





Photography courtesy of St Andrews Links Trust

There is something about an Open played over the Old Course.

I've been to six, and seen some remarkable golf.

Back in 1978 I saw Jack Nicklaus finally overhaul New Zealander, Simon Owen, in the home straight; in '84, I peered over the wall at the 17th as Tom Watson stumbled and allowed Seve, complete with his iconic 18th hole celebration, to snatch victory; in '90, Nick Faldo was in his pomp and crushed Greg Norman, and the rest of the field; five years later, John Daly showed what a fine golfer he can be, and he didn't wobble as Costantino Rocca holed an amazing Valley of Sin putt on the 72nd green to force a play-

off; in 2000 Tiger Woods became the youngest player to complete the set of Majors, leaving the rest in his wake, and five years later he again showed his mastery of the Old Course.

Six Opens, each memorable and each identifying the cream of that particular era's crop.

But I'm only scratching the surface of Opens that I've been lucky enough to attend. Before my time memorable things were happening every time The Open was played on my own back yard, with legendary names such as JH Taylor, James Braid, Bobby Jones, Sam Snead, Peter Thomson and Bobby Locke all emerging triumphant.

As a greenkeeper there can be no greater privilege than to prepare the Old Course for an Open Championship and this year that honour falls

to Gordon McKie, who will be experiencing his first Open as Course Manager.

"I remember doing an Assistant Profile for Greenkeeper International about 12 years ago and the final question was 'What do you hope to be doing in 10 years time?' I said that I wanted to be a Head Greenkeeper or Course Manager at a top course, but this has exceeded all expectations and it's a real dream to be in charge for an Open at the best known course in the world," said Gordon, who arrived at St Andrews Links from Tain and spent a number of years working on other courses within the Links stable before becoming Old Course Course Manager three years ago.

Gordon works very closely with another Gordon, Gordon Moir, who is the St Andrews Links Trust's



new back tee that has been built for the 17th – a change to the most famous and challenging hole in all of golf.

“It was our idea, back in 2005,” revealed Gordon Moir.

“We had our usual de-brief after that Open, looking at what went well, could have done better and what we might do for future Opens. The main criticism in ‘05 was the penal rough on the right of 17 meaning most players were only hitting a 3 or 4 iron off the tee and I suggested, ‘How about we put a new tee back here and leave the rough on the right cut as semi’. It wasn’t taken up then, but I kept mentioning it and eventually Peter Dawson (R&A Chief Executive) said he was warming to the idea.

“I did say we’d need to do

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Gordon McKie

Director of Greenkeeping.

“I’m more involved with meetings with the R&A and working with the grandstand and scoreboard erecting teams leaving Gordon to get on with looking after the golf course. I’ve also got our other six courses to oversee as well,” said Gordon Moir, who, like Gordon McKie has risen up through the ranks at the Trust having arrived in Fife from the north-east of Scotland.

It doesn’t take a crystal ball to predict that one of the main talking points at this year’s Open will be the

it in the winter of ‘08 but it had to go through the committee process, while a couple of players were asked about it at the Dunhill Links Championship last year. When they gave their approval to the idea we got the go ahead and it was built last winter,” said Gordon Moir, who believes it will be the preferred tee unless there is a strong easterly wind.

Other course amendments, introduced since 2005 are less high profile but will have just as big an impact on how the course is played.

“We’ve made some changes to the

surrounds, cutting closer further away from the greens so the ball will roll off more easily and further away meaning some bunkers, which were previously in the rough, are now in closely mown areas so that the ball will run into them more easily,” said Gordon McKie, who is believed to be the first Course Manager to have his own Open Blog, which he hopes to continue through the week of the Championship itself - www.standrews.org.uk/2010-Open/Blog.aspx

Another area where changes have



10. What do you hope to be doing in 10 years time?
 Head Greenkeeper or Course Manager at a top course

been made is the 4th hole which had previously involved a blind tee shot over gorse.

"They complained about the 4th in '05," explained Gordon Moir.

