



The 185-yard 15th. The clubhouse is being built to the left of the green

Something special

How does an architect go about creating a course, especially in an environmentally sensitive area? Chris Boiling talked to leading golf course designer Donald Steel about the Carnegie course on Peter de Savary's Skibo Castle estate, near Dornoch, Scotland.

"Heaven on earth," was how Andrew Carnegie described Skibo, his Highland castle which is now being turned into a golf and sporting club by Peter de Savary. "Heaven", "Mecca", "paradise" are over-used terms in golf magazines, but the Carnegie course, which is due to open in July, is certainly special.

It's the first links course built in Britain in the last 40 years; ➤ 33

In our April issue we reported how the farm and parkland surrounding Ramside Hall Hotel near Durham was being turned into a golf complex with course manager Roger Shaw coordinating the project. Because a greenkeeper was playing such a pivotal role and because it sounded such an exciting project, we've decided to follow it all the way through with regular updates from now until its planned opening in spring '96.

The new 27-hole golf course being built at Ramside Hall Hotel is being built by "the project management method". This is a fancy way of saying that the developer - Michael Adamson in this case - pays for each aspect of the construction work directly instead of paying through the main contractor.

But the key to using the project management method successfully is picking the right managers.

Mr Adamson and course manager Roger Shaw, who has been in charge of this project from day one, have gone for Ian Martin and Bob Hornegold, who have both been working in the industry for more than 20 years.

Work started at Ramside Hall in early March and, as we went to press, Ian Martin told us they had constructed 17 greens, 16 tee

complexes, seven lakes (ranging in size from 500 to almost 8000m sq), and 55 bunkers (greenside and fairway).

To have got these features 'constructed' basically means they are shaped up and ready for a herringbone drainage system to be installed prior to placement of drainage carpet, blinding layer and rootzone.

Once the green has been approved by the architect, Jonathan Gaunt, the drainage carpet can be spread (between 150mm and 200mm depth, 19-14mm whinstone aggregate supplied by Hargreaves) and blinded off with grit (50-75mm depth, 3-6mm whinstone aggregate, again supplied by Hargreaves). Tees will not be having a drainage carpet but will still have a herringbone drainage system and 150mm depth of rootzone.

The drainage of greens and tees is carried out by mini-trencher and linked into the fairway drainage system on the approach. MJ Abbott are the con-

Ramside Hall: an update

tractors for this major scheme which involves the installation of over 50,000m of pipework, and they have been on site since mid-March. Nine fairways have now been drained (including bunkers) ready for mole-ploughing, so cultivation works have begun over the top - two passes of the shakaerator to relieve compaction, encourage vertical water percolation and aerate the soil, followed by power harrowing and stone picking/burying, where necessary.

The drain game

Robert Donald of MJ Abbott explains what he did at Ramside Hall:

"Standing side by side with course manager Roger Shaw and looking over what was to be the 5th fairway on a cold and horribly wet October morning, I first realised the importance that the drainage system would play in the success of this venture. The client, whom I had met earlier, had given me a verbal brief: "Robert," he said, "I want the water to flee off the land!" Here I was ankle deep in an emulsion of clay with the task set to produce a drainage proposal that suited the needs of the site and that inevitably was within the client's budget.

Consideration of the soil type indigenous to the area was a key factor in the design of the drainage system, the low permeability of the clayey subsoil led to winter waterlogging of the subsoil layer and rapid surface runoff during rain. The topsoil, however, was initially good over most of the site and consequently a great deal of emphasis was put on this fact. There was to be no contamination of the topsoil with the clay subsoil.

Another important feature of the golf course was the large and frequent areas of water in the form of lakes with occasional streams between them. Lakes only look attractive when they are full of water, however these features were also to supply irrigation to greens, tees and approaches over 27 holes. Careful liaison with the course architect, Jonathan Gaunt, ensured that the water, once removed from the land, was stored in a manner that enhanced the general aspect of the course.

The design finally proposed

and accepted consisted of an intensive piped drainage system that incorporated a network of rigid twinwall pipework between the lakes. The fairway drainage was typically 60mm laterals at 10m spacings connecting into 100mm mains. The lateral spacings were reduced in areas requiring intensification. The pipe depth is another critical factor, too deep and the cost of stone fill makes the job expensive, too shallow and the effectiveness of the drain diminishes as the hydraulic conductivity is reduced. The final depths depended on the contours of the land but could be generalised by laterals at 650mm and mains at 900mm deep. A very suitable carboniferous limestone quarried locally was used as the permeable backfill medium, 20mm single size to within 150mm of the surface and 5mm grit as a blinding layer.

The installation of the coil pipework - some 40km! - was facilitated using a 180hp continuous chain trenching machine, especially equipped for golf courses with low ground pressure tracks and a spoil conveyor, the digging boom depth is automatically controlled via a series of rams responding to a laser grading device which maintains pipe falls regardless of surface undulations. The pipe is fed into the trench as it is excavated and immediately covered with stone which is discharged from a gravel cart running parallel to the trenching machine. The spoil generated is loaded directly onto a dumper thus preventing topsoil contamination.

All the greens, tees and bunkers were connected to the fairway mains using a mini excavator, this method coping well with the inherent mounding associated with such features. Following pipe laying, the area of the fairways were mole ploughed prior to final cultivations in order to assist water movement through subsoil whilst the pipe drains were "bedding in".

To close a course for any reason is undesirable, but to close because of poor drainage is intolerable as it can lead to huge losses in revenue. Addressing the drainage question in the early stages of planning will reap benefits many years after the initial cost of installation has been forgotten."

