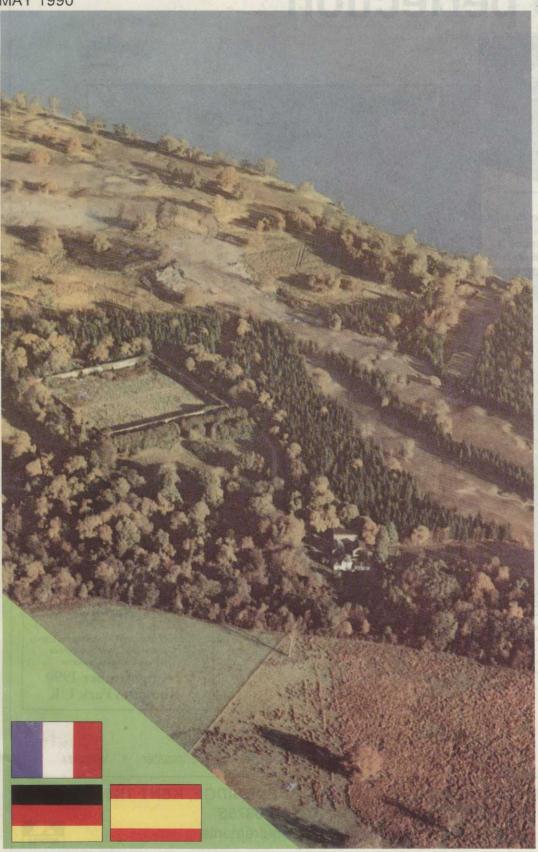
Golf Course

MAY 1990



Development

John Lelean reports on Tom Weiskopf's views on design construction and maintenance for Loch Lomond

Management

Different greenkeeping practices North and South by Roger Newman

Maintenance

Advanced technology improves mowing the fairways

Construction

Jim Arthur says sand only greens are not for the UK

Technical

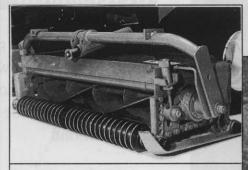
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CONTENTS

Golf Course



A birds eye view of Loch Lomond Golf Club

MAY 1990

18

Advanced technology improves fairway mowing
Richard Bishop

20

The Yanks are coming to the bonny, bonny

banks of Loch Lomond

John Lelean

26

The North, South divide

Roger Newman

28

A firm no to sand only greens

Jim Arthur

34

Turf or seed

Robert W. Laycock

38

Powered tractors, compact and versatile

Departments

4

Resum

5

Greenside Comment

Is "The Demand for Golf" being met asks John Lelean

(

Out and About

Latest news from the golf course industry

23

New Developments

25

From the Fairway

20

Buyers Guide

A product and service information guide to suppliers

19

Appointments

RÉSUMÉ



FRENCH

Le tout dernier-né des terrains de golf d'Ecosse, sur les rives du Loch Lomond, va très probablement soulever bon nombre de controverses, non seulement parce qu'il a été conçu par deux Américains, mais parce qu'il est prévu que le responsable des parcours sera recruté en Amérique.

Le projet du Loch Lomond a été lancé le mois dernier à une reception de presse dans la demeure ancestrale du propriétaire du terrain, Sir lvor Colqhoun, le 'Laird' de l'un des clans les plus anciens d'Ecosse.

Le parcours de la 'High Road' a déjà été tracé au travers d'une forêt de pins et sera semé de gazon ce printemps. Un second parcours, celui de la 'Low Road', est encore dans sa petite enfance et les travaux de construction n'ont pas commencé.

Tom Weiskopf, un ancien Champion 'Open' et partenaire de l'association Morrish/Weiskopf, conseils en conception-tracés, a déclaré que le groupe d'investissement responsable du complexe de 52 millions de livres sterling, donnerait la charge du parcours à un Américain, un 'greenkeeper' britannique n'étant pas capable, à leur avis, d'entretenir le terrain dans ses premiers temps.

Il est appuyé en cela par Alec Hay, journaliste sportif de la BBC et manager du Golf et Country Club de Woburn, qui a commenté que les entreteneurs de parcours britanniques n'avaient pas suffisamment d'expérience dans les techniques de gestion pour entretenir des golfs de type américain.

Ce numéro du 'Golf Course' contient aussi un commentaire sur la rétention du Veston Vert - le 'Masters Green Jacket' - par Nick Faldo qui l'a gagné pour la deuxième année consecutive à Augusta.

C'est là encore une nouvelle preuve de la place de plus en plus preponderante du golf européen. Il est noté que c'est la cinquième victoire d'un golfeur européen au cours des huit dernières années.

Cela ne peut qu'entrainer une demande de plus en plus grande pour la creation de terrains de golf dans toute l'Europe, ce qui, à son tour accentuera le besoin d'entreteneurs de parcours ayant reçu une formation de haut niveau technique.



SPANISH

La construcción del màs reciente campo de golf en Escocia, junto a las orillas del Lago Lomond, probablemente provocarà considerable polèmica, no sòlo por haber sido diseñado por dos norteamericanos, sino porque existe la intención de nombrar a un supervisor de campo de golf proveniente de E.E.U.U.

El proyecto de Lago Lomond fue lanzado el mes pasado en una recepción de prensa en la casa solariega del propietario del terreno, Sir Ivor Colqhoun, el"Laird" de uno de los clanes familiares más antiguos de Escocia.

El campo 'High Road', ya ha sido trazado a travès de un bosque de pinos y serà sembrado durante la primavera de este año. Un segundo campo, el 'Low Road' aùn se encuentra en 'su infancia' y el trabajo de construcción todavia no se ha iniciado.

Tom Weiskopf, un ex-campeòn del Open y socio de Morrish/Weiskopf, consultores de diseño, expresò que el grupo inversor responsable del complejo de 52 millones de libras esterlinas entregaria el campo a un supervisor norteamericano porque no consideraban que un encargado de 'green' britànico era lo suficientemente bueno para mantener el campo en las etapas iniciales.

Se encuentra respaldado por Alec Hay, un periodista deportivo de la BBC y gerente de Woburn Golf and Country Club, quien expresa que los encargados de 'green' britànicos no cuentan aùn con la experiencia necesaria para mantener campos de golf al estilo norteamericano.

Tambièn se incluye en este nùmero de 'El Campo de Golf' un comentario sobre la retención por parte de Nick Faldo del Masters Green Jacket, obtenido por segundo año consecutivo en Augusta.

Se hace hincapiè una vez màs en el creciente dominio del golf europeo y se remarca que esta es la quinta victoria de un jugador de golf europeo en los ùltimos ocho años.

El resultado debe ser una constante mayor demanda para màs campos de golf por todo el continente, lo cual conducirà a la necesidad de tener encargados de 'green' bien formados a un alto standard tècnico.



GERMAN

Die neueste Entwicklung einer Golfplatzanlage in Schottland neben den Ufern Loch Lomonds wird wahrscheinlich eine beträchtliche Kontroverse auslösen, nicht nur weil sie von zwei Amerikanern konzipiert wurde, sondern auch wegen der geplanten Anstellung eines Golfplatzdirektors aus der USA.

Das Loch-Lomond-Vorhaben wurde im vorigen Monat bei einem Presseempfang auf dem Stammsitz von Sir Ivor Colqhoun, dem Grundbesitzter und Gutsherrn einer der ältesten Clanfamilien Schottlands, in die Wege geleitet.

Die "High-Road"-Spielbahn wurde bereits durch einen Kieferwalf gelegt und das Aussäen erfolgt noch im Frühling dieses Jahres. Eine zweite Spielbahn, die "Low-Road", befindet sich noch in dem Anfangsstadium und die Bauarbeiten haben noch nicht begonnen.

Nach Feststellung von Tom Weiskopf, einem ehemaligen Open Champion und jetzt Partner in der Beratungsfirma Morrish/Weiskopf, will die für die 52 Millionen-Pfund-Sterling-Anlage verantwortliche Investitionsgruppe einen Amerikaner als Golfplatzdirektor anstellen, weil sie der Meinung sei, daß ein britischer Platzleiter für die Instandhaltung der Spielbahn im Frühstadium nicht gut genug wäre.

Weiskopf wird in seinem Glauben durch Alec Hay, einen BBC-Sportjournalisten und Manager des Woburn Golf and Country Club, unterstützt. Laut Hay verfügt noch kein britischer Platzleiter über ausreichende Erfahrungen bei den Platzführungsmethoden, die für die Instandhaltung eines Golfplatzes im amerikanischen Stil erforderlich sind. Dies Ausgabe des 'Golf Course' enthält außerdem einen Bericht über den Sieg von Nick Faldo in Augusta, wo er zum zweiten Mal hintereinander die "Masters Green Jacket" erhielt.

Es wird hier die steigende Vorherrschaft des europäischen Golfs unterstrichen und darauf hingewiesen, daß der Sieg nun fünfmal in den letzten acht Jahren en einen europäischen Golfspieler ging. Als Folge wird sich zwangsläufig die Nachfrage nach Golfplätzen auf dem gesamten europäischen Kontinent immer weiter erhöhen, was seinerseits zu einem größeren Bedarf an ausgebildeten Golfplatzleitern mit hohem technischen Niveau führen wird.

GREENSIDE COMMENT

As a European Golf industry publication it is right and proper that we should bask in the reflected glory of Nick Faldo's retention of the Master's Green Jacket at Augusta. Not only did he create a little more golf history, but this is now the third successive year that a British golfer has been crowned king of world golf and the fifth European victory in the past eight years.

If a few more facts are required to press home the increasing dominance of European golf, Faldo's caddy, Fanny Sunesson is a Swede, the first woman to carry the winner's bag in a major championship and the Augusta course was designed in partnership with Bobby Jones, by Dr Alister McKenzie, who cut his teeth on golf course architecture in Yorkshire.

All this glory, can only create one result, a demand for more golf courses, which in Britain at least is highly unlikely to be met. After all it was watching Jack Nicklaus winning the Masters on TV in 1972 that inspired a 14 year old sport mad Faldo to persuade his parents it was the game he wanted to play.

Just how many potential Faldo's, with drive, determination and potential ability have been similarly spurred to emulate his performance by the end of the cen-

Which leads us logically into "The Demand for Golf," the document from the R & A, examining the present facilities, area shortages and recommending ways and means for the construction of more golf

That sufficient land is available cannot be in dispute, what is more of a steeple-chase fence, than a hurdle to be overcome, is the attitude of planners and nearby residents to the change in land usage.

The mere mention of a rural golf course plan is certain to inflame local councillors, aided and abetted by self appointed custodians of environmental protection, whose out-cries are often only thinly disguised excuses for maintaining their private outlooks over an uneconomic pasture, inhabited by a few sheep.

The objections, when analysed, are often not against the golf course *per se*, but the fear that the club-house and the rest of the infastructure to include a couple of acres of tarmac car parking will become a gross intrusion into the country dweller's co-cooned existence.

There is also the potential threat, real or imaginary, that once planning permission has been granted for the golf course, how long will it be before the developer slides in another application for residential property, diluting even further their isolation from fellow man.

If there is to be an increase in playing facilities it can only come about in one of three ways. From the large scale developer, who is out to make a substantial profit from an hotel or housing, the farmer with financial resources to launch his own private club, or existing membership clubs expanding their present set-up with a further nine or 18 holes.

Local authorities, particularly now they are funded by the poll-tax rather than the rates, are not in the market to build new municipal courses, rather it is likely that existing lay-outs will be sold off to the private sector.

There are around 300 applications in the pipe-line according to the rather vague statistics available. Vague, because there is no compulsion on planning officers to notify a central coordinating body, though the English Golf Union have formed a golf development committee and would welcome information from all sources.

What is desperately needed is a greater understanding, not only how golf courses can enhance the environment, but a change of attitude away from conservative selfishness, which denies the right of outdoor enjoyment to others.

Into that category falls the private club member, now reaping the benefits of a legacy from the club's founders, often at a fraction of the true cost, who is totally opposed to extending his golf course for future generations.

The Nature Conservancy Council, with financial support from the R & A, have published a most beautifully illustrated book "On Course Conservation" - managing golf's natural heritage. Having been distributed to all UK golf clubs, it is available from The Nature Conservancy Council, Northminster House, Peterborough PE1 1UA at a cost of £ 7.50 (post free).

