

# conditioner

weed and animal excrement, both are plentiful and allow the innovative several means of processing it into an acceptable sterile product which can be bagged or otherwise packaged. Precise details of the processes are normally kept secret, but include drying and milling, distillation, bacterial action and sedimentation. Bacterial action must be the cheapest option because it is the most natural and only requires the product to be held in a tank for the bacteria to work. Temperature control may be needed to manage the process, and then it is mainly a matter of separating the liquid from the solid – both factions can then be sold.

The main claims for most turf conditioners is that they enhance root systems, increase tillering and improve grass colour. How they do this remains largely a mystery, although research is currently being undertaken into this. Certainly response is usually greater than would be anticipated from applying any pure element, and while one supplier suggests that it is the 'cytokinins' which are responsible, others suggest that it is the addition of other micro flora – bacteria, fungi, moulds, yeasts etc. – which stimulate the plant, but until research proves conclusively the what, why and when of these products the greenkeeper's best option is to keep an open mind, use what has been proven to work, and to try other options tentatively.

One of the most common additives to turf conditioners, partly due to its very effective greening effect, is iron. It is a main constituent in seaweed and has several important effects on turf, hardening it, adding colour and at the same time helping depress moss. The colourising effect is useful to the greenkeeper preparing for a tournament and it is likely to last for a couple of months, while the hardening of the grass is useful when preparing the turf towards winter. Of course the form that the iron takes is critical: it has to be soluble and it also needs to be chelated or 'buffered' so that it does not get hijacked or locked-up by other chemicals before the plant utilises it.

Possibly sitting between the two camps of soil and turf conditioning are wetters. In original form these were little more than washing-up liquids in disguise, however there has been a vast change and today's wetter is a more complex material: organic, non-ionic and bio-degradable, and of course it needs to produce the minimum of foam. Non-ionic is seen as required to avoid it reacting with other chemicals – unlike industrial cleaners. The basic purpose of a wetter is to reduce surface tension so that water spreads more readily, thus with foliar sprays it aids the spray to spread over the leaf and be more effective, while with soil applications (and composts) it is aimed at reducing the surface tension around soil particles so that the water is more readily assim-



ilated into it, which should make irrigation more effective and economic.

In the past the worse soils have been devoted to golf because they were of little use for agriculture, in fact almost by definition they were the poorest of soils. Now, however, increasing pressure for more rounds per day, 364 days of the year, means that grass is having to be 'stretched.' Fortunately most of the poorer soils respond particularly well to all forms of conditioning. In recent times agriculture has found itself with land which is not required for food production and aided by 'a suggestion' from the R&A it has looked on golf as a more productive diversification. Again this is seldom the best land, usually being the hardest and most expensive to work, so again turf or soil conditioners could be required.

Soil (or tissue) analysis and a dig into the soil structure may give clues over precise requirements, however the normal scientific criteria (of soil analyses etc) are often no better than the subjective judgment of a good greenkeeper, and he is likely to judge any action or application by the response of the turf simply by asking 'is it better?' – better meaning greener, stronger, more disease resistant, thicker, faster growing, or any of many other desirable criterion. There is still a long way to go before we know all we need to know about growing grass for the golfer, but perhaps the greenkeeper is better off while there remains a high level of art and some chance in turf preparation, – that way he has good reasons why the greens are not what others judge they should be.

**Strong, prolific rooting where before it was weak: treated grass from Maxicrop**

# GREENKEEPER

## THE COLLEGES AND THE

The Greenkeepers Training Committee (GTC) are currently 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.

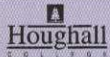
NORTH



**ASKHAM BRYAN COLLEGE** Askham Bryan, York YO2 3PR. Contact Nick Bisset. Tel: 0904 702121.

*Full time courses:* BTEC Higher National Diploma in Golf Management.

*Part time courses:* NVQ Level II, City & Guilds Phase 3 and 4.



**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 40611. *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 BTIA).



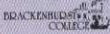
**REASEHEATH COLLEGE** Nantwich, Cheshire CW5 6DF. Tel: 0270 625131. *Full time courses:* BTEC First Diploma in horticulture (with Sports Turf Option) - 1 Year; BTEC

National Diploma in Landscape and Amenity Horticulture (with Sports Turf Option) - 2 Years (both subject to approval); BTEC Higher National Diploma in Golf Course Management - 3 Years. *Part time courses:* NVQ Level I Greenkeeping - Day Release; NVQ Level 2 Greenkeeping - Day or Block Release; C&G Phase III Greenkeeping - Day or Block Release; C&G Phase IV Greenkeeping - Block Release; IOG National Intermediate Diploma in Turf Culture - Day Release; C&G Phase II Greenkeeping Machinery Maintenance - Block Release. *Short courses:* FEPA Chemical Safety; Safe Lifting and Manual Handling; Chainsaws, Off-Road Vehicle Driving; First Aid.



**SOUTH MANCHESTER COLLEGE** Wythenshawe Park Centre, Moor Road, Manchester M23 9BQ. Contact Peter Riley/Martin Webb.

Tel: 061 957 1526. Day Release and Full Time courses leading to NVQ Level II Amenity Horticulture with the Greenkeeping option.



**BRACKENHURST COLLEGE** Southwell, Nottinghamshire NG25 0QF. Contact Brian Osbourne. Tel: 0636 812252. *Full time courses:* National Certificate in Horticulture, Greenkeeping and Sportsturf Management - 1 Year. *Day Release over 2 Years:* NVQ Level I Amenity Horticulture; NVQ Level II Amenity Horticulture with options. (Options include Greenkeeping, Hard landscaping, interior landscaping and Arboriculture). *Half day/week over 1 Year:* City & Guilds Phase 3 Greenkeeping Management. We also offer short courses in Technical, Supervisory and Management skills training appropriate to the Greenkeeping Industry. Full details from the Short Courses Unit.



