

## Greenkeeper Education and Development Fund



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Ken Richardson discusses the department's latest projects.

What with the results of the BIGGA Golf Environment Competition being announced and the build up to Harrogate Week continuing, it has not been easy for Sami and I to find time to work on our current project, the development of the AGCS/BIGGA Safety Management System.

## The BIGGA Golf Environment Competition



As the results of the BIGGA Golf Environment Competition are announced, I would like to reinforce our gratitude to the four sponsors. Ransomes Jacobsen, Scotts, Syngenta and Course Care without whose support, this, extremely worthwhile competition could not continue. The full results appear elsewhere in this magazine but I would like to congratulate Brighthouse Bay Golf Club on becoming the National Winner.

The Environment Competition prizes will be presented during Harrogate Week.

## Harrogate Week 2007



Last month's article concentrated on Half-Day Harrogate Week Workshops and I intend to look at Seminars this month.

With just 49 days left to the start of Harrogate Week, that's just 29 working days, places on the Harrogate Week Workshops are few and far between. However, there are still places on the Seminars, where there is something for everyone. The programme has continued to develop and we have added a seminar presented by the R&A that will take place before the Opening Session on Tuesday, January 23.

This half hour session will look at two areas, the Turfgrass Climate Map and the Open Road to Sustainability.

The interactive climate map shows where warm or cool season grasses are most appropriate and the Transition Zone where often, difficult choices have to be made with regard the most sustainable turfgrass selection. The map is linked to text on the R&A Best Practice web site ([www.bestcourseforgolf.org](http://www.bestcourseforgolf.org)) that describes the turfgrass species in detail.

The Open Championship at Hoylake last July was considered to be a great success. The R&A Golf Course Committee has produced a DVD that highlights the sustainable nature of the course. With footage taken both from The Open itself and again nine weeks after Tiger Woods picked up the Claret Jug for the third time, this DVD considers the recovery achieved after hosting a major golf event. See this new resource at Harrogate.

The morning continues with the presentation of awards to Master Greenkeepers, to prize winners in the Golf Environment Competition and to those who have gained diplomas in Continuing Professional Development.

This session will be followed by 'Making an Exhibition of Yourself' - a presentation by Frank Newberry. Frank is well known for his exuberant flamboyant approach to presentations and his talk will give an interesting spin on how to get the most out of your visit to Harrogate.

Seminars continue in the afternoon with Dr Kate Entwistle taking a close look at integrated pest management. Kate will be showing us how the accurate identification of problems is the key to successful management.

How often have you had to deal with difficult people, whether at home, at work or socially? The, I'm not Difficult, Everyone Else Is! Seminar, presented by Mike John will help you to cope in these situations.

The first day of BTME ends with a look at Developing a Sustainable Approach to the Management of Amenity Turf. Presented by Jon Allbut

and Joan Reeves. Not only is it free, all delegates will receive the latest copy of the Approved Code of Practice for the Use of Plant Protection Products.

Wednesday sees the return of International Seminars when four greenkeepers will relate their experiences in Canada, the USA, Sweden, Holland, Germany, Belgium, Spain, the UK, Australia and Hong Kong. All four sessions are Free of Charge to all delegates

Thursday morning introduces four Seminars that have the common aim of Keeping the Customer Satisfied. It is becoming ever more important to run golf clubs on a commercial basis. Lose your customers or your members and you will have great difficulty getting them back. One area that always makes golfers complain is green speed. Come and see what Dr Richard Hurley recommends that you do to keep golfers happy. Andy Campbell has had to work within severe financial constraints for many years and he is well suited to tell us how golf club management needs to be aimed at getting golfers to come back.

The majority of golfers play the game for relaxation and enjoyment and they want to have a pleasurable experience. All golf club staff need to be aware of this and do all that they can to present a positive image. David Roy has had a great deal of experience on both sides of golf club management and he will use his experience to show how we are all involved in making golf a pleasure.

Getting the message across can be very difficult at times and yet we expose many greenkeepers and golf club officials to the media without any training or preparation. Roger Greenwood has worked in or with the media for many years on both sides of the camera and in journalism. He will concentrate on how to present a positive image and how to change negative perceptions.

As if all the above were not enough, we are pleased to be able to offer 14 Exhibitor Presentations during BTME. These free of charge Seminars take a close look at a wide range of technical topics from Aeration to Turf.

Make sure of your place by sending in your application form as soon as possible. Remember that if you book all seminars, you get a 30% discount and if you book all seminars through your Regional Administrator, you get a 40% discount.

