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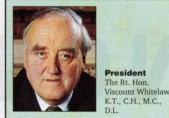
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BIGGA BOARD OF MANAGEMENT John Crawford Chairman: Vice-Chairman: John Millen

> **BOARD MEMBERS** Ivor Scoones George Malcolm Barry Heaney Gordon Moir Huw Parry Dean Cleaver

Roy Kates George Barr EXECUTIVE DIRECTOR Neil Thomas B.A.



EDITOR

David White Tel: 0323 891291 • Fax: 0323 895593

DESIGN/PRODUCTION EDITOR

Tim Moat Tel: 0904 610611 • Fax: 0904 643074

SALES AND MARKETING MANAGER Bill Lynch Tel/Fax: 091 413 7218

ADVERTISING SALES EXECUTIVE

Carol Dutton Tel/Fax: 0207 570117

PRINTING

Hi-Tec Print, Unit 7, Universal Crescent, Houghton Road, North Anston Trading tate, Dinnington, South Yorkshire S31 7JJ Tel: 0909 568533 • Fax: 0909 568206 Estate

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Greenkeeper Education and Development Fund Launched by Viscount Whitelaw at BTME 1992, the Fund provides the key to the future for greenkeeper, golf club and game. Individuals and companies can join the Golden Key Circle and Silver Key Circle. For details, contact BIGGA on 03473 581 GOLDEN KEY CIRCLE COMPANY MEMBERS: • Hardi Ltd • Hayters PLC • ICI Professional Products • Jacobsens • Kubota UK Ltd • Lely UK Ltd • Ransomes • Rigby Taylor Ltd • Risboro' Turf • Toro Irrigation BIGGA **GOLDEN KEY** and SILVER KEY **CIRCLES**

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AD REF

Faces and places



Rolawn (Turf Growers) Ltd of Elvington, York, have appointed Terry Ryan as sales and marketing director with responsibility for expanding and formulating a new programme of sales and marketing initiatives - in accordance with the company's focused plans for the future.

Mr Ryan was previously general sales manager, having joined the company in November 1992.

The National Turfgrass Council is following up its successful Workshop last November on good environmental management with three further Workshops round the country on the same theme. They will be at Reaseheath on 5 May; Sparsholt on 18 May; and Oaklands on 20 May. They will cover the new Health and Safety 'six-pack', the NRA guidance on protection of groundwater, and BS 7750 on Environmental Management, as well as more familiar subjects such as COSHH, FEPA and the Environmental Protection Act. Jon Allbutt will speak, supported by specialists from the NRA, HSE and Environmental Health Departments. The fee, £55 + VAT, covers the information pack and all documentation, lunch and refreshments, and the Workshop report to be sent later. The Workshops are for club secretaries, greenkeepers, contractors, and anyone concerned with caring for sports turf or amenity grass areas. Details -Tel: John Shildrick 0535 273188.



Recognising the importance of operator training, Hayter's have appointed Robin Blackford as technical support manager to develop this side of their business. Hayter's operator training will now be given to all end users including overseas distributors, local authorities and golf course managers. Robin brings with him 21 years' experience as a lecturer in

agricultural engineering at Rycote Wood College, Oxford. For the last six years he was contracted to carry out all Beaver service training. Now in his new role with Hayter's, Robin's main responsibility is to give technical support to all product lines. His is a new staff appointment and he will operate nationwide.



Nigel Prestwich has joined Agriland Ltd as sales manager for the North of England. He started in December last, shortly after completing a two year greenkeeping and management contract with the Havighorst GC. in Germany. Nigel is not only a skilled greenkeeper but also a proven sales executive, having represented Joseph Metcalfe Ltd for seven years before leaving for Germany in 1990.

Agriland's M.D., Roger West, told Greenkeeper International how delighted he was to have on board a sales manager with hands-on experience of greenkeeping and golf club management: "With the market getting more and more sophisticated it is becoming increasingly important to employ reps who are familiar with the responsibilities and problems that face greenkeepers in their day-to-day work."

Head greenkeepers have been appointed for both the oldest and the newest courses at St Andrews Links. Taking on one of the top greenkeeping jobs in the world, Andrew 'Eddie' Adams has been promoted to head greenkeeper for the 600 year old Old Course, while Roderick Barron moves up to be responsible for the newest 18 hole course at St Andrews, the Strathtyrum - scheduled to open later this year.

Since leaving school, Eddie (24) has worked his way up the ladder at St Andrews Links. Born and brought up in the town, he started his career as an apprentice greenkeeper



and in addition to on-the-job training, he has attended a full range of greenkeeping courses at Elmwood College - all of which he passed with distinction. In his new role, Eddie will be responsible for the quality of presentation of the Old Course, as well as for leading his team in preparing it for the 1995 Open Championship.

Eddie Adams, left and Roddy Barron on the 17th Green on the Old Course at St Andrews

Roderick Barron (37) has worked on the St Andrews' courses since leaving school in the town 19 years ago. His training at the Links has been complemented by several courses at Elmwood College. He has worked on all four 18 hole courses at St Andrews and taken part in the preparation of the Old Course for three Open Championships. His new task is to continue work on the programme for bringing the Strathtyrum Course into play later this summer and to maintain it in excellent condition in the future.

Both Eddie and Roddy will work under links supervisor Walter Woods.

During 1992 the British Turf & Landscape Irrigation Association took its latest step towards self-regulated quality improvement. It started a procedure for the monitoring, by its independent secretary, of members' quotations and specifications, to ensure that they provide the basic information which a client needs in order to understand the essentials of his irrigation system. The headings of this basic information are listed in the first section of 'Your Guide to the BTLIA'. *

One round of random monitoring has almost been completed, and the process will continue regularly in future. As a result of non-compliance with the monitoring procedure, Quality Irrigation is no longer a member of the Association. * Free from BTLIA, Tel 0535 273188.



Stan Hardwick, head greenkeeper at North Cliff, Scarborough, is a man who knows better than most the difficulties that were prevalent in the industry 100 years or more ago. Not that he's an 'ancient' himself, but his hobby is

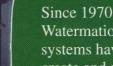
collecting old greens mowers from bygone days. Pride of his collection is a beautiful and still working 'Patent Chain Automaton' by Ransomes, Sims and Jefferies, dated 1884.

Jon Allbutt's latest News and Information leaflet for spring and summer, packed with typical 'Allbuttian' common sense, is now available. In discussing the contents with your editor, Jon spotted a not so deliberate mistake and has impressed upon me that old sprayers will have to be replaced by 1996, not 1966 as the copy suggests! Free copy by calling 0959 575575 ('phone and fax).

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BIGGA's quiet man takes control

The current 'in' joke amongst members of the board of management, indeed amongst all those involved in the management of BIGGA in all of its multifarious activities, is the one concerning the outgoing chairman, who goes from being high profile Mr Roy Kates to that of yesterday's man, the *who d'ya mean Mr Roy Who?* Roy Kates has delighted in 'milking' this joke for all it's worth, after all it's only meant in fun and is of his making. That stated, it is a fact that the feeling of deflation following a year of hyper activity can affect different people in different ways, some taking it more in their stride than others.

John Crawford, our new 1993 chairman, will I know forgive me if I describe him as 'the quiet man' of BIGGA, for on first acquaintance he appears the very essence of intensity, a 'still waters run deep' type. Those who take the time to dig a little deeper, however, will find that he hides behind a streak of wicked humour which surfaces on numerous occasions. Having watched him and listened to his often caustic wit over the past year or two, I predict that whilst John Crawford may well begin his year of office as the quiet one he'll surprise us all, for like those illustrious and high profile chairmen in whose footsteps he follows, he'll come through as being anything but a John Who?

Who, then, is this man of quiet countenance? Certainly he's a modest man who admits to a dislike of tape recorders, of being interviewed. His fellow board members will nevertheless aver to his having made a distinct mark in BIGGA affairs, a stand up, speak up and shut up sort of fellow who thinks carefully before committing his thoughts for public consumption, but one who has positive views and ideas that are his alone, never a 'yes' man.

John, true Scot and archetypal canny Fifer, began his greenkeeping career in his native county, joining Aberdour GC at the age of eighteen as a humble assistant under the eagle eye of John Robb, the now retired head greenkeeper whose name is always spoken with reverence and one who still remains active in local BIGGA affairs. John is quick to declare his true allegiance by stating that it is to John Robb that he owes everything, ever his mentor and a trusted friend.

Came the time to put John Robb's teaching into practice, John, still a youngster of just 22, moved to Glenrothes GC to take up his first head greenkeeper's post, an enviable one as Glenrothes, designed by Hugh Middleton, was still under construction with only the very basic shaping completed. There can be no finer way of gaining expertise than in such a hands-on situation and John enjoyed some six years of working in local authority golf, sorry when local government reorganisation -essentially the establishment of a Parks Department which engulfed the previous golf-only set-up caused him to re-think his future. Such experience meant not only controlling the destiny of a golf course but also hiring his own staff. On reflecting that situation, he declared that by so doing he became the youngest member of his own team, often mistakenly identified by salesmen as the boy!

A brief sortie across the English border followed when John joined Chorlton-cum-Hardy as their head greenkeeper, hired over the current head man, though it was brief indeed – just two years – as it proved to be a period of tension, a 'them and us' situation at the time that was not altogether palatable and he returned to Scotland, joining the Lanarkshire course of Airdrie, as keeper of the green and the pro shop. This was not such an uncommon situation as it may now seem, as income derived from the shop helped supplement the greenkeepers package, though John found this side of the work less palatable and it also meant a seven day week, every week. I suppose it speaks volumes for the man that despite such enforced commercial activities he stayed for over three years and only moved when the lure of returning to his native Fife, to Dunfermline GC, came about through chasing an advert in the trade press.

A light sparkles in John's eyes when he recalls Dunfermline. He took over from Bob Winton, a fine man who was suffering from a debilitating disease which subsequently took his life. The course, quite understandably, was a mite neglected. The job offered the very challenge for which John had been searching and he was to remain there for 15 years, during which time he was to ably demonstrate not only his skills as a greenkeeper but his mettle as a course builder. Elsewhere it is written that John is a modest chap, and I must say that I had almost to drag the story of John's nineholer from him. With the help of a local farmer, Wag Allen, who had served both as club captain and green convenor, John set about constructing a nine hole junior course which to this day is seen as a great success and, equally important, is a splendid money spinner for the club.

If Dunfermline was a great challenge, there can be few more challenging than course management of Haggs Castle, and it was to this established high profile club that John came in 1990, taking over the mantle from Chris Kennedy, who had nipped across the border to take over the reins of Wentworth's championship arena. John has not attempted to become a surrogate Chris Kennedy, for that would be impossible and not his style anyway. What he has done, and seen to be highly successful in so doing, is to continue to provide excellent playing surfaces, making his philosophy one of 'good golf for every occasion, 365 days a year.' I've talked to Haggs members and though some found Chris's departure hard to accept, at first perhaps even a mite resentful at the thought of having to accept a perceived interloper, to a man they now declare that John is making great strides and, to quote one perceptive observer, 'is doing a bloody fine job'.

On the Association front, John has been around since SIGGA times, as a beginner at Aberdour, as one who helped form the Central section in 1981 (with valuable support from John Souter), as a committee member in 1982, later to become chairman and secretary and later still elected in 1988 as board representative for Scotland. He was vice to Harry Diamond's chair until Harry retired in '92 and now is chairman of the Scottish region.

John Crawford the canny Fifer is on his way, set to make his mark as chairman of the board in his own inimitable style. You may be sure we shall hear much from this likeable character – perhaps finding a whole new audience for his acerbic wit in the speeches he will inevitably be called upon to perform – let's persuade him. **DAVID WHITE**

Tlying Divots

Time now for a little trumpet blowing. In an international competition, Greenkeeper International has come second in the Best Magazine category for journals published ten or more times a vear.

In a written appraisal, judges said: "This is an extremely lively and popular magazine which does a good job in informing a specialist readership about their business. A plethora of ads bring interest to the pages. This is a professionally produced publication which enjoys a lively letters page – always the classic sign of a well-read magazine."

The Editing for Industry Awards, organised by the British Association of Industrial Editors, is open to all corporate and in-house publications and receives entries from the UK, Europe, the United States and the Middle and Far East. It has a reputation for quality and sets particularly high standards.

Though our design and production editor, Tim Moat, is far too modest to take full credit, this is very much his triumph and we salute him.

Milestones in the world of inventions include the lead pencil (1812), the lawn mower (1832), the rubber band (1845) and the zipper (1891). Now a new invention that is set to make its inventor a millionaire is said to be taking the world by storm - advertising on the bottom of holes on golf greens! If you believe that only one good idea is necessary to make a mint, apparently Mr Ric Dark has hit the jackpot. As golfers bend to retrieve their Titleists, adverts implore from the depths of the cup - buy me, drink me, drive me. Dark's clients already include Cadillac and Coca Cola and talks are scheduled to take place soon between Dark and a Scottish group, with plans afoot to licence the introduction of golf hole advertising in the UK.

A simple but eye-catching fund raising idea using heart-shaped golf ball markers is being launched at golf clubs throughout the UK to raise money for heart research charity STRUTH. The heart-shaped ball markers, bearing the STRUTH logo, will be available in pro. shops at all clubs supporting STRUTH's 'Heart of The Green Appeal', sponsored by Legal & General. Organisers of the Appeal are encouraging golfers to show their support for heart research by purchasing one of the ball markers and 'making a mark with their heart'. The suggested donation is 50p or three for £1.

Golf clubs are also being invited to organise simple competitions to support the Appeal anytime between 1 May and 30 September. The aim is to raise more than £150,000 for vital research into heart disease, the single most common cause of death in the UK today.

Building



A new tee at Tyrells Wood

DAVID BOOCOCK offers practical guidelines whether you're starting from scratch or just extending tee areas

W ith most jobs on a busy golf course, advance planning is essential to determine when, where and how the work is to be carried out and this is especially true of construction work. To decide your winter work in October is folly and unless you are fortunate in having a very free-draining course or excellent access and roads to the site, such action can be the first step towards a winter of frustration and discontent.

Unfortunately, most rebuilding or extension work on a golf course has to be timed for the end of the playing season. Where construction involves grading or machine handling fill material and topsoil, operations should commence in late September, early October at the latest. If that means altering arrangements for late played Medals, visiting parties etc., so be it, provided the planning steps were taken in time that presents no hardship.

Good access to the site is vital – there is no point hashing up tracks across fairway and rough, transporting materials and machinery, and then having to spend weeks on corrective work. If you do not have good access, consider getting the basic groundwork such as fill and topsoil spreading, completed during the summer when damage reaching the site can be minimised.

SIZE

Think big, especially for tees at par three holes where, on a busy course, you may well require at least 400m². Since short holes are often tight for space, particularly at the tee end, one large tee all at the same level is preferred. You cannot afford potentially usable area lost to internal banks. At par four's allow a good 150m² for medal tees and 100m2 for the general teeing area on a members course where lots of competitive golf is played. Where the emphasis is on visitors and holiday makers these sizes may need reversing to cater for the heavier use on general tees. At these holes a ladies tee of around 80m2 will suffice since there are usually fewer of them and almost invariably ladies are far kinder to tee surfaces then men.

Go for width rather than length, especially on medal tees where competitive rules restrict movement of tee markers. In any case wide tees provide more opportunities for spreading wear and tear and less of the available space is lost as unusable area at the edges.

POSITION

Siting tees within woodland or new plantations is a ploy quite often used by architects and beloved of green committees in their quest to lengthen and/or add interest at a golf hole. Because cutting down trees is such an emotive issue these days, regardless of the fact that trees, like grass, require planned management, the greatest failing is to remove too few of them to start with. Alternatively in a relatively new plantation, the happy planners completely fail to allow for the simple facts of life – trees grow!

When faced with this situation be bold, removing trees and saplings within at least 10m of the edge of the tee. Within plantations ensure that in front of the tee the cut back fans out either side to avoid in future years all damage occurring down the centre of the tee or close to one edge as golfers try to secure a good line out to the fairway.

SHAPE

Golfers are conservative by nature and most moderate handicap players like a nice parallel sided shape which allows them to line up comfortably with fairway landing areas. A tee shape based on the traditional rectangle, with rounded corners to facilitate mowing with triples and easily mown slopes to embankments, serves very well.

There is no need for excessively elevated tees either, that only means large areas of bank which for the sake of appearance need to be kept tidily mown.

If the intelligent golfer is given a view of obvious hazards, sufficient to plan his second shot, it is surely unnecessary to be able to see the bottom of the pin from the nether reaches of a par five. new tees

EXTENSIONS

If you are thinking of extending a tee by simply adding material at the front or side to match up with an existing area, the best advice is don't. Through the ravages of time and use, older tees are seldom truly level, straight away you have to compromise so that new joins old without risk of severe scalping. Sooner or later, and the emphasis is usually on sooner, the new addition will settle so the joint really starts to show and, of course, the difference in level immediately loses valuable tee space. That says nothing of the mis-match between bought in turf and the tired old sward on the existing tee, often no more than annual meadow-grass peppered with coarser tufts of perennial ryegrass. The best approach by far is to start completely from scratch, stripping topsoil and turf and incorporating any existing tee wholly into the new one.