"We built a new back tee last time and it was 295 yards to the ridge beyond which the fairway opens up. But only 10% of the field could carry it, so 90% of the field were complaining as they didn't want to go down the narrow strip of fairway on the right because of the two bunkers in that area, even though the carry on that line is only 200 yards."

Gordon McKie added that the fairway short of the ridge had been widened and gorse removed from the mound in front of the tee and replaced with wispy fescue so that players could see the ball land.

"We've also worked on the bunker face angles to increase playability and make them a little fairer."

Since taking over the Old Course Gordon McKie has looked to work on course conditioning and has done a considerable amount of overseeding as well as slightly increasing the feed and water.

"I've overseeded all the greens with pure fescue six times in each of the last two years, and twice this year, which we can do because the greens

"When I arrived in 1991 we'd just started a policy of boxing off the clippings on the fairways and it was great because it really firmed up the fairways and got rid of the worm casts," recalled Gordon Moir, who added that the fairways were actually running faster than the greens at the '05 Open.

"But we got to the stage having done that for 15 years that we were putting nothing back into the fairways by way of nutrient and they were starting to look tired – they weren't even getting the clippings going back into them – so in consultation with Richard Windows, of the STRI, we decided to add a tiny amount of fertiliser," said Gordon McKie.

That policy reaped dividends at the turn of this year when the course was buried under ice for 30 days and the courses were closed for a month.

"I did start to perspire when Peter Dawson phoned and said he recalled Gleneagles losing all their greens in similar circumstances about 30 years ago but we took a lot of advice, including posting on the BIGGA website, and the best came from a guy who looked after Boat of Garten Golf Club whom I knew. He said that he had iced greens year in year out

"It was a great advert for sustainable golf showing that if you have the right sort of grasses you will survive in these extreme (for the UK) conditions"

Gordon McKie

are so big and we can do part of them at a time," he said.

"I take on board the policy that we should manage a course with minimal fertiliser and minimal water but, at the end of the day, it needs something. My philosophy is that you look after grass the way you look after the human body and we all need food and water... as long as we get the correct amount we'll be fit and healthy.

"What we do is still very minimal. When I took over the nitrogen input was about 27 kg/Ha a year and we're just sitting on about 30 kg/Ha," said Gordon McKie, who used to be a regular on the BIGGA Open Support Team and was the man with the dramatic Jean Van de Velde match at Carnoustie in 1999.

The fairways now had around 10 kg/Ha of nitrogen on them in three of the past four years just to keep them healthy following on from a policy introduced at St Andrews around 20 years ago.

and the best thing to do was to let nature take its course," explained Gordon McKie, who added that an experiment in aerating through the ice conducted on one of the other courses confirmed the waiting was the best approach.

When the thaw arrived it showed that the fescue and bent had coped well and that a couple of greens on one of the other courses, which had a higher poa content, had suffered to a greater degree.

"It was a great advert for sustainable golf showing that if you have the right sort of grasses you will survive in these extreme (for the UK) conditions," said Gordon McKie.

This year Richard Windows, and a team from the STRI, will be on course every day producing performance management data on soil moisture, green speeds etc on behalf of the R&A.

"In the middle of each day we will look at this data and use it to base our decisions on whether we need



to give it an extra cut or irrigate a particular green a little more. It is getting much more scientific and we are guinea pigs for this as, if successful, it will be rolled out over the other Open venues. It's all about consistency and the playability of the golf course. It really is quite exciting," said Gordon McKie.

The Old Course, which has always closed every Sunday for a full day's maintenance, closed permanently until the Championship on June 19 to enable Gordon and his team to make the final presentational touches but, speaking a month and a half out both Gordons were extremely relaxed about where they were, especially as a couple of weeks of good weather had brought the course on a lot.

St Andrews is unique in that they have an extended team of greenkeepers, which may be unmatched in the world of golf with seven courses worth of experience and talent available to draw on for The Open.





