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The magazine for BIGGA members
Greenkeeper International exists
for you, our members. Since 1987
BIGGA has helped thousands in golf
greenkeeping to progress their careers,
find inspiration and get involved in our
varied and vibrant community. This
magazine aims to reflect the passions
and preoccupations of our members
and we'd like you to be involved. Please
drop us a line, send us a picture or post
on our social media pages.

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Welcome

With the Masters come and gone, golfers are metaphorically starting their engines and revving up for the season. But, as at Augusta, the weather is not playing ball.

A huge proportion of our courses are still suffering enormously from the rain that arrived last summer and seemingly hasn't stopped since. Many were closed more than open - even into April - and I know that my golfing friends and family are all incredibly frustrated. This is nothing of course compared to the travails of greenkeepers for whom the last 10 months have been unbelievably challenging. We know that it is the weather that closes courses, not the greenkeepers, but that doesn't mean the pressure isn't keenly felt.

It is appropriate, therefore, that this magazine focusses on mental health, and I'm grateful to our cover star, David Byron, for bravely sharing his story and how, perhaps ironically at the moment, greenkeeping has been his route to happiness. It is an inspiring tale and a great example of the benefits of problem sharing and the importance of professional help.

I'm really proud of the efforts BIGGA has made to highlight both the prevalence of mental health issues in our industry and the The relaunch of Your Course will boost awareness of your work and showcase expertise

range of support options available. With Mental Health Awareness Week approaching, it is critical we keep this high on our agenda. Our programme to train Mental Health First Aiders continues, and our excellent Counselling Helpline is available to all BIGGA members.

We also must continue to communicate with golfers and the sport's governing bodies to ensure there is more understanding of the challenges you face. We have made great progress in this area but must keep going, and that is why we are relaunching Your Course to boost awareness of the work you all do

and showcase your expertise to the wider golfing public – do look out for it later in the season.

Jim Croxton BIGGA Chief Executive

Here to support you when you need us

Full Members Personal Accident Helpline 0161 687 2178

Greenkeepers Legal Assistance 0808 181 9194

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All you need to know from around our industry

- Melanoma Fund seeks sponsors for free sunscreen dispensers at golf clubs
- Assistant greenkeeper Ellis takes on one of the toughest endurance races



Royal Mid-Surrey assistant greenkeeper celebrates 40 years of service



Assistant greenkeeper Innes Blight's 40 years of service were recognised on a day of celebration in his

honour at Royal Mid-Surrey Golf Club last month.

Tuesday 2 April was officially 'Innes Blight Day' at the Richmond venue where Innes has been a constant presence for the past four decades.

The event included a buffet lunch and the presentation of a picture collage capturing Innes' long career at Royal Mid-Surrey, where many of his current and former colleagues were in attendance for a special team photograph.

Among those returning for the

celebrations were club legends Bill Lyon, Doug Tate, Harry Cannon, Kev Glazier, Mike Williams and Jimmy Butler, with Innes kept in the dark over their presence until the moment he arrived in the room.

Events manager and club welfare officer Erin Robertson was integral in organising the special occasion, which included some gracious words from the man himself and plenty of praise from those who know him best.

"We have the single most reliable, metronomic, diligent, vigilant, unflappable and balanced employee the world has ever seen," said George Parsons, head greenkeeper on the JH Taylor Course. "Innes is a masterclass of integrity, honesty, courtesy,

cordiality, punctuality, adaptability and professionalism. He is a popular, significant, integral and highly valued member of the Royal Mid-Surrey Golf Club staff."

Course manager Gavin Kinsella MG lauded Innes' loyalty but pointed out that he is not alone in dedicating such long service to the club.

"In this day and age, and in a working climate that has never been so mobile and transient, this length of service is very rare – unless you are at Royal Mid-Surrey! Because while we gathered to recognise Innes Blight, next year in September 2025 our workshop manager Terry Redwood will also have happily been in our employment for 40 years!" GI



Skin safety charity seeks sponsors for free sunscreen dispensers



As part of the Slip! Slap! Swing! campaign, the Melanoma Fund is launching a sponsored sunboard scheme to get free sunscreen dispensers into 100 golf clubs this year, to benefit the wellbeing of members and greenkeepers.

