

# GREENKEEPER

## *International*



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# GREENKEEPER

## International

**APRIL 1997**

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# A game of golf in the real world

**W**ell it's here. The new golfing season has begun for everyone outside of the addicts whose breath freeze during their protestations to have you open an ice bound course.

For the golfer it's the best time of the year. He strides to the first tee in the latest Ashworth full of expectation and confidence, the words of David Leadbetter's latest video still ringing in his ears and the smell of freshly cut grass filling his nostrils. From then on, though, it's the same as every other year. Same involuntary lunge at the ball, same wicked slice, same old comments from his partners, same old course – bare fairways, builder's sand in the bunkers and slow greens.

Then The Masters comes on the telly. "Well, if we had greens like that we'd all hole putts"... "Look at those fairways, a perfect lie every time"... "All it needs is a little time and effort and we could have flower beds like those."

When he gets back to the club and he's changing his shoes out of the back of his car the guy doing the same next to him agrees with every word he says. So does the guy in the next shower after the game. Even the steward agrees.

"The luckiest golfers in the world must be the Augusta National members. Imagine playing there every week..."

Well, no as a matter of fact. It would probably be interesting for our club member to know that while he's playing in the winter foursomes or the spring medal the Augusta member is having to make do with a game of bridge or checkers in the majestic clubhouse because the shrine to golfing excellence outside the window is closed, even when the sun is splitting the sky. In fact, it's closed for a large chunk of the

year irrespective of weather so every effort can be made to produce perfection for one week in April.

While our man snorts when he sees the accounts during the AGM, and in particular the amount spent on greenkeeping, it may interest him to know the equivalent figures at Augusta National would be enough to pay a handful of good old British fat cats for a couple of years each. Come to mention it the greenkeeping staff at Augusta would just about number enough to run a smallish British public utility.

It's all about making the most of the resources available and cutting cloth to suit. There is no denying that the staff at Augusta National make the most of the unlimited resources they enjoy, which is no mean feat in itself but just as impressive is the wonderful job done at clubs up and down this country where smaller budgets are made to stretch much further than is initially thought humanly possible and where course closure is the rare exception rather than an extended rule.

Wouldn't it be nice for a change if Britain's unsung greenkeeping heroes got the credit they deserved.



Scott  
MacCallum  
Editor

## As I see it...

BY PAT MURPHY  
BIGGA CHAIRMAN

**L**ast month I returned to my homeland when I attended the Scottish Conference in Perth.

It's always nice to see so many old friends across the border, and on this occasion, it was particularly enjoyable as it brought back some old memories. It also shows what a small world it is.

The evening before the conference we had a meeting with the Scottish Section Secretaries and it turned out that I was at school with the sister of Stephen Dixon, the East Section Secretary – St David's school in Dalkeith!

The Section Secretaries' meeting was excellent. It was great to see so many constructive suggestions and so much enthusiasm. I've been to a number of these meetings now and they are all informal but there is so much that is positive which comes out of them.

The Scottish Conference was opened by our first Chairman, Walter Woods, and I closed it which seemed fitting. Between us there were some brilliant speakers.

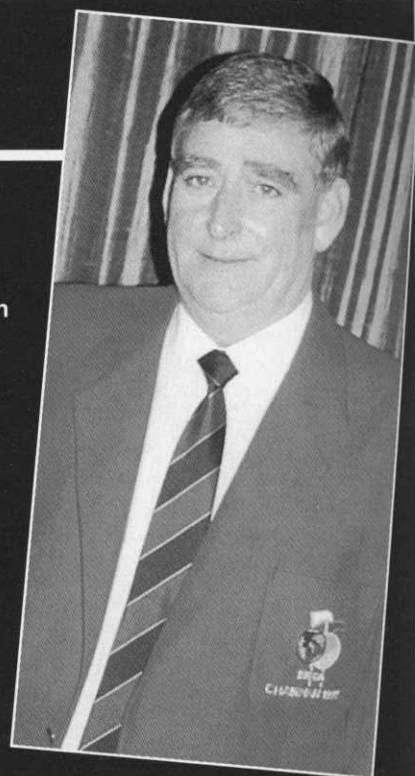
A couple of weeks later I was also at the Mere Conference in the Northern Region, again preceded by a positive secretaries' meeting. This was also an extremely fine conference with some interesting speakers.

Another highlight of the month was the Northern Section dinner dance at Bradford Golf Club which this year had a record attendance of over 100. This is my own Section and I attended with my wife and presented the prizes. It was nice also to welcome the Northern Regional Chairman Ian Holoran and his wife, Audrey, in attendance as well as Regional Administrator Bob Lupton with Sara. I was also delighted that Bill Lawson was able to come along.

It may be of interest to other Sections that Northern are about to start events aimed at the non-golfing members and we will have fishing and clay pigeon shooting on our calendar.

On the golf course spring has definitely sprung and no doubt like you all I've been hard at it hollow coring, top dressing and overseeding all the tees and greens at Shipley.

Can I wish you all rewarding and successful seasons.





# Fastest greenkeeper on one or two wheels

If there is a BIGGA member in the country faster than Terry Colville, Deputy Course Manager of Mill Hill Golf Club in North London, he must be working under an assumed name having been better known as Speedy Gonzales or Road Runner.

Because Terry is happiest when he is racing along at 165 miles per hour on the back of a 600cc Yamaha Thundercat. He can even pull wheelies at around 140mphs.

Terry's skill on a motorbike is such that this season he is taking part in the Supersport Series racing at, among others Brands Hatch, Donnington and Mallory Park and he is being touted as a future champion.

The nickname "The Nutty Novice" is displayed on the sides of his bike and it is a clue to the fearless style adopted by the man who, during the week, is number two to Tony Dunstan, Course Manager at Mill Hill and current Chairman of the London Section.

His father was also a fine racer – Terry describes him as the equivalent of a club professional golfer – and Terry grew up on bikes, from the age of three or four encouraged by his father, also Terry.

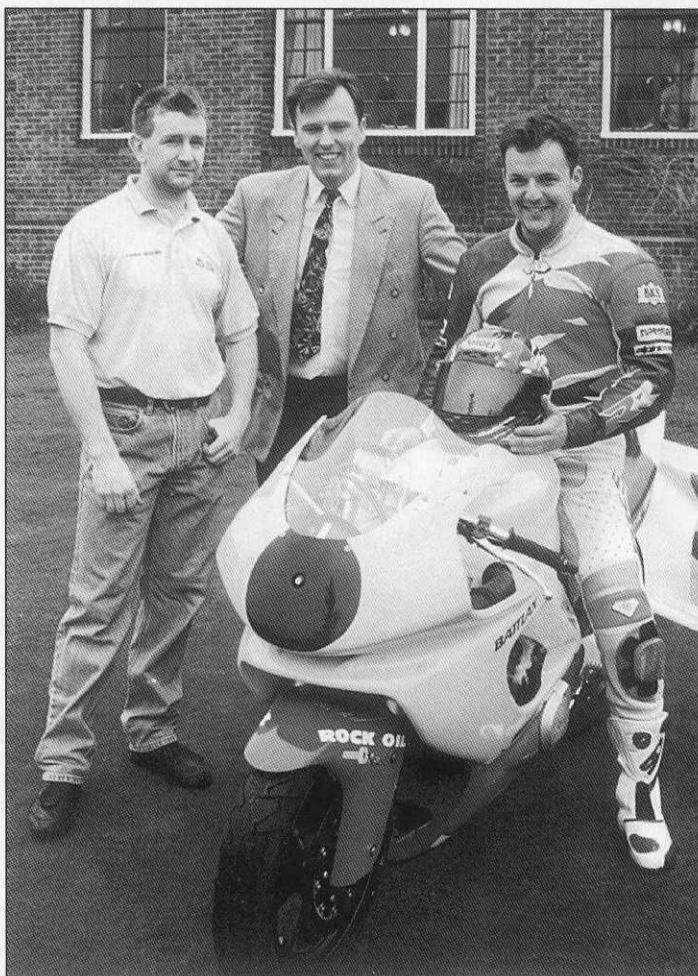
With his mother less keen on the idea Terry junior didn't have a bike for a period of three years but two wheels were very much in his blood and he was drawn back into the sport.

He made his mark when he went to an open day at the Goodwood circuit and on his own road bike was lapping at speeds comparable with those on specially prepared racing bikes.

A former grand prix racer Rob Orme took Terry under his wing and he honed his skills at the racing school at Mallory Park, near Leicester.

"Rob told me I should be racing and helped me in getting sponsorships particularly from Bridgestone who supply me with tyres," explained the 25 year-old Nutty Novice.

Terry has already ploughed about £10,000 of his own money



Tony Dunstan, Jamie Bennett and Terry Colville, the 'nutty novice'

into preparing for the season and it will take about another £6,000 to complete the 14 race programme... and that's if nothing goes wrong and he writes off a bike.

"That's a major disadvantage as many racers have teams behind them and they don't have to worry about money," revealed Terry.

He does have sponsorships and in addition to Bridgestone thanks Jamie Bennett, of Grass Roots Trading Company, who among the generous support is paying his entry fees; Rock Oil, who supply his oil, and local dealer Judd's Motorcycles.

In a sport when a new helmet, and you need a new one each time one is even slightly dam-

aged, costs £440 all help is greatly appreciated.

"I believe that Terry has great potential and I'm delighted to be able to help him," explained Jamie.

Like many motorbike racers Terry is no stranger to his local casualty unit and his latest visit saw him off work for five weeks with two broken ankles and damaged ligaments, not forgetting a dislocated shoulder.

"I've also broken fingers, fractured the top of my foot and had all sorts of sprains," said Terry, whose first race in his series was on March 23.

*Greenkeeper International* will keep you up to date with his progress.

## FLYING DIVOTS

■ Deere & Company has acquired the assets of the German farm machinery company, Maschinenfabrik Kemper GmbH. The agreement is subject to approval by the German anti-trust authorities.

Based in Stadtlohn, Germany, Kemper is a leading European producer of specialised maize headers, with European sales in 1996 totalling around \$50 million.

Kemper will retain responsibility for product development and manufacturing, and will continue to provide full sales and service to its customers through the Kemper dealer network.

Deere & Company and its subsidiaries worldwide manufacture, distribute and finance a range of agricultural, construction and groundscare equipment, and also provide a variety of financial services.



■ KK Ransomes, the Japanese subsidiary of Ransomes, has announced the appointment of Mr Shoji Katsuta,

pictured, as Technical Sales Manager.

Trained as an engineer. Mr Katsuta brings to the position a sound technical knowledge together with additional wide experience of international business gained from working in North America and Germany in recent years.

Based at the company's southern office in Kaizuka City, Osaka, Mr Katsuta will be working closely with KK Ransomes' Managing Director, Mr Katsuji Ohashi, and Ransomes' five distributors in Japan to maintain the strong growth in Ransomes, Cushman and Ryan grass and turf machinery business throughout the country.

■ Johnsons Seeds, the leading supplier of turfgrass seed for professional users have appointed a new distributor – East Riding Horticulture Ltd.

East Riding which has its head office in Sutton on Derwent, York, also has a branch in Kirknewton, Mid Lothian.

Some excellent golf clubs are hosting Sectional Qualifiers while the venues for the Regional Qualifiers form a group of clubs which it would be hard to better.

■ South West and South Wales

## HAYTER CHALLENGE

– Burnham and Berrow GC, June 11.

■ Midland – Warwickshire GC,

June 26.

■ South East – Ham Manor GC, June 27.

■ Northern – Matten Hall GC, July 9.

■ Scottish – Loch Green GC, Troon, May 27.



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# Ecological plan brought to life

By Neil Rowland, of Innovative Design by Newart

Following discussions with the local naturalist group I was responsible for erecting nest boxes at South Herts Golf Club in Totteridge, North London,

Although the Club is on old farmland with many elderly Oaks, Hornbeam and Ash in the hedgerows there are very few suitable nesting holes, as dead or decaying trees tended to be removed in the name of tidiness.

I erected a mix of 64 boxes, mainly for Tits and Nuthatches, some open fronts, three Owl boxes and this last spring a

Kestrel box high on a Lombardy Poplar.

Some 80% of the Tit boxes were taken up in the first year though the Owl boxes were used by the Squirrels.

The cost of the whole scheme has been borne by the golfers themselves as we initiated box sponsorship and members "bought" an allocated box for £10.

A list of numbered boxes is displayed during the Summer so that the member can see whether his sponsored box is being used during the nesting Season.

Each nesting family of Blue

Tits consumes a total of some 10,000 caterpillars until the young fly from the nest.

It is sensible to provide nesting facilities throughout the Course so that nesting birds can consume those caterpillars which are eating away the Oak leaves.

This scheme has been copied at other local clubs, providing there is an enthusiastic golfer with "birdies" in mind to initiate a scheme, there will always be a following of members to support a project of this nature.

I will be pleased to advise on the setting up of a scheme.

## Westurf gets dressed up to the nines for '97

At Long Ashton GC on April 30, Westurf will open its gates for the ninth time giving the west country greenkeepers and groundsmen an early season taste of the likely front runners in the turf care marketplace.

Westurf is a fine example of the making of a Region. It brings together all who represent the voice of our industry, where they can talk, try and test any machine or product in its own environment. On show will be all the old tried and tested, along with the new and brand new launches seen for the first time.

The region are proud of its exhibition here in the west. It not only brings to you the customer, the best that's on offer in the way of equipment but also presents the opportunity of an educational experience. Among the exhibitors will be all the Region's training colleges, the STRI, IOG and BIGGA all willing to answer your questions.

Westurf is certainly worth a visit, not just for greenkeepers and groundsmen but for managers and committee personnel as well. All will find a warm welcome.

Parking and entry are free. There are demonstration areas for both fine turf and outfield. Hot and cold refreshments all day, not forgetting the chance to win a free holiday voucher.

The Regional Board and BIGGA staff look forward to meeting visitors. For further information please ring 01803 844056.

Bowcom will launch two new products for greenkeepers at Westurf '97. Plifix is a revolutionary indicator which clearly identifies walkways or ground repairs without interfering with the greenkeeper's normal work or mowing while the Bowcom One-handle Bowspray was developed on request from greenkeepers who wanted flexibility when using aerosol markers.

**Exhibitors:** Amenity Land Services • Amenity Technology • Atterton & Ellis • Avoncrop Amenity Products • Bailey's of Norfolk • Barenbrug • Bennett Engineering • Better Methods - Europe • BIGGA • Bioseed Probiotics • Bourne Amenity • Bowcom Ltd • Boyd Golf Course Accessories • Britannic Garden Furniture Ltd • British Seed Houses • Cannington College • Celtic Mowers • Complete Weed Control • Course Care • DGM Turf Equipment • Encore Leisure Ltd • Farmura Ltd • GWilliam Kellands • Gem Professional • H. Pattissons & Co • Hartpury College • Headland Amenity Products • Huxley's Grass Machinery • IOG • K Two Group • Levington Horticulture • Lindum Seeded Turf • Logic Irrigation Ltd • Lubrication Engineers • Maxicrop International • Medland Sanders & Twose • Miracle Professional • Nomix Chipman • Ocmis Irrigation • PJ Flegg • Pencoed College • Pipewise UK Ltd • Pro-Seed Equipment • RS Bird • Ransomes • Rhône Poulenc • Rigby Taylor • Rocol Site Safety Systems • Roffey Ltd • Ruffords Top Dressing Supplies • Scotts UK Ltd • Shelton Trenching Systems • Sisis Equipment • Sovereign Turf • Sparsholt College • STRI • Supaturf Products Ltd • Swan Plant Services • Ted Hopkins • Tildenet Ltd • TH White • Tonick Watering • Turf Irrigation Services • Vitax Ltd.

## Video library is on offer

A free library of 30 operator training videos for turf maintenance equipment is being offered by Toro to all colleges and other establishments running training and education courses for golf greenkeepers. The videos, each 20 to 30 minutes' long, give students a complete overview of the safe operation and routine maintenance of Toro machines, including how to make adjustments to set up equipment to get the best performance out of it.

Anyone interested in getting the library should contact David Cole at Toro Commercial Products. Telephone 01480 476971.

## In fast lane

As winner of the last year's Blazon "Jet Setter" campaign, former Formula One World Motor Racing Champion Nigel Mansell, together with his greenkeeper Jeff Mills, took delivery of a new Hardi sprayer for Woodbury Park Golf & Country Club in Devon.

The Blazon 1997 'Spray Watch' campaign offers greenkeepers the opportunity of winning for their club a Hardi AMK 400 litre Tractor Mounted Boom Sprayer, fully equipped.

## Profits up

Deere and Company has reported record first quarter worldwide net income of \$176.7 million or \$0.69 per share for the quarter ended January 31, an increase of 10 per cent in earnings per share compared with the first quarter of 1996.

### New post at Rhône Poulenc

■ Rhône-Poulenc Amenity has appointed John Hall to the new post of Contractor and Utilities Customer Manager. This post enables Rhône Poulenc Amenity to gain closer contacts with the Spray Contractor and Utility Customers. John will be able to advise on technical, product stewardship and business issues as well as

providing relevant training. This close contact with the key players in the industry will be to the mutual benefit of both parties.

After working for a contract organisation doing a wide variety of Amenity and Agricultural Field Trials in Scotland, John joined Rhône-Poulenc's field trials team.

### New partners

■ Terravent has appointed two new overseas distributors. Jean Heybroek BV, Houten, Holland, will import and distribute Terravent's soil aerators and decompackers in Holland, Belgium and Luxembourg while Sports Turf Services of Christchurch is importing and distributing Terravent's products in New Zealand.

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# Leatherjacket damage a real risk to turf this spring – report

DowElanco's Pestwatch service has detected a rise in leatherjacket populations across the country this spring. Attributed to poor weather conditions this time last year, the rise means that populations are currently exceeding the traditional threshold for treatment in rough grassland.

"This indicates that there will be a particular threat to fine turf this year," says Talei Herbert of DowElanco's Specialty business.

"The high quality of grass required to make up cricket or football pitches and golf fairways and greens could really suffer visually from this level of leatherjacket attack."

Leatherjackets feed on grass stems just below the soil surface taking out tillers and even the plant's central shoot. The pest will leave bare patches of soil in its wake if large populations are left unchecked.

In the Midlands and North West, average pest numbers are exceeding the threshold for treatment in grassland. And in the South and South East, soil sampling is recording average populations of 2 million larvae/ha – the

highest level of activity found in this part of the UK for more than five years.

"Last year, despite the existence of high pest populations, only a small percentage of grass in the UK was treated to prevent damage," explained Miss Herbert.

"This is mainly because bad weather during the spring of '96 slowed pest activity down. Low temperatures force the larvae to remain further below the soil surface, making damage much more difficult to recognise."

According to Miss Herbert, higher populations of adults survived to lay eggs last autumn. This was compounded by the fact that weather conditions over the autumn favoured successful adult flight and egg laying. A warm, dry period was followed a few weeks later by moist conditions which, in turn, suited larval development and survival.

"This spring there is a real risk of turf damage," warns Miss Herbert. "Areas at risk should be treated with Lorsban T at a rate of 1.5 litres/ha. This will arrest damage and help to reduce the risk of damage for the following season."

## HANDSHAKE FOR PRIZE DRAW WINNER



Keith Lough, Head Greenkeeper at Beamish Golf Club, was the lucky recipient of £150 worth of BIGGA vouchers after winning the Vitax Prize Draw at BTME. He is seen being presented with his vouchers by Henry Bechelet, Vitax Technical Sales Advisor.



As part of a plan to highlight the many wonderful events held throughout the Sections it is hoped to print photographs taken at Section events.

First in is this offering from the East Section in Scotland. Chris Yeaman from Swanston Golf Club is the one in the funny hat.

Please feel free to send any contributions to The Editor, BIGGA Headquarters, Aldwark Manor, Alne, York YO6 2NF.

## (mis)adventures of Gordon the Greenkeeper



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# Architects' specifications to bring more washed turf

## (mis)adventures of Gordon the Greenkeeper



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An article by Dr Jim Beard extolling the virtues of washed turf has taken Stephen Fell, Managing Director of Lindum Seeded Turf right round the world, and resulted in a major new investment for the company.

The concept of turf washed completely of any soil particles by pressurised hydraulic means prior to transplanting is not new. Ben Warren patented the system as early as 1970, but it was not until the USGA specifications advising a high sand root zone for golf greens came into force, that golf course architects began to specify turf prepared in this way.

The danger with conventional turf is that the finer soil attached to the sward is responsible for a layer developing between the turf and the root zone which retains excess water. With properly washed turf there is no conflict between soils, water flows freely into the prepared root zone and rapid root development within a free draining environment is the result.

StrathAyr, an Australian company seeing the way things were going, bought the patent on Ben Warren's system in the 1980s, and introduced it to the US in the early 1990s.

It was to Bill Casimaty head of StrathAyr, that Stephen Fell wrote after reading Dr Beard's article. He was directed first to Austria, then the US, to see the process in action, before finally arriving in Australia, where StrathAyr, had completed the re-turfing of Melbourne Cricket Ground with BAyr Root Washed Turf. After six months of investigation Stephen Fell was finally convinced that totally soil free turf was the only logical material to use on sand based construction, and the StrathAyr process was the only system with the means to achieve this 100%. "If the turf is only partially washed the benefits are completely lost," he said. "We felt the whole concept was so right that we could convince people of the long-term benefits."

