

JUNE 87

Golf

GREENKEEPING

MANAGEMENT AND MAINTENANCE FOR THE GOLF COURSE INDUSTRY

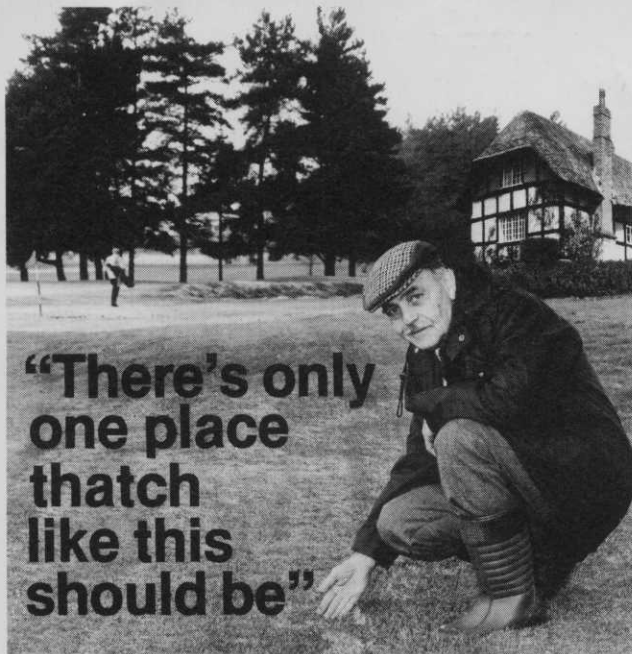
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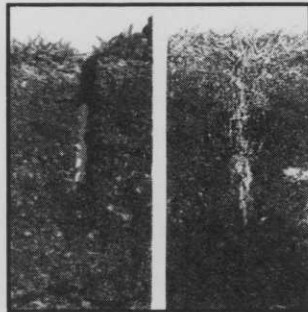
"When you think how weather-tight a thatched roof is, you can see how a build up of thatch will block out air, light and water from reaching the roots. Of course, a little bit of thatch is normal and helps turf to wear better. But, if it builds up too much, you will soon have problems.

And they've got a lot of special features, like the Greensaire's 2 inch by 2 inch core pattern. And the unique design which makes each tine go in and out absolutely vertically so that it doesn't damage the top surface like some others can.

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"In fact, you should have a look at the whole range of Ryan turf maintenance equipment. It's the best you can buy".

"Why do I think Ryan hollow tine aerators are the best? They're exceptionally well made. Tough and reliable.



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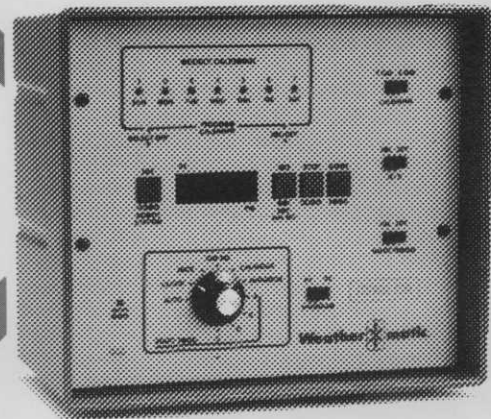
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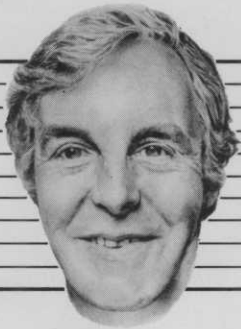
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Greenside Comment...



John Lelean

Enterprising Developments

This issue of Golf Greenkeeping is the first as a completely independent publication for the management and maintenance of golf courses in the United Kingdom. Regular readers will notice several changes in the presentation and layout of the magazine, designed to provide not only up to date information on the latest techniques, but in-depth articles featuring interesting projects, concerned with golf course constructions.

The development of a new municipal course at Oulton Hall at Rothwell near Leeds, this month is an example of the type of projects Golf Greenkeeping intends to highlight during the coming months.

The Oulton Hall Golf Course is quite unique in its concept, because the local authority have used a combination of resources; their own parks and recreation facilities, outside advice and most importantly MSC labour. Not only has this ambitious scheme provided people who would otherwise have been unemployed with a job, but because there is

an 'end product' for all to see, considerable enthusiasm has been generated among those involved.

Whether one approves of the political aspects of job creation schemes or not, in this instance there is a considerable benefit for everyone. A golf course is under construction within the budget the ratepayers can afford; a worthwhile job has been provided for people who would otherwise spend their time waiting for pay day on the dole; not least the golfers of Leeds will have the pleasure of another fine course.

The driving range which opened shortly after this article was prepared is so popular, customers are queueing up to use the facilities, providing income already to off-set the costs of construction.

There is a desperate shortage of golf courses around our densely populated cities requiring a combination of finance, land, enterprise, drive and enthusiasm, as well as a relaxation of rigid green belt restrictions.

Because of the crippling costs involved in building an eighteen hole golf course, future developments can only take place in one of two ways.

Firstly by municipal authorities who have vast tracts of land, though they may be earmarked for other uses. Secondly by private enterprise, if the planning controllers will accept that golf courses not only provide leisure activities for thousands, but they are conservation areas in themselves.

Collingtree Park, also featured in this issue is a case in point. A total of £50 million has been made available for this enterprising development, most, it must be accepted, will be for the construction of high-class housing, hotels and a private clinic, but there is nothing wrong in building a golf course with a profit motive.

What is certain, the established member-owned clubs, the backbone of golf in this country, will never increase in number.

Next Month: **FRED HAWTREE DEVELOPS THE HUGGING & KISSING SYNDROME COMMUNICATION SYSTEMS FOR GOLF COURSES FURTHER DEVELOPMENTS AT DUBAI THE COURSE FOR THE OPEN CHAMPIONSHIP PRODUCT REVIEWS**

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Bill Matthews, Superintendent,
Parks & Gardens,
Thanet District Council, Kent.

Geoff Sadler, Head Groundsman,
Talbooth Hotel & Restaurant, Essex.

David Jones, Superintendent,
Parks & Gardens, City of London.

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Floranid gave us fast and long lasting results.”**

David Jones said, “Floranid cut leaching to a minimum so we needed fewer applications. We used it on a wide range of areas including raised shrub and flower beds.”

Bill Matthews was looking for strong, even growth sustained throughout the season. “Floranid more than lived up to my expectations. It produced the hard wearing grass that I needed and also gave me vigorous, healthy shrubs with good colour and appearance.”

Geoff Sadler considers that he has already saved money. “Our grass has to look good. Floranid gave us good colour and rapid recovery even after hard wear but without any excessive growth. Floranid has certainly worked well for us.”

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NEWS ROUND-UP

PEOPLE, PRODUCTS AND DEVELOPMENTS

IN THE GOLF COURSE INDUSTRY



New Powered Aerator from Sisis

The new Sisis Hydrocore is a powered aerator developed from the well proven Autocrat, ideal for all fine turf areas.

It is a highly manoeuvrable machine which will turn in its own length. There is also a reverse gear for tight spots and the tines are raised and lowered hydraulically.

With its speed of operation and its 3ft. (91cm) working width, the Hydrocore gives a fast rate of coverage; an average size golf green can be completed in approximately 30 minutes.

Interchangeable hollow coring, slitting and solid tines are available for penetration to 3" or 4". Adaptors can be fitted to the tine holder tubes to effectively double the effect of the Hydrocore. By fitting a set of 8 adaptors and 16 tines approx. 150 holes per square metre can be achieved. When hollow coring, a considerable amount of thatch is thus removed as well as the extensive relief of compaction. The tines enter and are withdrawn completely vertically so there is no tearing of the turf and minimal disturbance of the playing surface. Depth of penetration is adjustable. Integral swath boards are fitted to windrow the cores when hollow tining.

NEWS 1

Appointment of Head of Horticulture

NEWS 2

New Pump from Grundfos

A horizontal single stage Jet Pump, suitable for a wide variety of water supply applications, has been introduced by Grundfos Pumps Ltd.

Designed to cater for shallow well water supply, boosting and sprinkling, the new pump, known as the JP5, is suitable for both continuous and intermittent operation.

Both JP5 and CH pumps can be supplied with a booster set for automatic operation, comprising a diaphragm pressure tank, an adjustable pressure switch, pressure gauge and five-way adaptor.

