



is a former Royal Lytham man.

"I think the National Championship will be a good test because they will be playing two different courses – an out and out links where the wind blows and another which is a bit more picturesque but which is equally tough."

To illustrate the point Peter describes the work that has been carried out on the par-3 17th which has made a difficult hole more difficult.

"We've altered the bunkering around the green so that it is now surrounded by eight pot bunkers while we've removed the mound at the rear of the green so that now, if you go

long, you risk going out of bounds."

When you're hitting at least a 5-iron into the green, and it's all carry, it could never be described as a cake walk.

Having said that the course did hit the headlines during the '96 Open Qualifying when local favourite Royal Lytham tournament professional Paul Eales, desperate to play the Championship over his home course birdied the final five holes at Fairhaven to scrape into the final field. Admittedly there are two par-5s in those final five holes but it was still a mighty feat.

The course record was set during that same qualifying event. A 64, which might have been two less had

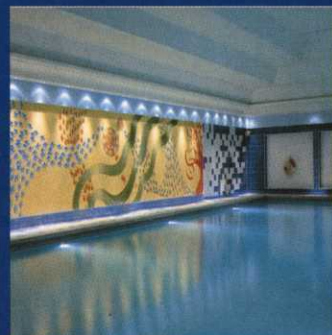
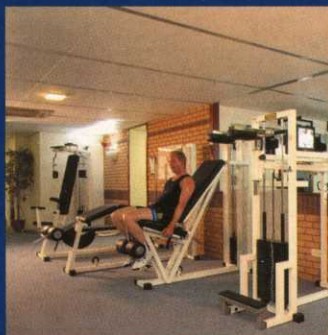


One of the new ponds at St Annes – Complete with a easily accessible suggestions box!

A Championship of Distinction



Right: St Annes Old Links.



Some of the excellent features to be found at the Dalmeny Hotel.

not two relatively straight forward birdies been missed, including one at the last, by a certain Justin Leonard, who went on to become Open Champion at Royal Troon 12 months later.

"The club was delighted to have an Open Champion as course record holder and made him a member of the club," revealed Peter.

"We're hoping he'll find time to come over and play the course again next year."

Another change from our '96 visit is on the 3rd which used to have a big bunker guarding the left hand side of the fairway but which now has two pot bunkers.

In many ways Peter had the toughest task of any of the greenkeepers who have hosted a BIGGA event. Not only did he have the British and Irish contingent he also had to present his course to some of the top superintendents and greenkeepers from the rest of the world in the shape of the Hayter International players who had competed at West Lancashire Golf club earlier that week.

"We try to produce a golf course which is good all the year round and it is nice to have some greenkeeping professionals playing here. It is our professional pride which ensures that it is in good shape for them," said Peter.

"Our season is from Good Friday to the end of September and we try to have it at its best all the time during that period so when the National Championships are played it should be in good shape," said Peter.

The Championship Hotel for the event is the Dalmeny, on Lytham's South Promenade. An excellent hotel it boasts, three restaurants, a heated indoor swimming pool and extensive leisure and gym facilities while all bedrooms are equipped with satellite television.

The Lytham area boast many attractions including Blackpool's world famous pleasure park. Britain's most visited tourist attraction the park includes the death defying Big One, the mother of all roller coasters while the equally terrifying Valhalla, built at a cost of £15 million, will have opened by the time we descend on the town to play the event.

Think about it a couple of visits to these two rides and the four footer on the 18th to win a prize is not going to appear quite so frightening.

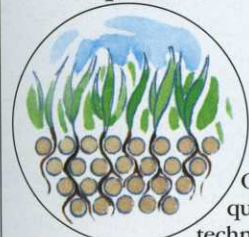
Anyone wishing to enter the Charterhouse/Scotts National Championship and book into the Dalmeny Hotel should contact Sarah Sowerby at BIGGA HOUSE for further information. Tel: 01347 833800.