QUALITY FIRST



**Specialists in land drainage,
irrigation installations,
golf course construction and
maintenance**

**Complete land drainage service:
Tracked, rubber wheel and pedestrian
continuous chain trenchers; large and
small spinning wheel trenchers**

also

**Vertidrainers, sand slitters, sub soilers
and mole ploughs**

M J ABBOTT LIMITED

**Bratch Lane, Dinton, Salisbury, Wiltshire SP3 5EB
Tel: 0722 716361 • Fax: 0722 716828**

31 → it's bounded on three sides by the estuarial waters of the Firth and has spectacular views of Struie Hill; eight of the holes lie within the Dornoch Firth Site of Scientific Interest; it's the first course owned by wealthy entrepreneur Peter de Savary; and it's a project that Carnegie himself would have been proud of.

Carnegie was a Scot who emigrated to America with his family when he was 13. There he rose from a bobbin boy in a cotton factory to become a steel magnate, and returned to his homeland as one of the richest and most successful men of his generation. He bought Skibo (a shortened version of its Celtic name, Schytherbolle, which means 'fairlyland of peace') in 1898 and spent a fortune rebuilding it to entertain the likes of King Edward VII, Rudyard Kipling and Lloyd George.

It is believed that the local golf club, Royal Dornoch, invited him to become a member but because he couldn't play he built himself a nine-hole golf course where he could learn the game. He invited five-times Open champion JH Taylor to stay at the castle – and coach him. Carnegie later became vice-president of Royal Dornoch and, today, the impressive-looking Carnegie Shield is one of the big competitions on the club's calendar.

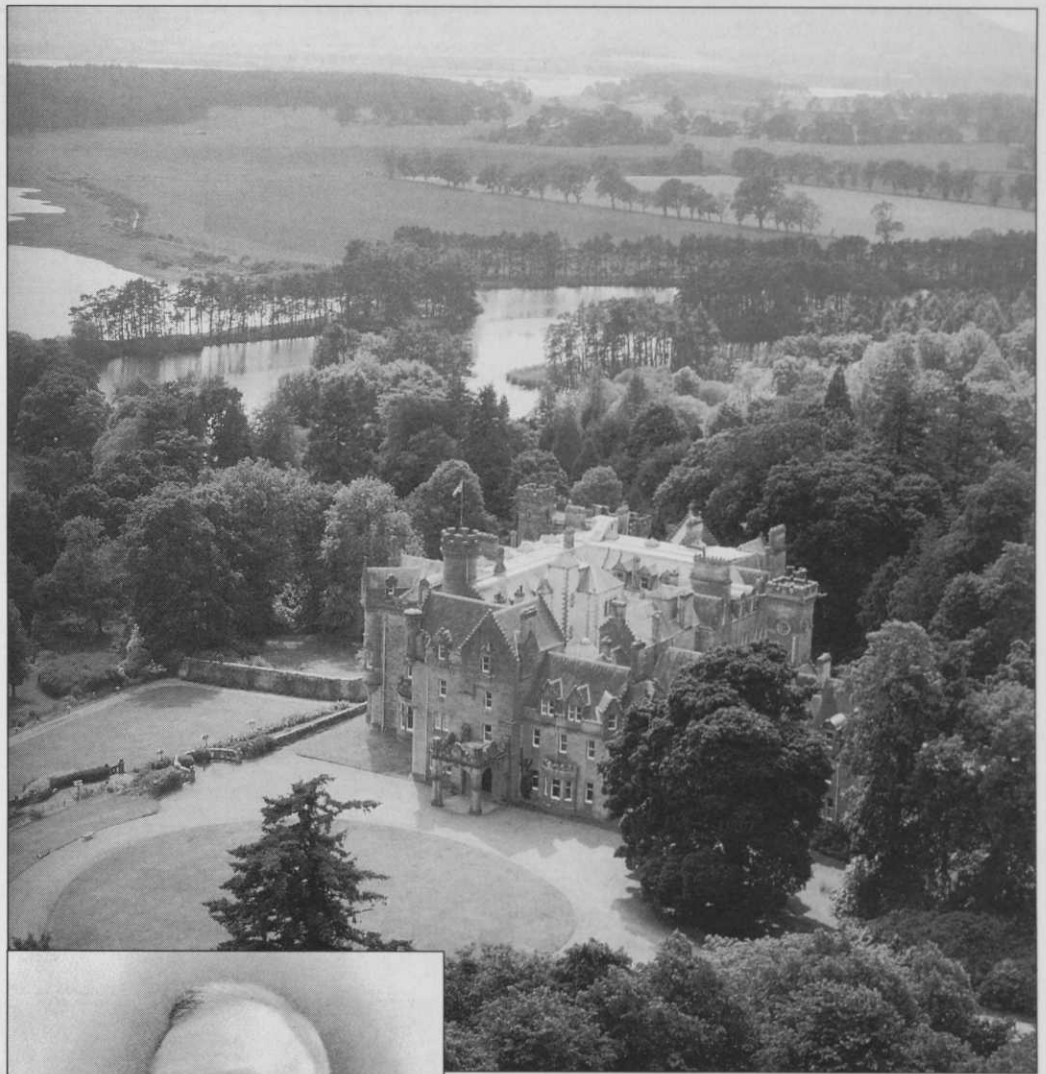
Peter de Savary is a non-golfer too, but he's not building the new 18-hole course for himself. He is turning the 7,000 acre estate into a private residential golf and sporting club with an invited international membership of about 500.

The Carnegie course at Skibo Castle will be de Savary's first golfing venture. And what a venture. The first links course built in Britain since Southerness and the restoration of Turnberry after World War II. It's not long – just 6,650 off the championship tees and 6,400 off the white tees – but there are many tough and memorable holes.