Further information and prices can be obtained from:-

**Grundfos Pumps Ltd.,
Grovebury Road,
LEIGHTON BUZZARD,
Beds. LU7 8TL
Tel: (0525) 374876**

NEWS 3

Irish Farmer seeks finance for new golf course

A top golf course architect has given the thumbs up to an Irish farmer's plans for developing a new first class 18 hole golf course near Dublin.

Farmer, John Wilkinson wants to turn about 130 acres of farmland just 13 miles north of the city centre into a course to ease massive waiting lists at local clubs.

Keen golfers face a wait of up to 10 years to join one of the other 10 clubs in the Leinster area.

Most clubs are refusing waiting list applications because of the huge backlog among an estimated 50,000 golfers within 25 to 30 miles from the centre of Dublin and John Wilkinson is looking for backers to help him get the project off the ground.

Eddie Hackett, one of Eire's best known golf course designers has drawn up a detailed Feasibility Report and plan for the course.

His proposed course would be in the shape of "an impressive

arc" and consist of two loops of nine holes each, starting and finishing at a Club House. The total length would be 6,700 yards, giving a par of 72 (ss 74). There would be four par three holes, four par fives and ten par fours. The eighth hole would be a "fine dog leg line of play" and the long holes would be broken up by shorter ones. Existing trees, hedges, ditches, a stream, a large pool and a river would provide a course of very varied and attractive character.

Mr. Hackett envisages that the course could be constructed and opened within two years. He summarised the excellent potential for the course as follows:

"I must say that a combination of situation, pleasant and varying gradients, adequate acreage, good drainage, magnificently featured land, mixture of terrain... and superb golfing virtues, would all combine to make a golf course here uniquely attractive and memorable".

NEWS 4

Mr. Tony Bass, has been appointed as Head of Horticulture at the Cambridgeshire College of Agriculture and Horticulture.

Mr. Bass has been at the Farm College in Milton since April 1986 and prior to that was a Lecturer at the Northumberland College of Agriculture for three years.

The newly-formed College is an amalgamation of three centres - the Cambridgeshire Farm College

of Milton, its Agricultural Education Centre at Sawtry and the Horticultural Station of the Isle College, Wisbech.

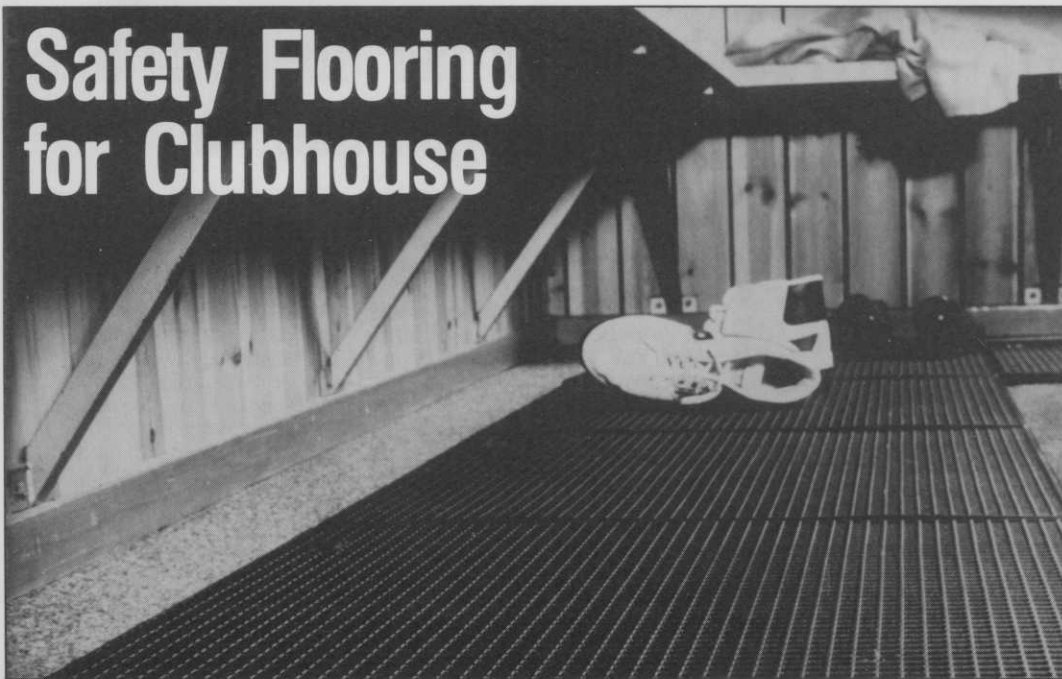
In addition to a range of part-time and short courses, other courses offered by the College include:

- National Certificate of Horticulture
- Amenity Commercial Interior Landscaping



Booster Set (centre) and Hydrostat (left)

Safety Flooring for Clubhouse



Increased safety with Perstop floor slats

The new floor slat from Perstop Form, provides the perfect solution for hard, cold and wet floors.

Easy to install, clean and maintenance free, the floor slats are manufactured in a special grade of low density polyethylene, chosen particularly to provide the correct cushioning effect.

Resistant to most chemicals, the slat is hygienic with surface profiles that enable good drainage and have no dirt trays.

NEWS 5

The floor slat reduces the risk of skidding and slipping by keeping the walking surface dry.

Several sections can be linked together to cover large floor areas, without the need for additional parts, and are easily cut to shape to fit awkward corners.

Available in standard brown or beige ex-stock, but with other colours available on request and subject to minimum order quantities, the dimensions of the slats are 600 x 600 x 15mm; the weight is 0.9kg.

Contact: The Editor, Golf Greenkeeping for further details.

New Company organisation for Mallard Trucks

Formerly known as David Brown Developments, the company, after major re-organisation has adopted the trading name of Mallard Trucks Ltd. They will continue manufacturing at their Ferry Road, Fiskerton, Lincoln address and David Brown - a well known figure in the industry - will continue his role in product design and development, and carry responsibility for sales and leisure markets.

The re-organisation has meant becoming part of the Wood Group Ltd., a substantial private group of companies with a turnover of some £25m. The group is run by Mr. Sidney Wood who will have a non-executive role as Chairman of Mallard Trucks. Two new Directors have been appointed to the Board of Mallard, Mr. David Kilby - Finance and Mrs. Chris Hewitt - Marketing.

Product developments in the pipeline include a new Mk.5 4-wheel truck - shortly to be released - and a completely new Golf Caddy Car. Both of these will utilise the unique transmission developed by David Brown, which links the latest Ford 4-speed gearbox to a variety of suitable air or water-cooled, petrol and diesel engines, thereby giving the customer an unsurpassed range of power options together with a full 1-ton carrying capacity. Fitted with the Mallard Multilift, all of the trucks in the range can be connected to a wider range of existing turfcare implements and this, without the removal of the 1-ton capacity body.

NEWS 6

New Safety Blade for Rotary Mowers

A revolutionary new blade to replace conventional steel blades in rotary mowers has been developed in Australia by Merlin International, Melbourne, and is being distributed throughout the UK and Eire by Garfitts Ltd. of Sheffield.

The new Merlin blade is manufactured from a rugged polyamide composition "Zytel" developed by DuPont Corporation. Its performance on wet and dry grass equals that of a steel blade, but the well-known dangers inherent in the latter are reduced drastically in the new product.

Cable-cutting, for example, is virtually eliminated with a Merlin blade, which tends to reject the insulated cable rather than tangle with it.

The fear of flying chippings from stone and concrete is all but removed, and in the event of the feet coming into contact with the rotating blade, any injuries will undoubtedly be less than if caused by a comparable steel blade - although strong footwear must always be worn when using a hover mower.

Garfitts of Sheffield, are the leading manufacturers of steel replacement blades for rotary mowers and John and Derek Cooper the joint M.D.'s are enthusiastic about the new Merlin blade.

"Anything that contributes to greater safety in the garden has to be welcomed", says John Cooper, "and I see the Merlin blade as a positive advance in rotary mowing. Garfitts have a strong connection with the mower repair industry throughout the British Isles, and I'm sure we will quickly establish supplies for greenkeepers wishing to replace his present steel blade.

NEWS 7

Two new Representatives join SISIS



Mark Mills, joins as a Sales Demonstrator. He is single and lives in Ashstead in Surrey and will cover the South East of England as Demonstrator/Sales. Mark was formerly with Sisis Distributors, T. Parker & Sons Ltd., Surrey.



Tony Cundall, will cover the Greater Manchester, Cheshire and Staffordshire area.

He previously worked on the greens staff at Crewe Golf Club and then became a landscaping contractor. Golf was a major hobby but for the past 6 years all his spare time has been taken up with fund raising as an active committee member of the South Cheshire branch of the Muscular Dystrophy Group.

