The GTC has the responsibility to ensure the employers and greenkeepers it represents are served by its network of training providers by way of a variety of ways e.g., part or full time at a college, on the job or online.

The choice of delivery is very much up to the student and if employed, the employer.

Same employers still consider it best that the student attends college even when they have registered them on a work-based training qualification.

I still feel there is a great deal of misunderstanding of the modern vocational qualifications and without wanting to bore regular readers I will briefly explain the structure and content of a vocational qualification.

Vocational qualifications include skills AND the related knowledge which are assessed using nationally agreed standards NOT individuals standards!

The VQ’s are nationally accredited National Vocational Qualifications (NVQ) in England, Wales & Northern Ireland and Scottish Vocational Qualifications in Scotland – NOTE: the content of the N/SQV’s are exactly the same at all Levels.

Groups of skills are agreed and become Units which in turn are grouped into Levels of qualifications e.g., N/SQV Level 2, 3 or 4.

In Sportsturf there are specific N/SQV Levels 2 & 3 with a Sports Turf Manager qualification at Level 4.

The GTC has a major input into the content of the qualification ensuring the employers either recruiting using the appropriate level of qualification or reviewing staff training requirements can use the VQ to identify particular staff’s skill and/or knowledge requirements.

The crucial element of any VQ is the quality of assessment and I don’t think I need to repeat the fact that this is where much of my time is spent ensuring that Centres are delivering the various programmes to at the national standards laid down by the Awarding Bodies NPTC & SQA.

Back to the main point of this article, our providers meeting, the importance of what our providers are teaching turf students has been reviewed.

The GTC, while promoting vocational training, also promotes the college based Higher education qualifications such as the Higher National Certificate/Diploma, Foundation Degree, B.Sc and M.Sc.

No matter which course or qualification a greenkeeping student is registered on the GTC is looking to ensure they get a balanced education where the ideals are balanced with the reality of employer/customer requirements. We need to ensure our providers do teach and discuss all aspects of turf maintenance but at all times be in touch with the current trends in the sector hence the recent GTC workshop.

The workshop proved to be a very worthwhile event and the GTC will continue to work on raising the maintenance issues facing the sport with all parties.

Clearly the Home Unions and BIGGA are committed to the awareness campaign through conferences and seminars but we accept that each golf club has to take the responsibilities for the standards it requires.

The GTC is committed to ensure its provider network teaches best practice in aspects of course maintenance providing qualified turf professionals for the employers.

The best practice information produced for use by the providers is also available within the hard copies of the Level 2 & 3 and will be sent out with future copies of the CD Rom format.

The learning materials are available from the GTC direct – Tel: 01347 838640 Email: golf@the-gtc.co.uk or visit the GTC website: www.the-gtc.co.uk

GTC is supported by:

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.

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.

Juggling 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.

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

MIND WHAT YOU SAY AND HOW YOU SAY IT

According to a recent survey of professionals at national and international level, our experts reveal the secrets of “talking the walk and walking the talk” with proactive and entertaining presentations that reveal how to project confidently an image of self confidence, gain trust, establish rapport and read the signals, mannerisms and gestures of others.

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 Nightley 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 maced@ elthwood.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 at all Levels 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 levy in 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.

The Club Managers Association of Europe is running a series of Seminars in Scotland this place on September 17 at BIGGA House. Details as follows:

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**Vanessa Depré Updates Us on Membership Matters**

**Competition:**
Win one of three mobile phones, a BIGGA polo shirt, a waterproof pair 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.

We have three Nokia 6233 mobile phones up for grabs with Bluetooth, 2 mega pixel camera, large high quality screen with stereo speakers and a memory card for additional storage. There is also a BIGGA polo shirt, a pair of waterproof socks and a fleece to be won.

**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 off pay 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 and on international car hire in over 80 countries. Call us on 03447 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 welcomes**

**Scottish Region**
Name: Graham North
Position: Head Greenkeeper
Club: Carholme GC, Lincoln
Email: graham@bigga.org.uk

**Midlands Region**
Name: David East
Position: Head Greenkeeper
Club: Wollaston GC, Nottingham
Email: david@bigga.org.uk

**North**
Name: Nick North
Position: Head Greenkeeper
Club: Shrewsbury GC, Shrewsbury
Email: nick@bigga.org.uk

**South East**
Name: David South
Position: Head Greenkeeper
Club: Maidstone GC, Maidstone
Email: david@bigga.org.uk

**Mid Anglia**
Name: Michael Mid
Position: Head Greenkeeper
Club: Lincoln GC, Lincoln
Email: michael@bigga.org.uk

**North West**
Name: Andrew West
Position: Head Greenkeeper
Club: Manchester GC, Manchester
Email: andrew@bigga.org.uk

**Premier East**
Name: Steven Premier East
Position: Head Greenkeeper
Club: London GC, London
Email: steven@bigga.org.uk

**North East**
Name: Martin North East
Position: Head Greenkeeper
Club: Newcastle GC, Newcastle
Email: martin@bigga.org.uk

**West & Wales**
Name: Scott West & Wales
Position: Head Greenkeeper
Club: Swansea GC, Swansea
Email: scott@bigga.org.uk

**International**
Name: David International
Position: Head Greenkeeper
Club: USA
Email: david@bigga.org.uk

**New Recruit**
Brad Anderson’s temporary move from Receptionist to Membership Services Assistant at BIGGA HQ, is now permanent. Congratulations Brad!