BEWARE OF GREEKS

These bearers of gifts are usually some wellmeaning member of committee or club who as soon as they learn of new construction work have contacts (usually in the building trade) for supplies of topsoil cheap, or fill for free. The golden rule here is always to examine such offerings at the site and if there is the least doubt as to quality or consistency decline the offer with thanks. A builder's idea of 'good clean fill' usually turns out to be a mixture of subsoil clay liberally sprinkled with boulders.

To provide the basis for good tees we need clean, preferably free-draining material, containing no organic debris or large stones. On links the first choice has to be the native sand. On inland sites gravel or clean reasonably structured subsoil can be suitable. Where a considerable depth of make-up is required hard-core has a place but that place is at least 600mm below finished surface levels if conventional construction is intended, 300mm if a drainage carpet and emptying drains are to be provided. Coarse rubble will need blinding with finer material before finishing layers are applied to prevent settlement or infiltration by soil.

FORMATION LEVELS

On fairways with a downhill slope it is in order to provide a slight fall of say 1 in 80 from back to front. Playing into an uphill slope, a grade on the tee surface from front to back is acceptable and helps to shed heavy rain as run-off. As long as the tee surface is smooth and uniform it matters little whether it is on an inclined plane or dead level. Naturally where ground contours permit, a level tee surface is preferred.

DRAINAGE

It will always be necessary to provide effective catchwater drains around the foot of cut banks where cut and fill grading is necessary to establish suitable levels.

Most tees will be built a modest 230mm or so

above existing ground level, which in itself helps drainage. Given reasonably structured material and adequate subsoil cultivation, both along the length and across the width of the surface, to relieve excessive soil compaction created during building operations, that should suffice.

For larger expanses of tee, particularly at par three's and where natural subsoil or the fill used in construction is unlikely to drain adequately, provision for effective pipe drainage is essential. Top quality installations will require drainage carpets, emptying drains and suitably free-draining sand/soil mixtures and, of course, provision of pop-ups for summer upkeep.

PREPARATION

Many potentially excellent tees have been spoilt by inadequate preparation or haste to finish a job off which has dragged on through much of the winter. The first essential is to get the base firm in order to minimise settlement and also to get it reasonably level. Ensure that at least 200mm firmed depth of sandy loam topsoil or equivalent is provided.

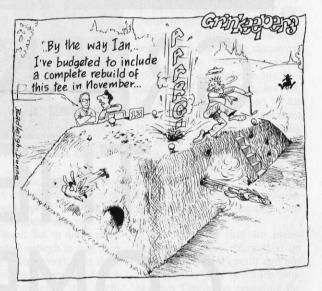
The next operations make for success or failure, and here ground conditions and the workability of the soil are crucial. In view of that and the fact that so much tee construction goes ahead in, at best, marginal conditions during autumn and winter, it is surprising that more efforts are not made to keep soil dry both in the stockpile and once it has been backspread on site.

After returning topsoil and carrying out any subsoil cultivation that is required, set up corner and intermediate pegs to represent finished surface levels. Heel and rake the soil bed at least twice in opposite directions, working to a tightly stretched line between the pegs. Reasonably dry, friable soil is essential for this process and covering it with polythene in wet weather can help enormously. Do not be tempted to put down a layer of sand on a wet surface in order to achieve a level top which you can work on. Turf will root poorly into such material, its vigour is affected and the sward will be extremely drought prone. Sand can help in this situation, but have patience and wait until it can be effectively worked into the top 25mm or so of the soil

Correct any deficit of lime or major nutrients and it helps, particularly on sandy constructions, to work in one of the seaweed-based materials.

ESTABLISHMENT

Where the new tee is a separate entity, con-



struction during the drier summer months has much to be said for it. That gives you the option of cheap establishment by seeding, preferably during August, your own choice of grass cultivars and the stronger establishment and subsequent growth which results from seeding direct into the growing medium. The down side is that you will not be playing for 12 to 18 months unless you are blessed with a mild autumn and very favourable climate.

Most of us have to make do with turfing. Attempts to save and re-use existing tee turf are often a failure and at best you end up with distinct differences in the sward which can take years to blend. Where the old turf is predominantly ryegrass and annual meadow-grass, discard it and start afresh.

There is a wide selection of commercial seedling turf available and the stronger and more mature that product is the better it will cope with the harsh realities of its new existence on a tee. Get the new turf off to a good start with adequate amounts of fertiliser, up to two or three dressings during the first growing season. Avoid over-close cutting and ensure by early top dressing that you correct any minor irregularities in the surface.

CONCLUSIONS

The start points to any tee construction programme are usually easily identified. Getting the first and last tees in good shape must have priority. An immaculate first tee provides that all important first impression of the course and gets the golfer away in the right state of mind. Bring him home with a first class 18th hole and he will be back for more. Providing user satisfaction is what it is all about, whether it be club members or visitors.

The author, David Boocock, is a senior agronomist with the Sports Turf Research Institute.



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et's see now, we're titled the British and International Golf Greenkeepers Association, with the accent on the 'International' greater than ever seen before during our brief but meteoric rise. Yes, we also run a 'National' education conference that has grown in stature and appeal, one that attracts attendance from all corners of the globe. It's fame has blossomed and it now could accurately be called an International conference. All this was brought home to me when at an informal gathering held before the beginning of Keele '93, a table set for just twenty saw the following nations represented: Germany, Czechoslovakia, Switzerland, Wales, Scotland, Ireland, England and the good ol' U.S. of A! Anvone still nursing doubt that BIGGA is an international force to be reckoned with needed look no further than the Keele lecture theatre, for no less than eleven nations were represented, the aforementioned topped up by representatives from Holland, Norway and Australia - our very own greenkeeping United Nations was in session!

It has been written before that three days of incarceration in a classroom is not something greenkeepers necessarily undertake voluntarily, yet the proof that BIGGA conferences are different – as

AN EDUCATING EXPERIENCE...



Conference luminaries, from left, Iain Ritchie, Sandy Anderson, John Crawford and Gary Grigg

much about learning through social intercourse as sucking in great chunks of knowledge in the lecture room – was brought forcibly home to me when I received a letter from an English delegate now resident in Lausanne, stating: 'I think I learned more in the few hours spent in the company of Professor Noel Jackson than I have in the last few years here, talking with my fellow Swiss greenkeepers!' The truth is that greenkeepers are not only happy to learn, but in many cases are dedicated enough to pay their own fees, even though it is their club that reaps the benefit of their improved knowledge and technique.

It was Noel Jackson, formerly an STRI biologist and now a professor in plant pathology at the University of Rhode Island, who began the proceedings, discussing 'Cool Season Turf Diseases'. I hope Noel will forgive me if I refrain from summarising his talk, but I became mesmerised by his accent - as English as Yorkshire Pudding yet nevertheless adopting so many Americanisms - not unlike hearing Freddie Truman impersonating George Bush. I honestly couldn't concentrate, though I could tell from audience applause that his message was well received!

Few will deny that our members are the new, rising stars on the BIGGA lecture circuit and our next speaker was one such winner, Ian Tomlinson revealing the horrific problems associ- = 12

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'As Bob Brame summarised, it pays to amplify your strengths and develop an appropriate strategy for improving your weaknesses'

11 a ated with maintaining turfgrass at 2800 feet above. In truth his slide show was more than just an overview of Swiss roll-overs such as snowmould, collapsing greens and uprooted trees, for Ian had embarked on several mammoth renovation programmes which he explained just had to be squeezed in between the meltdown and the time his members expected perfect playing conditions – calling for the skills of a juggler cum magician!

Tony Mears followed with a fascinating view on the wild side – golf that is – interspersing his illustrated lecture with anecdotes that left the listener in no doubt that wildlife and its preservation is something that we all should take to heart. It is encouraging to note that more and more courses are becoming special for reasons other than mere play, positive havens of natural beauty that we should vehemently fight to preserve.

The remaining sessions were taken by Dr Peter Hayes and Robert Brame, representing the STRI and the USGA Green Section respectively. It was interesting to compare the roles undertaken by these two bodies, for example the STRI are proud now to include golf course architecture among their expanding list of services whilst the USGA are hesitant to embark on such activities (save advising on such simple things as reconstruction of bunkers or tees) for fear of antagonising the American golf course architects. Interesting also was Bob Brame's revelation that Poa annua is as much of a problem on the far side of the pond as it is here - they manage it equally well, hate it just as much, but it just won't go awav!

Restricted space prevents a full precis of every speaker and subject, but I must single out Patrick Murphy's re-building of a golf green – the clever fellow did it in just 16 days and had it back in play on the seventeenth, though one question remained in my mind – why the rush? Would the green not have been better, given longer to recover?

Ed McCabe and Arthur King, respectively course manager and green chairman at Brockenhurst Manor, proved a good double-act



Above: Gordon Child, Carol Borthwick and Nick Rigden Right:

George Brown, Jane Ryan and Bob Brame



and enlightened the audience to the necessity of communicating with members – here I found myself wishing that all clubs would adopt the Brockenhurst way, a case of greenkeepers educating members by telling 'em everything, even the unpalatable!

Gary Grigg, a GCSAA board member, continued in similar vein, of the opinion that greenkeepers must above all else cultivate the ability to communicate that this universal weakness is more to blame for greenkeepers losing their jobs than any other, certainly more than the practical implications of course management that often are so unpopular he urged delegates always to explain, be first with reasons before a single complaint becomes a thunderous roar. On the basis of what America does today we (possibly) will do tomorrow, Gary also told of the rapid growth in turf iron and Hydroject machinery usage in America - will we, I wonder, see these tools in every workship in the next decade?

We learned from Seve Schmitz how computers aided the course manager, aided and abetted by Fred Robinson, and we listened to Ian Thomson's plea for sensible tree preservation and intelligent choice of species indigenous to our native habitat, all this before anticipated a serenade from Anthony Davies. His title, 'Right or Wrong – I Did It My Way', evoked ideas of a Frank Sinatra style rendition – but we were robbed, no such song forthcoming, though his talk was highly original, hugely entertaining, and jam-packed with common sense observations.

The George Brown comedy half-hour nicely rounded off proceedings on day two, and though George took his audience on a slide tour of Turnberry, whilst also explaining the intricacies of managing such a high profile Open Championship site, he delivered in such a way that the audience was in no doubt – should he ever feel the desire to change his career, agents are waiting to sign him as the latest comic discovery!

From one comic to another, delegates were later entertained at dinner by Kevin Connelly, a clever impersonator who, whilst having the British contingent in stitches, must have baffled our American friends, for his act centred largely around British footballers!

I hesitate to suggest that Neil Thomas actually planned to keep the best till last, but whilst it is not unusual for folks to look at their watches during the final performances at some three day events, on this finale the feeling was that the few hours remaining were just not enough. Noel Jackson excelled in his discussion of 'Patch Diseases in Cool Season Turf Grasses', prompting one delegate to opine that Noel's information was alone worth twice the total conference fee!

'Follow that' might have been the thought after Jackson's rouser, but we all know that Gordon Child can follow anyone and command rapt attention every time. Gordon revealed to this observer a side I'd not seen before: the philosopher, the comedian, and the man of the future. Sure, he's no longer a spring chicken but he thinks like a youngster and has the wisdom of age - a wonderful combination! Interspersed with clever cartoons drawn by our own John Moran, Gordon's 'Past, Present and Future' was, for me, the most down-to-earth home spun philosophy I'd heard in a very long while.

Yet more classic stuff followed, with Iain Richie describing his three years at Portmarnock, and at the risk of boring I'll declare that Iain's course would be the one above all others where I'd elect to play, given a single choice. If the layman has no idea how such a course can fall into disrepair, we were privileged to see how much Iain has achieved in his short time – it is not for nothing that he is thought of as a wizard by his grateful members!

Bringing down the curtain, Bob Brame made a welcome return to the rostrum with his 'Ten Pitfalls of Turfgrass Management' and to round off this report, let me repeat them: 1) Failure to communicate. 2) Overwatering. 3) Fast green speeds. 4) Unnecessary use of pesticides. 5) Lack of continuity in club personnel, especially at green committee level. 6) Inadequate maintenance buildings. 7) Tree management. 8) Amount of play, i.e. too much. 9) Not enough or under qualified labour. 10) Not enough or poor quality equipment. As Bob summarised, it pays to amplify your strengths and develop an appropriate strategy for improving your weaknesses. The alternative is to continue hitting your head on the same rock. 'Failure to study and learn from the past leaves us doomed to repeat it!' DAVID WHITE





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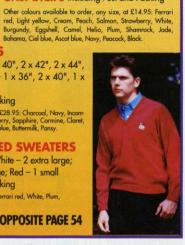
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AD REF

Golfing heaven on the Island of

DAVID WHITE gets a taste for Indonesia and meets a greenkeeper with a staff

of 100

Mark Isley, superintendent: would you leave?



here can be few who have not at some time dreamed of here can be rew who have not at some time away to far-casting off the shackles of routine to scuttle away to farflung lands where the grass is perceived always as being greener. Bali, the 'Island of the Gods', is one such place where last year I had the privilege of spending several days with golfing journalists from around the globe competing for the coveted Publishers Cup. The nature of this trade orientated magazine precludes this feature from falling into a travelogue - though if any reader has a day or two to kill I willingly will bend their ear on why they should allow themselves to be pampered by Garuda Airlines whilst flying to Indonesia's foremost tourist destination, there to enjoy the fabulous beaches, the climate, the people, the food, the ambience, and, of course, the golf - all are out of this world! I must restrict myself to writing about the golf, essentially the way golf maintenance is practiced in this tropical dream location.

In Britain we are always banging on about the benefits of education, rightly so as so many plum jobs seem destined to fall into the hands of those who have broken the craft mould and moved into the technological age. It is significant therefore that I should find in Indonesia one man who had cut free from Uncle Sam's umbilical as a direct result of being college trained. His name is Mark Isley, he's just thirty and he is an American.

Mark has been the superintendent at the Bali Golf & Country Club, Nusa Dua, for just under three years, arriving in the

now time-honoured tradition before the course was complete, indeed when the course was little more than roughed-out and long before contouring took place, the better to oversee installation of the irrigation and the sodding, seeding and subsequent nurturing of Bali's now delicious greens and fairways. Though far removed from being the typical British way, Bali G&CC's bunkers were sodded, as were those areas prone to erosion during the rainy season, whilst the rest of the playing surfaces were planted with 328 Bermuda grass 'sprigs' and roughs seeded with common Bermuda grass.

Quizzing Mark on how the 328 performed, he was honest enough to admit that, in hindsight, it would have perhaps been wiser to plant the fairways with a sturdier variety, say a 419 Bermuda, as 328 doesn't handle cart traffic well and tends to compact, also it reacts poorly in the drought conditions that often prevail. To cap it all 328 is greedy and demands a lot of fertiliser - in a nutshell, its a very high maintenance turf. "We used 328 to keep it simple", he told me, "after all, we brought the grass all the way from America and a single variety seemed to make sense at the time, now we live with what we've got!"

It was ever thus, the golf course manager having to live with the whims and foibles of the architect or designer and I found myself thinking, 'I've heard this before a thousand times.

Mark's transformation from college kid to fully fledged golf course superintendent was something of a fairy tale in itself. He'd worked as an assistant in Florida for several years, he'd been an irrigation technician and worked also on commercial chemical spraying before making the purposeful decision to go back to school. At first he entered an ornamental horticulture programme and then made his big move - to Lake City College, famous in the States for turning greenhorns into expert greenkeepers - there to undergo four years training, interspersed with practical golf course work, whilst studying Turf Science.

Examinations concluded, Mark was considering several jobs in the offing when a fax arrived at the college, sent by Mike Martin, the constructor of Bali G&CC, calling for the services of a superintendent and seeking the college principal's advice. In Mark's own words, "right there and then I knew I was going to Bali.'

Confidence breeds confidence and sure enough our footloose and fancy-free hero was hired, soon to be whisked away to the Paradise Isle - over 24 hours flying time from his native Florida, to a culture and life style that was completely alien to him.

Consider this: Mark has a maintenance staff of 100 full time employees, yes - 100! Twenty two work on landscapes, still more on common areas such as roads and areas that pass through the course, whilst twenty ladies pull weeds by hand, also sweeping paths and trimming edges. The rest are full time golf course personnel. Labour is not expensive, though Mark pointed out that at \$3.50 a day his course crew are well paid by Balinese standards, drawing a comparison with, say, a road builder who may only earn \$1.50 for digging limestone rock! The ladies make \$1.75 for their weeding, and in every case local opinion suggests that Bali G&CC are very good employers indeed, without destroying the local economy. Never believe, however, that everything is roses in paradise. Mark loves his staff, gets on well with them, but does not expect them to perform with quite the same enthusiasm as, say an American or European crew. For one thing, golf is a novel experience and they can't quite understand it, don't entirely



the Gods

share our enthusiasm. For another, the way of life is very laidback and if they feel like taking it easy – the Balinese way – then they take it easy and no amount of whip cracking will produce a full head of steam. It's the natural way of life and Mark is not about to change it.

Living in Bali has made Mark quite a philosopher, causing him always to count his blessings. He has his own house, he's well insured, has a vehicle at his disposal and earns enough to save. "It makes me feel specially fortunate," he told me, "for there are many Indonesians who have nothing and yet remain blissfully happy – this is a happy island!"

Communication in the local tongue was a problem, but Mark has grasped the language nettle, attending classes in Bahas Indonesian, learning fast, gradually overcoming the difficulty. Naturally, he relies on his secretary and a few key Balinese staff who also speak English to relay many of his needs, especially to his crew of seven mechanics, who work shifts. They listen to the interpretation of any problems voiced by native operatives – 'it's got a funny knocking noise' – thus ensuring that machinery stays in pristine condition.