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FOCUS ON ROTHWELL

... JOHN LELEAN REPORTS ON THE BUILDING OF A NEW 27 HOLE GOLF COURSE FOR THE LEEDS CITY COUNCIL.

The City of Leeds, has sixteen golf courses, including five run by the municipal authority. By next year this will increase to seventeen when the new public course at Rothwell is due to open, initially as eighteen holes and later with another loop of nine.

Moortown and Alwoodley, designed by Dr. Alister Mackenzie with Harry Colt are listed in the top fifty for the British Isles. Moor Allerton, Robert Trent Jones's first British course although not regarded as a classic nevertheless is a redoubtable test of golf. Now the Leeds Council are aiming to produce a course of championship standard on the rolling parkland at Oulton Hall, seven miles south of the city centre.

The demand for more golf courses can be seen by the enthusiasm displayed by golfers wanting to play the municipal tracts. Teeing off by the light of car headlights is a common feature at weekends by those using the two courses at Temple Newsam. At Middleton and Gotts Park, nearby cafes open at 5.00 a.m. to provide refreshment, to those fanatics waiting for the pro's shop to open, to book a tee off time.

The private clubs all have full membership lists and at Wetherby where residential development is mushrooming, the pressure is so great even those wanting Monday to Friday golf will be waiting many years before consideration for entry.

Oulton Hall is a listed building, built by Sydney Smirke in the early 19th century. Unfortunately by the time Leeds MDC was able to acquire it, vandalism and the passage of time had brought the building to a dilapidated state. A planning brief for the Hall had been approved, and it was intended to convert the Hall into a hotel and conference centre with associated facilities for golfers.

Such is the state of our society mindless destruction could well have put this superb house beyond the state of repair. For many years the grounds have been used informally by local residents and the pond in particular has attracted interest from coarse anglers.

The feasibility of developing an 18 hole golf course on the Oulton Estate was investigated in 1972 but difficulties with land ownership, tenancies, underground coal mining, and finance, hindered

progress. Furthermore it was recognised that acquisition of the Hall grounds was essential to allow development for an 18 hole golf course. The grounds were acquired last year and coupled with a modified financial climate readily available MSC labour, provided the impetus for development to start.

As well as developing 18 and 9 hole golf courses a 16 bay driving range was proposed and farm buildings picked out for conversion into a maintenance depot and irrigation control point., with the possibility of a green-keeper's cottage. Clubhouse facilities will be sited in the Victorian stable block.

Leeds wanted to be sure that the golf course, would attract a range of golfers from beginners to professionals. With this in mind Dave Thomas Ltd., were engaged in the spring of 1985 to provide the overall design input and occasional site inspection. The day to day design and management of the project, however, has been under the direction of the authority's own Chief Landscape Architect, Mr. John Morgan, who has drawn together expertise from various sources.

Forestry advice was provided by the City Forester, ecological advice has come from the West Yorkshire Ecological information and advisory service. Turfgrass matters were overseen by the experienced parks staff. Water and fishery matters were dealt with the help of the Yorkshire Water Authority, only irrigation design is being sub-contracted to a specialist company.

On the implementation side, the scheme is unusual in that the works have been by a balanced combination of MSC labour, Parks, Landscape and some contract labour.

Construction commenced in the spring of 1985 when an MSC team started preliminary works on site, including fencing and clearing out existing ditches and drainage works. At this time the condition of the existing woodlands was assessed by the City's forester.

During early 1985 Dave Thomas, in conjunction with the authority, provided the sketch layout for an 18 hole course. A detailed planning application based on this plan was submitted, and approved. Subsequently the consultant provided green and typical tee drawings, and a general specification.



Woodland area opened out to take the tee for the 3rd green.

August 1985 saw rapid progress on the course with the hire of a 915 International and a Caterpillar D8 and Box. The major earthworks then began.

Firstly the position of all the greens, tees and dog-legs to fairways were transferred from the plan and positioned exactly on site. This enabled the consultant to check the positions where he had anticipated that they would be, and if not, to slightly amend them as he thought necessary. After final agreement to these positions, they were then surveyed for future reference. For all positions in wooded areas, tree felling works were carried out carefully to remove only the minimum number of trees.

The next stage was to strip and stockpile topsoil from areas requiring regrading. To avoid problems of grass sods in the soil stack, grass areas were either chemically treated with 'Spacor' or rotovated before being stock-piled. Fairways were stripped over a width of approximately 40 metres. Greens for approximately 40 x 40 metres

and tees for approximately 70 x 30 metres. This allowed adequate room to shape them and marry grades into the surrounding landform.

Earthworks involved both large and small areas, and different machines were required depending on the scale of the job. The machines ranged from a D8 and Box to a 951 Caterpillar excavator, 915 International excavator, and a JCB.

The greens were constructed by first removing the topsoil. The perimeter of the greens and any bunkers were then marked out on the ground using spray paint and the level profiles were erected. These areas were then shaped using a 951 Caterpillar excavator for the main cut and fill works, and a JCB to create the initial shape of the bunker, allowing for approximately 400mm of stone, sand and peat on top of the formation level.

On certain greens the D8 and Box (and sometimes the D8 on its own) were used to obtain an initial shape and level to the greens when, for example, they involved cutting into an existing sloping area.



Waterfall built by the M.S.C. labour linking the two lakes.



Early stage of construction to the 2nd green, showing the stone base.

When formation levels were achieved, trenches were dug to accommodate herringbone land drainage, using wavencoil pipes, 80mm diameter for mains, and 60mm diameter for laterals, all wrapped in 'Terram' and covered with 37mm diameter clean hard stone. 'Terram' sheets were then laid over the formation base and the land drains, and then a further 100mm of stone carpet was provided. This was then blinded with 3mm 'Lytag' before receiving a 350mm layer of 4:1 sand and peat by volume, which was mixed on site using a hand rotovator, to provide a seed bed.

Earthworks and grading for tees was either on a cut and fill basis or using surplus materials from other parts of the site. The tee surfaces were constructed flat from side to side and the majority were sloped to drain rearwards from the front edge at between 1 in 100 to 1 in 200. Every effort was made to compact the tees in layers to prevent subsequent settlement. Slopes between individual tees and tee banks were kept to a maximum of 1 in 5 and wherever possible tees were not excessively elevated so that they blend smoothly and naturally into the surroundings.

A 150mm depth of topsoil was placed on all the tees, followed by sharp sand at 2500kg per 100 square metres. The whole tee surface was then rotovated to produce an even mixture of sand and topsoil prior to seeding operations.

On any fairway where major earthworks were proposed, longitudinal level sections were prepared so that cut and fill areas and depths could be identified easily on site. The topsoil was then removed by a D8 and Box and deposited in stock piles as near as possible to where the soil was to be respread. In many instances the works were phased so that the

topsoil went straight back onto an adjacent area that had been regraded. Profiles were erected to achieve proposed subsoil levels.

After the subsoil had been graded a 150mm layer of topsoil was spread over the areas and prior to the seeding operations some of the more compacted areas were subsoil ploughed at approximately 1 metre centres in two directions.

The seeding operations on the fairways and around the greens involved breaking up any hard pans by ploughing, disc harrowing, dutch harrowing, seeding, chain harrowing and cambridge rolling, followed by stone picking as necessary.

Bunkers were excavated to a depth of approximately 500mm by using both the JCB and the 951. First the JCB marked out the area and generally shaped the bunkers, and then the 955 tracked and married the bunkers into the surrounding ground. The bunkers were constructed to allow for 100 to 140mm of bunker sand on top of a lateral connection to the land drainage system or a soakaway at some distance.

When the fairways and surrounding areas of the greens had been soiled the bunkers were soiled and seeded to the bottom of the inside banks. This was so that the actual shape and size of the bunker could be marked and cut out nearer the time of the opening of the course. This allows a lip of at least 180mm thickness to be left to act as a retaining structure to prevent loss of sand by erosion. When in place, the bunker sand comes up to within 50mm of the top of the lip.

An interesting feature of the course involved the creation of two small lakes, a meandering stream, and the dredging of three existing ponds, one of which was in use by anglers. Great care was taken to safeguard the ecology of the ponds. However, in order that the largest pond could be

TECHNICAL INFORMATION

Fairway / Tee Grass Mix:-

12.6 g/m ²	40% Chewings Fescue - Tamara
	35% Red Fescue - Oriflamme
	15% Smooth Stacked Meadow Grass - Baron
	10% Browntop - Saboval

Greens Grass Mix:-

35 g/m ²	80% Chewings Fescue - Atlanta
	20% Browntop Bent - Saboval

Fertiliser Materials for Pre-Sowing:-

75 g/m ²	10-15-10 Granular Fertiliser to tees and fairways
70 g/m ²	20- 5-10 Granular Fertiliser to Greens

Sand Specification:-

The sand used is uniformly graded sand, free from silt and clay, stones, roots, rubbish and chemical contaminants and has a pH of less than 6.8.