**BROOMFIELD COLLEGE** Morley, Ilkeston, Derbyshire DE7 6DN. Tel: 0332 831345. Fax: 0332 830298.

Level I and II Amenity Horticulture (Greenkeeping) Block Release Course. Two Years duration presented in 12 one-week blocks starting 13th September 1993.

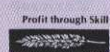


**CAMBRIDGESHIRE COLLEGE** Milton Centre, Landbeach Road, Milton, Cambridgeshire CB4 6DB. Contact David Haigh. Tel: 0223 860701.

*Part time - Day Release over two years leading to NVQ Level II including the GTC Training Manual requirements.* Autumn term commences October 1993.



**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.



**MOULTON COLLEGE** Moulton, Northampton NN3 1RR. Contact Stuart Phillips. Tel: 0604 491131. *Full time courses:* BTEC National Diploma in Horticulture

with Turfcare Option. *Part time courses:* NVQ Level I Amenity Horticulture - Day Release; NVQ Level II Amenity Horticulture with Turficulture Option - Day Release; C&G Phase 3 - NVQ Level III if/when available - Day Release.



**STAFFORDSHIRE COLLEGE** Rodbaston, Penkridge, Stafford ST19 5HG. Contact Nigel Foskett. Tel: 0785 712209. Courses offered Craft

Level/NVQ I and II. Day Release. Duration: Over two years, each of 30 weeks duration (September - June). Registration Date: Please contact the College.



**WARWICKSHIRE COLLEGE** Moreton Morrell, Warwick CV35 9BL. Contact PJ Smith. Tel: 0926 651367. *Greenkeeping courses:* NVQ Level I - Day Release; NVQ

Level II - Day Release; NVQ Level II - Block Release; NVQ Level III/City & Guilds Phase II - Day Release; NVQ Level III/City & Guilds Phase II - Block release. *New for 1993/4:* Full time two year BTEC National Diploma in Horticulture with an option in Turf Culture (Subject to approval). *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 Green-

keeping 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 and part time students will work both to the NVQ II work book and the Greenkeeper manual. An evening course will continue for the IOG National Technical Certificate. NVQ Level II 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.



**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 three periods of Block Release.



**MERRIST WOOD COLLEGE** Worplesdon, Guildford, Surrey GU3 3PE. Contact the Academic Registrar. Tel: 0483 232424. NVQ Levels I and II

Amenity Horticulture, Greenkeeping and Sports Turf specialism. Part time... one day per week for 30 weeks commencing in September.



**NORTH EAST SURREY COLLEGE** 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 and II in Amenity Horticulture (Greenkeeping options) Training and assessment for the Greenkeepers Training Manual. Part time, Day Release. Duration: Two years to Level II.

MIDLANDS

SOUTH EAST

# ER TRAINING

E COURSES AVAILABLE

**GREENKEEPER**  
International

## KEY TO COLOURS

Currently GTC approved  
at Craft, Supervisory and  
Management levels

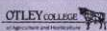
Applications currently  
with GTC seeking  
approved status

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

SOUTH EAST



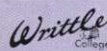
**OAKLANDS COLLEGE** Oaklands Campus, Hatfield Road, St Albans, Herts AL4 0JA. Contact Ian Merrick. Tel: 0727 850651. *Greenkeeping and Sports Turf Management:* Two year part time, one day per week. Level II Year One leading to NVQ Level II. Level II Year Two leading to City & Guilds 022-4. *Greenkeeping 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 Sportsturf Management: One year - full time. All courses commence September 1993.



**OTLEY COLLEGE** Otley College of Agriculture and Horticulture, Otley, Ipswich, Suffolk IP6 9EY. Contact John Pearson. Tel: 0473 785543. *Full time courses:* National Certificate in Horticulture with options in Sports Turf Management. BTEC; GNVQ Level III. *Part time courses:* NVQ Levels I, II and III. Short Day and Evening courses.



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



**WRITTE 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 (Day Release); 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 '93.



**CANNINGTON COLLEGE** Cannington Bridwater, Somerset TA5 2LS. Contact Nick Rigden. Tel: 0278 652226. BTEC National Diploma in Sports Turf and Golf Course Management. BTEC Higher National Diploma in Golf Greenkeeping with European Studies - split sandwich period including three months working in Europe. Golf Greenkeeping NVQ Level I and II (craft level).



**HARTPURY COLLEGE** Hartpury House, near Gloucester GL19 3BE. Contact Stephen Drew. Tel: 0452 700283. Fax: 0452 700629. Courses: NVQ I, II, III - Day Release/Part time. Higher National Diploma Land Use - Full time. Greenkeeping and Sportsturf Management - 3 Year Sandwich. All course are September start.



**SPARSHOLT COLLEGE** Sparsholt College Hampshire, Sparsholt, Winchester, Hants SO21 2NF. Contact Bob Young. Tel: 0962 776441. *Full time courses:* National Diploma in Golf Course & Sportsground Management (3 Years); National Certificate in Greenkeeping and Sportsground Management. *Part time - further training:* Level/Phase III and IV Courses. Short courses: ie. Sprayer Legislation, First Aid and Chainsaw Use. *Part time - New Entrant and Craft Level:* Level I: New Entrant, Level II: Craft Continuation. *Greenkeeper Training Committee - Manual:* All courses, according to the appropriate Level, will encompass the demands and requirements of the new GTC Manual.