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Lindum has teamed up with Strathayre, and is now sole UK licensee of the BAyr Root Washing process.

One of the first people to try BAyr Root Washed Turf in the UK was Jimmy Kidd, Director of Gleaneagles Golf Developments, on their new Academy Course. He reported that two weeks after laying, the turf had produced roots of 22 inches, and after six weeks the course was open for limited play, in time for the Jackie Stewart Rolex Challenge.

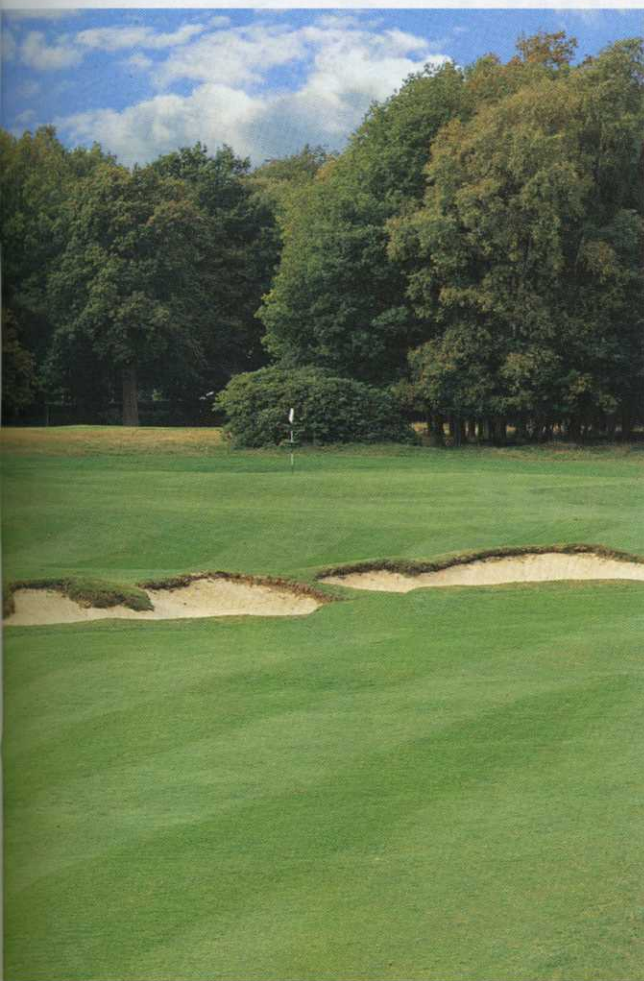
Following Stephen Fell's extensive air miles covered to reach the

right decision, there are signs that BAyr Root Washed Turf could soon be circling the globe. The company has already exported to Berlin and received enquiries from Norway and Istanbul. As washed turf is considerably lighter than conventional turf, and can survive quite happily in refrigerated lorries for several days, supplying these destinations is a viable proposition. But the "coup de gras" has to be the recent delivery of BAyr Root Washed Turf to the Kildare Golf and Country Club in Southern Ireland.



Pictured above: Stephen Fell at the Melbourne Cricket Ground. Left, the StrathAyr Root Washed Turf System

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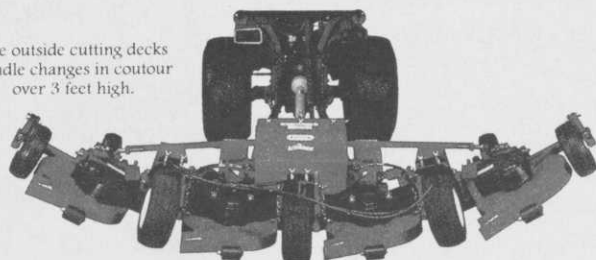


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# Closing date looms for Toro Award for Excellence

**H**aving just returned to the office after a very pleasant break on the Red Sea, I was delighted to see the large number of nominations that had already arrived for the Toro Award for Excellence in Greenkeeping Competition. Full details of the competition have been sent to golf clubs and appear in this edition of *Greenkeeper International*. All nominations must reach BIGGA HQ by 30 April 1997, so if you think that your Head Greenkeeper/Course Manager should be given the chance to win this prestigious competition and your club win a Toro 3000 greens mower then send your nomination TODAY.

### Aldwick Manor Supervisory Management Courses

Full details of this year's Aldwick Manor Supervisory Management Courses are also included with this magazine. As in previous years, we will be running five one week courses and we have managed to keep the cost at the same level of £426 + VAT (£500.55) for BIGGA members. All applications must be at BIGGA HQ by August 29 but to ensure your place, apply now.

### BIGGA Library

The BIGGA library is continuing to grow with at least four new titles being added each month. We now have more than 400 books in stock, with 300 available for loan to BIGGA members. Contact your section secretary if you wish to view a library list or BIGGA HQ if you wish to borrow books. Remember, you may borrow up to two books for up to six weeks at no cost except return postage.



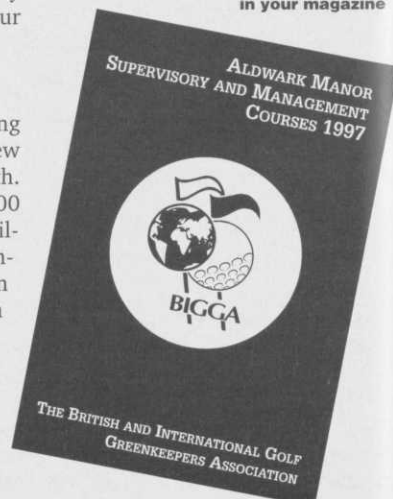
## Education Update

BY KEN  
RICHARDSON

### Regional Supervisory Management Courses

Plans are being finalised for this year's regional Supervisory Management Courses and full details will appear in the May edition of *Greenkeeper International*. Courses are open to all greenkeepers not just those currently in supervisory positions and are offered, thanks to the BIGGA Education and Development Fund, at the incredibly low cost of £75. Courses will be held in Scotland, Aldwick Manor, Accrington, Bradford, Retford, Northampton, Malden, Brighton, Crawley, Bournemouth, Cheltenham, Exeter and Dublin. Places on these courses are in great demand and early booking is essential.

**Aldwick Manor Supervisory Management Courses - this leaflet is in your magazine**







# The *Quality* of cultivated *Turf*

by Robert Laycock

**T**urf is a product that can vary in quality – when it arrives on site, the purchaser has usually not seen the field from which it has been harvested and is not always sure what to expect. He knows what the turf should be like but occasionally it fails to live up to expecta-

tions and has to be sent back. This aggravates both grower and customer and could be avoided if the customer had a detailed description of the turf.

What customers really need to know, preferably in advance of purchase, is the composition of the turf, not just the seeds mixture

which was sown to produce it but also the percentages of the species of grasses which have survived in the mature turf, as well as its dimensions, strength, roll weight and whether or not it contains netting.

The Turfgrass Growers Association, formerly known as TPI (UK), which represents most of



# The Quality of cultivated Turf

the producers of cultivated turf in the UK, commissioned me in 1996 to produce a quality standard for use by turf growers who needed to be able to describe their turf objectively. In other words, rather than saying something vague, they would be able to provide detailed facts about it.

I decided that an important feature of the quality standard scheme, as with a growing number of declarations these days, was that it should be self-certified – in other words the growers would assess the turf themselves. The actual measurements are all easy to perform and need a relatively short time to do. As a result, outside bodies would not be needed to measure the turf and assess its composition on a regular basis, charging large fees which would have to be passed on to customers.

Turf that had passed the tests would be sold with a signed declaration to that effect. All the techniques used to assess the turf would be set down so that they could be repeated by similarly equipped greenkeepers or outside agronomists so that if necessary a third party could confirm the details on the declaration. If it turned out that there was a problem with a consignment of turf not matching its description, a trained outsider could assess the turf using the same techniques as used on the turf farm and make a ruling as to whether the turf



Philip Young, Head Greenkeeper at The Oaks, with an optical point quadrat frame

in question had been accurately described.

In the past, the British Standard Institute's "Recommendations for turf for general purposes (1990)" has been the only objective guide to turf quality assessment in the UK. However, this document is fatally flawed in the methods it advocates. It is out of date in that it allows the use of meadow turf and it specifies dimensions of turf pieces which are not now in common use while omitting modern formats of turf such as "big rolls".

The TGA quality standard is now being advertised and used in the selling of turf by participating members of the TGA. As it stands, it is primarily intended for use by suppliers of turf for landscape purposes. The reason for this is that the area of sports turf is fraught with dangers relating to soils and their drainage characteristics, much to the delight of lawyers. Greenkeepers know the importance of matching soil types, particularly on playing surfaces. In the landscaping world,



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# 'The optical point quadrat frame is now used as the standard equipment for turfgrass ground cover assessment at STRI and is used around the world'

however, this is less of a problem and much excellent turf is grown on heavy soil. This would be unsuitable for use on most golf greens but from a compatibility point of view would match with the majority of natural soils in this country (which also tend to be heavy), and could be used away from sensitive areas such as new greens. However, those producers who are confident that their soil type is satisfactory for specialist areas can add a note to this effect as part of their declaration.

Eventually it may be possible to draw up a detailed standard for turf for sports turf. In the meantime, the standards are useful to greenkeepers who need to know the features of turf they are purchasing. These include dimensions (including height of sward, soil depth and thickness of thatch), the soil type and the cultivars used to produce the turf and, possibly most importantly, the percentages of grass species which are present in the turf when it is sold.

One measurement which can be of particular interest to greenkeepers, apart from the obvious one of exactly which grasses the turf contains, is thatch thickness. Turf bought for use on tees needs to be strong, with a reasonable thatch layer to withstand the golf club heads which will be trying to destroy it, possibly a matter of weeks after it has been laid. A

turf grower using the standards will be able to tell the greenkeeper the average thatch thickness of the turf he is offering.

Since last summer turf growers have been on training courses to learn to use simple techniques to objectively assess their turf. The only tools needed are a ruler, tape measure, weighing scales and an optical point quadrat frame. The optical point quadrat is used to assess the percentage ground cover of the grasses in turf and is based on the instrument I developed when working at STN in the late 1970s. All participants on these courses have been fully equipped with identical sets of this equipment to ensure that all measurements are repeatable.

The part of the tests which was new to all growers was the assessment of the botanical composition of the turf. The method set down in the British Standards "Recommendations" is to use a large square quadrat, subdivided into a hundred squares and to estimate the proportion of the grasses in them. This then provides a percentage figure for each species present in the turf. I defy anyone to do this. It is tedious, as anyone who has tried it will tell you, and the fact that estimation is involved must mean that it is not accurate.

The optical point quadrat frame is now used as the standard equipment for turfgrass ground cover assessment at STRI and is used

around the world. It gives an accurate, repeatable measure of ground cover, and can be used on turf of greens height as well as the more normal cutting heights used on turf farms. Provided the user can identify the grasses in the turf its use is very simple. Incidentally, as a tool for greenkeepers who want to monitor changes in the content of grasses in golf greens it is invaluable.

It is important to remember that although they were produced on behalf of the TGA, the TGA standards are strictly defined and are not a soft option for the grower. As an independent agronomist working with both the producers and users of turf I was able to devise measurements which are workable and useful to both. The training which participating growers have received using standardised equipment means that the results of assessments are repeatable and because the criteria for meeting the quality standards are set down in detail it is possible for the contents of a TGA member's declaration to be verified by an independent assessor.

The long term consequences of growers using these techniques are that turf quality will improve, provided customers insist on seeing these detailed descriptions of the turf they are buying. This way they will obtain the best turf for their purposes

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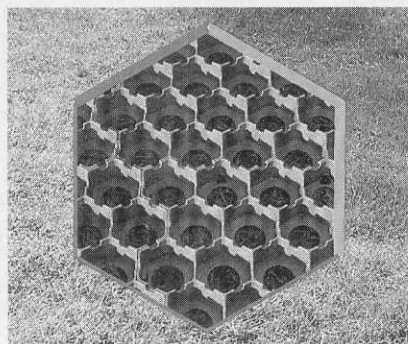
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**Scott MacCallum visits The London Club, which has a big name to live up to but manages the feat with aplomb.**

**F**ew would argue that there are no more evocative names throughout the world of golf than The Old Course or Augusta National but another golf club which, despite being relatively new, has a name to be envied is The London Club – the club named after the city which can lay claim to being the world's best known.

To those who don't know differently you might imagine a course which winds its way around the streets of the city never out of sight of Big Ben, with huge carries over the Thames, a halfway house in an annex of St Paul's Cathedral and caddies dressed in pin stripe and bowler hats.

Interesting concept though that is the reality is somewhat different. The London Club is at least half an hour from the city itself and, thankfully, is devoid of the hustle and bustle that proximity to a major city brings. It does, however, have rightful claim to its name and with two Championship courses each with its own formidable reputation forged in a remarkably short time – they were only opened in '93 – it enjoys a celebrity studded membership and has a greenkeeping team which could lay claim to being the most enthusiastic and well motivated in the country.

"We run like an army," explained Course Superintendent, Steve Jones, of his 29 full time and 39 strong summer team.

"If you look at our staff you'll see they all walk twice as quickly as most people. They set a cracking pace. They must be clean shaven every day and uniform must be worn at all times. They are always out on the course bang on the dot., no-one ever leaves the yard five minutes late."

On learning this you half expect to overhear US army style marching and chanting going on in the yard.

*"Because we strive to be the best.*

*"We don't ever take a rest,*

*For London members life is heaven,  
As all our greens stimp at eleven."*

"Other clubs visit us and can't

believe the system can work and I think it doubtful any existing club could introduce a system like ours which was set in stone from day one," explained Steve, who was promoted to Superintendent six months ago.

"The staff here are so enthusiastic. I never have any problems

getting them to do overtime," said Steve, who added that the salary scales at The London Club are no more than average. "We're not paid at the top end of the scale by any means.

"They work nine hour days with a 45 minute break in the summer and seven hour days in

the winter and if we've got a tournament on we treat it like The Open and a number stay on site."

While you might imagine such a regime was not for everyone staff turnover is minimal. The fact that a London Club entry on a CV is a feather in the cap of anyone is perhaps the answer to that.



# A club that's simply

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The team at the London Golf Club

The London Club comprises the Jack Nicklaus-designed Heritage Course and the International Course which was designed by Ron Kirby, one of Nicklaus' right hand men.

The courses are completely different. The Heritage is much more Americanised than the International which is links-like in its style.

"The Heritage is the most

frightening golf course I've ever seen with regard to maintenance. It is absolutely massive," said Steve.

"There are 179 bunkers – 38 on the first two holes alone – and

they are generally biggish, clover leaf and in clumps. The manicuring of these is a tremendous task.

A full tournament rake, which we haven't done since last spring, takes 14 guys a full day."

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## Greens and tees were designed to be hand cut

There is also a policy of staff placing all the rakes clockwise in the bunkers... although the members are prone to forget to replace them in the right direction!

"The fairways on the Heritage are the biggest in Europe. You are looking at four Jacobsen LF's taking three quarters of a day just to mow them."

Greens and tees are all hand cut as a matter of course – in fact they were designed to be hand cut.

"Some of the greens are within three feet of a lake wall and you couldn't possibly turn a ride-on machine while some of the slopes are too severe. We did try to cut the International tees with a Greens King triplex but it was too big for the tee and even with a very skilled operator it took almost as long as hand cutting."

The Heritage is sown with Providence creeping bent grass while the International is a Colonial bent fescue with 10% Providence – a Nicklaus trait designed



Neat touch: Rakes are left clockwise to the greens

for security reasons.

Dealing with two courses of such different style does cause problems. While at the moment there are two separate sets of staff operating – they are going to be dissolved into one crew later

this year – the same equipment is used on both courses.

"The problem is that they are set differently for each course. For example we might send five Jacobsen LF set at 16 mm to cut fairways on the International but

have to change all the heights to 14 mm before going out to do the Heritage.

This throws up many problems and I've spent a great deal of time trying to work out ways to solve them. We'll probably settle for

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# 'We spoon feed the greens every seven to ten days'

some mid-height ranges over the two courses to make it practicable but if you want to look after them differently you have to mow at different heights."

Steve has crammed in quite a bit to his 30 years. He worked abroad in Germany and Greece among others, spent some time under Martin Jones at The Oxfordshire before moving to The London Club and also completed a two year turf degree course at Rutgers University in New Jersey during which time he lived in New York.

"I put the idea to Mr Nagahara, the owner of The London Club, and he agreed to send me.

"That was fantastic because the Americans are miles ahead of us when it comes to colleges and education," said Steve who recently visited the GCSAA Conference and Show in Las Vegas with his First Assistant and recalls going into a room packed with 3,000 superintendents for a lecture at seven o'clock in the morning.

He is not overly impressed with the greenkeeper education system in the UK.

"I sent five people to college to do their NVQs and three came back and said 'you're wasting your money sending us on day release because I can't learn as much at college as I can here'. It is generally the fault of the bureaucracy they have to go through. There is no standard to NVQ you pass or fail... and everybody seems to pass. A student who is exceptional and another who is poor or average come out with the same result.

"The standards are low. In fact my guys here sometimes take over the classes. They were putting in a new irrigation system the other week and my staff member had to tell the lecturer how to do it."

The London Club has come up with its own education system to train its employees.

"I'm going to take on two apprentices who start this month. One is an apprentice mechanic/greenkeeper and the other is an apprentice greenkeeper. They are going to work here on a graduated pay scale for four years - our own scheme not part of the modern apprenticeship scheme. .

"The problem is that they may



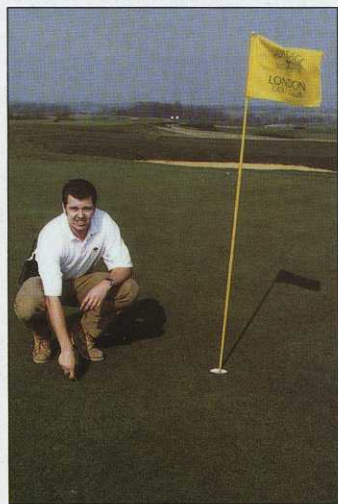
be inhibited when they go on to another job at another golf course because they won't have qualifications NVQ 2 and 3 but they will have had a four year apprenticeship at this golf course and I'm hoping that will be enough in the industry.

"The other option is that I will pay for them to go to evening classes and study whatever they want, diverting the money I would have spent on NVQs into evening classes. They should get a full background here and we've got a set programme of what they are going to study in the first year, year two, year three, year four."

The club also has a library with over £1000 worth of books, as well as a video and photographic library.

"We also get suppliers to give

Steve Jones, Superintendent



talks, half an hour in club time and half an hour in staff's own time."

The education initiative is matched by my maintenance practices at The London Club which would be an impossibility to the majority of clubs in the country which just don't have the resources.

"We spoon feed greens every seven to ten days while we are introducing a practice whereby we poa pick greens every Monday for four hours before doing any other work."

Not that the greens are in need of it. Steve reckons the greens on the International have less than 2% poa while the Heritage has less than half a percent.

"We core greens and tees on a two by two spacing to a depth of three to four inches twice a year, sometimes three if we can fit it in. That's on both courses and it's a huge operation. We verticut more frequently including at depths of 18 mm and we top dress every Monday but so lightly the members don't notice. It's a little and often.

"We are generally more aggressive with turf and that is something I picked up here and at college. It is not something I knew before."

There are two full time mechanics, and an apprentice, who operate in the state-of-the-art maintenance unit.

"Every piece of machinery is washed down, diesel and greased every night. Our mechanics have 35 year's in dealerships

between them on a range of machinery and their work is extremely important. I can increase their budget by £10,000 and save £150,000 on capital expenditure."

The machinery is predominately Jacobsen a company chosen on the strength of Club Secretary, Joe Paulin's, previous experiences with the kit.

"We're very happy with the equipment. I find that Jacobsen machinery is certainly finer with regard to reels and cutting equipment and that suits our courses," said Steve.

Joe was the original superintendent at the club and his experience has been extremely useful to Steve.

"Joe is very helpful and he lets me try anything. He's certainly a calm person to work with. He's also keen to stress that other greenkeepers are always welcome to come and visit us at The London Club," said Steve.

"I'm very happy working here. We have an excellent bunch of guys and it is a real pleasure to work with such a superb team which is so committed to the industry as a whole.

"We all work hard but it is made easier by the fact that our enthusiasm is encouraged because we have the budgets here to get the job done and a large enough staff to produce the quality we do."

With that sort of commitment The London Club will continue to gain in prestige and live up to its name.



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AD  
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# What to buy and

by Ken Richardson

In the previous, two, articles, I have looked at hardware, that is, the parts of a computer that you can see; and software is the instructions that make a computer do what you ask. In this, third, article, I will look at what to buy, where to buy it and look at some of the costs involved.

