

of severe scarification and double coring. This is to make the greens playable the whole year round.

"We used a Koro on the greens and were quite amazed at the amount of thatch we lifted," he says. "The greens are of original construction, but we are gradually going to introduce more sand to change the profile."

With 82 bunkers on the course, most remodelled about 12 years ago, Ben is keen that they retain the look and shape suitable for a heathland course.

But his major work is on heather regeneration, which has been paying dividends. Vast swathes of vanishing heather have been revived through a process of rotavating, scarifying and turfcutting to bring heather seeds to the surface.

The main problem with heather is that if it spends any length of time under leaves it will die off as the leaves release nutrients – which heather hates.

"We spend a great deal of our time from autumn to spring clearing leaves from the heather with blowers," says Ben. "Because we are surrounded by trees we also do a lot of thinning in the woodland, removing as many of the oaks and silver birches as possible to reduce leaf drop damage to the heather."

This thinning also promotes air movement across the course and helps to allow light through to greens and other areas of the course.

"This area was once called New Copse," says Ben, "so it is not surprising that we have good tree coverage. They do act as a windbreak and certainly add to the look of the course."

West Hill is keen to encourage wildlife on the course and in the woodland there are owl boxes, with some tawny owls currently nesting. Hawks and deer are regular visitors and the diverse habitats encourage butterflies and smaller birds.

The 450 members of West Hill are anxious to keep the heather regenerating. "It is the one thing that crops up in most conversations, because some of the members have been here for many years and have seen the heather go through various stages," says Ben. "When it is all in flower it is a beautiful purple that looks spectacular against the mown grass areas."

Ben has eight staff, including a mechanic, and his deputy, Matt Foster, was also previously at Sand Martins. "He is also my best friend, which helps when you are in the same profession," he says.

"We have a very young staff here, all members of BIGGA, some of whom have very good single figure handicaps and our latest recruit, who's only 20, plays off three.

"I don't play as much as I should do but my handicap is about 16 - I



play football three times a week, but when my legs tell me to stop I will certainly play more golf. I really believe you have to play golf to appreciate what a golf course is all about.

"I know there are many greenkeepers who don't play golf, and that's understandable – but golfers who are greenkeepers look at the course from a different perspective."

Ben believes that golf is all about

"The main problem with heather is that if it spends any length of time under leaves it will die off as the leaves release nutrients – which heather hates"

> people. "This is one of the nicest sports to work in and I have a very good relationship with the members and the staff," says Ben.

> Chairman of the greens is David Hargreaves, who has been a member of West Hill for about 30 years. "We have a major meeting about twice a year to make a plan of action," says Ben. "But David and the club secretary, Gina Rivett, rely on my experience to keep the course running smoothly.

"This is an incredibly busy club







BELOW: The team..

Back row: Richard Kuban, Jack Cleaver, Adam Mortimer, Matt Foster, Ben Edwards

Front: Simon Bonner, Sean Bullock and Honey the dog. Missing team members are David Alexander and Adam Wicks



and we host so many society events that there is never a week when there is not a tournament of some sort.

"Our biggest event of the year is a famous father-and-son tournament which takes the best part of a week and has been running since the Thirties, with 156 pairs starting off on the first day."

West Hill has a strong artisan membership – members who help with divotting and tidying.

Ben is not short of equipment at West Hill having a fleet of Toro mowers and Workmans, including pedestrian mowers for the greens including Triplexes and Toro fiveunit Reelmaster 55-10s for the fairways.

He also has a John Deere tractor and two New Hollands. In the workshop he has three Bernhard grinders including an Express Dual and an AngleMaster.

"We have been tied in with Toro equipment for five years through John Shaw machinery and we do review the situation from time to time," says Ben. "The service from David Cole and his team has been fantastic since I have been at West Hill."

Grass seed suppliers for the course are Rigby Taylor using their Mascot brand mixes from Top Green.

"I went with a party of greenkeepers to see their trial grounds in France with Stephen Alderton of Top Green and we were incredibly impressed by the amount of research and work done on perfecting seed varieties for golf and other sports," says Ben.