This will be of use to any developer, planner or club manager no matter where they are situated in Europe as it gives a clear message as to how a golf course can improve the environment, flora and fauna.

Lelean EDITOR

STEWARTS NAME NEW TEAM

Widespread business diversification during the past two years has led to the creation of a new senior management team at Stewart and Company, the Edinburgh-based turf management specialists. "As we move into the 1990s Stewards have become Scotland's leading turf management suppliers, sportsground contractors and growers of Inturf," said Greame Forbes, Stewarts managing director.

Ken Waddell (bottom) relinquishes his position as Sales Manager to become the company's new General Manager, and Alan Miller (below), previously Stewarts Area Manager for the East of Scotland, is promoted to Sales Manager.

"The development of Stewarts in recent years has been encouraging for all involved with the company but we are keenly aware of the importance of close day-to-day management which Ken and Alan will be able to provide," said Mr. Forbes. In addition to his role as MD of Stewards,

In addition to his role as MD of Stewards, Mr. Forbes is also a director of Inturf.





COMPULSORY COMPETITIVE TENDERING ADVICE FOR PUBLIC GOLF COURSES

Anticipating the impact of Compulsory Competitive Tendering in 1991, which will mean public golf courses being put out to private tender, Golf Course Management (Europe) Limited is launching a special service to advise local authorities.

From its base in Richmond Park, Surrey, it's associate company Golf Course Management (Richmond) Limited, on behalf of the Department of the Environment, runs the two public courses in the Royal Park. G.C.M (Europe) Ltd. will advise on all aspects of the government act particularly with regard to maintenance. They can recommend on the provision of better facilities such as extensions from 9 to 18 holes, par 3 courses, driving ranges, enlarged clubhouses and golf shops.

The G.C.M.(E) Ltd, service covers planning, development and construction, funding if necessary and management and financial consultancy role.

Gilbert Lloyd, G.D.M.'s Managing Director, said "With over 20 years experience in helping local authorities develop their golf facilities, we believe we can improve both the quality and profitability of any public pay-as-you-play golf course".

S.T.R.I. TEST OF 'KNOT OUT'

Winter research by the S.T.R.I. has been conducted on Synchemicals unique product KNOT OUT, a residual herbicide for the control of germinating weeds on areas of newly sown grass.

S.T.R.I. applied KNOT OUT at the manufacturers recommended rate and field tested for possible adverse effects on seed germination and seedling establishment on a range of 30 turfgrass cultivars, commonly used in the renovation of sports turf, including ryegrass, fescues, bents and smooth-stalked meadow grass.

Seed germination was not impared on any turfgrass cultivar following treatment with KNOT OUT when a direct comparison was made with the untreated control.

Neither were there any apparent differences in rooting between the KNOT OUT

treated and the control plots.

These independent tests confirm the findings of studies in the UK and the United States of the high degree of tolerance of turf grass species to ISOXABEN.

SISIS IN SCOTLAND

John Yeates is the new Area Representative for the West of Scotland. John a keen sportsman from a farming background and has worked in agricultural engineering and forestry.

The East of Scotland Area Representative is Les Westwater who also has an agricultural engineering background, and was previously with A. J. Bowen.

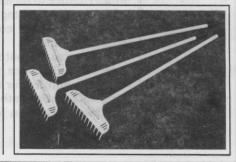
The SISIS Centre in Scotland at Falkirk will continue as the base for this expanded team, serving as demonstration, service and spares supply depot for Scotland. Keith Vertigan has returned to Cheshire to take up the appointment as SISIS Northern Regional Manager with overall résponsibility for Sales and After Sales Service.

PERSONALISED BUNKER RAKES

Club names can now be printed on the header panel of the attractively designed new Prorake bunker rakes. As an optional extra a courteous reminder about raking bunkers, and repairing pitch marks can be incorporated.

"Prorakes are popular with members, according to Ralph Pickering secretary of Stoke Poges." Even the pilferage factor seems to have been eliminated."

Rakes cost £4.95 each, plus printing costs to individual club specification and logo. Further details from Robin Hunter B.D.P. Ltd. 0990872321. Boundary House, Lady Margaret Road, Sunningdale SL5 9QH.



LELY APPOINTMENT

The United Kingdom importers of Toro machinery Lely (UK) Ltd have announced that Graham Dale has been appointed managing director. Graham who has been in charge of sales on the Toro turf care equipment side for many years will now be responsible for both agricultural and turf equipment the former accounting for some sixty percent of Lely's business. The company will be appointing two new sales managers for each division.

LINDUM TURF SALES SUCCESS

Just under a year after Geoff Hodgson was appointed sales and marketing manager for Lindum Seeded Turf, they have a full order book and a number of notable firsts to their credit. The company is the only one to supply turf as a full package

with grass seed compatible with their turf for fairways and rough, fertilisers are also included as well as a soil analysis service. In the last year Lindum have brought a farm near Thorganby, near York, which has increased their turf capacity to some 650 acres. Last Christmas they were awarded the contract for turf, grass seed and wildflower seed for the 1992 Garden Festival of Wales to be held at Fbbw Vale. Recently they have also supplied all the materials for two new courses turf, seed and fertiliser at Tallpines at Bristol and Hawthorn Hill in Berkshire. They have supplied in the last year turf to over 100 golf courses including Royal Birkdale. Wentworth, Walton Heath, and in the near future they will be supplying turf to the new course at Froome and Gleneagles as well as Meon Valley.

Lindum Seeded Turf can supply a complete service from conception to completion which puts them on course to be the number one supplier to the golf course industry in the 1990s.

pany recommend spraying either in the early morning or in the evening to maximise plant take-up. Usually, the members do not even know the greens have been fertilised! Before competition, or other important events, Ferrosol Liquid Iron is the ideal green-up product to ensure perfect presentation.

Having recently introduced their own Wetting Agent Zorbit the Company have just acquired the distribution rights for Blazon Spray Pattern Indicator - the top selling product of its type in the USA, with sales of Ten Million Dollars. Blazon is ideal for ensuring that liquids go on correctly and in the right place, for maximum effect and the least possible waste.

All in all, a useful range of weapons in the greenkeepers armory to ensure that the best possible standards can be maintained in what are very difficult conditions. For more information contact Farmura Limited, Stone Hill, Egerton, Ashford, Kent. Tel: 0233 76 241/581 or Fax: 0233 76 419.

GMA SHOW VISITORS TO GET HANDS ON EXPERIENCE ON THE DEMONSTRATION SITE

Visitors to the GMA show in September will not only be able to see, touch and compare the latest machinery and equipment on the market but they'll also have the chance to test it in the enormous Demonstration Site at Kempton Park.

Over 30 companies have opted to use the Demonstration Site including Ransomes Consumer, Kubota, Husqvarna, Briggs & Stratton and Charterhouse Turf Machinery. This eye-catching feature enables visitors to watch exhibitors' demonstrations and to obtain first hand experience by testing out the machinery for themselves.

Catherine Sleigh, Sales Manager of the GMA show commented "We are delighted to have so much space available at Kempton Park for demonstration purposes. Whilst static displays are essential, the demonstration area will provide colour,

noise and activity - all necessary indegredients for compulsive viewing. For the first time in the UK, market leaders are making use of the demonstration facility giving buyers and specifiers a real opportunity to test and compare machinery."

Exhibition dates September 2-4.

LIQUID ANSWER

With the hot summer of 1989 still in peoples minds dry conditions this year have started even earlier and it could be the beginning of a long hot summer for greenkeepers. Traditionally this has meant major problems with fertilisation and presentation of golf courses.

One Company that has developed at least some of the solutions is Farmura Environmental Products. The recent successful introduction of the Flo-Gro Range of clear liquid fertiliser means that the Company can offer a complete range of liquids from their organics to clear liquid feed.

Because they are liquid they do not need to be washed in, and the problem of mower pickup is also avoided. All the products are formulated to avoid scorch and the Com-

SPINNING DISC IMPROVED

Nomix Manufacturing has redesigned the spinning disc on their award winning handheld spray lances, reducing the risks of environmental contamination.

The new component incorporates a cone which changes the way the liquid is metered onto the disc, so the pattern of spray droplets falls more accurately into a range of sizes that don't drift or fall off the weed leaf.

Nomix have developed a system where the weed-killer is specifically formulated to produce a set of droplet pattern that is slightly too coarse, and although the formulations contain advanced sticking agents to keep the chemical on the leaf, a number of large droplets have bounced off target.

"The new disc means that we are able to reduce the risks of environmental contamination at the same time as improve herbicide efficiency", claims Nomix chairman, David Gill.

Nomix are inviting SuperPro and Panther spray lance owners to contact them by phoning 0272 574574, so that they can be sent the new disc free with the redesigned disc.

WET SUMMER FORECAST BY HOVERDRY

In comparison to previous years, the summer of 1989 saw very few days lost to rain. Courses remained playable for a much greater period of time than usual and received heavier wear as a result. The predictions this year are for a deluge of rain in early summer, which taken in conjunction with the compaction resulting from last year's increased use, will lead to the type of standing water and flooding of greens that makes play impossible and loses both goodwill and green fees.

The use of turf drying machinery for ensuring that courses remain playable has, quite naturally, always taken a very distant second place in the minds - and budgets -

of most greenkeepers.

Traditionally the way to keep a golf course playable has been to rely almost solely on drainage. The cost and disruption of green reconstruction makes this, however, an expensive solution that cannot be undertaken lightly, and when, in years like last, older greens come into their own again, with their higher loam/clay constructions holding the moisture better under the drought conditions, there seems to be little to cause concern. Yet there is a price to pay, for these are exactly the greens most likely to flood.

Most greenkeepers will admit, if even only to themselves, that they have a few trouble spots on their courses which are liable to flood. These may be greens, low spots on the fairway, or bunkers - notoriously difficult to drain and impossible to pump out with conventional pumps, as the sand

destroys the pump.

In all cases where course design and geology is less than perfect. The solution is a water removal machine, with the most popular machine for Golf Courses being the Hoverdry. On the market for only three years, the Hoverdry has built up an impressive track record, having been purchased by both St Andrews and Gleneagles and used at all the British and some of the European PGA tournaments during the last two years. This year Augusta National evaluated the Hoverdry and had two machines on standby for the whole of the US Masters Tournament. The Japanese have shipped container loads of machines for their Golf Courses.

The Hoverdry machine looks like a giant

Flymo. One metre in diameter and weighing 38 Kgs (80lbs), it fits neatly in the back of a Cushman, although it can be supplied with a carriage trolley like a golf caddy, if required. The machine works on an unique patented principle invented by the company's technical director. The machine hovers on a cushion of air. The air pushes the water into the reservoir in the body of the machine, from where it is pumped via a long hose up to 60m (200 ft) long and out of harm's way. This could even be up a hill if necessary.

At a pumping rate of 275 litres/min (60 gallons/min) or its own weight every 7 seconds, the Hoverdry will remove an average puddle on a green in 3-4 minutes. Combatting the results of compaction, the machine cannot itself, because of the Hoverdry's unique hovering action, cause any damage. Indeed it never touches the turf as it dries the grass. Of course, compaction is a particular problem for British courses, as unlike their northern US counterparts, they play throughout the year, and especially so in winter with the grass dormant, ground soft with rain, and when traffic over the turf causes maximum harm to root growth and recovery.

Golf courses buy Hoverdrys for many different reasons. There are those that buy them for championships, when the cost of a day's play lost is many times the cost of the machine (£1,750). The there are those who use the machine throughout the year to remove puddles formed on the course. Some, especially Public Courses, use them to get more play, with one course on Jersey recovering their investment, in terms of greater green fees in a matter of weeks. Others use the machine to remove water so that there is no build up of compaction and thereby save money on maintenance as well as giving a much better and more professional service to their golfers.

DOG AND RABBIT REPELLENT

Golf greens plaqued by the attentions of dogs and rabbits will benefit from an application of Renardine. This repellent from Gilbertson & Page keeps pests and pets away from greens and fairways; also from

flowers or shrubs near the clubhouse. In continuous use since 1896, this well-known repellent looks set to become even more popular with the introduction of a new easy-to-use one litre spray dispenser, which has the advantage that it keeps hands clean. The dispenser supplements the one and five litre cans, and all three appear in a bright new green and yellow design.

