

Education

Greenkeeper Education and Development Fund



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After what seems like an age, the BIGGA/GCMA Safety Management System is, at last, finally installed on the BIGGA website and on the GCMA website. Members of either association can access the SMS through their respective web site members' area. You should have received a copy of the Getting Started guide in this magazine.



Remember that the SMS will not do all of the work for you but it will help you to introduce a health and safety system for your golf club.







The deadline has passed for entries to the 2007 BIGGA Golf Environment Competition. However, there is still just enough time to submit your entry if you have forgotten to put in the post.

Judging of entries will commence later this month when the judges from STRI will contact clubs to arrange visits.



The judging of this year's Student of the Year Competition begins on Monday, July 2 in Edinburgh. There are 32 entrants in this year's competition and judging will finish on Friday, July 6 when the judges will select eight finalists to progress to the National Final that will take place on September 17 at BIGGA House.

MANAGEMENT TRAINING

The Club Managers Association of Europe is running a series of Seminars in Scotland this summer. They have agreed that BIGGA members can attend at the same price as CMAE members.

The next seminar takes place at McDiarmid Park, Perth on Tuesday, August 28 from 11am to 5pm. Details as follows:

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GUEST SPEAKERS

Billy Dixon is a Managing Partner of MIND Associates and is a specialist in public relations, image consultancy and communication. With his passion for sport, Billy's presentation will be especially relevant. Mary Keightley is also a Managing Director of MIND Associates, specialising in human motivation, leadership skills and performance enhancement. Mary coaches senior executives and speaks regularly at industry conferences.

BIGGA Members £75 - Price includes lunch, coffee, tea and all handout material. Register by fax on 01334 460859 or email *cmae@ elmwood.ac.uk*

FREE TRAINING FOR UNDER 25S

It is not often that we can get anything for free but as from August this year, those under 25 and living in England can get free training up to and including NVQ Level 3. Details just released by the Learning and Skills Council are:

FREE TRAINING FOR UNDER 25S

Adults under the age of 25 who have missed out on education and training opportunities will be able to get free tuition to obtain a first, full level 3 qualification, equivalent to 2 A levels, from this August. The new entitlement for the key intermediate technician level skills employers say they need will provide routes back for those who left education early and want to return to improve their qualifications and job prospects.

The new entitlement will be available from August '07 through colleges of further education and other providers of high quality education and training who have satisfied the Learning and Skills Council quality assurance process. The entitlement is expected to benefit some 60,000 learners in 2007/08, enabling more young adults to achieve higher-level technical and professional qualifications.

Membership



VANESSA DEPRÉ UPDATES US ON MEMBERSHIP

COMPETITION:

of socks or a fleece just by answering the following question:

Which of the following is not a BIGGA Membership Benefit?

- 1. Legal Helpline
- 2. Reduced rates at selected beauticians
- 3. Personal Accident Insurance

Email your answer to vanessa@bigga.co.uk and quote your name and membership number and you could win one of the prizes.

BENEFITS REMINDER:

Legal Helpline:

Offering legal advice on employment matters, health and safety issues, consumer rights and any other legal matter for Greenkeeping Members and their families. Call on 0800 1777891.

Personal Accident Insurance:

This includes cover for time off work due to an accident at home, work or even on holiday as well as one off payment dependent on the type of injury. Call 01277 251000.

Car Rental:

National's Affinity Leisure Programme offers BIGGA Members exclusive rates on car and van hire in the UK an on international car hire in over 80 countries. Call us on 01347 833800 for more on this.

Discounted Workwear:

ARCO offers BIGGA Greenkeeper Members 20%* discount off a choice of goods. *Discount not available on selected products. Call 01482 611773 for more on this.

BIGGA Library:

The BIGGA Library is available to all members and stocks over 800 titles. You can borrow up to two titles from the library at any one time, for a period of six weeks. Call 01347 833800.