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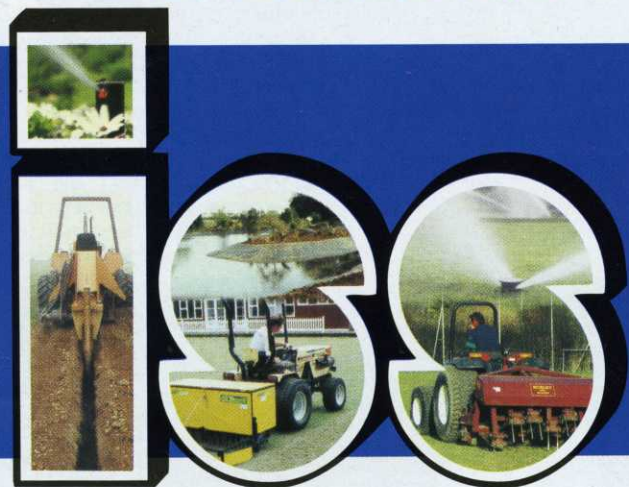


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Roland Taylor gets down among the long grass to bring you this report on how to deal with the thick stuff

GRASS ATTACK

One of the most successful species of plants found throughout the world is grass. It is a survivor, growing in the harshest of conditions such as mountainous regions, mud flats, sand dunes and jungles.

There are an estimated 10,000 species globally and the family includes at the top end bamboo trees that grow to over 50 metres, whilst at the bottom of the scale is the dreaded poa annua at less than 12mm. Here in the UK there are approximately 160 species found naturally of which a few have been chosen for their characteristics in the production of professional turf.

The rest grow wild and a fair proportion will find their way on to most golf courses. Combined with other vegetation such as trees, bracken, heather



and flowers they make up the backdrop to immaculate greens, fairways and tees. These areas play an important role in the overall image of the course and, therefore, require some form of management.

Regardless of its location, a course is a haven for the development of flora and fauna and in recent years there has been an increasing interest in developing this aspect. Changes in agriculture and the encroachment of concrete and tarmac have led to the demise of natural grasslands and as a result some flower species have been lost, whilst others are becoming rare. The introduction of wild flower areas is one positive action that can be taken to reduce the impact modern civilisation is having on the environment.

Whilst the greens, tees and fairways are the most important part of any course, creating natural areas that blend in and add another dimension to the game are increasingly becoming a consideration when managing a course.

To manage these sites and keep vegetation under control often requires a different range of grass cutting equipment. For long grass there are three suitable systems rotary, flail and reciprocating blade (rarely used for cutting grass these days).

Rotary

This is the most popular method of dealing with long grass and vegetation and today it can be found in many configurations.

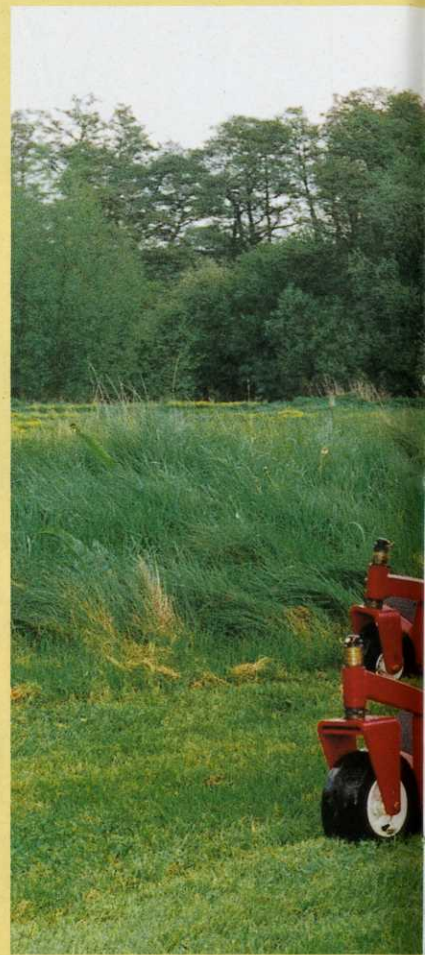
Its origins date back to 1930 when the hedge of Scotsman David Cockburn was causing him problems – he was fed up with having to cut it by hand. One day while his wife was out shopping he

removed the brushes from her vacuum cleaner and replaced them with a blade. The experiment on the hedge was a failure but when he pulled the unit across his lawn it cut and collected the grass. David Cockburn realised he was on to a winner and set up a company to develop the machine. A petrol engine was used for power and the first rotary mower was created and christened 'the Rotoscyth'. World-wide patents were taken out, but unfortunately, Adolf Hitler intervened and production ceased.

With the coming of peace, Cockburn's company resumed production but shortage of materials was a problem, plus the fact that the American and Australian designers had found a way round the patents. They marketed products that had no collection facility as rough grass cutters – a label all rotaries were to carry for over two decades.

It was the beginning of the fifties and the country was getting back to some normality after the war. On the Hertfordshire/Essex border a builder by the name of Doug Hayter had built a rotary mower for cutting around his premises and quickly discovered there was a market for such a machine. He established a factory and went into production. A local agricultural company which had found a number of customers with large areas of grass to cut contacted him. The result of this meeting was the 6/14 – the first tractor-mounted rotary mower in the world. These units proved highly successful and were used by many golf clubs for cutting their rough.