Renardine is now backed by independent research which proves that it really does provide an effective deterrent, without harming animals in any way.

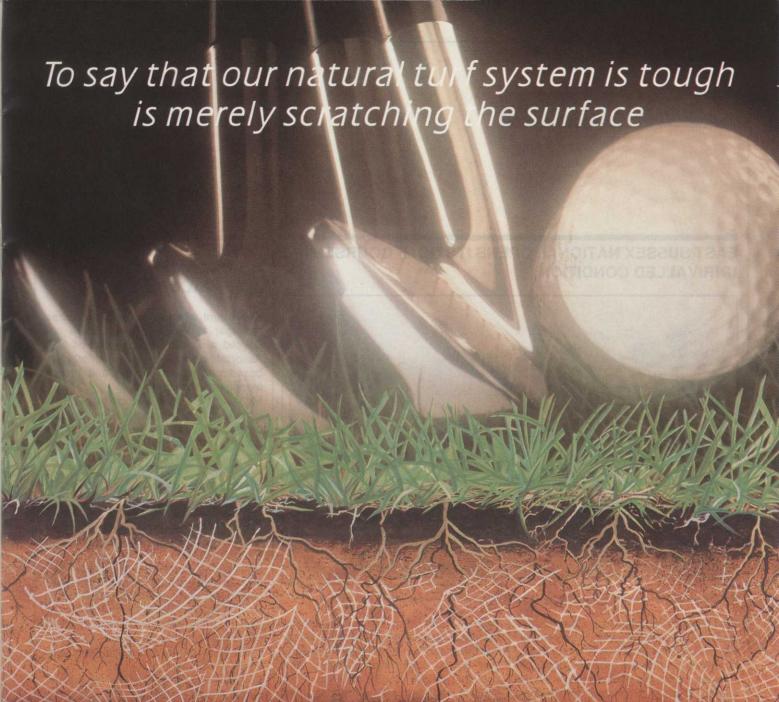
ALLEN APPOINTMENTS

Two new Directors have been appointed to the Broad of Allen Power Equipment. Lance Bassett becomes Sales Director and Jonathan Allen Technical Director. Having worked for the company for 15 years as sales representative then sales manager, Lance Bassett, 45, lives near Oxford and is married with three children. Honathan Allen, 29, has a thorough knowledge of Allen machines and spare parts, having a technical background and experience in the spares department at Didcot. Jonathan will be involved with the development and introduction of all new Allen products. He is married with one son and lives in London.



Lance Bassett above and below Jonathan Allen





The iron swoops in perfectly. Contact is sweet and true. Your eyes roll upwards to follow the ball as it lifts steeply on course

for the next hole. Beneath your feet the turf is virtually intact, only the minimum divot dislodged. Recovery is

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TOUGH TURF NATURALLY

rapid because you have just tee'd off on Techturf – the toughest growing surface that money can buy.

The Techturf System brings together advanced technology and the best of

nature, giving a surface that has an unparalleled ability to stay flat, dry and healthy. The massive root structure

is augmented by a random matrix of unique micro-grids which ensure that any damage inflicted will heal rapidly and completely.

If your course has not yet discovered the benefits of Techturf, find out how you can ensure that the grass keeps growing beneath your feet by sending for the full facts today.

SEND FOR FULL DETAILS TO:

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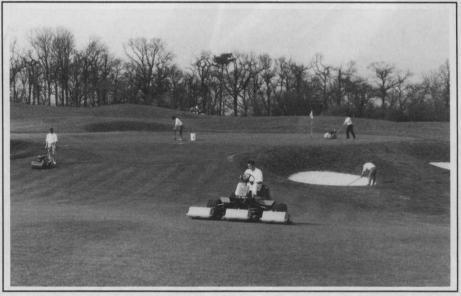
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EAST SUSSEX NATIONAL OPENS ITS GOLF COURSES IN UNRIVALLED CONDITION



East Sussex National Golf Club is bringing Augusta Nationals course conditions to the UK

East Sussex National Golf Club is now open for its members to play. This encompasses both the East and West courses, as well as the practice grounds. Both golf courses, under the control of Ken Siems and his 40 strong greenstaff, will be maintained to give the finest inland playing conditions available in the UK.

Both 18 holes will also be primed for a number of special events that East Sussex National has agreed to host this season. These include the visit of the GB and Ireland Curtis Cup team. They have selected East Sussex National to stimulate the speed and contours of the greens they will be confronted by during their defence of the cup in America. This practice week-end will be the 30th June and 1st July. Later in the year, the club's West course will play host to the Montorola Classic. This satellite tour event will be followed by the inaugral Wilson Amateur Masters invitation event.

GREENSWARD ENGINEERING CO. HIGH QUALITY RECONDITIONED AND GUARANTEED TURF MACHINERY CUSHMAN Truckster with cab and dump box CUSHMAN Offensaver slitter CUSHMAN Greensaver slitter CUSHMAN Haviet Hydraulic gangs, ex-demo TORO Greenmaster - new engine, immaculate JACOBSEN Greensking - new engine, immaculate LUBOTA B 7100 HST, mid mower, 395 hours KUBOTA B 7100 HST, mid mower, 395 hours KUBOTA B 7100 HST, mid mower, 474 hours ISEKI 2160 HST with Beaver hydraulic gangs RANSOMES 2130 Hyple mower RANSOMES 2140 Hydraulic gang mowers CASE TF700 trencher on tracks. Diesel HAULER golf course runabout, 1 year old LEEDS (0532) 676000

FORMER WENTWORTH COURSE MANAGER JOINS JOHN JACOBS

Kevin Munt, who was until recently course manager at Wentworth, has been appointed a director of John Jacobs Golf Associates Limited, the Hertfordshire based golf course design and project management company.

Mr Munt joins John Jacobs as part of a major expansion programme. Several large contracts have been won in recent months and the company is now developing its activities in both the UK and Europe.

Kevin Munt, who is 32, has 15 years greenkeeping experience, eight years of which have been spent in golf course management. He was links supervisor at the Royal Dornoch Golf Club, ranked as the 12th best course in the world by 'Golf Digest' magazine.

But it was at Wentworth in October 1987 that his name first hit the headlines when he and his team worked round the clock to save the Suntory World Match-Play Championship from disaster after the worst storm on record brought down some 300 trees, flooded the greens and made the course totally unplayable.

The following year Kevin Munt (below) prepared the Wentworth courses for the Volvo PGA, World Match-Play and English Ladies Stroke Play championships and in each case they were generally recognised as being in the best possible condition for championship events.

It was during his time at Wentworth that much of the work on the John Jacobs' designed new South Course took place and although not directly concerned with its construction, a lasting relationship was forged with John Jacobs and the company's managing director, David Pottage.



AMENITY APPOINTMENT

Joseph Bentley Ltd., of Barrow-on-Humber has appointed an Amenity Sales Manager - John Gregory.

Mr. Gregory joined the sales team at Bentley's in 1987 and has a B.A.S.I.S. qualification, he also holds a national certificate in Horticulture. He will be responsible for all Bentley Sales to local authorities, landscape contractors, sports clubs and public utilities, including the development of 'Growtree' - a tree mulching compost.

John Gregory intends to build on the healthy base of local authorities, landscaping contractors and landscape architects who specify and use the product.



John Gregory



Representatives from dealers attending the first training course on the Huxley 358 Greensmower

TRAINING COURSE ON 358 GREENSMOWER

Engineers from professional horticultural machinery dealers throughout Britain attended a successful first service training course on the Huxley 358 Greensmower, held recently at the company's development and manufacturing centre in New Alresford, Hampshire.

Demonstrations and sales of this Britishdesigned and built precision mower are fast expanding outside the company's direct sales area.

The result has been the establishment of a regular series of practical courses for the company's appointed sales and service dealers both at home and overseas.

The first course for representatives from five British based dealers - George Brown,

Grass Machinery (now a Huxley-owned company) of Edinburgh, H.Ardron & Son of Ulverston, Cumbria; K.F.Kirby (Harborough) Ltd, Leicestershire; Strathmowers Ltd, Dundee, Tayside; and Western Farm Implements Ltd of South Wales, was held in February.

In addition to courses on the 358 Greensmower, Huxleys run regular refresher and new appointments training for dealers' staff on its full range of turf and grounds maintenance machinery. They also offer comprehensive owner and user instruction on site, or at its premises in Hampshire or at George Brown Grass Machinery in Uphall, West Lothian.



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OUT AND ABOUT

EUROPEAN TURFGRASS TREATY

Rolawn of York, the biggest suppliers of cultivated turf in the UK, have signed an agreement with a leading horticultural company in France to expand an increasing demand for their product in Europe. The turf will be grown by Darbonne of Paris and supplied through a new commercial network under the name of Sitoflor. Rolawn will advise on all aspects of production, marketing and distribution. Darbonne grows a limited amount of mature turf at present near Bordeaux and customers include the golf clubs of Monaco, Biarritz the Jardin du Luxembourg in Paris and St. Nom La Breteche. Rolawn have trebled their turnover in the last four years by extensive promotion and by the establishment of a network of unique, direct-sell turf depots. Customers include landscapers and gardeners as well as golf clubs including St. Andrews and Muirfield, First Division football clubs and Wimble-

don All England Lawn Tennis Club. "Cultivated turf in rolls is still unknown in France, but English lawns and greenkeeping are a by-word for perfection. There is no French word for greenkeeping so they use the English" says Ken Dawson, Managing Director of Rolawn. "Our association with Darbonne gives the French company prestige and the benefit of our experience. It is an opportunity to expand into Europe ahead of 1992.



Rolawn and Darbonne strike up an 'Entente Corchale'

Rolawn Ltd started fifteen years ago with half an acre of land in Scotland and seven acres in the Vale of York the following year. At that time the only turf available in this country was ordinary meadow, or pasture turf and limited amounts of Cumberland sea-washed turf. Cultivated turf is now a multi-million pound industry and Rolawn has nearly 2,000 acres under cultivation.

SA Dabonne a family company set up over a hundred years ago, is the world leader in the production of culinary herbs, with over 3,200 acres under cultivation at Milly-la-Foret, south of Paris and at Le Barp near Bordeaux. It is also a world leader for the production of strawberry and asparagus plants, researching new varieties every year. It is run by brothers Luc and Hubert Darbonne, grandsons of the founder.

The turf is grown on a sandy soil and is purpose-grown using special seed mixes to suit its end use, with different grades for lawns, landscaped areas, sports pitches and golf and bowling greens. Freshly harvested in long, square yard or square metre rolls, it is mature, weed-free and ready to lay for an instant finish.

In three years the two companies plan to have a total of 4,000 acres under production which rolled out is enough turf to circumvent the world!



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KESULT: GREAT NEWS FOR GREENKEEPERS. BAD NEWS FOR COMPETITORS

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McMILLAN TEAM TRIO

Three members of one family, whose name is synonymous with excellence in greenkeeping, have united to form a company offering a specialist support service to golf courses and golf course construction companies.

Founded by brothers, Cameron and Stewart McMillan, and now joined by father, Jack, McMillan Golf undertakes, or coordinates and oversees, the fine work needed on golf courses, specialising in greens and their approaches, surrounds, tees, bunkers, general hazards and drainage. The team has already undertaken, contracts in Berkshire, Surrey and Kent and members of it were recently involved in the successful completion of a prestigious project in West Germany.

By combining the McMillans' golf course construction skill and experience with the consultancy and golf club operation expertise of two additional board members, Michael Latham and Roy Betts, McMillan Golf offers a service that is unique it its field. "Our ability to construct to a very high standard is complemented by a full understanding of the practical impact of that construction on a golf club's future operation," said Cameron McMillan, operations director.

Cameron McMillan, having gained his greenkeeping qualifications at Elmwood, the UK's leading college, where he was his year's top student, spent several years at Sunningdale Golf Club. He was involved in course alteration, the construction of greens, tees and bunkers and in the preparation of the course for numerous amateur and professional tournaments, before joining Liphook Golf Club as course manager, a position he held for two years.