## The AGCS/BIGGA Safety Management System

We have made progress in developing the Internet based AGCS/BIGGA Safety Management System. Thanks to sponsorship from Ransomes Jacobsen (logo) and cooperation between BIGGA, the AGCS, greenkeepers, secretaries, golf club officials and Health and Safety Advisers, the launch of this internet resource will take place at Harrogate. Come along to the Queens Suite at 5pm on Wednesday, January 24 to see if you it can help you at your golf club.



Rachael and Gemma would like to welcome 39 New Members to the Association and this month will talk about an important change to the Legal Helpline Scheme.

# Membership Update

## Renewal Packs

The December and January renewal packs are on their way out to those of you who renew at this time of year. Included in your pack is an application form for you to pass on to anyone interested in becoming a member and a newsletter detailing any changes to your membership.

For those of you who pay your own subscriptions you will also find a direct debit mandate and a tax relief form to assist you in claiming tax relief on your subscription. You are able to do this because BIGGA is recognised by the Inland Revenue as a legitimate professional body.

To make renewing even easier you can now pay for your subscription over the telephone.

If you have not received your pack or have any queries regarding your membership please do not hesitate to call Gemma on: 01347 833800.



## A Fond Farewell

I just wanted to say a few words to you all, as I will be leaving the Association for pastures new on December 8. Thank you to you all for making me feel so welcome and for putting up with me on my many visits to regional and section events. It is down to you that I will be leaving the Association with many happy memories. A special thank you also to all those who have served as Section Secretaries in recent years, for your help and ideas. I wish you all well for the future and only hope that I have the good fortune to work for such a friendly industry again.



## PLEASE READ CAREFULLY...

General Legal Protection (GLP) has provided members with a good quality service for several years and many have benefited from the advice given and legal help provided. In reviewing the scheme the Association has identified an alternative company (Arc Legal Assistance) that it feels will be able to improve on the level of service through their agents Irwin Mitchell Solicitors.

Irwin Mitchell are a leading legal practice with national cover, including Scotland, and through their bespoke call centre in Sheffield they will be able to offer advice and assistance on any aspect of the law for the member and anyone in their household. Please remember that advice is not just available on matters of employment law but also covers many of the everyday situations in which we can find ourselves.

With effect from 1st January 2007 the helpline service will be transferred to Arc although GLP will continue to give legal advice and assistance relating to incidents that occur on or before 31st December 2006. It is important that all potential claims for which GLP may be liable are reported to them without delay. All incidents arising after 31st December will be the direct responsibility of Arc.

## CONTACT DETAILS:

**Before 1st January 2007 - General Legal Protection**  
**Freephone 0800 019 2569**

**From 1st January 2007 - Arc Legal Assistance**  
**Freephone 0800 177 7891**

Full policy details of the cover with Arc will be sent out to members as they renew however, anyone requiring a copy before that time should contact Gemma by telephone: 01347 833800 or e-mail: gemma@bigga.co.uk

### BIGGA welcomes...

#### SCOTTISH REGION

Matthew Baird, Central  
Calum Fraser, North  
Brian Marmion, Central  
Robert O'Donnell, North  
John Wilson, Ayrshire

#### NORTHERN REGION

Jonathan Roberts, North West  
Greg Wellings, North West

#### MIDLAND REGION

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Matthew Howes, East Midland  
Wayne Oseman, Midland  
Robert Reeves, BB&O

#### SOUTH EAST REGION

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Richard Gugacz, Essex  
Michael Hind, Sussex  
Liam Somers, Surrey  
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Darryl Gardner, South Wales  
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Graham Hastie, South Coast  
Vincent Ley, South Coast  
Robert Patrick, South Coast  
Adam Payne, South West  
Clive Staddon, South West

#### INTERNATIONAL MEMBERS

Philip Laws, Spain  
Paul Monaghan, Germany

#### STUDENT MEMBERS

John Casserly, North West  
Rob Jones, North West  
Andrew Knott, North West  
Will Law, North West  
Ian Lucas, South Coast  
Allan Macdonald, East Scotland  
Michael Slater, Devon & Cornwall  
Matthew Thomas, South West

#### ASSOCIATE MEMBERS

David Binks, Midland  
Ceri Davies, South West  
Andrew Eckley, South West

#### GOLDEN KEY MEMBERS

Mark Keysell, East Anglia  
Mark Robinson, Sheffield

## DECEMBER'S MEMBERSHIP DRAW WINNER

Just introduce one or more new greenkeeping members to BIGGA and your name will be placed into a monthly draw to win a £10 Music Voucher. Our congratulations go to Angus Macleod of Newport Golf Club.





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# 50 Years of Greenkeeping

It's unusual, nowadays, for an individual to find a career and industry they enjoy enough to spend 50 years of their life working within.

Les Easthope of Hillsborough Golf Club, Sheffield, is set to retire this December after 50 years service. He left school at 15 and went straight into an Assistant Greenkeeper position. GI found out why Greenkeeping can be a career for life...