Maintenance is not without its share of headaches at Bali G&CC, for the course is constructed on miserably poor land, mostly sand over lime rock and as porous as any in the world. Though lush and inviting, the course demands constant aerification and this means a monthly routine of slitting and tining, though a major need, a Vertidrain, is still on Mark's wanted list. Added to this would be lightweight fairway mowers rather than the five-gang's he uses and he would certainly welcome a fully automatic programming system for his Rainbird irrigation. Currently this is controlled by 44 field clocks, each hand set and each liable to regular resetting, for Bali's electricity grid is known to flip-off at the least provocation – somehow it doesn't seem to matter and life just goes on...

Greens are loosely based on the USGA spec but minus the choker layer, which Mark would have preferred, for as he pointed out "the USGA is a proven system that works on this type of layout and I would have liked to have gone the whole nine yards!" Disease is not a major problem, despite a pH as high as 8.1, though there are occasional outbreaks of the heat stress induced Curvularia lunata on the greens. This responds well to treatment with Daconil, which he swears by. Other fertilisers are not easy to obtain due to monstrous shipping costs, and Mark is every bit the chemist in mixing his own magic brews. He would prefer to use slow-release but this is on the 'can't afford to ship' list and he therefore blends his own numbers of N P and K suitable to Bali's unique conditions. What Urea he obtains locally is of inferior quality and he cites occasions when such 'extras' as a shoe and a bag of old clothes were found within the exceedingly fine, dusty powder! Apart from solids he also concocts various liquid cocktails in storage tanks and these are applied in carefully metered quantities through the irrigation system.

Mark dresses his greens with pure sand, chuckling as he explained that the original organic mix used in construction was compiled using sawdust brought in from the local mills, this mixed with fertiliser and nitrogen, turned and watered multifold – a laborious three month process that somehow proved very effective.

Bali is indeed a sunshine paradise for the tourist, especially during the months of May through October, though to a golf course manager the dry, humid and often droughty conditions present a constant challenge which must be tackled with frequent watering. During construction three deep wells were bored and these fill the lakes, subsequently providing 500,000 gallons each day – the maximum that local water extraction permit will allow. Mark monitors his supply on a daily basis, taking samples of the moderately salty aqua – about 800/900 ppm during the summer season, lower during the rainy season, which in theory should start in November or December, though only two inches fell throughout last year.

This tourist did not find insects a problem, certainly none that nibbled. Nevertheless, Mark assured me that insects are a mega problem on the golf course, mostly 'no-see 'em' varieties that leave humans untouched whilst being a pig to control on turf, but he's getting there. In truth his whole job has been a continual learning process, seen at its best in his 'back to basics' improvisational approach, for as he explained " Bali is a real eye-opener in that nothing is typical - it is quite unique and I'm learning just by being here, the feeling is time-warp, a bit like turning the clock back some ten or twenty years. I've made mistakes and gained by learning from them, and I've never lost a green! In the USA I would have trained staff to back me, here I'm very much the hands-on teacher - encouraging, nurturing, bringing my staff forward. I've instituted an 'employee of the week' cash award, I teach my key people everything - I have to - and I'm actively bringing my head man forward to a point where, one day, he'll be a superintendent proper.

Frustrations? "Well, I'm ultra-light on herbicides, pesticides and fertilisers, though perhaps the biggest one is spare parts. I can wait as long as four months for a spare and as everything is shipped from America parts are hugely expensive. It's frustrating to have a machine down for the want of a minor part and on occasions I'll 'phone direct to the States and have something shipped UPS – this can turn a \$10 part into a \$100 part with shipping and duty so it's not likely to become a habit!"

I asked the inevitable question – will he stay? "Well, I've fallen in love with this fabulous place and I cannot envisage leaving. I've a beautiful girlfriend from the nearby island of Lombok, I love my job and I sleep like a baby every single night! Visiting golfers are generous in their praise for the golf course and I'm truly blessed with good fortune – I'll ask you the same question – would you leave?"

Not me, I never wanted to leave, but let me close on a personal note of misery and woe. The Publishers Cup is the brainchild of Parker Smith, a former senior editor with Golf magazine who now masterminds this and other media events world-wide under the Sports Opportunities International banner. Parker's

fabulous promotions enable selected journalists to visit great golf locations in exotic places, to exchange views and ideas and, inevitably, to write about their experiences, whetting the appetites of those who will want to follow. People ask how I fared in the Publishers Cup and in a single word I answer – 'depressingly'! I arrived with a miserably sore back and immediately developed man's worst disease – the shanks. Three rounds of visiting the boondocks brought me nothing but grief. In this event the winner automatically returns to defend his title and in 1993 my friend Mike Takamori, publisher of Japan Golf Report, will play on the Grand Barrier Reef in Australia. Me? I'm wearing the booby prize – a Mickey Mouse watch that plays 'It's a Wonderful World'. That just about sums it up – Bali on all counts is the glittering star in a very wonderful world – whilst I finished as the damp squib!



Hot work: ladies weeding at Bali Golf and Country



A Balinese yardage marker

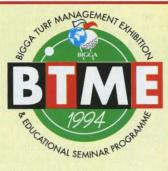
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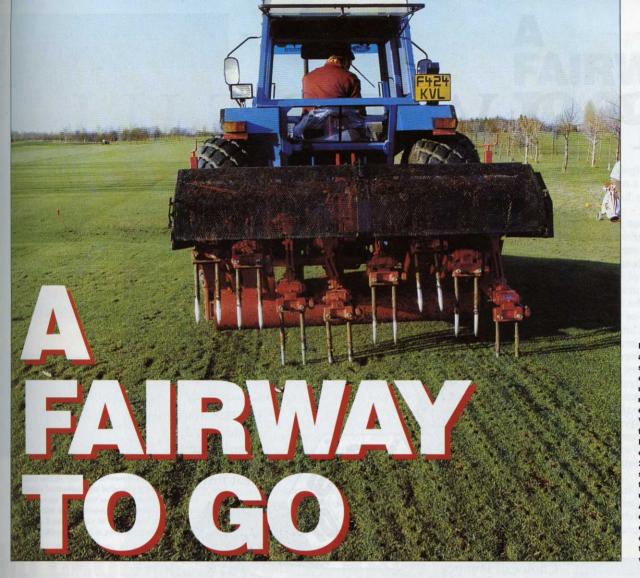
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Unless you've been working in some foreign clime for the past few years, there should be little need for a reminder about the difficulties that the British weather is creating for turf professionals, particularly over the last 12 months. A parched summer, followed by an uncommonly wet autumn and winter, and then a return to near drought conditions in most parts of the country during early spring, have played havoc with many a well-planned course maintenance programme.

If we are to believe the meteorologists and environmentalists, the situation is unlikely to improve until positive steps are taken to minimise the level and nature of industrial and domestic pollutants being discharged into the atmosphere. In fundamental terms, the world's climate is believed to be undergoing a small, but measurable, change, with the four seasons as known by our great-grandparents becoming less clearly defined. This change is being accompanied by more extremes in weather patterns than have ever been discussed on a course in basic turf management techniques.

However, despite the gloom in some quarters, there is no reason why greenkeepers should not cope comfortably with the climatic change, if that is indeed what is taking place. It simply requires a little more flexibility in planning and a need by golf clubs and players to be more understanding of the difficulties that weather extremes can bring.

The one area of a golf course which suffers perhaps the greatest in all weathers are the fairways. Tramped by hundreds of pairs of feet When it comes to fairway maintenance, greenkeepers need to be just that bit more flexible, says MICHAEL BIRD



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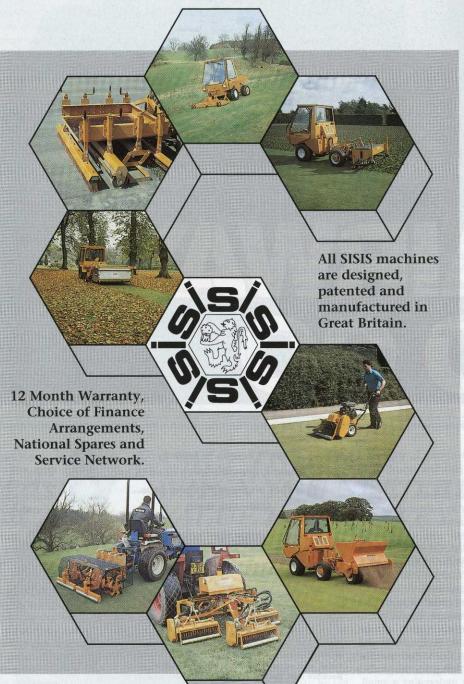
throughout the year, their sheer size means that they cannot receive the same level of attention as paid to the tees and greens. In any case, fairway maintenance has traditionally been left to times of the day and year when minimum inconvenience or disruption is caused to those playing a round, irrespective of the fact that the turf or subsoil may not be at its most receptive or responsive to the treatment being carried out.

A strong case for 'spare' fairways could be put by most greenkeepers, citing the example of winter tees and greens. However, with space at a premium on most established courses, there will be few who get the chance to rest a fairway and provide it with the necessary full recuperative treatment. A dense, uniform, tight grass cover should be the aim on all fairways, comments Peter Smith, greenkeeping course tutor at the Warwickshire College, Moreton Morrell, "Ideally, a golf ball should not be sitting light on the surface, as this will only encourage the taking of large divots," he says. "A small, tight divot is a clear indication of a good, tight sward." The condition and growth of fairway grasses need to be maintained with the help of appropriate nitrogen feeds during the season. Smith always recommends carrying out a soil analysis before the first dressing in mid to late March. He would then expect a maximum of three further treatments to be carried out during the growing season, depending on the weather, the rate of growth and whether clippings are boxed or returned to the turf. If clippings are returned, then routine fertiliser treatments are not considered necessary and decisions on timing should be made according to the condition, vigour and appearance of the turf. Only on intensively-used areas subjected to high wear will localised applications of nitrogen be helpful, applied in two or three dressings of around 4g/m2. These can be given as ammonium sulphate or in a mini-granule, if conditions are particularly acidic. However, no fertiliser should be applied to bare ground until reseeding has been carried out or new turf laid. In very dry summers, such as those = 19

GREENKEEPER INTERNATIONAL May 1993 17

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17 • experienced in recent years, Smith recommends minimal fertilising and the use of clippings as a mulch to retain available moisture within the turf. "This may mean raising the height of cut a little to prevent possible scalping, giving the grass more opportunity to recover after a cut," he comments. "However, on some courses, particularly those with freedraining soils, there may be no need to cut the fairways for weeks on end. In such areas, the grass varieties are normally extremely hardy and are able to withstand long periods without water."

Where clippings are left as a protecting mulch, keep an eye open for any build-up of thatch. If localised thatch does manifest itself, then scarification is the most effective answer, taking care to avoid over-energetic action, particularly in dry periods. Properly adjusted, a rotating vertical blade or rake can remove the offending thatch quickly and efficiently without uprooting healthy growth or causing an unsightly mess, enabling air, light and water to enter the soil. Clearing up can be equally speedy using a brush collector, turf vacuum or even one of the new generation of fan-assisted collectors linked to a rotary mower deck. For more widespread thatch, a spiked chain har-



row is highly effective, although it may be better to postpone the work on a complete fairway until the throughput of golfers reduces later in the year.

Problems with disease are normally few and far between on fairways, although excessive soil nitrogen carried over into wetter periods can lead to infection with fusarium patch disease. This can be countered by adding potash to any late summer treatment, accompanied by a soil analysis for safety's sake. Other treatments may include spot or selective spraying against daisies, dandelions and thistles.

In Peter's experience, three of the biggest nuisances on fairways are rabbits, moles and foxes, resulting in untold wear and tear to mowers and leading to ground being continually under repair, to the dismay of greenkeepers and golfers alike. Apart from sound fencing in vulnerable areas, rapid repair of damaged turf and humane control methods, there is very little that can be done to deter turf predators, especially where a course borders heathland.

The heavy, prolonged rains during last winter brought drainage problems to the notice of many turf professionals, with run-off, blocked pipes and outfalls, surface ponding and = 20



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Right: Suitable for removal of thatch and dead material across large, open areas of turf, the Wessex grassland chain harrow comes in 8ft and 9ft (2.4m and 2.8m) working widths to suit tractors of 20hp and 30hp respectively. Both models have folding wings for transport and have adjustable tension chain links to suit conditions





19 **soggy** patches highlighting those areas where remedial treatment is needed. Summer is the time to clear ditches and drains, although excavations are best left until the autumn. If the greenkeeping staff do not notice a drainage problem, they can be sure that any golfer who has to retrieve a ball from a puddle will quickly bring it to their attention. For that reason, Smith advocates that all fairways be walked regularly through the year by those charged with their maintenance. An even better solution is to play the course regularly oneself.

Most surface and sub-surface aeration and deeper drainage work is left until the spring or autumn when the need is greatest and it is hoped that the soil will be in the most receptive condition. However, there are certain aeration treatments which are more effective if carried out in a drying soil rather than one subjected to wetter spring or autumn weather. These include sub-soiling, moling and slit drainage, where shattering of the compacted sub-surface layers can help dramatically in the percolation of surface water. Great care needs to be taken, however, to avoid work which leaves slits which open up as the soil dries out, producing gaping holes which will be = 22





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 $20 \implies$ difficult to repair. Surface aeration should be confined to the use of solid or chisel tines in the summer, although a top dressing of sand or sand-based compost will help reduce the level of visible surface disturbance, particularly when verti-draining or spiking to depth on greens approaches or heavy traffic routes on the fairway. Sand top dressings can also be most beneficial in improving the drainage efficiency of heavy clay soils.

At all times, one has to be aware of possible disruption to play and ensure that the work carried out will have positive results which justify the need to move onto a fairway during the busiest time of the year. Of all the regular summer maintenance work required on fairways, mowing will be the most frequent and important on many courses. Grass should

A FAIRWAY TO GO

never be allowed to grow too long. Aim for a height of cut of between 14mm and 19mm (0.5in to 0.75in), removing about one third of the existing growth at each cut to achieve the required length. Correct mower settings and maintenance are vital for even, healthy grass growth, with all cylinders adjusted to the same height and the cutting edge keen and true to the bed knife.

There are few better sights than a fairway evenly striped along its length. Apart from the cosmetic appearance, striping can help emphasise contours and the shape of the fairway, helping golfers with their game. "It's a fact that fairways can be neglected due to pressure of work on other parts of the golf course," points out Smith. "However, with just a little attention to the density and length of the grass, its nutrient requirements and aeration needs at appropriate times of the year, there is absolutely no reason why one's fairways should not gain the level of praise normally reserved for greens.

"Golfers also need reminding that a divot cannot replace itself. Someone has to do it, preferably the person responsible for its removal."

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The Dean, New Alresford, Hampshire SO24 9BL. Tel: 0962 733222 When I came across the term water farming, it immediately conjured-up thoughts of a country tale about a bunch of yokels who, one bright moon-lit night a couple of hundred years ago, were discovered raking the surface of a large pond, near Devizes, Wiltshire, with good old fashioned, man-size, wooden hay rakes.

Challenged for an explanation by a mounted Excise Officer who happened to be passing (as the result of a tip-off from some local 'grass' who evidently was not welcome in parochial circles) the leader of the group, no 'yokel', replied by saying; "We'm only tryin' to rake this yer moon in off the water, Maister."

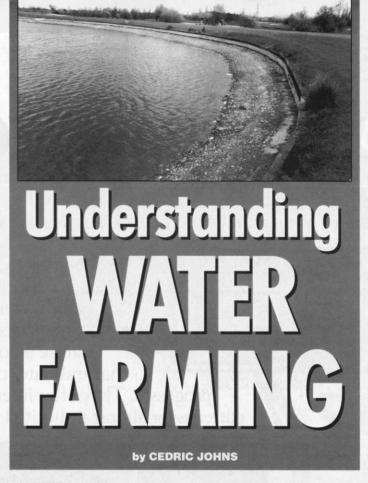
When told that it was the moon's reflection they were attempting to reach with their rakes, the yokel's spokesman shrugged his besmocked shoulders, smiled disarmingly and so it is said, answered with, "Thank 'ee fer tellin' us zur, we were a-wonderin' why we couldn't budge 'ee!"

Shaking his head in disbelief, the Excise man rode off into the darkness reflecting that he had been the victim of a fools-errand. In a way, he had. After he had gone the yokels set-to with their rakes to haul up barrels of contraband hidden in the depths of the pond. Not only did the locals get their booty, they carved themselves a niche in the history of the Shires. From that day, all Wiltshire folk became known as 'Moonrakers' – but I digress...

Water farming? My Oxford dictionary reveals that the term can be related to 'A tract of water used as a preserve...' For what, I wondered. Fish, stated the dictionary, oysters or perhaps, I thought, watercress. No, that wasn't it, so I asked my friend, Robin Hume, for clarification.

Now as some of you will know, Robin is top man at Turf Irrigation Services and as such, most of his working hours are spent planning water management schemes around irrigation systems, mostly for golf courses.

"Water farming, ah yes, interesting subject", said Robin. "It's all about water conservation or rather the practice of farming (management) water resources by the collection of surface run-off or similar sources into controlled channels – like a drainage system – and preserving or storing it in a suitable reservoir. "Farmers have been



doing it for years and we have adapted their ideas to help overcome the problem of water shortages, especially on golf courses."