**CARDIFF INSTITUTE** Cardiff Institute of Higher Education, Llandaff Centre, Western Avenue, Cardiff, Wales CF5 2YB. Contact David Thornton. Tel: 0222 551111. City & Guilds Greenkeeping and Groundsmanship. Two year course - part time. NVQ Level II Greenkeeping and Groundsmanship. Two year course - part time. Enrolment September for all courses.



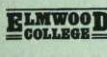
**PENCOED COLLEGE** Pencoed, Mid Glamorgan CF35 5LG. Contact Peter Gillard. Tel: 0656 860202/860635. *Courses offered on Day Release from September:* Greenkeeping & Sports Turf: Year I, Introductory, NVQ Level; Year II and III, Technician Level, NVQ Level I and II; Year IV, Supervisory Studies, Phase III City & Guilds; Year V, Management, Phase IV City & Guilds. BTEC 1st Diploma - Greenkeeping & Sportsturf. Part time or full time.



**WELSH COLLEGE** Welsh College of Horticulture, Northop, Mold, Clywyd CH7 6AA. Contact GM Wright. Tel: 0352 86 861 Fax: 0352 86 731. *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 courses:* 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.



**DUNDEE COLLEGE** Old Glamis Road, Dundee DD3 8LE. Contact G Carr. Tel: 0382 819021 Fax: 0382 88117. Courses offered: SVQ units & SCOTVEC Modules in Greenkeeping HNC in Golf course management. Attendance: Block Release and Day Release. Duration: 36 weeks from September 1993. Registration: June and August.



**ELMWOOD COLLEGE** Cupar, Fife KY15 4JB. Contact Carol Borthwick. Tel: 0334 52781. Scottish Vocational Qualifications Levels I and II in conjunction with the GTC Training Manual: available as a block release and full time course. National Certificate in Greenkeeping: available on a 3 year block release and full time course. Six week specialist modular programme including Golf Course Construction, Pesticide Application and Plant Protection Procedures. Six week continuous block in the winter. National Certificate in Supervisory Skills: available as a distance learning course with one week at College. Higher National Certificate in Golf Course Management: available as full time, day release and distance learning. Progression into the Higher National Diploma in Golf Course Management from September '94.



**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** Langside College 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. 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.



**GREENMOUNT COLLEGE** Greenmount College of Agriculture and Horticulture, Antrim, BT41 4PU. Contact Geoff Jenkins. Tel: 08494 62114. Day Release course in Greenkeeping and Sports Turf Management. Two Year course leading to NVQ and Certificate in Greenkeeping for those completing additional working practices as specified by the Greenkeepers Training Manual. Course runs from September - May.



**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.

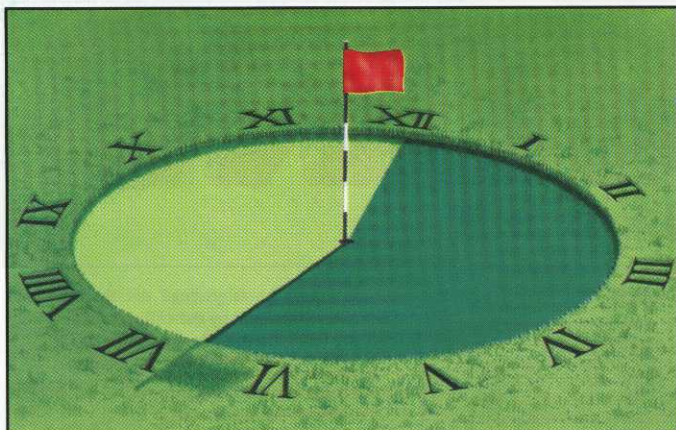
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CARD OPPOSITE PAGE 42



## LAWN GENIE THE MOST VERSATILE PICK-UP MOWER – EASILY THE BEST

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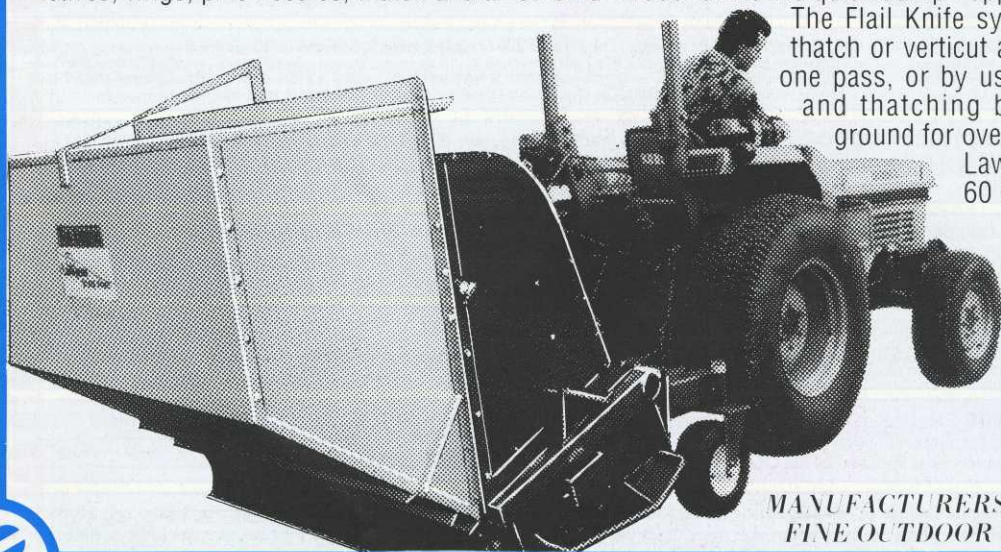
*Ideal for Estates, Parks, Golf Courses, Playing Fields etc.*

Designed for all-year-round use, Lawn Genie will mow any length of grass... knee high orchard to ornamental lawn... and leave an excellent finish. All the cuttings are vacuumed into a huge capacity all metal hopper and then dumped by means of a cable winch from the operators seat. Alternatively they can be discharged smoothly and evenly over the ground by use of the quick flip deflector panel. When mowing is not required Lawn Genie will lift leaves, twigs, pine needles, thatch and all other lawn debris into the quick dump hopper.