"This business is all about networking which is why greenkeepers tend to head for Harrogate to meet up with old friends, attend seminars and see the latest products. "I went to Las Vegas with Murray Long from Sunningdale and Chris Lomas from Worplesdon Golf Club, and we had a good week catching up with all the latest news.

"I usually attend a few seminars at the US show and visit a few of the local golf courses. It is important to see what greenkeepers are doing in other parts of the world.

"The one thing about greenkeeping is that you are always learning and that is a very important lesson in itself.

"Greenkeeping is about doing your homework, knowing what works best on your course and seeing problems before they happen – if you are able to see them.

"Being in BIGGA has been a major advantage for all our staff because they go on training courses, get the qualifications and can use them to develop their careers.

"Working outside in fantastic surroundings is a privilege and I never dread going to work. I always look forward to reaching the course.

"There are very few jobs which you can say that you look forward to doing every day."

The next year will be busy because the club hopes to get planning permission for a new practice range.

"We are always looking forward and the members know that we have their interests at heart," says Ben. "This is a superb course and we work hard to keep it that way.

"The greenkeeping staff are dedicated and passionate about golf. It makes all the difference.

Ben has a busy year planned for himself – he is getting married in September to Alice.

"She's not really into golf so we won't be arguing on any golf courses," laughs Ben.

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Water restrictions

Water, H2O, wasser, agua, l'eau, call it what you will it has been the main topic of conversation for greenkeepers for the last few weeks and months.

We either have too much of it dropping from the skies – some of the rainfall statistics for the West of Scotland amongst other areas are eye watering (excuse the pun) – or far too little, resulting in Temporary Use Bans/Hosepipe Bans and potentially Drought Orders.

Meanwhile, courses are closed due to flooding, but we're assured that even if it rains all summer, and let's hope it doesn't, that won't be enough to make up for two very dry winters.

As ever, BIGGA members will adapt to the varying challenges and continue to strive to produce the best course conditions possible. Many have already taken steps to harvest, store or abstract water, reduce usage and recycle, but there are still golf clubs out there that face the possibility of a long-term ban on irrigation.

Water shortages are clearly a serious issue and it ill behoves the

golf industry to try and claim that it's need is more important than many other deserving areas. But, it is clear that if irrigation is banned then those clubs affected will almost certainly suffer significantly as a result, and jobs are very much at stake, not just those of greenkeepers but across the golf employment sector and beyond.

Later in these pages we feature some examples of good practice and forward thinking that have taken place but the problem is one that the golf industry needs to address in a united way.

"Courses are closed due to flooding, but we're assured that even if it rains all summer, and let's hope it doesn't, that won't be enough to make up for two very dry winters"



SH ЛЬК КЧ -By Tamara Cohen Science Reporter

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TWENTY million people will be hit with hosepipe bans tomorrow to cope with the worsening drought, the Daily Mail can reveal.

the Daily Mail can reveal. Water companies in the South and East of England, where rainfall has been too low for nearly two years, will announce restrictions affecting one in three homes in the UK. Other areas could soon follow. The move follows months of concern about the arid conditions, which have seen rivers run dry and reservoirs at record low levels. In some areas, this has been the driest winter since record began a century or more ago, and weeks of anitatimed rain-ful would be needed to get levels back to normal

ormal Source: Daily Mail 12th March 2012 IMAGES show the drought of 2006, in that year's Open at Royal Liverpool. Courtesy of Alan C.Birch

BIGGA along with the Golf Club Managers Association is supporting England Golf in its strong attempts to put forward a coherent case for golf clubs to be considered for exemptions. Paul Keeling, England Golf Club Services Manager, explains their position...

Temporary Bans are not a new thing. Back in 2006 (the last time bans and drought orders were in affect) England Golf ran water management workshops in the Midlands and South, at which experts such as Dr Jerry Knox from **Cranfield University and** the Environment Agency, all presented historical data that this has happened every five or six years, even before global warming was considered. At the workshops, advice on measures clubs should implement to protect themselves for the future were disseminated.