Stewart McMillan has more than 15 years experience at senior level greenkeeping and is currently course director at Leatherhead, where he is responsible for the redevelopment of its 90 year old course. Jack McMillan, a head greenkeeper for over 30 years, the last nine at Sunningdale, has a lifetime's experience of remodelling and altering golf courses and preparing them for major events. His advice on turf management is regularly sought at home and abroad.

McMillan Golf is based at Leatherhead Golf Club, Kingston Road, Leatherhead, Surrey. KT22 ODP. Tel: 0372 843966.

AMENITY MOVE FOR TESTERS

Testers have been Ford New Holland dealers for almost 29 years as well as holding other leading manufacturers franchises at Edenbridge, a Kent beauty spot, on the border of Kent, Surrey and Sussex.

In 1981 they were appointed Land Rover Agents and now have a Land Rover Centre employing 20 staff. In 1986 their Fuel Oil Distribution business became involved in bulk liquid propane gas distribution and now they are the main Shellgas operation for the South East stretching from Chichester to Dover and on up to the Thames.

Testers have used their experience in dealing with sales and service of agricultural machinery to develop a fast growing professional turf equipment business; they were already selling the Ford Compact tractor range and have added Jacobsen, Hayter, Beaver, Modus T, Turfmaster, Lewis and Wessex.

The Professional Turf Division started 2 years ago and operates within a 25 mile radius of the depot. Bill Hammond, the Sales Manager together with his representatives-Jack Bloomfield, Robert Lewis, Robert Timms and George Woodcock-recognise the growing potential in the professional equipment market, the need for more mechanised methods of cutting grass and conditioning the ground and are supported by the Parts Division managed by Colin Kentish.

Marketing Director, Nigel Young, has visited the U.S.A. twice in the last 12 months, firstly to help the management of Lingfield Park Racecourse research requirements for the grooming of their all weather race track. His second trip was with Jacobsen to their factory and the GCSAA Conference and Exhibition.

Managing director, Paul Kentish said "We have the Kent County Council contract to supply Hayters for 1990 and are supplying Southern Water Authority with a fleet of Ford tractors fitted with Lawrence Edward loaders, but we are not just in it for the big contracts, all our customers are important. Our company has been built on service to farming so if we can't look after the Greenkeepers and Sports Groundmen's needs, I'll be very surprised.

QUAD TRENCHER IMPROVED

A new trencher to Britain the JI Case trencher, known as the 760 'QUAD', has improved trenching technology and versatility.

This unique and highly manoeuvrable machine is the first of its type to be delivered to a UK contractor and is equipped with four different attachments so it performs varied tasks in the narrow trenching field. The need to hire-in single or double attachment machines to perform separate trenching functions is now no longer necessary.

Based on a standard 760 trencher, the QUAD takes its name from its ability to handle four attachments at the same time including a chain cutter and vibratory mole plough fitted to the rear with a backhow and backfill blade attached to the front.

L. D. Bourgein (Oxford) limited, one of Case's UK trencher dealers, supplied the 760 'Quad' to Turf Irrigation Services to work on the Royal Birkdale golf course, near Southport, scheduled to host the British Open Championship next year, to lay several thousand metres of 50mm and 38mm diameter UPVC water pipe to a depth of 600mm - feeding sprinklers on each fairway.

As Turf Irrigation's workload mainly involves pipe and cable laying on golf courses, the mole plough will be the attachment mostly in use. The company believes the backhoe, trencher and backfill, blade will also be fully utilized which means that there will be no need to hire-in additional machines to carry out these functions.



With four different attachments on the Case 760 'Quad' there is no need to hire-in additional machines for separate trenching functions.

JACKLIN TO HOST CONFERENCE

Tony Jacklin and the organisers of the BBC Radio Show and the Daily Mail Ski Show have got together to create a 2 day conference "The Demand for Golf" to be held in Montreux Switzerland, January 24th and 25th 1991.

Aimed at the European growth market the visitors will include developers, architects, financial investors, and service companies as well as the private landowner.

The object is to provide an information and advisory service on the business of golf, in particular the intelligent and profitable use of land in the creation of courses and related facilities. Speakers will come from those concerned with golf holidays, travel companies, event sponsorship, hotel chains and local authorities.

The conference sessions will be on the financial commitment, design development and marketing of new golf resources and there will be an associated exhibition with an opportunity for individual discussions. It will be of particular interest to developers seeking finance as well as information on design, construction and management.

Held in Montreux Palace Hotel, Montreux, Switzerland the event begins with a welcoming supper on Tuesday 23rd January 1991. The conference proper being held on Wednesday 24th and Thursday 25th



ne handshake

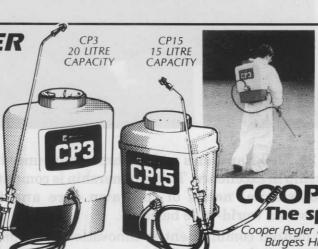
January, with a closing dinner on Thursday 25th January. Departure will be Friday AM 26th January.

The cost per delegate, to include hotel room, meals and the conference is SFR 3500. For companies requiring exhibition

space the cost will be SFR 310 per square metre for space only. (Exhibition space is limited and therefore available only to delegates and their companies). Further details from: Peter Anslow on 0634 660852.

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ADVANCED TECHNOLOGY IMPROVES

FAIRWAY MOWING by Richard Bishop

The mowing of fairways up to around 20 years ago was almost invariably carried out by trailed gangs. The trailed gang still performs this function on many fairways both in the UK and in the rest of the world and, to their credit, in most cases give an acceptable finish. However, since the introduction of powered gang mowers in the early 1970s, and more recently the introduction of self propelled ride-on gang mowers, the Course Manager can provide much more than just an "acceptable" finish. He can provide, with the help of modern equipment, fairways which are maintained to a very high standard and evenly cut no matter what the terrain, as well as

the front cutting units before the driving wheels rolled the grass down.

The introduction of the Hydraulic 5/7 was a major step forward, but there were problems associated with cutting fairways; the unit had been designed primarily for local authority and contractor use. In short the standard offered was not high enough for the typical golf course fairway.

The breakthrough came in the mid-1970s with the introduction of the floating headed unit. Development of this started mainly because of the problems that George Brown (now course manager at Turnberry) had at

S ince those days development has continued and there is now a wide choice of fairway mowers with powered cylinders for the Course Manager to chose from. Most units are hydraulically powered but there are also some with mechanically driven units, frequently belt-driven. There have also been machines with cutting units driven electrically, but for a number of reasons that idea never did catch on. The choice of equipment has been widened in the last few years with the introduction of ride-on self propelled machinery. Whether these machines are triples originally developed for tees and surround work, or the larger purpose-built 5 unit machines, they do have the advantage of being very much more maneuverable. In most cases they also have the option of grass collection; a feature which is becoming increasingly necessary with the continual improvement in the standard of fairways.

The most up-to-date method of cutting fairways is with the lightweight 5 unit ride-ons developed from greens triples. As is so often the case the idea has emanated from the USA and has much to commend it. All the major manufacturers have such a machine in their range and this year I know will see a great deal of activity with the promotion of these machines. They are, of course, particularly suitable for conditions where low ground pressure is of importance. Being developed from triple greens mowers, they also have the ability to give a very high standard of cut which can be improved even further with the addition of Verti-Groom reel. Verticutting units can also be fitted where appropriate, although this is not a new idea as many of the current machines have the ability to change from conventional cylinder units to verticut heads. So, the last 20 years has seen a dramatic change in the methods of cutting fairways, and I would hazard a guess that change will continue to occur at what could be described at an alarming rate. There is one thing for certain, and that is that any person involved in the purchase of fairway mowing equipment has a very wide range of types of products and manufacturers to chose from. Whether trailed gangs, mounted gangs, triple machines, 5 unit ride-ons or the very latest lightweight 5 unit machines are preferred, there are machines available to suit each and every applica-



Pictured cutting a fairway is a Ransomes Hydraulic 340TG trailed gang mower with 8-knife floating head cutting units

aesthetically pleasing. Perhaps the last point regarding aesthetics is not one at the top of the Course Manager's priorities but, with the increasing interest in golf as a spectator sport, particularly on television, aesthetics does have a part to play.

Changes in fairway mowing, particularly in the UK started with the introduction of the Ransomes Hydraulic 5/ 7. This unit, still in production today in a modified form, was mounted on the 3 point linkage, had cutting units positioned in front of the driving wheels and had the benefit of hydraulic drive to the cutting units and hydraulic lifting and lowering of the cutting units. For the first time, cutting could be carried out no matter what the forward speed of the tractor because the cutting ratio or cuts per yard was infinitely variable by use of the engine speed and gears. Another important feature was that grass could be cut by

Princes Golf Club in Sandwich, Kent with his Hydraulic 5/7. Anybody who knows Princes Golf Club will understand that the severe undulations on the fairways were impossible to cut without either "scalping" on the ridges or leaving long grass in the hollows. The problem was that the cutting units, although being able to articulate around the pivot point from side to side, could not articulate up and down around the pivot point to enable the unit to follow ground contours. The result was, as previously said, long grass being left in the hollows and ridges being "scalped". To overcome these problems Ransomes development engineers worked closely with George and came up with the floating head unit. The floating head concept these days is not out of the ordinary, but 15 years ago it was very much ahead of its time as far as fairway mowing was concerned.

tion.

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THE YANKS ARE COMING TO THE BONNY, BONNY BANKS OF LOCH LOMOND

Why a Scottish Greenkeeper is not considered good enough to manage Scotland's latest golf complex John Lelean reports

A n historical peninsula of tree scaped parkland in the ownership of one of Scotland's principal lairds, is about to suffer the ultimate indignity in the eyes of the Scottish traditionalists.

By 1992 it will be transformed into a golf course, designed, bulldozed and sculptured by an American professional golfer and his compatriate architect partner.

This first Scottish course where total American design has been introduced by the Weiskopf/Morrish partnership is not for the plebeian golfer from Clydebank Municipal or even the Bearsden or Helensburgh club member, the £52m development is aimed strictly at the company corporate market with an annual fee at present set at £25,000 or £10,000 for individual international membership.

That does not only mean to say this figure will not give value for money to those taking up the offer, undoubtedly the eventual two golf courses, the High Road and the Low Road on the Rossdhu Estate, plus the luxurious infastructure will provide the ultimate in golfing excellence. The High Road course is anticipated by many of the game's sages to become a sparkling jewel in the crown, of the home of golf.

W hat is likely to add to the controversy at Loch Lomond, will be the decision to appoint an American Superintendent to take charge of the course. Although the supremo has not been named it would appear to be a foregone conclusion that the position will go to someone from the other side of the Atlantic.

Why Scotland's newest course should be given to an American to maintain is explained by Tom Weiskopf. "First and foremost they have qualifications and know how to manage golf courses. From my experience there is a reluctance in this country for greenkeepers to carry out intensive aeration programmes, use fertilizers and regularly top dress."

"It could be that they are held back by their club committees or restricted budgets. but that won't happen here". The issue has been well aired by all in charge of the Loch Lomond project. Developer David Brench has sought the best advice and is prepared to act on it. As a member of Woburn, he had the ear of Alex Hay, who acts as a consultant to David.

Hay has strong views on course management. A green committee of one him; and no budgets. What needs to be spent at Woburn will be found without cutting any corners.

It has been a policy that cannot be faulted at the Duke of Bedford's courses, because it has proved to be very successful, though that does not mean to say he does not listen to the suggestions of his greenstaff.

Alex Hay is an ardent supporter of greenkeeper education and training, though he fervently believes it is 20 years behind the times in Britain. Where he can help a greenkeeper with drive and ambition he will, but until the know-how, demonstrated by qualifications are readily available, he will support the Weiskopf decision to bring in the man who is fully conversant with the construction methods used. In his view twenty years of practical experience, say on a golf course in one part of the world can be no substitute for a degree in agronomy and a demonstrable track record, when new methods are being applied.

"Once the golf courses are established and experience gained in the field on American methods, the British greenkeeper will certainly take over," he added.

Hay said that he is confident that there will be stepping up of the greenkeeper's education programme in this area and the benefits of American construction methods going on in many parts of the UK will provide the classroom for our young trainee greenkeepers.

The story of Loch Lomond's conception has been quoted previously, but is worth repeating. It all emerged out of an idea from Stirling Investments property developer, David Brench, who had been involved in a project at the south end of the Loch.