Each sunboard contains a sunscreen

dispenser, loaded with a one litre cartridge of SPF50 Stokoderm sunscreen and a UV dial to support educational information on how, when and why to apply.

The charity is seeking sponsorship of 100 sunboards in total, in units of 10 boards at £690, which includes a full

colour logo within a 200mm x 55mm space at the top of the board, plus delivery.

The sponsorship rate is a one-off cost lasting the lifetime of the board, which is around three years.

"As an official Slip! Slap! Swing! supporter, England Golf is fully behind this project," said Richard Flint at England Golf. "With golfers twice as likely to get skin cancer than nongolfers, making sunscreen more accessible will help change attitudes and habits around sun protection to make golf a safer sport for all."

The idea, which provides brands with a valuable corporate social responsibility opportunity to support a golf-centric cause, has the backing of

every major golf organisation or association, including The R&A, and will be supported by a multimedia marketing campaign. **GI**



What's on this month



Dates for your diary

2 May

BIGGA North West Section Bert Cross Trophy -Fleetwood GC BIGGA East Scotland Golf Championship -Craigielaw GC

8 May

BIGGA South West Scotland Section Royal Troon

9 Mav

East Midlands Golf Day – Rothley Park GC BIGGA Yorkshire Section Spring Golf Day - Pannal

14 May

BIGGA London Section Spring Golf Day - Ealing GC

First Green STEM Field Trip - Disley Golf Club

BIGGA South West Scotland Golf Championship -West Kilbride GC BIGGA Northern Ireland Golf Championship -Royal Belfast GC

A greenkeeper's best friend - Rory



Owner: Paul Gibson

Club: Forest Hills Golf Club

Dog's name: Rory **Breed**: Cockapoo Age: 14 months

Favourite Treat: Anything!

Favourite Place: On the Toro Workman He's is happiest when: Chasing squirrels and

seagulls



Our programme of local and regional events is supported by regional patrons, whose generosity helps create opportunities for BIGGA members.

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Head to the BIGGA website for more information about local activities near you



'You have to stay warm and





Josh Ellis isn't your typical greenkeeper. In the past few years, the former Dewsbury Rams prop forward has undertaken various charity runs – including a 104-mile run from the Angel of the North back to his hometown – but recently he took on something very different.

The Montane Winter Spine Challenger North is a non-stop 160-mile race along the Pennine Way. It is one of the most physically and mentally demanding races anywhere on the planet, accentuated by the intensity of the harsh British winter conditions.

Here, Headingley's assistant greenkeeper explains the ferocious nature of one of the toughest endurance races in the world.

Taking up running

I started running properly in 2019. I played professional rugby, and I snapped my finger. At the time I was working for the council, and they said: "You can't have 12 weeks off work – you are going to have to pick either rugby or work." I picked work as rugby didn't pay too well.

In 2022, I did 31 marathons in 31 days for charity. The first

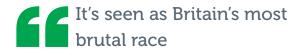
few nobody was interested because they didn't think that I would do it, but as it got further on there was media outside my house and people wanted to join me.

Inspired by Arctic expeditions

The Montane Spine Expedition Races started 12 years ago, created by someone who was involved in Arctic expeditions. He wanted to bring something similar here to the UK. Fifteen people did the first one and only about three finished it. It has just grown and grown, and it's now seen as Britain's most brutal race.

There are four different races, starting with the Sprint (46 miles), the Challenger South (108 miles), the Challenger North (160 miles) and the Spine (268 miles). I did the Challenger North and I'm hoping to do the Spine next January.

You have to carry a minimum of 3000 calories from each checkpoint. Over the whole race, I burned 24,000 calories.



fed or you are going to die'





You have got to carry your own sack, which is on you at all times. Mine was about nine kilos. You carry a sleeping bag, extra layers, a cooking kit, a toilet kit.

If you get injured, you are probably going to have to survive for about three to four hours before mountain rescue is going to get to you as you are so remote. You have to stay warm and fed or you are going to die.

Getting bogged down

I found it harder mentally than I did physically. I was in such dark places sometimes, but you just break it down to smaller chunks. I would know where my wife would be waiting and that would cheer me up.

There was one point where I fell in a bog. It looked iced over, but it wasn't, and I fell through it up to my chest. I panicked. Fight or flight kicked in at that point and, luckily, I chose to fight.