## What to buy

Many people have asked me 'What sort of computer should I buy?'. This is a very difficult question to answer as it depends on several things, eg. what do you want the computer to do and how much money do you have to spend. There is a wide range of dealers hoping to sell both hardware and software and they will try to sell you what they think you need. Therefore, before setting off to your local computer shop or picking up a computer magazine, you need to decide what tasks you want to perform using a computer. This is not easy to decide as you can only begin to see what computers are capable of, when you become familiar with them. However, with some thought, you may be able to formulate a plan. The most critical factor is cost ie how much are you or your golf club willing to pay, although you could convince your club to spend a little more money if you made a good enough case. Lets look at some of the points to consider.

## Which Applications do I want to run?

As I explained in the Software article, all applications state their particular processor, memory, hard disk and monitor requirements on their packaging. You must decide which and or how many applications you wish to run. Remember that the operating system selected ie DOS, Windows or Windows 95 also determines processor, memory and hard disk requirements. For example, let us suppose that you want to run MSWorks and TRIMS under the control of Windows 95.

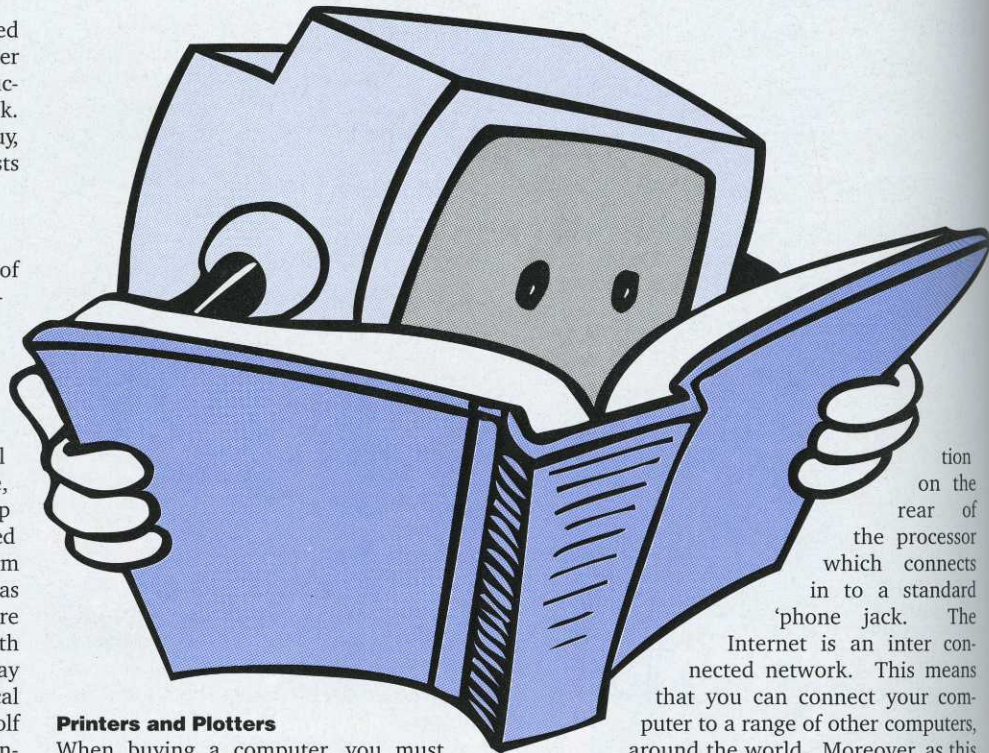
### Requirements:

Application	Memory	Processor	Hard Disk
MSWorks	4 Mb	386SX	14 Mb
TRIMS	8 Mb	386SX	25 Mb
Windows 95	8 Mb	486 DX	120 Mb

Therefore, a minimum of 8 Mb of store (software only uses memory when it is running), a 486 DX processor or higher and 160 Mb of hard disk space are required. Remember that this is the minimum requirement and does not allow for other applications or storage of data. Similar calculations can be performed for other applications.

## Peripheral Devices

When considering applications, you must also consider peripheral devices such as printers, plotters, compact disks and sound systems and 'add ons' such as modems and Internet



## Printers and Plotters

When buying a computer, you must decide what you need to print, if you need it in colour and how much printing will be required. As I mentioned in the article on hardware, printers come in three main types ie dot matrix, bubble (ink) jet and laser. Laser gives the best quality print but at the highest price, dot matrix is cheap, slow, noisy and fairly poor quality whereas bubble jet give reasonable quality at a reasonable price, is fairly quiet and can print in colour. However, ink cartridges cost approximately £20 and bubble jet can be expensive if printing large amounts. Plotters are needed if you are considering producing plans or designs.

## Compact Disk Drives

Compact disk (CD) drives are now available on most new computers. Many software titles are available on CD, especially those needing large amounts of data eg encyclopaedia. Reference data for turf science and turf management eg identification of pests and diseases is becoming available and the number of titles will increase with demand.

## Sound Systems

Sound cards, loudspeakers and associated software is available, however, it is debatable if they are necessary on office computers.

## Modems and Internet

If you are contemplating becoming a user of the Internet, you will need a modem and appropriate software. Modems allow computers to communicate with other computers via a telephone line. If you buy a computer with a modem installed then you will see a connec-

tion on the rear of the processor which connects in to a standard 'phone jack. The Internet is an inter connected network. This means that you can connect your computer to a range of other computers, around the world. Moreover, as this

connection is through a local computer, you pay telephone charges only at local rates. For example, you could access the pages for the Golf Course Superintendents of America from the computer in your office by telephoning the computer in the office of your Internet supplier which may only be 10 miles away. You can also send and receive E-mail, using the Internet. E-mail is electronic mail and allows you to type messages into your computer and send them to any part of the world for the price of a local telephone call.

Once you have considered what applications you want to run you can then begin to look at purchase options. Unfortunately, you may have decided to buy a computer system with a particular configuration and then find that you cannot buy it as it has become obsolete in computer terms. You should then look to buy the highest specification computer that meets your budget. The next step is to decide where to buy and even whether to buy new, buy second hand or even use a computer from another part of the golf course.

## Where to buy

As I suggested above, the cheapest way of obtaining a computer is to inherit a system from an office which is buying a new system. This has many disadvantages, however. Eg. The software application may not be what you want, the processor may be old and slow, the system may not be able to be upgraded, spares may be impossible to find and maintenance difficult to arrange. Therefore, if you have made a case for using a computer in your office then it should not be difficult to make a



# where to buy it

## EXAMPLES

Examples of specifications and prices are:

### Computer warehouse

Pentium 166 Mhz Pentium processor - with MMX technology  
16 Mb RAM  
SVGA Monitor  
CD ROM  
16 bit Stereo sound card and speakers  
1Mb PCI 3D Graphics card  
Modem  
Windows 95  
MS Works  
£1599 inc VAT

Hewlett Packard DJ 693 Colour Bubble jet Printer  
£259 inc VAT

Pentium 133 MHZ Processor  
16 Mb RAM  
1Mb PCI Graphics  
CD ROM  
Soundcard  
Windows 95  
MSWorks  
£999 inc VAT

### Specialist Computer Store

Pentium 120 MHz Processor  
16 Mb RAM  
1.2 Gb Hard Disk  
CD ROM  
Sound Card  
Windows 95  
Colour Bubblejet Printer  
Modem  
£1499 inc VAT

### Small specialist store

Pentium 166 MHz Processor  
16 Mb RAM  
1.2 Gb Hard Disk  
SVGA Monitor  
CD ROM  
Sound Card  
Speakers  
Windows95  
MSWorks  
£822 inc VAT

Buying a new computer can be even more daunting than buying second hand. There is a bewildering range of computers, a vast range of prices and many different outlets. You could visit your local high street electrical store, a computer warehouse, visit a computer specialist, purchase direct from a manufacturer or use direct mail.

**High Street Stores** There are several High Street Stores that sell or rent computer hardware, software and peripherals. The advantages of these stores is that you can see what is for sale, you can calculate the price of a system, you can see how the system operates and you can discuss your requirements face to face with the salesperson. The main disadvantage is price. High street stores prices tend to be higher than warehouse prices or direct mail. Warranty can usually be arranged with servicing being done in the home, but check that this is included in the price.

**Computer Warehouse** Most large towns and cities have at least one computer warehouse which sell the whole range of computers, software, peripherals, up grades, books and stationery. Prices tend to be lower than at High Street Stores and you can view and try a wide range of systems. It can be a bewildering experience, however, if you do not have a very good idea of what you want before entering the warehouse.

**Computer Specialists** Many towns and cities have at least one specialist computer supplier. These can be local suppliers of top brand name computers or small independent suppliers, many of whom make up computer systems to order. Top brand names can be expensive but they can give you piece of mind. Small independent suppliers can give excellent service and good value for money. However, you need to sure that they will remain in business, at least for the duration of your warranty.

**Direct Mail** Computer magazines seem to contain more advertising than editorial and most adverts are for computer hardware and software. You can buy from a major manufacturer, from a direct mail supplier or from a small independent. The main disadvantage of buying by direct mail is that you cannot see what you are buying. However, prices are very competitive and you can compare a number of suppliers.

**Practical Considerations** Let us suppose that your club has agreed to the purchase of a computer for your office and that you have decided what software applications you want to run. How do you compare what the different companies have on offer, when each company gives differing descriptions, supplies different software and has different prices for peripherals such as printers? Firstly, write down your needs: Eg.

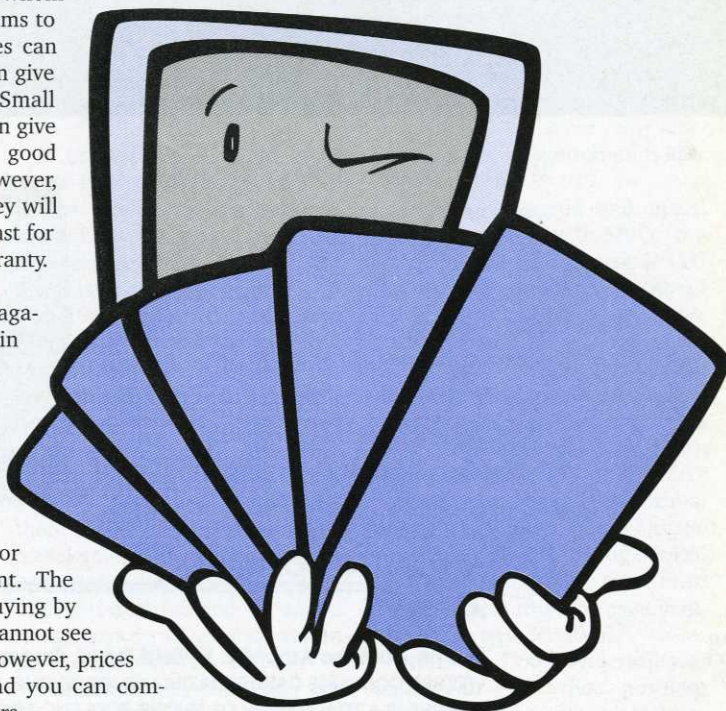
### Basic requirements

Processor: Pentium 133 Mhz  
Memory: 16 Mb RAM  
Monitor: SVGA colour  
Hard Drive: 1.2 Gb  
Floppy: 3.5 inch  
CD ROM  
Built in Modem  
Windows 95  
MSWorks  
Colour bubble jet printer

Secondly, determine the cost of the basic system (without software) from your chosen supplier or suppliers. You may also be given a great deal of other information which can be confusing, however, try not to let it confuse you too much. Once you have got your list of suppliers down to three or four, you can then start to see what else you get for your money eg Windows already fitted, MSWorks already fitted, a range of software supplied 'free', extended warranty, at home or return to manufacturer, is the system expandable, how many expansion ports has it got, does it have cache memory, does it have a graphics extension card etc.

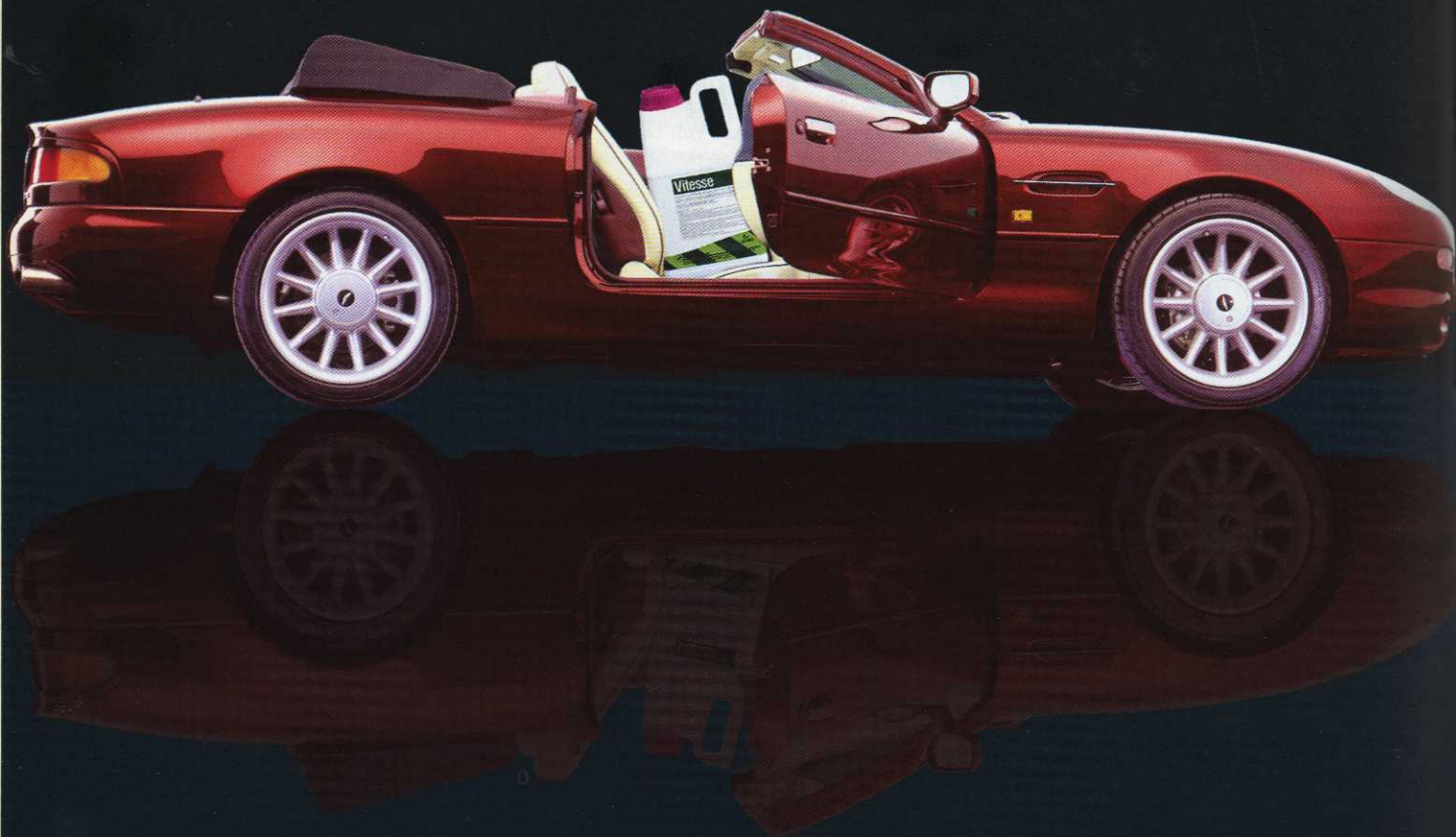
case to your club for buying the computer that is needed.

Computers can be purchased second hand. Indeed many companies sell out dated ie lower specification than current computers that have had little or no use. However, unless you are very knowledgeable and/or have a good relationship with a computer hardware technician then you could be buying trouble. If, however, money is limited and appropriate guarantees can be sought from the supplier then you might consider this option.





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**When Ransomes introduced its E-Plex all-electric greens mower in 1994, greenkeepers had to adapt to a new way of thinking and a new way of working. Instead of relying on the internal combustion engine and hydraulic pumps to provide motive and cutting power, they had to get used to batteries, electric motors and the strange sensation of using a virtually silent machine to cut their greens. It was a learning experience in more ways than one, as two of the first users in Britain discovered...**

**G**raham Wissett admits to being somewhat apprehensive when his new E-Plex greens mower was delivered to Lydney Golf Club in June 1995.

Although he had arranged a long demonstration of the machine and had ensured that Ransomes' dealer, R S Bird Ltd, was able to provide the necessary back-up service, Graham still felt that he was stepping into the unknown.

"That feeling did not last long," he now says. "Once you get used to the lack of engine noise, vibration and exhaust fumes, the E-Plex is just like any other greens mower, only it's better and less costly to own."

Founded in 1927, Lydney Golf Club is a nine hole parkland course located on the western bank of the river Severn midway between Gloucester and Chepstow. Following his appointment as head greenkeeper in 1994, Graham had set about compiling a list of new machines to replace the ageing equipment on the course.

A new greens mower was a high priority, yet Graham had a specific requirement. "I work pretty much on my own, so I needed something that was quick and simple to maintain," he explained. "Even with nine holes, there's a lot of work to get through each day and I want to be out on the course not back in the shed. I took one look at the E-Plex and could see that it would take very little looking after."

Although it took time to per-



# Thinking ELECTRIC

suade the club's committee to order the E-Plex, Graham's initial reasoning has been totally vindicated. The machine has cut weekly servicing and maintenance time by half compared with the club's previous diesel-engined mower.

Yet precious time is not the only saving being achieved by Graham Wissett with his E-Plex. "Running costs are minimal," he pointed out. "I need no diesel fuel, no engine or hydraulic oil and no filters. All the E-Plex consumes is off-peak electricity and distilled water. I estimate that the club is saving around £600 a year on consumables alone. Even if the batteries need replacing after three years, we'll still be more than £1,000 in pocket."

In its first season at the club, the E-Plex managed to cut 27 greens before the batteries needed to be recharged. The average size of the greens is 450 sq yards (375 sq metres).

In 1996, groomers were fitted to the cutting units which placed extra demand on the batteries. "Yet, I'm still able to cut 19 greens with power to spare," commented Graham. "The machine has proved extremely reliable, it produces a very good finish and there are no worries about oil or diesel spills. Both the club and I are totally convinced we made the right decision and we would not go back to an ordinary greens mower now."

Brandhall Golf Club was the first local authority course in Eng-

land to buy a Ransomes E-Plex greens mower.

Owned, managed and maintained by Sandwell MBC, the attractive 18-hole course is laid out on hilly, undulating parkland close to the M5 motorway, approximately 5 miles west of Birmingham city centre. The urban location makes Brandhall a very popular course, attracting close to 50,000 rounds of golf a year.

Apart from being an E-Plex pioneer, Brandhall golf club has the rare distinction of being looked after consecutively by three head greenkeepers from the same family for the past 50 years.

In 1947, Doug Underhill was appointed to the position, remaining for 34 years. He was

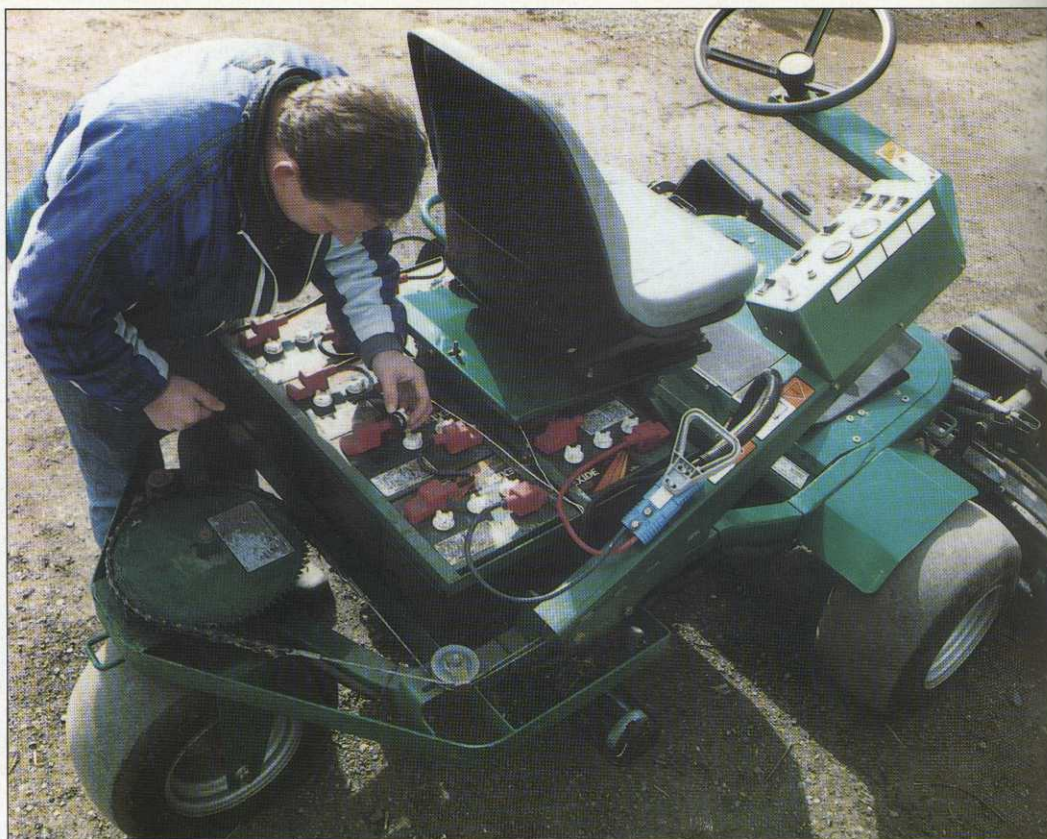




followed by son Ian, who held the post for six years before becoming contracts manager with Sandwell MBC's DSO division. Ian was succeeded by his brother, Paul, who has been Brandhall's head greenkeeper for the past 10 years.