**Hobbies**
Here’s something you didn’t know about me...

**The Course Maintenance Range**
Meticulously engineered to exceed your demanding daily needs, the Kubota Course Maintenance Range offers an exceptional line up of machines for first class results regardless of the task in hand.

Combining outstanding power, fuel efficiency, exceptional versatility and unrivalled reliability, the Course Maintenance Range delivers unparalleled performance to help you effortlessly maintain the perfect golfing environment.

Visit your local dealership to arrange a test drive.

www.kubota.co.uk

**NEW RECRUIT**
Brad Anderson’s temporary move from Receptionist to Membership Services Assistant at BIGGA HQ, is now permanent. Congratulations Brad!
MEMBERSHIP

VANESSA DEPRÉ UPDATES US ON MEMBERSHIP MATTERS

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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 WELCOMES

SCOTTISH REGION
Name: Taner
Club: Elgin
Pos.: Head Greenkeeper
Name: Michael
Club: Kinross
Pos.: Head Greenkeeper
Name: Andrew
Club: Brechin
Pos.: Head Greenkeeper

NORTHERN REGION
Name: Neil
Club: Elgin
Pos.: Head Greenkeeper
Name: David
Club: Brechin
Pos.: Head Greenkeeper
Name: Mark
Club: Kinross
Pos.: Head Greenkeeper
Name: Christopher
Club: Brechin
Pos.: Head Greenkeeper
Name: John
Club: Elgin
Pos.: Head Greenkeeper

MIDLAND REGION
Name: Malcolm
Club: Grantham
Pos.: Head Greenkeeper
Name: Mark
Club: Wellingborough
Pos.: Head Greenkeeper
Name: Richard
Club: Loughborough
Pos.: Head Greenkeeper
Name: Matthew
Club: Loughborough
Pos.: Head Greenkeeper
Name: Russell
Club: Roade
Pos.: Head Greenkeeper
Name: Steve
Club: Roade
Pos.: Head Greenkeeper

MIDLAND EAST
Name: Joseph
Club: Chester
Pos.: Head Greenkeeper
Name: Mike
Club: Bury St Edmunds
Pos.: Head Greenkeeper
Name: Nick
Club: Bury St Edmunds
Pos.: Head Greenkeeper
Name: Steven
Club: Peterborough
Pos.: Head Greenkeeper
Name: Andrew
Club: Peterborough
Pos.: Head Greenkeeper
Name: Steve
Club: Peterborough
Pos.: Head Greenkeeper

5TH WEST & WALES
Name: Matthew
Club: Cheltenham
Pos.: Head Greenkeeper
Name: Christopher
Club: Hereford
Pos.: Head Greenkeeper
Name: Craig
Club: Hereford
Pos.: Head Greenkeeper
Name: Philip
Club: Hereford
Pos.: Head Greenkeeper
Name: Robert
Club: Hereford
Pos.: Head Greenkeeper

INTERNATIONAL
Name: David
Club: Portmore Golf Club
Pos.: Head Greenkeeper
Name: Steve
Club: Portmore Golf Club
Pos.: Head Greenkeeper
Name: Stuart
Club: Portmore Golf Club
Pos.: Head Greenkeeper

NEW RECRUIT
Brad Anderson, Assistant at BIGGA HQ, is now permanent. Congratulations Brad!
**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)
11. Completely, as a unit (2,4)
12. Insect, the female of which feeds on animal and human blood (8)
14. Leader of a group - name taken from a children’s 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)
4. 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)
10. The volume of a golf ball is approximately equal to how many cubic centimetres? - R. 22 or 40?
11. What is the only Olympic sport that has a finish line that no competitor will ever cross?
13. Snooker player awarded the OBE in 2001 (5,5)
14. What others jobs have you done?
15. Monster Sudoku
16. Dangerous toxic condition experienced during or immediately after pregnancy (9)
18. Term for any creature having two feet (5)
22. Type of fruit; word used informally to mean “exactly” (4)
23. What others jobs have you done?
24. In which sport do players take long and short corners?
25. What do you like to do in your spare time?

**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.

**QUICK ‘NINE HOLE’ QUIZ**
1. Slider, sacrifice fly and R.B.I are all terms used in which sport?
2. In which sport do players take long and short corners?
3. 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?
6. The volume of a golf ball is approximately equal to how many cubic centimetres? - R. 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?