These are only a few of the benefits that BIGGA offers you. For a complete list go to www.bigga.org.uk

BIGGA WELCOMES

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Joseph	Dormer	Sussex			
Morne	Kaasjager	Surrey			
Russell	Kirk	East Anglia			
Adam	Millward	Essex			
Daniel	Morgan	Kent			
Michael	Nelson	Kent			
Steven	Pearce	London			
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Scott	Waddell	London			
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Ricky	Heine Cgcs	USA			
Sean	Hoolehan Cgcs	USA			
Mark	Kuhns Cgcs	USA			
ASSOCIATE					
Simon	Squires	Northern			



NEW RECRUIT

Brad Anderson's temporary move from Receptionist to Membership Services Assistant at BIGGA HQ, is now permanent. Congratulations





Name: Ian Stephens Club: Carholme GC, Lincoln Position: Head Greenkeeper Hobby: National Trust Volunteer

How long have you worked for the National Trust?

"I started off at 19 and am now double that – so in answer to your question probably too long!"

In exactly what capacity do you work for them?

"I am a volunteer and a member of the South Downs National Trust Volunteers (SDNTV) that involves carrying out conservation work at the weekends. At the moment I am a 'sleeping' member as it is a bit far to travel from North Notts down to Sunny Sussex. In my years with the group I have been a work party, social and fundraiser organiser, as well as Chairman."

How and when did you get introduced to this hobby?

"I found out about volunteering in my Dad's Daily Telegraph. There was an article on weeklong conservation projects. My best mate and I decided to go to a property in Northumberland working on Hadrian's Wall, doing a bit of archaeology. I definitely got the bug for the work from that!"

What is it about the work that appeals to you?

"I have always loved the outdoors and having been brought up on wildlife, walking and the countryside it was a perfect way to keep busy over the weekends doing stuff that I enjoy, doing my bit for the environment and meeting friends from many walks of life.

"The biggest reward and appeal by far for me is meeting my wife Jenny when we were both starting out in the SDNTV. We've now been married for 15 years. Our friends in the group even changed our 'work in progress' sign to 'wedding in progress' and posted it outside the church.

"Our biggest honour came in 1995 when I was Chairman and we were invited to attend a Centenary event for the NT. We were introduced to Princess Alexandra as representatives of conservation volunteering.

"It's a great way of making friends. I would recommend this to anyone wanting to get out and about and active in the countryside. The skills I've learnt from this work really help in the work environment - fencing, hedge-laying and coppicing."

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Greenkeeper International brings you 'In the Shed', a puzzle page to keep you entertained when the weather forces you in or for when times are slow.

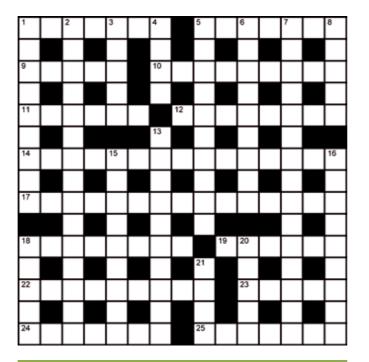
CROSSWORD

ACROSS

- 1 Of an insurance claim, paid without assigning blame to any party (2-5)
- 5 Title bestowed upon kings of ancient Egypt (7)
- 9 French city famed for its rayon and silk manufacture (5)
- 10 Factory which uses cheap, non-union labour (5-4)
- Completely, as a unit (2,4) 11
- 12 Insect, the female of which feeds on animal and human blood
- 14 Leader of a group - name taken from a childrens' game (4,2,3,6)
- 17 Original name for a petrol bomb (7,8)
- 18 "On one's --", in a difficult or destitute situation (4-4)
- 19 Apothecary weight measure of an ounce (6)
- 22 Having existed at the earliest stages of existence (9)
- 23 Cricket ground located in St John's Wood in London (5)
- 24 Wander (especially from a topic of conversation) (7)
- **25** The upper jawbone (7)