The decision to purchase the E-Plex was made jointly by all involved with the council's grounds care contracts, as Ian Underhill explained: "We looked firstly for simplicity of use and maintenance. Here, the E-Plex scored top marks. We then considered the environmental aspects which are of major importance to the borough. With no engine, no oil and no exhaust, it was obvious that the machine would be kinder to the environment than other mowers."

Before placing the order, an E-Plex was loaned to Brandhall golf club for two weeks' assessment. "We don't buy any new machine



The E-Plex's batteries are checked daily by Paul Underhill, Head Greenkeeper at Brandhall Golf Club

without a thorough test," pointed out Ian. "It did not take the greenkeepers long to get used to the E-Plex and they were keen to have the mower. Our mind was made up by the confidence of

local Ransomes' dealer, E T Breakwell, who said they would swap the E-Plex for a diesel greens mower if we did not like it after 12 months use."

A year on, Sandwell MBC has

no intention of taking up the offer and head greenkeeper, Paul Underhill, says the mower has been troublefree since it was delivered in April 1996. "It was a bit of a culture shock at first, but

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# 'It is put on charge overnight and the mower is ready to go without delay the next morning'

we quickly appreciated the absence of noise and the low maintenance requirements. One small drawback is the lack of power steering, but this is only really noticeable at very slow forward speeds."

A critical factor in extracting maximum life from the batteries is setting the cylinders correctly to the bottom blades, says Paul. "Too tight and the drag creates excessive battery drain. We check them daily so they barely touch, enabling all 18 holes to be cut on one charge. This is a good result on our sloping ground."

Realising that the groomers take additional power to drive, Paul uses them on a maximum of nine holes in a day, grooming the other nine holes the following day.

"We chose the E-Plex principally for its simplicity and reliability," commented Paul. "A year on, the facts speak for themselves. Daily maintenance involves simply greasing the cutting units and checking the batteries. It is then put on charge overnight and the mower is ready to go without delay the next morning."



**Graham Wissett of Lydney Golf Club:**  
"We would not go back to an ordinary mower now"

During 1996, the machine clocked up 225 hours without a single visit to the DSO workshop, much to the delight of manager, Les Parkes.

"Apart from the obvious environmental benefits, the machine has proved it can make significant savings in maintenance time and running costs," concluded Ian Underhill. "I believe other clubs need to take a serious look at the mower. If it can do it for us, it can do it for them."

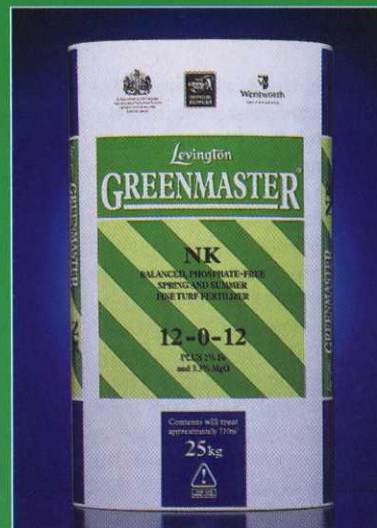


**Ian Underhill (left), Contracts Manager with Sandwell MBC, discusses course maintenance with his brother, Paul, Head Greenkeeper at Brandhall Golf Club**

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**AD  
REF  
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**Jack McMillan recalls the early years of his career when the stresses were more physical and compares it with now when the mental strains can be excessive.**

I came into greenkeeping by accident in 1946. I was leaving school and looking for a job when a vacancy arose at East Renfrewshire GC. Like so many before and after me, we all stayed long enough to become obsessed with the job.

Every aspect of the job then involved a demanding physical commitment. There was an element of physical drudgery in greenkeeping, which has left many greenkeepers of my generation with aches and pains in places they never knew they had.

We constructed a cut and fill tee at East Renfrewshire GC during the winter of 1946/47, one of the more severe winters I can remember. It involved physically digging with picks and shovels into the hillside, the cut material was thrown over the fill area until it was too far to throw, it was then wheeled forward into place by wheelbarrow, until the required level platform area for the tee had been created.

We can, with the available equipment, build and construct a new golf course from start to the finish in four or five months, without too much physical stress on those involved.

During this year's Harrogate show I met an old friend, a greenkeeper of my generation, and commented that he was looking well. His reply was that he may look all right on the outside but he very much doubted if he would pass his MOT.

The introduction of new technology in equipment, sophisticated irrigation systems and the pressure from the changing expectations of the golfer have all, I believe, changed greenkeeping into what could now be considered a stressful job. Golf course management has been identified in the US as being a high risk stress profession.

The pressures of the job are today much more demanding than ever before. With our ever changing way of life, travel and golf abroad, televised golf and heavier levels of play, comparisons will be made and very often they will be totally unreasonable and unfair.

There are levels of work related stress that I have always felt could be considered a healthy stimulant. However there are unfortunately levels that can make life painful. We have as an industry had more than our fair share of nervous breakdowns, heart attacks and sadly, has in some instances created enough tension to have caused suicide.

The greenkeeper is always going to be the recipient in the front line when it comes to complaints from angry golfers finding fault with the weather, bad tees shots, missed putts and the price of subscriptions.

This job also involves that most sensitive of all roles communicating with people. The



# 'More important

greenkeeper earns a living by having to communicate with some 500 "experts" who think they know more about his job than he does. The unfortunate circumstance in this situation is that they all have differing ideas on just how the job should be done.

Private members golf clubs adopt the attitude that each and every member and their guests are your employer, with all the power that entails. Making one of the more impor-

tant skills that has to be developed early in the job is that of tact and diplomacy.

The Course Manager is somewhere in between his own staff and the client/customer. To the green staff their employer is a faceless committee that they rarely, if ever, see. The Course Manager is normally the only continuity that most golf clubs have. Thankfully many of the enlightened clubs have taken the opportunity to prepare sensible on



going policy documents that can be excellent guidelines for ever changing committees.

I can remember in the 1960s going out with 16 committee members to look at a piece of available land that had been purchased to extend the golf course. It became evident that there were 16 differing ideas on how these holes should be laid out. The situation became so unmanageable that I was then instructed to find a good 3, 4 and 5 in the card and get started on the construction.

Greenkeeping could never be considered dull or boring it is the complete opposite of that.

Greenkeepers are inordinately proud of their golf course, most of them in my experience are workaholics and spend time on the job that far exceeds the length of day expected in other professions. There is always a machine to set up or repair, an irrigation leak to find and repair, you name it they will find something that requires their time. Very often sacrificing time that should be spent and shared with their families.

Talk to any young greenkeeper's wife, she knows when things are going well and more importantly she is well aware of the anguish when he is at the mercy of the extremes of weather. Something he has to live with but very often does not have the necessary resources to do anything about. She will no doubt tell you of meals missed, hurried meals, a reluctance to take holidays and very often work taken home.

better part of six months in the year. The level of play runs at about some ten thousand rounds of golf annually and they have climatic conditions that allow for year round growth. The budget provision, is I am sure, in line with that required for a Roll's Royce golf course.

The UK members are looking out onto a course that has a normal level of play somewhere in the region of at least 40,000 rounds, many I am sure a great deal more, and much of that played over seven months of dormancy when there is no recovery whatsoever from the ever increasing traffic.

Having been privileged to have visited Augusta National and been impressed with everything I saw and indeed pleased that the golf world can provide such excellent standards.

We are now seeing that quality and standard extended to similar projects here in the UK. "I would not however exactly call any of them working golf courses." They will however rightly or wrongly become the benchmark for judging standards of excellence.

I recently was taken to task by a very fine young Course Manager for suggesting that a golf course with a generous budget, limited level of play, (9,000 rounds per year) and a staffing level and equipment provision that compares with the best was only an ornament.

He also informed me that if it was considered necessary they would close the course for the winter months, or at least ensure very lim-

budget, levels of play and more important the level of winter play. The increased traffic over the winter months can be a major area of concern for greenkeepers. It is however an occupational hazard we have to live with.

One of the joys of playing golf is the diversity in the types of course we have – they all vary in character and they all deal with the problems of traffic and the extremes of weather differently. They will however still be compared one to the other.

The role of the Course Manager has in the main improved greatly – I recollect a cartoon in an early edition of the old Scottish Greenkeeping magazine *Turf* where car parking for the Secretary and the Professional were clearly defined and there was a bicycle rack for the greenkeepers that could afford a bike.

Material rewards have moved on in keeping with the new responsibilities and as would be expected with the better rewards comes the expectation for better and higher standards.

The golf course is more than a means of earning a living, it very often becomes an extension of their lives. There is an ongoing search for perfection sometimes in very difficult circumstances. In my experience the golf course managers are naturally high achievers and set their sights high and can on occasion be their own worst enemies.

There are the pressures and sometimes frustrating circumstances associated with the job eg equipment breakdowns, too heavy a work programme, the varying weather conditions, responsibility without authority and in some instances a feeling of insecurity, ever changing bosses introducing new management styles and sometimes an unclear line of authority.

Who could explain the communication they find at Harrogate, there we see the greenkeeper at his best, he is among his peers, they

# than life itself'

As this article is published we shall be about to go through the annual ritual of having Augusta National Golf Course and the Masters on our TV screens – members of our golf clubs will be watching it on television and at the same time looking out the window at their own course "with a touch of poor me's" and wondering what is wrong.

The answer to that is clear, very simply put the Augusta National golf course closes for the

ited play. The kind of situation I am sure most young greenkeepers only dream about.

Some of the comparisons made by the golfer can very often be totally misleading and illogical. Comparisons are fair when comparing apples with apples and when the playing field is level. An almost impossible situation in the golf course business with so many and varied items to be considered such as course type, staffing levels, equipment provision,

share a common bond one with the other they are comfortable and the pressure of work is for a brief period left behind – I am sure they all come away from Harrogate having enjoyed each others company with their batteries charged and ready for another challenging year ahead.

By bending Bill Shankly's quote I would suggest that greenkeeping is not about life itself, it is more important than that.



# Accessories make all the

**A**ttention to detail is the difference between good and great. It is what sorts the superstars out from the stars.

It is the same with golf courses. The ones you remember are those who have paid attention to the finer details. The ones which have a little something which has visitors commenting to their partners about the next time they play.

"I saw some superb tee markers at BIGGA Country Club..."

There follows some of the new ideas which are available in 1997.

■ Eagle Promotions are proud of the fact that their "Photocast" zinc tee signs relate to the tradition of golf.

"Photocast" is a photographic etching process that allows the most complex of graphic images to be deep etched into zinc, giving the look and feel of traditional



cast products without the need for expensive patterns or dies. The company can etch club emblems, crests and hole diagrams into any size of tee plate.

They specialise in providing measured mark systems, backed up by a course measurement service. The zinc plates nestle into a range of

stone effect pedestals or are affixed to a shaped wooden log design. The wooden range extends to fairway signs, point of play markers and fingerposts.

The list of clubs using Eagle Promotions is growing fast. Contact Philip McNley on 01883 344244.

■ Getting food and drinks out on to the greens for players' snack meals is potentially big business. However, the problem is how to transport it there, and then store it, safely and hygienically.

The Maillon Line coolbox from Portable Refrigeration Company (PRC), pictured above, offers an economical and straightforward solution. Manufactured by Monetti, the Maillon is a tough yet lightweight insulated container with a capacity of 68 litres. It offers a practical, no nonsense way of moving and storing

NEW FROM



S T A N D A R D G O L F

## THE LOOK AND FEEL OF GRANITE AT A FRACTION OF THE COST

With our exclusive Turfstone™ Tee Course Markers and signs you can make your course look like a million dollars – without breaking the bank!

They are available in a mountain range of colours and just like the real thing they are made to last for ages.

The handsome markers are precision moulded from a dense, non-porous material that will stand up to the elements as well as normal golf course use.



Send or telephone for details and prices:

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# difference



chilled, frozen or even hot food and carries a list price of from £345 plus VAT.

The Maillon is a top-loading box. When fully loaded with chilled foods, the standard insulated version will maintain temperature safely for hours at a time, without the need for an external power source. Thus food can be dropped off at pre-arranged spots for players to eat when they are ready – and it keeps in prime condition, whatever the weather. For longer storage optional chilling systems are available using either eutectic plates or a 'dry ice' system to maintain temperature.

PRC can offer the Maillon in a choice of colours, so users can colour-code them for, for example, different groups of players, menus or times of day. As well as being equipped with carrying handles, the Maillon can be supplied with wheels for easy transporting of heavier loads. It could also be carried using a buggy or in a car boot.

For more information, brochures and details contact your local PRC branch or call Portable Refrigeration direct on 01428 707622.

■ Standard Golf has introduced for 1997 TurfStone Tee Markers, Yardage and Course signs. How tees can look a million dollars without breaking the bank. TurfStone Tee Markers by Standard Golf provide the look and feel of real granite – at a fraction of the cost. They are even available in a mountain range of colours, Red Garnet, Blue Slate, Yellow Sandstone, White Quartz, Black Onyx and Grey Granite. Just Like the real thing, they are made to last for ages.

TurfStone Tee Markers are precision moulded from a thermoset polyester compound that is ten times stronger than other similar compound. It is a dense, non-porous material that resist chipping, cracking, fading and even staining. It is impervious to golf course chemicals and available for immediate delivery.



They can be ordered TurfStone Markers plain, or have them engraved with your Club logo, in one colour, or any other one colour design, or with hole numbers.

For further information telephone 01753 537410.

■ A new golf driving bay – which can be constructed in single or multiple bays – has just been launched onto the UK market by the Shropshire-based golf equipment specialist, Links Leisure.

Said to have been designed to allow both golf clubs and golfers to make the maximum use of the space available for practising facilities, the new PRO-TEE bays are both robust, require little or

## PHOTOCAST TEE SIGNS

By



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Acid Brushed Balladín Stone Pedestal with 12 x 9 inch Zinc Plate Showing Hole Diagram



Cornish Stone Pedestal with 9 x 9 inch Zinc Plate



Monolith Style with Zinc Plate

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Double Pedestal with Sponsor Position





# Golf course accessories

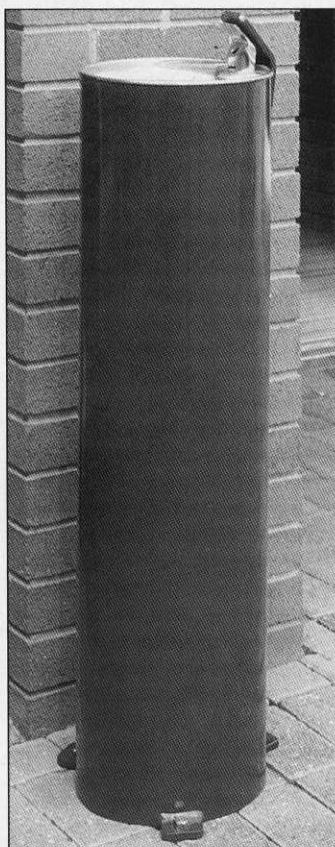
no maintenance, and they are easily erected.

Measuring 3.5 x 3.5 metres in single bay multiples, the driving bays consist of a rust-resistant frame either galvanised or coated in green plastic – and long-life baffle nets.

Easily installed – each bay comes with a detailed set of installation instructions – Links Leisure are also offering, as an alternative, a complete installation service if required.

The company can also provide all-weather and user friendly golf mats for use with the new bays. These consist of a durable glass reinforced cement base and three individually replaceable artificial turf sections, each with a rubber shock pad backing.

Full details of the new practice bays can be obtained from Links Leisure Unit 22, Civic Industrial Park, Whitchurch, Shropshire SY13 1TT Tel: 01948 663002.



■ The ability to have a drink of fresh water while playing a round of golf will appeal to most golfers, especially in the summer months. Progressive golf clubs now provide drinking fountains at strategic points around the course. Facilities of this type need to be hardwearing and robust to withstand the effects of weather and possible rough usage. Ideally, they should also blend in with the surrounding environment to enhance the appearance of the course.

The Maestro Model 35 drinking fountain, pictured left, achieves all this. It is attractively styled with simple lines and a fern green finish which will enhance any outdoor location.

It is also extremely robust and vandal resistant. The column is made of 1/8" mild rolled steel and the receptor is stainless steel for strength and hygiene. The bubbler is also specially

designed with a public environment in mind. It features a steel guard and an anti squirt head to prevent vandals from flooding or spraying surrounding areas. Operation is via a push button which is recessed into the body of the unit for protection. Tamper resistant screws are used for all fixings.

To give long lasting good looks, the receptor is made of stainless steel, the bubble's finished in chrome, the valve is chrome plate and the body of the fountain has a scratch resistant epoxy finish.

The Maestro Model 35 features standard connections and is simple to install. It is available now from Maestro International, Europe's leading manufacturer of drinking fountains and water coolers. Maestro is also registered to BS5750.

For further information telephone 0181 302 4035.

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AD  
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Cleveland. TS14 6RQ.

Tel: 01642 475009 or Fax: 01642 471036.



AD  
REF  
56



■ Easy Picker Europe Ltd have launched an ingenious Golf Ball Tee-Up device which is ideal for every Golf Range.

Easitee will eliminate back strain, save costs on rubber Tees, speed up practice and increase revenue at busy Ranges.

Easitee is simple to install, directly onto the floor, under a Rubber Mat. Each Range Ball can be raised or lowered by simply pressing the club head down alternately onto each tee, so lifting the ball to the desired height.

Easitee is a British invention and patented world-wide.

For further information telephone 01508 528828

■ Tildenet, the international netting company is able to offer tailor-made indoor netting systems for a variety of sports

Tildenet has recently converted Bridgewater Mill, Eccles,

Manchester into a 7-bay indoor golf range, allowing the fair weather golfer to practice all year round!

Other projects installed by

Tildenet include a 6-bay system at Lord Wandsworth school near Basingstoke.

For further information telephone 01179 669684.



Indoor golf netting at The Belfry

## KEEPS FOOD FRESHER ON YOUR GREENS

The Maillon Line coolbox from Portable Refrigeration Company offers an economical and straightforward

solution to the problem of transporting smaller loads of food safely.

With a capacity of 68 litres it fits in the boot of most vehicles and can be equipped with wheels for easy carrying. Its superior insulation will keep fresh, chilled or frozen food safely for hours at a time, while for longer storage periods eutectic plates or a special 'dry ice' system can be used.

Manufactured by Melform/Monetti the Maillon's polyethylene body is tough, lightweight, easy to clean and entirely safe. The external dimensions are: Length 850mm Width 450mm Depth 390mm

Another great idea from PRC!

For information, prices and brochures phone or fax the Portable Refrigeration Company on 01428 707622.



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THE 68 LITRE CAPACITY LINK IN THE COLD CHAIN FOR THE SMALL RETAILER OR CATERER

- ❄ Provides no break in the Cold Chain with eutectic plates for chilled or frozen food.
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Amazone Ltd has joined BIGGA as a Golden Key Sponsor and joined the Association and Rhône Poulenc as co-sponsor of the Environment Award it initiated two years ago.

In recent years the name Amazone would lead you to think less about the great South American river and more about Amazone Ltd, the company which conceived the Amazone Golf Environment competition two years ago and ran it with conspicuous success.

Amazone has now joined forces with BIGGA and Rhône Poulenc to give the competition a further boost under the new name of the BIGGA Environmental Award in association with Amazone and Rhône Poulenc. Amazone has also become a BIGGA Golden Key sponsor.

# A GROWING FORCE IN THE INDUSTRY

Amazone Ltd was formed in 1983 to market the products of Amazone, one of Germany's best known and largest agricultural engineering companies. With a history of over 100 years Amazone is the market leader in Europe for its fertiliser broadcasters, a piece of equipment which has been developed and refined since the 1950s.

The product range now includes Amazone seed drills, sprayers, power harrows, and ground care equipment, the latter of which is handled through a separate division – Amazone Ground Care – which was launched in

1989 to market the Amazone Groundkeeper flail type mower as well as the fertiliser spreading, seeding, cultivating and spreading machinery.

The philosophy of the company is based on innovation and of the need to provide equipment which is environmentally friendly. The reasoning is simple – Amazone equipment is designed to apply materials such as agrochemicals and nitrate fertilisers and these have to be applied with great accuracy to ensure that their effect is optimised and that there is no ecological danger involved.





One "first" Amazone introduced was the boundary spreading discs for its fertiliser broadcasters which prevent fertiliser landing in hedgerows and streams – the arrival of which superseded the European Union ruling covering boundary spreading.