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

**IN THE SHED ANSWERS ON PAGE 59**
CROSSWORD
ACROSS
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2 Title bestowed upon pharaohs of ancient Egypt (7)
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4 Factory which uses cheap, non-union labour (5–4)
5 Completely, as a unit (2,4)
6 Insect, the female of which feeds on animal and human blood (8)
7 Leader of a group - name taken from a children’s game (4,2,3,6)
8 Original name for a petrol bomb (7,8)
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11 Having existed at the earliest stages of existence (9)
12 A puzzle page to keep you entertained when the weather forces you in or for when times are slow.

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

WHAT’S YOUR NUMBER?
Name: Rob Donald
Company: Whitehorse Contractors
Position: Managing Director
How long have you been in the Industry? “15 years.”
What 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 other 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 sporting 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 courses are important green spaces in many areas, and in many urban sites can be the only green spaces available. They provide a useful and complete 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 invertebrates animals. For example, many insects depend on water for 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 wetland-dependent 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, rainwater, floodwater 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 wetland, the greater the increase in the richness 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 smaller 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 (Potamogeton) and freshwater eel-grass (Valisneria americana) stem upward from the bottom along with submerged flowers (Vallisneria) 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. Submerged 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.

Emergent vegetation. Juncus provides a beautiful aesthetic enhancement. Cut tall utilises many nutrients, which might otherwise be available for algal growth. Many irrigation systems or along shorelines blows supplies of G2 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 be made 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 rainwater 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

References

Golf Course Wetlands — Their Importance and Management

By Mary Purcell

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

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 invertebrates 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 bodies can provide habitat for a diverse array of wetland dependent 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 richness 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, nesting 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 golf course managers and 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 simple plants including sedums and algae. Beyond this zone, the floating leaves plants reside – for example, the near-shore lily pads and duckweeds (Lemnaceae).

In deeper water, pondweeds (Potamogeton) and freshwater eelgrass (Nelumbo americanum) stem upward from the bottom along with submerged food (Bryophytes) and in the littoral zone (Zosteraceae). 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 includes 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. Brackish 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 waterbirds.

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.

MACROINVERTEBRATES

Macrophytes refers to the large photosynthetic organisms typically rooted in and permanently submerged in water. Aquatic macrophytes include Characeae (stoneworts), Bryophyta (the mosses), Phanerogamae (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 detritus 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. Spare vegetation and lack of buffer zones can increase chemical runoff, 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 waterbirds.

WATERBODIES

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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, 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 prefabricated 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 here 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.
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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.

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 nine hole 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 Earice, of Creative Bridge Designs, for his assistance with this article. See: www.creativebridge.co.uk

Scott MacCallum chats with John Philp, about preparations for this year’s Open and looks back at the most controversial Championship of recent times

Let’s rewind to the end of April and a function room within the excellent Carnoustie Hotel, which overlooks the 18th green of this year’s Open venue. The annual R&A press conference has just finished and one man is surrounded by the nation’s golf writers, with a battery of dictaphones and tape recorders stuck inches from his nose.

Carnoustie Links Superintendent, John Philp, is the man at the centre of all the attention. Eight years ago he was identified as being responsible for the famous links being renamed “Carnasty”, when many players hit out at the playability of the course. John was infamously described as “an out of control greenkeeper” who, among other devilish acts, had fertilised the rough in a warped attempt to make the players look foolish.

Three months ahead of this year’s Championship the press were taking their chance to quiz the man himself.

John coped with all the attention admirably, answering the questions as fully as he could and certainly giving as good as he got in a relaxed, honest, and upfront manner.

What those golf writers missed out on, however, was the opportunity to sit down with John at length and listen to his philosophies on golf course management and on his beloved Carnoustie Links.

For example, had they heard him talk about the work he and his staff have done to reward a player for finding the fairway, or ensuring consistency of bounce when the ball lands, they would have discovered a man as knowledgeable as he is passionate on the subject of fine turf and golf.

They would also have learned more about the reasons why so many of the world’s best struggled in ’99. As fully as he could and certainly giving as good as he got, in a relaxed, honest, and upfront manner.

Sitting in his office, close to the 10th green on the Championship course and 5th green of the excellent Burnside course, John first of all paid tribute to his team and outlined some of the work they have been doing since the Open’s last visit.

“I’ve got a wonderful team and, although they are split over our three courses, they combined over the winter to re-do over 90 bunkers on the Championship course. We have 26 greens staff in total, as well as four in the workshop, some of whom were here in ’99, but also a lot of lads working on an Open for the first time. My staff produce the highest standards of workmanship and I’m very proud of their achievements.

“I am very fortunate to have very talented people in key positions. Sandy Reid is the skillful and committed head man on the championship course and Eric Watson with his wealth of experience leads the workshop team. I have worked with my Deputy, Paul O’Connor since 1990. He has an impeccable knowledge of links turf management and has been instrumental in the development at Carnoustie Links over the years.”

The team has spent a lot of time trying to get a balance on the fairways between low areas, which obviously can be a little lush and higher parts so that they will perform similarly.

“The ball is not going to sit on a crown, it’s going to roll into the hollows so that they will perform similarly.”

For a good number of years the team has been verticutting and hollow airmowing to get as much sand into the low areas to give them the same playability quality as those higher areas.