## What age were you when you started greenkeeping?

"I came to Hillsborough straight from school at the age of 15."

## What was your last position at the club?

"I have been an Assistant Greenkeeper for all the 50 years I have worked here."

## What first attracted you to the industry?

"I wanted to work outdoors, having gone to look down the mines when I was at school - I didn't fancy that."

## What is it about greenkeeping that you enjoy the most?

"Fresh air and also you get to perform a wide variety of jobs. I also enjoy working on the machinery."

## Do you play golf? If so, what is your handicap?

"No, I've never had time to play anybody at the club since I first started working there."

It's unusual, nowadays, for someone to stay in the greenkeeping industry for so long. Why have you chosen to stay in the same career and golf club for 50 years?

"It's been a big part of my life, having never been married you can say I have been married to the job."

## Do you feel a certain sense of loyalty to Hillsborough GC?

"Yes they showed a lot of loyalty to me when I first started work there, so it is only right for me to do the same."

## You must have seen a few greenstaff come and go at the club, have your fellow greenkeepers contributed to your staying at the club?

"Everyone who has worked with me I have got on well with, it is very strange now, when I first started it was sickles to cut the tee banks now its ride on mowers, it was overgreens to cut the greens and now its ride on triple mowers, and its gone from wheel barrows to four wheeled trucks - all the changes I have seen have definitely been for the better."

## Will you spend some time playing on the course, now that you have retired?

"No, with having arthritis in my back it is now difficult to walk but I will make time to come and see the greenstaff."

## What would your advice be to someone thinking about getting into the greenkeeping industry?

"It's now a good career for someone who is willing to work hard and listen to any advice given to them."

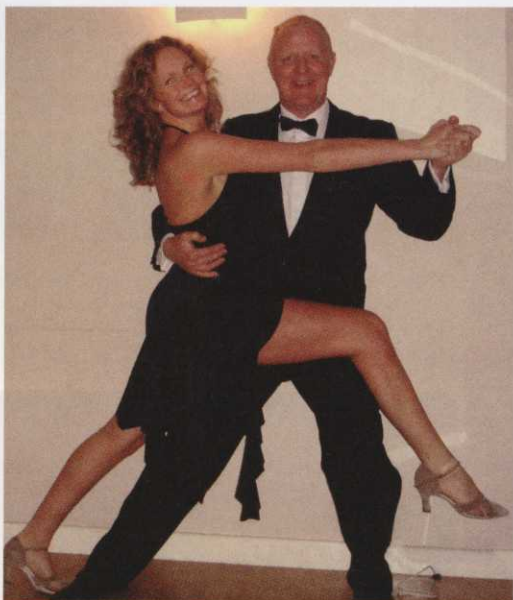
## How do you plan to spend your retirement?

"I will be spending time doing jobs in the house and garden."

## HOBBIES

GI has begun a new feature, finding out what greenkeepers get up to in their spare time. Here's something you didn't know about me...

**Name:** Graeme Macdonald  
**Age:** 48  
**Club:** Newark GC  
**Position:** Head Greenkeeper  
**Hobby:** Ballroom Dancing



## When and how did you get introduced to dancing?

"When I got divorced eight years ago I was introduced to dancing. I was single at the time and it was a great way of meeting people, especially females."

## What is it about dancing that appeals to you?

"It's a great way of keeping fit, meeting people and socialising. It's fun, energetic and a stylish partner dance. It is now the fastest growing partner dance in the UK. It is easy to learn with over a 1000 moves and you can dance to any style of music from 1950s right up through to today's hot rhythms."

## Where does it take place?

"It takes place all over the country, but I dance regularly in Nottingham. But at weekends I can be dancing all over the country from Blackpool Tower to Hammersmith, London."

## How many years have you been dancing?

"Eight years."

## Have you entered any competitions or do you intend to?

"I have been entering competitions for five years and am the reigning Scottish Champion, which I won in September in Edinburgh. I am also part of the UK Team Champions from Nottingham which we have won for the last two years and I have been a UK Finalist many times."

## Have you been following Strictly Come Dancing?

"Yes, I am a keen follower of Strictly Come Dancing and have been lucky enough to dance with two of the professional lady dancers from the series, Nicole Cuttler and Erin Bourg."

Do you or your fellow greenkeepers have an unusual hobby?

If so, get in touch, email: [melissa@bigga.co.uk](mailto:melissa@bigga.co.uk) or tel: 01347 833800.



## FALSE ASSUMPTIONS

I write to point out some of the false assumptions in the article written by John Jinks (Osprey Irrigation) published in the October issue of GI.

The main premise of the article is that irrigation consultants present a significant additional expenditure to the project cost of an irrigation installation, "adding a further 10% or so to the total bill".