Partical Sizes are as follows:-

Maximum	2% above 2.00 mm diameter
Maximum	5% between 2.00 mm and 1.00 mm diameter
Minimum	80% between 1.00 mm and 0.300 mm diameter
Minimum	45% between 1.00 mm and 0.600 mm diameter
Maximum	15% less than 0.150 mm diameter
Maximum	5% less than 0.075 mm diameter

Gradation Index D90/D10 = less than 5

Salinity - The sand has an electrical conductivity of less than 2 m/mhos per cm at 25 degrees Celsius.

Peat Specification:-

Finely textured (preferably milled and sieved) peat having a pH of 5.5 to 6.5.

Trees Planted:-

Trees for the Main Woodland Area:

Sweet Chestnut	English Oak	Sessile Oak	Beech
Sycamore	Larch	Scots Pine	Austrian Pine

Trees for Large Groups:

Lime	Hornbeam	Field Maple
Norway Maple	Sweet Chestnut	

Trees for Small Group and Individuals:

Hornbeam	Cherry	Lime (Large Leaf)
Chestnut (Baumani)	Field Maple	

The shrubs to be used as an understorey and fringe planting amongst the groups and also in the existing woodlands where appropriate, and will include:

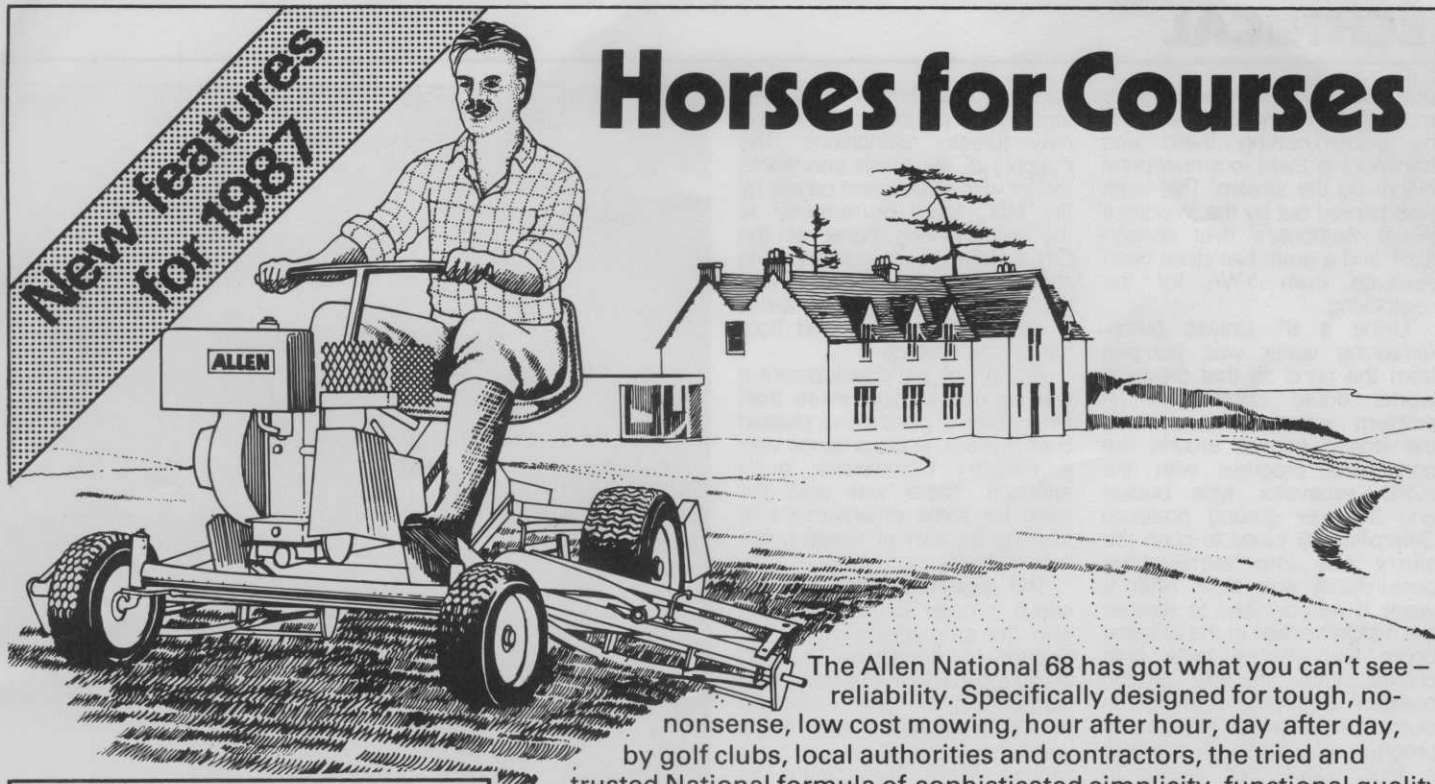
Hazel	American Elder	Hawthorn
Guelder Rose	Snowberry	

Equipment used for Construction:-

Caterpillar D8 and Scraper Box	- Topsoil strip, regrading sub layer, topsoil spread
Caterpillar D8 and Ripper	- Relieving compaction
Caterpillar 951C with 4 in 1 bucket	- Final grading and formation works
JCB 4 x 4 Turbo Extradig	- Digging drain trenches, initial work to bunker, etc.
915 International Harvester with 4 in 1 bucket	- Final grading and formation works
Caterpillar D5 LGP Bulldozer	- Cleaning out lakes
22RB Dragline	- Cleaning out lakes, formation of new lakes
Moxy D16B Dumptruck	- Moving slurry from lake
1390 David Brown Agricultural Tractors and attachments including sub soiler, plough disc, dutch and chain harrows and Cambridge Roller	- Working up prior to seeding Preparation and seeding works
Caterpillar 215B Hydraulic Excavator	- Placing sand and peat on greens
Dumpers, Rollers, etc.	- Miscellaneous site works

Continued on Pages 10 & 11

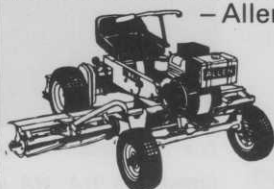
Horses for Courses



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- ☆ Full 68 in. width of cut
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TECHNICAL

dredged, it was necessary to move the fish, and this was done by electro-netting them and transporting them to a new pond higher up the stream. This work was carried out by the Yorkshire Water Authority's river division staff, and a grant has since been received from YWA for the re-stocking.

Using a 6" Univac pump, remaining water was pumped from the pond so that dredging works could commence. A problem arose, however, with the limited access around the pond and progress with the 22RB+excavator type bucket and the low ground pressure Caterpillar D5 (used to push the slurry out into surrounding pastureland) was slow. After a week, it was decided to remove the middle section of the dragline boom and change to a grab bucket. With the low ground pressure Caterpillar pushing the slurry further afield satisfactory progress was made. In this way it took about four weeks to complete the dredging to this pond and two and a half to clear the two other smaller ponds.

In line with the City Foresters recommendations, a management programme of selective thinning, surgery and replanting began in late 1985. A great number of the trees felled were cut up on site, using a diesel powered saw generator and re-

used for the timber protective fencing on the perimeter of the new forestry plantations. The majority of the brash and waste timber was either burnt on site by the MSC team or removed to the woodburning boiler at the City's horticultural nursery. The remaining brash and timber was left within the woodland areas to encourage wildlife and flora habitats to develop.

As part of the development it was agreed to plant more than thirty acres of plantations, phased over 3 years, in accordance with a Forestry Commission grant approval. There was also the need for some ornamental tree planting as part of creating the course itself.

The species planted are indigenous in order to be compatible with the surrounding vegetation and the soil conditions. The tree areas alongside the fairways and surrounding the greens will be mainly broadleaves, with shrub understorey and places, and sizes ranges from transplants to standards with the emphasis on feathered whips. Protection against vermin involves fencing to large blocks and rabbit collars to individual trees.

The layout incorporates a number of interesting features. These include: several greens and tees cut into existing woodland; a meandering stream with a timber ha-ha across one of the



The 15th green has been set into a former quarry after landscaping.