The scheme was not feasible, but it sparked off a train of thought which led to him broaching the golf course idea with Sir Ivar Colguhoun, the owner of Rossdhu House, a stately ancestral home, dating back to 1772, but vacated by the family for something smaller, warmer and more liveable. Now David is a self-confessed "golfnut" and on his world travels had played the two Arizona courses in cow-boy and indian country, Desert Highlands and Troon. The latter course was a Tom Weiskopf/Jay Morrish design and it so happened, Tom was around at the time.

David was introduced, broached the subject of his dream and persuaded Tom Weiskopf to come over and take a look. From that moment on the "dream" became reality.

Tom recalls that when he and Jay drove into the estate off the A82, they had laid out the 16th, 17th and 18th holes before they reached Rossdhu House. His reaction on arrival was - "We've designed the finishing holes, let's now look at the rest!"

He has been quoted before, but he said it again. "This is the finest piece of land we have ever been given to build a golf course". He is not necessarily looking for a memorial to the Weiskopf/Morrish partnership, though this could become a possibility. Rather, he said, he would like the course to have the appearance of having been built by a Scot over a hundred years ago.

The greens at Loch Lomond are under construction to the USGA specification, or nearly. The herring bone drainage system has been installed, but there is no stone carpet. "We don't

need it", said Tom Weiskopf. "Jay (Morrish) has designed 97 golf courses, the last 14 with me, and he believes there is no need for a stone carpet on this site. As you can see the greens have been formed, drained and pea graveled and the drainage is working perfectly."

"There is standing water around the course after the wettest winter period anyone can remember, but none on the green areas or where we have put in the fairway drainage system."

"When the growing medium goes on we will be using 12 inches of a sand/ peat/soil mix, using some of the suitable peat we have dug out of the course."

A sked what seed they will be using at Loch Lomond, Weiskopf said without hesitation. "Pencross, for greens and a bent with three varieties of fescue for the fairways."

"Why Pencross - because it has been proved to be the best grass for a putting surface. It is grown in Oregon, where the climate is similar to here. It is used all over the northern part of the USA where the winters are much harder and I cannot understand why there is such an objection to using it in Britain."

We are not building sand only greens, there will be a mix something like 80/20, which might increase to 85/15 depending on the final quality of the sand available.

Pencross first introduced in Britain for sand only greens has not proved successful, though whether this has been due to the climatic conditions or the lack of maintenance knowhow is a matter of debate. What may not have been considered



Tom Weiskopf receives the traditional Scottish welcolme

fully is that most north American courses are closed (often under snow) throughout the winter. Whether it will prove to be the correct grass for Scotland's cold damp climate is equally debateable.

It must be said that Tom Weiskopf's involvement at Loch Lomond is in no way that of the "big name" cashing in on his reputation as a leading light on the tournament circuit, it is total commitment. Last summer he spent eleven solid weeks, living in a cottage on the estate, surveying every inch of the ground, making sketches, and familiarising himself with the trees to such an extent he must know each of them intimately.

His visits to Loch Lomond are regular and frequent, flying in from his home in Phoenix, Arizona every couple of weeks or so, returning with more sketches and plans after consulting

WEISKOPF QUOTES

Who would I cross the road to watch playing golf? Jack Nicklaus. He plays golf like a game of chess, always thinking two or three shots ahead of the one he is playing. Who else? Lee Trevino. Still the finest shot maker in the game and entertaining to be with.

Nick Faldo? (and he said this a month before Faldo won the Masters). The best is yet to come, he will win at least four or five majors within the next ten years. He has a perfect swing, superb concentration and plays par golf under extreme pressure.

Did I come off the circuit too soon? Yes I think I did. I still play good golf and will enter some tournaments this year. Another three years I will be eligible for the Seniors Tour.

The best golfer he ever played with? Ben Hogan. "Mr Hogan", a man of few words, called me Sonny. After a round at the Champions, he murmured "Young man come down to Fort Worth one day and I will give you the key to make you into a great player". A young, headstrong Weiskopf never did.

His greatest embarrassment? Watching the closing holes in the 1980 Open Championship at Muirfield in the lounge of the Greywalls Hotel, when in the company of his wife Jeannie, he engaged Princess Margaret in conversation.

Unaware of her distinguished status he asked her if she played golf. Her Royal Highness informed him that she didn't, but her father was quite keen. "Really", said Weiskopf, "and what did he do for a living?"



Loch Lomond in March prior to reseeding

with his partner Jay Morrish.

David Brench, who spent much of the summer with Tom, said it was not unusual to find him out prowling the course at 3'O'clock in the morning, returning for breakfast, and after two hours sleep, calling for another consultation with the men on site to put into operation a further stage in the plan.

It is his proud boast that less than 10% of the hard woods have had to come out and it is with a profound sense of regret that these have had to be sacrificed.

onservation is the key to development on this 1,200 acre finger of real estate, guarded on three sides by the deep fish-filled waters of Britain's largest Loch, so much so that David Bellamy has been appointed to manage the retention of flora and fauna and a botanist is permanently on site supervising all excavations and tree surgery to ensure that nothing of interest or value is disturbed.

As an example, a group of half a dozen trees were found to be covered in a rare and beautiful lichen, so the line of the fairway from tee to green was changed to preserve them, which has in effect improved the value of the hole.

Tom Weiskopf insists that every hole on the High Road course has its own significance, but singles out four at the top of his list.

The third, a par five, runs down to the Loch. To the right on the approach to the green, overhanging oaks and marsh demand an accuracy of approach.

The fourteenth, a par 4 can be reached from the tee down wind by the big hitter, though the safer route still offers many challenges.

The fifteenth, a 390 yard, par 4, appropriately named "Arboretum" has almost every specimen of deciduous tree on the golf course within 100 yards of the green.

And the eighteenth - expected to become one of the most photographed holes in golf and one that Weiskopf, bubbling with enthusiasm dragged a somewhat reluctant press corps through a squally shower to view.

Framed by the ruin of an old ivy clad castle, the slightly elevated green nestles picturesquely alongside Rossdhu Bay. The tee 440 yards away demands a shot across the water, though how much distance one dares to cut will depend on the skill of the golfer, the prevailing wind or sheer

bravery.

As a finishing hole for the amateur or professional, it will be one long remembered.

And so to the club-house, a £5 million re-fit to the home Sir Ivor and Lady Colquhoun had abandoned to the ravages of rot and decay. One room, the baronial hall has already been restored to its former glory, hung with ancestral family portraits, going back through the ages.

By mid-summer, the transformation will be complete, bringing to Rossdhu House, the 20th century luxuries of a swimming pool, saunas, solariums, restaurants and the inevitable corporate suits.

To complete this supreme golf complex, negotiations are at the final stages with an international group for a 200 bedroomed five star hotel, corporate cottages, a 200 berth yacht marina, riding, shooting and fishing facilities. And a final touch - a caddy school is planned, which falls in line with the policy of buggies for medical reasons only. That is one aspect of Scotland's first American designed course the traditionalist Scottish golfer will approve.

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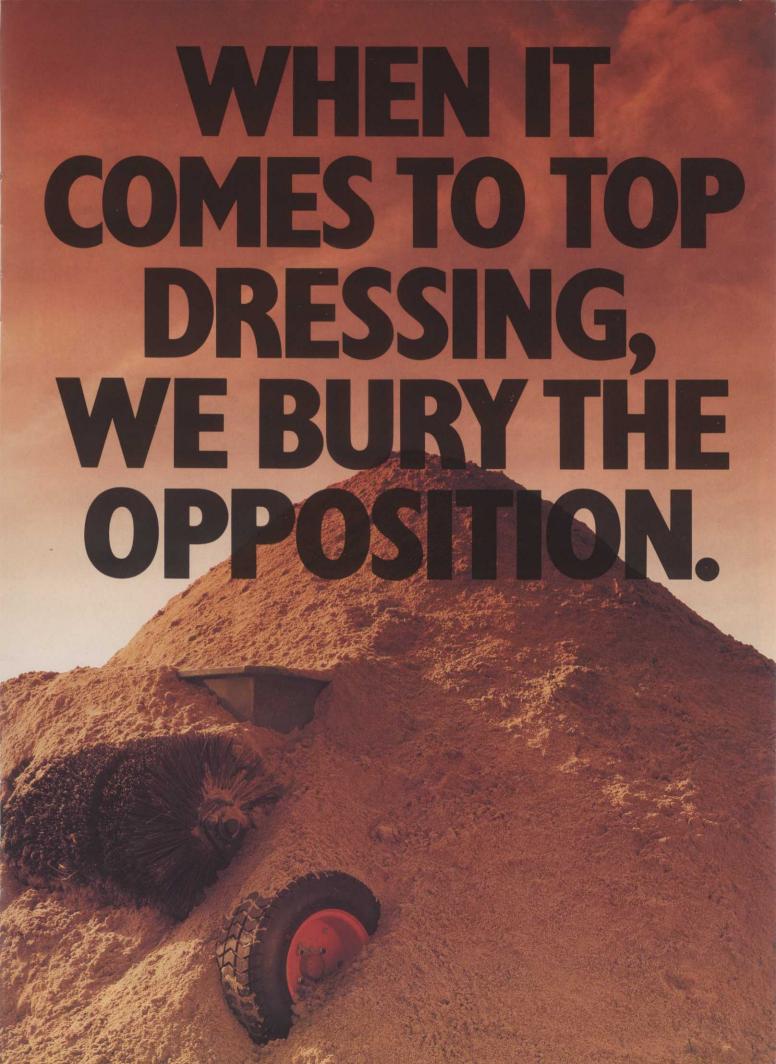
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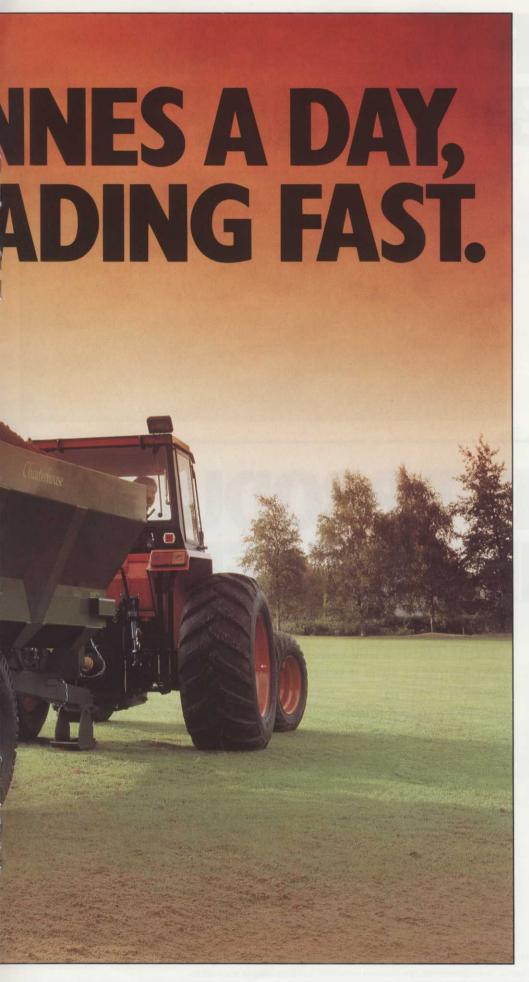
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NEW DEVELOPMENTS

DRIVE TO IMPROVE BOLTON'S MUNICIPAL G.C.

Bolton Leisure Services Committee is aiming to improve facilities at their Regent Park Golf Course - the Borough's only municipal course.

At the April meeting of the Leisure Services Committee Councillors discussed ways of increasing participation in golf for a wider cross-section of the community. Councillor Tom Alderton, Chairman of the Committee, said: "Golf is a sport for people of all ages and Regent Park is one of the finest courses in Greater Manchester."

The Committee plan to discuss possible improvements to clubhouse facilities, marketing campaigns to attract new participants in golf and special courses for beginners. Investment in the course over the last three years has created new greens, special winter tees of artificial grass and an extended professional's shop.

Councillor Anderton commented: "We already have an exceptionally well-used course. The aim is now to enhance the enjoyment of our existing customers whilst providing a warm welcome to new users."