“The regular team is 15 strong – large because of the sheer size of the greens on the Old Course where the six people who hand cut the greens each day each walk seven miles (the shared 5th and 13th green is over half a hectare) – and I can draw on knowledge of four other Course Managers as well as Gordon, who was a working greenkeeper, and so many others. There are guys on our team who have done seven Opens. The senior guys on my team, deputy, Jon Wood, and my three senior men, together with me have well over 100 years of experience,” said Gordon McKie, who has already booked a holiday and four days in his bed from the Tuesday after the Championship is over.

He will have around 65-70 greenkeepers working on the course during Open week with ten cutting greens.

“We are on the fourth or fifth draft of work schedules but I think one of the main issues, with such

a big team, will be to keep everyone happy during the week. The younger guys are beginning to get excited and it’s down to the senior guys to keep their feet on the ground,” said Gordon McKie, who added that it was very much a team effort and that the guys deserve all the plaudits that they get.

“It will be proud moment for me and all of my family when I’m standing beside the Champion at the presentation on the Sunday evening,” he added.

Playing a small part in the Old Course’s fabled history is a priceless honour and both Gordons are delighted to have assisted in producing what will undoubtedly be another worthy St Andrews Champion.

As for me, I’m sure I will also add another chapter to my own St Andrews Open memories.



A QUICK GUIDE TO...

SUMMER IRRIGATION

After two wet summers, weather experts are predicting warm, dry conditions this season with some drought in the south. But are you ready to irrigate to keep your course in perfect condition? Robert Jackson shares his top tips for choosing a new system or getting the most from your existing one.



Budget well

Effective irrigation is a maintenance must, but many clubs persevere with problems. They call out Service Engineers time and again, accruing unnecessary labour costs as well as causing turf damage during hot, dry periods, until it becomes a real headache. Before you reach breaking point, weigh up the costs of growing annual service bills against budgeting for a new system. More often than not, budgeting for new costs less in the long-term compared to throwing good money after bad in the short-term.

Maximise efficiency and reduce waste

Investing in a brand new system is by far the best way to maximise efficiency and reduce waste. Advanced controllers and automatic flow management programmes allow you to water in millimetres instead of time. And, while nothing beats rainfall, the latest sprinkler and nozzle technology means we're getting closer to nature in terms of uniformity and applying water precisely where you want it.

'Future-proof' your system

The greatest mistake a club can make is to stump up the cash for a new system that leaves no room for expansion. A system designed to irrigate just greens is specified and costed accordingly. So if you later decide you want to expand this into a tees and fairways system it will not have the capacity to cope. You'll then be faced with

the unpleasant prospect of upgrading or replacing the mains infrastructure to cope with the additional flows and pressures. Discuss your needs with a consultant or contractor from the start in order to 'future-proof' your system. A good system will last up to 50 years if properly maintained and serviced, and should be flexible enough to adapt to the changing needs.

Refurbishment or Replacement?

Refurbishment rather than wholesale replacement of your irrigation system is also an option and can be very cost-effective. If you experience a decline in performance, or your system is approaching the end of its useful life, seek expert help from a consultant or contractor.

Check your sprinkler nozzles

Sprinkler nozzles are subject to wear, so adequate maintenance and periodic replacement can bring about a dramatic improvement in the overall efficiency of your system. Because they need to be replaced every few years, manufacturers are constantly updating and improving their design and function. This means new nozzles will work at the very best flow and pressure, whereas older nozzles will always become less uniform with age.

Did you know that, simply by renewing sprinkler nozzles, you can increase the efficiency of your system by up to 10% at

the right pressure and flow? With nozzles costing on average just £15 per head, this can be a highly cost-effective way of improving your system.

Look out for leaks and burst pipes

During a drought, look out for tell tale signs of leaks and burst pipes. A few years ago I visited a course suffering from sprinkler performance issues; when we arrived we noticed a green stripe running right down its mainline in stark contrast to some brown areas – a great indication that there was a problem! One of the best ways to establish if you've got a burst pipe is to perform a pressure test on the mains. Switch everything off and pressurise the mains network to see how long the pressure lasts in the system. If you have a burst then you'll see the pressure drop quickly.