The Flail Knife system allows the operator to thatch or verticut and then pick up the debris in one pass, or by using the double-edged knives and thatching blade together prepare the ground for overseeding.

Lawn Genie is available in 36, 48, 60 or 72" cutting widths.

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## EDITORIAL COMMENT

Beyond dispute, the 'hottest ticket in town' for any golf event has to be those precious little holographed numbers produced each year for The Masters, tickets which cost just \$100 for the whole week. Indeed, so precious have they become that a whole mini-industry erupts each year, with travel companies happy to pay hugely inflated prices in order that they may sell 'Masters Packages' which include air flights, Cadillac limo's, swanky hotels and champagne receptions on the lawns of some of Augusta's stately homes. Despite valiant and increasingly successful attempts by the Masters committee to bring transgressors to book, men have been known to cheat and lie for tickets, on occasions even ending up in jail by attempting to produce forgeries. How refreshing then, to discover that American golf course superintendents may enter Augusta National on production of a Class One membership card, whilst those superintendents engaged on the course during the tournament are invited to return later in the year for a round over the hallowed grounds. It's enlightening, heartening, and indicative of the high regard that such an exclusive body has for those who care for America's courses.

By contrast, the miserly administrators of the 1993 Ryder Cup have seen fit to snub our profession by refusing point blank to grant any concessions to British greenkeepers, though in a letter sent in answer to an official BIGGA request, a director was quick to point out that 'of course, all your members will be most welcome to purchase tickets'.

Murmurs of discontent are rumbling throughout the States at the high cost of Ryder Cup tickets (£242 for Patrons) and the exorbitant prices bandied around by hotels in and around

Birmingham. Though tickets can be had, the preferred method of ticket sale appears to be the package (at prices starting around \$1,300 *without* airfare), and American pro's are encouraged to earn sales commission by referring golfers through PGA Travel, the monopoly agency in America for the biennial matches. One such includes riding with the big-wigs on Concorde, invites to the opening and closing ceremonies, tickets that include VIP hospitality at the 18th and five star accommodation and luxury travel, all for a tag of - wait for it - just \$13,000 per person! With that sort of obscene extravagance, it's no surprise that Britain's greenkeepers are left out in the cold. Frankly, I think the whole thing stinks!

■ It appears that I opened a fine bag of worms in April with the publication of 'Greens must not be spared', and though I did not share Mr Travers' views and indeed agonised over printing them, I decided that his comments deserved exposure if only to reveal the professional golfer's viewpoint, which so often appears to be in direct opposition to those of the greenkeeper. Often there are occasions when I don't agree with an expressed opinion, indeed I didn't entirely concur with the view that worn approaches and walk-off areas would benefit from an annual application of nitrogen fertiliser, when such problems are not due to nutritional deficiencies but to compaction and abrasion, best dealt with by corrective aeration or traffic control. No, the point I make is that I am the editor not the judge, and must leave adjudication to my readers. The fact that so many of you ask questions and refuse to take opinion as gospel truth is one that I find refreshing - keep those letters rolling, please.

DAVID WHITE

YOUR CHANCE TO WIN A SHARE OF OUR £600 BTME '94 COMPETITION



## BTME PRIZES ARE JUST THE TICKET!

### THE FIRST THREE QUESTIONS

1. In our April issue's BTME Update we carried a letter of congratulation from a sales director of one of the industry's leading companies - what is his name?
2. In the BTME column in May, we introduced our new sales and marketing assistant with special responsibility for the BTME - what is her name?
3. In this month's BTME Update we indicate the number of promotional information packs which have already been sent to interested companies - how many?

### Here's your chance to WIN your way to BTME '94!

Starting this month and every month until September, we will be posing a number of easy to answer questions. All you need to do is keep your answers handy and safe until our September BTME Update, which will have the final questions and details of where to send your entry.

There will be three winners. First prize will go to the sender of the correct answers, whose entry is drawn first from the hat. He or she will win:

★ Return rail travel to the prestigious venue in Harrogate, three night's accommodation in a top class hotel and entry into ALL the educational seminar sessions. Prize value: £300.

Sender of the second correct entry drawn wins:

★ Return rail travel, two night's accommodation and entry to all seminar sessions. Prize value: £200.

The third entry drawn wins for the sender:

★ A single night's accommodation and a seat at all the seminars. Prize value: £100.

Answer the first set of questions, left, hold on to your answers - and YOU could be a BTME winner!

Note: Competition not open to BIGGA staff. No cash alternatives. Full entry details in September 1993 edition of Greenkeeper International.

WITH less than two weeks to go to the deadline, some 20 per cent of 1993 exhibitors had booked - and paid their deposit - for stand space at BTME '94.

As at June 1, the total for bookings was expected to be much higher - underlining companies' willingness to invest so early in such a major event

New company enquiries are coming in all the time, following the despatch of 757 BTME '94 promotional information packs. Potential newcomers are asking about large stand spaces - look out for more and more exhibition stands in 1994 which will be as big as has ever been seen at BTME.

One notable addition to next year's show will be the British Golf Course Constructors Association, who are to exhibit for the first time.