A NEW COURSE FOR THE WEST COUNTRY

There are reports of a new golf course development at Erlestoke Sands near Devizes, which starts construction in May. Built on 163 acres of farm land, the 6,700 yard course will be a private members club, with an annual fee set at the astonishingly low figure of £275, though this does not mean the construction will be sub-standard.

The course designers, Western Golf Development, headed by Adrian Stiff, formerly course manager at Tracy Park, are aiming at a high specification with large greens, some measuring 800 square yards, three sets of tees for each hole, with interesting and unusual features, such as an island green at the fourth hole, completely surrounded by sand.

The green constructions will be to USGA specifications, with particular emphasis on drainage, though as the course is built on a 40 foot depth of "greensand", flooding is not likely to prove a problem.

Greens will be sown on a 12" mix 75/25, with an all bent grass mixture of Highland/ Saboval/Bardot, medal tees with Frieda, a Chewings Fescue and the day to day tees with a more hard wearing species to be decided.

The estimated cost of construction to include materials, labour, plant and irrigation has been put at £386,000, well below some of the figures heard recently. The land includes a marked Roman site and archaeologists will be on hand in the early stages to search for coins and artefacts.

NEW COMPLEX AT QUINTA DO LAGO

The Algarve purchase of the Vilar do Golf complex at Quinta do Lago, by Trafalgar House (Europe) last summer also involved two superb nine hole golf courses, one of which, the D course, was still in the throes of construction. Now successfully completed, the course was officially opened in April 1990 by the new Ryder Cup captain, Bernard Gallacher, Trafalgar House Europe's Golf Consultant.

All four 18 hole golf courses at Quinta do Lago, are regarded as amongst the best in Europe. The regular venue of the Portuguese Open, the spectacular Bermuda grass fairways unfold amongst wooded and open slopes to provide a variety of true championship play.

The location of the new D course itself is superb. Both par 5 holes feature beautiful winding fairways through pine and heathland, with a view of the distant mountains behind the greens. A walk in the rough will

also provide botanists with an array of wild orchids, tulips, gladioli, corci, heather, bluebells, gorse, together with a beautiful selection of colourful birds.

The D course was designed by Joseph Lee with the collaboration of Rocky Roquemore. The course, long for 9 holes at 3,067 metres, is a masterpiece of design, featuring beautifully contoured fairways. Excellent bunkering is a feature, with large greens, many of which contain gentle tiers to provide a multitude of interesting flag positions.

Tees and fairways are of Bermuda 419, with an overseeding of cool season grasses. The greens are Penncross bent. The courses are built on sand to the highest specifications, with a Toro irrigation system keeping the course watered.

"The holes are testing for the good player but the high handicap players will not lose many balls as the rough is not punitive" said Stuart Woodman, Vilar do Golf Resort Director and British PGA member. "The course is tremendous and really makes the player think and plan his route. Interesting holes include, for example, the 4th hole 'Lago', a 90 degree dogleg around a two acre lake".

The opening of the D course will coincide with the launch of the first of 180 refurbished villas with a distinctive Portuguese flavour, with spacious interiors and surrounded by extensive landscaping.

Whilst eventually all these villas will be offered for sale, currently villas can be taken for holiday lets by golfing enthusiasts with swimming pools, tennis courts and restaurants. All part of the complex. Future freehold purchases of Vilar do Golf's one bedroom apartments and two or three bedroom villas will also be able to enjoy discounts on green fees and given guaranteed starting times. They will also be eligable to apply for membership of the Quinta do Lago Golf Club.

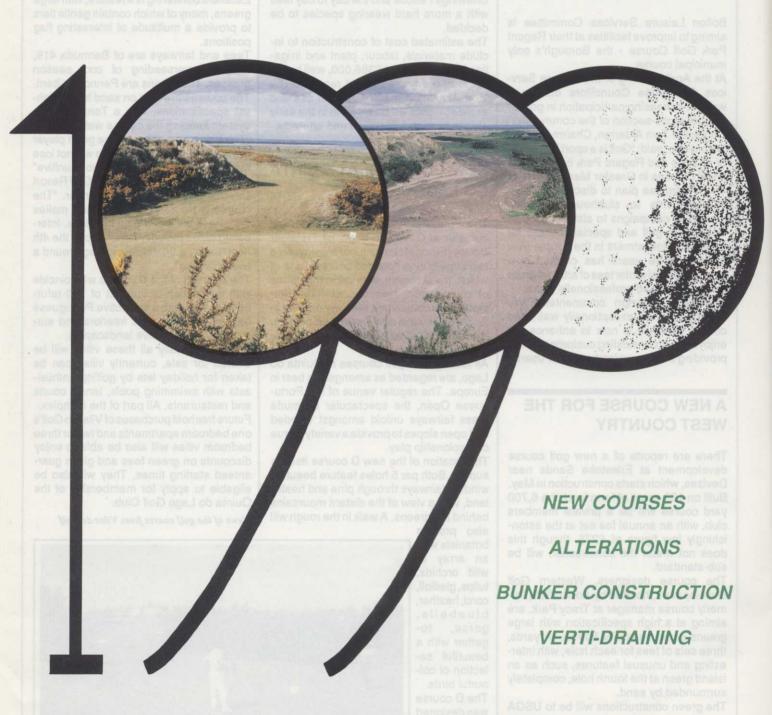
Views of the golf course from Vilar do Golf



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THE NORTH, SOUTH DIVIDE

Roger Newman compares two courses and finds differences, but much in common

Is there a 'North-South divide' as far as golf course management is concerned? Roger Newman looked at two 18-hole courses, one in the leafy lanes of stockbroker Surrey, the other on the edge of industrial Sheffield.

E ssentially, there does not appear to be what Disraeli termed 'two nations' in golf course maintenance and ideology.

There are, of course, problems found in one and not in the other, and there is certainly a different management policy at West Surrey Golf Club, compared with Abbeydale Golf Club. But both have one aim in common: to keep the course up to the highest standards required by players.

Another interesting fact in common is that both were designed by W. Herbert Fowler, the distinguished golf course architect and landscaper, best-known, perhaps, for the championship course at Walton Heath.

West Surrey Golf Club, near Godalming, was set up by a local landowner, John Eastwood, in 1910. It has spectacular views towards the great ridge known as the Hog's Back and an attractive Clubhouse designed in the style of a typical Surrey farmhouse. Apart from the loss of several mature trees in the 1987 hurricane, the appearance of the course has changed little over the years.

Abbeydale Golf Club, in the Sheffield suburb of Dore, was designed on its present site in 1922 - it is interesting to note that Fowler's fee for a report and travelling expenses was £20. The original course, at neighbouring Beauchief, was only leased and a change of landlord meant that much of the ground was required for building development. As at West Surrey, the new site of Abbeydale has magnificent views, this time over the Tetley Moors towards the Peak District. And here too, the general layout is little altered from Fowler's final designs.

West Surrey Golf Club is wholly-owned by the members, so there is no requirement, as secretary Ralph Fanshawe pointed out, to 'generate and put into reserves any more funds than they wish to spend'. There is a course management committee chaired by an elected director plus two elected members, secretary Ralph Fanshawe and greenkeeper Mike Kirkham. Abbeydale, on the other hand, has the more usual Board and Committee structure, including the green committee chaired for the last 10 years by David Wish. It is unusual too, in having a husband and wife team -Paul and Jane Ryan - as greenkeepers. Previously at Whitby, they came to Abbeydale at the beginning of 1983. Also unusual in a sector which has always been male-dominated, Abbeydale has a lady secretary and a lady steward. As the secretary, Kathryn Johnston, suggested: 'A number of northern clubs now have lady secretaries and I followed one here. There must be a message there, somewhere!

The soil at West Surrey is very fine sand, not necessarily typical of Surrey, and classed as Lower Greensand - but it is far from muddy, even in heavy rain. Ralph Fanshawe said that the course is usually ready to play soon after heavy rain, although the third and sixth greens, which tend to flood, are always the last to clear. As an experiment, Ralph Fanshawe has invested in a small rain gauge which relates to the condition of the sixth green. It is a simple attempt to judge from the Club House the likely condi-

only two fairways and improving. Last year's hot weather produced some patches on greens but this is now cured.

Inevitably, both clubs have suffered from compaction and drainage problems, although four years ago both purchased a Verti-Drain from Charterhouse Turf Machinery Ltd and both Mike Kirkham at West Surrey and Paul Ryan at Abbeydale saw 'immediate effects'.

Even the problems with the third and sixth greens, after rain, have eased significantly', said Mr. Kirkham; while Mr. Ryan added: 'Our greens never drained well, but they do since we began to use the Verti Drain. They used to be the first area of the course to be closed: not any more.

The Verti Drain encourages deeper rooting, and both clubs agree that grass seed companies should seriously consider the introduction of deeper-rooting cultivars, particularly if the mild weather pattern, apparently set last year, continues in the 1990's.

R alph Fanshawe of West Surrey said: There is no real growth here until the beginning of May, and



Gun-booted greenkeepers Paul and Jane Ryan are one of the few husband and wife teams on Britain's courses

tion of greens during heavy rainfall. Waterlogging can be a problem at Abbeydale also. Much of the course is solid clay over shale which goes down to 18" and much of Abbeydale lies on North facing ground and gets little sun in winter. Torrential rain used to close the course completely and slime would appear, but now this is confined to

we could be facing a new and unwanted experience if we have a repetition of the drought last summer. We will certainly be looking to create the environment for deeper-rooting grasses'.

At Abbeydale, following a hard winter, there is no real growth until early June, commented Jane Ryan - usu-

ally because the weather on the edge of the Peak District is too cold. Ideally, we Verti Drain and top dress at the end of August when have some growth coming through, and then we top dress in May with a seed-compost mixture. Both clubs have recognised an eternal conundrum: how to educate players to use the course correctly, without placing undue and unpopular restrictions on them. At West Surrey there are 600 playing and intermediate members, and while the course is not over-used - as at Abbeydale, the period between Christmas and the New Year is busiest - it is essential that players' feet cause as little compaction as possible. To these ends, West Surrey has laid 600 railway sleepers as steps and curbs on pathways and woodchippings have been spread as a surface - both tidy and rural in appearance. Steps are also being laid on the tees at West Surrey, to ensure that players use them, and the first tee is being developed as a collection point; although Ralph Fanshawe insisted that 'we don't want it to look like a bus stop'.

At Abbeydale, Paul Ryan is more outspoken. There are too many golfers: the 'hard core', if you like, is greater than it used to be. Obviously, we need the revenue - we pay £25,000 a year rent and rates to Sheffield Council. During the war, the club was short of funds and sold the ground to the Council. We would like to buy it back, but at the moment the likelihood of doing so seems unlikely.'

There are 514 members at Abbeydale, but something in the region of 15,000 rounds a year are played. As in West Surrey's case, there is no shortage of courses in the immediate area, but Abbeydale has always been especially popular - and, as Paul Ryan stressed ruefully, 'too many golfers just don't seem to know the etiquette'. Competitions now run through to October, and golfers want to keep playing all year round. This, coupled with the results of the mild weather means that the grass gets little chance to recuperate.

Unlike the management of West Surrey, Paul Ryan does not agree with steps on tees. It simply makes holes on the top and bottom.'

Increasing the appearance of the course, without making them appear artificial, is naturally a primary aim at West Surrey and Abbeydale. Investment in equipment, notably the Verti Drain, has resulted in a much better appearance at both courses. With deeper rooting encouraged, bounce reduced and drainage improved. Neither club favours one particular manufacturer where machinery is concerned. Different equipment is



Mike Kirkham (West Surrey) shops around for best equipment used for different tasks.

Paul Ryan and Mike Kirkham 'shop around' for whichever machine performs its task best, and both clubs have a good workshop for running repairs. Both men are agreed, too, that

repairs. Both men are agreed, too, that a great deal depends on the back-up available from manufacturers or deal-

There is no clash of personalities over management at either clubunfortunately, the same is far from true of every golf club in the UK. Mike Kirkham sits on his management committee; Paul Ryan has a good working relationship with his green committee.

Abbeydale also sets an example that could be more widely followed by encouraging its greenkeeping team to play golf at the club - not just granting permission condescendingly and restricting it to 'after hours'. The past captain, Warwick Ward, has, in Jane Ryan's opinion, 'done more for the staff in his 12 months in office than anyone else she has known in fifteen years of greenkeeping'. He made sure that all the staff had handicaps and invited them all to play on his Captain's Day, and donated a trophy to be played for anually in a match against the club officials.