DOWN

- 1 Russian gymnast who won her first Olympic gold in 1976 (6,3)
- 2 Deductions from mutual fund payments to cover sales commission etc. (5-3,7)
- 3 An unexpected victory (5)
- Specific item of work (4)
- 5 Any remarkable occurrence (10)
- 6 Theoretical particle, opposed to one measured in "flavours" (9)
- 7 Dickens novel featuring Ebenezer Scrooge (1,9,5)
- 8 Shortened name of animal whose name means "river horse" (5)
- 13 Snooker player awarded the OBE in 2001 (5,5)
- 15 Trying to gain profit, usually dishonestly (2,3,4)
- Dangerous toxic condition experienced during or immediately after pregnancy (9)
- 18 Term for any creature having two feet (5)
- 20 Controversial Frankie Goes To Hollywood single first released in 1983 (5)
- 21 Type of fruit; word used informally to mean "exactly" (4)



IN THE SHED ANSWERS ON PAGE 59

QUICK 'NINE HOLE' QUIZ

- 1 Slider, sacrifice fly and R.B.I are all terms used in which sport?
- In which sport do players take long and short corners?
- Which Olympic sport needs a planting box?
- 4 Which non-mechanical sport achieves the highest speeds?
- **5** Which sport is played over four periods of 15 minutes where only two of the seven players can score?
- The volume of a golf ball is approximately equal to how many cubic centimetres - 8, 22 or 40?
- 7 What is the only Olympic sport that has a finish line that no competitor will ever cross?
- 8 How many penalty strokes are added for a lost ball in golf?
- 9 What was the name of the 1980 comedy film about golf which spawned a sequel in 1988?

MONSTER SUDOKU

Fill in the grid so that every row, every column and every 3x3 box contains the numbers 1 to 9 and the letters A,B and C.

Г		5			7			9
		9	3				6	
	6			9		4		5
			4	7			1	
		6				8		
	3			2	5			
1		3		4			2	
	8				2	9		
9			7			1		

SQUIGGLY SUDOKU

Fill in the grid so that every row, every column and every 12 box shape contains the numbers 1 to 9.

			2	9			
3		6	5	7	4		8
1							3
	4					1	
		9			2		
	6					7	
9		1	8	6	5		7





WHAT'S YOUR NUMBER?



Name: Rob Donald
Company: Whitehorse Contractors
Position: Managing Director

How long have you been in the industry? "15 years."

How did you get into it?

"As a student I worked for M J Abbott between semesters, Mike Abbott became a mentor to the extent that he sponsored me through my final year at uni - I became a competent machine operative, this has served me well throughout my career as it has helped me understand what is achievable and more to the point, what isn't."

What others jobs have you done?

"I worked for M J Abbott until 1996 until I was recruited by White Horse Contractors. During my time with Abbott's I progressed from a Graduate Trainee to Site Manager and ultimately a Contract Manager."

What do you like about your current job?

"I thrive on the daily challenges of running our company. I enjoy the camaraderie of colleagues and staff. I get a buzz out of closing deals, developing business relationships. I have a real interest in the construction, management and maintenance of sportsturf facilities."

What changes have you seen during your time in the industry?

"Construction, Design and Management and staff competence

certification have influenced the greatest change in both site and contract management attitude over the last 15 years. I look back at practices that were accepted as the norm and consider that, despite the bureaucracy associated with CDM, the increased awareness of health and safety issues has undoubtedly made the industry a much safer environment."

What do you like to do in your spare time?

"I've a house full of sprogs and dogs and am kept busy both vocationally and socially. My true passion is fly fishing for salmon. Standing waist deep in a cold, Scottish river, casting a fly for the most enigmatic of fish species - an antidote to the pressures of business life."

Where do you see yourself in 10 years time?

"Waist deep in a cold, fast flowing Scottish river – would be nice!"

Who do you consider to be your best friends in the industry?

"This particular industry is, by its very nature, 'friendly'. Over my 15 years I have made close friendships with architects, specifiers, suppliers, subcontractors and believe it or not, competitors!"

What do you consider to be your lucky number?

"I have 3 happy, healthy children – I consider that to be lucky".

Pick a number

"11."

Rob has picked Clive Nottingham, Lloyds of Letchworth

GOLF COURSE WETLANDS HEIR IMPORTANCE AND MANAGEMENT

Golf courses are important green spaces to any area, and in many urban sites can be the only green spaces available. They can provide a useful and compatible habitat for humans and nature together. Wetlands are among the most productive and dynamic ecosystems on the earth. They are host to numerous wildlife and plant species. While water ecosystems are of special importance for biological diversity.