It was minus 10 at this point, but I instantly stripped off and put dry clothes on. Then I had nine miles to the checkpoint. I was freezing cold and petrified and in the middle of nowhere. I rang my wife, who is a paramedic, and she said there is

I was in such dark places sometimes

only one way you are going to get to that checkpoint and that is by keeping moving. She told me to keep my core warm and to get another layer on. I had five layers on at this point and just slogged it out. That was the scariest moment.

Chasing the record

I actually thought that I could win. I knew that if I got close to the record then I would be in contention to win the whole thing, but I just did not expect so many big names to enter this race.

I worked out what I needed to do to beat the record and I knew that if I managed that then I would be up there. The course record was 61 hours and I got 60 hours 11 minutes, so I did beat it, but unfortunately for me so did four other people.

I just love to do it to test myself. I wish there was a deep inspiration, but I just love seeing how far I can push myself. GI





Representing the greenkeeping community

- Find out how HR Services Scotland supports greenkeepers all across the UK
- Chair Steve Lloyd on why you should always check in on your colleagues



Apply now for your chance to be a participant of the FTMI class of 2024

Greenkeepers with ambitions to climb the career ladder are invited to apply for the Future Turf Managers Initiative (FTMI) class of 2024.

BIGGA and its Premium Partner Jacobsen recognise the importance of preparing greenkeepers for management roles, and FTMI has been designed to provide practical tools and guidance to help candidates pursue their career aspirations.

Working with leading course managers, dynamic professional trainers, mentors and industry leaders, such as BIGGA and Jacobsen staff, candidates focus on personal and professional development and leave FTMI with a realistic overview of the expectations that come with a management role.

FTMI begins in-person at Ransomes Jacobsen's headquarters in Ipswich before a series of online education sessions and, finally, two days of education at BTME in January 2025.

Jack Wellings, senior greenkeeper at JCB Golf and Country Club, was part of the 2023 cohort.

"It has completely changed me as a person in a positive way," he said.

"I knew what I wanted before and doing this whole process has made me want it 10 times more."

The FTMI programme is a hybrid event, combining in-person and online training. Before applying, please make sure that you are able to attend the dates, which can be found by scanning the QR code above.

Jacobsen will cover all accommodation costs and will contribute towards travel expenses. **GI**



HR Services Scotland offers free help and advice across the UK, wherever you work

BIGGA partner HR Services Scotland provides access to free help and advice for greenkeepers across the United Kingdom.

A team of qualified advisers will be on hand to assist BIGGA members with any HR problems that arise, with instant advice just a phone call away.

The advisers can help from the very early stages through to the conclusion of the matter, and unlimited telephone and email advice is available for each case.

The helplines are open at any time and are available to every BIGGA member, no matter where they are based.

The service is completely confidential, and no contact will be made with your employer. The only things they will ask for when you get in contact are your full name, your start date at your current employer and your BIGGA membership number, just to make sure that your membership is still active.

They may ask for a copy of your employment contract if appropriate to your enquiry.

You can get in contact by email and an adviser will aim to respond the same day.

For help with your HR matters, email bigga@ hrservicesscotland.co.uk.

Alternatively, you can call 0800 652 2610 to speak to an adviser immediately. **GI**

Ways we can help

Each of the following, and any other HR issue, can be discussed with a dedicated team of advisers at no additional cost to BIGGA members:

- Do you need to sort out how much annual leave you are entitled to?
- Do you need to lodge a grievance but aren't sure how to do it?
- Do you need help with maternity or paternity leave?
- Are you suffering from harassment or bullying at work?
- Would you like to discuss fair and equal pay but aren't sure how?
- Would you like an employee handbook?
- Do you want to discuss personal wellbeing and mental health?
- What benefits are you entitled to at work?





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Applications open to join BMW PGA Volunteer **Support Team**



Applications are now open to join the support team for the BMW PGA Championship at Wentworth.

BIGGA is proud to team up with the DP World Tour and Wentworth Club to provide an outstanding experience for members during one of the stand-out tournaments on the calendar

Those who are selected to join the BMW PGA Volunteer Support Team will get hands-on experience of course preparation at a major DP World Tour event.