Firstly, while I can't speak for our competitors, I can assure your readers that our fees to design and specify an irrigation system are considerably less than half the amount asserted by the author of the article.

The second fallacy, which is inferred by the article, is that a design submitted by a contractor, distributor or manufacturer is somehow "free".

The reality is that a free design submitted by a contractor is no such thing. The cost of producing that design has to be covered somehow. In the case of a contractor the cost is built in to the quotation to supply and install the system. In other words it is a buy-now-pay-later design.

To some this might sound an attractive proposition, especially considering that if the project does not go ahead it hasn't cost the client any money to get an irrigation design. However this method of procurement is not so attractive when the full picture is revealed.

For every five "buy-now-pay-later" designs that a contractor, distributor or manufacturer produces and submits to the customer, he may be successful on at best one of those bids. This is because some projects never go ahead and some projects are lost to competitors (no contractor wins every job they bid on). So when covering the cost of the irrigation design in a bid, the contractor has to cover the cost not only of the design pertinent to that particular project but also the designs that never got built or were lost to competitors.

In the bad old days of when the industry was predominantly based on "free" design and build, for every 10 irrigation systems that were installed perhaps 50 designs were actually produced, most ending up in the dustbin (I have witnessed projects where, over a period of time, seven separate irrigation designs were solicited for a golf course).

Somebody has to pay for the cost of those discarded designs. Since there are no irrigation design charities producing free designs and since in business the customer pays for everything the cost of these rejected designs is paid for in higher construction costs, which is ultimately paid for by the industry's end-users.

Actually what a customer gets with this model of procurement is a "get-one-now-pay-for-five-later" design.

When hiring an independent irrigation consultant the client pays for only one irrigation design, the one pertinent to their project. So even if a consultant was only half as efficient or competitive at producing an irrigation design as the "free" design and build model, he still works out at less than half the cost of the so called "free" route.

There are obviously many more advantages to hiring an independent engineer to design an irrigation system. These are too numerous to include in this letter but explained in the FAQ section of our website [www.irriplan.net](http://www.irriplan.net).

Yours sincerely,

Giles Wardle BSc. MSc. MIAgrE. ASIC.

Irriplan Ltd.

Consulting Engineers - Irrigation Drainage Soil & Water

## GREENS SPEED! OR DO THEY?

The daftest question any greenkeeper will hear is, 'What speed are your greens?' It's obvious to us all that the green has no speed at all, 'it never moves', but most of us will answer by giving a stimpmeter reading. What we don't say is that the stimpmeter measures the resistance of the grass, not its speed. The less resistance the grass offers, the further the ball will roll. The problem that we keep to ourselves is that if we lower the grass's resistance for too long it's more prone to drought, temperature, disease and insect stress.

Loss of leaf blade is the greatest stress that grass faces, yet in the last 20 years, we have started to cut lower, more frequently and more efficiently than we've ever done before. We've moved from the Troon Open of 1962 when it seems the greens were cut at 1/4 inch (6mm) twice in the week, to today when many courses are cut at 3mm at least daily and often double cut, for ordinary members' play. These modern mowing practices are extremely stressful to our greens, so why is it being done.

The answer given is that golfers want fast greens at any cost and it is our duty to give it to them! This might be acceptable if the speeds we are providing at these low heights were pleasing the leading golfers, but from a recent trade survey it appears that many greenkeepers feel they need to provide greens one foot quicker than at present. I'm worried what they might do in future to get that extra foot and even then will we satisfy the demand for speed? or will it simply increase? We've had very mild winters in the past 10 years and I fear what would happen to our greens cut low and stressed if we return to cold ones, or have another foul spring like this year.

Most golfers don't care about speed and few understand it. One asked what that was in feet and inches when told the stimp reading, so why should we stress our greens to please those who may never be satisfied. The lower we cut our greens the less resistance they have. Is this what we want?

David Woodbyrne

Southerness Golf Club

## YOUR LETTERS ARE REQUESTED!

Send to: Scott MacCallum, Editor, Greenkeeper International, BIGGA HOUSE, Aldwark, Alne, York YO61 1UF, or email them to: [scott@bigga.co.uk](mailto:scott@bigga.co.uk).



# MANAGING WATER RESOURCES

Water is one of the most precious of our recyclable resources, as well as being a source of natural beauty and recreation. The concept of water as a natural resource, which must be carefully managed, is becoming increasingly important as global needs continue to increase. With global demand for fresh water doubling every 20 years, competition for this resource will continue to increase in future years.

*Continue  
to learn*



Tim Butler collects water

Yet the amount of water used is not our only concern. Water quality has also become a critical issue in recent years. The spotlight has been turned onto the turfgrass industry in recent times, as course managers and greenkeepers are well aware, with some people saying that turfgrass management may be negatively impacting upon water quality.