(inset) The 'HA - HA' under construction approaching the 4th green. Spring water has been tapped to provide a constant flow to the lake over a gravel bottom.

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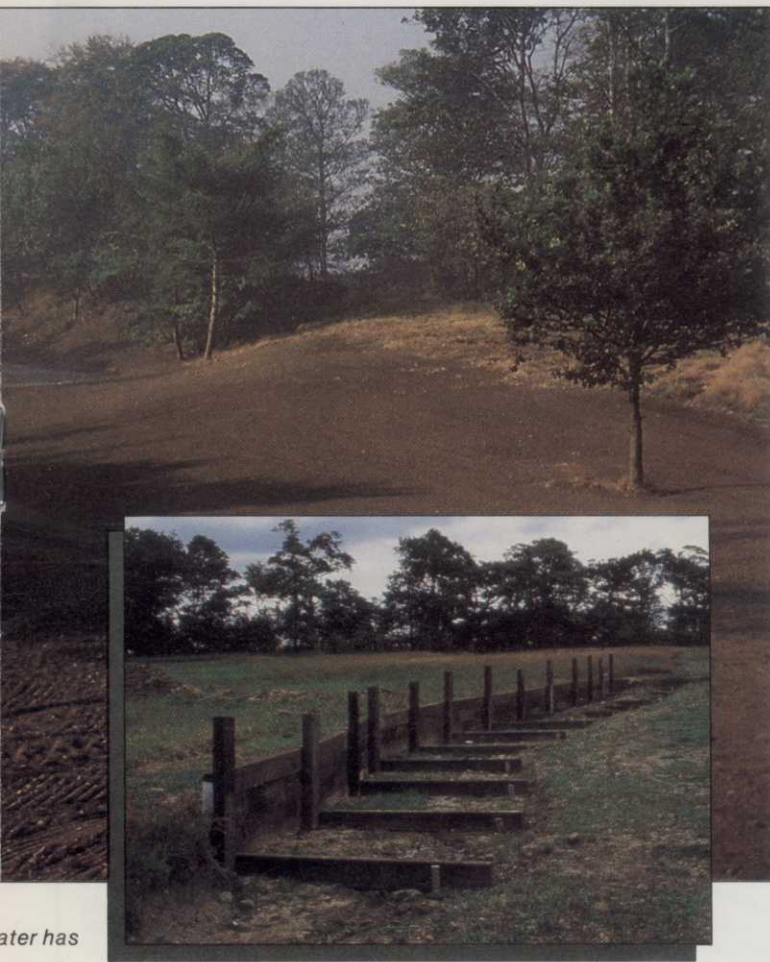
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ater has

fairways; a timber bridge and rock waterfall between the 2 new lakes; and a small narrow green in a former quarry.

An aspect of the development of this championship style golf course which may be considered by some to be controversial was the extensive use of MSC labour. In the event this has worked well, and is worthy of note.

The vast majority of MSC work has been in connection with general site clearance and in providing a land drainage system to the whole site. This has involved establishing mains, and then laterals where site conditions were found to be poorly drained, apart from the herringbone system in the greens.

The MSC team have also been involved in the work to the existing woodlands and in afforestation, including clearing and burning brash and waste timber and removing tree roots from site. They have erected all the protective timber fencing and planted and maintained forestry transplant areas, as well as the half-standard planting in the critical areas of the course.

Other works carried out by the MSC team include: erection of security fencing and gates around the perimeter of the site and temporary fencing around the decaying structure of Oulton Hall; stone picking using agricultural equipment and pond dredging.

CONCLUSION:

This article illustrates the way, in difficult economic times, how construction of a golf course can become financially feasible when the approach is toward a linked Community Programme and a Local Authority Scheme with further support from Forestry Commission and Fisheries grants.

To work on such a major recreational scheme is a real training opportunity for those seeking employment through MSC.

Lastly, the method of working illustrates how a local authority can maximise the use of its own resources and use specialist consultants and contractors in a most cost-effective way.

The Editor is most grateful to John Morgan, The Chief Landscape Architect to Leeds City Council who has tackled this enterprising project with a great deal of enthusiasm, and injected a similar feeling among those working with him.

The information contained in this article has been obtained from a paper prepared by John Morgan for a forthcoming presentation.

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New 50m Golf Complex for Northampton

1976 Open Champion Johnny Miller is to design his first 'own name' golf course at Northampton. Miller made a come back this year, winning the A.T.&T. at Pebble Beach, his first tour victory since 1983

Work on a £50 million golf complex in central England designed by Open Champion Johnny Miller, based on the concept of combining health and leisure facilities on one integrated site has started outside Northampton. It will be the first development of its kind in Britain.

Collingtree Park is the first integrated complex to be built by Health and Leisure International in Britain and is based on the concept of setting top quality executive homes into the beautifully controlled landscaped environment of a championship golf course similar in many ways to both Wentworth and St. George's Hill.

The Company intend to go several stages further by incorporating onto the golf course, Britain's first purpose-designed golfing academy to teach golf to people of all ages and abilities. This will be complemented by further leisure and health facilities designed to give tuition in many other sports. This concept is aimed particularly at senior business executives and professional people and includes a sports injury clinic capable of providing full rehabilitation facilities for top sports men and women. A luxury hotel and homes for retired people are also planned.

Planning authority has been granted by Northampton Borough Council for HLI to develop the 275-acre site a few minutes off the M1 motorway, near Collingtree village, between the motorway and the A508. The total development will cost approximately £50m and take up to five years to complete. Work on the golf course - the first phase

of the project - commenced in May and is scheduled to be open for play by the Autumn of 1989.

The site will contain 185 luxury houses on about 60 acres of grounds in a landscaped environment, set between eight lakes. The championship golf course built to USPGA specifications, with a club house, a four-star hotel, and 45 homes for retired people. Later the site will include a forward health sports teaching academy and health centre as well as a 60-bed nursing home.

Collingtree Park was chosen as the site for HLI's first golf complex because of its geographical position at the crossroads of central England and the access to it by motorway. It is within easy reach for executives and professional people to drive to for a day's golf from the Midlands and Home Counties. Watford and the outskirts of Greater London are only an hour or so's drive away. Access is a few minutes off Junction 15 of the M1 just three miles from the centre of Northampton.

The landscaping of 275 acres involves the moving of more than 350,000 cubic metres of earth and the formation of eight lakes with a surface area of approximately 11 acres. The water features will contain some 25 million gallons and will eliminate the occasional flood problems associated with Wooton Brook which runs through the park. Considerable sums of money are being spent on the woodland management scheme which will preserve existing trees and plant new areas.

The 18-hole golf championship course covering 160 acres will be one of the most spectacular in Europe. It is the second in Britain to be designed to full USPGA specifications - the first being at St. Mellion in Cornwall. Extensive drainage and irrigation will guarantee superb golf play throughout the year.

The course is the first to be designed by Johnny Miller under his own name. Johnny will be responsible for the golf course strategy and has the back-up of Golforce Inc. for the technical

design aspects. The course has been specially designed so that the driving tees lead away from the houses making gardens safe from stray or sliced golf balls. Outlying houses will also be protected by the design of the course.

The club house will include dining rooms, bars and rooms for private functions and provide a personal service which will take care of golfers' needs from the moment they step out of their car until they leave the club.

The academy facilities will include three practice holes of golf - a par 3, a par 4 and a par 5 not provided anywhere else in Europe. There will also be the more usual facilities of a double edged driving range, chipping bunkers, practice greens and putting green.

This specially designed academy will run residential and non-residential courses for complete beginners through to advanced players in both golf and later tennis. A sports hall with squash, indoor tennis, cricket and bowls is scheduled for the latter development stages.

The 185 exclusive 4 to 5 bedroom detached homes will stand in a third of an acre looking on to the golf course. Contracts for building some of the homes have already been agreed with Bovis and Wimpey. It is expected that they will be completed and ready for occupation by 1991.

Negotiations are at an advanced stage for the four-star hotel which will have 150 bedrooms and aimed at both the strong mid week commercial corporate market and the weekend resort guest.

The health centre will be one of the most advanced in the world for dealing with stress among executives, treating sports injuries and sports rehabilitation.

A partner company International Resort Holdings, a golf development consultancy, represents Jack Nicklaus Golf Services in Europe and was the development consultancy involved in the St. Mellion golf course in Cornwall. Shanning Group the other partner is an international healthcare organisation, based at Berkhamsted in Hertfordshire. It has been responsible for hospitals, clinics and nursing homes around the world. Finance for the Collingtree Park project is being provided by Gammelstaden - the Swedish bank.