The volunteers will be completely integrated into the Wentworth team and will undertake mowing and a range of other activities.

Dan Waring, spray technician at JCB Golf & Country Club, was part of the team in 2023 and thoroughly enjoyed the opportunity.

"It was a great experience to finally see the set-up and operation first

hand of one of the DP World Tour flagship events at an iconic venue," he said

"For a greenkeeper in England, not many tournaments come close for event name, and the ability to network is outstanding."

Team members will need to be available for the entire duration, from the previous Sunday, September 15, leading up to the championship until the following Sunday, September 22, when the Wentworth Club team will witness the crowning of a new BMW PGA Champion.

Accommodation and sustenance will be provided throughout, and the

only cost is transport to and from Surrey's Wentworth Club.

Applications for a spot on the team are open throughout May 2024. GI



find out more



"We value our relationship with BIGGA highly, and we know how committed and capable these volunteers will be as we prepare the West Course for the DP World Tour's flagship event."

- Dan Clarke, Wentworth Club Courses and Grounds Manager







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The culture has changed - it's good to talk!



Steve Llovd Chair

Taking the time to check in with your colleagues could make all the difference

Mental health was not a common topic when I was starting out in the industry, but it's never far from the conversation now - and that's a good thing.

The culture has changed - there's a recognition that people are individuals, and each member of a team will react differently to things.

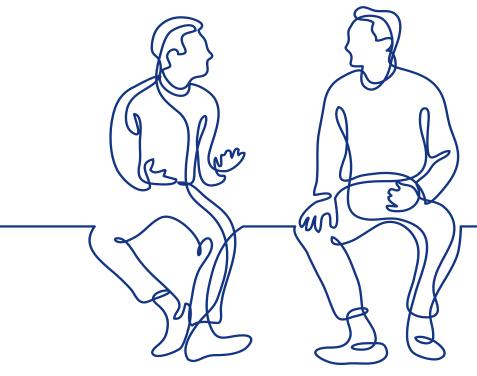
The one-size-fits-all approach of the past won't cut it and, while there should be consistent values that underpin how you manage and interact with people, there has to be more of a focus on the needs of the individual.

That can be anything from allowing more flexible working hours to simply making sure you ask people how their day is going and if they need anything.

I'll admit that I used to approach things differently. I'd be the first one to arrive in the morning and sort out in my own mind what needed doing, then I'd walk into the break room and start dishing out orders.

While I may still be the first one in, I make the time to speak with my staff and see how they're doing. We'll take it in turns to make the coffees and have a chat about the football scores or whatever else has been going on.

That's quite a basic thing,



but it creates the room for conversation and leads to a more enjoyable team environment compared to having the boss come in and immediately start telling people what to do.

matter. Because they do.

I see it as part of my role as a course manager to be that touch point for people, someone they can approach and talk to if they need to, not just a person

in our work - this winter has thrown up a whole load of them – and all of us have bad days, so nobody should feel alone if they're struggling.

For those who are finding things tough, BIGGA has support services on hand, and I'm sure your line manager and colleagues will be more understanding than you might think.

Ultimately, everyone in greenkeeping wants what is best for the industry and for the people in it.

And what could be better than having a happy, healthy workforce? GI

People want to feel valued and looked after

This stuff matters because people have higher expectations now and rightly so.

It's not enough just to have a job that pays the bills - people want to feel valued and looked after, like they

who tells them what to do.

We can all make ourselves open to talk to, whether we're in management positions or not, and that way hopefully nobody is suffering in silence.

All of us face challenges





"Driven By Innovation. Judged By Results."

"The industry is constantly evolving, and you've got to be looking for the new stuff coming out. I'm working with the Plant Food guys and it's really good [because] the reduction in fungicides over in the UK is hitting massively, so, there's so much more emphasis on nutrition."