For golf courses, water quality is often linked to fertiliser and pesticide usage, and any loss of these chemicals into water systems. So what is it that often makes people think negatively about water and water quality in relation to turfgrass management?

Nutrient concentrations at natural levels are essential to maintain diverse aquatic ecosystems. Nutrients are regularly applied onto intensively-managed turfgrass swards, and some people feel that this may be lost through leachate or run-off and contribute to pollution of water supplies.

This negative image has been particularly given to golf courses, because streams, ponds and lakes often border golf course fairways and greens and public perception may be that there is pollution potential. These water features are an important part of the aesthetic component of golf courses and are often used to increase course challenges. Much of this bad publicity is speculation but as greenkeepers are well aware there has been a lot of pressure placed upon turfgrass managers in recent years over this issue.

## SO WHAT EXACTLY ARE THE PUBLIC CONCERNED ABOUT?

Probably one of the main concerns that people express is leaching of applied chemicals through soil profiles in water bodies. Sand-based rootzones have become increasingly popular in golf green construction in recent years. These rootzone types are very beneficial to golf courses because they have good drainage properties and resist compaction. However, it is well publicised that sand-based rootzones have low organic matter content, poor buffering capacity and limited water-holding capacity. This has added to the speculation in relation to turfgrass systems as high-polluters.

A term that I am sure you have all heard of in the past is eutrophication, which is the increase in the nutrient load of a water body over time. Eutrophication can occur in water bodies, such as lakes, estuaries, or slow-moving streams, and can cause the growth of plantonic algae and blue-green algae, which will result in a depletion of available oxygen in the water

and thus fish-kills, as well as loss of ecological diversity and foul smells.

Nutrients can come from many sources, such as fertilisers applied to golf courses, agricultural land, home lawns, erosion of soil and sewage treatment plant discharges.

Fear has also been expressed regarding human health issues resulting from polluted water. Of all nutrients, phosphorus and nitrogen are probably the two most widely talked about in water quality issues. Phosphorus is probably the most limiting element for algal growth, since many blue-green algae are unable to utilise atmospheric  $N_2$ . Trials carried out on nutrient leaching from turf at Michigan State University, in the United States, showed that:

- sandy soils are more prone to leaching losses than clay soils
- nitrogen losses can be reduced by applying nitrogen in smaller amounts on a more frequent basis
- in putting green construction, mixing peat moss with sand significantly reduced nitrogen leaching compared to pure sand rootzones during the year of establishment

It is known that large applications of N, particularly from soluble sources, may be leached through golf greens by heavy rains or irrigation before the nitrogen can be taken up or fixed. For the protection of human health, the National Surface Water and Drinking Regulations and the European Union require that nitrate concentrations in raw water intended for human consumption and in drinking water must not exceed 50 mg/L  $NO_3$  (or 11.3 mg/L expressed as nitrogen). Concentrations of phosphorus in most soil solutions should not lead to environmental problems. However, some sandy soils require special precautions to avoid pollution because of low phosphate buffering properties and extensive use of irrigation.

## SURFACE RUN-OFF

The water available for surface run-off is the portion of the precipitation which is not lost via evapotranspiration and does not penetrate the surface soil to infiltrate into groundwater. Several factors affect surface-loss of nutrients and pesticides including: (i) amount of precipitation; (ii) soil moisture content previous to rainfall; (iii) time of chemical application; and (iv) fertiliser type applied. Trials carried out by Shuman (2002) showed that: (i) the first rain event after a fertiliser application will produce the great majority of the transport by run-off water both of phosphate and of whatever form of nitrogen was applied; and (ii) the quantity of nitrogen and phosphate transported from turf is linearly related to the rate of application.

Having said all this, I feel that turfgrass facilities, be they golf courses, sports pitches or parks, are vital to protecting fresh water resources. Turfgrass areas are green belts that, particularly in built-up areas, in a sense offer safe environments for many forms of wildlife. Numerous golf courses have strategies in place to protect water quality while consequently maintaining top-class playing surfaces.



## By Tim Butler

The general public can forget that turfgrass managers often strive to protect water resources. This is clearly evident with the decline in the amount of nutrients applied to many turfgrass areas in recent years.

Coupled with this there has been a drive to finding ways to reduce required nutrient inputs. Turfgrass and soil scientists have come up with novel nutrient management approaches such as the use of live bacteria and fungi in nutritional programmes, which are claimed to increase nutrient uptake. Turfgrass varieties with pest resistance and tolerance to stress are often used. Integrated pest management through the use of natural predatory insects has become on many golf courses common practice. Some courses have created buffer strips using plants such as reeds along water ways in order to trap sediment and act as natural filters. It is easy for people to forget other management practices that have been implemented by the turfgrass community.