Maintenance checks

Finally, it's no use investing in a new system or replacing component parts of an existing one if you're not performing proper maintenance. Daily and weekly checks should be a part of your routine. You should also ask your contractor to carry out an annual full system check.

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The roar of the dandelions

Dr Terry Mabbett asks if the dandelion explosion is the first sign of fall-out from EU pesticide meddling

It is naive to think you can build up a sophisticated programme of chemical pest control then dismantle it wholesale without disturbing the environmental equilibriums created over many decades.

Some observers say this is root cause of the dandelion 'explosion' seen this year and blame EU's ongoing onslaught on chemical pesticides across the amenity and agriculture sectors.

Dandelion is not a dedicated weed of sports turf, like slender speedwell, so what has this got to do with golf courses? Indirectly, a lot, because as well as being a potential weed of golf greens, tees and fairways, dandelion is ubiquitous and frequent in farmers' fields, amenity grassland in parks and sports fields, on grass verges and waste ground and actually in hard surfaces.

Moreover it generates a huge seed load throughout spring and summer carried 'anywhere and everywhere' by the super-efficient, wind-energised seed dispersal mechanism. The fall-out for golf courses and greenkeepers could well be a sky-full of tiny 'parachutes' (pappas) each carrying a new dandelion plant.

Dandelion escapes control

It would be ironic if first plant to escape decades of tight weed management should be the 'dear old dandelion', much loved by children for 'telling the time' and their grandmothers for making dandelion flower wine. Weeds don't come more basic than the dandelion with its nomenclature firmly established in the Norman Conquest of England. Dandelion is an old English corrup-

tion of the Norman French 'Dente de Lion' (Lion's teeth) in recognition of the sharply toothed margins of large flat rosette-forming leaves which together with long robust tap roots make dandelion a formidable turf weed.

Others say it has less to do with herbicide restriction and more to do with the tap root, enabling dandelions to survive exceptionally cold winters like 2009/2010 and gain a growth start over grass and other plants in spring. This year's exceptionally late spring, they claim, aggravated the situation by delaying amenity grass mowing and herbicide application.

Dandelion tap root is a useful organ and unusual too in the way it behaves after attempts to dig out the entire plant and also in what's inside. Dandelion tap roots contain the unusually found storage poly-



saccharide called inulin instead of commonly occurring starch. Inulin is composed of fructose sugar units instead of glucose sugar units in starch. There is some suggestion that inulin can act like an 'anti-freeze' allowing dandelions to survive exceptionally low temperatures.

Attempts to dig a dandelion out of the ground especially without a dedicated tool invariably leave pieces of tap root behind which develop into new plants. Dandelion lacks a true stem and its leaves simply sprout from positions on the taproot. Such peculiar tap root characteristics occur in other members of the plant family Asteraceae (Compositae). Ragwort behaves in exactly the same way after failed attempts to dig out the entire plant and the root tubers of Dahlia, a popular garden plant, contain inulin.

Anti-chemical culture

The undisputed 'plague' of dandelions this spring and summer is as much due to the prevailing anti-chemical culture and the economic slowdown. You don't have to look far and hard to see how local authorities and other land management organisations are forced to cut back and economise at the expense of amenity grassland management.

EU's constant chipping away at the list of approved products on both safety and environmental grounds is clearly making its mark. Range and depth of pesticide chemistry available to amenity and agriculture is progressively eroded and restricted by EU withdrawal of specific actives or curtailing the way in which others can be used. In addition it is now becoming so expensive [in relation to potential

profits] for chemical companies to produce additional data that they may withdraw some of their own products.

Some have suggested aminopyralid herbicide residue in farmyard manure reported several years ago may have affected herbicide application to agricultural grassland where dandelions thrive in ryegrass pastures. Aminopyralid is a hormone-based herbicide used by farmers to control deep rooted broad-leaf weeds including dandelion, ragwort and thistles in pasture.