The next rotary milestone was as a result of work of Karl Dahlman, a Swedish engineer, who combined the hover principle of a cushion of air and a rotary





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FlailDek

FlailDek



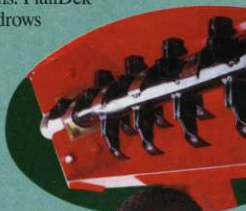
GAMMA Flail

The FlailDek can mow anything from quality parklike conditions to rough road sides at speeds not attainable with other mowers. The unique Gamma Flail blades fitted to the FlailDek require relatively low horsepower. Designed by Trimax engineers, the Gamma Flail with its aerodynamic shape cuts easily while creating optimum airflow to expel the clippings. Tractor horsepower is used for cutting grass, not pumping air. The Gamma flails deliver a perfectly uniform cut with clippings evenly dispersed behind the mower, even in sodden, long grass conditions. FlailDek does not leave windrows or clumps.

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GRASS ATTACK



blade to produce the Flymo. At this time another inventor in the United States had used nylon fishing line and a tin can to come up with the strimmer.

To know what to look for when deciding which machine to choose and how to get the optimum performance, it is necessary to understand how the rotary system operates and the factors that can affect it.

For a rotary mower to operate efficiently two things are required: rotational speed and the ability to move the cut material out of the system as quickly as possible. Each of these affects the other and the machine eventually blocks up and stalls the engine.

In many instances this can be avoided as there are other contributory factors:

- **The cutting height is too low for the volume of vegetation.**
- **Blunt blades.** This is a common fault, as even a blunt blade will hack off something.
- **A worn engine or one that needs servicing will not give of its best.**
- **The forward travel speed of the machine is too high for length of grass conditions.**

Whilst all rotary systems are similar the method of ejecting the cut material can be different especially on the wider machines. This is either out of the side or rear of the machine. In the case of the latter, the blades contra-rotate and their action directs the flow of grass back and into the centre of the cutting deck.

The dimensions of the outlet aperture are vital to the efficiency of the mower when it comes to collection. It needs to be as large as possible and with minimum obstructions. The more direct the flow of cut material into the catcher is from the blade, the better the performance.

Cutting decks need to be kept clean. Dried grass deposits and dirt attract more build-up and impede the flow.

When using collectors it is necessary to ensure the air vents in the bag or box are free of debris. Blockages cause a build up of air pressure, which slows and often restricts the volume of grass entering the receptacle, thus choking up the cutting chamber.

When using strimmers it is important to have the correct length of nylon protruding from the drum – too

long and the rotation speed is reduced with a resulting drop in performance and more strain on all the components.

As said before, for all rotary blades sharpness and balance are critical. Any damaged ones must be replaced immediately using only those supplied by the original manufacturer. If something solid has hit the cutting system the blade carriers and mountings will need checking for signs of stress or breakage especially around welds.

Which rotary to buy will depend on the requirements. In the case of wild flower meadows the cut material should be collected, otherwise it can smother the sward and reduce light penetration so the plants become weakened. The rotary mower has to be able to cope with long, often lush, wet growth and this should be borne in mind when choosing a machine.

For large areas a tractor drawn unit could be suitable and the introduction of small independent units, all linked together to make a wide mower that is flexible and can follow the ground contour could be the solution to undulating rough areas.

Recycling mowers are now available. These finely chop up the cuttings and blow them into the turf. The length of grass and frequency of cuts will determine if one of these units is suitable.

In recent years there have appeared on the market a number of wheeled strimmers, which are suitable for dealing with long grass and undergrowth. When it comes to rugged work the hand held, pedestrian and ride-on brushcutters are ideally suited. For banking on the course around tees and bunkers there are the two-stroke petrol powered hover mowers and four-wheel rotaries.

Flails

The flail mower arrived on the scene largely due to the problems found using reciprocating cutterbar on roadside verges and hedges. Roadmen were a dying breed in the early fifties and they were being replaced with tractor mounted mowers. Whilst these did a reasonable job they were extremely expensive to maintain, especially when used on hedges.

On the verges the cut material blew across the road and blocked drains and ditches. The answer was the flail. This



consists of a drum with rows of hinged blades. When spun at high speed the blades are held out by centrifugal force and cut the grass, mulching it up in the process.