As a PhD student at Michigan State University, I have had the privilege of seeing first-hand some of the strategies that are being implemented in the United States by golf courses in the fight to ensure that they protect the environment by reducing mains and well-water usage. I have visited many courses in the state of Michigan with my supervisor at Michigan State



Filter on wetland

University, Professor Kevin Frank, and have seen how numerous golf courses are actually collecting water run-off from the parking lots and roads in many towns and cities, water which would otherwise end up in sewage treatment plants at an additional expense. The collected water is channelled into very large settling ponds on the golf courses, which can hold millions of gallons of water and are directly linked to large ponds or lakes which the golf courses use for irrigation water.

In fact, I am at present helping Professor Frank to carry out research on measuring the quality of the water in collection ponds on various golf courses throughout the state of Michigan. The goal of the research is to study if the water contains any pollutants from the parking lots, etc, which may negatively impact upon the turfgrass performance.

In Michigan, the weather is normally around 35°C during the summer months, yet many golf courses are able to store enough water during the winter and spring so that well and mains water may not be required up to and including August, with the saving of millions of gallons of water and thousands of dollars in water bills.

I am sure that there may be some people thinking that the water requirements in the UK and Ireland would be much less than, for instance, in Michigan. However, it is very important to remember that as the world population increases, and thus demand increases, more scrutiny on water usage by turfgrass systems will occur.

The turfgrass industry has had its fair share of bad publicity regarding water pollution, yet I believe that properly-managed turfgrass systems are a very important component in the constant struggle to maintain clean, non-polluted water supplies in the future. In fact, research indicates that when fertilisers and pesticides are properly used, the chances for movement of these chemicals into water sources from turfgrass systems is minimal. Many turfgrass managers are doing excellent jobs in preventing pollution of water bodies under their management. However, in my opinion, water usage and regulation will become a critical component in turfgrass management in the years to come.

*Tim Butler is carrying out research in the area of turfgrass nutrition for a doctorate degree at both University College Dublin, Ireland, and Michigan State University, USA.*



Lake on golf green

- Brown, K.W., Thomas, J.C., and Duble, R.L.** 1977. Influence of management and season on fate of N applied to golf greens. *Agronomy Journal* 69: 667-671.
- Carton, O.T., Coulter, B.S., Herlihy, M., and Hackett, R.A.** 2002. Nutrient applications to tillage crops and their environmental implications. p.21-49. In: National Tillage Conference 2002. Crops Research Centre, Oak Park, Carlow.
- Duncan, R.R., Carrow, R.N., and Huck, M.** 2000. Understanding Water Quality and Guidelines to Management. *USGA Green Section Record* 38 (5): 14-18.
- Peaslee, D.E., and Phillips, R.E.** 1981. Phosphorus dissolution-desorption in relation to bioavailability and environmental pollution. p.241-259. In: Stelly, M. (Ed.), *Chemistry in the soil environment*. American Society of Agronomy Special publication No. 40. American Society of Agronomy and Soil Science Society of America, Madison, Wisconsin.
- Shuman, L.B.** 2002. Nutrient leaching and runoff from golf courses. *USGA Turfgrass and Environmental Research Online* 1(17): 1-9.
- Snow, J.T.** 1996. Loss of nitrogen and pesticides from turf via leaching and Runoff (Online). Available at: [www.usga.org/turf/articles/environment/pesticides/loss\\_nitrogen.html](http://www.usga.org/turf/articles/environment/pesticides/loss_nitrogen.html)
- Toner, P., Bowman, J., and Clabby, K.** 2000. Inland waters. p.101-123. In: *Ireland's Environment. A Millennium report*. Environmental Protection Agency, Ireland.
- USGA.** 2004. Golf and Water Quality (Online). Available at: [www.usga.org/turf/articles/environment/water/golf\\_water\\_quality.html](http://www.usga.org/turf/articles/environment/water/golf_water_quality.html)
- Watschke, T.L.** 1990. The environmental benefits of turfgrass and their impact on the greenhouse effect. *Golf Course Management*. February: 150-154.



# Summer Battle Gains PGA Headquarters

By John Stevenson

In March 2005 I was approached by the new Irish company - Carnoustie Holdings Ltd - about the Superintendent position at Golf de Fontenailles, which is situated about 40 minutes southeast of Paris. The course is 15 years old and consists of 27 holes. 18 of which make up the Championship course.