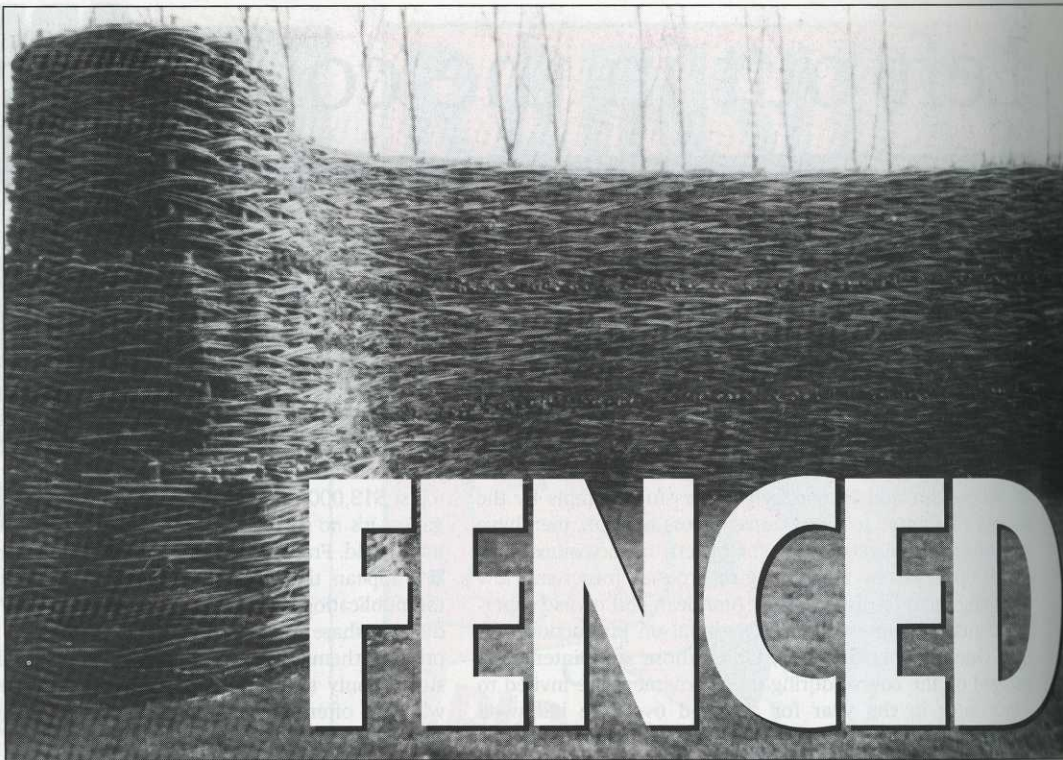
A big welcome awaits them... and maybe you, too? Call Louise Lunn on 0347 838581 if your company would like a BTME '94 information pack.

Anyone considering installing a new fence for the first time in a decade could be forgiven for being overwhelmed by the virtually endless permutation of designs, materials and specifications now on offer.

Gone are the days when one might have to choose between wooden post and rail, continuous steel bar or chain link, depending on the site, the security requirements and the appearance of the final job. Not only are there fence types and materials available to suit one's every need, but the quality and specification of the structure will, in most cases, be covered by a British standard.

Glancing at the BSI list for fencing, one will find that the majority of popular fencing systems in use are subject to one or more of the 16 parts contained in BS 1722 with regard to their design and quality of manufacture. This safeguard, recognised nationally, must be the starting point for anyone considering a new fence, says Mr Ray Smith, chairman of the European Fencing Industry Association (EFIA). "Irrespective of the size of contract, quality has to be the principal criteria for all specifications," he stresses. To ensure quality of materials, Smith advises buyers to insist that the selected product conforms to all requirements of BS1722.

Even when the fencing is purely



### What to buy and what's available, by MICHAEL BIRD

of a decorative nature or manufactured to a patented design, he recommends that the fence and gate structures and the quality of the materials used comply with any applicable Clauses contained

within BS 1722. "Similarly, it is advisable also to ensure that the manufacturer and the installing contractor have been awarded or have applied for BS 5750, the quality assurance accreditation," com-

ments Smith. "I would also like to ascertain that they are a member of an approved trade association."

The only professional bodies currently found within the UK are the EFIA and the Fencing Contractors

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# IN



**Two pictures; same fence: a woven willow wall forms an excellent screen against noise and entry, bursting into leaf in spring.**

*Photographs courtesy of CD Brown Landscaping*

Association. Both are represented on British Standards committees and subscribe to government training schemes to help improve the quality of workmanship in manufacture and on site.

Fencing systems can be categorised into four basic types according to their function. These are security, protection, decoration and direction. Most fences found on golf courses are likely to have to perform at least two of the above roles, and sometimes three or all four. The requirements for the fence's design and structure will vary but should normally include four factors: Low maintenance, aesthetically and environmentally acceptable, cost-effective to buy and erect, and fit for the purpose for which it is intended.

Of course, in the case of security fencing intended to keep intruders out, the appearance of the fence will often take second place to the need to provide appropriate protection to property, people and equipment. There are three basic types of security fence, all able to prevent entry to an increasing degree. The simplest is chain link, available in rolls up to 3.6m wide. Usually galvanised and plastic coated, this material is certainly one of the least costly to buy and erect per metre and has the advantage of being able to follow ground contours closely. It can also be buried to deter burrowing by foxes and rabbits. Aesthetically pleasing, especially when selected in dark green, chain link can be combined with other materials such as knitted or knotted nylon netting to form an excellent ball stop on driving

ranges and alongside fairways close to roads and houses. Chain link can be installed up to 6m high or greater, but it is most important to have adequate supports at such heights. It also becomes costly here (around £100 metre), due to the increased difficulty of erection.