Despite some of the publicity for the club and boards outside proclaiming its "reopening", the new course, designed by Donald Steel, is nothing like the original. The only visible evidence of the original course is a grassy hollow near the 12th which was probably a bunker near the original 9th green.

When the castle was put on the market in 1989, Steel was commissioned to provide a golf course as a selling feature. When de Savary bought Skibo in 1990 he saw Steel's name on the plans and asked him to design a course for him.

When Steel and his assistants,



Andrew Carnegie, left, called Skibo 'heaven on earth'. His highland castle is now owned by the de Savary family

Martin Ebert and Tom MacKenzie, are designing a new course they walk the new site as many times as possible. For Tom, who comes from Dornoch, this meant driving 11 hours home a few weeks after starting work at Steel's offices near Chichester, West Sussex.

The first two things they have to find out before they start creating a course are the boundaries and the site of the clubhouse. With the Carnegie course they also had to plot the areas of scientific interest.

The site of an old steading was to be used to build the new clubhouse. Standing there, Steel envisaged a spectacular final hole, a par 5 dogleg with a drive across a bay. So, to some extent,

they worked backwards on the design of this course. Once they realised they could get three holes to the west of the clubhouse, the first hole became obvious.

They also knew they wanted to use some land on the other side of Ferry

Road because it gave a third view of the Firth and linked the course with the beach. Another hole, the 8th, alongside River Evelix, was also obvious, according to Steel.

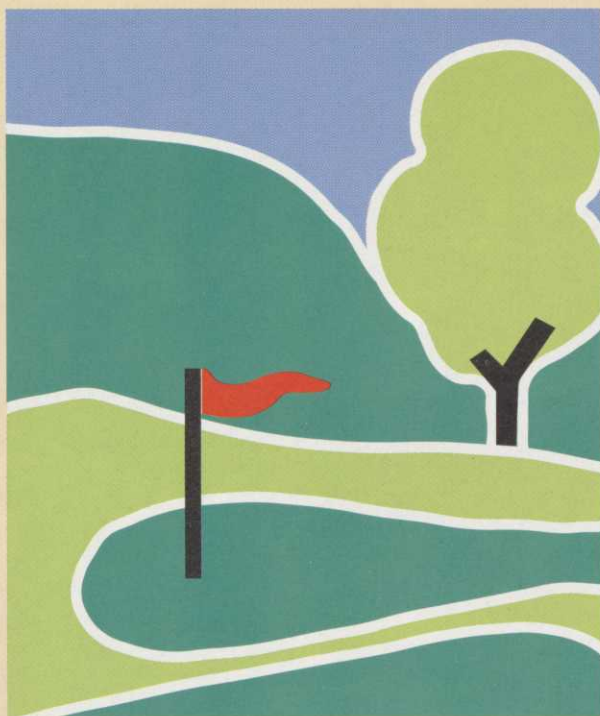
Before they went too far down the design road, they employed an ecologist to plot the areas of importance and grade them: prime importance, importance, and potential importance, so they knew where they could go and where they most certainly couldn't go. They also started consultations with Scottish Natural Heritage and began communicating with planners, ecologists, environmentalists etc.

They told them they wouldn't go into any areas of importance or prime importance and they would do their best to avoid areas

of potential importance. They also struck a deal allowing the conservationists to come in and manage the heathland areas, which they hadn't been allowed to do for the previous 30 years and as a consequence some of the areas of good heathland had started to disappear. The conservationists jumped at the chance to stop the decline of valuable sites.

The most sensitive area was the land south of Ferry Road. Steel wanted to take the course there to add to the scenic variety, but also because he needed the space. Although the estate is on more than 7,000 acres, the golf course is on a plot of about 120 acres (200 if you include the areas of scientific interest).

Once they had received approval in principle from Scottish Natural Heritage, Steel's ecologist had to do a detailed environmental appraisal showing why the site was valuable, what plants were there, what effect the work would have on them and how the course would be built – hole by hole with particular attention to holes in SI territory. He also had to say how → 35



GOLF MAINTENANCE LIMITED

(a member of the golf leisure group)

0277 373720

**The Golf Course
Maintenance People**

Free Colour Brochure Supplied on Request

founder member British
Association of Golf
Course Constructors



member

33 → these holes would be managed – what fertiliser would be used, how it would be applied, and what the irrigation regime would be. This is important because the lichens in these areas are very sensitive: “One application of fertiliser and they’re gone, and they’ve been there since the Ice Age,” said Tom.

Fortunately, Steel had been involved in the rebuilding of some new greens at Royal Dornoch, so they were able to take SNH there to show them how it’s possible to work in very tight areas, without damaging heather and gorse bushes around the backs of greens.

The new plan for the Carnegie course showed it would only go into SI areas with the first green, second tee, fourth and fifth holes, and sixth tee.

So with the 18th, 17th, 16th, 1st, two holes near the beach and a hole near the river in mind, the rest fell into place.

Steel doesn’t believe a good course has to be over 7,000 yards. “You pick nice tee and green positions and whatever they measure, they measure and whatever they add up to, they add up to. The belief that unless it’s 7,000 yards it’s no good is a load of poppycock.

“Carnegie is not long, but it’s



Looking back from the 5th green. The SI area on the right is marked as GUR but requires a compulsory drop

long enough for the majority of golfers. And the penalties for missing the fairway on a number of holes are quite grave.”

With this par 71 (70 off the championship tees) course, Steel wants to make golfers think. Cut-

ting off the right amount of dog-leg is rewarded with a much easier line to the green.