Mr. Graham Fisher, Chairman of Health and Leisure International said: "Collingtree Park will put Northampton on to the world's golfing map. Collingtree Park has been chosen as the site for HLI's first golf complex because of its geographic position at the crossroads of central England and the access to it by motorway and rail.

TECHNICAL 1

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FEATURE



Seve Schmitz tastes the 'Good Life' in Minneapolis

.....Seve Schmitz is Head Greenkeeper at Ellesborough Golf Club near Wendover Berks.



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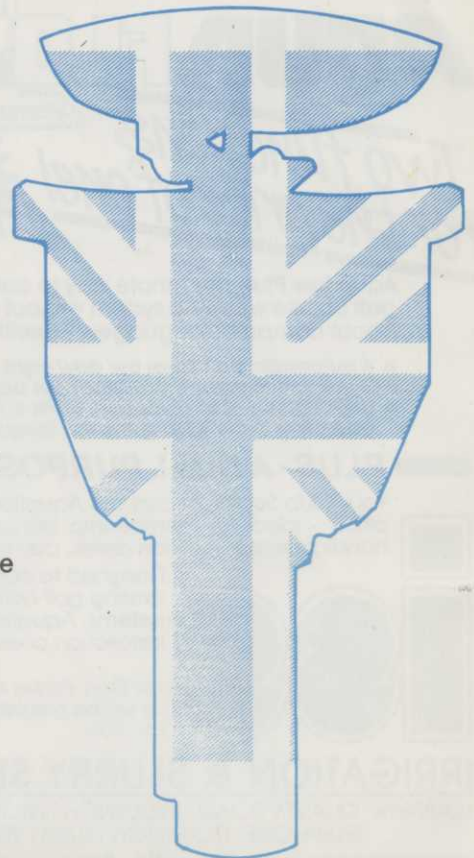
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Recently I was fortunate enough to be asked to attend the Toro Turf Professionals Conference held in Minneapolis, Minnesota, U.S.A.

Travelling with me were Peter Wisbey from North Foreland Golf Club, Kent, Kevin McNiven from Effingham Golf Club, Surrey and Bob Wiles, R.A.C. Golf Club at Epsom, Surrey. Accompanying us were Graham Dale, Sales Manager Lely Imports UK and Ian Kerry, Ian Kerry Machinery, Guildford, Surrey.

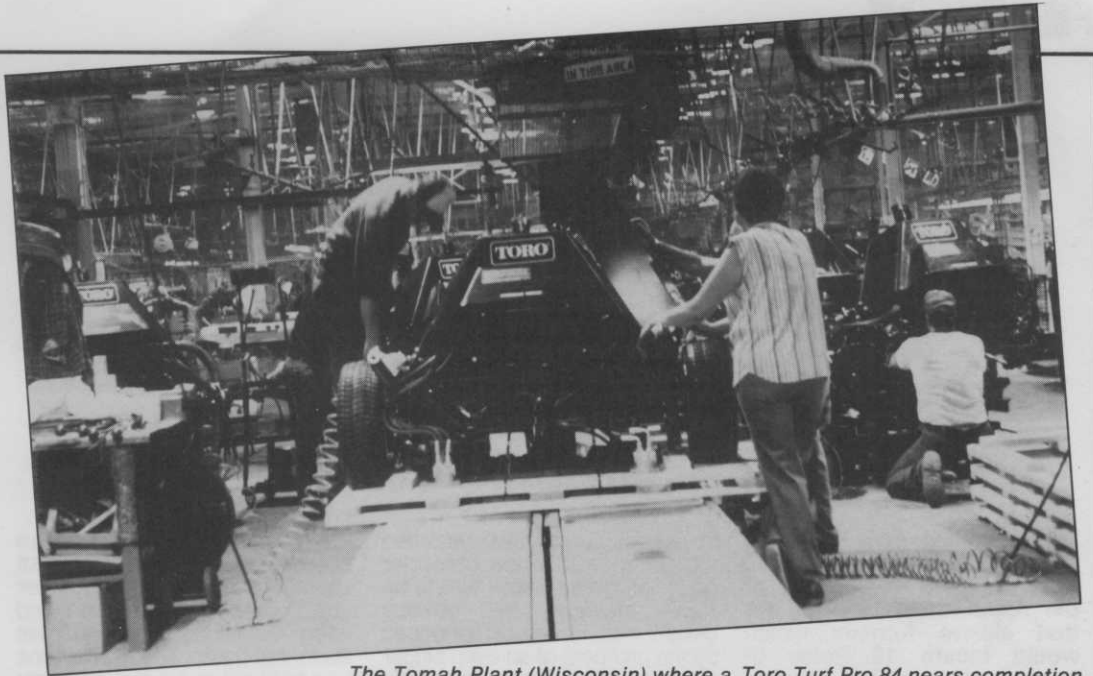
Having only ever flown once before, I found getting in a 747 for an 8 hour flight exciting in itself. We landed in Minneapolis to find beautiful weather. In summer the temperature can go up to 85° but because of a large climatic swing, winters can be very harsh, as low as 30°C with four feet of snow. The Golf season runs from approximately April through to the end of November when most Superintendents spray their greens with Fungicide and cover them throughout the winter.

Our trip was for 9 days, but not all of it was conference and tours, far from it. Our hosts went out of their way to give us a great time. I had oysters and caviar until I could eat no more. Champagne flowed (I developed quite a taste for it) and a Burger Place we were taken to was first class. All the Burgers were made from sirloin steak. My only problem now is shedding some surplus pounds in weight. But enough of our gallivantings, on to the serious side.

We visited Hazeltine National Golf Club where the 1991 American Open is to be held. Chris Hague the Superintendent is already well ahead with his plans out on the course. Last year \$380,000 was spent on refurbishing all 18 greens with Penncross Bent; the turf was specially brought in refrigerated lorries to keep it in tip top condition. The greens are now excellent and the turf looks like it has been there years - a true credit to Chris and his team.

During our visit the fairways were being verti cut with Toro GM3's. All the fairway cutting is also done with the GM3's at 7/16" and all clippings removed. Chris says that the fairways have shown remarkable improvement from this treatment, especially in controlling Poa Annua.

We visited two other golf courses, these being The Golden Valley Country Club and The Edinburgh U.S.A. Golf Course which was a new course due to be open on 1st May 1987. This course is a Robert Trent Jones design. One of the greens which is used as a triple green, measures 44,000 sq. ft., just over 1 acre. It also has a bunker round it to match. That one bunker probably holds more sand than all the bunkers on my course put together.



The Tomah Plant (Wisconsin) where a Toro Turf Pro 84 nears completion

During construction of the course 1 million tons of soil were moved to contour the fairways and greens, also the water table has lowered some 8 or 9 feet. How I would love to come back in 5 years time to play that course, it was one of the most impressive public courses I have ever seen.

So, onto the Conference, there were about 50 participants apart from us few Brits. We were taken to the Toro Shakopee Plant where everything from GM3 cylinders to rotary blades down to small sundries are produced. The tour round this plant was fascinating if a little noisy. Next we were taken to Lyndale Avenue to see the design facilities. Toro are world leaders in this field because computers are used extensively during the design stages. Not being a computer buff I found this all a bit technical but Ian Kerry was in his element.

Next stop were the testing bays where every machine, before going to production, had to go through very extensive testing, for example engines are run for great lengths of time so that carbon build up and internal temperatures can be monitored.

The next morning saw us all on a coach at 6.00 a.m. ready to catch a train to Tomah, Wisconsin where Toro's production plant is situated. The journey was very scenic and meandered beside the Mississippi. We spent most of the day at the plant where the motto of the Company is Pride in Excellence so much so that in certain parts of the factory quality inspectors have been removed and the responsibility is on the assembly team who provide a guarantee from every worker. Each worker can stop the production line at any time if they feel anything is wrong.

The last day of the conference was spent in round the table discussions, which surprisingly I found very interesting and rewarding. Toro also gained information in these talks from us.

I think other manufacturers could learn a lot by holding such a conference and then listening to those people who use their machinery day in, day out.

Finally there was a true American Razzamataz style Farewell Banquet. It was extremely well organised. We were shown a slide show that evening from pictures that a photographer had been taking of us during the entire conference, we were also all

presented with a group photo.

To summarise my trip I feel the Toro Company are fully committed to trying to understand our problems.

I think American Superintendents are extremely professional and are in total command of their courses although I should like to have their yearly budget to use on my course.