The first machines were belt-driven from the tractor but Tony Turner had other ideas. He came up with a hydraulically powered version. This made the machine much more adaptable. It had a long fully adjustable arm and the cutting head could be set to virtually any angle – sales of this machine are said to have taken off immediately.

A long armed flail unit will have limited applications on a lot of courses but for banking, ditches, river banks, around water features and cutting country-type hedges they are ideal. Where the workload does not warrant buying one, it is worth considering hire as they can save a lot of time.

For areas of rough and semi-rough there are rear-mounted tractor models. These machines have the facility for fitting a large hopper for collecting the cut material. This is a distinct advantage

when the flail unit is fitted with scarifying blades.

Like the rotary machines the cutting efficiency relies on drum speed. As there are a large number of blades involved they need to be checked regularly for damage or breakage and replaced, as the drum will be out of balance. The vibration set up in this situation can do a lot of damage in a short period time.

With both rotaries and flails because of the conditions they work in there is often a tendency to neglect the maintenance

aspect. Blades are allowed to become blunt; guards are left off; belts not adjusted and a grease gun is rarely used. In the end, any one of these can cause a breakdown, so it is worth spending those extra few minutes checking and carrying out any replacements so the machine always performs at its optimum. Who wants hassle?

Having the right piece equipment to deal quickly and efficiently with areas other than greens, tees and fairways, is half the battle – there are plenty out there to choose from or hire.

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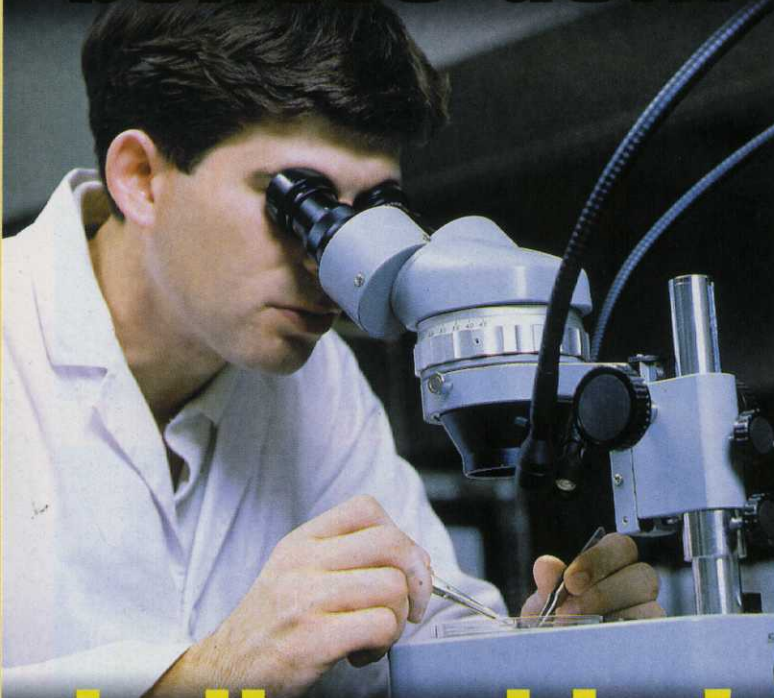


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Ad Ref 126

"The Insiders" Philip Armitage, Ben Allen, Neil Atkinson and Swede Patrik Benneryd spent time as Interns working on Pinehurst Number 2. Last month they told us about the overall experience while this month they give an insight into the background to last year's US Open preparations.

American beauty part II

"The United States has to move very fast to even stand still" John F. Kennedy, 1963.



Above: The Carolina Hotel (or 'Queen of the South' as it is often renamed) is the main hotel at Pinehurst where guests stay

"Pinehurst No. 2 makes you think, it makes you play, it makes you drive the ball, it makes you position the ball. It's a player's dream. Donald Ross did a phenomenal job. It's the type of course I'd play every day of my life" – Greg Norman.

After the 1992 US Open at Pebble Beach, Pinehurst was awarded the 1999 US Open. The stipulation was that the USGA would work with Pinehurst to rebuild all 18 greens on No. 2. Pinehurst knew their existing Penncross greens were not of a high enough standard for a US Open,

given the heat of the Carolina summers. So they asked the USGA to help them find a newer, more heat tolerant variety of bentgrass.

With the huge success of the G-2 at Pinehurst No. 8, it was decided that this variety of bentgrass would be ideal for installing into the greens on No. 2. So, in 1996, Pinehurst rebuilt the greens on No. 2. In addition, several new tees were constructed to lengthen the course and dozens of trees were removed to provide space for grandstands and hospitality units.