But here we are in 2012, so what are England Golf doing?

In anticipation of temporary bans, England Golf has made representation to the seven water companies with bans in place, advising of the damage the restrictions will have to golf club BUSINESSES, highlighting that an inability to maintain the biggest business asset (the greens) to a usable standard could result in repair and replacement costs of tens of thousands of pounds alongside a significant loss of income for clubs. This will naturally have a knock on effect to secondary spend within clubhouses and professional's shops, ancillary supplier businesses could also be severely affected and employment will be jeopardised.

At the date of writing this article only one water company, Veolia, has provided a response.

What does England Golf suggest?

We would encourage each club affected by the ban to make individual representation to their water company, and to back up our representation.

I would congratulate Patrick Dawson, General Manager at Burnham Beeches Golf Club, who has also asked the question of the Thames Water Public Consultation Department and received the following reply; an irrigation system is not classed as a hosepipe.

Plus collate supporting information to strengthen your case;

Visitor Income - calculate the income to the Club and the impact

We Need You!

If your facility is affected by the Temporary Use Bans and you have either received an exemption or have had no joy so far please email us at info@bigga.co.uk with your details and the potential impact on your course to enable us to build a clearer picture of the overall effect on the golf industry.

it would have on the business if this dropped off due to poor greens conditions.

Justification of Water Use - It is important to show that current water use is efficient (evapotranspiration replacement) and necessary to maintain the playing surfaces and that water is not being wasted through carrying out the following:-

·Irrigation System Audit - the efficiency and adequacy of your system / water storage measures.

Reductions made to Current Demands- Records on reductions made to irrigation inputs e.g. watering greens only.

Agronomic Advice - Specialist advice to help strengthen your case in proving what water use is essential to keeping your turf alive and showing the Club are taking all possible measures to take to reduce drought susceptibility. Also, budget costs associated with remedial work in the event of loss of grass cover.

England Golf working with the Associations, BIGGA, GCMA, PGA etc, will continue to represent golf and support our affiliate clubs in securing access to the ever more valuable resource ... WATER.

Water pressure

How do BIGGA members cope with the mounting pressure from Water Authorities to limit irrigation on the course? Jim Cook interviews four Course Managers from areas affected by the recent hosepipe ban

The water restrictions imposed throughout much of the south of England in April have caused much confusion amongst greenkeepers in the affected areas.

Whilst water shortages were not unexpected, some of the sudden and varying messages from water companies were. The news that some golf courses are now categorised as 'gardens' and subject to the same restrictions was a prime example.

This article hopes to highlight the varying experiences of course managers in dealing with increasingly adverse weather conditions as well as muddy regulations from authorities.

Ian Streeter, Course Manager at West Sussex Golf Club, has a limited amount of water in a borehole. He said readings taken from this borehole indicated the aquifer that they pump from was at the same level as last year and therefore had not recharged through winter. Ian then is in the position of having water available, but how much he does not know.

He said: "We are limited to 2.5 million gallons, so we can't use any

more than that from the borehole. I've spoken to the Environment Agency and at the moment they're quite happy for us to pump from that well."

Ian had spoken to his water company, Southern Water, about using mains water if the borehole dried up and continued: "Apparently if I need to use mains water, they're quite happy for me to do so on greens only and that is only to maintain them, to keep the grass alive. So that is their take: greens only to keep them alive."

Some golf clubs that draw all of their water from the mains have fallen into the unenviable position of being unable to use their irrigation systems.

In the past weeks, though, a number have already successfully lobbied their water authorities into granting them an exemption from the ban. One example was a club that did not want to be named, in the Thames Water region, and was given an exemption up until June.

The course manager from this club said: "My problem is, is that the exemption we've got currently is right and in place, but if they suddenly come to us and say "no it's Woburn GC, showing the effects of a drought ridden fairway. Courtesy of Alan C Birch

not" then things become difficult. I think it's a very grey area at the moment."

As the exemption is only up to June, the course manager was thinking about how to water their greens after this time.