Mainly turfed

Work started late August/September 1992, later than

desired because of all the planning involved. Most of the fairways, greens and tees were turfed because of the difficulties of getting seed established in light sandy soil on a windy site. Lindum supplied and laid → 37

Brian D. Pierson

(Contractors) Limited



Alterations to existing courses ♦ Revetting of bunkers
 Vertidrainage ♦ Specialist Maintenance
 Project Management ♦ New Golf Course Construction

HOMESTEAD FARM, RINGWOOD ROAD, THREE LEGGED CROSS,
 WIMBORNE, DORSET BH21 6QY

Tel: Verwood (0202) 822372, 824906 & 825979

Fax: (0202) 826447

PARIS OFFICE: Tel: (1) 40 10 02 04 Fax: (1) 40 10 01 12

AD
 REF
 40

IS YOUR BUSINESS GOLF?



OURS IS



Since 1970 Watermation irrigation systems have helped to create and maintain the top championship golf courses around the world.

We are proud to have been chosen to design and install an automatic irrigation system for the greens and tees at the prestigious new
CARNEGIE GOLF COURSE

Watermation
IRRIGATION SYSTEMS

Watermation (Scotland) Ltd.
30 Bannockburn Rd. St. Ninians,
Stirling FK7 6BP, Scotland.
Tel. & Fax 0786 470252

AD
REF
33



NEW GREENS TURF

Inturf introduce Super Agrostis, the new high content bentgrass mature turf grown on sand soils.

Plus choice of cultivar mixtures from the 4 top seed houses - all grades.

Plus improved range of fescue/bent greens turf, hard wearing tees turf and low cost fairway turf.

Plus full installation service for conventional turf, 'Big Roll' turf (*the original patented system*) and new Lay 'n' Play turf tiles, all by qualified greenkeepers.

Plus good value prices and the best service available.

ANYTHING TO DO WITH TURF AND WE'RE

INTURFTM

Inturf Limited, Regent Street, Pocklington, York YO4 2QN
Telephone (0759) 304101 Fax (0759) 305229

For Scotland Telephone 031 663 6617/8/9 Fax 031 663 0651



Registered for BS 5750
Quality Assurance

AD
REF
31

35 → the turf. David Stansfield was employed as the agronomist and Brian D Pierson Ltd as the constructors.

Alick Mackay and his team of six greenkeepers and a YTS lad built the bunkers, although by modern standards there are very few bunkers on this course – “it’s difficult enough without them,” says Steel, “and they require a lot of maintenance and upkeep.”

He added: “Setting up the impossible is the easiest thing in the world, but that’s not the right way of going about things, you want to present a challenge which is achievable if people play well enough.”

Holes which caught our eye include:

◆ The short 3rd, which is played from the top of one dune across a hollow to a green set on top of another dune. Anything to the right rolls down a steep drop, leaving the player with an awkward pitch back to the green. The left side is guarded by rough.

◆ The fourth and fifth holes with their panoramic views over the Firth to the bridge and the hill all around. The fifth fairway is flanked by the beach and sea one side and heathland the other.

◆ The 8th is a long dogleg to the right, lined along the right by Loch Evelix. The more of the dogleg you cut-off by driving across the loch, the more straightforward is the second shot.

◆ There are no bunkers on the par 3 15th, just a steep drop into the water.

◆ The 18th is one of the most dramatic finishing holes on any course. A long par 5, it sweeps left around the bay from tees set on a spit of land with water on three sides. From most tees, the player must choose how much of the bay to carry and the boldness of the drive will determine how to play the second shot. Big hitters may try to reach the green in two shots but most will play into the broad approach and pitch to the large green from there. Apart from the bay, the worst thing about this hole is the fact that you know everyone in the clubhouse bar will be watching your progress to the green as the bar overlooks the entire hole.

If the club is as successful as de Savary’s other clubs, like St James’s in London, when it opens a few months after the course, then a ‘parkland’ course may also be built.

CONSTRUCTION

The bases of the greens and tees were shaped from local material. The growing medium is a 70%-30% sand to fen soil mix. On the greens it is 250-300mm deep and on the tees it’s about 150mm deep. The greens, surrounds, approaches, tees and their surrounds are turfed with a *Festuca/Agrostis grass mix*.



Donald Steel was a golf writer before he became a designer. A scratch golfer, he joined the Sunday Telegraph after leaving Cambridge University. Five years into his 30-year stint there, Ken Cotton invited him down to see his new courses at St Pierre and Ross-on-Wye, among the first courses to be built in Britain after World War II. After that they kept in touch.

When a new wave of courses was built in the 60s, Donald was asked if wanted to help out. He did, and eventually he became a partner in the firm of Cotton, Pennick, Lawrie and Partners. In 1987 he started his own firm and in 1989 he left the Telegraph, although he still contributes articles (including a new series on his 18 favourite holes) and has written several books.

Over the last five years he has built about 60 courses in 15 countries. One of the courses he is most proud of is Redtail in Ontario, Canada. Built for just over £1million it has been voted the second best course in Canada one year after opening. And Canadian journalist Lorne Rubenstein has said: “Developers should ask English architect Donald Steel to work in Canada more often. This is the only course he’s designed in Canada. It’s a peach.” He believes it could become Canada’s Pine Valley.

In this country Steel, who now

plays off 6, is best known for his work at St Andrews, where he redesigned the Jubilee and Eden courses and designed the Strathtyrum course. Other courses of his which have received widespread acclaim are Mill Ride and Portal in the UK and Vila Sol in Portugal.