The anti-chemical culture, created by anti-pesticide lobbies, regards chemicals as a 'dirty word' with 'brownie points' to be won by 'coming out' against their use. Amenity managers and operators are becoming increasingly 'frightened' to use chemicals and 'everyone'

(MAIN PHOTO) There are fears that reduced use of herbicide in the agricultural sector is adding to current problems with dandelions

is scrambling to get on board the biocontrol 'bandwagon'.

Golf courses and greenkeepers in particular cannot always hang around waiting for the 'right' weather and environmental conditions to arrive to apply biopesticides according to label recommendations. And then wait around some more while these density dependent biological control agents start to work. Anyone who thinks otherwise is out of touch with the practical and commercial realities of maintaining pristine golf courses.

Opportunity knocks for dandelions

Dandelions are opportunistic weeds of turf. Seeds exploit germination sites in late summer and early autumn sports turf increasingly 'threadbare' after drought and heavy wear and tear, germinating quickly when autumn rains and early morning mists start in earnest during October. Look again in the low light conditions of January and you probably won't see the myriad of tiny weed seedlings including dandelions ready and waiting to go with the arrival of warmer spring temperatures and longer days. And go they will because come spring the under managed fairway can rapidly go from 'grass green' to 'dandelion yellow' after a few warm days in April.

Sheer speed of flowering in dandelions is phenomenal with grass verges green one day and yellow the next. As all accomplished wine makers know it is this first rush and flush of dandelion flowers in April that makes the best wine. Similarly all amenity managers, whether they are groundsman, park keepers or local authority highway managers, should realise that it also sets the scene for seed dispersal and next year's infestation. And not only for them but everybody else, including the greenkeeper on the golf course 'next door'.

Dandelion is rarely a weed problem on well tended golf greens where traditional tightness of the turf grass sward will essentially exclude this opportunistic weed. But fairways and even tees are a different matter with un-replaced divots offering an open invitation to dandelions and other 'like-minded' weeds. It is not uncommon to find otherwise well looked after tees supporting quite substantial numbers of dandelions, and other weeds like ragwort and sowthistle not normally found in fine turf, that have germinated and established quickly by taking advantage of soil exposed from 'teeing off'.

The danger from dandelions to closely cut and well groomed sports turf is the rosette of large flat leaves acting as 'light blockers' as they cover, smother and shade surrounding turf grass plants. Like many other erstwhile agricultural and garden weeds that colonise professional turf dandelions have a versatile habit. Prostrate biotypes, evolving in response to close regular mowing, lay flat on the ground so that at the leaves and the growing point, which is situated even lower, escape the mower's blades.

Greenkeepers well armed

Dandelions have a high requirement for potassium and are therefore prominent in potassium-rich swards of ryegrass (*Lolium perenne*) and meadow grass (*Poa* spp). Switching to a higher bentgrass (*Agrostis* spp) and fescue (*Festuca* spp) composition with a correspondingly lower requirement for potassium keeps dandelions in check.

Physically digging out individual dandelions is another option and there are hand-tools dedicated to this task. However, it risks more infestation from pieces of tap root left in the soil while the patch of bare soil remaining is open to even more weed infestation.

Spraying with an appropriate selective herbicide will gradually kill dandelions allowing turf grass plants time to gradually re-colonise any exposed soil.

Golf courses are still well-armed against dandelions and other broadleaf weeds in turf. Most actives come within the so called 'hormonal' grouping of herbicides because their molecular configuration is similar to that of naturally occurring plant auxins. They selectively kill broadleaf weeds like dandelion in turf through hyper-stimulation of growth to cause weed 'exhaustion' and death.

This 'grouping' includes the 'old favourites' 2-4, D and MCPA with a 1940's vintage, mecoprop and dicamba developed in the 1960's and modern equivalents such as clopyralid and fluroxypyr first appearing in the 1970's and 1980's. Together with more recent herbicide active additions like diflufenican and florasulam, with completely different modes of action, turf on golf courses is for the moment at least potentially well protected against weeds.

Commercial herbicide products for selective broadleaf weed control in managed turf usually contain a mixture of active ingredients ide-