Every species has specific habitat preferences and golf course managers and greenkeepers can contribute greatly to conservation by providing habitats for local species. Water quality and indeed overall wetland quality can have an effect on the native diversity.

The age of the golf course can be important in determining its value for wildlife, with conservation value of older sites often seen as being greater. But there exists the potential to enhance local biodiversity significantly if appropriate habitats are created and restored on newer courses, which can be more productive than older unmanaged wetlands. Installing ponds and maintaining wetland areas (no matter how small) can add greatly to the diversity of flora and fauna on the course.

Wetlands are key habitats for the conservation of invertebrate animals. For example, many insects depend on water for their larval stages. Invertebrates have an important role in decomposition and recycling of nutrients in wetlands. Created wetlands in the form of ponds and other water hazards can provide habitat for a diverse array of wetlanddependent species, particularly birds. Wetlands provide large amounts of food that attract high volumes of wildlife with many species using them as an important part of their life cycle. They also act as natural sponges that trap and slowly release surface water, rain-water, flood water and ground water. Loss or degradation of wetlands can lead to an increase in flooding, extinction of species and the decline in the water quality of the area. So it is very important to maintain and restore wetland areas on the golf course.

ESTABLISHING WETLANDS

Before trying to enhance wildlife to any degree on any area of the course, it is important to understand the basic needs of wildlife so as to incorporate them into the site. The basic components of any habitat include: Space, Food, Cover, Water

Wetlands can provide all of these components and in my eyes provide the 'complete package!'

Space is provided in terms of the area of the wetland body as well as surrounding areas. Wildlife corridors (connecting fragments of habitats) help to increase species number and diversity. The greater the variety of plant species located in or around a waterbody, the greater the increase in the niches available for colonisation by various wildlife species. Wetlands contain detritus, which is dead vegetation that forms particles of organic matter, supporting a multitude of insects, which in turn support many other wildlife species.

Water birds use wetlands for shelter, protection, resting and nesting sites and feeding. Water availability is the most important factor for wildlife in my opinion, and so maintaining or restoring water features such as lakes, ponds, streams and wetlands should be top priority for greenkeepers looking to increase the nature potential of the course. Many wildlife species depend on wetland areas for survival and there

are also many species that visit wetland areas less frequently but just as importantly, for, say, breeding purposes.

Robust golf course construction can involve the loss of habitats such as wetlands. But with careful planning they can be incorporated into the landscape of courses, adding to their diversity and uniqueness. Designing and restoring golf courses in natural ways such as incorporating wetland areas may determine the survival of wildlife populations and the ecosystem on which they depend.

STRUCTURE

In nearly all ponds and wetlands, certain plants grow in more or less clearly defined 'zones' and particular communities of animals are associated with them. Closest to the shore are the emergent water plants, which grow with their roots in water and stems and leaves in the air. For example, reeds, bulrushes and marsh grasses. There are plants whose stems are below the waterline; the simpler plants including desmids and algae. Beyond this zone, the floating leaved plants reside – for example, the near-shore lily pads and duckweeds (Lemnaceae).

In deeper water, pondweeds (Potamogetan) and freshwater eel-grass (Vallisneria americana) stem upward from the bottom along with submerged liverworts (Bryophytes) and bladderworts (Utricularia). Emergent plants do not usually colonise water deeper than one metre while the totally submerged plants can be found at depths of many metres. Submerged plant forms include species of pondweed (Potamogeton) and water milfoil (Myriophyllum). Examples of emergent plants include common club-rush (Spirus lacustris), mares-tail (Hippuris vulgaris) and bur-reed (Sparganium species).

Slow moving or still waters encourage copious growth of submerged and emergent plants. Many species of waterbirds use golf course ponds. Shoreline vegetation is important for many foraging and nesting birds. Greenkeepers can add a multitude of plants to a waterbody. It is highly recommended that plants natural to the area, sourced locally, be used in building or restoring waterbodies. Over time the natural plants of the area will colonise the site also.