With an increasing use of machinery and automatic irrigation - Abbeydale has a Watermation system, although at West Surrey the tees are handwatered - one might presume that a greenkeeper's lot has eased. But all too often a greenkeeper is treated by his official as little more than a hired hand. This is certainly not the case at West Surrey or Abbeydale, but Jane Ryan's words should be noted: 'Greenkeepers should be encouraged to feel that they belong to their club in every sense. Get them to play - give them a handicap - give them clubs, if necessary. It all helps them to set up a course with the mind of a golfer. To teach them the game is essential: it means that a greenkeeper will take a real pride inhis course if he plays on it, and is encouraged to play. And that, in turn, will result in the calibre of greenkeepers that golf clubs need.'

S o, what of the future? There are no plans to redesign either course, but at West Surrey improved practice facilities could well be provided if areas of scrub and woodland are developed. At Abbeydale there are hopes that, in time, the club will own the course again, although this depends largely on a change of heart by Sheffield Council.

In the meantime, general improvement continues, and the comments of W. Herbet Fowler in his report on Abbeydale, submitted on 7th September 1922, are applicable to both courses. 'We have no hesitation in saying that in our opinion you have the most wonderful chance of making a first-class course.'

A FIRM NO TO SAND ONLY GREENS . . . by Jim Arthur

A s with so many catch phrases in golf, not every course described as having sand greens has been built with sand-only or pure sand greens. As one Texan Golf Course Superintendent said some years ago he wanted nothing to do with the sand-soil root zone of the USGA Green Section specification, as he had enough problems getting rid of the enormous amount of irrigation water he had to apply to stop the grass dying under what were virtually desert conditions.

Those who will doubtless leap to the defence of much publicised new courses with sand-only greens should first carefully check that there is no humus or soil addition to that sand. In fact they will be less ready to defend truly 'pure' sand-only greens because there is not one example of one in Britain which has stood the test of even a short period of play. Many so called examples of this desert inspired technique have in fact some source of moisture and nutrient retaining material, uniformly pre-mixed with the sand. In passing, rotavating bales of Irish peat into what were originally pure sand greens, as at one North Western venture is not a solution!

Research, generously funded by the Royal and Ancient, carried out for several years at the STRI, on the management of pure sand greens confirms both analytically and visually exactly, what logic would expect it to prove. Where there is nothing to retain water or plant foods, the grasses must snatch what they can as they passed own through the root zone and both feeding and watering must be both frequent and generous. Equally, with no compost-like buffer to hold basic nutrients, unless such sand greens are fed (and watered) regularly with complete (NPK) fertilisers and lime, the sown grasses die and if they are fed, then unsurprisingly Poa annua rapidly colonises and eventually replaces the bent grasses.

EXCELLENT SURFACES

Under arid conditions, and using heat resistant strains of bent (Agrostis stolonifera) the heat prevents any other grasses from invading and in any case there is not much Poa annua in the desert to provide seed to support the invasion. This is why such desert courses are virtually monocul-

SAND GREENS - STRI RESEARCH RESUME

by Dr Peter Hayes Director, Sports Turf Research Institute

- 1) Sand greens require an intensive fertilizer programme with repeated applications of nitrogen, phosphates, potash and trace elements. If these fertilizers are not applied, deficiencies of the nutrients will occur.
- 2) The management of the pH (acidity/alkalinity) of the sand rootzone is critical as sand greens are prone to rapid fluctuations in pH, leading to poor growth and vigour. For example, on our trials the pH of the sand rootzones could drop by one unit in a year.
- 3) If liming is used to correct the lowering of the pH, lime causes too rapid an increase in the surface pH of the turf, thus leading to ideal situations for the ingress of the weedgrass Poa Annua and for moss, and the risks of obtaining the diseases Take-all patch and Fusarium are heightened with liming.
- 4) A rapid deterioration in winter

quality can occur on sand rootzones, resulting from nutrient starvation. This is due to the fact that there is no organic buffer to offer a supply of nutrients during mild weather periods.

- 5) The playing quality of sand greens is different from 'normal' greens. There is no resilience in the base of the turf which produces a "dead" ball bounce behaviour.
- 6) The quality of the sand used for the construction of pure sand greens is critical. It must be of uniform particle size and be lime-free, consequently construction can be subject to mistakes and, by using cheaper sands, inferior quality materials are often employed which lead to problems in the future with "concrete-like structures".

At the present time, the STRI would not recommend the use of pure sand greens for construction on golf courses.

tures of a specific bent, producing under these conditions superb fine, uniform and fast putting surfaces.

Arguments about (or especially against) sand-only greens in Northern Europe are often confused by the effects of two other factors, the poor quality of sand used (which we will deal with later) and the all too frequent combination of sand-only and Penncross bent.

It must be accepted that Penncross and its relatives are simply not suitable for Northern European conditions, though unsurprisingly since they were bred primarily for heat resistance, so that bent could be used instead of Bermuda grass, they are satisfactory for Southern Europe etc. Claims that Penncross survives American winters in the cold Northern States are irrelevant. What Penncross will not stand up to are our long wet rather than very cold winters, coupled with

being subjected to constant play. In northern America, they spend the winter under snow and ice, with obviously no play.

It is fully accepted that regular spraying with dilute solutions of Paraquet can control for a time, seedling Poa in Penncross but in an unpredictable climate, this is akin to Russian roulette - and at best is certainly a very skilled operation dependent on calm weather, very accurate application and suitable growth. With so many imponderables, Murphy naturally is likely to have a field day!

The conclusion is unarguable. The system, though having considerable advantages in hot arid 'desert' climates, has no relevance to northern European conditions and creates a hundred times more problems than it solves. In passing the STRI confirm Penncross has poor winter colour, very poor disease resistance and worst of all is a



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thatch producer a doubtful second only to Poa annua.

This makes pronouncements by a senior member of the USGA Green Section that "English (sic!) greenkeepers have progressed no further than the belief that Poa annua and fescue are the two best grasses for greens and fairways in Britain" so infuriating! This is compounded by the claims that "only recently a few have come round to the belief that bent grasses may be superior and more dependable." So obviously, they are thinking of 'their' bents, which were bred for completely different climatic (and soil) conditions, rather than our native strains of Agrostis tenuis and Agrostis stolonifera. It may come as a surprise that Scottish golfers, were playing on bent grass greens and fairways whilst America was still a British colony!

In ine fescues have always been associated more with links and a few favoured sandy heathland courses, but the bulk of our better courses even today are based on bent, especially on heavier and more acid soils. It was only the mistakes in the past fifty years of overfeeding in a chase for colour, based on 'agricultural' advice, that caused Poa annua to dominate so much fine turf, and everyone (well, almost everyone) has been desperately trying to reverse this pattern for the past two decades at least.

But to return to sand-only greens, the specification for a suitable sand both in regard to uniformity and narrow range of particle size and shape is difficult enough but to find supplies of such sands in consistent quantity to build even 18 greens is nigh on impossible and demands constant check analysis, - indeed of almost every load. The use of sands with angular particles over a wide size range, which bed down with all the permeability of a motorway is indeed a major cause of poor performance of many earlier sandonly greens, all of which either have been or should be lifted and relaid to specifications more relevant to our Northern European conditions.

To state that we should at the present state of research into their management, confine verdicts on the use of pure sand greens to saying that the disadvantages outweigh the advantages is classic fence-sitting which, as it always is, will be rewarded by the sitters being left behind. When leading American Architects such as Robert Trent Jones Jr. at Wisley (not the professionals turned designers whose knowledge of relevant agronomy could be written on the top of a tee-peg) specifically reject sand-only and opt for sand-soil greens for all those courses where they are involved in Northern Europe and echo the above condemnations, it is surely time to take a positive view.

What indeed are these advantages which are so obviously and heavily outweighed in the UK? The only one is that such greens are easier (not necessarily cheaper and certainly not better) built and the problems arise only when the contractor and architect have left with their fees safely banked.

What we must ensure, if only to avoid Britain being littered with "costly monstrosities which are maintenance nightmares", is that naive if well endowed developers are not taken for a ride by inexperienced designers or contractors into building courses which will predictably fail to meet the effects of our climate and ceaseless play - and incidentally, which cost so much more than they need do, because lack of flair in using the land to best advantage is replaced by costly and destructive earth moving and the creation of artificial water features perched half way up hills, often retained by banks looking like the sides of major reservoirs!

All members of the British Association of Golf Architects would not advise sand-only greens, and no qualified agronomist (least of all the staff of STRI) would recommend them. Research programmes into their hydroponic management may well not have been completed (and indeed when they are, the findings may well be of academic interest only in northern Europe) but we know enough now from both research and practical experience to justify advising a total prohibition on this method of construction, which is so clearly unsuitable to our weather conditions. soils and above all constant play all winter

CORRECT CONSTRUCTION

If pure sand greens must be condemned what then is the correct specification? Virtually without exception all concerned with golf course construction in this country at each and every level, would advise building greens (and tees) with a uniform sandy soil root zone, over an underdrained stone carpet. There may be differences in detail but not in principle.

The only exception might be where the natural 'soil' is virtually sand e.g. links courses. The root zone of the greens is deliberately a copy of the black sandy top spit of such links built up by years of decomposition of grass and organic matter.

Certainly there can never be any excuse to use the local soil (save in exceptional heathland sites etc). as no amount of sand added to a basically clay soil will produce anything better

than bricks. We have progressed some way from the situation so common 25 years ago when greens were built on native soils with 2" of 'seed bed compost' - asking for and receiving a certainty of annual meadow grass dominance, by virtue of impeded root development. The soil is available quite economically from limited sources and is characterised by having a very low 'fines' content (less than 4% clay and silt) but 8% of humus.

One must feel a certain sympathy for inexperienced developers whose sole knowledge of the game seems to be based on what they have seen on television, swayed by those whose golfing experience is confined to playing it professionally, albeit once superbly, employing unskilled contractors, whose previous skills were gained in motorway construction. Such unfortunates end up with a £multi million monstrosity far too difficult for the average golfer to enjoy and costing fortunes to maintain.

As with all aspects of golf, including construction as well as greenkeeping. the clue lies in better education - in this case of inexperienced designers and their equally naive 'employers'. Sadly in every aspect of golf today everyone seems to be convinced that they can do another man's job far better - and make more money at it than that man, who has spent a lifetime at the job, kept himself up to date (if he didn't he would be out of work) and has seen it all before. This trend is by no means confined to golf course construction nor even to agronomy and the root cause, it must be accepted, is that there is a boom and money to be made. This is a plea for avoiding mistakes, spending money wisely and learning from the errors (often very expensive to make, and even more so to correct) that others have made before.

hether 700 new courses will be built before the year 2000 is built before the year 2000 is arguable. What is certain is that we must build those well: provide all year round play; as attractively as possible (using the latent advantages of the site and not trying to move half Britain from A to B); and certainly as economically as possible (if only because diabolically expensive construction cannot be funded from returns). Ultra expensive courses, equally with cheap golf-in-a-field ventures will certainly not survive a down-turn in the economy, but properly designed, specified and constructed courses will remain as memorials to the varied skills of those producing them and be both a source of pleasure to all grades of golfers and profit to their owners, whatever happens, be it boom or bust!

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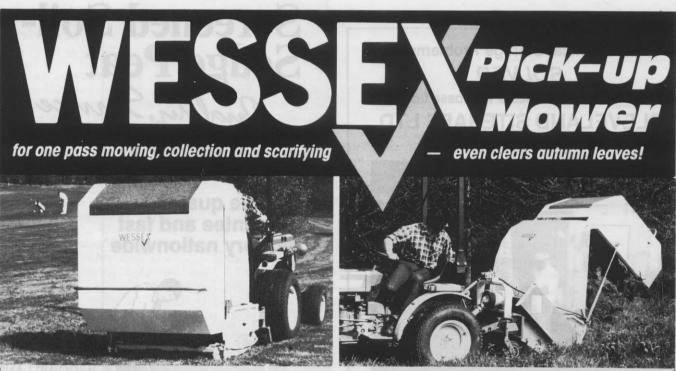


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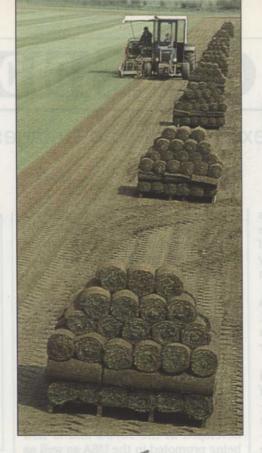
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TURF OR SEED

Robert W. Laycock examines the advantages of both methods and new species

The method of establishing grass on the playing surface is one of the major decisions in the construction of a new golf course. It affects the quality of the game, as well as the time taken to bring the course into play.