"What with more and more golf clubs investing in automatic watering, the changing patterns to much drier weather in parts of this country, and the clamp-down by the National Rivers Authority on the use of water supplies, we have been forced to re-assess the whole situation", he told me.

Legislation can be interpreted in many ways but as Robin sees it, any water currently running into ditches, streams, lakes or reservoirs – or percolating through the soil to underground aquifers – is deemed to belong to the nation. In other words, it is considered (by the legislators) to be a natural asset and, as such, its use is controlled by the NRA.

"However", said Robin, "Any water that is collected before it reaches a water course or is absorbed by the soil can, as I understand it, be utilised by the landowner, (in this context, a golf club), for subsequent use without need for a licence".

In effect, water farming or the collection of run-off forms a valuable supplementary source of water for topping up existing lakes or reservoirs where normal supplies are marginal relative to the seasonal needs of irrigation.

Conditions have to be favourable. Because this method of collecting surplus water is very much dependent on natural rainfall, it is important to understand that it is also dependent on topography. There must be sufficient high ground on a golf course to generate worthwhile run-off.

Soils also play an important role. Limited drainage and heavy soils which quickly become saturated create the best conditions for runoff. Light sandy soil or soils containing a high percentage of gravel are not so helpful – unless extensive pot drainage has been installed to collect and channel surplus water. Alternatively, golf courses covered in densely cultivated turf grass or where large areas of compaction are present provide suitable surfaces for the generation of run-off, even on lighter soils.

Mind you, the practice of water farming is not just confined to trapping surface water. Gary Parker, who heads-up the irrigation business, ISS, in the southern counties, has demonstrated the potential value of collecting rain water from roof top guttering. While completing work on a newly excavated reservoir on a course in Surrey, he spotted several out-buildings clustered close to the excavation. Having mentioned the thought that the roof tops could prove to be a source of additional water for the club, he decided to prove the point. So he rigged up a temporary pipeline linked to the gutters. Gary knew that rain had been forecast, he later told me, but even he had not anticipated the bonus of 4-5mm which fell in a matter of hours. Well it did, and it contributed handsomely to the contents of the reservoir. Apparently tens of thousands of litres of water were successfully channelled from the roof tops via the makeshift pipelines.

Having said that, I am reminded that the Cotswold Edge club took advantage of a small spring on their course to provide a good source of water for their reservoir. Instead of continuing to let the spring rise and trickle away, they dammed the area to create a small lake. Once established, the water was (and is) pumped into the club's reservoir proper and used for irrigation.

Another example which comes to mind relates to the Barton-On Sea club, overlooking the Solent, on the Hampshire coast. With the approval of the NRA, a small stream has been channelled into the clubs recently constructed ornamental lake cum reservoir. For years immemorial, the stream ended its journey to the seas by simply soaking into the porous, crumbly cliff-top soil. In doing so, the stream probably contributed something to the long running saga of cliff erosion along that stretch of coast - but not any more!

Back to Robin Hume – "When considering the economics of water farming coupled to storage facilities, a club must begin by establishing whether or not licence will be granted for summer abstraction from a secure source." he says. In his experience, Robin told me that southern and eastern parts of the country will not be granted licences unless substantial winter water storage facilities are available.

It is therefore essential that any club wishing to be self-sufficient should investigate the possibilities of creating a reservoir and filling it with winter rainfall. This in turn can then be supplemented by farming run-off or similar sources of water.

Talking of self sufficiency, Robin Hume's biggest water management project to-date was that of masterminding the multi-million pound scheme completed at The Belfry, at the back end of last year. There, winter water is diverted from a stream into the Brabazon's three inplay lakes and cross-fed into a new off-site reservoir holding 40 million litres of water. Even on a project of this size, water farming - purely incidental in this particular case helps. According to Robin, the collection of rain falling into the lakes and reservoir is about equal to that lost through evaporation.

When thinking in terms of the volumes stored at The Belfry, that is not so much moonshine as a sub-stantial amount of water.

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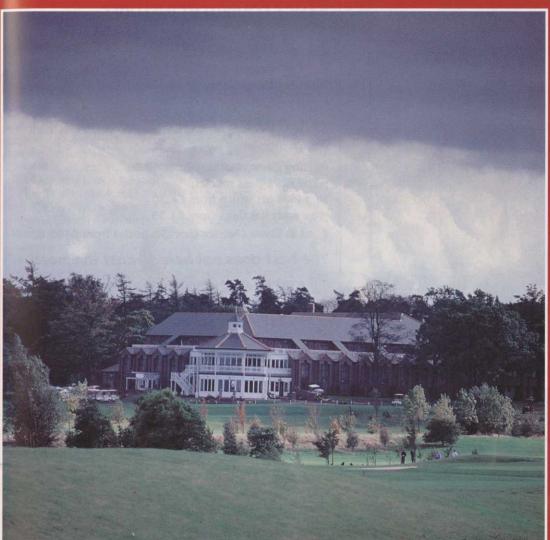
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GREENKEEPER INTERNATIONAL May 1993







Derek Ganning BEM (left) isn't just preparing his course for the Ryder Cup, reckons DAVID WHITE. With golfing passions running high, he may just as well be getting ready for World War III rom 1927 until the mid-eighties it smouldered and spluttered, on occasion appearing in danger of dismissal by the Americans as of little consequence. For the better part of fifty years it might as well have been played in Outer Mongolia for all the interest shown outside the minuscule bunch of rah-rah's who waffled on about it being character building, an exercise in stiff-upper-lipmanship, of being 'good for golf'! There's no doubt about it, a huge amount of piffle has been written in the past about the Ryder Cup matches generating international goodwill between the Yanks and the Brits, when in truth the British until 1985 had



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AD REF

402

26

£2.5m spent on major redevelopment

25 → been well and truly stuffed far too often, winning just three times in 25 attempts over 58 years.

What changed it? Well perhaps the Nicklaus gift to Jacklin of a two or three footer for a tie at Royal Birkdale in 1969 set folk thinking that perhaps there was something in this pukka sportsmanship caper, though I like to think that there were two, maybe three, other factors that swung the world into Ryder Cup ferment. The rule change to include European players, first in 1979, turned the hitherto exclusively Brit bashing into a much more evenly balanced contest. The captaincy of Tony Jacklin, our first modern super-hero, who time and again inspired 'our' players to unknown heights and by so doing turned the tables, gave us back our dignity. The third? Well there may be some who will scoff, but I fancy The Belfry, essentially the Brabazon, turned from her early days of bitch teeny-bopper into becoming a voluptuous princess, evolving in the process into a national monument to winning.

Derek Ganning, B.E.M., has been course manager at The Belfry since its very inception, masterminding a host of 'majors' and two hugely successful Ryder Cup matches. When I visited him recently he was in the throes of preparation for what promises to be the biggest sporting spectacle this side of Mansell's Formula One World Championship bid. There is no doubt, the world's hottest ticket for 1993 has again seen Ryder Cup mania reach fever pitch before a ball is struck, and Derek is leaving nothing to chance in his personal bid to outdo anything that has ever been done before.

Criticisms voiced in the past, not of Derek's management regime but of the course itself, were of a constructive nature, a sort of 'wouldn't it be nice if we had such and such', for without exception folk could see the potential, admired David Thomas's design concepts and wanted the place to be successful. Granted there were early construction specifications that justified adverse comment, the rootzone structure in particular, but nothing that couldn't be put right. It is to the great credit of De Vere Hotels, owners of The Belfry, that they have taken such critique on board to the extent of investing something like £2.5 million in a major redevelopment programme, the whole Belfry arena now a cauldron of activity as workmen and technicians put every effort into dressing the princess in her niftiest party clothes.

Before talking me through the new developments, Derek spoke of the pride he and his team have in being able to boast a near 100% complement of British made machinery, mostly sparkling new Ransomes kit supplied by ET Breakwell and finished in traditional British Racing Green. The patriot in him went further by suggesting, "it wouldn't do for us to be seen waving any flag but the Union Jack and I believe that by opting for this fantastic Ransomes machinery we'll be seen as having a two-up match advantage before the first blow is struck, certainly in the eyes of the Americans."

Things have changed since the Ryder Cup first was staged at The Belfry in 1985, for, as Derek recalled, in those days the Belfry greenkeeping team worked in unison with the PGA's Tony Gray and John Paramor, a time when the PGA European Tour was in its early stages. They learned one from each other, bouncing ideas and suggestions back and forth, taking on board the best of both sides. It all seemed good fun, nothing was impossible, there was no measurable intensity. Came the time for TV cameras to roll and the world was suddenly taken aback – could this really be the course that everyone though of as 'ordinary'? There were flowers and shrubs in profusion, there was pattern and definition in cutting regimes that had never before been seen in





Bridge building at The Belfry.

Above: from this...

Left: ...to this

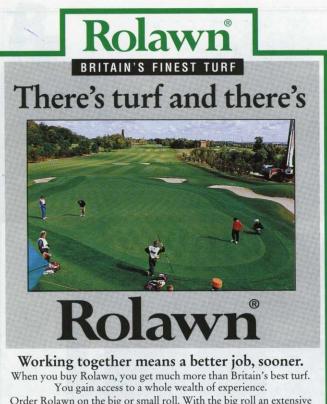
Below: ...to this



Britain, certainly not on TV, something like 80,000 trees had been planted, this was course presentation like never before, a show-place on view to the world.

The 1989 event saw still more changes, the event even bigger, American interest hugely increased - they wanted the damned cup back! In Derek's view the event had intensified somewhat, an agronomy team headed by Bruce Jamieson and George Shiel was appointed and tournament condition regimes were more rigidly enforced. This regime has grow apace and for 1993 the PGA European Tour's new agronomy department, linked with IMG, have an even closer involvement, with Derek, Bruce Jamieson, Richard Stillwell, Mike Tate, De Vere's Mike Maloney, and the new head greenkeeper and Derek's right-hand man, David Norton, holding regular meetings to discuss such things as throughput of golf, capital projects to be instigated, deadlines that must be met. For the first time ever the course will shut ten days prior to the Ryder Cup, a move that pleases Derek in that it will allow last minute tuning without the problem of club golfers encroaching and holding up activities.

Work in progress includes a new raised teeing area 🗯 28

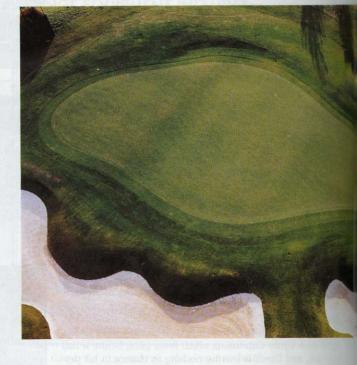


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A Rolawn green at The Belfry



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27 - for the 600m² driving range, a new teeing area and levelling of the 450m² 10th tee, a new vehicular and pedestrian path between the 7th tee and green, renewal of irrigation pumps, including sump, pumphouse, tanks and aeration pumps on lakes at five, six and eighteen plus specialised chemical treatment. Several bridges are being rebuilt and sleeper linings applied to water courses, trees are being removed to facilitate spectator movement, thousands of yards of new turf will be laid to the 8th fairway and driving range, plus turf displaced by new reservoir pipelines. On the Derby course installation of 18,000 litre effluent storage vessels has taken place within the hospitality area.

All this may seem more than enough, but all greens (now pure bent Cobra after being sown originally with Penncross) additionally have been intensively Vertidraining with tines to a depth of ten inches, slit at four inches, followed by heavy top dressing using 80 tons of an 80:20:20 (sand/peat/loam) mix. Further, the construction of an 11 million gallon capacity reservoir is complete, essential in safeguarding irrigation on the course at all times and dramatically increasing lake levels to

allow extraction at a higher and therefore cleaner level, avoiding silt and eliminating any possible recurrence of anaerobic conditions on the greens.

One would expect someone honoured by the Queen to be pro-British, and Derek Ganning, holder of the British Empire Medal, had some pretty firm comments to make on that subject: "I'm certain that my award was due almost entirely to my having a wonderful team around me. My crew's as good if not better than any in Europe and I am immensely proud of them, every one. With the addition of several bright young HND students on short-term placement I'm truly blessed." Will everything be alright on the day?, I asked. "No doubt about it," came the emphatic reply.

I cannot subscribe to the view that the Ryder Cup is just another game, nor do I see it as 'just a friendly', played for the honour of the old country and all that eyewash. The Ryder Cup in 1993 will be staged like a Third World War, for it's we Europeans who now want the damned cup back, nursing the feeling that 'we was robbed' at Kiawah Island.

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question

s there a greenkeeper who does not at some time encounter one problem or another with his greens? Whether it is a disease outbreak at specific times of the year or one of maintaining good drainage properties, the weed grass *Poa annua* is more often than not a dominating factor.

Fertiliser companies advertise their products as being the most suitable for use on fine turf, from slow-release to organic formulations, and naturally enough they are promoting their own materials in a very competitive market. However, it is the golf course manager who has to make the decision when it comes to purchasing. Full order books may bring joy to the supplier, but I find myself wondering, what about the fine grasses?

There are I feel still too many course managers who do not look closely enough at the composition of the fertilisers they use. Questions which should be asked are • What is the source of the main element nitrogen? • What percentage is of inorganic origin compared to organic? • Is there a slow release element and if so, how is it activated? These are just a few that spring to mind, though precluding the obvious but often overlooked critical point • What do the indigenous fine species actually need? In my view they certainly don't need phosphates unless one is dealing with pure sand constructions or if the rootzone shows an analysis figure substantially below 30ppm.

Fertiliser treatment for fine turf requires nitrogen only. This trueism, established at the beginning of the century, still holds firm today. It always will, for the requirements of the fine grasses naturally remain the same and are in any case much more to do with physical rather than chemical aspects! The nitrogen form is so critical nowadays, especially with the wide array of products available.

Little and often, has been quoted on numerous occasions in books on greenkeeping since the earliest times, suggesting the use of sulphate of ammonia (21%N) [inorganic] and dried blood (13%N) and hoof and horn (13%N) [organic] as the standard ingredients. Iron sulphate can be added as required.

Mixing your own fertiliser can be very cost effective and gives the satisfaction of knowing exactly what and how much is being applied. The mixed ingredients are bulked up with compost to facilitate spreading, which is done by hand and switched in behind.

Iron sulphate has been used for years in small doses, particularly in autumn and winter to harden the grasses, for disease control and for lowering or maintaining suitable acidic pH levels. It was also used in the days before selective weedkillers, mixed with ammonium sulphate, for weed control during the growing season. In my opinion, all the modern technology and new fertilisers coming onto the market cannot create fine turf.

There are a wide variety of fertilisers available to the course manager of the 1990s. We have slow release forms and even controlled release. These forms, however, take any control of turf condition away from the manager, are irreversible, and can have variable effects as they are activated by soil temperature, moisture levels and (to a much lesser extent) by bacterial life.

Preparing fine golfing turf for major calendar events and tournaments is impossible with such products, as the requirement is for any previous nutritional effects to have waned prior to the event. It goes without saying that anyone working on a corrective maintenance programme seeking to produce a dominance of fine fescue and/or bent grasses in favour of *Poa annua* will not do so by using slow release or controlled release fertilisers!

I say stick with the old-fashioned style using the materials I have mentioned:

For example, if we want to apply a 1:1:1 mix

		23.5 Kg N/ha	2.35 g N/m2	
50 Kg hoof and horn:	x 13%N =	6.5 Kg N/ha	0.65 g N/m2	
50 Kg dried blood:	x 13%N =	6.5 Kg N/ha	0.65 g N/m2	
50 Kg sulphate of ammonia:	x 21%N =	10.5 Kg N/ha	1.05 g N/m2	

Total N Mix in % = 21% + 13% + 13%

3 = 15.6%N

With proprietory mixtures, which contain 50% carrier to assist conditioning and spreading, the analysis becomes 8: 0: 0.

Of course not everyone prefers fine turf because it is not as easy to maintain as annual meadow grass turf. To understand the maintenance and development of fine turf it is worthwhile going back into the history of greenkeeping and the game of golf in order to gain invaluable insight into previous mistakes and misconceptions. Naturally, people will say that you can't apply exactly the same treatments as the answer to every golf course – and they are right. However, the basic principles remain the same: the difference lies only in how they are implemented, if fescue/bent turf is the aim!

But I believe that many golf course man-

agers don't really want to fight against annual meadow grasses, mainly because they have no experience of how to successfully achieve the change over, what the effects on the turf will be; how to promote the fine species; the different stages the turf will go through or an effective overseeding programme, to name but a few. Consequently they are not in a position to prepare a policy document describing the processes, anticipated timings and associated effects on surfaces of the treatments involved, or indeed the advantages in the long term, to put in front of their club management, let alone the full membership.

To save face, avoid the hassle and possibly preserve their job they take the easy option and continue to promote and maintain annual meadow grass turf, often on courses which in earlier times were of vastly superior composition and which even today may show a high percentage of fine perennial grasses on fairways and even green approaches, yet not on the greens themselves!

I have even heard of courses where the members prefer to putt on the winter greens, which are in use regularly through the winter period, cut out of the fairway, rather than on the main greens! The reason is obvious and it brings us back to grass species. There is something fundamentally wrong in this scenario and it is not too uncommon. The final selfincrimination comes when turf managers of

> the annual meadow grass school purchase grass seed composed of the same fine perennial grass seeds which they vehemently claim are 'impossible to succeed on my course!'. Why don't they spread the multiplicity of seed collected in the grass boxes each day if they don't have enough of the weed grass already in certain areas, instead of wasting their employer's money on what must be destined to be futility under their turf management system? Good quality seed does

not come cheap!