The course was taken over from Japanese company - Taiyo, who also had Golf de Clement Ader and Golf des Aisses, which were sold off around the same time. Fontenailles had massive inputs for the first few years, which even included tarmaced roadways made through the forest areas and was recognised as a top golf course in France. From around 2001 there started to be big financial difficulties and eventually the last two years saw no finance at all, resulting in a big decline in the condition of the golf course. At this time I was positioned at Golf de Joyenal on the west side of Paris.



As I made several visits early in the season, around April, before I had signed the contract, there started to be a worry about the irrigation system which needed major work doing in the pump station - to the value of around 25.000 euros. Due to the takeover process and the person responsible for the maintenance at the time, the greens began to decline rapidly each time I visited. Handwatering was being done with a galvanised tank with no pressure at all, at a rate that was impossible to keep up with the 27 holes. The temperatures were around 25°C and some greens were only getting watered every three or four days, which wasn't enough. At the start of May I signed the contract for the Superintendents position, as it was an absolutely fabulous site. Having a month's notice to work in my existing job, I had to settle for weekend visits. The next month was a horror, as each time I visited the greens appeared worse, due to no irrigation system and temperatures rising. By the end of May I was distraught. I was going to start a job in 10 days and there were 15 greens that showed burnt areas like you've never seen before. At this stage I was starting to have second thoughts as I thought that any kind of revival was impossible. I knew that 12 of my 27 greens were fine but I didn't know what I was going to do with the other 15. Each weekend in May the members appeared more and more angry and were more and more doubtful of any revival. There were two major blocks for me that made me think it would be impossible. Firstly, after the lack of Japanese funds there had been three staff kept on to maintain the course, which resulted in no mechanical verticutting and one aeration in three years that resulted in a thatch layer of around three inches - this made a block on the surface. The other problem was that there was no aeration equipment on site or verticutters to control the thatch. (PHOTO 1).

On June 7 I got a call from Fontenailles to inform me that they'd hired an irrigation



company to get the system up and running. I was satisfied and began to have a glimmer of hope but I knew the light at the end of the tunnel was a long way away and that this situation was the rise or fall of my career - as bad news travels fast. After exceptional experiences working at Oakland Hills for the 1996 US Open, and Valderamma for the 1997 Ryder Cup and World Championship, plus irreplaceable experiences at the Pinehurst resort, I started to think that even with the difficulties, pressure and levels demanded, I have never been faced with a situation as difficult as this.



June 13 and my first day at work, where do you start? The first thing I thought was there is a massive concern for the greens - that is a negative topic. I thought lets do something good and quick to get people talking positively while taking care of the negative. With the fairways starved I thought I'll put some ammonium sulfate at 15g m2 to give them a quick response. Not wanting to take the risk with the irrigation system until I had time to check it all, I waited for the first rain. The result was brilliant. I bought new flags and flagpoles and tidied up and pruned the trees at the front entrance and the hotel entrance, which gave a good first impression. The members started to talk a little more positively and I went to work with my major problem. (PHOTO 2).

My first concern was to check all the sprinklers on the greens that were looking really bad. Going through the first three or four greens was no problem, and then all of a sudden there was a big drop in pressure, until eventually a cut off. I ran down to the pump station to find that the pumps would no longer run on automatic, but manual. The pump station is a type PEME with a jockey pump that gives 30m3 an hour and the two main pumps which each give 60m each. With still no dejoiner installed I decided not to fiddle as the electrical wardrobe was like a time bomb and there were wires dangling everywhere. I decided to call the company back to fix the problem and continued my tests with the jockey pump on manual. The company came back and fixed the problem with another two wires added to the time bomb. After my testing of all the irrigation system there were 25 sprinklers either to be replaced or installed, as they were non-existent. The next step was to get the pump station in security. We had had a quote for 7,000 euros to be installed by a company. After





asking for prices I could purchase one for 3.000 euros so I decided we'd install it ourselves, which we did. I set the cycles for the evening watering as usual. I came back the next morning and the first green I saw was drier than the previous day - the temperature had been around 32°C but if watered, the green should have been OK. I went to the satellite to test it. There was nothing, I verified a second one to make sure it was not an isolated problem but there was nothing. I went to the pump station to find it had dejointed. You think to yourself, I've done the right thing by making it secure but it's backfired. I started to go through all the normal tests to find out what the problem was. All the pressures on the outside of the tank were fine. All the pumps on manual worked fine and when put to the off position would stop. Then testing the pump on automatic there was a main pump that would not shut off once started which would eventually cause the whole system to dejoint. An electrician was brought to find the problem. After his diagnosis a wire had moved position. The next month would become a nightmare as we were getting our cabling sabotaged by an outside party. There must have been six or seven situations in the pump station where wires had been pulled out of place or moved, or disconnected. With tiredness playing a big part - at first I thought it was the vibrations that were causing the wiring to dislodge but as time went on this became inevitably impossible. I decided to make plans of



Photo 5

every electrical wire as to where it was connected and also change the lock on the pump station. Everything at this stage settled down until a very hot weekend of around 35°C-37°C. In the morning my assistant called me to say the irrigation cycle had shut off about an hour into its cycle and also the well pump had stopped feeding the lake which had caused shutdown. He had looked in the electric box to find wires had been disconnected and he couldn't find the solution. I set off and prayed on the journey, please let it be something I can solve as tomorrow is Sunday, no one works in France and it's scorching. I went to the office to get my plan and the work I'd done with the plans saved my bacon. The well pump functioned so I let it run for a few hours and came back early morning to get some water on the greens and bought another lock for the well pump house.