FEATURE 1

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HUGS & KISSES

Golf's big love affair

... by Fred Hawtree

Spring comes early in North Carolina. Hawtrees II and III were tramping the foothills of the Appalachians looking for that elusive formula which would locate 18 holes in exactly the right places. A sharp wind still blew off the snow higher up but the sun blunted its edge and four days of 12 miles a day seemed like no more than two. As a matter of fact, they really were two for H. Senior. He decided that enough damage had already been done at the halfway stage and left the younger division to get on with the tramping. A plan on the bonnet of the jeep needed a lot of static thought.

As you go farther south, Spring comes earlier still, until I suppose it disappears altogether, but for golfers at least it is heralded by the March tournament at Orlando which coincided with the Hawtrees' perambulations farther north. Thus on returning to Asheville's Grove Park Inn which has recently moved its 18th green to accommodate another 200 bedrooms and is currently adding another 200 somewhere near the 1st tees, we were able to catch up with a real day's golf on T.V. after one entirely imaginary.

The event was won by the elegant Payne Stewart whose plus fours and cap I had first admired over here in the Open in 1985. Apart from a touch of tartan here and there (entirely justifiable with a surname like that) his conservative attire suggested an imperturbable, undemonstrative personality, a Bobby Locke indeed, and not so differently attired. Well that's how I saw him. How was he?

His final longish putt for a birdie to win would have been difficult enough at the best of times. When it went in, the spectators surrounding the 18th green were delighted. Mr. Stewart also seemed delighted. He stood on one leg, punched the air a few times in the approved fashion, then embraced his caddy very affectionately. The caddy too was clearly delighted at the prospect of a handsome cut from the winner's cheque.

The cameras next recorded the entrance of a new character on to the green. I took him to be P.S.'s manager. His obvious delight was no doubt enhanced by the prospect of an even bigger cut from the winnings. He and his protégé went into a big clinch with a certain amount of in-fighting, but no instructions to 'Break' that I could hear.

Prior to these demonstrations of mutual esteem, the cameras had been picking out a lady in the crowd and recording any visible evidence of her emotions at all critical times. I assumed that this was Mrs. P. Stewart, although she only came No. 3 in the pecking order, and that the child in her arms was Miss P. Stewart, No. 4

Little Precocia (not, I imagine, her real name) got in the way of the full marital embrace which viewers like to see but they got it sorted out eventually and Little Miss P. was transferred to the victor's strong left arm. She too seemed not entirely displeased, though her cut was unlikely to make a dent in Dad's new balance at the bank.

If the T.V. cameras had been at Hoylake in 1913 J. H. Taylor would have had to embrace seven 'tinies', one by one.

After a short interview with Arnold Palmer, who mercifully refrained from close contact, another NBC commentator took over the show while an official brought on a cheque measuring about 6 feet by 3 feet and made of wood (not rubber) with 'Payne Stewart' already inscribed in handsome italics as the payee. Lumbered as he was with Little Precocia on one arm, the winner had difficulty in adding this piece of plywood to his impedimenta and stood up against his right leg as the interviewer began his routine interrogation

'How did you feel when....?'
'When did you first think perhaps you....?'
'What about that recovery from the trees at....?'
'That must have been a bad moment when you...?'

While answering these questions Mr. Stewart was, not unnaturally, trying to get a firmer grip on the cheque and even tried abortively to hoist it up under his disengaged arm. The microphone was held out at full stretch to get past the cheque and Little Precocia who was getting bored, took a fancy to the sponge rubber ball on the top of it. So the routine questions to her father were interspersed with asides to her:-

'Just a moment, darling, you'll get your turn....?'
'Now just wait till Daddy has finished sweetheart....?'
'Just be a good little girlie will you....?'
'O.K. honey. You can have it when we've finished....?'

And she persevered until she did get it, whereupon her interest evaporated.

I fell to thinking what would have happened if the TV cameras had been at Hoylake in 1913 when J. H. Taylor won his fifth Open. Mrs. Taylor would have been pretty sharp with the interviewer if he had tried to investigate her personal feelings. Then, one by one, J. H. would have had to hoist up about seven tinies each with an individual embrace to maximise the emotional impact. But what would the great man have had to say himself? And how big would the cheque have been? While you ponder these weighty matters I will press on.

When did all this embracing begin? No event is now complete without a big hug. No television serial is complete without frequent variations on a theme where father embraces son and they vigorously pat each other's back while the following laudable sentiments are expressed.

Dad: 'I love you son'
Son: 'I love you too, Daddy'

The principal variation on this dialogue takes a somewhat different form.

Son: 'I love you Daddy'
Dad: 'I love you too, Son'

On the whole the second one always seems to play better but I cannot for the life of me think

why. In fact I cannot think why they have to do it at all.

I first came across the big hug in El Salvador in 1954. I had gone out there to design a new 9 holes for the Country Club which was moving out of town (the first of many elsewhere) to allow development on its existing urban site. Ed Fox was their professional. He had been engaged at Northwood in Middlesex when he met his wife St. John and they went out to Central America, after the war.

Ed had always enjoyed company and conviviality. For example he never knew where he was when his unit was stationed on the South Coast before leaving on D-Day. He swore this was because they had taken all the signposts down. Even so....

When I met him in San Salvador, the local brewery was running a promotional stunt much to his liking. Inside a certain number of bottle tops was printed a red heart. A certain number of hearts or 'corazones' brought you a cash prize. To find the heart you needed to prise the cork disc from the metal top.

Ed regularly complained of feeling dehydrated in the Central American climate and his corrections of this dangerous condition placed him among the leading qualifiers for the top prizes. The climate was sultry, the sun remorseless and there was a revolution every four weeks. Ed maintained that these fortunately coincided with the rain storms which built up like radical passions in the dry periods. When it rained, everybody went indoors until the revolution was over. Alas this happy arrangement seems to have been abandoned.

A keen observer of the local scene, Ed had also picked out the 'embrasso' which had presumably come from Spain with Christopher Columbus. This form of greeting between old chums involved circling the shoulder of the opposite number with the arm not engaged in shaking his hand and warmly beating the dust out of the back of his jacket while uttering cries of delight at your good fortune in coming across him. It is also used when parting, but with heart rending howls of regret.

Ed had a wonderful gurgling laugh and could perform both welcoming and parting embrassos to perfection, give or take a certain artistic licence. When we parted at the airport after a detailed examination of a certain number of bottle tops, our own embrasso actually out-shone the tragic scenes being enacted at the departure gate by much closer acquaintances.

Then, damn it, I forgot about it when he came to England, as he often did during the winter to visit his mother and frighten the moths out of his overcoat which she kept for him. Far worse, on a later occasion I never got the

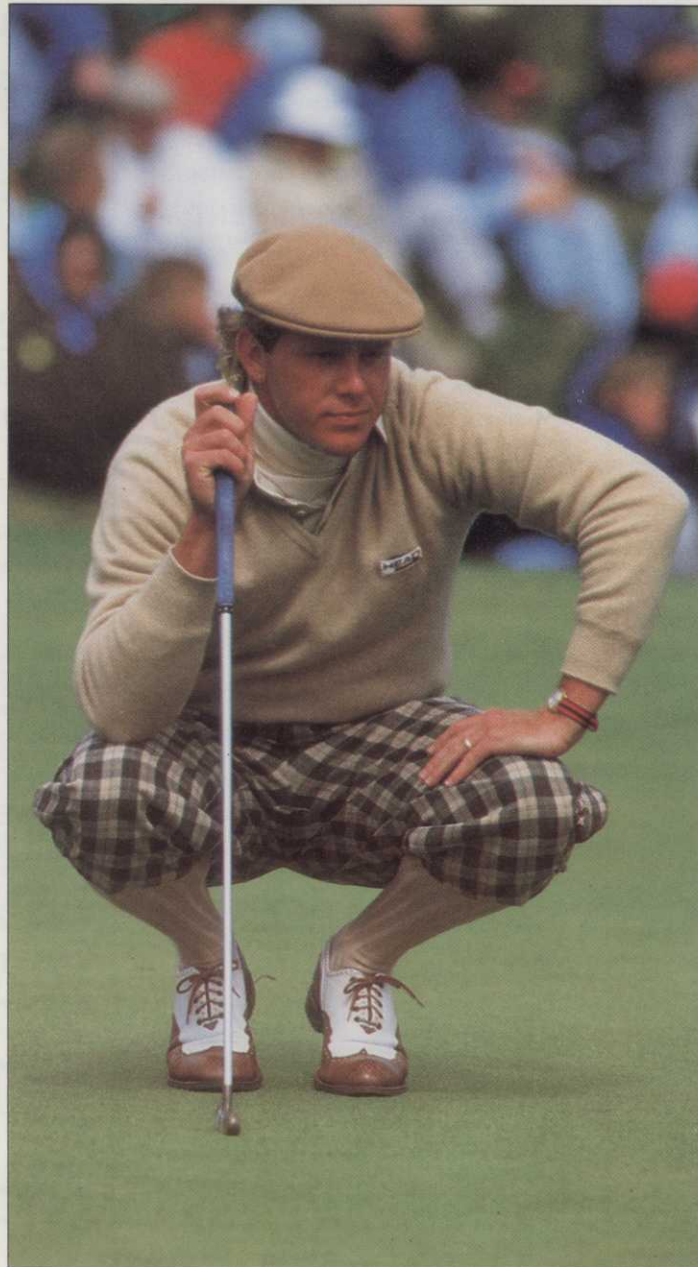
Payne Stewart

message when he telephoned my office from hospital in London. I only found out about six months afterwards. When the woman responsible walked out on her husband, her son, and on the job, I found the note. But by then it was too late. Sorry, Ed.