I sincerely hope we will be maintaining more fine turf on golf courses in 20 or 30 years time, but the present reality indicates a totally different line, (with a few notable exceptions), despite what might be written or said to the contrary.

■ The author, Arne van Amerongen, spent several years working as a course manager in Europe, specifically in Germany.

He trained at a GTC approved college in Great Britain and was nominated for the Toro/PGA European Tour Young Greenkeeper of the Year in 1990. He is currently employed at Carnoustie Golf Links whilst studying for an HNC in Golf Course Management. A new series written specifically with a view to inviting comment or counter opinion.

BONES OF CONTENTION FUTURE OF THE FESCUE

he desirability of Festuca rubra ssp. commutata as a major component of the finest turf has long been held as dogma in the teaching of greenkeeping and, by and large, still is today. Seldom is a top quality seed mix offered without it, and the most expensive cultivated turf usually contains one or two of the top varieties.

And yet, nearly everywhere in the country, difficulty has been experienced in retaining the fescue content of greens and on many inland courses it is absent altogether, the sward constituents being bent and annual meadow grass in varying proportions.

For sure, some management regimes employed have not helped the situation, though in a hopefully enlightened age sound practices - plenty of aeration and careful control of water and fertiliser application seem to be altering sward balances very slowly, if at all, in favour of the finer grasses. As a result, many greenkeepers have had to become experts in pandering to the whims of Poa annua, and are notwithstanding capable of producing excellent surfaces, albeit limited to certain times of the year.

So, is the production of the traditional fescue/bent sward still desirable? More to the point, when greenkeepers seem to be swimming against the flow in trying to discourage meadow grass, is it worth the effort?

Some years ago, Nick Park wrote an article outlining what had been done at Lindrick Golf Club to herald the return of fescue/bent greens. He went on to give in some detail an appraisal of the resilience factor of the latter, which concluded that fescue/bent greens were more receptive and gave the best and most consistent rewards to the well-struck shot. The resilience was ascribed to the fact that fescue/bent greens will remain firm, whereas Poa annua dominated greens are usually either soft to the point of plugging or too hard to hold a ball. Perhaps these observed tendencies have more to do with thatch, poor drainage and overwatering than the sward constituents, but certainly when the engine room of a densely Poa annua sward gets going in the height of summer, evaporating water at a suicidal rate, it then is very easy to err on one side or the other with the irrigation programme.

This difficulty apart, another argument for the traditional green is that attempts to produce a top quality surface with Poa annua is in terms of both time and money an expensive hobby, trying alternatively through the year to thin it when it's thick, boost it when it's thin and to fight off the inevitable ravages of fungal attack. Add this to difficulties of presentation - profuse seed head production and the patchwork quilt effect noticeable as

fertiliser is expended - and a case must then be evolving for a more consistent performer.

It is worth mentioning at this point that as an alternative the creeping bent monostand has been introduced in the UK. The pros and cons of this alternative are already a longrunning bone of contention, and this article is concerned with the virtues, or not, of the fescue

The most important desirable qualities of the fescue have been held as the ability to withstand and recover from drought, and tolerance of heavy wear. Of lesser importance these days is the classification of fescues as 'poverty grasses' - able to withstand low levels of nutrition in inhospitable acid environments

It is in the 'heavy wear' area that thinking on the performance of the fescue may have to be revised, and it would be relevant at this point to look at new courses/constructions. Eighteen properly prepared sites with suitable free-draining rootzones, irrigation system etc., are either sown or turfed with a fescue/bent mix. The usual moratorium is imposed while the turf establishes. What happens next varies according to the expectations of the management, but you are still dealing with a two-headed coin - either way it's tails you lose for the fescue.



If the management decides to open six months later like some amphetamine-soused drag racer, going from 0-30,000 rounds in six months, then at the end of the first season fescue content will be rapidly in decline and some of the bent may have gone with it, leaving areas of zilch. If, on the other hand, traffic on the course is increased gradually from a low initial number of rounds per annum, then the fescues may take four or five years to pack their bags before waving the meadow grass in.

The above may been seen as a very gloomy scenario, and one which decries the efforts of some excellent course managers on new sites who do not have Poa annua (yet?). For the rest of the poor devils who have inherited established greens demonstrating 50 years of excellence in the growing of Poa annua, what hope? Perhaps it is time for some contentions on how we may help ourselves with both new and existing sites:

i. Existing greens are unlikely to be surrounded by an abundance of flowering fescues so seed importation would be required. Overseeding should be helped by being carried out when there is maximum time to establish, under conditions of reduced traffic and least opposition from vigorous Poa annua. This suggests seeding in the autumn, in the hope also that a slightly longer winter sward will offer some protection to emergent seedlings.

ii. On new sites the maturity of the fescue plant is important. If it has grown to a decent size before being 'trained', it will have a better chance of withstanding wear. So with new constructions, perhaps turf is a better option from the outset, unless a longer maturing time is allowed.

iii. It has been suggested that fertiliser applications should be of the very slow release type. Forced growth is anathema to fescues and the plant will not take up nitrogen into the leaf as would, say, ryegrass. Applications of quick release fertiliser therefore favour anything but the fescue.

iv. Steps should be taken to ensure that no single area of the green is punished beyond its limitations. Fescues will not return of their own accord once gone. This may be helped by frequent hole-changing and, failing all else, limiting play.

v. Consideration should be given to the timing of any hollow-tine operations. If there is a clear spot Poa annua is always ready to fill it, though more readily at certain times of the year. So make the odds favour the fescue. vi. If greens are new constructions, wear tolerance will be helped by making them as large as possible.

You may say at this point - but of course we've already tried this – and it doesn't work? But have we tried hard enough? A con-

cluding contention might then be: If you take a four hundred square metre fescue/bent green from the seaside links, rootzone and all, deposit it next to a suitable drain in some inland park and proceed to manage it in customary inland fashion, in five years you will have a Poa dominated problem. If, however, you take an eight hundred square metre etc., etc., and manage it under the constraints applied above, in five years you would have ...?

■ The author, Tony Howorth, is course manager at Willesley Park Golf Club, Ashby-de-la-Zouch. He is also secretary of the East Midland section of BIGGA.

Are you a fescue fan? Replies please to 'Bones of Contention' The Editor, Greenkeeper International, 13 Firle Close, Seaford, East Sussex. BN25 2HL. Subject to response, an up-date will appear in a future issue.

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Custodians of the COUNTRYSIDE

by DAVID HEMSTOCK

f you didn't already know it, golf is under attack; from a written and verbal assault which will increase rather than diminish whether there is a further 'boom' in new courses or not.

It is of course over the desirability of an increased number of golf courses in the countryside, and to what extent a course benefits or detracts from rural Britain. And it falls upon those existing courses which can be set up as fine, environmentally sound, non-intrusive examples to defend against some of the perceptions that others hold on golf and its venues.

It is an unfortunate fact that the recent activity on construction of new courses does not appear to have particularly helped the cause because of the inadequate quality control that has applied during the boom.

Any consultant such as myself who visits a wide range of golf courses, and particularly the recent spate of projects which can be said to range from the 'insensitive' to the downright disastrous, cannot help but worry about the defence of such schemes in future as prospective new projects are compared to them.

The battering that golf development is taking from the financial world, for whom the Midas touch has been replaced by the lepers', is linked to the struggle to show environmental compatibility to those concerned.

A long-term viewpoint has not featured in many new courses. The massive earthworks that have helped snuff out financial viability of some, are in a way the impatient developers' device allowing the claim of 'a major championship course', the instant and impressive formation of a spectacular piece of saleable real-estate. The scale of some of the work is awe-inspiring, or frightening if you are viewing the butchering of a childhood held scene of the local countryside. But the fact is that some of our true, actual championship courses are what they are through age and maturity, through woodland, water and ice-age sculpting of the land rather than as a result of major civil engineering work. Apart from breaking the bank on capital



No bunkers allowed - or needed - on this proposed Midlands course. The greenkeeper will follow an established ecological management strategy

costs, the ground conditions are likely to be badly effected for an awfully long time (there is a more concise, less polite way of describing it) which may put your debenture holders in the Clubhouse rather than on the course. And to top it all, the environmentalists, which are actually becoming 'the public', are able to compare golf course construction to opencast mining or quarrying; with the same rape-of-the-countryside tags.

The big schemes have had all the publicity; bad publicity recently. They have set the tone in the general public's mind of what golf courses are about; development, 'bull in a china shop' approach, private clubs behind whose gates untold crimes against nature are committed.

This sort of misconception or lack of understanding fuels the type of situation which appears to be at its worst at present in parts of Germany. To give one example, a greenkeeper friend of mine who operates there in a very 'green' way; integrated pest control, replacement of ornamental trees with indigenous, revitalising choked-up ponds and woodland, has a running battle going on with local environmentalists who would rather he cut fairways above daisy flowering height (I don't think they have extended this to putting greens, yet).

Some of the German planning policies applying to golf course development such as the setting aside of areas purely as nature reserves in addition to that required for the course are interesting, but the inference is that these are needed to counteract the damage done by the course to the environment; a pay-off.

The planning authorities are important in controlling what happens in the countryside but have in the recent past been fairly slack in their control over golf developments. Now they require landscaping details, and some sort of information on earthworks, but further constraints and controls are to be expected.

However, what happens over a long period to the development of a course is pretty well out of their hands. It takes more than a small amount of consistent self-control by a club to avoid the over-ornamentation of their course and even over-manicuring, which takes a golf course away from countryside on which golf is played, to an extension of the formal garden type of landscape.

With time, the evergreen hedging trees, other ornamentals, fountains, paths, walls and sanitised water features do tend to give courses a rather artificial, urbanised feel. Plenty of ammunition for those who say golf = 34



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'The truly 'green' golf course will now have a water storage or perhaps a re-circulation system, preferably with a means of aeration to keep the water clean'

33 ➡ detracts from traditional landscapes.

It's not that a golf course can ever look anything but a golf course; greens, tees, markers and flags make sure of that, but some do appear to be at odds with their surroundings, and are probably less useful to their environment than they could be. Useful in terms of the habitats and diversity that could exist, in an area by its nature protected from the annual upheavals found on most farmland, for instance.

Although most golfers may not be capable of or interested in identifying plants and birds, I believe that they appreciate the more natural surroundings, perhaps even subconsciously, and 'feel' that they are on a course with an active environment.

Back to nature

So, if a course provides a better golfing experience and makes non-golfing friends if it is integrated with the natural countryside of the area, how can a course be constructed and/or managed with as an aim? In the first instance, on a new development, the Planners should ensure that the project is set up with more than hollow promises about the future treatment of the landscaping aspects. But once they are off the scene, it is the Club or course managers who should set up a few golden rules, or a policy setting out long-term what the nature of the course is meant to be, and what is and what is not to be allowed. The less Draconian it is the more likely it is to be adhered to over a long period, human nature being what it is.

The Club's management and development policy might contain clauses such as:

• A list of natural tree species for the area to be used on the course.

• A programme for woodland management with certain aims on species and spacings.

• Preservation of areas for wildlife only.

• Limits on the amount of hard edging to ponds and watercourses, preservation of varied conditions within watercourses and around ponds.

• A description of what the natural conditions of the course and surroundings consists.



This new course near Stratford suffers more from previous agricultural practice than any design or construction effect. The foreground shows an important 'wildlife corridor' – a hedge; one of the few features on the original land, but a key to rejuvenation of the new course environment

• Specifications for various features on the course.

• Restrictions on environmental pollutants of all kinds; including garish course accessories, loud clothing, loud Americans!

But seriously, the basically transient nature of the course management team can be usefully under-pinned by something which helps keep things progressing along the right lines.

This sort of information ought to be presented by the person whose philosophy shaped and formed the course, the designer or architect, as a hand-over document or operating manual. If not, then the initial management team could take pride in having set up the course with a written basis or reference. Some of the more eccentric additions which can appear during particular trends or phases of management might then be avoided, preserving both the original intended nature of the course and the ecology around it.

Construction

Apart from the earthworks and landforming considerations already covered, there are other green aspects which might be important at the development stage.

Preserving any old ponds, hedges left over from the ravages of grant aided agricultural defoliation, etc. will give the course a head start with re-establishment of wildlife. Having come across even Planners with reservations on the desirability of water features and tree numbers on golf courses it is worth remembering that prior to agricultural hyperefficiency the land was littered with ponds and ditches for stock watering and the like, and the more open water we restore the better. And of course almost any land below 3,000 feet would have once been thickly wooded in the UK.

Bunkers are perhaps the most visible labels announcing the presence of a golf course, but there are courses which manage without, using their own indigenous natural hazards, notably rocks, water and trees instead. Sharpedged, bleach-sand filled and sore-thumb like, bunkers can be very intrusive, to golfer and non-golfer alike.

The truly 'green' golf course will now have a water storage or perhaps a re-circulation system, preferably with a means of aeration to keep the water clean. Apart from using water efficiently the alternative cost of irrigating with mains water is becoming, and must continue to be frighteningly expensive.

Although theoretically water recirculation and aeration helps to prevent nitrate pesticide runoff pollution, it is fair to say that on the golf course any such pollutant is far more likely to originate from adjacent farmland, inputs of such chemicals being enormous and more powerful compared to the course.

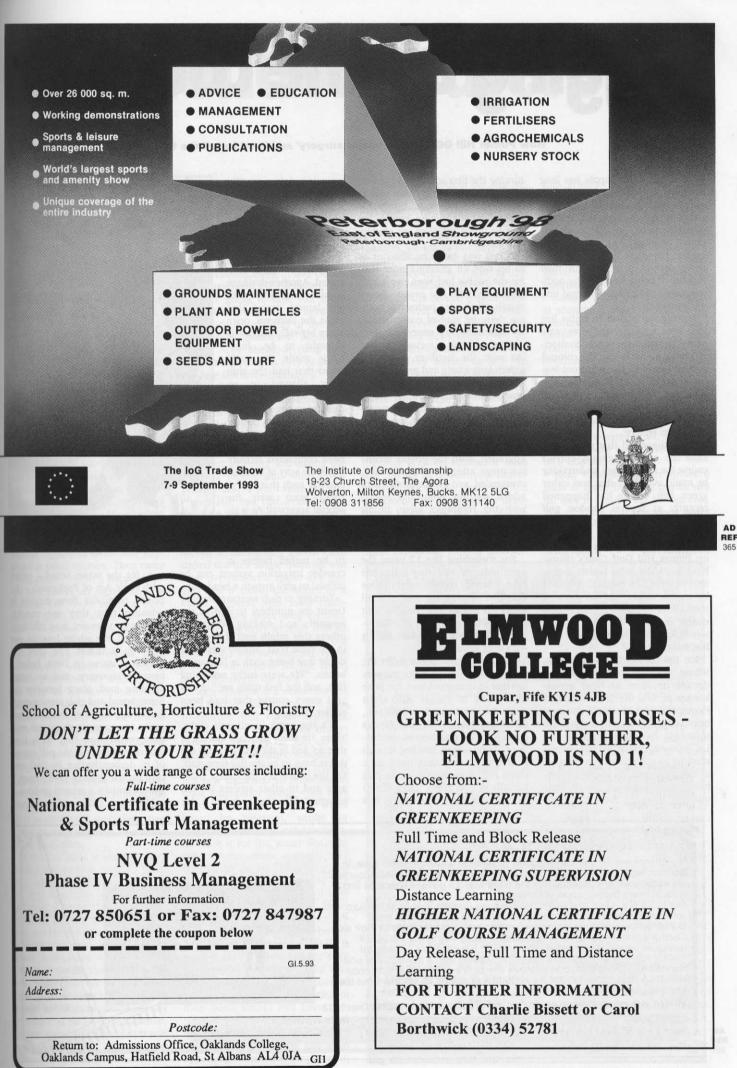
Maintenance

The final point following on from the latter is that relatively little chemical input does go into a typical golf course, but there are still possibilities for reductions. I have mentioned previously integrated pest control management, but there is another key factor in keeping chemical inputs to a minimum. Keeping the turf and subsurface conditions in a healthy state ie. by combating those weakening factors that appear on any course; compaction, water-logging, avoidable drought stresses, will make turf more resilient to attack and therefore reduce the need for pesticides.

Compaction and water-logging also inhibit the usefulness of any fertiliser added. An application may even be washed away with the first rain if the surface does not allow absorption. Fertiliser wasted in these conditions affects the greenkeepers turf management programme but also, of course, has to end up in a place where it was not intended to. Soil analysis helps to trim fertiliser amounts to the minimum required, soil management helps to use the amount applied to the full.

I have left out a lot of features which could be identified as being part of the 'green' golf course in this article, but in a way I am preaching to the already converted and so that does not matter. Greenkeepers are, like any other landowner or manager, custodians of the countryside generally in addition to managing land for a purpose. And we all have a responsibility to defend golf by our actions.

David Hemstock is an independent golf course consultant.



Digging up the course to

How Pinner Hill GC handled 'major surgery' and lived to tell the tale

L ondon's water supply has long been the cause of headaches and heartaches. Demand has outstripped supply and the ancient piped network, incapable of sustained volume, has on occasion caused pressures to drop to little more than a dribble, with flow capable of being stemmed by nothing more than a finger plugged into a hosepipe.