"At the moment we've started to collect rainfall, but I would require a minimum of 20 cubic metres per day through the hot weather just to keep the greens alive. After that they would deteriorate and probably quite rapidly," they continued.

Alan Pierce MG, Course Manager at Ham Manor GC, in West Sussex, is in Southern Water's region. Alan has an abstraction license from the Environment Agency for 1.6 million gallons per year, for what they determine as the growing season from April until September.

The license applies to the Black Ditch which runs all the way through Sussex to the River Arun and then out to sea. This ditch runs through the course and is water table controlled, so is always at the water table level. As this is Alan's only source of water, he is completely at the mercy of nature when it comes to watering his course.







INSET ABOVE AND LEFT: Splendid views of Ham Manor He said: "As it stands at the moment it is slightly lower than it has been previous years but not so much so that it's causing me any great concern at the minute."

Alan explained that because his club has an older abstraction license, the Environment Agency's 'Hands off Flow Restrictions' do not affect his allowance of water.

"In terms of the position that people are in the one we're in here I'd rather be in than any other because of the older license and being able to physically see how high or low the water level in the ditch is just by going down and having a look," he continued.

Alan gave some figures for how much rainfall had fallen at his course between January 1 and April 1 for the previous three years. In 2009 there was 240mm, in 2010, 249mm, in 2011, 186mm and in 2012 just 54 mm.

Les Howkins MG, Course Manager at Richmond Golf Club, in Surrey, is under Thames Water and said: "They're currently saying that you're not allowed to water gardens. Their description of a garden now includes any sports or amenity surface and the only exemption is for national or international sporting events. The only other exemption is on health and safety grounds so you could possibly argue that if you don't water your greens it's going to be an unsafe playing surface because of the dangerous bounce."

The Environment Agency has sent out questionnaires to all of its license holders, including farmers, golf clubs and sports grounds, asking if they would be willing to reduce the amount of water they extract.

Les extracts water from boreholes for irrigation and has offered to voluntarily reduce his extraction by 25%.

"We'll just have to be more careful. Use wetting agents and ensure aeration is completed regularly so water gets in there. As it happens, since they've imposed the hosepipe ban, it's rained every day. I think for some golf courses it could be a long summer if they're not allowed to water," he said.

Billy McMillan, Course Manager at Tyrrells Wood Golf Club, in Surrey, recalled previous drought orders in 2006. He said: "It was probably one of the toughest greenkeeping years of my career. One of the toughest things to overcome was explaining to my membership why our course wasn't in as good a condition as they expected."

With a hosepipe ban in place and unable to draw from the mains

"Coping with the drought in 2006 was difficult. One of the toughest things to overcome was explaining to my membership why our course wasn't in as good a condition as they expected"

Billy McMillan, Tyrrells Wood GC

supply, the club successfully lobbied for a limited, yet valuable, supply from their water company.

He went on to explain how lessons learnt from that experience could now be applied to the current situation with regards best practice.

"All those days of deep aeration, organic matter reduction and it has to be said, sometimes painful, operations in the eyes of the golfer will result in a kinder transition through a drought situation. Additionally under drought conditions we wouldn't want to make for ourselves any additional problems by introducing further stress to the grass plant. Therefore at our club we follow a fairly simple philosophy to include a reduction in mowing levels coupled with slightly higher cutting heights than would be deemed normal in the main playing season. Sometimes we let clippings fly and use them as a mulching on some areas."

Another interesting point he highlighted was that of public perceptions. He mentioned that when their newly-commissioned irrigation system was being tested during March 2006, it had been raining at the same time. The club received a letter from an irate passer-by who was disgusted to see irrigation on during rainfall. Billy continued: "So it is important what the general public perceive and can show us in a bad light, so we always have to be mindful of these things in tough times."

Continuing good practice was something other course managers believed important to prepare for environmental stresses.

Alan Pierce said: "We use wetting agents every month and we're trying to be as pro-active as we can. We've made a conscious effort to go round and check that every sprinkler is only doing the area intended and no more. We do monthly aeration with 8mm solid tines to keep the surface open and the water penetrating through. A big thing for us is that we don't let anyone play in adverse conditions, such as frost, throughout the winter, so we're not asking the surfaces to cope with more than they can handle."