His assistants, Tom MacKenzie and Martin Ebert (pictured above with Donald – Tom is on the left), are also university graduates and low-handicap golfers. Tom has a degree in landscape architecture and plays off 5; Martin graduated in engineering and plays off 4.

ROLLER MOWER BEATS THE GANG



THE MAJOR GROUNDSMAN ROLLERMOWERS

- No V-belts – fully gear driven through shock absorbing couplings
- Opposite rotating blade eliminates any windrowing and evenly spreads cutting
- Cutting heights from 1/2"–4"
- Ideal for parks, amenity areas, golf courses, playing pitches and sports grounds
- Various sizes available
- Patented easy skid adjustment
- 3" blade overlap
- Full width rollers front & rear



MAJOR EQUIPMENT LTD.,

Units 8/9 Calder Trading Estate, Leeds Rd, Bradley, Huddersfield, HD5 0RX
Tel: (0484) 450411, Fax: (0484) 450412

FORCE TO BE RECKONED WITH

Course manager Alick Mackay, 39, reckons his greenkeeping staff form the best golfing team in the country. Five of the seven staff play off single figures!

GREENKEEP

THE COLLEGES AND T

The Greenkeepers Training Committee (GTC) are continually reviewing the approved status of colleges offering greenkeeper training courses.

The directory shows colleges offering courses to craft, supervisory and management levels, but it must be stated that until the GTC review is completed only the green coded colleges are approved to train greenkeepers beyond craft level.

The introduction of vocational qualifications into industries, has caused the colleges

to re-think their training policies and the GTC will be issuing guidelines for the golf greenkeeping industry as to which colleges employers and their staff should be supporting.

Until the report is complete, anyone with a query regarding greenkeeper training should contact the Greenkeepers Training Committee at Aldwark Manor, Aldwark, Alne, York YO6 2NF, telephone 0347 838640.

NORTH



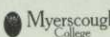
ASKHAM BRYAN COLLEGE Askham Bryan, York YO2 3PR. Contact Christine Biglin, registrar. Tel: 0904 702121. *Full time courses:* National Certificate - Horticulture; National Diploma - Amenity Horticulture; Higher National Diploma - Horticulture (golf management options). *Part time courses:* NVQ Level 2, City & Guilds Phase III and IV Greenkeeping.



HOUGHALL COLLEGE Durham College of Agriculture and Horticulture, Houghall, Durham DH1 3SG. Contact Tony Milan. Tel: 091 386 1351. *Full time courses:* National Certificate in Horticulture/Greenkeeping and Groundsmanship - 1 Year; National Diploma in Horticulture Turf Option - 2/3 years. *Part time courses:* Greenkeeping and Sportsturf Management Level II - Day Release; C&G Phase III Enterprise Management - Afternoon Evening. *Short Courses:* Health & Safety Legislation; Turfcare; Machinery and Mechanisation. All courses contribute towards NVQ Levels I and II.



KIRKLEY HALL COLLEGE Ponteland, Northumberland NE20 0AQ. Contact Dr Ron McParlin. Tel: 0661 860808. NVQ Level II with greenkeeping option. Day release or block release - one to two years.



MYERSCOUGH COLLEGE Myerscough Hall, Bilsborrow, Preston, Lancashire PR3 0RY. Contact Martyn Jones. Tel: 0995 640611. *Full time courses:* National Certificate in Groundsmanship and Greenkeeping - 1 Year; BTEC National Diploma in Turf Science and Sportsground Management - 3 Years; BTEC Higher National Diploma in Turf Science and Technology - 3 Years (Both these courses include one year's paid industrial experience). *Part time courses:* NVQ Level II Greenkeeping; Phase III Supervisory Management; Phase IV Business Management; Certificate and Diploma in Turf Irrigation (in conjunction with BTLIA).



REASEHEATH COLLEGE Nantwich, Cheshire CW5 6DF. Contact Dennis Mortram. Tel: 0270 625131 Fax: 0270 625665. *Full time:* BTEC First Diploma Horticulture (Sportsturf Option) - 1 year; BTEC National Diploma Horticulture (Sportsturf Option) - 2 years; BTEC Higher National Diploma Golf Course Management - 3 years. *Part time:* NVQ Level 1 Greenkeeping - Day Release; NVQ Level 2 Greenkeeping - Day/Block Release; NVQ Level 3 Greenkeeping - Day/Block Release; C&G Phase IV Greenkeeping - Block Release; IoG National Intermediate Diploma in Turf Culture - Day Release; IoG National Diploma - Day Release. *Short Courses:* FEPA Chemical Safety; Safe Lifting; Chainsaws; Off-Road Vehicle Driving; First Aid.



BROOKSBY COLLEGE Brooksby, Melton Mowbray, Leicestershire LE14 2LJ. Contact Paul Greene. Tel: 0664 434291. *Full time courses:* National Certificate in Horticulture, Greenkeeping and Sportsturf Management. *Part time courses:* Day Release training to NVQ Level II in Amenity Horticulture - Greenkeeping option. The course is based around the GTC Training Manual. Short courses also available in Horticultural Machinery and Arboriculture.



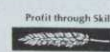
BROOMFIELD COLLEGE Morley, Ilkeston, Derby DE7 6DN. Contact Admissions Officer. Tel: 0332 831345. NVQ Level I and Level II Amenity Horticulture (Greenkeeping) Block Release course. Two years duration presented in 12 one-week blocks following guidelines of GTC Training Manual. NVQ Level III available from September 1994.



CAMBRIDGESHIRE COLLEGE Milton Centre, Landbeach Road, Milton, Cambridgeshire CB4 6DB. Contact David Haigh. Tel: 0223 860701. Part time - Day Release over two years leading to NVQ Level II (Greenkeeping Options), including the GTC Training Manual requirements. Autumn term commences September/October 1994.