Putting the matter to rights has long been a priority and after years of deliberation the water authorities have at last begun the colossal task of replacing the worn-out system with a new ring-main, the pipework eventually planned to encircle the whole of London, providing a grid system that will leave nothing to chance.

Logic suggested that where possible the environmentally correct course for such a huge undertaking be made over land that was either green belt or, as has happened recently at several London golf clubs, tunnelled or open trenched through their fairways!

The pretty rolling hills that make up Pinner Hill Golf Club's course have been the most recent recipients of what is a colossal upheaval by any standards, and last month I met Chris Nicholson, the club's course manager, to see how they were coping and the problems they had encountered.

For the record, Chris Nicholson, whose experience includes a decade or more as head greenkeeper at Mid Herts GC., joined Pinner Hill as their course manager only some 18 months before the upheaval, having returned to the UK following extensive experience working in golf course construction at the prestige Vines course in Sydney, Australia, seeing the championship course through from turning the first sod to completion. Though it was not for this reason alone that Chris was hired, his extensive construction knowledge was to prove priceless, as readers will learn...

Chris was under no illusions as to his task on joining Pinner Hill, for the course had been neglected: greens rife with *Poa annua*, heavy thatch, no proper pathways, nothing done by way of construction, no indication of a concerted aeration programme, – a classic case of 'on with the fertiliser, don't the greens look lovely and green.'

Since his arrival the course has been a hive of activity, a new maintenance building erected, clappedout machinery replaced, new tees constructed, drainage improved, full tee/green irrigation installed or upgraded, with the greens receiving mega attention, Vertidrained, overseeded and Hydrojected (with added wetting agent the results with the Hydroject were, in his words 'incredible'). An almost unbelievable transformation is the happy result.

For something like 12 years the possibility of the ring-main has been mooted, though cynics opine that the government waited until water privatisation was a fait accompli before saying in effect – 'right, there you are, get on with it – it's your headache.'

Being the sixth club to suffer the indignation of such major surgery has had its compensations, for prior to arriving at Pinner Hill, clubs such as Knebworth, Mill Hill, Uxbridge, Haste Hill and Grim's Dyke have all experienced excavations of one sort or another, though it is true to say that none save Haste Hill, a municipal course that actually lost six holes, had suffered in such a big way, the 'cut' on this occasion going straight through Pinner Hill from end to end, butchering six fairways and hacking through woodlands.

Work began October last, and the anticipated completion - earth reinstated, Agraflex drainage installed and linked with the lateral drains that cross the fairways, open scars big-roll turfed - is thought to be June. Chris made the valid point that had the club been allowed to go ahead with their own reinstatement, without inevitable water the board deliberations, the work might well have been completed already - but the way of bureaucracy is such that everything must wait for official approval! As it is, the 13,750 square yards of Pinner Hill that have been disturbed have still to be turfed before a

crawler irrigation system can be utilised to give growth a headstart.

Turning to club secretary Jeremy Devitt for numbers to add to the equation and seeking advice for others that might find themselves in the same boat, Jeremy was in no doubt that being sixth in line was a bonus. "We were lucky not being first, and the first thing we did was visit every course that had been earlier victims.

It's the same in all golf clubs, 'there are them that talk and them that do' and in the final analysis the do'ers have to be the full-time staff. On the course it's the course manager and in other aspects it's the secretary. Effectively we had a dry



Chris Nicholson with 'the pipe'

run, for the water board - armed with their Act of Parliament - are bound to advise three months in advance that they are coming. Whatever rumours may circulate, until then, the advice I would give is - do nothing! The club had notice of intent in 1989, before I became secretary, and an initial meeting took place between the water board and club management. Following, the club selected a surveyor to represent them and minutes reveal that they were then interested purely in the golf aspects of it, demonstrating no real concern for the ground, even though it was essentially a ground problem.





keep London watered

again served, a board meeting again convened, but this time we were careful to select a surveyor who had experience in this field, not only with the pipeline situation but also dealing with other clients on the pipeline run. We appointed Strutt & Parker, who are dealing with seven other clients and one other golf course. The immediate side benefit of this appointment was that we couldn't get a dividing rule by the water company and if Strutt's were looking up a point for another client we would get side benefit. Chris visited all the other courses, learned everything of their problems and returned with invaluable information.

Fundamentally it appeared to us that the water board appoint a PR team to make the first sortie, a sort of 'we'll do this for you, we'll do that for you' soft approach that can possibly give a false sense of security. That's fine, and any club would leave such a meeting feeling that things would be OK. However, we were advised to pay attention to various aspects of what had happened at other courses. Then came a long pause - nothing happening and they hadn't vet appointed contractors. The three months were running down and we became anxious: there were society bookings, fixtures to be ratified, to say nothing of the work on the course. Then a contractor visited us direct to view the site and we went out of our way to be accommodating, making sure we were available. We looked after them and we helped them. In hindsight this was to our advantage as they subsequently won the contract.

Our key area of concentration was to be co-operative: there was nothing we could do to prevent the work, so we helped by guiding them toward local specialists, tree surgeons and the like, we were totally supportive.

In the meantime it was necessary to do some serious forward planning, advise members - in a positive way - and this was done. The promised starting date came and went, no activity took place and then suddenly a site meeting was called and we were confronted by a whole new team - both water board and contractors - the operators. Apparently the contract had been granted on the basis of a straight run, with no 'single fairway at a time' as had been intimated, and we ended up with some tough negotiations taking place in the woods. There was no chance that

our board members could be present, but Chris and I could - and it was very important that we were and we had our surveyor there too. Immediately we conceded the 'straight through run', on the basis of wanting to be co-operative, whilst wanting them in and out as fast as possible. We conceded, but said 'it's going to cost you more because we're going to need six temporary tees instead of the one originally bargained for!' Advice to others? - be ahead of them and think smart, which is easy to say as we were not first - thankfully".

At this time Chris spotted an obvious 'gaff – the contractors proposed to charge through without prior stripping of the turf. Being on clay and with precious little top soil this seemed criminal, so the club set about stripping and saving the precious topsoil and with a few 'phone calls the word went out that Pinner Hill had turf available for free – on the old boy basis of 'you'll owe us one'.

Once begun, the contractors moved at astonishing speed. Land staked out in a single morning was soon overrun with spider-like diggers and a swath the width of a major highway was soon transformed into a deep, deep channel. Granted that lousy weather took its toll, with inevitable hold-ups, but both Chris and Jeremy expressed genuine admiration for the speed and efficiency of the crew.

Compensation is a word charged with emotion. Each party will seek to protect their corner and here again Jeremy stressed the importance of keeping on top of the problem. For smaller amounts roping off tees, temp. tees, numerous new signs and all other immediate emergency needs - the club sent claims direct to the water board for payment, whilst for larger amounts, eg. reinstatement, the rule is for the water board to contract the work - which they wanted to do by simply digging out, backfilling and seeding the scar! Again Jeremy stressed how essential it is that the club know who is doing what and to ensure (by seeing that proper experts are included in the tender list) that it is carried out by experts rather than by any old contractor - the rule always is to be on guard and defend your corner. By digging in their heels Pinner Hill have won the turf versus seed battle (including roughs) and have seen an expert who they know and trust appointed to reinstate the ground.

"There is no profit in this, but the secret is to make sure there is no loss", Jeremy continued. "I'm almost certain that other clubs have lost out, most of them. For example, we would not have had a drainage contractor in unless we had pushed for it. Right at the onset I established that Chris should be the on-site project manager and with his vast experience this has proved valuable beyond measure. He dealt direct with all site personnel and if any problem could not be solved on site we established that every single communication be via our surveyor, no direct letters from us - we established that principle from day one.

Other attributable losses include green fees, pro shop sales and lessons, catering and bar revenue, together with an important issue that has yet to be resolved, lack of facility. We've not yet reached agreement, but as a basis for negotiation I have used the loss of 17% in course length over the winter, 24% in season, and used that as a figure across our playing membership. Whether we win or not I don't know, but we will have to show that the sum is either returned to our members or shown as a reduced subscription. To substantiate our claims I have built a computer model that goes back four years – claims can be backed up with hard facts".

Costs thus far are 'guesstimated' at something like £50-100,000 for reinstatement, and at this stage £60-70,000 for loss of revenue. The point has to be made however that revenue does not instantly return to its former level, so there may well be a further claim. And one final cost which must never be overlooked is the added cost of both Chris's and Jeremy's time – with all the extra work these two stalwarts have put it, this also will be a substantial sum.

Next time the reader draws a glass of water from the tap he will do well to ponder the hidden cost. We all know that privatised water is going to cost more – now we can see where some of the money is being spent. **DAVID WHITE**





They may be the gardeners' friend but they are the greenkeepers' enemy. JIM ARTHUR discusses what to do with worms

W ith more and more of the tools of our trade being banned by our Brussels bureaucrats and our 'Greens', who live in mortal fear of killing off the planet if we carry on as we have been, we shall have to rethink our approach to problems which have always made fine turf management very difficult and where cures are progressively banned.

The worst pests of golf greenkeeping are indubitably casting earthworms. It is being suggested that only recently have we discovered that there are non-casters and we should be looking at selective wormkillers. How typical! I was writing articles 46 years ago on earthworm activity and my erstwhile colleague and friend at the then Board of Greenkeeping Research; the late Peter Jefferson, researched this problem for his M.Sc. We both came to the same conclusion: it was a non-starter.

Earthworm control is beyond argument necessary. They may well be the farmers' and the gardeners' friend but they are the greenkeepers' enemy. The problem is not just the unsightly casting and resultant smearing and muddiness of the affected turf, but interference with putting surfaces and winter playing conditions, weed invasion (from both buried seeds brought to the surface and in giving points of invasion for airborne seeds) and also subsidence (to which non-casting worms contribute), not to mention increased fertility (when we want the opposite in greenkeeping).

In my young days to describe someone as green meant they were inexperienced, naive or five green shield stamps short of a pop-up toaster. Today the term means something different. But does it? On reflection, our dear and often blinkered conservationists, many of whom seem to put invertebrate life ahead of human, should still be so described. On second thoughts however, who am I to be critical – there are some invertebrates which are infinitely to be preferred to certain so-called humans busily engaged in killing or starving their neighbours to death – and not just the third world, either.

I venture to propose a philosophy which will certainly bring down coals of fire on my head, but those hurling them had better do their homework first. As with acid rain, now blamed more on cows and excessive conifer planting than on power stations; with prophets of global warming competing with those forecasting increased glaciation; with our low lying east coast areas threatened with unlimited flooding because of perhaps a few inches extra high tides, we all listen (well, some do)



to these harbingers of doom who persuade our bureaucrats – and ours are far worse even than those in Brussels – to ban everything in sight, replacing the tools of our trade with less efficient ones which in turn are later also proscribed as 'dangerous'.

Let us take earthworm control. In my advisory life from 1946 the best advice was to use lead arsenate and I did this up to the early seventies, when it was banned. Yet I had never lost a greenkeeper in all those years, there were no cases of poisoned stock (except one case where a daft greenkeeper had washed out the drums after use in a local stream!) and when I treated my own lawns, our black cat came back with white paws and he licked them clean and all he got was a much glossier coat and an increased zest for life. he lived another 14 years after that episode!

Lead arsenate was an ideal wormkiller. It was persistent, lasting an average of eight years and in some cases where reinvasion was slower, even longer. It stayed in the soil, did not leach, did not drift when applied and did not get into water supplies, being insoluble. However, despite the evidence of their own eyes – you could still see the lead arsenate in the soil years later – it was banned. Chlordane, with an effective life of 1-2 years, replaced it. It too has now been banned. We are now down to applying short term wormkillers several times a year. Surely the risk to environment, wild life and operators is far less, when carrying out an operation once in eight years than once in eight weeks?

I mentioned this point to Jon Allbutt who at once supported my view, as this was his view too when trying unsuccessfully to oppose the ban on Chlordane – a political decision made by those who were unrepentantly deaf to all reason and logic.





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OUT THESE PESTS

However, as I was brusquely informed by some of our continental E.C. barons laying down the law about golf course construction, 'you can moan as much as you like but there is nothing you can do about it and the sooner you accept defeat the better'.

So we must try to control earthworms and leather jackets (the two worst pests of fine turf in the U.K.) by other means. There is nothing new in this and of course we might look into wormkillers such as derris dust used many years ago, displaced by the more efficient and cheaper (in the long run) lead arsenate.

Furthermore, even in fairly recent times, i.e. forty odd years ago, there was so little money in golf that poor clubs could not afford even modest expenditure on lead arsenate costing £122 ton in 1947, so we and they had to devise management methods avoiding direct use of pesticides.

The chief method of alternative earthworm control was to acidify the soil, generally by using sulphur, to bring alkaline soils (favouring earthworm activity), down to a pH of the lower fives or even high fours. No self respecting earthworm would poke its nose into such a hostile environment! Sulphur of course takes months to oxidise and trials were and still are necessary to determine the optimum rate – to be decided not earlier than six months after laying down replicate trials from 1-4 ozs sq yd (most commonly 2 ozs did the trick). Today sulphur is used for less laudable objectives than acidifying soil: as a constituent of explosive mixtures, so its purchase is looked on with a jaundiced eye by some authorities.

Other methods were to top dress heavily with sharp sintered ash (more like pulverised glass) and similar materials such as coke breeze, worked in after aeration. This firmed up muddy fairways and certainly discouraged earthworms, but was pretty unpopular with golfers because of club damage.

Sometimes on links courses where local earthworm activity was a problem and of course against leather jackets, low lying areas (which attracted the crane flies and the worms initially because the grass was green and the soil moist) were flooded with sea water – which needed skill if you were not to risk severe yellowing. As it killed off the grasses we did not want and left the salt resistant links grasses, we tolerated any discolouration – and anyway golfers were less critical in those days and given good putting surfaces were quite happy to play the ball where it lay in between.

We used orthodichloro-benzene and Jeyes fluid as expellents for leather jackets but even without this mix, soaking turf and 'sweating' pests out under sacks or tarpaulins and then sweeping up gave some relief.

Another method widely used, especially against leather jackets or chafers, was to heavily roll the turf, killing some grubs by squashing them but making the passage of others through the soil more difficult. Of course the resultant compaction had to be corrected later by deep aeration, but it is correctable. Without such treatment (or the use of pesticides) many areas would have been left dead and rootless, demanding wholesale reseeding in autumn.

Of course DDT and later the BHC's made leather jacket control easy, cheap and effective - and of course its use was stopped (perhaps with some justification because of its effects at the far end of the food ladder on birds of prey). I have heard it said of the use of DDT, which continued for many years after that in the third world, that the main problem with DDT was that it had saved so much human life by eliminating insectborne diseases (notably malaria) that there were too many heads to feed. This I think is unfair since despite the gloomy prognostications of the experts - from Malthus and Sir John Boyd Orr to the present day – about the world not being able to produce the food to meet the demands of exploding populations, the sad fact is that it is not shortages but wars, distribution and incompetence - and religion - which is the cause of the harrowing scenes of starvation that we are presented with nightly on the box.

On a parallel tack, it is of course important not to encourage earthworms to invade. Their food is of course decomposing (not decomposed) organic matter. Now that we almost all use imported top dressings of fen soil or equivalent and sand, the use of materials attractive to earthworms has all but ceased. In the old days when farmyard manure was stacked with local soil and the heaps turned, they were veritable earthworm factories and even when let down with sand, they provided free meals for earthworms.

Allowing cuttings to fly – even on greens in those days in winter or in drought – was another source for earthworm's looking for food. One of the reasons why mowing 20 m of approaches with triplex mowers, collecting the cuttings, is the best way I know of improving turf quality is that this discourages earthworms and related weed invasion.

Pure organic fertilisers – often sewage sludge-based, but including dried blood and hoof and horn without 'balancing' ammonia and iron – certainly invited earthworms.

Pure acidic reacting inorganics (ammonia and iron on their own) will certainly discourage earthworms, but tend to leave eventually fine turf thin and open and, with prolonged use, mossy and drought susceptible.

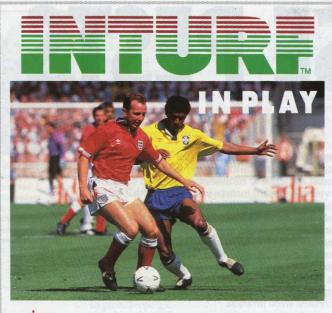
The biggest encouragement of all, of course, comes from alkaline reacting materials. This is so widely recognised that one sees less of the horrors resulting from agricultural advice forty years ago – but one thing is certain; some fool will always come along to repeat all the mistakes made so many years ago, in the name of progress. Lime, of course, is rarely used though one sees photographs of courses where one cannot see the fairways for clouds of lime being applied to 'sweeten sour turf'. Such pictures are not all from the 1920s. It is not so many years ago that some of our heathland courses were being limed and even more recently given a dressing of basic slag, especially if the current chairman of green was a farmer! I am talking about the mid-sixties, even the seventies!

It is totally unrealistic to expect so-called research (really only investigation of known products and policies) to come up with a new wormkiller which is acceptable to the E.C. – and even if one cropped up by sheer accident it would cost millions to get it tested and passed by our obsessed bureaucrats, with no guarantee of it being passed for use after that astronomical expenditure. We can therefore forget about that remote possibility. Frankly we want glimpses of the obvious like a hole in the head and I for one cannot see any new management methods emerging, though one has to accept that with effective persistent wormkillers and pesticides so easily available, the incentive to develop such new methods was absent, in the past.