Amazone's commitment to develop precision application equipment is best demonstrated by the development of the Global Positioning Satellite system (GPS) with Massey Ferguson. It was for this work that Amazone was awarded a Gold Medal at this year's SIMA show in Paris. With this system an application map is produced using yield information gathered from the combine and nutrient information from soil samples. With this information it is possible to assess the varying nutrient requirements of different areas within a field and assign different application rates to them. Having done this the information is then entered into the computer controlling the spreader. As the tractor moves across the field its precise position is plotted by satellite and the spreader is automatically adjusted to vary the application rate according to the field position.

The company philosophy was easily transferred to the Ground Care Division as golf courses are prime areas of potential ecological interest and prompted the company to launch its environmental competition. This was a positive attempt by Amazone Ltd Managing Director Rod Baker to promote more interest in golf course conservation and environmental work.

"Amazone Ltd has always been particularly concerned with promoting the responsible use of machinery and input and the Golf Environment competition was designed to highlight the benefits that golf courses can bring to the natural environment, in a climate in which they too often tend to receive negative comment from both press and public who perceive destruction of natural habitats and intensive use of inputs," explained Rod.



"The fact is that the opposite is more often the case. Golf courses cover large tracts of land with often only a small area that is actually 'in play'. The remainder contains areas of natural terrain that can, and often do, provide habitats for a huge range of bird, insect, animal and plant species.

"Many greenkeepers have become concerned with these areas and actively manage them to encourage species diversity. The BIGGA Environmental Award in association with Amazone and Rhone Poulenc seeks to both enliven this interest and also promote work that is being done to improve the public image of the industry as well as the interests of the club management and membership," he said.

"We know that many greenkeepers face ignorance within their own working environment and often have to battle to protect species or particularly rich areas or to raise the cash to invest in areas with low environmental value.

"By achieving recognition of the good work that is done we hope to both encourage greenkeepers in this area of their work and also to help provide increased support for their efforts from club management and members."

Having launched the competition in '95 the link with BIGGA and Rhone Poulenc has given the competition wider industry recognition and

helped to increase its stature and importance and give it an added educational dimension.

The expansion of the UK company has been fairly dramatic during the last 14 years. Turnover has gone from less than half a million to approaching £12 million and staff and facilities have been increased to keep pace. There are now two centres with the administration at Saltash in Cornwall and the machine sales, parts and services based at Harworth near Doncaster.

As a measure of the company's success the Harworth premises have already seen three phases of expansion so that today machine stocks can be stored under cover and the overall facility includes latest state-of-the-art parts storage and retrieval systems as well as a magnificent new training school. The latter has been provided to give in-house training for both dealers and their staff as well as end users. The school offers the ideal environment to demonstrate how machines work and the technical aspects of their design and operation.

Harworth is also the base for Amazone's Ground Care operations which produces machinery for grass maintenance, scarifying, power coring seeding, cultivations, sand and fertiliser spreading and leaf and litter collection plus specialist machines for maintaining artificial sports surfaces.





# Around the Green

Keeping in touch with news and comment from the regions

## SCOTTISH REGION

Elliott Small  
Tel: 01259 731445

### Ayrshire

After the driest January on record we have now had the wettest, windiest February on record. This must have had some effect on the communication links in our Section as no news has come to hand. We shall take it that no news is good news and everything in the area is going to plan and we can all look forward to a good start to the season ahead.

I am looking forward to meeting everybody at the Spring Outing on April 22 at the Wigtownshire County GC.

Derek Wilson



appear that the problems of last year may soon be resolved.

A challenge football match against the West Section was played in March (at the time of writing it has not been played so I can't give you the score!). It is hoped to arrange a return match and eventually an Inter Section Tournament so if you are interested just fill in the appropriate form and we will take it from there.

I have a complete list of what is available from the BIGGA Library so if anyone is interested in borrowing books or videos just get in touch and I will send you the list with the relevant forms.

John Crawford

### West

Spring is upon us and courses are busy putting final touches to their season preparations and clearing up the winter work. Spring hasn't really been too good so far with high winds and plenty of rain, maybe next year we'll get a good start...

The Conservation Day was held at Kirkhill and East Renfrewshire GCs. There was a good turn out with various views expressed, differing ideas and new concepts and hopefully more and more clubs will look to the future and adopt some of these ideas. Our thanks go to Gordon for the day and also to Jonathan Smith for his interesting outlook.

The Game's Night arranged for February 27 saw 26 participants with a few late arrivals (no names mentioned!). Everyone appeared to enjoy themselves with the eventual winners on 80 points being John Scott and Robert Hogarth, pipping myself and John Scott Snr! Thanks once again to John Scott Snr for organising the pies and the facilities. Please convey our thanks to Claremont Bowling Club for accommodating us.

Remember to put your entry for the Spring Outing in quickly as numbers will be limited. Next month's issue will include the Perth Conference, the football match and the Loch Lomond Day so look out!

J S Taylor

### North

The Scottish Region Conference

in Perth was a great success with a large turnout of delegates especially North members I am pleased to report. The morning and afternoon sessions were ably chaired by North men Alisdair McLaren and Sam Morrison, the latter having not quite recovered from his son's wedding reception a couple of days earlier. A vote of thanks to all who helped to organise the day. Just one request for next year, could the weather be bad on the day in 1998 as for the second year running the weather was lovely, dry and sunny, leaving a lot of greenkeepers sitting in the hotel and cursing missing the best day's weather for quite a while. Indeed as I write this the following day it is pouring with rain again here in Tain. It was good to see the BIGGA Chairman Pat Murphy present and also James and Janet from Headquarters.

Congratulations to Neil Ballingall on his appointment as Head Greenkeeper at Moray GC, Lossiemouth. Welcome to the Section, we look forward to seeing you at outings etc if possible. Congratulations also to Richard Atkin Jnr on his recent marriage down in Hull.

Section Secretary Dougal Duguid is wondering if anyone has a spare kidney as he is experiencing problems with his, seriously we wish Dougal a speedy recovery from his problems.

Two reminders for members, firstly have you sent back your 200 Club money yet, time is running out as the first draw is next month at Duff House Royal. Secondly, but not quite so urgent, BIGGA are running management courses again this Autumn, probably at Falkirk, and I know they were not full up in Scotland last year. This is ridiculous when you consider the cost is only £50 as the remaining £150 per delegate is paid from the Golden/Silver Key Fund. Clubs should be more willing to send staff on these two day courses as they are so heavily subsidised so get working on your Committee now, I am sure you will both benefit.

Finally I have received a letter from a young man in Canada who after seven years experience in greenkeeping in Canada and USA is looking for a job in Scotland. Unfortunately we are not

currently looking for staff here at Tain, but I thought that maybe someone out there in Scotland might have a place for him. His CV makes good reading, he even has a degree in turf management. Anyone interested in finding out more about Mark Obee can contact me on 01862 894402 and I can send you his CV.

Iain Macleod

## NORTHERN REGION

Bob Lupton  
Tel: 01782 750539

### North West

The vacancy of the North West Section Presidency that occurred through the retirement of Arthur Harrison has been accepted by John Walker, Director of Rite-feed. The North West Section Committee voted unanimously to offer John the opportunity to become President of the Section because of his genuine efforts in trying to better the cause/efforts of the greenkeeper. I was delighted that John accepted and know that we will see him at many of the Section events.

Some good news, North West Water assures us that the reservoirs are full and that this year there will be no water restrictions. I only hope we don't have a cold spring again giving a late growth on bent and fescue greens.

You will all see from your fixture lists that we have a full year of golf tournaments with the roses match and the stewards match requiring teams of 16. The Spring Tournament which is the Hayter Qualifier is on May 1 and you will need to register with Bill Merritt, 255 Utting Avenue, Clubmore, Liverpool, L49 9RB enclosing £15 made payable to BIGGA N/W no later than Thursday April 24. Soup and sandwiches will be available from 12 noon to 1pm with tee off from 1.30pm.

Bert Cross

### Sheffield

On February 6 we held our winter lecture at Rotherham GC. Our thanks go to Michael Palmer, from Supaturf, who gave a very interesting talk on water management which was thoroughly enjoyed by a good number of our members.







AMENITY  
TECHNOLOGY

# ***TURF COLOURANTS & WATER MANAGEMENT***

***Professional Solutions for the Green Environment***



## DRENCHER PELLETS

With the summers getting longer and hotter there is an increasing demand on the water supply and its application into the amenity sector. Through normal irrigation methods the spread patterns of water may give adequate coverage, but this does not mean that there is an even absorption of water into the soil. High spots on greens can be particularly prone to hydrophobic conditions caused by surface water run off due to insufficient water absorption.

For this reason, it has always been necessary to apply additional water to high spots, by syringing. To increase the effectiveness of this procedure it is advisable to apply a wetting agent along with this extra water. The easiest and most cost effective way to add this wetting agent is through the Drencher hose end applicator.

This has been designed to incorporate a chamber for a solid wetting pellet which is eroded as the water passes over it.

The Drencher pellet range consists of a straight WA (wetting agent) pellet and the 123 Premix pellet, a combined wetting agent, biostimulant, and micronutrient feed, both of which are supplied in cases of six pellets with each pellet treating between 3 and 6 greens.



## DRENCHER GUN

The Drencher Gun is the most advanced hose end applicator of its type in the UK.

The applicator gun is easy to connect and operate and gives the operator total control at the hose end, where it is needed.

Designed and manufactured in Europe, the applicator has improved hose connector couplings, a simple shut off valve, brass spray nozzle and clear chamber which is tested to 120psi, making it easy and effective to use. An optional rose attachment is available.





# GREEN LAWNGER™



**Greenlawnger™ turf colourant** will restore the natural appearance of turf which has been damaged or discoloured by fertilizer burn, winter yellowing or other problems such as chemical or oil spills. It is ideal for sports turf, golf greens, tees and fairways, along with commercial application.

Greenlawnger™ turf paint is easily applied with any tank or knapsack sprayer to give a healthy, natural look to all turf grass. It will not wash or wear off turf after it has been applied, and the colour will last 10-14 weeks, or until the coloured grass is removed by mowing.

Greenlawnger™ is available in both 1 and 10 lts. for spray mixes, and should be applied at 1 lt. per 500m<sup>2</sup> or in Ready To Use(RTU™) aerosols for spot treatment. RTUs come in a case of 6 cans with a free applicator gun. Greenlawnger RTU™ is available in two colours, Standard Green for all applications and Agrostis Green for darker turf.

Greenlawnger™ Sand Concentrate is also available in 100 lt. drums for colouring sand/divot mix.



## WATER MANAGEMENT

### Crystal Clear™ WSP

Crystal Clear™ WSP is a concentrated microbial based lake clarifier containing 4 billion CFUs (Colony Forming Units) per gram of a proprietary blend of 17 bacillus bacterial strains. Crystal Clear WSP will biodegrade the nutrients, organic matter and hydrocarbons reducing surface scum, algae blooms, sludge and organic sediment, improving water clarity and quality. In addition, Crystal Clear will control methane and sulphide odours.

Crystal Clear™ WSP is packaged in easy to use water soluble packets. It is non-toxic and harmless to humans, animal and aquatic life. Crystal Clear WSP is fully compatible with all aquatic colourants.

For initial application each WSP will treat 250m<sup>3</sup> of water, with a maintenance rate of 1 WSP per 1500m<sup>3</sup> every 2 weeks. Available in cases of 6 WSP.

### Lake Colorant™ WSP



Using Lake Colorant™ WSP to create natural looking blue water is easy and inexpensive. It is the perfect colourant for lakes, ponds, water hazards or large fountains.

Lake Colorant™ WSP is a highly concentrated blend of dry-flowable colourants in water soluble packets. Unlike liquid colourants, these totally eliminate any need for measuring or for any applicator contact with the colourant, so there is no mess. The packets dissolve quickly and completely, leaving no residue.

Lake Colorant's exclusive formula disperses the colourant quickly, and since the water soluble packet floats, colouring occurs from the top down for much faster results. Lake colourant is available in cases of 6 WSP. Each WSP will treat 1500 m<sup>3</sup> of water.





# DRENCHER LIQUID

Drencher liquid is a performance enhanced organic soil penetrant, combined with natural sugars to aid in the treatment of dry patch and stimulate soil microbial activity. Formulated for use on fine turf, Drencher liquid is an essential weapon in the fight against hydrophobic soil conditions.

- **ENHANCED WATER PENETRATION**
- **AIDS IN THE FIGHT AGAINST DRY PATCH**
- **STIMULATES SOIL MICROBIAL ACTIVITY**
- **NON SCORCHING FORMULATION**
- **100% ORGANIC**

## **Maintenance Rate**

750 ml. - 1 lt. per 500 m<sup>2</sup> in 40 lts. of water (15 - 20 lts. per hectare in 800 lts. of water)

## **Extreme Hydrophobic Conditions**

1.5 - 2 lts. per 500 m<sup>2</sup> in 40 lts. of water (30 - 40 lts. per hectare in 800 lts. of water)

## **Dew Control**

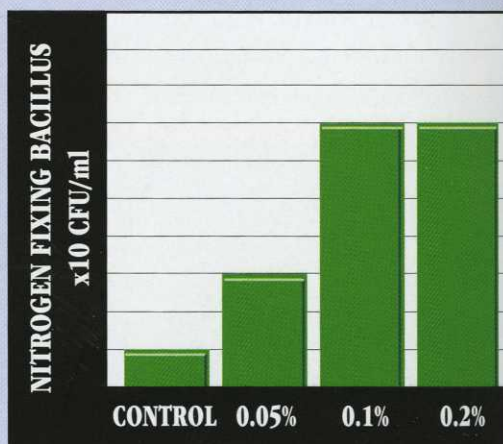
A treatment of between 625 ml. - 1250 ml. per 500 m<sup>2</sup> in 40 lts. of water will provide a dew control of between two and three days. This is, however, dependent on climatic conditions and irrigation levels and therefore the longevity of dew control may vary.

## **TECHNICAL INFORMATION**

Independent research carried out in the USA shows the effectiveness of Drencher as a soil penetrant. The data below shows just a few of the beneficial results you can achieve with Drencher liquid.

PRODUCT	TIME (min)
Drencher	8.60
Aqua-Gro	15.26
Distilled Water	21.75

*\*In the above test, an 8 cm. column was filled with peat and various solutions of equal concentration were added on top of the peat, then timed to measure how long it took the solutions to penetrate.*



*\*The above test shows that Drencher is an effective microbial inulator of beneficial bacteria.*

\*Full copy of results available on request.





If there is anyone interested in taking a First Aid Course would they please contact Ron Ullathorne on 04105 765322. The course will be filled on a first come first served basis as there will be only 12 places available.

If anybody has got a trophy from a 1995-96 golf competition please return it to Barry Heaney for insurance valuation.

Golf dates: Annual Tournament – July 7, Silkstone GC at 10am; Autumn Tournament – September 22, Sickleholme GC at 1.30pm; Christmas Tournament – November 24, Rotherham GC. Ron Ullathorne

#### North East

Slaley Hall are having a busy winter extending the 8th and 13th holes in readiness for the European Tour event in July. Work has restarted on the new 18 hole championship course designed by Neil Coles and Associates and just another reminder that they are looking for volunteers again this year.

Tony McLure, Course Manager at Whickham GC, informs me that they are opening their new 8 acre practice area shortly. Paul Moore, from Lindum Turf, has just gained a valuable order from Tony for supplying turf on two new tees there.

Derek Cruddass, of Garesfield GC, informs me that they have now changed all their bunker sand to the white Levenseat monosand. Two of his staff are to be congratulated. Firstly, Gary Needham on gaining his Phase 4 and having the letters LCGI after his name and, secondly, it just shows you that you are never too late to go to college as Alan Harrison, aged 48, is studying for Phase 2. Well done to both of you.

Glen Barker, of South Shields GC, is obviously getting the course ready for the Spring Competition in April as they are having a new irrigation system installed by Par 4. Apparently David Jennings, of Morpeth GC, has moved further afield by going to Australia!

Hopefully in December this year we are having a competition at some course which will coincide with the Christmas dinner followed by an AGM and prize giving. The chosen course will be announced at a later date. Another idea we are thinking about is a knock-out, based on a pairs format. Members should have a club handicap and the entry fee will be approximately £10 per couple. The details will be announced later.

New members to the Section are as follows: Kevin Mould – Whickham GC; Andrew Tolly –

Beamish Park GC, David Neil – Consett GC.

New members elected on to the Committee are A McLure, D Cuthbertson and D Cruddass. Jimmy Richardson

#### Cleveland

I am sorry to report that Bill Burt, the SISIS retired rep, died in January aged 80 years old. Bill was a perfect gentleman. He was our first President from 1979 for five years and was a regular attendee at events and loved to go to exhibitions to meet old friends. Our sincere condolences go to Elizabeth, Martin and Richard Burt.

Our February meeting was on trees and was presented by John Nicholson, from Eamon Wall of Durham. He advised on checking your local area to see which trees grow well there. He told us not to plant trees in straight lines, use kerb or glyphosate to treat one square metre around the base of the trees and plant small trees for the best results. He can also advise on grants available for golf clubs wishing to plant and can help with plans for copes of trees. John then introduced Peter Facey from Ouston, Chester-le-Street, who grows trees from seed on his tree nursery.

First Aid Courses are available regularly at St Johns Ambulance Cleveland Headquarters, 236 Marton Road, Middlesbrough, Cleveland, telephone 01642 218131. A 4-day course costs £120 and includes a free 1-day top up after 18 months to comply with growing changes in treatments. All my staff are now qualified, are yours?

Chris Fiddell is back at work one year after his serious motor cycle accident. We wish you well Chris.

The Spring Tournament is to be held at Bedale GC on Thursday May 8 at 9.30 am.

New member Mark Aspdon, from Northallerton, has successfully completed his Diploma in turf science and will be learning his trade from the Americas as he will be travelling to Shoal Creek GC in Alabama to work. Bruce Burnell

#### North Wales

A bit of news, contrary to my report in last month's issue of this magazine the entrance fee for members wishing to play in our golf competitions this year will be £11. This is due to the fact that the Section will be receiving our subscription refund for this year after all.

By now you should have received your entry forms for our Spring tournament at Frodsham,

please ensure that you return them to Terry Evans by the closing date of Sunday April 13. Our teeing times are between 0900 and 1300hrs and it is expected that "locals" will take the earlier times, leaving the later starting times for those that have further to travel.

Please note that all trade representatives that are not playing golf but who wish to attend our tournaments are requested to contact Terry Evans on 01352-720692.

It is provisionally hoped that our Autumn tournament will be at Abersoch GC on 8 October.

Finally, a welcome to two new members, Gareth Wyn Jones, from Henllys Hall GC, at Beaumaris, and Paul Drennan, of Maesdu GC. Gareth is our 14th member with the surname of Jones which represents exactly 10 per cent of our Section membership – can any other Section better this?

Trevor Johnston.

#### Northern

Our annual dinner dance was held at Bradford GC and what a superb evening it was. The food was excellent. Thank you to all the staff at the club for their hospitality and making it a very enjoyable event.

A total of 113 people attended the dinner, which I believe is the best turnout to date. Many thanks to Dave Thackray and Mel Guy for their help in arranging the function and to everyone who contributed towards the raffle prizes. Plenty of effort went into the organising but I'm certain all who attended will agree it was worthwhile.

May I thank Pat Murphy, our National Chairman, and his wife for attending in a year which I'm sure is exceptionally hectic. Thanks are extended also to Ian Holoran and his wife and Bob and Sara Lupton for coming. Sara always puts a smile on the face of a certain small stout rep's face! I wonder who that could be?

An excellent event and I hope we have as much support from greenkeepers, trade and friends at future dinner dances. Finally thanks to you all for your support to the Section.

Spaces are rapidly decreasing for the Hayter qualifier at Wakefield GC. Some people will be disappointed for not booking earlier.

I hear down the grapevine that things are happening out there in the Section, but unfortunately nobody gets in touch so that I can put it into the magazine. Please let me know of retirements, promotions, change of

club etc so that I can let everyone know.

My numbers are Home 01484 519829 (answer machine); Work 01977 690117 (12-1pm) and Mobile 0585 268136. Simon Heppenstall

#### MIDLAND REGION

Peter Larter

Tel: 01480 437507

#### East of England



The Section's winter education seminar seems to go from strength to strength. The turnout was excellent for our small area nearly half our membership. The informative talks were from John Hacker on soil sampling, Jay Dobson on thatch and a talk on Ecology and Conservation from Mike Schofield.

The afternoon session was a tour of the course with Mike Schofield assessing the conservation and ecology at Kenwick Park GC.

Many thanks to Ian Morton of Kenwick for providing the venue and helping to organise the successful event.

A warm welcome to new members of the Section: Philip Oldman, Newark; Colin Hutchcraft, Oasby; Graham Millard, Lawnmower Services; James Cuthbert, Boston, Craig Knight, Gedney Hill and Mathew Francis, Oundle. Retirement Members, Fred Cobb and George Knowles.

Dates for your diary:

April 9, Thorney Lakes GC, PGM Cup; May 1, Holme Hall GC, Rigby Taylor/Hayter Qualifier; June 17, Rutland County GC, Purdy's Cup and July 24, Boston GC, Lambs Cup.