Towards the end of July some of the greens that had stayed in decent condition started to get yellowing. I figured there was a shortage of food and after speaking to my assistant the greens were last fed in March with a relatively soluble material, which I figured was finished and the greens were now stressed. I was worried about fertilising with this heat but maybe they would suffer more if I didn't. Then there was the heavy thatch, I made the decision that when maximum temperatures went below 25°C, I would use a Scotts fertiliser with a high slow release at a low dose of 10gmn2. I applied it only to note two days later temperatures soared up to above 30°C and we had to water heavily for the dry areas which resulted in a pythium outbreak which was surely due to excessive watering and thatch. Not every choice or decision we make will work but always know the consequences and have the solution ready. I saw it very early and sprayed with fosetyl-al, which cleared it up.



Photo 6

Now was the time to purchase aeration equipment that was essential, as the greens had taken a knock back with all the electrical difficulties, this was a critical stage. I purchased the new Toro procore 648 aerateur, which I used on its closest spacing to alleviate as much thatch as possible as I had only tried one verticut as I thought the stress would be too much. When I arrived here they were mowing all the greens at 3.7mm that I moved up to 5mm from the first day to allow for better photosynthesis and recovery. The aeration went great and then I verticut only the major worn areas I thought may not recover. On some greens there were spotty areas that needed reseeding. These areas were raked with a leaf rake seeded with pencross and toppedressed. (PHOTO 3). These works all went really well. All I needed now was the irrigation to stay working. After the seed had been out for three days, I got a call from the hotel to say I had a visitor. I drove over and entered the hotel to find a gentleman dressed in a military style uniform who turned out to be from the water police, he had come to place his heavy restrictions on water use. Just as I felt I'd got my head above the surface of the water, someone's come and stood on it and pushed me under. At this stage I really thought I was not destined to get out of this situation. I could water from 8am-8pm and only the greens. Heavy fines are implemented if the rule was broken but I thought I needed four or five syringe cycles in the day to keep the seed moist. I decided to purchase some penmulch that really helped me retain the moisture during the day. The restrictions actually passed quite quickly and after a fortnight I managed to see big stands of pencross growing, at this stage I really felt the battle would be won. (PHOTO 4). I was granular fertilising the seeded areas once a week with predominantly slow release fertilisers but also a little soluble, the results were impressive and only two greens had to be put on temporary greens through all this.

Just after catching my breath we would run into more problems, which involved heavy damage to the course but this time it was by wild pigs. (PHOTO 5). Another detrimental problem was having over 100 Canadian geese that were leaving their deposits everywhere but the real concern for people was the problem of bird flu that scared people. To tackle the pig problem I took a five tonne excavator to make a path at the side of the neglected fence and started to push up 60cm of soil to the bottom so they couldn't push underneath, when the soil froze it made it like concrete which seemed to work as the pigs are only a seasonal problem. I also had to change to 500m, which had been abandoned for years and was in an impossible state to repair. An outside company carried out this work, the geese problem were very time consuming and we eventually stopped the problem with explosives.

Getting to where we are now we have managed to get a deal with the French PGA, which will become the home course of the PGA. Through hardwork from Carnoustie Holdings Ltd, Ireland and excellent work from my crew it all came together above our expectations. I am now recruiting staff to help out on a heavy workload and we are also in the process of buying all new equipment. We have a project of bunker renovation to do on the championship course, which will bring a lot of changes and more challenges; the bunker work is already underway. (PHOTO 6). There are also unforeseen problems like this one on the island green, which can hamper your current planning. (PHOTO 7). French Tour pro Jean-Françoise Remsey, will be involved on a consultancy basis on course upgrades and development which will be a great experience for myself and my crew.

If I got out of this summer the way I did, it's because I looked back on my previous experiences especially at the US Open where I lived with the Superintendent who is probably the person I respect most in the business (Steve Glossinger CGCS) many thanks to him, he was a good mentor. To conclude, if anyone is faced with a similar situation and you're self confident, go for it, things can only get better and I think it's easier to look good than take something on that is already good and make it better.



Photo 7



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