Trawling the technical papers of the temperate world's research organisations has, believe me, been done already by commercial concerns so is not likely to yield success! We might be better off in preparing cast iron cases to protect what few products we still possess against the interference of a host of busy bodies who would not know one end of an earthworm from the other.

Doubtless we shall get the usual manic minority talking about sonic booms, electrocution, or similar way-out methods of getting rid of that oldest pest of fine turf – the casting earthworms, which may be the farmers' and gardeners' friends but are most certainly the golf greenkeepers' enemies. Those who say earthworms help by aerating soils, improving fertility and breaking down thatch live in a world of their own. Casting is the main but not only problem and a mechanical aerator does the job deeper and with less men. When will golf writers understand that the poorer the soil, the better the golfing grass. Finally, thatch is associated with waterlogged conditions and I have yet to find earthworms wearing snorkels. They just don't appear in flooded conditions.

In passing, when will the uninformed realise the difference between thatch (undecomposed stagnant dead vegetation derived mainly from leaves and stems causing all manner of problems) and fibre, the dry wiry load-bearing constituent of hard wearing turf – especially for winter play – which occurs under totally different conditions and within reason is as beneficial to golf as thatch is deleterious.









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Lots on offer at

Planning for the Landscape Industries '93 show in June is well underway. This unique exhibition is the most comprehensive event of its kind. It's the only one which brings the whole industry together at one venue. No matter what sector of the industry you're involved with, there are many reasons why you shouldn't miss it.

Landscape Industries is *the* specialist business event which encompasses the whole landscaping and related leisure industries. It is centrally located and is organised by the industry for the industry.

Over 200 specialist companies will displaying everything from chemicals and mowers to nursery products, irrigation and garden accessories. Admission is free and



there is no charge for parking or an exhibition catalogue.

What makes the exhibition unique is its ability to present a truly working event – a whole range of manufacturers will be demonstrating their equipment working under realistic conditions.

EDUCATION AND TRAINING

There is a great emphasis on training and education and many of the established technical features are set to continue in 1993. You will notice a number of new elements, particularly the development of links with the play industry as a new area is created outside for this sector of the industry.

You'll find many of the country's finest educational and training organisations at Landscape Industries including: • ADAS • Arboricultural Association • Association of Playing Fields and Landscape Managers • BALI • British Turf and Landscape Irrigation Association • City and Guilds of London Institute • Dry Stone Walling Association • Health and Safety Executive • Institute of Fisheries Management • Institute of Horticulture • ILAM • Joint Council for Landscape Industries • Learning through Landscapes • National Turfgrass Council • Rural Development Commission • Sports Turf Research Institute – and more than 15 specialist colleges to name just a few!

DRAINAGE FEATURE

There'll be a chance to learn from the Royal Showground's experience, as a new drainage feature highlights the conditions the groundsmen have had to deal with in a major showing ring. You'll have an opportunity to look at the drainage work and the product used, as well as talk to people involved about the decisions which have been taken and the reasons why.

DISCUSSION SESSIONS

The discussion sessions at the exhibition have proved very popular in the past and the topics for 1993 should provide a good deal of information and food for thought. Each session will be held on both days of the event and there's no admission charge so it's the ideal opportunity to update yourself:

• Leisure Strategy for Water – examining the alternative uses for irrigation reservoirs, their design and limitations, particularly with reference to a variety of sports and their specific requirements.

• Children's Play Areas – an overview of the situation including the possible knock-on effects of recent developments.

• Health and Safety Issues – a look at health and safety issues in the work place, particularly in the landscaping sector.

• Introducing NVQs into Industry – a complete demonstration of the computerised training management system and a total overview of the experience of introducing cost-effective vocational qualification into the workplace.

ARBORICULTURAL ASSOCIATION

There will be a display by the AA utilising one of the trees within the exhibition to indicate areas of weakness, maintenance work required and previous pruning work that has been carried out.

TRAINING IN ACTION

Trainees from industry and colleges will undertake the second stage of a project to construct a landscaped area within the exhibition by working in groups and trying their hand at various skills.

AND FOR THOSE WITH A COMPETITIVE STREAK ...

Introduced in 1992, the Fencing Competition will give both professional and college two-man teams the chance to show their skills in erecting three types of fencing – chain link, close board and post and rail. The winning teams will be awarded prizes from Fencing News and the National Fencing Training Authority.

40 GREENKEEPER INTERNATIONAL May 1993

Landscape Industries

AMONG THE 1993 EXHIBITORS

• Distributors of Scag mowing equipment for the UK, Germany and Holland, Simon Tullett Machinery will feature a wide range of machinery suitable for use on golf courses at this year's Landscape Industries.

The Scag range includes both pedestrian and ride-on models in both standard hydro drive and zero turn configurations. A choice of rotary deck size ensures fast efficient mowing in a variety of on course locations including rough and semi rough areas.

The latest new product introduction from Simon Tullett Machinery is the STM Super Flail 52. Designed and manufactured in Britain, this extremely robust flail head features interchangeable single twisted fine cut flails or back-to-back for rough cutting.

Providing significant cost savings for machinery operators, the STM Super Flail 52 can be fitted to the Scag STHM 20KHE to replace the standard rotary deck. In addition, a three point linkage model is also available for tractors up to 28hp.

Fast and efficient in operation, the Super Flail 52 can be fitted or removed from its host machine in less than 15 minutes.

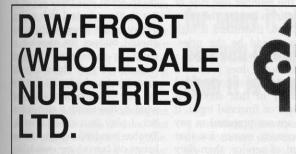
• A special projects team was set up by the International Wool Secretariat to find a use for low grade wools which could not be used for the manufacture of woollen products, eg. clothing, carpets and so on.

The result, a new concept for Landscape Weed Control using one of nature's oldest resources.

Shown for the first time at the BTME and BGLA 1993 Exhibitions, **Vitax Wulch** is a 100% non-woven matting which is specifically manufactured for use as a natural biodegradable mulch which can be planted through after laying or placed around the base of established saplings or shrubs.

• For many years now the name **Barlow Tyrie** has been synonymous with high quality teak outdoor furniture. As an established family firm and the largest manufacturer of teak outdoor furniture in the UK, Barlow Tyrie has pursued a policy of excellence in the production of its comprehensive range.

For this reason our designs are often the first choice for landscaping projects. A selection from our wide range will be on display at Landscape Industries for



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• DW Frost (Wholesale Nurseries) Ltd aim to provide their customers with good quality plants, backed up by an efficient service generated from their nursery situated at Fosseway Nurseries, on the A46 Leicester-Newark road, one mile north of Bingham. Here at their container



unit of 15 acres they produce high quality container grown trees, shrubs, roses and amenity plants for use by local authorities and landscape contractors. They also produce a large number of open ground trees; whips; and amenity type shrubs of all sizes produced on 80 acres for supply between November and April.

• Inturf, grower and supplier of high quality cultivated turf, operates a seven day harvesting programme, producing six grades of turf from the selected 1200 acres of nurseries situated throughout the country, and is the official turf producer for Wembley stadium. Turf can be supplied and installation work carried out using the large roll technique. Technical advice is offered by Turfgrass Services International Limited and the whole group accomplishes total quality management verified by BS 5750 accreditation. Visit our stand at Landscape Industries where technical personnel will be available to offer advice.

• **Shelley Signs Limited** will be displaying the part of their range of signs and panels which are suitable for golf course applications.

The signs are manufactured in Glass Reinforced Plastic (GRP) with the text and illustrations printed into the surface of the sign. This results in a totally smooth finish and a sign that is exceptionally durable, easy to clean and that will provide many years of service. $\Rightarrow 42$





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Lots on offer at Landscape Industries

41 A number of sample signs and fixing arrangements will be on display as well as examples of signs supplied to industry, local authorities and wildlife reserves.

These signs are ideal for tee marker plates, golf club entrance signs, directional

and car park signs and club house signs.

• This year ADAS concentrates on safe and effective weed control. With complex legislation, concern over the environment, pressure from the regulators and tight cost limits, those responsible for weed control on hard and soft surfaces, road and grass have difficult decisions to take. ADAS have developed a complete service to review existing practices, assess the risk to environment and develop suitable weed control strategies to control vegetation safely and effectively. Our service includes briefing senior managers, training contract managers and specifiers and the preparation of monitoring procedures.

• ET Breakwell Ltd, Ransomes dealer for Hereford, Worcester, the West Midlands and Warwickshire, will be exhibiting at this year's Landscape Industries show

ET Breakwell, who this year will have a stand within the outside demonstration area, will be exhibiting a wide range of machinery for the local authority, landscape contractor and specifier market, including a comprehensive selection of machines from Ransomes. Two machines which will generate a large amount of interest will be the T-51D and Parkway 225 which were launched onto the UK market at last year's IoG show.



G olf clubs today are the haunts of many a varied character, transcending social barriers and attracting both working class and aristocracy alike. In fact, regardless of your social history and given the right connections, just about anybody has a good chance of being accepted into an established golf club. The only qualifications required are a small knowledge of the game, a friend who is already a member, a willingness to part with a few readies and the patience to endure many years of waiting.

It has always amazed me how in this day and age of turbulent economies, business strategies and cut-throat competition that the golf club sees fit to maintain a never-ending waiting list. Surely the number one rule of business is to ensure the price fits demand. If demand is high then so should be the price. True, a golf club is not strictly a business, but it does provide a service to paying customers and the quality of that service is dependent on financial input. If people are not prepared to pay the necessary money for that standard of service, then they do not get in the club.

Assuming a golf club is efficiently run then the member pays the money and he or she has no right to complain: "Why is that society booked in today just when I want to play?". Because we must subsidise your annual dues. "Why then is the rough not cut on the fourth?". Because you are not prepared to pay for enough greenkeepers or equipment to have this done on a regular basis. "Why does it take me five hours for a round of golf?". Because the course is saturated with golf in an effort to keep down the subs. It's a bit like someone buying a Metro and then complaining to the manufacturers that it will not do 180 mph. Well, of course it won't, you've bought a Metro and not a Ferrari.

No doubt many club mem-

bers reading this will at this point be somewhere between slightly irritated and extremely angry. "But I pay a bloody fortune!" they will explode, as if that gives them the right to complain. Well, I will concede that in some circumstances that is the case, but in those cases standards are very high and there is therefore little to complain about. Generally speaking though, this fortune theory is somewhat debatable.

For example, if I want to play snooker it will cost me £4 an hour even though I am a club member. Let's call it £2 because I will split the cost with my playing partner. If I then play for as long as it takes me to play a fairly quick round of golf it will cost me $3 \ge 2 = \pounds 6$. Quite cheap when you think about it. But if, like a typical club golfer. I play twice a week then my annual budget for snooker is £600, or more than the vast majority of golf clubs' annual subs. Six hundred quid just for the hire of a snooker table. But what if, like many a club member, I play four times a week. Twelve hundred pounds! I'd be better off buying my own table, which is a lot easier than buying my own golf course.

Strangely, the same thing applies directly to golf. If I find the cheapest 'pay and play' in the area, queue up for an hour and then take five hours to hack around a course filled with divots, novices, unraked bunkers and greens that would do Twickenham an injustice, it would still cost me ten pounds. If I then decided to endure that 200 times a year I would be paying £2000, or roughly three times the annual subscription of the Royal what-do-vou-call-it just down the road. No wonder it's got a waiting list that goes into the next millenium.

Now having explained my argument that the average member of the average club has got a proverbial 'right result', I will admit that some members

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have indeed got cause to complain e.g. the member who plays infrequently and who perhaps joins the club as a status symbol, or a means of entertaining clients. He or she may only play ten or twenty times a year, but still pays the same as our old friend who whinges his way through 200 rounds a year.

Now surely, looking at this system rationally, something has gone drastically wrong. Why on earth don't golf clubs charge green fees to members? Not necessarily the full amount but perhaps five or even ten pounds should suffice. New golf clubs giving the golf business a fresh outlook often adopt this system, after all it makes sound business sense. To the best of my knowledge, no established members' club has yet adopted this system and are surely therefore sentenced to a life of catering for the daily fourball, where shoes are changed in the car park and where a half pint of shandy is only invested in on the rare occasion of a hole in one.

I am not advocating driving the avid golfer off the course, but surely golf is an expensive game. It involves the upkeep of a vast expanse of sports turf and if someone wishes to spend their life on it they should pay the appropriate dues. Besides, by charging a green fee to members, annual subscriptions could even be reduced and some members will actually pay less for their golf.

Now how did this peculiar state of affairs ever come about? Well, I have a theory. As we are all aware, golf in those far off days of the twenties was a game for the proverbial toff. Back in the days of P G Woodhouse and before, plus fours and hunting tweeds were the order of the day. I will strongly contend that at that time when so many of our golf clubs were being established, the subscriptions were actually higher than they are now. They may only have been four or five guineas but that would equate to an average man's monthly salary or the equivalent of something in excess of one thousand pounds in today's money. Rural golf clubs and clubs in Scotland had annual subscriptions that were within range of the working class, but at these clubs overheads were extremely low. One greenkeeper, who may also have been the professional, together with a flock of sheep for mowing duties and fertiliser application, was quite sufficient for the upkeep of the course.

'Golf doesn't have to be prohibitively expensive, in fact for many it should be even cheaper than it is now...'

A steward, his wife and a parttime secretary took care of catering and administration in the clubhouse. The golf courses received considerably less play than they do now and it was common practice to close the course for the winter months. Courses were thus well able to cope with the odd obsessive golfer and so such individuals were not considered a problem. Annual subscriptions were therefore the simplest and most practical means of financing the club. They would have been fixed, as they are now, by the committee and it is there that the problem lies. Although the courses, traditions and the game's popularity have changed immensely the system of financing the operation has not for two reasons:

1:The committees are loath to change for fear of public opinion, amongst other things.

2:In the main, committee members are the very people who would lose out if a members' green fee system were brought in.

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After all, committees are elected because they are respected members of the club and that respect is gained by regular attendance. Their faces are seen all the time. If you don't believe me think of your own club committee, are they not regular golfers, Saturday and Sunday and perhaps the odd afternoon and evening during the week? Not only that, but are they not in regular contact with the more frequently visiting member? The result is that the members who play less frequently are the ones who have less say. The whole system encourages more and more golf from every quarter and the inevitable consequences are more and more problems. Golfing traditions have changed drastically over the years and I believe the subscription system will have to do likewise.

Now before I am tarred, feathered and expelled from society as some sort of militant revolutionary, let me speculate on the consequences of this fairer means of paying for one's golf. In my opinion, one of two things will happen. Either the regular golfer will not play so frequently or he will accept the additional cost and pay more for his or her golf.

In the first case, the course will be significantly less busy. This will result in improved course conditions, reduced maintenance costs and quicker, more enjoyable rounds. Alternatively, the powers that be may decide to make up for this shortfall in golf by introducing more members, thereby eating into the waiting list and increasing revenue.

In the second case, where the member continues to get his daily shot of golf but at a higher price, the club's revenue will be increased – to be spent no doubt with great foresight by the elected committee.

"But what about the potential champion, or the county captain who just happens to be a member, they need somewhere to hone their skills?" Well, of course there is the practice ground, that is the place to hone any latent talents they may have. Hopefully they do not practise on the course anyway. At my own club we have an outstanding player but he is a relatively infrequent visitor to the course itself, preferring instead to obliterate the practice ground, which is quite acceptable under the circumstances.

"Ah! but what about the golfer who merely requires a bit of exercise in his retirement?" you may argue. "Surely it would be a sin to expect him to pay the additional fee?" Well, if the committee is worried about being labelled the slayers of the frail and needy, may I suggest a bit of diplomacy. A reduction for the odd minority group would be a tactful decision under certain circumstances. Personally, I am of the opinion that if exercise is all they require then voluntary work at a local SSSI or conservation area would supply their necessary work-out whilst at the same time being considerably more constructive.

I am not advocating a huge green fee for all members that would result in mass resignations, simply a change to a fairer system. I believe that all reasonably perceptive members will acknowledge that membership of a club that requires a five or ten pound course usage fee is infinitely preferable to the local pay and play, or to putting down a £2000 deposit for membership of a club that hasn't even been built yet.

Golf doesn't have to be prohibitively expensive, in fact for many it should be even cheaper than it is now. I do, however, believe that clubs ought to start recognising how popular the game has become and start changing to a fairer system of paying for the game.

The author, Marc Haring, is head greenkeeper at Camberley Heath Golf Club.

AROUND THE GREEN

Keeping in touch with news and comment from the regions

NORTHERN

Our lecture season has now finished and it was pleasing to see so many of our members attending. I trust you all found the presentations interesting and informative, whilst also enjoyed yourselves. Not many BIGGA members attended the quiz night, staged with our colleagues from the IoG, in fact it turned out to be a solo performance with Alan Gamble attending in isolation. I couldn't attend personally as I was at a secretaries meeting at Aldwark Manor, though Alan tells me he had a fine evening and did very well in the quiz. Thanks Alan, for waving the section flag.

Golf events are filling up quickly so don't delay in booking: £10.00 deposit to me at 49 Cornwall Road, Gilstead, Bingley, W. Yorkshire BD16 4RL. If you have not yet received information of our 1993 golf programme, please 'phone me on 0274 568128 and I shall endeavour to put it right.