People on the move. Phil Belton, Ramsey GC to St Neots GC and Kevin Hodges, Northshore to Cambridge Lakes.

If you have any news, ideas etc please telephone 01733 260297. Graeme Macdonald

#### Midland

I would like to start by informing you of two members making moves to new golf clubs, the first being Michael Green who has left his position at Evesham GC. Congratulations! The second being myself, I have now moved to be Course Manager at Ross-on-Wye GC from my position at Envue, so the future for both of us is a busy one.

By the time you read this report all of you who intend playing in the Spring competition should have sent your applications along with those intending playing in the singles or doubles knock out.

There has been a steady return of people who are interested in the trips to championship



courses, I will contact those people involved.

Toro, along with Alexanders, are holding an Open Day and demonstration at Perton GC on June 11. This will start at 9am and there are also a limited number of places to play golf so the first to apply will take priority. This should be a good chance to see all the new Toro range.

I would like to welcome our new members to the section – Simon Ingham, Trevor Asken and Adrian Howells.  
Jonathan Wood

#### East Midlands

By now all members should have received their entry forms for this years Spring Tournament which will be held at Cosby GC, on Thursday May 1. Anyone who has not received a form can contact me on 0116 289 0301 and I will gladly forward a copy. Please remember that to enable you to play in this competition (which is also the qualifier for the Hayter Regional Final) you must have paid your yearly membership and your form must be returned to me before the closing date.

This month we welcome the following new members to our Section – Paul Norton, Longcliffe GC; Richard Saunt, Birstall GC; Lee Baines, Lingdale GC; Ross Wallace, Kettering GC; and Paul Roe, Tony Penty, Steven Wheel- don and Andrew Baker, all of Kedleston GC.

Brooksby College have arranged two lecture evenings and all members are welcome to attend these lectures. They include a talk from David Bibble on "Dealing with Stress" on Thursday April 17 and on Thursday April 24 the weather is the subject of Dave Mutton's talk. Both talks begin at 7.00 pm. For further details contact Paul Greene at the College.

The Betterball Stableford competition on March 5 at Lingdale GC was very poorly supported by members with only six teams tak-

## Around the Green



ing part. Hopefully the next Tournament will attract a better turnout. Results will appear in next month's article.

Finally if any member has anything they would like to see in this report please do not hesitate to contact me.

Antony Bindley

#### Berks, Bucks and Oxon

Once again a new season beckons, I wonder what's in store for us all this year? As we enter Spring my thoughts go back to before I entered this profession when my only interest was to play golf. I used to look forward to the US Masters on the telly, the sight of that manicured playing surface was something to behold. Not anymore! This one tournament causes so much grief for many of us as we approach the start of another season. The sight of those lush fairways and fast true greens causes comments in many clubhouses to the effect of "How come our course is not to that standard?" Do we really have to explain?

Despite my comments I will still be glued to the television on the Sunday evening watching the drama unfold once again.

I mentioned in last month's article that we were putting together the Fixture Card. This has actually gone to print with all the dates and venues confirmed: Spring – Castle Royle; Summer – Badgemore; Autumn – Lambourne; Turkey Trot – Richings Park. As well as confirming the venues we have lined up sponsorship for the first two events and are in the process of tying up the remaining two.

We have appointed a Handicap Secretary for the coming season

so be warned, please leave the sombreros and guns at home!

As well as the golfing events we have been approached by a local company who wish to sponsor a family fun day in the summer. This will be a social event with food and drink, probably a barbeque on a Saturday or Sunday evening. Details of this event will be posted soon, in the meantime if you have any ideas about events you would like us to hold then contact myself or Ray Clark.

I have recently attended a Regional Board meeting at Northampton. If anybody wishes to glance over the minutes of this meeting then please contact me by telephone.

I look forward to seeing many new faces this coming season at the various events.

Lindsay Anderson

#### Mid-Anglia

Our first golf tournament of the year takes place on April 17 at Wellingborough GC. All entries should have been sent in by now. This will be a 36 hole event with one round counting as the qualifier for the Regional Final of the Hayter Tournament.

The Regional Final, should you qualify, will be held on Thursday June 26 at the Warwickshire GC.

There have been several new appointments at golf club's in the Section recently. Good luck to Phillip Belton, the new Course Manager at St Neots GC, and Neil Whittaker, who has moved from Woburn to Arkley. Also, Andrew Trainell takes over as First Assistant at St Neots.

The Lodgeway fourball will have been drawn by now and you should all know which league you are in. I know April and May are particularly busy times on our golf courses but please do not leave your matches to the last minute as this only causes problems with arranging times to play and can disrupt the final league tables.

Paul Lockett

#### SOUTH EAST REGION

Derek Farrington  
Tel: 01903 260956

#### South East Region

The Gentlemen's Dinner at Walton Heath is often beset with weather problems, in the past it has been known for players to tee-off in snow. This year however the weather was very kind to us, being very pleasant even if turning a little chilly towards the end of the day.

It is comforting to know that a Golf Club with the stature of Walton Heath can make Greenkeepers and their guests so welcome, with Administrative, Bar and Catering Staff doing all that they possibly could to make the day a success.

The course, as usual was in prime condition for which Clive Osgood and his team should be justifiably proud. The New Course however is not easy and this tough test of golf was reflected in the scores, with even scratch players struggling to achieve respectable scores. Of the 76 starters 13 managed to play to their handicaps or better. Nigel Stapley, Darenth Valley, and Graham Winckless, Secretary, Abridge Golf Club, each managed 40 points, a fine effort from both of them. The Trade, as ever, gave the event wonderful support both by taking part and contributing to the prize fund and some fine prizes were won by Members, Guests and Trade alike. Prize Winners were: 0-9 Handicap: Winner (and The Shulockie Putter) 1. Ian Semple, Old Fold Manor; 2. Mike Smith; 10-17 Handicap: 1. John Hill Birch Grove; 2. George Booker; 18-24 Handicap: 1. Nigel Stapley, Darenth Valley; 2. David Howells, Coombe Wood. Guests and Associates: 1. Graham Winckless, Abridge; 2. Mark Day, CMP Equip. Nearest the Pin. 2nd Bill Machin, Home Park; 6th, Huw Morgan, Wilderness, 10th John Vivers, Bentley.



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After an excellent meal enjoyed by all, the Membership were welcomed in a humorous speech by Michael Simmonds Captain of Walton Heath GC and then Joe Goodman, a "bandit" off 18 but a Comedian "Par excellence" entertained all present with his hilarious 45 minute act. The event although a great success was undersubscribed this year.

If you would like to attend next year, contact your Section Secretary to make sure that you get a chance to apply for tickets. Derek Farrington

#### Essex

First of all we would like to thank those who returned the questionnaire. It is vital in these early days to have your views on how you would like to see the Essex Section run.

We would also like to thank Kings Horticulture for sponsoring the questionnaire and especially Graham Paul for all his hard work he has put into the project.

Following our first golf day on April 22 at Chigwell GC, the next meeting will be held at Writtle College, Chelmsford. The date is Wednesday May 14 (note the change of our usual Tuesday night) starting at 7.30pm in the Main Building Room L60. The two lectures "The Life Circle of the Grass Plant" by Roger Levitt and Jeff Taylor of Johnsons Seed and "Fungicides Functions - All You Need to Know" by Andy Crawley.

See you all at the golf, lectures or both!

Dave Wells

#### SOUTH WEST AND SOUTH WALES REGION

Gordon Child  
Tel: 01803 844056

#### South Coast

On Wednesday February 5 the



Section held its quiz night at Bramshaw GC. Unfortunately I was not able to make it but our Chairman informed me afterwards that it was quite successful with seven teams of four competing. It would be nice to see a few more attending next time with perhaps a few more ladies, and don't worry, the questions were on general knowledge, not greenkeeping! Congratulations to the winning team who were from High Post.

Our Regional/Section Seminar was held at Sparsholt College on Tuesday February 18 and was very well attended with around 100 delegates. The Education Committee once again has done us proud and arranged some very good speakers for us. Our first speaker was Duncan McGilvray who spoke on "Greenkeeping - A Developing Industry". Duncan discussed the titles Head Greenkeeper or Course Manager and illustrated this with some very good slides. The question of "working head greenkeeper" also came up, I'll leave you to think about that one! He then went on to talk about education and NVQs as Duncan is solely committed to educating greenkeepers.

Next we listened to an interesting presentation by Scott MacCallum, our Editor. He spoke about his past appointments in the golfing world which was very amusing and then talked about the magazine and what he had in mind for the future.

We then came to the first of our student presentations. Mike Cartwright from Salisbury and South Wilts GC gave us a talk on the environmental programme at his golf course. As soon as he had cracked his first joke there was no stopping him!

Our second student was Steve Privett from Hampworth GC. His talk was about the autumn/winter programme at his golf course and he also gave

his own views on the future of the industry.

Both students prepared themselves well and should be congratulated on their presentations.

After lunch John Le-Mar from Bio Lube spoke on "The Green Alternative". John's firm specialises in bio-degradable oils. These are to replace mineral oils that can do so much damage to a green when a hydraulic pipe bursts. He gave us a good insight into all his products and showed us how effective the cleaning agents were along with how water and oil separate.

Our final speaker was Joe Paulin who spoke about his club, The London GC. Joe has been there from the beginning and has two 18 hole courses. All the greens are a bent mix, hence at the peak of the summer there is a staff of 35. Joe illustrated his talk with some excellent slides. When he tells us that on one of the courses there are 179 bunkers you can see why he has such a large staff. The whole complex is a real eye opener. Joe is very keen for the Section to visit The London GC and if there is a large enough interest we will book a coach.

Please let your committee member know if you are interested and we will make the necessary arrangements.

At the end of the day our Chairman thanked the speakers for giving up their time and providing us with some very good papers. He also thanked Sparsholt College for allowing us the use of their facilities. Our thanks also go to the sponsors of the day: Huxleys Grass Machinery, Driving Force Leisure, Gem Professional, ISS Aquaturf Systems Ltd and Winchester Garden Machinery for their support. On a personal note I would like to thank all of you who attended. Without you the Seminar would not have

been the success that it was.

A final reminder for Westurf 97 to be held at Long Ashton GC on April 30. As I said in the March Report this will be Gordon and Marion Child's last Westurf so lets make a big effort and give them all the support we can. We are looking for a record attendance this year. There are new stands, a new layout, plenty of demonstrations and an improved PA system! Anyone who has any spare seats please let me know, likewise anyone who requires a lift please contact me on 01329 282362.

Ken Lodge

#### Devon and Cornwall

April has arrived and at last those dark winter nights are starting to fade in our minds as our thoughts turn to presenting our courses in the best possible condition during the season ahead. What better way to help you achieve your goal than to visit Westurf on April 30 at Long Ashton GC, Bristol where you will be able to see all the latest products and technology at your local turf care show. On arrival just pick up and complete Westurf's short questionnaire and you could walk away with a travel voucher for £200. This will be Gordon and Marion's last show in charge so what better way to thank them for all their efforts over the years, then to all of you who attend the show to make the day unforgettable.

REMEMBER - APRIL 30 - LONG ASHTON GC, BRISTOL.

The Section's February meeting was held at Perranporth GC on Wednesday 26 on a cool and very windy day. Our golfing members played over the excellently presented links course for the Avoncrop Trophy. The playing conditions got a lot tougher when the hail showers arrived early on in the day. As usual our non-golfing members had a

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St. Andrews Links Golf Course supervisor

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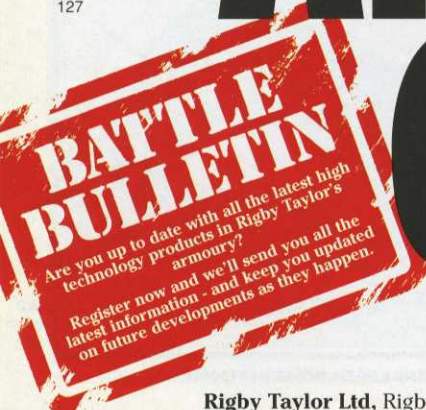


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guided tour of the course and the club's new greenkeeping complex by the host Head Greenkeeper and Section Chairman Bill Mitchell.

After a superb lunch our President John Palfrey presented the Avoncrop Trophy and prizes on behalf of Avoncrop Amenity: 1. Gordon Tambllyn (Mullion GC), level; 2. Michael Child (Saunton GC), -4; 3. Gary Hargrave (Sidmouth GC), -5. Congratulations to all the prize winners especially Gordon who returned a superb level round in such difficult conditions.

It felt just like one of those Monday mornings regarding our afternoon speaker as our original speaker was taken ill just 24 hours before the meeting so we decided to use the new BIGGA ecology video as back up but to our horror the video machine didn't work either. So we approached Gordon Child to see if he could speak on NVQs. Gordon agreed and with some five minutes to prepare gave an outstanding talk. The Section would like to thank Gordon for standing in at the last minute and John Palfrey of Avoncrop for sponsoring the prizes. We would also like to thank Perranporth GC for allowing us the use of their facilities and all the staff

## Around the Green



at Perranporth for making our day run so smoothly. Also thanks go to the Head Greenkeeper

Bill Mitchell and his Assistants John and Fred who always have their links in magnificent condition.

Richard Whyman

### South Wales

Well spring is truly upon us and I'm sure that you're all busy hollow tining or verti draining and the like. Let's hope for a warm wet season and no prolonged dry spells.

Our latest Pencoed College evening lecture failed to take place due to the untimely withdrawal of the lecturer to be! To the rescue came our Education Chairman and Timekeeper, Malcolm Davies with his Assistant and Quizmaster, Peter Gillard. A quiz to beat all quizzes was based on general knowledge, greenkeeping, football and trivial pursuit. Six teams of three competed for the honours (a bottle of Scotch!) and the win-

ners were my team, the Arsenal! Well done to the lads from Aberdare GC and commiserations to the other teams, the Spuds, the Vikings, the Crays, the Thugs and the Poas. An excellent evening with a difference, thoroughly amusing and enjoyable.

A sincere thanks to both Malcolm and Peter for hastily arranging the evening and doing such a grand job.

Peter Lacey

### South West

February saw about 30 greenkeepers turn out for the Lawson Trophy at Clevedon GC. This was quite encouraging considering the forecast which was nothing short of horrific.

However Mr Fish and Mr Ketley etc were a bit wide of the mark and we got away with some light winds and a bit of scotch mist just to keep us on our toes.

Clevedon is in the throes of some major rebuilding work at the moment and so we were on a bit of a cross country race trying to find the 18 holes in the correct order but the new greens, particularly those that had recently been built by the greenstaff themselves were in quite exceptional condition.

Almost perfect fescue dominated swards are difficult to find during the best of times but in the middle of February, well I can only conclude that Barry Reeves and his crew must have a magic wand or something. Anyhow, enough of my petty envy, thanks are due for all their hard work and obvious expertise.

Having got back to the clubhouse safely we were then given an excellent late lunch followed by the sharing of the spoils, all of which were presented by Lawsons. First place with 36 points was Michael Fawcett of Marlborough with Maurice Pierce of Wells in second with 34 points on a countback from our beloved Secretary Peter Baynton. A sterling performance considering the pressure he is under. Thanks to Lawsons for their sponsorship and to Clevedon Golf Club for allowing us the pleasure of their course for the day.

Remember the short courses. We have recently held a First Aid course and a PA1 and PA6 all of which appear to have been successful. If there are any others you would like to go on please give me a ring on 01380 828380.

Marc Haring

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## Two integral cogs in the workings of golf

by Bob Taylor, Ecologist STRI

What an excellent show BTME turned out to be. All of the seminars I was involved with were extremely well attended, the practical workshops were filled to capacity and the show itself surely must have encouraged record levels of entrants. The STRI stand was certainly full to bursting most of the time, with a considerable amount of discussion being devoted to ecological aspects of golf course development and management.

It could, I suppose, be argued that greenkeepers were being polite realising my interest in discussing their course and what has been achieved, but I did on several occasions throughout the early part of the week during dinner, etc. overhear people discussing ecological issues such as how many trees have been planted and how raising the cutting height on areas of grassland has improved the course. Comments including, "Members didn't like it much at first" and "I was nearly hung for chopping that tree down" were also overheard. Greenkeepers did appear, and I am sure they are, genuinely interested. Indeed, I have always said that to the greenstaff, managing 'through the green' is a hobby, an interesting extension of their workload and a break from some of the more tedious operations

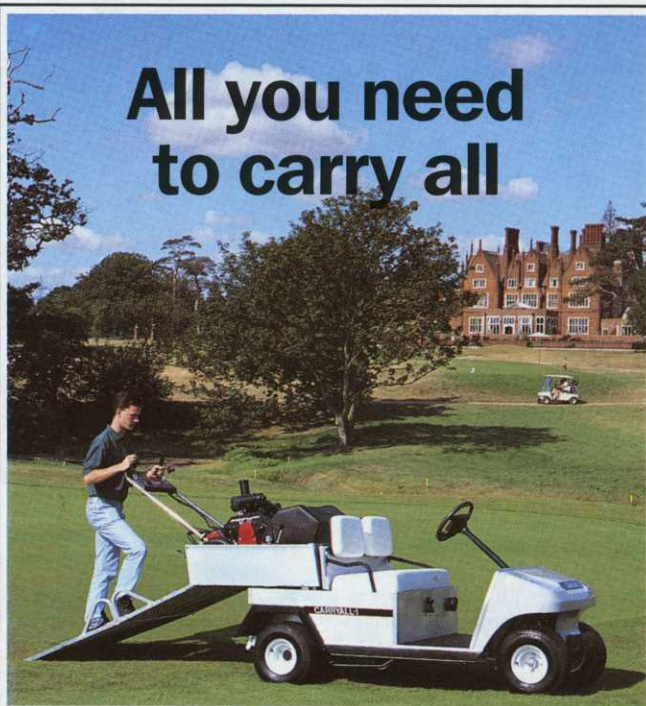
one could mention.

It was also interesting to note how most of the seminars during the week came round at some point to the need for sensible rough management.

Larry Gilhuly (USGA) showed the results of a members' questionnaire, and the environment came high on the list of their expectations of what constitutes a good course.

Bunkers were a major talking point. Why do we need so many? Answer, we don't - we could achieve far more from a sensible approach to using the grasslands, eg. semi rough, grassy hollows, the heather, water features, ditches, ponds, etc., if club committees and members should be brought around to this way of thinking. Education therefore will over the next few years be essential in this area and must be an important step in the way forward.

Talking of the way forward, I discussed at length the importance of the environmental management plan as a baseline for management. The plan will identify what can be found and how it will change given different management regime. It will form a baseline for monitoring, assessing gains and interest. Indeed, it is only by this approach that the wider environmental bodies, the general population (public), etc.



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will appreciate that golf is not a selfish use of the land, nor is it a pesticide dump and reservoir of toxic waste, as reported in certain press.

So, where do we start?

#### THE FIRST STEP

##### Setting up a Management Plan

The first step will involve an initial assessment of the course to classify the vegetation types. The plan must use the data collected to formulate an overall goal, determine the most appropriate targets and management techniques. Directing the management in this way will help to ensure that any money spent is used to the best effect, to ensure the most efficient use of the land and the resources to improve the course for play and for wildlife. Any target must be realistic, "ambitious" possibly and quantitative in terms of habitat and species quality and extent. A major aim must be to recognise the need to halt naturally occurring deteriorating referred to by ecologists as "succession" (eg. scrub invasion) and to retain habitat quality alongside the management of the playing surfaces.

A thorough site investigation will be a prerequisite towards the production of a long term management plan. The management strategy for the course must be practical and sustainable as the programme, more than likely, will be carried out by the greenstaff during appropriate periods using hired or club labour and machinery. If the management tasks being proposed are not practical or indeed affordable, then the project is unlikely to be sustained into the longer term.

The initial assessment of the course should be undertaken by a qualified ecologist with relevant field experience in applied ecological management and indeed the workings of the golf course. The Head Greenkeeper should be present for at least part of the assessment period so as to gain knowledge and reasoning behind the types of work being recommended.

The inspection of the course with all interested parties should provide a full description of the site and detail areas of impor-

tance while outlining and reiterating the main focus of the study.

The study should: (a) describe the site through collation of available physical and biological information; (b) identify objectives and purpose of course management; (c) realise conflicts and achieve the best means of resolving them; (d) detail management strategies to achieve objectives; (e) identify and detail scope for monitoring (auditing).

The above objectives form part of the N/SVQ Greenkeeper Training Certification (Level 3) under the mandatory additional tasks within the Supervisory Section. These include: (a) Monitor and survey (b) Collect and record data (c) Analyse, evaluate, interpret and report.

Monitoring thereafter is an essential component of any management planning.

It will be necessary to detail and demonstrate the degree and effectiveness of the management programme and the likely timescales involved. It may be that the work fits into a phased timetable utilising periods within the year that tie in with the greenstaff's annual works programme. Equally, timing of the works will be essential if wildlife losses are to be avoided – it is of no benefit to clear a pond during the height of the breeding season, far better to implement the work when this is over but before the onset of the colder winter period. Phasing the work, ie splitting the water feature arbitrarily into portions, and carrying this out through just one portion each year will allow wildlife the chance to move safely as the work progresses. Undertaking the work in this way will ensure that

habitat and species continuity and sustainability are maintained and encouraged.