Another fencing system able to combine security, protection and decoration is weld mesh. The wider advantages of this material came to be recognised little more than 10 years ago, when it was being used principally as a reinforcing medium in concrete. Stood vertically, weld mesh can form an excellent barrier against entry and prevent golf balls straying from the course or range. A major benefit of the material is the welded joint at each metal rod intersection which makes it far more difficult and time consuming to cut through than chain link. Galvanised only or with a plastic coating, weld mesh is available in heights up to 5.5m and is suitable for installation onto most types of metal post. It can be combined with other materials, such as chain link, nylon net or barbed wire, to form a suitable barrier against unwanted entry or exit. Interesting variations providing improved strength, appearance and security include a 'V' or 'W' shape pressed horizontally into the panels, folded tops and bases and special posts with anti-vandal fixings. Weld mesh also makes an excellent ball stop.

If security is the principal requirement, there are few more formidable barriers than corrugated or 'W' section steel palisade or pale fencing. Comprising a series

of closely-spaced vertical bars with horizontal rails 300mm from the top and bottom for added strength, palisade is manufactured in heights up to 3.6m with a variety of head 'points' depending on the required level of security. Features include anti-tamper rivet heads, cup square bolts for fence to post fixing and a choice of finishes to suit the surroundings. Palisade fences are suitable for vulnerable course perimeters and to protect buildings and compounds where machinery, materials and fuels are stored.

Security, and the appearance of fencing, can be enhanced significantly by planting trees and shrubs adjacent to the fence. It is important, however, to leave sufficient space for maintenance and to prevent vegetation growing through and over the barrier which could assist an intruder. A useful tip is to take a close look at your fencing system from the other side. All too often, a well-planned fence from the inside can look dreadful to the passer-by or neighbour and create antagonism and ill-feeling.

One fence designed to be secure, environmentally friendly and minimise noise levels by up to 30 decibels comprises living willow planted and woven to form two closely-spaced walls with soil in between. In autumn and winter the structure resembles a wicker basket. In spring and summer, leaf growth greens up the wall, encouraging birds and other wild life. A non-greening alternative to willow is reed thatch.

Apart from discouraging human entry, fencing is often needed to protect turf and new plantings

against vermin, livestock and, sometimes, golfers. For newly-planted areas, galvanised wire mesh netting, buried to 150mm and lapped outwards horizontally a further 150mm at full depth, will prevent access by most small animals. Inexpensive, it can be readily installed by staff using pressure-treated timber posts 10m apart.

Rabbit netting is best erected just before the main growing season so that vegetation grows through the lower part of the mesh quickly to prevent rabbits from finding a way underneath. In exposed areas, a windbreak made of open weave polyester will provide protection for young trees and prevent soil erosion, by reducing the speed and chilling effect of the wind.

If sheep, cattle or deer are a problem, then wire stock fence topped, if necessary, with high visibility tape or barbed wire is an excellent solution. On courses adjacent to farm or parkland, the landowner will normally pay close attention to his or her fencing. Those neighbouring common or moor land and other wide, open spaces will have to establish the optimum solution for their individual situation.

If vandalism is not a problem, then simple continuous steel bar, spike or bow top mild steel or wooden post and rail fencing are likely to be the most economical and simple to erect, combined with an attractive screening hedge or row of trees. Alternative fencing materials are concrete and plastic, with the advantage of minimal maintenance, long life and the ability to specify a colour to match the surroundings. These benefits mean that such materials are being used increasingly for decorative fences on entrance drives and other areas close to the club house.

Portable temporary fencing to protect course works and ground under repair or direct cars, players and spectators along specified roadways can range from the simple rope or plastic chain suspended on pigtail steel pins to brightly coloured polyethylene mesh to crush-type barriers manufactured of galvanised tubular steel. The latter may be free-standing on splayed legs or, for added security, slot into concrete blocks.

There are, literally, hundreds of fencing systems to choose from and this article has concentrated on just the main types on the market without making any specific recommendations regarding product name or manufacturer. Anyone wishing further information on the two fencing trade associations mentioned or advice on particular designs or products and the British Standards covering their manufacture or installation is invited to contact Mr Ray Smith, chairman of the European Fencing Industries Association, on 0386 792033.

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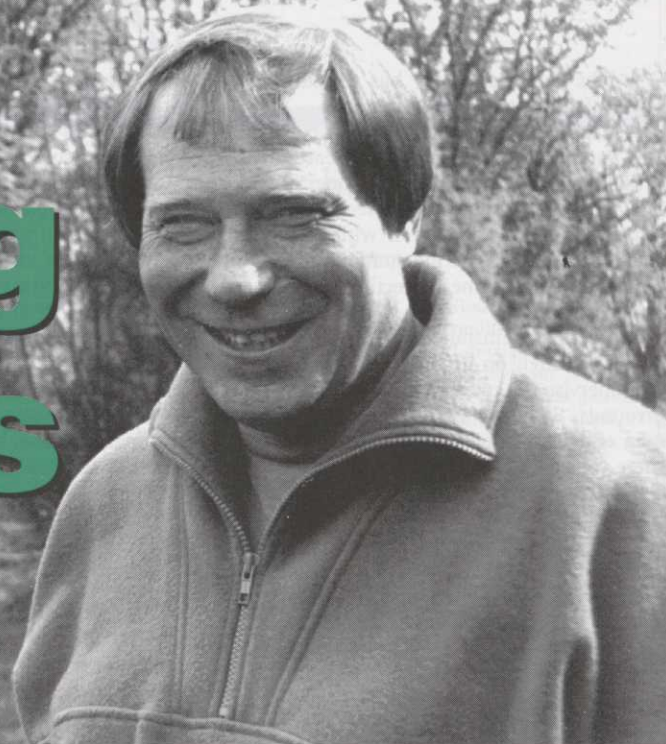
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# Watching the grass grow



**Y**ou've got to admire the way some people drive a tractor. I have an image of Bob Hornegold trundling up and down a fairway pulling a roller behind him. At the time, he was furious because someone hadn't finish a job and if it was to be done in time, he had to do it himself. So he did, working his anger out on the job – and the tractor.