Our friends in the trade are again being very generous, with Rocol Easyline Paints sponsoring our last mail-shot, Yorkshire Mowers again sponsoring our Invitation Day, Pattissons the Roses Match and Chaplins our Autumn Tournament. Many thanks to you all, it is greatly appreciated.

The annual dinner took place at Shipley GC on Friday 19 March with some 70 members and friends attended, enjoying a first class meal and top rate entertainment. My thanks to those who helped make the night such a huge success. As stated, our winter lecture series is over, the last being the Lloyds Workshop held at the STRI. I must thank Derrick Coad and his colleague Stan Duncan for presenting the workshop – very interesting with many pertinent questions answered. Thanks also to the STRI for the use of their premises at short notice.

Michael Lealman has become head greenkeeper at a new course being built near York, named the Forest of Galtres. We wish you well, Michael. It is with deep regret that I have to inform you that Ken Scruton, father of Gary Scruton of Greenkeeping Services, has passed away after a long illness. Condolences to his wife Mildred, and to Gary.

Are there any members who would like to attend a public speaking course and perhaps speak at BTME Harrogate, or even at the National Education Conference? Please contact me for further details. PAT MURPHY

SURREY

'No news is good news' is a saying which often applies unless one is attempting to compile section notes with no golf events or lectures on which to report – together with zero information from within the section – then it becomes a 'no news is no news' situation!

By the time this appears our Spring Tournament

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will have been played and the next section event, the Cresta Cup, will be looming. The Cresta is on Wednesday 8 June at West Surrey GC with entries closing on 25 May. Also please note that The Open is on our 'patch' this year and it would be good to see the Surrey section represented – either spectating or helping with the bunker raking etc.

Finally, would players in the Huxley Bowl try to play their matches promptly in order to keep the competition moving ahead throughout the summer. ROGER TYDEMAN

AYRSHIRE

The first draw for the 200 Club, drawn at the Spring Meeting, means that results are not yet to hand as I write this in late March. However, winners will be announced in the next issue.

The Ayrshire Autumn Meeting will be held on 28 September at Old Prestwick GC, which should prove an excellent outing over this tremendous course. Also confirmed is a trip to the Stewarts of Edinburgh Turf Farm, for which a bus will be provided. This also should prove well worth while, for only today (Mar 31), Alan Miller told me that the recent weather had caused some of their newest turf to be literally blown away. They experienced very strong winds and with the ground being so dry the surface just disintegrated.

On the course maintenance side we are all busy

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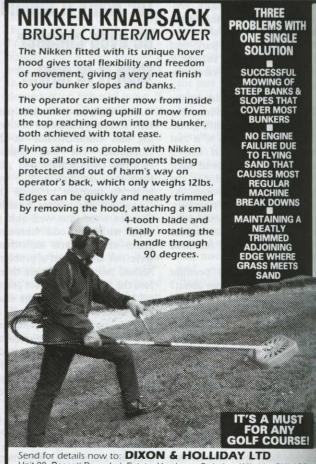
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getting our courses into immaculate order and right now I am preparing for the Scottish Boys Championship at the beginning of April. Imagine, 256 boys in the first round – who'd be a greenkeeper? But we all get there, so good luck to you all during the year.



Duncan is busy working down in England, so if anyone has anything for the magazine – fact or hearsay – call me instead on 0294 823210. I can just imagine the stampede to get to the 'phone! JIM PATON

CLEVELAND

Guy Longshaw gave a talk to our section on natural growth activators based on bacteria and fungi, which it is claimed will break down thatch into nutrients, thus reducing the need for nitrate fertilisers – we will wait and see. Temperature, which I think is vital, was not discussed. Another product is said to restore the natural balance of smelly or stagnant pools. Rex Kimberley also spoke, discussing organic fertilisers. Our thanks to Norman Sheddon for organising the meeting, which was well received by our members. In particular, we were pleased to welcome Brian Hall from the new course at Huntly Hall, Bretton, which is due to open in June. Another new course soon to open is Romanby, Northallerton.

Our section member Anthony Mears gave a slide show presentation to delegates at the National Education Conference recently, his subject being the Wild Side of Golf.

After the recent wet winter my club is programming a drainage policy, with a view to incorporating it into next year's budget. On heavy land,

weakness in drainage is now so obvi-



ous. Stuart Vickers is now acting as trainee first assistant at Brass Castle, Middlesborough GC, working under George Malcolm's skillful eye. BRUCE BURNELL

DEVON & CORNWALL

The section's March meeting was held at Woodbury Park GC, with lunch and an afternoon talk taking place at the Kings Arms, Otterton. Both venues are owned by the Carter family. Jeff Mills and his staff had the course in splendid condition and it was a pleasure to play our golf tournament over such a well designed new course.

Our golf comprised three competitions: The Supaturf Trophy for head greenkeepers & trade, the May & Baker Trophy for assistants, and the section's qualifier for the new Hayter Challenge Tournament. The results were: Supaturf Trophy 1st A.Ramsden (Budock Vean) 35pts. 2nd L.Millar (Warren) 34pts. 3rd A.Woolnough(Teignmouth) 33pts. May & Baker Trophy 1st M Scott (East Devon) 35 pts (results decided on back nine) from J Mitchell (Perranporth) 35 pts second and A James (Budock Vean) 35 pts third.

Qualifiers for the regional final of the Hayter Challenge Tournament to be held at Clevedon GC, Bristol on Friday 11 June are: (0-9) J Mitchell, A Ramsden, L Millar, J Welsford and R Whyman. (10-18) A Woolnough, B Ridgeway, E Barber, B Lewer and W Potter. (19-28) M Scott, A James, D Parr, N Macintyre and C Browning. Congratulations and good luck to all who qualified.

The section offers thanks to John Palfrey of Avoncrop for presenting the Supaturf prizes and to Paul Clifton of Rhone Poulenc for donating and presenting the May & Baker prizes.

Following lunch our educational talk was presented by Herbie Aarons on 'Golf Rules and Etiquette', his talk being most informative and one from which I am sure many of our higher handicap members gained valuable tips. I'd like to thank members who attended meetings during winter – as usual, you turned out in large numbers.

Our next meeting will be the section Guest Day on Wednesday 7 July, with tee times from 12 noon



and a course tour and inspection for non-golfers starting from the club house at 4pm. Our evening meal will commence around 7pm with the new GTC education director, David Golding, our after-dinner speaker. RICHARD WHYMAN



LONDON

Congratulations are in order to all those who attended the recent pesticide course run by Jon Allbutt Associates at Dyrham Park CC, for a 100% pass rate on PA1 and PA2a was achieved. Thanks to Dyrham Park for the friendly atmosphere and to Don Wilson for all his help.

Any members interested in training courses, especially tractor driving, chainsaw competence or COSHH, should contact me on 081 959 5629.



Finally, all those players who win our section golf events will go forward to represent the section versus Mid Anglia later in the year – thus giving everyone something extra to aim for – go for it!

TONY DUNSTAN

MID ANGLIA

The second winter lecture held on 2 February saw Jon Allbutt presenting an update on recent developments relating to both Health and Safety and Pesticide regulations. Forty two members were entertained – the highest attendance figure for a meeting to date! Many thanks to Jon for a most informative talk and to all those who attended.

Our last lecture on 2 March was given by David Golding, the education officer of BIGGA. David gave an extensive talk on the topic of greenkeeper training in the past and gave some positive pointers as to its development in the future. Many thanks to David for his presentation, although it was disappointing to see only 19 members attending. Once again we must thank Beadlow Manor for the excellent facilities offered to us over the course of the lectures.

Section matches have been arranged against the London, Midlands and BB&O sections for later in the year, details to follow shortly. The final of the four ball knock-out competition will be played at Brocket Hall GC on 30 September and is once again being sponsored by Lodgeway Tractors.

Lectures for later this year and into



1994 are currently being arranged, as are other golfing fixtures. As soon as full details are available these will be published. PAUL LOCKETT

NORTH WEST

Wednesday 24 March saw the last of our winter lectures staged at Bury GC, an interesting evening with David Furnival and Derek Hatton (No, not that Derek Hatton, the other one!), discussing lubricants. Some interesting information was divulged on how to get more miles out of your engine with lower maintenance costs. Unfortunately, the attendance figures were low, the reason being that Manchester United decided to play a home game just a few miles down the road on the same night – kicking off at the same time as our arranged start. I must write and ask them to liaise with me over next year's programme. That stated, I am sure Gary Worrell was delighted with the poor attendance as he managed to consume most of the sandwiches, prepared for thirty people!

May I remind those course managers and head greenkeepers who have received ICI Premier Greenkeeper Award application cards to complete and return them to me as soon as possible, our section nomination is required by 31 July.

The Spring Tournament will be played at Birchwood GC (Warrington) on Monday 10 May, this being a qualifier for the Hayter Challenge Trophy regional final to be played at Worksop on 9 June. The tee is available from 1.30 pm and tee times will be allocated on the day.

I will finish this report by thanking Bury GC for

allowing us the use of their facilities for our winter lectures, also head greenkeeper Dave



occasion. Have you any news to report? Why not contact me on 051 724 5412. BERT CROSS

Berry for organising the buffet on each

NORTH SCOTLAND

A welcome to Iain Bell who moves into the area as first assistant to Alan Dobbie at Boat of Garten. Iain has come up from Duddingston GC, Edinburgh. We also welcome new members William Morrison and Michael Nicol of Huntly and David Henderson of Bonar Bridge and Ardgay GC. David's club is currently a nine-hole layout midway between Tain and Dornoch on the old road. Last year they purchased some land adjacent to the course and I understand will soon begin constructing twelve new holes to go with six of those existing. It is an ambitious project as they are proposing to do much of the work themselves, raising funds through various ventures and obtaining grants from the region etc. We wish them every success and look forward to playing the new course in the future.

What with Bonar, the new course at Skibo and the upgrading of the Struie course at Dornoch we are certainly going to have plenty of variety for golf in the Dornoch Firth in the near future. Work has begun again on the Carnegie Course at Skibo. Over the winter Alex and his assistant Stuart Shaw have been putting in fairway bunkers and cutting back bushes for the contractors. I plan to go over sometime to see the progress being made. Perhaps I will report on it.

This month sees our Spring Meeting staged at Murcar Golf Club, Aberdeen and I hope to see a large turn-out of members. Chris Pearson is in charge and I'm sure he'll have the course well prepared for us. A forward date for your diaries is November 23 when we will have our AGM at Nairn Dunbar. I am hoping to arrange a tour around the three new holes to see how they are



the constructors. Finally, if anyone has news which they would like to see in Around The Green, please call me on 0862 894402.

coming along with (maybe) a talk by

IAIN MACLEOD

SOUTH WALES

The last talk in our winter lecture programme was held on 10 March, with Huw Morgan discussing 'Spring Preparation at Southerndown Golf Club', his last presentation as a member of the South Wales section. I trust he will now join the Kent section of BIGGA. Our 15 April Spring Competition incorporating the Hayter Challenge Tournament qualifier will have been held at Llanishen GC by the time this appears, but anticipated successes will (I hope) see a large attendance at Clevedon



GC Bristol on 8 June for the regional finals. Our sincere good wishes go to Dennis Archer, who in the near future will be re-admitted to hospital for a series of operations – come back fighting, Dennis! PETER LACEY

SOUTH WEST

Hotfoot back from the conference at Keele, I must again report on very high standards all round. A very professional show from the Association, its members, and especially its officials. Keele University turned out to be an excellent choice of venue, being accessible, clean and comfortable. The towels in my room were so fluffy I could hardly get my suitcase shut! The auditorium was likewise comfortable, with all the latest high-tech viewing equipment.

It would be very unfair to single out one speaker, but again, as last year, our American colleagues were superb. High-brow technical knowledge was liberally mixed with grass-roots greenkeeping with which we could all identify. I certainly look forward to next year, when at Warwick University I would hope to see more members of this section.

Please keep the replies for FEPA training coming in - this valuable qualification cannot be \rightarrow 55



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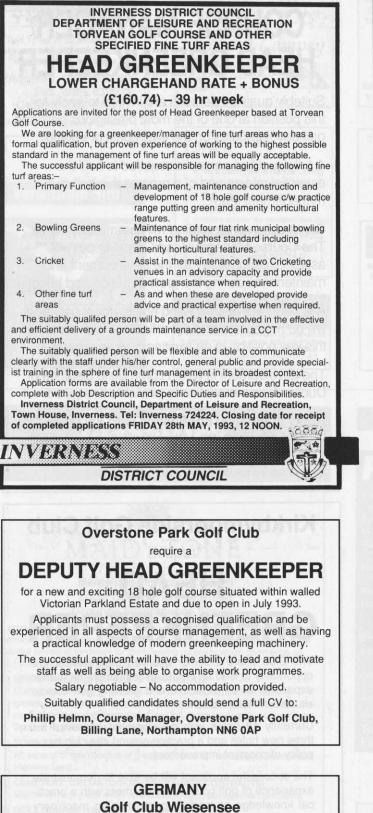
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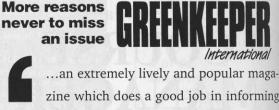
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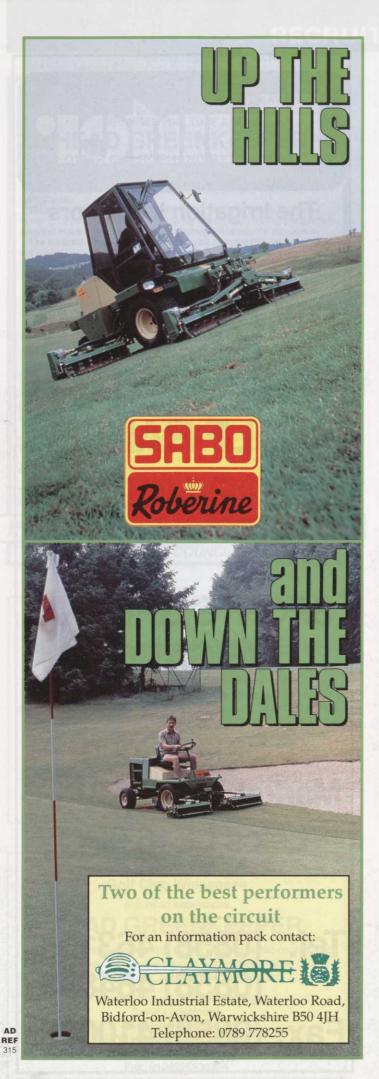
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AROUND THE GREEN

 $45 \Rightarrow$ overestimated: the Environmental Health Officers are on the move.



COSHH Assessments are also still available from our resident expert, Mr. Noel Stevens. This service can be arranged through me, or by contacting Noel direct on 0452 526111. In the meantime, I'll wish you a successful summer of greenkeeping, and look forward to seeing many of you at Enmore Park on 6 July. PAUL WORSTER

NORTH EAST

On 24 March section members were invited by Abcon Top Dress Supplies to visit their plant and witness production of their top dressings. A full tour of the plant, under the guidance of Alan Taylor and his son Gavin, gave us a full run-down on the process from start to finish – and the ten greenkeepers who attended were most impressed by it all. Our



sincere thanks to Abcon for providing a most enlightening tour, an excellent buffet lunch, and to everyone on their staff for ensuring that we had an enjoyable day.

Congratulations to Brian Hughes, assistant greenkeeper at Whickham GC, on becoming the proud father of a baby daughter.

JIMMY RICHARDSON

MIDLANDS

During February a group of our members visited Ransomes factory in Ipswich, where they were shown around and were able to see how machinery is designed – from raw steel to design and through to assembly. The section would like to thank both Ransomes and ET Breakwell for sponsoring the two day visit and for entertaining us so well.

On 26 March we held our final lecture of the winter series at Telford Country Club. Subjects covered were Jacobsen machinery and its maintenance, and Envirogreen and how it works. Both subjects prompted good discussion and made for an enjoyable afternoon. The section extends thanks to both Jacobsen and Envirogreen and especially to Oakley's, who provided refreshments and also a prize for the informal golf played in the morning. On a personal note thanks to Ivan Beetlestone, who did a fine job in organising the lectures during



the winter. The Summer Tournament is to be held at Kidderminster GC on Thursday 17 June with entries due in by 17 May. Anyone wishing to play but without an entry form may contact me on 0789 762912. DEAN CLEAVER

MIDLANDS REGION - RYDER CUP 1993

Derek Ganning, course manager at The Belfry, has requested the help of a support team during the Ryder Cup, to be held over 24-26 September. A total of 24 members are required to assist from 20-26 September and though you'll get to see something of the action at this world-class match, unfortunately no accommodation is available. Anyone interested in attending should contact Dean Cleaver on 0789 762912.

COMING UP

- May 25–30: Amateur Championship, Royal Portrush, Northern Ireland June 9–10: Landscape Industries '93, National Agricultural Centre,
- Stoneleigh Park, Warwickshire
- July 5-8: Royal Show, NAC, Stoneleigh park, Warwickshire
- July 15–18: The 122nd Open Championship, Royal St Georges, Kent July 18–24: International Turfgrass Research Conference, Palm Beach, Florida, USA
- August 2-4: BIGGA National Golf Tournament, Dunbar Golf Club, Scotland
- August 18–19: The Walker Cup, Interlachen, Minneapolis, USA

September 7-9: IoG Show, Peterborough. Northants

September 24–26: Ryder Cup, The Belfry, Sutton Coldfield, Warwickshire



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