Alan had written a letter to his local water authority highlighting how pro-active and efficient the club was at managing their water, with no unnecessary irrigation. It also stated that irrigation equipment was monitored to ensure its fully working order.

He said: "I'm sure they're aware that golf courses aren't just throwing water on, but I wanted to highlight to them that just throwing



MAIN ABOVE: Tyrrells Wood Golf Club, how it normally looks (LEFT) and under drought stress (RIGHT)

ABOVE and BELOW: more shots of Tyrrells Wood GC



water at our surfaces can be detrimental to what we want to achieve anyway."

We all know that a staggering amount of water is lost by water companies through leakages, so it is important for golf courses not to be tarred with the same brush.

Ensuring nozzles are not worn, sprinklers are spaced properly and water is distributed efficiently has never been more important. Being sure that irrigation pipes are not leaking is also key to good practice. New Water Regulations Advisory Scheme (WRAS) guidelines have been published relating to marking systems used to convey nondrinkable or non-potable water.





Some water companies are already stipulating that pipework used for these purposes should have WRAS recommended markings. Currently the SportsPro PE100 pipes, by Revaho, are the only PE pipes to come with this mark as standard.

As drawing water becomes less reliable, clubs were looking at contingency plans for the future.

Ian Streeter said his club had installed two 74,000 gallon hold-

ABOVE: Images kindly supplied

BELOW LEFT: Dried out turf gives a free hand to drought resistant weeds like creeping cinquefoil and yarrow shown

BELOW RIGHT: Drought leaves turf with large patches of white clover which continue to grow ing tanks, late last year, because of water shortages in the past. He added:

"So now we have got a bit more storage, but not enough to last us long-term. We're thinking about going through planning to try and get our own reservoir put in.

"We think with these water shortages, it's not going to get any better long-term and we don't want to risk trying to beg steal and borrow from the water authority or rely on a well that we may get stopped from pumping out of, so we will try and put our own reservoir in if we can get planning. Hopefully from that we can be self sufficient."

Les Howkins said: "I've asked for a quote from a few companies about getting water brought in in tankers just in case we do get cut off. I've had prices up to $\pounds 65$ per cubic metre, so if I was going to water just greens I'm looking at about 25-30 cubic metres per day.

"So it soon adds up. I'm lucky at where I work because we could probably afford to do it for a few months if we needed to, but not everywhere could."

Alan Pierce said he had looked into the feasibility of having facilities for the future where they use their abstraction license on days when it was not needed, to fill up an alternative supply like a tank or reservoir. These were in the early stages of planning.

One of the main causes of contention is how the water companies have dealt with the situation. Les Howkins said: "The water companies should have gone into more consultation with sports grounds, golf clubs and bowling greens. At the end of the day, they are businesses employing a lot of people and if clubs, in the worst case scenario, fold, there will be people out of jobs. They said that car washers are still allowed to use hosepipes, well for me the golf course is a commercial business and if you can't maintain the quality of your surfaces, you're not providing the service to your customers."

A course manager said: "The water company has now come up and said that you can still use water if you're cleaning patios down or cleaning cars for a business. So they're effectively choosing which businesses can use water. This is the problem I have, but they're not actually writing this down.

If all these ways of getting water are taken away from us and we do have a big heat wave, will there be clubs switching on their irrigation systems regardless because they're going to lose customers?"

Another course manager echoed this idea and said: "The maximum fine for breaking the restriction is £1,000 so it could almost be worth doing that instead of buying it in."

The extreme likelihood of mains and other water sources becoming unavailable in the coming months means preparation and action is now the key.

Lobby your water authority, from a business perspective, with the reasons why golf courses need water to operate and highlight your responsible usage.

As examples in this article have shown, lobbying does work and will continue to yield results, which may provide a lifeline for clubs through the summer months.

Because drought problems are not going to go away, it is becoming increasingly more important to store water and a self sufficient club with its own supply would have peace of mind during future restrictions.