LINCOLNSHIRE COLLEGE Lincolnshire College of Agriculture, Caythorpe Court, Caythorpe, Grantham, Lincs. Contact Neil Rowbottom at Student Services. Tel: 0400 72521. Day Release NVQ Level II. NCH with Greenkeeping pending approval. National Diploma in Horticulture with Greenkeeping and Turf Management options, pending approval.



MOULTON COLLEGE Moulton, Northampton NN3 1RR. Contact Stuart Phillips. Tel: 0604 491131. *Full time courses:* BTEC National Diploma in Horticulture 2 Years; BTEC First Diploma in Horticulture with Turfcare Option, 1 year; BTEC First Diploma in Business and Finance with Horticulture Option, 1 year. *Part time courses:* NVQ Level II Amenity Horticulture (Options include Turf Culture (including GTC requirements), Hard landscaping, Interior landscaping and Arboriculture) - Day Release or Block Release; NVQ Level II Turf Culture - Day Release. *Short courses:* Safe Lifting and Handling, Chain Saw Operation and Maintenance, Off-Road Vehicle Driving, F.E.P.A.



STAFFORDSHIRE COLLEGE Rodbaston, Penkridge, Stafford ST19 5HG. Contact Nigel Foskett. Tel: 0785 712209. Courses offered: Craft Level NVQ Level I, II and III. Day Release. Duration: Over two years, each of weeks duration (September - June). Registration Date: Please contact the College.



WARWICKSHIRE COLLEGE Moreton Morrell, Warwick CV35 9BL. Contact Chris Gray. Tel: 0926 651367. *Part time courses:* NVQ L1 - Greenkeeping - Day Release; NVQ L2 Greenkeeping - Day or Block Release; NVQ L3 Greenkeeping - Day or Block Release; C&G Phase 3 Year 4 - Greenkeeping Management - Day Release; IoG National Intermediate Diploma in Turf Culture (proposed). *Full time course:* 2 year BTEC National Diploma in Horticulture with an option in Turf Culture. *Professional updating courses include:* Groundsmanship, Machinery Maintenance and Repair, Managing Conservation Areas, Plant Identification, Hedgelaying, First Aid, FEPA Spraying Courses, Chainsaw Courses.



BRINSBURY COLLEGE North Heath, Pulborough, West Sussex RH20 1DL. Contact Keith Harrison. Tel: 0798 873832. *Full time courses:* New Entrant to Greenkeeping Course - 36 weeks. NVQ II Greenkeeping option plus core. Approximately a third of the course is delivered on college's and local golf course. *Part time:* Day Release to NVQ II level. Both full time and part time students with work both to the NVQ II work book and the Greenkeeper manual. NVQ Level II (National Technical Certificate) with Inst. of Groundsmanship manual may be delivered as an evening course. At present Phase III is offered in Greenkeeping Supervision and Enterprise Management. As this qualification is phased out, NVQ III and IV will be offered. ND Landscape Studies (Option - Sportsturf Management). *New courses and qualifications:* National Technical Certificate (IoG), National Practical Certificate (IoG), Intermediate Diploma (IoG), National Diploma (IoG)



HADLOW COLLEGE Hadlow College of Agriculture and Horticulture, Hadlow, Tonbridge, Kent TN11 0AL. Contact Keith Backhouse. Tel: 0732 850551. NVQ Level II Part-time Day Release over two years with two periods of Block Release. Level II in Amenity and Groundsmanship Courses with Day Release. Centres at Hadlow, Canterbury and Maidstone.



MERRIST WOOD COLLEGE Worplesdon, Guildford, Surrey GU3 3PE. Contact the Academic Registrar. Tel: 0483 232424. NVQ Levels I, II and III Amenity Horticulture, Greenkeeping and Sports Turf Specialism. Part time... one day per week for 35 weeks commencing in September.



NESCOT North East Surrey College of Technology, Reigate Road, Ewell, Epsom, Surrey KT17 3DS. Contact Dr S Shaw. Tel: 081 394 3099/3111. NVQ Levels I, II and III in Amenity Horticulture (Greenkeeping options) Training and assessment for the Greenkeepers Training Manual. Part time, Day Release. Duration: Two years to Level II. FEPA Spraying Courses.

MIDLANDS

SOUTH EAST

GREENKEEPER TRAINING

COURSES AVAILABLE

GREENKEEPER International

KEY TO COLOURS

Currently GTC approved as Regional Training Centres, offering courses at Craft, Supervisory and Management levels

Currently GTC approved for training courses up to Craft level only

Pending GTC approval for all courses

Please note that all college details on these pages were provided by the colleges themselves. Greenkeeper International takes no responsibility for accuracy of information provided. Contact the colleges direct for prospectuses and comprehensive information.

SOUTH EAST



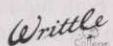
OAKLANDS COLLEGE Oaklands Campus, Hatfield Road, St Albans, Herts AL4 0JA. Contact Ian Merrick. Tel: 0727 850651. *Greenkeeping and Sports Turf Management*: Two year part time, one day per week. Level II Year One leading to NVQ Level II. Level II Year Two leading to City & Guilds 022-4. *Greenkeeping and Sports Turf Management* or NVQ Level II/III. *Amenity Horticulture and Greenkeeping Business Management*: Part time, one day per week. National Certificate in Greenkeeping and Sports Turf Management: One year - full time. All courses commence September 1994.