The concept of sustainable development is an integral component of ecological management. There is little point in encouraging wildlife by initiating ecological/ course improvements if the management regime necessary to sustain it cannot be maintained year after year.

The management objectives, if they are to survive long term, must reflect club policies and must be compatible with them. A further aim of the assessment should be to help club communication, ie between club officials and members and outside, to improve the course image within the wider population. Drawings and details of conservation work posted within the clubhouse and around the course on notice boards together with periodic informative evening discussions will all help to raise members' awareness of conservation management and may help to protect one or two areas from excessive trampling damage (heather-dominated carries, for example, are particularly sensitive).

The above will give an evaluation of the golf course which can then be monitored, enabling subsequent changes to be made to "fine tune" the management programme as and when required. It will help give priority to some tasks over others but, most importantly, will offer in a practical way a long term management strategy for the course that is readily achievable and affordable, both in terms of the greenkeeper's time and the financial budgets of the club.

A management plan can all too easily become heavy with detail and format, and it is essential, if the end user (the greenstaff) is not to be put off or lack confidence in deciphering it, that the plan compartmentalises the detail away from the important management prescriptions.

In management programmes we have to think long term and to define what will be required over perhaps five to ten years. We also have to quantify what is likely to be needed in terms of the four M's: Men, Materials, Machinery and Money.

**'Timing of the works will be essential if wildlife losses are to be avoided – it is of no benefit to clear a pond during the height of the breeding season'**



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The objectives of management therefore must be clearly defined at the outset. Thoughtful planning and consideration must be given to the requirements of individual species present within a given habitat type and to the requirements of animal or plant communities whose interactions are fundamental to the successful workings of the habitat. A major objective must therefore be to maintain or improve conditions within the vegetation types for communities, forestalling further losses or possibly extinctions. For example, where there are populations of red squirrel, it is important not to affect the balance of tree species which could render the site more attractive to grey squirrels. The native red squirrel is now such a rare animal that if any golf course has a population, it would be highly advisable to take whatever steps are required to ensure that this attractive and popular rodent is encouraged. This may be encouraging a greater diversity of conifers to maintain a more constant food source (red squirrels eat conifer seeds) while retaining low numbers of deciduous trees. This indeed may be the converse of what may be generally thought the most appropriate form of management!

Each habitat found on the course would be represented in the management plan. It will

be necessary to highlight the importance of tree removal alongside tree replacement, or infrequent grassland management within areas of deep rough. Management within and around water features may involve infrequent desilting, vegetation clearance and maintenance of water quality. On heathland sites, heather management will be of major importance, together with the removal of scrub and naturally regenerating tree species.

#### Monitor and review

Monitoring is an essential component of management planning. The management plan should encompass periodic ecological audits of the course to assess the degree of conformity and the extent to which the desired objectives set up for the individual areas are being achieved. The period for repeated audit-

ing will vary to some extent according to the sensitivity of the site. Although an initial review should ideally be undertaken within the first three years, varying thereafter, repeated monitoring will be of considerable importance in areas supporting potentially invasive plant species, such as bracken, birch, rhododendron, Japanese knotweed or Himalayan balsam.

Site, species or habitat monitoring should be followed with a "review" of the management plan. Following changes on site, it may be necessary to update or modify the management plan. One of the main benefits derived from the monitoring and review process is the possibility of being able to improve upon the management techniques being used as knowledge of the most appropriate methods continues to develop and improve.

Given the interest that is now apparent through the golf industry towards ecological and environmental issues, it may be worth stating that BIGGA have been instrumental in the production of a practical guide to ecological management and accompanying video showing management techniques in action. Both are available from Aldwark Manor. STRI Golf Ecology Services are available through Bob Taylor, Ecologist with STRI who can be contacted on 01274 565131.



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# Sprayer pumps

**T**o be effective, pumps must deliver an adequate flow and pressure, and handle the desired chemical without rapid corrosion or wear.

Pumps generally fall into four types: 1. Roller Vane. 2. Diaphragm 3. Centrifugal 4. Piston.

The two most common pumps found in turf and landscape sprayers are roller vane pumps and diaphragm pumps. However, sprayers supplied with Piston and Centrifugal pumps are available.

■ Roller vane pumps produce moderate flows and pressures. The rollers are held in a slotted rotor revolving in a concentric care. As the rollers pass the pump inlet, the cavities between and under the rollers enlarge and draw in liquid. When nearing the outlet, the cavities contract – due to the concentric housing – and force the liquid out of the pump.

Roller vane pumps handle a variety of pesticides and have a low



purchase and maintenance cost. These pumps operate very efficiently, but as pressure increases, the volume (output) decreases.

For courses that use wettable powders regularly, a roller vane pump should not be selected as it is unsuitable for use with abrasive/corrosive materials i.e. iron and nitrates that rapidly cause wear to the pump housing, the slots in the rotor and the rollers. Though replacing the rollers is quite simple it may not restore the pump to a satisfactory working condition.

■ Diaphragm pumps have at least

one chamber sealed at one end by a membrane or diaphragm. The other end has an inlet and outlet valve. The diaphragm connects to a piston. As the piston moves, suction draws the liquid through the inlet valve by moving the diaphragm, which enlarges the chamber. The return of the piston forces the diaphragm inwards shrinking the chamber and propelling the liquid out.

Diaphragm pumps require little maintenance because there is minimal contact between the spray material and moving parts. Abrasive materials are less likely

to damage this type of pump, however the diaphragm will require periodic checks every two – three years for leaks. Most pumps have a diaphragm that is resistant to commonly used chemicals and provides a long service compared to other types of pump.

■ Piston pumps propel liquid by a piston moving in a cylinder and operate in a similar way to Diaphragm pumps but, due to the materials coming into contact with the cylinder bore, they are more susceptible to wear and damage. The intake stroke draws the liquid in through one valve and the output stroke forces the liquid out through another. Piston pumps require either an internal or external air chamber (surfactant tanks to dampen pulsation in the liquid flow associated with each pump stroke. Without the gurge tank, the sprayer will “pulse” rather than spray a steady stream.

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"Hunter's relief grinding is far superior to anything I have ever seen, each blade cuts true, the savings are substantial and the cost is minimal". Mr. Roger Shaw, Course Manager, Ramside Hall Golf & Country Club, County Durham.

"Our sole plates/bottom blades are now lasting between 2-3 times longer than when we were spin grinding". Mr. Philip Baldock, Head Greenkeeper, The Royal Portrush Golf Club, County Antrim.

"It is the best piece of machinery this course has ever invested in, a fine machine that I would recommend to anyone". Mr. John Bashford, Head Greenkeeper of the Green Hotel Golf Course, The Kinross Estate.

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# NEW PRODUCTS



■ A completely new fuel storage system has been launched into the UK and European market place. This patented system is known as "Convault" – an above ground storage tank (AST) which can store petroleum based products and other hazardous substances in an inherently safe and environmentally sound format. An above ground fuel tank is pictured above.

Although new to markets on this side of the Atlantic, Convault has been in service in the U.S.A. and Canada for approximately 10 years with over 17,000 tanks sold to date.

Convault has been developed to meet the highest environmental and fire safety concerns. Within the UK, Breton Precast Ltd. recognised the importance and potential contribution of the regulatory authorities. From this a Risk Assessment Document was compiled which addressed the key safety and operational issues. This document received a positive response from the regulatory bodies involved.

The environmental benefits of using an above ground system includes full visual inspection of the tank at all times which means, should a leak occur, it is detected at the earliest opportunity, removing the possibility for soil and ground water contamination which is associated with conventional underground storage tanks and below ground suction lines.

Convault's complete above ground vaulted tank and fuelling system is constructed using a steel tank which is insulated and wrapped in a poly membrane liner, all of which is then encased in a 150 mm reinforced concrete

shell. The complete unit provides full primary and secondary containment, a certified 2 hour fire wall, can withstand vehicle incursions and it is also bullet resistant!

Convault meets applicable safety requirements for secondary containment, leak monitoring, spill and over spill protection, and is also certified for phase 1 & 2 vapour recovery.

The initial size of the tanks available range from 4,500 litres (1,000 gal) to 18,000 litres (4,000 gal).

For further information telephone 01232 351711.



■ Huxleys' new Groundforce 104 is a rugged, easily maintained four wheel transport vehicle, designed for off-road use on golf courses, playing fields, caravan parks, schools and university grounds, and a wide range of amenity areas.

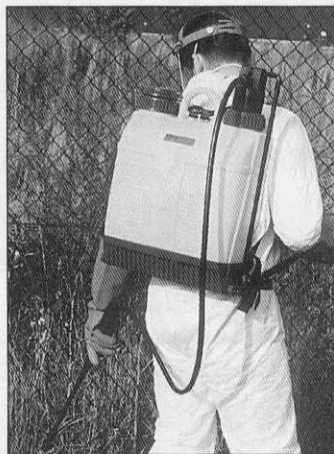
The Groundforce has an automatic clutch and is simple to drive. All you do is select forward or reverse, release the hand-brake, depress the throttle and you're moving. The powerful 16 hp Kohler overhead camshaft engine is smooth and exceptionally quiet (74 dbA at full operating speed), with easy access for routine service checks.

For strength and durability, the Groundforce is designed with sturdy upper and lower tubular

steel frame construction, with automotive type transaxle for long service life. Automotive hydraulic rear disc brakes provide sure stopping power, even when carrying the full 1500 lbs (680 kg) total payload capacity. There's also an optional hydraulic lift, to make light work of tumping heavy loads from the 16 cu ft (0.45 cu metre) tilt box.

Prices from £5,595 plus VAT.

For a free demonstration or further details telephone 01962 733222.



■ Spaldings latest addition into their 12,000 strong product range is a professional quality 18 litre knapsack sprayer.

The sprayer, say Spaldings, is designed for long periods of use in arduous conditions. It combines an ergonomic tank design with balanced weight distribution for accurate and efficient application of today's pesticides.

It features a heavy duty 1000cc piston pump for a long trouble free life and an easy move handle allowing for left to right handed operation and is designed to suit all users.

The telescopic lance, say Spaldings, is supplied as standard with an adjustable nozzle to suite all application flow rates.

The machine costs £59.98.

For further information telephone 01522 500600.

■ Rolawn, Europe's largest turf grower has introduced the 'Turf Inspector'.

The character will be used to convey the company's message about the independent testing of

its turf by the Sports Turf Research Institute.

"We want to make some serious points about turf quality and we feel that the turf inspector helps us to do this," stated Terry Ryan, Rolawn's Sales & Marketing Director.

Turf Testing Doctor Andy Newell of the Sports Turf Research Institute visited the Rolawn Turf Company's fields recently to conduct tests on the botanical composition of Rolawn's well known Medallion turf.

The tests which took place late last year on two fields amounting to 88 acres, revealed an annual meadow grass content of half of one percent and identified exactly the cultivated grass species present in the finished turf.

The tests were carried out to the STRI's own operating procedures and not to a procedure set out by the Company.

Rolawn began its policy of inviting independent testing by the STRI in 1995. The first tests were conducted to identify the botanical composition of their Advantage greens turf.

The company is happy to provide free copies of the STRI reports upon application.

■ Concern over the increasing number of thefts of ground's maintenance equipment has prompted Buckinghamshire-based Risboro' Turf to become the first manufacturer to fit Datatags as standard on all pedestrian self-propelled machines produced by them including, the new Little John scarifier and Big Willy aerator. Commenting on this security initiative, Director, Richard Taylor said, "During the year, the British Agricultural and Garden Machinery Association set up a scheme to fight garden machinery theft. Through this we learnt about Datatag, and realised it would be an invaluable addition to our products. We are fitting them during production at no extra cost to our customers."

Datatag is an electronic identification device that utilises micro-transponder technology. Each tag has its own 10 character alpha-numeric code which can



be "read" by a scanner via radio frequency. This code is fed into Datatag's mainframe computer and registered together with make, type and model of the machine. The frame and engine identification numbers are also recorded. Once the machine is sold, details of the owner are added. In the event of it being stolen, incident details including crime reference, police station and officer handling the case will be fed into the computer. The tags are small and have been designed to withstand vibration, electrical and magnetic interference as well as an acid attack. They are unobtrusively secured to the machine with two-part epoxy adhesive. Visible Datatag decals warn would-be thieves of their presence. Datatag is already the standard method of identification and registration in industries such as motorcycles and watercraft. As a result, the system is universally accepted by Police and Customs who receive, free of charge the equipment to read the tags as well as access to the Datatag computer.

Risboro' Turf would like other garden machinery manufacturers to join their bid to beat crime. "The whole issue of theft is a great problem, and we hope that the rest of the industry will follow our lead. We appreciate the problems that particularly smaller sports clubs and organisations have in funding machinery budgets, and want to do everything we can to ensure their investment is protected. Datatag has a proven track record as a reliable method of identification and retrieval. It is time for the industry to move into the 21st century with a more responsible attitude towards crime prevention," said Richard Taylor.

■ Many years ago activated charcoal was widely used by greenkeepers and groundsmen to neutralise chemicals or effectively clean through tanks or spraying units. It was effective, but as it was very difficult to use and dirty to handle, it fell out of favour.

Now technology has come to the rescue and produced Clean Carbon offering all the time

proven benefits of activated charcoal but in a water dispersible pelleted form which is clean, easy to handle and highly effective.

Clean Carbon has some very interesting applications in addition to its deactivation of organic chemicals in emergency or annual preventative maintenance, such as use as a warming agent. An application of Clean Carbon can warm up the soil surface via the sun's rays by three degrees above ambient temperature for times when those few extra degrees are critical. Clean Carbon also deactivates organic based pre-emergence herbicides when overseeding is undertaken.

Activated charcoal is capable of binding many materials such as organic pesticides, petroleum products and hydraulic oils; as such, it is a very handy product to have around in case of those all too frequent disaster situations.

For further information telephone 01455 234677.

■ Rufford Top-Dress Supplies has just launched a series of educational leaflets.

The first issue features top dressing and further topics will include rootzones, sands, soils and turf reinforcement. You can obtain a free copy from Rufford Top-Dress Supplies Limited Fairway House, South Stage, Broadway Salford Quays, Manchester M5 2UQ. Telephone 0161-877 8552.

■ Replacing the MULE 500, is the new Kawasaki KAF 300 C Mule 550. The most obvious change is a standardisation – the 550's big brother 2500 and 2510 4X4 both have seating for driver and passenger – to a "two seat" configuration rather than the single front seat of the Mule 500.

The original range of Kawasaki Mules was launched more than five years ago as an extension of the companies All Terrain Vehicle expertise. All are designed on the "low ground pressure" principle offering operators with a minimal ground damage requirement machines with high payloads and simple and thrifty operation.


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# NEW PRODUCTS

While the visual changes are obvious Kawasaki has carried out detailed work to further enhance the small Mule's performance and ease of operation.

Price: £4050.



■ BTME 97 was Wiedenmann UK's most successful show with enquiries and sales up considerably on previous years.

Pictured with the most popular product on the stand, the Terra-Spike P160 are from left: Director, David Rae; David Bate, Regional Sales Manager, Eng-

land and Wales and Michael James from the Scottish sales team.

Director David Rae said "The Terra-Spike Speed Link which we believe to be the most versatile deep-spiker in the UK marketplace was making its first appearance at Harrogate. We recently introduced the new speed linkage which enables the machine to be operated at much higher speeds, resulting in an increase of over 80% in productivity and this naturally created a great deal of interest at the show including a number of sales.

"This is our seventh visit to Harrogate and we have always found it to be a very worthwhile event for us. Going by this years results, there is no doubt we will be back."

■ There are now strict European Standards for personal

protective equipment for users of hand-held chainsaws to minimise risks.

Stihl of Germany, has developed and produced a new design for boots for users of chainsaws which have been tested and approved.

The boots are to EN345 which indicates that they have passed stringent cutting tests at a chain speed of 20 metres per second achieving Class 1 status.

They are made of brown leather in sizes 4 to 14, cost £99 per pair, and are zero rated for VAT.

The boots are just one of many items of Stihl personal protective equipment and the full 1997 range of Stihl power tools available in the latest Stihl catalogue.

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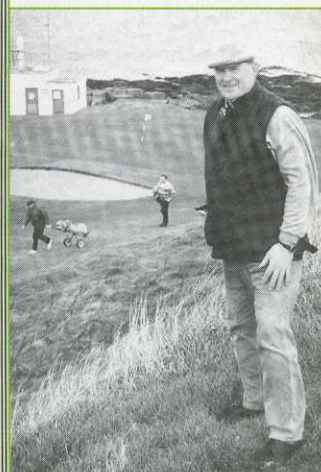
■ Improved traction, engine cooling and ease of maintenance are three important features of the new Front Line 933 ride-on rotary mower being launched by Ransomes for the '97 mowing season.

Based on the T-33D, which it replaces, the Front Line 933 is a rugged and powerful rotary mower designed to appeal to golf courses needing a 4-wheel drive machine with a choice of 60in. (1.52m) rear discharge, 63in (1.6m) side discharge or 72in (1.8m) side or rear discharge decks.

In common with its larger stablemate the winged 1951, the new Front Line 933 uses Ransomes' patented cross-flow four wheel drive and differential system which ensures excellent traction on slopes with minimal turf damage when turning. Other improvements to the hydraulic system have produced an increase in transport speed to 15mph when two-wheel drive is selected. Also included on the new Ransomes Front Line 933 are audible alarms for high engine temperature and low engine oil pressure, alerting the operator of any problems.

Price is £19,220 fitted with a 72in rear discharge rotary cutting deck.

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## A Salt on Larne's 7th Hole

The Bell Hole at Larne may only be 105 yards long, but its sheer physical position, bounded by the Irish Sea and with a carry across rocks from a high tee, make it intimidating.

But for head greenkeeper, Davie Craig it's not keeping the ball on the green that's the problem, it's maintaining its sward. Sea-spray can completely burn-off the bents and fescues he tries to establish.

Last spring he'd almost given up hope of ever having a resilient grass cover. Now, twelve months on, he claims that the Fortiva treated seed which he bought through JA Humphrey Agriculture has transformed the green into the best it's been in 20 years.

"I was resigned to the STRI's view that it would be better to move the green," he says. "However, we've now got a good sward with no sign of damping-off or fusarium.

"Having used seaweed extract prior to overseeding, I'm very impressed with the result," says Davie.

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**Hugh Tilley speaks to greenkeepers about their methods of aeration – and the equipment used**

One of the golf greenkeeper's greatest preoccupation in growing grass is with aeration and compaction. In simple terms for optimum growth turf needs air at its roots and open soil structure to allow diffusion of gasses. Both toxic gas and soil pans inhibit root growth thus it is essential to eliminate compaction and aerobic conditions. USGA specification greens with drains covered by a stone drainage carpet and a mix of course (sand) particles in the growing medium above are one way of keeping the root zone open, but many old established greens are not built this way, nor do tees and fairways have the same attention as greens. As a result most courses have some need for some mechanical means of ensuring or opening up the soil structure.

Surface compaction and other impediments, such as an organic matter layer can be alleviated or nullified by slitters and corers, and these will be covered in subsequent features, however it is essential to get the structure right at greater depth and this may mean machines such as the Verti-drain – the word has become generic as there are now other machines which do a similar task. There are also several alternatives which have arrived on the scene in the last decade, such as the

Terra-Vent and Terra-lift (don't confuse the two they are totally different companies) and the Robin Dagger Soil Ameliorator, all of which rely on a blast of compressed gas or air injected through a spike inserted deep into the soil, and this blast 'heaves' the soil to fissure it. The Terra-lift company use their own operators and incorporate seaweed meal into the fissures and inert material into any holes left in the surface. Some other machines have the same capability.

More recently the 'SubAir' has been introduced into UK, this operates on USGA spec. (or similar) greens to suck or blow air through the soil using an engine driven fan. An essential prerequisite of this system is that the soil is already reasonably 'open', and has an under drainage system. Originally introduced in USA the system is being franchised for UK by Industrial Power Units.

#### **SubAir at Puckrup Hall GC**

Trevor Williams, course manager at Puckrup was one of the pioneers with the SubAir System in UK, partly because his brother works for IPU, which give him inside and early information about the system. Since that time IPU have modified and refined the ground fittings, improving the efficiency of the system, but Trevor is still happy with 'his' system and plans to extend it so that it can be used on more of his greens – currently he uses it on just three. The system is different

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from mechanical aerators in that it does not attempt to make fissures, but simply to move the 'air' within an existing sub strata by either building a partial vacuum or a pressure in the (under) drainage system built into the green. The main advantage of the system, according to Damien Monaghan, the assistant who mainly uses the machine, is that it significantly increases playing time, and it can be used to draw water down and out of the green.