Bob is not a greenkeeper, he is a specialist finishing works manager. He works on a contract basis for golf course construction projects. He may work directly for a developer – as part of a project management package with his colleague Ian Martin – or he sometimes sub-contracts to the main contractor.

A qualified greenkeeper for many years, he set up his own business five years ago, and owns £40,000 worth of specialist machinery which he uses intensively for bringing new courses into play and then rebuilds and refurbishes as necessary during the months following completion. This sounds a tall order but it comes easily to a trained mechanic, which he is, having once had a passion for motor racing. He took it up competitively for a while, retiring after a 'near thing' nearly finished him off. I'm sure he brings racing skills to his tractor driving.

Construction and maintenance consultancy forms the backbone of his company. He has been consulted by clubs all over the country and in Europe. When he undertakes finishing works, though, it is a more long-term affair and calls on all the combined skills and experience of his 30 years in the business. It is the final stage of construction.

Project management is the framework within which Bob is usually employed, and in concept, it is a good-value, high-quality alternative to contracted golf course construction. It offers greater financial control to developers who want more direct involvement than if they employed a contractor to build the course. This is because

**You'd be hard pressed to find anything that Bob Hornegold (pictured), hasn't done.**  
**MAJA MIHAJLOVIC catches up with the greenkeeper turned specialist finishing works manager**

the contractor has to concern himself with making some profit and covering his administration costs, and this will inevitably influence the way he runs the project. Whereas if the developer takes the administration on himself and employs Ian and Bob, for example, as project managers, he will pay them a time-related fee, and together they will negotiate prices for materials directly with the suppliers, making the choices themselves of how best to balance quality and cost on each essential item.

At West Park, a brand new 36-hole course at Silverstone, Ian Martin project managed the construction and Bob Hornegold took on the finishing works and maintenance contract. The developer, Jeff Sargeant, is quite clear that having his course construction project managed was by far the best option, but then he was prepared to wade into the hard work of co-ordinating the whole thing himself. To be effective he needed the close collaboration and support of the project managers. It's an intense relationship at the best of times, even if those involved are meek – that's not a word you'd apply to Hornegold, though. So if the developer is determined enough, and not too sensitive to a little friction, great things can come of it, as they obviously have done at West Park.

Jeff Sargeant, politely noting that Bob doesn't suffer fools gladly, unreservedly acknowledges Bob's skill and professionalism. "He knows his

job inside out... and he has produced for us some of the best greens in the country. When people come here, they think they're playing on a much more mature course than one which only opened its last nine holes two weeks ago."

You can't get much higher praise than that and it is due to his thoroughness – Sargeant calls it perfectionism – and eye for detail, based on a rigorous understanding of construction principles, that he achieves such fine results.

The finishing works begin after the construction manager has built the first green or tee in its subsoil form, establishing the contours according to the architect's drawing. Ian will also have installed and backfilled the drains and spread the gravel drainage carpet. At this point, Bob begins by spreading the blinding layer with a 360° tracked excavator. It is hand raked to mimic the contours in the subsoil base. He then spreads the rootzone mix, which is normally an 80:20 sand and fensoil mix – specified by the architect and approved by the agronomist – also with a tracked excavator.

These three layers – drainage carpet, blinding layer and rootzone – form a drainage system recommended by the USGA for the construction of putting greens. The next stage is to prepare the rootzone for seeding, and this is begun by compacting the mix in several ways, first, with the flotation tyres of a mini-tractor, then with a Wessex Grader attached to the mini-tractor. Bob usually carries out this operation himself, as the contours have to be carefully maintained through what is now about 400mm of drainage material.

The compaction continues with 'heeling in' – it takes some time, is an old-fashioned, laborious, monotonous process, but one which Bob believes is the most effective method of ridding the greens of compaction irregularities. It involves the whole team shuffling on their heels like penguins all over the greens and ➤ 30

29 ➔ tees and supposedly has the additional benefit of creating a good team spirit.

After the pub or a quick nap, out comes the Toro Sandpro, with groover, to create a tilth. Fertiliser is scattered with a Cyclone Spreader and the sowing is done with a seeder, followed by travelling over the green with a Sandpro minus the groover. The indentations created by the tyres provide some protection for the seed until it germinates.

While this painstaking process is being worked through on greens and tees, Bob will also supervise the cultivation of the fairways and surrounds. Stone 12mm and larger is removed using either a Harley Power Rake or a Blec, or where the stone is especially bad, a Rotadairon or Buryvator. This process will in itself create a suitable tilth on which to spread the fertiliser and sow the seed. Finally, the seeded surfaces are rolled. He also ensures that the irrigation system has been correctly installed and primed ready for when the seed is sown.

To help him complete the work he says he needs a good assistant. In the past he had a young foreman called Keith Cracknell. Keith ended up staying at Golf de Chantilly where they had been employed on the finishing and maintenance contract, so Bob lost a valuable colleague. Apart from his assistant, he will employ local contract labourers, so that, for a project like West Park, Bob and his foreman will each head a team of about five men.

"So how do you get a whole load of people to do what you want them to in the time you want them to do it?" I ask. He smiles and says he thinks fairness is very important, firmness nearly so, but also, "training can only do so much to make a good manager, but when it comes down to it, I think it's something you've either got or not. Not everyone can do it".

Knowing how to start and keep the team working hard and using the right methods is fundamental to co-ordinating any contract. An essential skill for any head greenkeeper, strong man-management becomes all the more crucial when big budgets and strict timetables are at stake. Jeff Sargeant also paid tribute to him on this score: "He works his men hard, but he leads them from the front, which is a rare thing. He expects no more or less of them than of himself – but he's a good motivator, and most importantly, he gets the job done." I thought of Bob steaming up the fairway in his tractor...