OTLEY COLLEGE Otle College, Otle, Ipswich, Suffolk IP6 9EY. Contact Student Applications. Tel: 0473 785543. *Full time courses*: BTEC National Diploma - Sports Turf Management. National Certificate in Horticulture, option in Sports Turf Technology. Part time NVQ 2 Golf Greenkeeping and NVQ 2 Groundsmanship, NVQ 3 Sports Turf Management. IoG Intermediate and Final Diplomas (Evenings). NVQ Horticultural Mechanics. FEPA Courses PA1, PA2, PA6.



PLUMPTON COLLEGE Lewes, East Sussex BN7 3AE. Contact David Blackmur. Tel: 0273 890454. *Full time courses*: BTEC First Diploma (Greenkeeping Option). *Part time courses*: NVQ Level II - Amenity Horticulture Greenkeeping Sportsturf and Sportsground Maintenance - Block and Day Release; City & Guilds Phase III - Enterprise Management, Greenkeeping Supervision - Block and Day Release; City & Guilds Phase IV - Business Management - Day Release. NCH Full time with a greenkeeping bias. (Subject to approval).



WRITTLÉ COLLEGE Chelmsford, Essex CM1 3RR. Contact Dai Edwards. Tel: 0245 420705. City & Guilds Golf Greenkeeping and Sports Turf Management (Day Release); NVQ Level II Greenkeeping, Sports Turf, Sports Ground maintenance to include BIGGA Manual (Day Release); Courses leading to NVQ III and IV available (GTC Manual); a Golf Course Management option is also included in full time three year HND landscape and Amenity Management Course. Courses for next academic year commence 4 October 1994.



CANNINGTON COLLEGE Cannington Bridwater, Somerset TA5 2LS. Contact Nick Rigden. Tel: 0278 652226. BTEC First Diploma. BTEC National Diploma in Sportsturf and Golf Course Management. BTEC Higher National Diploma Golf Course Management (inc. European Studies). NVQ Level 1 and 2 Golf Greenkeeping, NVQ Level 3 Greenkeeping and Supervisory Management. NVQ Level 4 Greenkeeping Management. FEPA Training, Chainsaw Certification, Off Road Vehicle Certification, Golf Course Engineers Course.



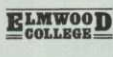
HARTPURY COLLEGE Hartpury House, Nr Gloucester GL19 3BE. Contact D. Kirkham. Tel: 0452 700283. Fax: 0452 700629. Courses: NVQ Level II and III in Amenity Horticulture, NVQ Level III Greenkeeping and Sportsturf Management, 1st Dipl Horticulture, NC Horticulture (Amenity & Decorative) Dipl Supervisory Management, ND Horticulture (Amenity & Decorative), HND Land Use (Amenity Horticulture), HND Land Use (Greenkeeping & Sportsturf Management)



SPARSHOLT COLLEGE Sparsholt College Hampshire, Sparsholt, Winchester, Hants SO21 2NF. Contact Bob Young. Tel: 0962 776441. NVQ Level 2 Greenkeeping Practice, NVQ Level 3 Greenkeeping Supervision, City & Guilds Phase III Enterprise Management (last year to be offered), City & Guilds Phase IV Management Studies, GTC: Greenkeeping Certificate, GTC: Certificate in Golf Course Supervision, FIPA: Short Courses, Chainsaw: Short Courses. All courses, other than Phase IV, are offered on Block release. Full residential facilities available.



DUNDEE COLLEGE Old Glamis Road, Dundee DD3 8LE. Contact Graham Carr. Tel: 0382 819021. Fax: 0382 858117. Courses offered: SVQ Units at Level I and II linked with GTC Training Manual; SCOTVEC National Certificate Modules for Greenkeeping; SCOTVEC HNC Units in Horticulture; SCOTVEC HNC Units on Golf Course Management (available as Distance Learning/Flexible Learning from October 1994). Duration of courses 36 weeks from September/October each year. Attendance full-time, block release and day release. Short courses including "Use of Pesticides" available on demand. Registration June and August.



ELMWOOD COLLEGE Cupar, Fife KY15 4JB. Contact Carol Borthwick. Tel: 0334 52781. Fax: 0334 56795. Craft Level courses. Block-release and full-time, following SVQ Level II and the GTC Training Manual. Six week specialist modular programme (January/February), including Golf Course Construction, Pesticide Application and Plant Protection Procedures. Distance Learning supervisory course, with one week in College. HNC in Golf Course Management: available as full-time, day-release and distance learning, leading to final part of HND in Golf Course Management from September 1994. FEPA, COSHH and Health and Safety short courses.



KYLE AND CARRICK DISTRICT COUNCIL Burns House, Burns Statue Square, Ayr KA7 1UT. Contact J Dudgeon. Tel: 0292 281511. SCOTVEC National Certificate in Greenkeeping - Day Release up to three years. Students can enrol at any time.



LANGSIDE COLLEGE GLASGOW Langside College Glasgow School of Horticulture, Woodburn House, Buchanan Drive, Rutherglen G73 3PF. Contact Colin S Urquhart. Tel: 041 647 6300. SCOTVEC National Certificate - 3 years day release or 1 year full time. Higher National Certificate in Golf Course Management - 2 years day release. SVQ Level II Amenity Horticulture with Greenkeeping options plus a range of NC and HNC Horticulture programmes including G SVQ Level III. Short courses on a range of subjects including Tractor Operations and the Safe Use of Pesticides can be negotiated.



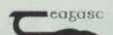
OATRIDGE COLLEGE Ecclesmachan, Broxburn, West Lothian EH52 6NH. Contact Steve Miller. Tel: 0506 854387. *Full and part time courses*: Higher National Certificate in Golf Course Management; National Certificate in Greenkeeping; National Certificate Modular and Scottish Vocational Qualification Level I and II. National Certificate in Hort. Machinery. Short specialist courses - including safe use of chemicals, operation of greenkeeping machinery.