Now clearly the embrasso has crept north from the Mexican border just as the kissing of all and sundry has crept across the English Channel. There was a time when the bestowal by French generals of military decorations with appropriate facial contact, raised a tolerant smile north of Dover. At least we have not abandoned our natural reserve in that respect. But in social affairs, the polite or 'air' kiss has progressively invaded normal civil contacts. More has been brought back from those Spanish and French holidays then the odd bottle of Fundador or Pernod. Memories of carefree sunny leisure at the pool-side are perhaps revived by acting the part of the natives and giving evidence of international social graces.

In the United States a continuation of these changes has led to a greatly enhanced warmth in greeting old friends. I noticed on the Spring trip mentioned earlier that some of the ladies whom in my advanced years I felt able to kiss lightly in the air space just forward of their left ear (or should it be the right ear, I am never very sure) were now clasping me tightly in an embrasso of which Ed Fox would certainly have approved. I am not vain enough to imagine that this is due to any improvement in my general appearance in the three years elapsed since we had last met. Indeed in some respects, my 1987 model verges on the portly and makes a close embrace just that much more tricky.

It is not only outside the Latin countries that greetings and farewells have become even more cordial and demonstrative. Even as late as the sixties, my early relations with the French were still formal and always correct. One never used a Christian name. Even a friend only addressed another as 'Charlie' if they had been at school together and known each other at least thirty years since. That is all in the past. Last year I was invited to kiss my hostess, after no more than four years, and then reprimanded for leaving the job half done with just one cheek. Christian names are banded about as often as 'Monsieur' and 'Madame' formerly. Those who were never allowed to peck at all may now peck twice; family peck at least three times and watching a party of no more (I guess) than acquaintances, greeted each other yesterday at Cherbourg, everybody gave everybody else two lefts and two rights as a matter of course. Again one can



The elegant Payne Stewart, whose tartan plus fours have brought back to golf a reminiscence of Max Faulkner and Bobby Locke

only wonder - what next? As the Brits start to peck in earnest, the originators redouble their efforts in order to keep at least two pecks ahead.

One grand-daughter recently in Normandy reported up to four busks, two on each cheek, but the precise number was unpredictable, she said she simply had to remain on her toes ready for any number.

Another grand-daughter currently in Stuttgart with a family where both Mr and Mrs are pastors, reports nil significant Teutonic osculations but makes no diagnosis of the causes.

I have always held aloof from the embrasso after the débâcle

of my second meeting with Ed Fox. Unless it is an inborn and automatic habit as in Spain, it becomes necessary to run a card index listing those whom you normally pat on the back and those whom you don't. I was once surprised into initiating an embrasso with the President of a Spanish Golf Club when I came across him unexpectedly in the locker room at San Cugat. Not being too sure who he was, outside his normal environment but realising that something more cordial than a handshake might be expected, I snapped into the full works in line with Ed Fox's Mark I, (Meeting at airport after long separation).

I have to admit that after recovering his composure he seemed very pleased and in fact referred happily to the occasion to a friend in my hearing some months later. But it had obviously shaken him for it to stand out like that in his memory. I wished I had been in full charge of events when it happened.

There was another occasion in Dublin after a particularly good dinner at Malahide when I was misguided enough to join in the fond farewells between old acquaintances and found myself giving the one/two to a lady I had only just met. I wish I hadn't done that either but that is precisely the trouble, once you start, where does it end? And is it all as genuine as we think? Let's go back to Payne Stewart.

To his great credit he looked thoroughly uncomfortable throughout the performance I have detailed. His initial display of jubilation must have come naturally, the rest of the programme, I suspect, was elaborately prepared by the N.B.C. Team, once he was clearly a possible winner. How else would the cameras be picking out his wife repeatedly in the crowd? How come that Little Precocia was on hand so nattyly attired. She should have been getting into bed after a last prayer for Dad's birdie putts. And what comes next? The hero's parents? His grandparents? More distant relatives with a few anecdotes about his early childhood..the little scamp?

I am pretty sure it was rehearsed because a month later when Larry Hogan Mize hit his second shot to the 74th Hole 50 yards wide of the green, thus ensuring that he would win the Masters on this supposedly well-contrived test of golf, Mrs. Mize only appeared once and that was long after he had done his leap into the air and taken several running jumps, (though not at himself) with other acrobatics made up on the spur of the moment.

And while we were at Augusta National do you remember last year when J. Nicklaus holed all those putts including the one that counted. What could be more natural than his embrasso of his caddy since his own son was carrying his clubs? But can you imagine the conversation? I think I can. If you can't, go back to the beginning and start again.

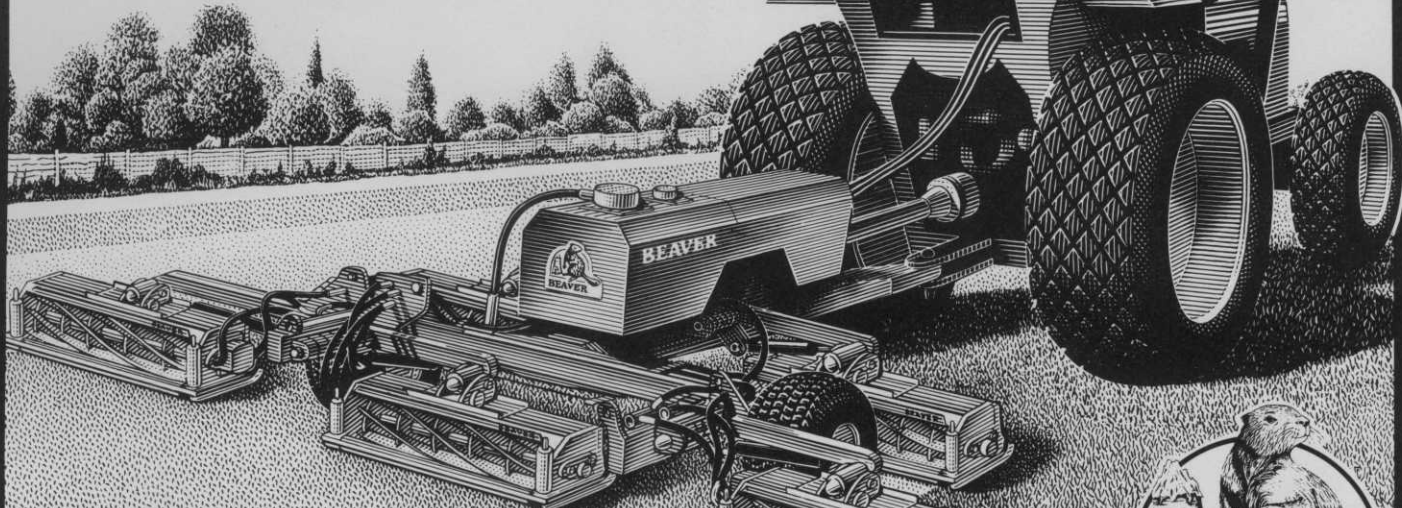
FEATURE 2

NEXT MONTH

more on the 'K' file.

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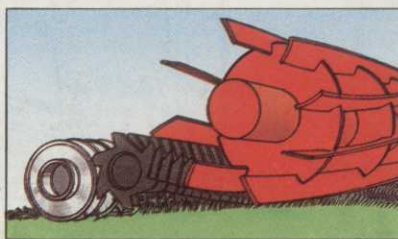


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