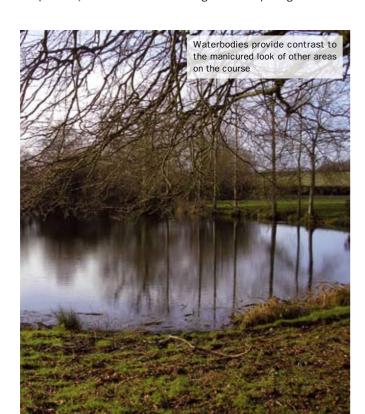
'Macrophytes' refers to the large photosynthetic organisms typically rooted in and permanently submerged in water. Aquatic macrophytes include Charophycaeae (stoneworts), Bryophyta (the mosses), Pteridophyta (the ferns) and Spermatophyta (seed plants). Macrophytes have importance, especially in shallow waterbodies. They are important sources of energy and play a significant role in the cycling of nutrients and organic matter. They also provide food for herbivores and contribute to detrital food chains. Additionally they act as substrata for algae and invertebrates. Shoreline and emergent plants add cover, food and aesthetics to the golf course and plants also oxygenate waters to decrease algal blooms.

'Macro invertebrates' refers to the larger and readily visible animals without a backbone. Frogs can be a common sight in wetland areas, which are an important part of their habitat, particularly when young, while adults can also live away from the water (in moist woodlands and grassy areas), returning to the pond to breed.

MANAGEMENT

A golf course can produce low environmental impact if managed well. However, good management practice is essential. Sparse vegetation and lack of buffer zones can increase chemical run-off. Improper fertilisation and poorly maintained irrigation systems add to nutrient losses. Informed management of the golf course is important, not only to the look and finance of the course, but also to the survival of healthy waterbodies.

Raised walkways and cart paths over wetlands allow traffic to move from tee to landing area without disrupting the habitat for wetlands located in areas of in-play. Naturalised areas need to be located where possible out of the regular lines of play. No-spray zones (buffer zones) around a pond are important so as to keep nutrient leaching to a minimum. Aquatic plants in wetlands oxygenate water. If waterbodies become excessively nutrient rich it leads to excessive plant growth and consequently eutrophication, causing the growth of algae, which is not desirable. The system can be balanced by allowing broad floating aquatic plants such as lilies to stop the penetration of sunlight (and therefore temperature) to the bottom so reducing excessive plant growth.



Emergent vegetation. Juncus provides a beautiful aesthetic enhancement. Cat tail utilises many nutrients, which might otherwise be available for algal growth. This vegetation in streams or along shore-lines boosts supplies of O2 for aquatic flora and fauna by reducing the BOD. Maintenance problems associated with wet areas along edges of ponds and so on are ideal for modifications to benefit waterbirds, while at the same time reducing management costs.

WATERBODIES

Ponds lack a strong, continual, unidirectional current and are usually small with specialised biota. Shallow ponds are inhabited right down to the bottom, as the main population of green plants and animals require light. Water is transparent and allows sunshine to penetrate. The movement of water in streams leads to different colonisation compared to stagnant waters of other waterbodies. The addition of a mini waterfall or oxygenation system to increase water movement in ponds leads to an increase in the water oxygen content and so increases diversity – for example, mayflies are found only in oxygen-rich waterbodies.

Fens are wetland systems with permanent high water levels at or just below the surface. They are fed by rain-water and so are acidic in nature. Fens are important for biodiversity. Over the years there has been a loss in fen habitats. If fens occur on a golf course, care should be taken to incorporate them into the site.

'Riparian zones' refers to the shorelines of lakes and ponds, stream corridors and wetlands. The maintenance of riparian vegetation along streams and rivers is critically important to prevent soil erosion, maintain high water quality and provide habitat for riparian specialists.

Wetlands are a crucial part of our ecosystem and an asset to any golf course. Architects, course managers, greenkeepers and golfers all have a vital role in the preservation and restoration of these resources. Water should be carefully and sensitively maintained for wildlife, as it is an essential component of habitats. Not only is it a refuge for countless species, but also adds great aesthetic appeal to the course.