Northern Ireland



GREENMOUNT COLLEGE Greenmount College of Agriculture and Horticulture, Antrim, BT41 4PU. Contact Geoff Jenkins. Tel: 0849 462114. Day Release course in Greenkeeping and Sports Turf Management. Two year course leading to NVQ - and a Certificate in Greenkeeping for those completing additional working practices/tasks as specified by the Greenkeepers Training Manual. Course runs from September-May.

EIRE



TEAGASC COLLEGE Teagasc College of Amenity Horticulture, National Botanic Gardens, Glasnevin, Dublin 9. Contact Pat Suttle. Tel: 0103531 371 636. Phase II Greenkeeping - Block Release two weeks, three times per year. Phase III Greenkeeping - Block Release, one week, three times per year.

WALES



PENCOED COLLEGE Pencoed, Mid Glamorgan CF35 5LG. Contact Peter Gillard or Richard Browning. Tel: 0656 860202. Day Release courses in Greenkeeping and Sports Turf at Introductory, Technician, Supervisory and Management Levels, incorporating the Training Manual of the Greenkeepers Training Committee.



WELSH COLLEGE Welsh College of Horticulture, Northrop, Mold, Clywyd CH7 6AA. Contact GM Wright. Tel: 0352 840 861. Fax: 0352 840 731. *Full time courses*: ND - Golf Course Construction Option - equivalent to NVQ Level III. NEBSM - equivalent to NVQ Level III. BTEC First in Landbase Golf Greenkeeping NVQ Level II. *Part time course*: Phase 3 Greenkeeping Management - equivalent to NVQ Level III. NVQ Level IV from Autumn 1993 (if available). NVQ Level I and II Greenkeeping. *Short courses*: Pesticide PA1, PA2, PA6, 1-3 day courses (training and testing); COSHH Assessments; Safe lifting and carrying; PICKUP courses.

...And not a drop to

Cedric Johns explores the sometimes murky depths of golf course lakes and ponds

Modern day golf course architects – especially our cousins from over the Atlantic – love water, it seems. Give 'em half a chance and they'll come up with at least one spectacular hole designed to force players into making choices. A safety shot for the timid; an arm chancing drive for the bold, tempting them to smash the ball beyond the watery clutches of an in-play lake. And, as we so often see, beyond the back of the green as well...

Water hazards can intimidate club golfers and hardened pros alike. Just think back to that menacing 15th which featured so dramatically in last month's US Masters, staged at the 'garden course', Augusta National.

Apart from Olazabal, whose 30-foot, final day putt killed-off the opposition – at the 15th – and ultimately secured that prized green jacket, most of his rivals were in big trouble. How many shots did Payne Stewart drop attempting to clear those limped waters...?

But it is not only the players who have to be aware of the dangers of still waters these

days. The increasing numbers of feature lakes and off-course reservoirs appearing on our golf courses form the basis for hazards of another type: natural pollution. Greenkeepers beware...!

The relatively new concept of digging holes in the ground for in or out-of-play water storage purposes is linked directly with the use of irrigation systems.

Why? Because legislation imposed by the National Rivers Authority (NRA) insists that abstraction licences are largely conditional on the system's design being self-sufficient in terms of water consumed. This is particularly true of golf courses located in the south and south-east of the country, where water is most often at a premium in the summer months.

This is the reason why we see so many developers and golf clubs – never mind architects – investing in the construction of in-ground storage facilities.

By comparison, the more conventional, above-ground storage tanks – usually used as overnight holding points – are fast going out of fashion. They are simply not large enough to hold the vast volumes of water involved. Even built in multiples, the cost of a number of tanks would far outstrip that of a reservoir.

Based on the broad principle that only winter water, abstracted between October and March, is utilised, man-made feature lakes and off-course reservoirs are today's answer to the problem of sourcing enough water for months of high-season irrigation. A classic example of this trend is the total water management scheme implemented at The Belfry a couple of years ago. Then, a lake, capable of holding ten million gallons of water – 40 million litres for the benefit of thrusting young 'keepers clutching HNC's – was constructed behind the Derby course.

Filled and subsequently topped-up from a nearby stream, the lake actually fulfils two roles – as course manager Derek Ganning explained when I visited him prior to the '93 Ryder Cup.

Not only does this vast tract of water feed irrigation systems watering both the Brabazon and Derby courses, it is also used to overcome evaporation losses by maintaining levels of the in-play lakes dotted around the championship course.

On the club circuit, the lake featuring an island green built during the reconstruction of the Barton-on-Sea course, featured on these pages (April issue) was designed to provide

Leaf Sweeper



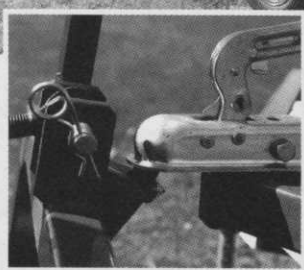
Demonstrations available through local dealers

Simple well proven design, easy to use, excellent value for money – 4 rows of hard wearing polypropylene bristles lift leaves, grass clippings and litter effortlessly into high-capacity hopper.

Fully floating linkage enables brush to sweep cleanly on undulating golf course fairways.

Simple manual trip facility for easy dumping of debris.

Optional scarifying rotor and gully brush attachments available.



Universal Joint detail



Brush detail

WESSEX

Send for details – no stamp required
WESSEX FARM MACHINERY SALES CO.
FREEPOST B2221
BORDON • HANTS • GU35 9HH
0420 478111

AD REF 210