Bob's facility with construction is certainly based on good experience accumulated over many years and seems to come also from a special aptitude for understanding form and structure in a 3-dimensional way. His experience in construction has included employment at Lords and Leyton Orient FC. At the end of each football season, the whole pitch is stripped and rebuilt. He sometimes feels that old golf courses could benefit from this kind of treatment. Instead they are expected to go on forever under thousands of feet and trolley wheels.

His time as construction manager for the Alliss/Thomas partnership at the Airlinks Course, Heston and at Old Thorns was testing but very valuable experience. Airlinks was built on a landfill site and there were problems with methane. They were also experimenting with pure sand greens and Penncross bent grass. Not as much was then known about the necessary regime for this kind of green, so the need for intensive feeding and scarifying programmes

was not really appreciated or catered for in terms of staff. To add to the misery, the course was a pay-as-you-play and suffered heavy use. They faced the consequences, and lost all the greens. Experience comes in many forms.

This seems particularly true in Bob Horne-gold's case, and when it comes to the final, perhaps the most exciting stage of the creation – watching the grass grow and establish – it is worth noting that he has been a head greenkeeper on courses all over the country for a total of 12 years. These include Dyrham Park, Chigwell and the Harry Colt-designed Thorndon Park. And throughout his work in construction and maintenance, he has worked in collaboration with the best agronomists in the country.

**'Fair enough, learn all the different theories, know what they are, but then don't just stick to one'**



Sowing the seed marks the end of the finishing works. On some projects he is not brought in at all before this point is reached, undertaking only the growing-in and maintenance of the course. There is apparently nothing relaxing, though, about watching grass grow, since the first signs of germination spark off a period of feverish activity. Bob will need to check on the growth of the new crop every day, keeping watch over the sward and looking carefully for signs of disease. He needs to be able to recognise the signs and know how to remedy any problem at its earliest manifestation before it gets the chance to devastate the whole crop. This is the time in its life when grass is at its most vulnerable, so the regime is very intensive. Apart from other diseases, the presence of worms and rabbits can also cause serious problems and have to be dealt with one way or another.

The first mow is done when the height reaches 25mm on greens and tees, 37mm on surrounds, 50mm on fairways and 75mm in areas of rough. The regime is from that moment on as intensive as that on any course, and is co-ordinated with a still constant programme of topdressing, fertilising, treating with pesticide, fungicide, lumbricide, herbicide etc. This is also the time Bob likes to bring in a new head greenkeeper. He will brief him thoroughly and be available to help and guide for as long as he is needed.

Given ideal conditions, the new course can be open for play within a year from seeding. This obviously depends on a number of factors. So I asked Bob about the effect of budget and time constraints, always more apparent at the closing stages of a project, on his work. After all, the pace of growing grass would seem to be incompatible with the pressure put on new projects by the financiers. In answer, Bob can look you in the eye and say that if he manages the growing-in he knows he can produce high quality grass by opening day. He accepts that it is a commercial venture and he's realistic about that, and confident of his ability. He has brought a green

from seed into play in a matter of four months, from May to August, and in the face of this, he is left little convinced of the value of using turf at all. It was working in the USA that taught him how fast a good quality grass crop can be made to grow, and he has always been prepared to put into practice the things he learnt over there, when appropriate.

A theorist however he is not. Neither does he seem retrospective in his views. He is really much more a pragmatist. "Fair enough, learn all the different theories, know what they are, but then don't just stick to one. He has, himself, what amounts to many years educational training – being dyslexic made it that much harder for him to express himself in writing, but he overcame the difficulties and came out with the highest national marks for his City and Guilds, Stage 2 (as opposed to Phase 2) Greenkeeping Option. Since then he has gone on to Myer-scough College where he finally completed his training in 1982. You could say stubbornness is another of his strengths.

His success in getting appointed to such jobs as West Park depends greatly on his having good contacts among the architects who are in a position to recommend specialists to developers. He has worked with Donald Steel, Cameron Sinclair, Tom Macauley, and Jonathan Gaunt. He has an eye for design and can apparently recognise the above architects' drawing styles one from the other. One of his favourites is Tom Simpson, original designer of Chantilly where he worked a while ago, and Jonathan Gaunt has suggested that greenkeepers of 'vintage' courses by the likes of Colt or Mackenzie will look instinctively for similar qualities in a new golf course.

Bob confirms that a good dialogue with the architect is very necessary to success. In return, architects can be sure that they will see their construction drawings correctly interpreted on the ground – no routine thing, it's not a skill many have perfected. He is able to visualise what a contour will look like when it has been built up with the blinding and rootzone layers, and how it should marry-in with the surrounds and how it will affect maintenance in particular, but also, play.

There again even his knowledge of the game itself is the product of experience gained at the most competitive levels, having once played to a low handicap and having caddied on the Tour. You'd be hard-pressed to find anything, in fact, that Bob hasn't done at one time or another.

If he sounds a hard nut to crack, it's probably true, but it would be unfair not to acknowledge that he has a warmth and loyalty that have won him great respect among his friends and admirers, even among less committed acquaintances.

But the thing that strikes me most is his incredible range and adaptability. He has done so many things, gone in so many different directions. Although he would seem to have the solid career behind him that contains the makings of the well-respected professional, he is in many ways a non-conformist, and there is a sense that he could still head down another path entirely if the opportunity arose. Or, if the mood ever takes him, he could go from strength top strength in his burgeoning golf course management practice.

■ The author, Maja Mihajlovic, is a writer whose speciality subjects include golf course architecture, design and maintenance practices.