In the United Kingdom the choice is simply whether to turf or to use seed. Elsewhere in the world there is a further option - the use of "sprigs" or stolons

Whichever method is used, it is vital that seed should not be sown nor turf laid until the greenkeeper is absolutely sure of the condition of the underlying drainage system, the quality of the rootzone material and the eveness of the surface levels.

In theory, the use of seed gives the user the widest choice of species and cultivars, and it should be possible to pick and choose the best available for each particular situation. In practice, however, the constructor tends to choose from the ranges of proprietary mixtures offered by each of the major seed houses.

In devising their mixtures the seedsman inevitably has to compromise between availability and price. Some desirable cultivars are effectively exclusive to a seedsman and so the "ideal" seed mixture remains hypothetical. Even so, the seed guide issued by the Sports Turf Research Institute each year enables an objective comparison to be made among the available mixtures.

Given time, seed can give a first class surface. It does not introduce any undesired soil types to the course and of course is by far the cheapest technique. Unfortunately in the British Climate, seed is significantly slower than turf, whereas in other parts of the world, where water temperatures prevail, greens grown from seed can be in play in a matter of weeks and turfing becomes unnecessary.

Turf grown on a mulch, possibly with a reinforcement of netting, and sold when a few weeks old, can give good results on the golf course. However, because it consists of fine-leaved seedlings any coarse grass present in the sown mixture may not become apparent until the turf has matured on site. Seedling turf is vulnerable to desiccation at the establishment phase, but gains a few weeks growth over seeded areas. It is debatable whether the benefits of this outweigh the high cost.

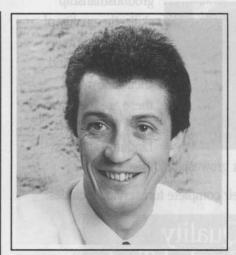
In the UK several companies producing this type of turf were in operation in the mid - 1970'2, but none of these original companies are still in existence, though there seems to be a recent revival of interest from new companies. A French technique involving the use of seed sown into a composted pine bark mulch was also developed in the 1970's and is now being promoted in the USA as well as in mainland Europe.

In spite of this, seedling turf is not suited to large-scale production and will therefore inevitably remain a minority interest among turf growers. Pressure to get new golf courses into play as quickly as possible means that more and more greens in the UK are being turfed using cultivated turf. In Britain it is perfectly feasible to lay turf in autumn and putt on it by early summer; or lay it in spring and putt in late summer.

It is a surprising fact that although the total number of acres of turf production in the USA is massively greater than that in the UK., I estimate that a similar acreage of greens turf is produced in both countries. This stems from their respective climates, the grass species used in each and the comparative standard of greenkeeping care.

C ultivated turf consists of grass specially sown and grown on a natural soil. Turf is harvested when it is mature, which gives greater strength to the established playing surface and allows heavier use at an earlier date than with other techniques. A range of grass mixtures is available to suit the majority of possible uses.

Choosing a supply of cultivated turf depends on the soil on which it is grown as much as the grasses it contains. There is no point in laying turf grown on a heavy soil on to a new green built with a free-draining rootzone. Water simply would not drain



Robert W. Laycock

from the surface, playing days would be lost and the sward would deteriorate in play, no matter how good it was when purchased. The best way to choose turf if you are at all unsure is to inspect the field from which your order is to come, as close as possible to harvest date. Any reputable turf grower will welcome the opportunity to show you his fields. There is no point in looking at turf six months ahead of purchase. Fields can vary and only the one from which the customer's turf will come is of real interest to him. In the UK and at golf clubs in Europe with a British influence, the tradi-

with a British influence, the traditional mixture for creating a putting surface is fescue/bent. The fescues may be a combination of Chewings fescue and slender creeping red fescue while the bent is predominantly browntop (known in the US as Colonial bent), whether "Highland" (Agrostis castellana), one of the Agrostis capillaris cultivars, or a native type. Frequently annual meadow grass has invaded greens over the years, but sensible management can minimise its extent.

In more continental temperate climates, creeping bent grass, (Agrostis stolonifera, is used for greens, particularly in the USA where it is virtually exclusively used. "Penncross" is the best known cultivar, though other similar types are available. Seed of "Penncross" was first released in the

USA in 1954 which makes it one of the oldest cultivars on the market.

Because there in only one type of grass on a creeping bent grass green it has a very uniform texture, albeit coarser than the finer fescues and browntop bents. Different forms of creeping bent in the green can cause segregation and a patchy appearance.

With access to a particularly good strain of creeping bent grass one could create a green vegetatively, using pieces of stolon as cuttings which would rapidly fill in to make a full grass cover. A number of vegetatively propagated strains of creeping bent were selected in the USA in the first half of this century to enable greens to be made in this way. In the UK this technique was restricted to the infamous "Emerald Velvet" bent grass which was available by mail order briefly about thirty years ago, but is still referred to in the amateur gardening textbooks as a way of making a new lawn.

A s American golf course designers have had a greater impact on European golf they have brought with them the grasses they know best. These have begun to increase in prominence over the grasses traditionally used for golf in mainland Europe, which had originally been introduced as a result of British influence. Thus creeping bentgrass is likely to become more common in Europe.

In Southern Europe, North Africa and other sub-tropical and tropical areas the most usual grass for golf greens is Bermuda grass (Cynodon spp). Like creeping bent it can be propagated by seed or vegetatively, the better types being established from sprigs and sold as sprigs or turf.

As more golf clubs are built around the Mediterranean the improved Hybrid Bermuda grasses, originally bred in Georgia, USA have been introduced and are now widely used in the area. One drawback is that they become brown and dormant in temperatures below about 10 degrees centigrade. As with greens there is a choice of grasses suitable for use on tees in the UK. Traditionally a mixture of red fescue and browntop bent has been used, similar to that on the greens. To add resilience to the sward smoothstalked meadow grass may be added. A radical departure from this is the use of a perennial ryegrass turf on the tee. Forgetting the tradition of the game and looking objectively at the required characteristics of a tee, many people find that the best of the modern, fine-leaved ryegrasses provide a combination of features which are beneficial on the tee, particularly when used with a rhizomatous grass such as creeping red fescue which can help repair divots. A number of the top clubs are trying this kind of seed mixture, particularly on par 3 tees. On North European 'American - style' courses the tees tend to be creeping bent or smooth-stalked meadow grass. both of which are also able to repair damage. Between the latitudes of 35

its heat tolerance. Whether turfing or seeding, the results depend on the initial preparation and the standard of greenkeeping af-

degrees N to 35 degrees S, Bermuda

grass is more appropriate because of

Robert Laycock B.Sc, M.Sc, D.I.C., C.Biol., M.I.Hort., is a chartered biologist and turf grass scientist. He has been Technical Director, Rolawn (Turf Growers) Ltd since 1987. A graduate in botany from University College, London he worked for the Field Studies Council before carrying out post graduate work on closemown turf at Imperial College. Later he undertook research at the Sports Turf Research Institute at Bingley for six years.

His main responsibility at Rolawn is the development and sales of turf for the professional sporting market and overseeing the quality control processes. He also provides technical advice for customers and staff and was responsible for introducing the concept of washed turf to the UK.

Robert is also much in demand as a lecturer on sports turf and lawn care. He has published scientific papers on turf grasses, and numerous articles on turf management for specialist journals and features on lawns for the general public.

ter establishment, as much as the grasses used, the temperature and availability of water. Choosing the most appropriate material is the key to success.

FROM THE FAIRWAY

Dear Sir.

Whilst reading the very interesting March issue of 'the Golf Course' I was surprised to read under Topical Tips your recommendations in response to the greenkeepers question about the Certificate of Competence. The advice you gave was inaccurate.

I will work through it step by step.

It is wrong to refer to the age of 25, as that was the starting age and will increase by one year each year.

1. Those born before 31 December 1964 and are spraying on their own or their

employers land (owned or rented) do not require a Certificate of Cempetence and do not need to be supervised.

- 2. Those born after 1 January 1965 require a Certificate of Competence - unless they are being supervised by a certificate holder
- 3. Those born before 31 December 1964 may not unless certificated supervise an operator who was born after 1 January 1965.
- 4. All contractors what ever their date of birth must be certified. A contractor is an operator paid or unpaid who is applying

pesticide to land which is not owned or rented by themselves or their employer. There is so much confusion about the legislation that I hope you will forgive me for attempting to put the record straight.

G. Keith McKee

European Technical Manager Fisons plc Horticulture Division

Editors Note:

Your guidance is much appreciated. The legislation is complicated and piecemeal, but in time all greenkeepers will be required to undertake training regardless of age. There is no substitute for sound knowledge and skills.





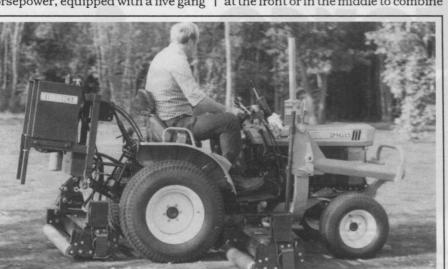
POWERED TRACTORS, COMPACT AND VERSATILE

When it comes to mowing fairways on your golf course, there is probably no better machine around than the Iseki range of Compact Tractors.

Iseki, one of Japan's foremost manufacturers of Compact Tractors now have a full range of tractors for a number of versatile jobs around the course, including fairway mowing. More normally, specialist equipment equipment might be used, but one of the new TA tractors from 33 to 48 horsepower, equipped with a five gang

back hoe, and the TA tractor becomes a real economic investment for your golf course.

Beyond the Iseki TA series is the smaller TU series, launched successfully two years ago, at the Institute of Groundsmanship show at Windsor. This range of tractors is available with either syncromesh or hydrostatic stepless transmission and has horsepowers from 19 to 27. With the TU series you can mount the machines at the back. at the front or in the middle to combine



Iseki's TX Tractors are available with wrap around cylinder mowers for fairway or green surround

mower can be just as productive, and more importantly equally at home on other jobs around the course such as scrub cutting, hedging, ditching and

course preparation.

The Iseki TA series comprises of three tractors from 33 to 48 horsepower all with four wheel drive and high torque, but economic, diesel engines. Take for instance the latest introduction to this range, the TA545, this 48 horsepower, 4 cylinder diesel engine tractor, has a job around the course. Uniquely this shuttle gear box allows you to work extremely quickly and economically with a loader or alternatively using its PTO power to power trail gang mowers. Turning circle is especially tight on the TA545, and you will find no more comfortable cab, with wide opening doors, front and rear screens and electronic PTO and power steering, it must be one of the most comfortable operator environments around. Combine this with the full range of attachments available from Iseki including Hedgetrimmers for either hedgetrimming or flail mower on road side verges, a full range of flail or rotary mowers including flail collection machines and a front mounted loader or rear mounted

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Quite recently, Iseki moved into spacious new premises at Bourn in Cambridgeshire to give more of a service to their well established customers throughout Great Britain and



Iseki's new TA Tractors are especially suitable for mowing fairways where they power from 33 to 48 horsepower and four wheel drive

indeed Europe.

These new premises include, some 15000 square feet of storage space and has meant a greatly increased range of service parts, as well as a demonstration are and educational facilities for dealer and customer training.

Iseki who are sponsors of the Iseki Greenkeepers golf tournament in Britain have made considerable steps in the golf course market over recent years and with the introduction of the new TA series their tractors from 19-27 horsepower and the top selling TX tractors, the original compact tractor, from 16-18 horsepower plus a range of attachments for all types of jobs around the course, really are the driving force in Golf Course management, in truth you will probably find no more interesting and innovative machines to work on your course than Iseki - the Driving Force in Golf Course Maintenance.

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