THE AUTHOR

Mary Purcell is currently carrying out research for a doctoral degree in Environmental Science at University College Dublin, Ireland. For more information, contact Mary at mary.purcell@ucd.ie

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ND THE GA

Scott MacCallum looks at the unsung hero of many golf courses - the bridge

If a course architect, constructor or greenkeeper is faced with a span to traverse on a golf course whether it be a lake, a river or stream, busy road or a gully, what are their options?

Well, you could go round the obstacle. But that could be time consuming for golfers and/or greenkeepers and, let's face it, a little bit boring. A tunnel is sometimes an option, ideal for some situations as they are extremely discrete, but can be expensive to introduce. A ferry, as one used on the 18th hole at Brocket Hall, is another consideration if it is quite wide expanse of water, although this can be expensive and often labour intensive to run.

What else is there? Well let's just think inside the box for a change. What's the most common and most effective method to get from A to B across the sort of terrain we've been talking about? A bridge, of course!

A bridge can make a huge difference to a golf course. Imagine what the 18th on the Old Course would look like, or indeed, function like, without the famous humpbacked stone bridge upon which, in recent times, both Arnold Palmer and Jack Nicklaus have stood and waved goodbye to the adoring galleries. If the bridge hadn't been there we wouldn't have been left with those unforgettable images, while no bridge would involve a somewhat less dramatic walk around the burn.

Likewise the 12th hole at Augusta National. You're leading the Masters on the final day but have had to play three from the wrong side of the creek having misjudged your tee shot and now have the time it takes to walk over the beautifully manicured bridge to collect your thoughts. They are probably the most famous bridges in golf and probably among the smallest.

At many clubs bridges, while often taken for granted, play a significant role in everyone's regular round of golf.

Georgia-based, Creative Bridge Designs, has worked for some of the best known golf course architects in the US, including Robert Trent Jones and the aforementioned Palmer and Nicklaus providing an array of bridges in different styles.

"One of the main considerations before deciding on a bridge is budget," explained General Manager, Richard Eunice.

"Once that is determined we can examine the options. We can supply pre-fabricated bridges, in whole or in sections but for club's with larger budgets we will look at a range of options and different styles," he explained, adding that in the US many bridges are installed to keep golfers out of protected wetland areas.

"The things we like to look at are from artistic perspectives we want to make a bridge look as natural as possible and we don't like a bridge over a river to go from bank to bank we want it above the bank, ideally about 10 feet on each side."

With golf in the USA suffering from a lack of money similar to the situation in the UK Creative Golf Designs has found a way of providing golf clubs with a more cost effective way of what they want.

"To save a dollar her and a dollar there what we have been doing lately is steel beams but decorating them with timber so that they look like a regular wooden bridge."

Length of span has a part to play in materials as well.





"If you want to reach 200 feet in a single span for example you are definitely looking at a steel bridge; from 10 to 20 feet you are looking at timber and for 30 feet a lot of people like to use a glue laminated beam timber," explained Richard, whose company, launched by Richard's brother Brian Nuttall, in 2000, is hoping to offer its services to UK customers in the near future.

One of the other main elements to consider is weight as the larger the bridge the more that can be done with it – buggies, greenkeeping machinery etc.

"From our point of view a two ton bridge is a pedestrian bridge, a five ton bridge can take buggies and some lighter maintenance equipment while 10 ton bridges are for large equipment and 20 ton for large vehicles," explained Richard.

Health and Safety is another important issue and hand or bump rails, should always be considered in most circumstances.

Sometimes bridges can give a new lease of life to a golf club. At Aldwark Manor, home of BIGGA HOUSE a bridge over the River Ure enable the course to be extended from a short nine holer to a full length 18-hole course with the additional holes being laid out on the land on the other side of the river. The 70-yard long single span steel bridge may not be a thing of beauty but it can take buggies and is of vital importance to Aldwark Manor Hotel and its owners Q Hotels.

So next time you are traversing one of the bridges at your club just have a think about how life would differ if it didn't exist.

Thanks to Richard Eunice, of Creative Bridge Designs, for his assistance with this article. See: www.creativebridgedesigns.com