Pinehurst became only the second golf resort to stage a US Open (after Pebble Beach) and this afforded them the luxury of utilising whatever room was required for corporate hospitality, TV compounds. Course No. 4 is located adjacent to No. 2 and so certain holes would have to be closed down to accommodate marquees, car parking and TV compounds.

ClubCorp, Pinehurst's ownership company, was faced with a challenge. How could it close down No. 4 to provide space for the US Open but

American beauty part II



Above: 8th Hole, Par 4 (for Professionals), Course No. 2. Normally a straightforward Par 5 for guests/members, this has turned into a Par 4 for the US Open.

still utilise the remainder of No. 4 productively? They decided to completely rebuild No. 4! So, in early 1999, construction began on a Tom Fazio designed, new Course 4.

Since it acquired the resort back in 1984, ClubCorp has instigated many changes at Pinehurst including the openings of No. 7 (1987) and No. 8 (1996). No. 4 is another chapter in its portfolio and reflects in the company's ongoing commitment to golf course improvements.



Above: 13th Hole, Par 4, Course No. 2.



Above: 3rd Hole, Par 4, Course No. 2. Show bermuda grass in various stages from white (still dormant) to green (actively functioning as a plant)

Significant progress was made in constructing and grassing most of the new holes before the US Open in June. The areas that were used for marquees were left untouched until after the tournament. Then construction recommenced on those holes up to its completion in October 1999. No. 4 re-opened in December 1999 to rave reviews.

Paul Jett CGCS, Superintendent of No. 2, was responsible for the preparation of the golf course for the US Open. He is perhaps the only Golf Course Superintendent who has had to raise the green heights in preparation for a major tournament!

The USGA felt that for the tournament, the greens should be rolling at about 10.6 and so Paul decided to raise the heights to 3mm and have them double-cut. The USGA worked with Paul to ensure that at the start of each day's play, the greens were rolling at 10.6. Green speeds were actually checked before any mowing commenced.

For those who are unfamiliar with the greens on No. 2, imagine 18 greens shaped like upturned saucers. The greens are similar to USGA spec. and are normally maintained to a height of 2.7mm which generate green speeds of around 9.5. The greens average around 6,000 square feet in size.

Course 2 has a history of having hard, fast greens. To maintain healthy, fast greens, Paul's philosophy is to control the water supply to the greens. Overwatering causes lack of oxygen, contributes to thatch build-up and encourages disease. Although minimal watering can cause problems in hot, windy weather, Paul would rather his staff syringe the hot-spots on the greens only when necessary. He also likes to stress the bentgrass in hot weather to increase their heat tolerance. In addition, regular verticutting and topdressing assist in keeping the greens firm.

Paul's fertiliser programme in the build up to the US Open was no different than any other year. In the month leading up to the tournament, he applied Nitrogen at

about a tenth of a pound per week and Potassium applications at around a fifth of a pound per week. (Paul was so satisfied with the greens that they were probably fourth priority in the build-up to the tournament!). The greens received just over 6lb N/1000 sq.ft for 1999.

The inclement weather slowed the greens down substantially during the tournament and as a result, greens were double cut morning and evening. (On one day, the 30,000 sq.ft putting green was cut 14 times to bring it up to the speed demanded by the USGA!) The USGA demanded faster greens for the Sunday. To dry them out, a vacuum pump was connected to the drainage system of the greens in order to remove excess water from the top few inches of the soil profile.

Fairways were narrowed to 28-30 yards in width and were mowed daily at 9mm. They were also cut in one direction, from green to tee, in an attempt to control long driving. Tees, approaches and surrounds were also mowed at 9mm but twice daily. It was refreshing to see tight surrounds instead of thick rough just off the greens – the normal tradition for US Opens. Rough was mowed daily at 3 inches at the USGA's behest.

Despite the rain, only Payne Stewart managed a sub par total of 279 (-1). One shudders to think of the winning score if the weather had been hot and windy. The success of the tournament has resulted in Pinehurst being awarded the 2005 US Open – a fine tribute to Pinehurst and to Donald Ross' masterpiece.

Paul's disease programme is done on a preventative basis and only during times when conditions are favourable for pathogens. Paul sprays to control a broad spectrum of diseases and never uses the same product two weeks in succession. G-2 is highly resistant to disease too and thus Pinehurst doesn't have many major problems with diseases. Paul also sprayed the Bermuda with Carbaryl the week before the tournament which killed off white grub larvae that were present