At Puckrup Hall the machine is taken out twice a week and coupled up to the drainage sump at the edge of each green for about fifteen minutes per hole. Connecting is quick and simple, just a matter of plugging a spigot into the drain, and the motor is started. A large bore pipe with quick release clips fits to either fan input or output depending on whether the system is needed to suck or blow. At Puckrup they alternate between sucking and blowing. IPU have a sophisticated

gas analyser, but Puckrup do not feel any need for this, nevertheless Mick Tinning of IPU has analysed the root zone gas and says that the machine is being effective at replacing the undesirable – or stale air with fresh – and getting the oxygen level up to the desirable 20.9% level. However on the basis that the proof of the pudding is in the eating, root development on the treated greens can be seen to be as much as twice the length and bulk as on untreated areas. Nor does it just tend to grow down a spike hole.

The machine at Puckrup Hall is a trailed model which is light and easy to hitch to a Cushman or similar. It is powered directly by a Briggs and Stratton Vanguard petrol engine with self-starter, and this has proved reliable and a 'good starter.' There is minimal servicing and the unit does not appear to be excessively noisy – no complaints have come back from golfers.

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*Bringing perfection to play.*



The expectation is that use of the SubAir will save any need to deep tine aerate the greens, however the club does have a tine aerator for use on other areas.

Trevor admitted that it was early days in using the machine, but he has sufficient faith in the effect and improvement that he expects to incorporate the sump fitting into more greens so that the SubAir can be used on them too.

#### **Terra-lift at Worlebury GC in Somerset**

Greenkeeper International spoke to greens' chairman Derek Mogg about the Terra-lift system. In fact the club has used the C&P Soil-care company's 'deep drill' rather than the Terra-lift, this being as the name implies a drill. It expects to continue using this service every other year. The Worlebury course is situated on 'a hill of limestone rock' and often this rock is close under the surface on the greens, thus it is essential to get a machine which can cope



such conditions – the 'Deep Drill' does, drilling through the rock, furthermore the machine is hired complete with operator which solves staffing. Another point Derek made was that the drills do not break up the surface nor

leave large holes. The machine has been used on all parts of the course.

#### **Huxley Soil Reliever at Tylney Park near Hook**

Tylney Park is an eighteen hole

private parkland course situated on clay. It was opened in 1975 and had relatively small greens and very limited tee space, something which it is planned to rectify shortly with remodelling and some extension of several holes –

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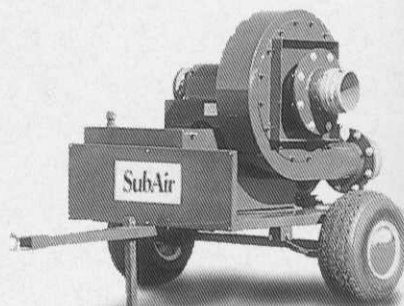
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making it a par 71. Peter Henderson took over as head greenkeeper two years ago and says that he is already getting members praising the improvement. One of the most important machines in this improvement has been the Huxley Soil Reliever which the club bought two seasons ago and has used extensively ever since.

Peter said that getting the grass roots down is particularly important. In the past getting grass to grow has been difficult, and there has been little root growth making it very easy to rip the turf up. As a result the machine is used on greens with no 'heave'.

Both hollow and solid tines are used, of 3/4in diameter, the former going down to about 150mm deep – any deeper and tines snap, while the solid tines which are also used for approaches, are put in to about twice this depth. Peter said that they had tried thinner tines but began getting breakage or bending. It would be possible to get the solid tines in deeper, but the friction and vibration becomes excessive and so penetration is limited to about 300mm (12 in.).

Tydney Park had several competing machines out on demonstration before buying the Huxley machine. Peter commented that the Soil Reliever did the best job and was the fastest thus this was the one bought. An essential

'option', at least for the Tydney course in Peter's view, was the hydraulic top link as this allowed easier and faster depth adjustment which can be carried out while the machine is working.

Regular coring of the greens is "bringing up a lot of rubbish," Peter commented. A 70/30 top dressing is used with incorporated seaweed meal to provide nutrition. A top dressing of two bags of gypsum per green has also been used in an attempt to improve the soil structure.

The Soil Reliever is used behind an Iseki 545, which has a creep gearbox. These very slow ratios allow the club to get very intensive tining, and typically a 75mm square pattern is used. Faster operation, while possible, is seen as causing greater damage to the surface.

The machine had not suffered any undue breakdowns, and although (accidental) operating

the power take off too fast has inflicted some damage to tinwork and the rear guard, this was no criticism of the machine itself. Routine greasing round and maintenance is undertaken by the greens staff while more major service work is carried out by Huxley's – very well and very promptly.

In summing up the Soil Reliever, Peter said, "I can't have a bad word about it – it has been a breath of life for these greens".

## Wiedenmann Terra Spike at Celtic Manor – Newport

At Celtic Manor there are two Terra Spikes, the newest being a 'Speed Link' model which was introduced at the end of last year. Although both are similar the Speed Link has several modifications including a new higher speed gearbox, modified tine carriers with a different 'heave' adjustment, and a new setting

bar. Setting is easier and more accurate and Patrick 'Cal' Callaby, head mechanic, commented that the new machine offered greater versatility and greater choice in setting it up. The new model also has heavier and better guarding. The original machine is two seasons old and has undertaken a lot of work being used on tees, fairways and approaches over two courses. Most of this is carried out using 25mm solid tines, spiking down to about 200mm and normally with a medium degree of 'heave' set, but some work has been done on hollow tining approaches.

Celtic Manor currently has 36 holes but within the next two years will offer a third course. A feature of the soil is that when wet it can pack and pan like clay, thus making intensive aeration essential. A major underdrainage scheme is to be undertaken shortly.

Jim McKenzie, course manager, stated that pressure on keeping the courses open throughout the year will be increased as the associated hotel is currently being enlarged considerably, and there is also a major conference centre to be built. He added that annual rainfall in South Wales was very high, averaging about 450 inches per annum. The first Terra Spike was bought after careful consideration, and a belief that it was a better machine than its competitors.

Both Terra Spikes are used with MF 362 tractors which have creep gear ratios – although often the work is carried out in a faster ratio. The machines are supplied and supported by Ted Hopkins Agricultural Engineers, who is local but well known and trusted by Celtic Manor Hopkins have extended their turf care work considerably in recent years.

Some repair work has been needed on the original machine. Metal fatigue on the main frame required some welding work, and a strengthening gusset was added – this modification has been incorporated into the newer machine. That Wiedenmann (UK) were prepared to listened to the user and act on greenkeepers' suggestions was a strong plus point.

Greasing round has been extended from twice a day to once a week, but the grease used has been altered to the Lubrica-

Terra Spike at Celtic Manor





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tion Engineers high viscosity grease. This has also minimised the likelihood of getting grease dropping onto the greens.

#### Charterhouse Verti Drain at Kenilworth Golf Club in Warwickshire

Kenilworth's machine, pictured, is now about five years old, it is a 1.45m wide Greens model which is used behind an Iseki Compact tractor of 36hp. Keith Weston, course manager, said that they have been using it almost continuously since about September last

winter and it has been used on greens, fairways and approaches, several times over, but seldom on tees as irrigation pipe was laid too close to the surface and so is liable to damage.

Operation with 3/4 in. solid tines is usually down to about 11in. deep, and the fairways have been treated two and three times during the last winter. Keith has used the machine with 1/2 in. tines to give closer spacing, but found some bending but, more importantly, he found stones can get jammed between the tines so

causing the ground to be ripped up. The club has also used 3/4in hollow tines on the greens, but mainly as a dethatching tool – thus at very little depth.

The 'heave' adjustment has been used but in Keith's experience soil conditions are far more important than the actual setting on the machine. He admitted he found adjustment something of a mystery. The other fact he has noticed is that as the soil structure at Kenilworth has improved so the effect or ability to 'heave' has diminished.



In common with other machines of this type there are a considerable number of bearings to be greased, but Kenilworth too have changed to Lubrication Engineers 1233 grease which they find stays in the bearings longer, they now only grease round every other day. Keith commented that the grease was "really sticky – you don't want to get it on your clothes." Again this has solved the problem of getting old grease pushed out of the bearings and falling onto the turf.

In summing up Keith said that he found the Verti Drain so much better than any other option on the course, he does no slit tining on fairways, and he certainly wouldn't be without the machine. Repairs during the whole time the machine has been at Kenilworth have been minimal, just two new main bearings in the last year and one or two shock absorbers to be replaced but no major problems nor any structural damage.



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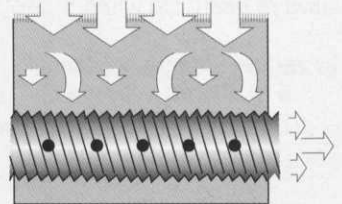
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# General requirements for golf clubs and greens staff

by **Tony Rees MIOSH, Health and Safety Consultant & Senior Instructor with ATB Landbase Training Services.**

**T**his month I will concentrate on the employers duty to others and the duty placed on persons who design, manufacture, import or supply any article or substance for use at work.

## Employers Duty to Others

Section 3. "An Employer or Self Employed person must not expose a Non Employee to a risk to health and safety who may be affected by the activities of the employer's business."

Employers and the self employed have a duty to conduct their Undertaking to ensure that any non employee eg Visitors, Contractors or Public are not exposed to any risk to their health and safety. They must also, when prescribed by an regulation provide information to non-employers about how the undertaking may affect their health and safety.

The above section requires employers and any self employed individual to ensure SO FAR AS IS REASONABLY POSSIBLE the health and safety of anyone not in their employment. In the context of golf clubs this includes:- Members of the Golf Club; Contractors working on the grounds or buildings; Visitors to the club and Members of the public.

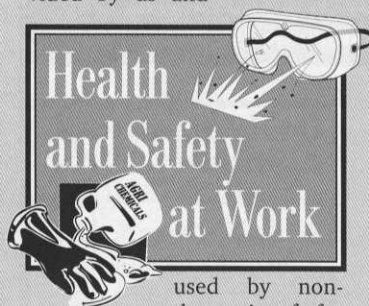
We must take account of any work that is being carried out and identify if this work will affect the health and safety of any of the above. For example, if machinery is in use which could endanger others we must ensure so far as is reasonably practicable that we inform all persons, likely to be involved, of the hazards and the possible risks associated, or, if we are using chemical sprays or similar, that account is taken of the non members of staff and how they may be affected by these substances. In some instances signs and notices should be prominently displayed warning of the work that is being undertaken or the areas of work cordoned off. This is particularly important if there are any footpaths and/or rights of way that permit public access.

We should also remember that this section of the act places a duty on contractors or the self employed not to expose us, our staff, club members or any others to any undue risks from their work. This should be achieved by ensuring that they carry out a risk assessment on the work to be undertaken before the work commences and convey all this information to us.

Section 4. Duty of persons in control of premises and sites to non employees.

Those persons in control of premises and sites must provide safe Access/Egress and ensure that the premises and site are safe for use and also that Plant and Substances are safe for non employees' use.

Which will mean that we must ensure that all equipment provided by us and



used by non-employees is safe for them to use for example a powered golf buggy. We should also ensure so far as is reasonably practical that all this equipment is used safely. For example, if someone overturned a golf buggy on sloping ground, the buggy which we had permitted them to use without ascertaining their competence, we could be deemed to be responsible.

This will also apply to building use, the clubhouse and changing facilities must be so far as is reasonably practicable be safe for all users by ensuring that the access and egress is adequate, electrical systems and equipment are safe and the structure of the buildings themselves are safe for use.

It is important that when we have contractors working on our site we should ensure that they use their own equipment for the work they are undertaking. This is an important factor as we can ensure that the equipment they use is safe but as they are not directly under our employ we

can not ensure that they are competent to use the equipment and this is a major factor which should be considered by all contractors.

Duties of Designers, Manufacturers, Importers and Suppliers

Section 6. The duty of any person who designs, manufactures, imports or supplies any article or substance used at work shall be to:- ensure they are safe and without risks when used at work; carry out any tests and examinations as may be necessary; provide any information about the safe use of the product and anyone installing or erecting the article you use at work has the same duty to ensure that on completion the article is safe to use.

The above section of the act requires persons who design, manufacture, import or supply equipment or substances to ensure so far as is reasonably practicable that the articles or substances supplied are safe and without risks to health and safety.

This means that anyone supplying equipment must ensure so far as is reasonably practicable that all dangerous parts on equipment are guarded to the required standard (BS 5304 Safe Guarding of Machinery) also they must provide information on the safe use and maintenance of the machinery. They should also indicate the presence of any hazard (noise, fumes etc) which could be present with the machinery. the safe use of machinery will be covered in future columns.

With substances supplied for our use we should be provided with a Substance Health and Safety Data Sheet which will give us information to enable us to take the required precautions and enable us to use the substance safely. This will also enable us to comply with the Control of Substances Hazardous to Health Regulations which we will also be covering later.

■ Next month we will look at employees duties.

■ Further information on training courses and consultancy contact ATB – Landbase Training Services – Jean John on 01282 617466 or Tony Rees on 01686 622799.

## ASSISTANT GREENKEEPER *Profile*

*Usually the spotlight falls on the Course Manager or Head Greenkeeper at a Club. Now it is the turn of those whose work often goes unheralded to star...*

Name: **Robert Purll**

Age: **26**

Club: **Wilderness Golf Club**

Position: **Assistant Greenkeeper**

### 1. How long have you been a greenkeeper?

Six and a half years

### 2. What education are you currently undertaking?

NVQ Level 3

### 3. Which one task do you most enjoy doing?

Construction and renovation

### 4. Which one task do you most dislike doing?

Divoting fairways

### 5. What job other than greenkeeping might you have ended up doing?

Banking

### 6. Who has been the biggest influence on your career?

Wilderness Golf Club

### 7. What would you do to improve the life of a greenkeeper?

More money and fewer golfers!

### 8. What are your hobbies?

Gym, golf, reading and socialising

### 9. What do you get out of BIGGA?

Golf, education, magazine, seminars

### 10. What do you hope to be doing in 10 years time?

Course Manager.



# Buyers' Guide

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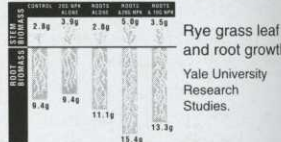


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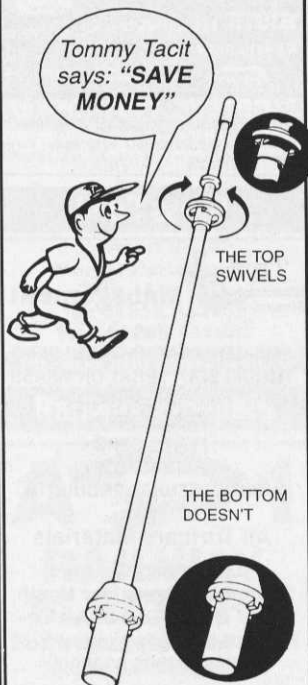
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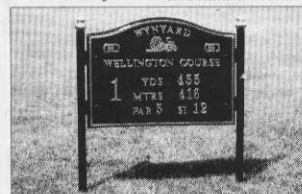
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**Seacroft Golf Club**  
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Applications in writing with full CV should be addressed to:

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## Chalfont Park Golf Club

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Applicants must have some greenkeeping experience, be willing to learn and work within a team and must also have a clean driving licence.

No living accommodation.

Please apply in writing including C.V. to:  
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## Weston-super-Mare Golf Club

We currently have a vacancy for a

### FIRST ASSISTANT

required for busy 18 hole golf course.

Experience of Links courses preferable, but not essential.

Please send your C.V. to:

**The Secretary**  
**Weston-super-Mare Golf Club**  
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Accommodation is provided.

Apply in writing with C.V. to:

**The Secretary, Reigate Heath Golf Club, REIGATE, Surrey RH2 8QR**

## Forest Hill Golf Club

applications are invited for the position of

### DEPUTY HEAD GREENKEEPER

Applicants must have at least 6 years experience and possess  
the following qualifications:

NVQ 1 and 2

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PA1 and PA2

Applications in writing with full C.V. to:

**Mr P McCarron, Forest Hill Golf Club,**  
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## Burnham-on-Crouch Golf Club

This 18 hole parkland club require a

### HEAD GREENKEEPER

Applicant must be experienced in all aspects of greenkeeping  
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staff are essential.

Accommodation not available and salary commensurate  
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Please apply in writing with CV to:

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**Arne Van Amerongen describes the construction work on a golf course he worked on in Germany.**

# Only top quality will survive

As we all know there are many ways of constructing a golf green some better than others! I have recent experience of construction in Germany will describe a project in Germany, so you can get a feel for how they went about it.

First the architect indicates the location of the green and its middle point, as well as the shape of the green and its contours, including height levels. The architect makes drawings of the surroundings, but these are only rough – the details of the surroundings are left up to the construction manager and machine operator. With these drawings and good personal communication with the architect, the construction manager and his team can start constructing the green.

The ideas conceived in the drawing room by the architect take shape when the caterpillar begins making the form and contours of the green. On the staff level this will give a finishing height of +20/-20 cm to the subgrade.

The machine operator checks the size and height levels of the green. He only works with four reference points taken from the centre of the green, i.e. 0°, 90°, 180°, and 270°.

When the final height levels and contours are reached, the machine operator starts rolling with the caterpillar and motorised vibrating six tonne roller to compact the subgrade.

The construction manager sets out eight points from the middle of the green. The points are on the edge of the green and are 45° apart. They are used to measure the length from the middle of the green to each point.

A good architect will visit the golf course at least twice a week for inspections, if necessary to make alterations and have a meeting with the staff and investors.

Then the machine operator can work towards the finishing height and contours of the green. Each operator has a drawing of the green size, contours and height levels. The soil is taken off, and goes into the surrounds. When the green has its final shape, the same machine will start working on the green drainage. By turning the bucket on an angle of 45°, it will make a trench for the drains with sloping sides.

A disadvantage of the sloping instead of steep sides is, that you need more back fill materials for



the drains. An advantage of the slope is, that the side of the trench is more stable, so it will not collapse and will find less disruption from water movement. The drains are four metres apart. The drain in the middle of the green is 100 mm. The lateral drains are 60 mm in diameter, and both are perforated. Only the drain that goes into the outlet is not perforated.

There is also a drain around the green. This drain is needed because of the slope on the left handside of the green, so the water movement will not disturb or damage the green's surface.

On top of the subgrade they build the intermediate layer, consisting of the same material they used for filling up the drain. The uncompacted height of this layer is 170mm, compacted it is 150mm. This material will be brought by lorries with 10 m³ each. This means that they need 10 lorries, giving ca. 100 m³ material on 600 m² green surface. The digger will spread the material on top of the subgrade. Two men make sure that the uncompacted depth of the intermediate layer is no more or less than 170 mm. when this is finished five men can start levelling the uneven pans. After this the surface is rolled three times and raked in three different directions

At this stage the irrigation company should have installed the irrigation pipes around the green with connection points for the sprinklers ready, or should be just in finishing stage. Unfortunately this is not always the case. In general, there are still surfaces being seeded and the irrigation system is still not working, which is a

nightmare in summer.

At this stage they have pure sand, so they are bringing organic material, which comes from the moor land and is dried in plastic bags of 25 kg, into the surface. They start rotavating the green.

The rotavator goes in two different directions, also taking a little bit of the surrounds, so they get a nice finishing touch. After this the green is rolled and raked in three different directions.

They do not use a pre-seeder. This is left up to the greenkeeper, and in my opinion there is no need for it, because I have seen grass species on sand greens, like brown top bent and fescues that still look healthy after six weeks and longer. There is no inefficiency of nutrients. After the second cut the greenkeeper will apply fertiliser on the green. I have seen bent and fescue grass species on sand based greens in winter time on a height of 15 mm with no feed at all. They looked excellent. It is a different matter if the green is under playing conditions and stress.

Then they start seeding the green with a motorised hand-seeder, called Semedner, in three different directions. Usually they use a traditional 80-20 grass seed mixture: 40% Festuca Rubra Litoralis (Barcrown) 20% Festuca Rubra Commutata (Center) 20% Festuca Rubra Commutata (Lifalla) 10% Agrostis Tenuis (Bardot) 10% Agrostis Tenuis (Egmont)

After the third seeding, the final light raking and rolling will be done

After 10-12 days the grass seed starts to germinate. In this case they had to irrigate the green

three to four times a day, for three to five minutes, just to moisturise the surface because of the hot weather conditions. Six to seven weeks later they do the first cut and collect the clippings.

The company is responsible for two cuts and then the greenkeeper will take over.

The greenkeeper starts maintaining the greens. The job of the construction company is done, construction wise. The cost of each green amounts to £2,000.

In my opinion, it is still important that investors hire qualified and experienced staff. Unfortunately we still see golf courses constructed and then there is almost no money left for machinery or staff to maintain the golf course. My advice is: Do not build a golf course if you cannot maintain it properly afterwards. People will ask why are you saying this. I believe that poor quality will only survive in the short term. Raising up the standards and quality will win in the long term.

My job in this project was to oversee the construction. I was hired as an independent consultant by this golf club. I was not able to use the specifications I wanted as the specification are provided by a government organisation. Personally I feel, these German set guidelines need to be changed more towards USGA specification. The sooner the better.

■ Arne van Amerongen is now based at Hotel Die Wutzschliefe where he is involved in the construction of a new 18 hole course. He would be happy to provide more detailed specifications the of the course described in the article if required.



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