Loz Ryan Superintendent Kettering Golf Club, UK







Welcome to our new members



Harry Barbour (I)

Manly, Australia

Brendan Byrne (I)

Llanerch CC, USA

Remy Dorbeau (I)

Golf de Chantilly, France



Charlie Boylan (GK) **Drew Wighton (AGK)**

Downfield

Allan Davidson (GK)

•••••

Auchterarder

Adam Dixon (GK) **Aarron Vines (AGK)**

Thornton

Cameron Gay (GK) **Ross Johnston (GK) Steven Spence (ET)**

North Berwick

Sam Hutton (GK)

Monifieth Golf Links

Michael McFarlane (AGK)

Trump International Aberdeen

Kieran McIlhatton (GK)

Fortrose & Rosemarkie

Michael Nicol (G)

Aberdeen City Council

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Antony Sheridan (GK)

Windyhill

Greig Taylor (GK)

Gatehouse of Fleet

Rory Williamson (APP)

Cabot Highlands

Daryl Yuill (GK)

Longniddry



Alfie Barley (APP)

Easingwold

Adam Bowker (AGK) Dylan Williams (GK)

St Annes Old Links

Martin Bradbury (A)

Hallowes

Jonathan Davies (AGK) Victor Skaife-Clarke (GK)

Pannal

Theo Economides (APP)

Wearside

Josh Ellis (AGK)

Headingley

Billy Hall (APP)

Moortown

Gareth Hannaby (GK)

.....

Carden Park

Ellis Mattinson (GK) **Daniel Robertshaw (GK)**

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Silloth-on-Solway

Curtis Rogers (GK)

Marland

Luke Turnbull (APP)

Roseberry Grange

Nathan Walton (FA)

Elland

Central England

Nick Apperley (RP)

Tallis Amos Group

Reece Burbell (GK) Leslie Davis (AGK)

Lambourne

Tom Clarke (GK)

Matthew Page (GK) Alvin Huxen (HGK)

Brandon Ward (GK)

Essendon CC

Daniel Harris (GK) Thomas Holbrooke (GK)

Hellidon Lakes Hotel & CC

Matthew Johnson (APP)

.....

Pitcheroak

Connor Kenney (GK)

Ruddington Grange

Todd Neville (AGK)

Moor Park

Tom Newell (AGK)

Rushden

Rubin Passberger (GK)

Worcestershire

Jamie Reeves (AGK) Max Sheppard (GK)

Queenwood

Ethan Rex (AGK)

Breadsall Priory Hotel,

G&CC

Josh Stokes (APP)

Coventry

Phil Weston (G)

Carden Park

South East

John Agbeko (AGK)

Wyke Green

Daniel Anderson (AGK)

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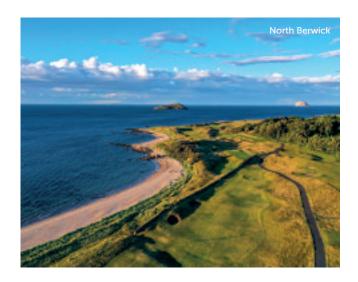
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Julian Erwee (GK)

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Royal Automobile Club

James Morgan (AGK)

Chigwell

Nicholas Navarro (GK) Lewis Willoughby (GK)

Queenwood

David Slapp (HGK)

Essendon CC

Harry Tietz (GK)

Gog Magog

Paul Tracey (HGK)

Three Rivers G&CC

Chris Turpie (RP)

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Brynhill (Barry)

Joshua Weir (GK) Matthew Yates (CM)

Llantrisant & Pontyclun

Alex Young (GK) Luke Young (AGK)

Dawn Till Dusk



Congratulations to the following members who have achieved CPD Approved status

Daniel Smith, Dartmouth Golf & Country Club

Derek Grendowicz, Private Residence

Gary Tonge, Tain

Jack Hall, Northampton

Thomas Arbon, Woodbridge

James Cunning, Roehampton

Tom Fowler, Woodbridge

Charlie Sorrell, Seaford

Chris Low, Coventry Hearsall

Craig Boath, Carnoustie Golf Links

Jason Clinch, Wallasey

Simon Ashford, Rhyl

Paul Legg, Cardigan

Michael Russell, Poulton Park

Shaun Cunningham, Prestonfield

Simon Willis, Burley

Richard Johnstone MG, Royal Aberdeen

David Beatson, Fairmont St Andrews

Congratulations to the following members who have achieved their **CPD Milestone**

Scott McTaggart, Erskine

Jack Hall, Northampton

Alan Boyd, Bothwell Castle

Chris Naughton, Bothwell Castle

David Feeney, Prestwick

Daniel Rigby, Honiton







Where we meet your fellow turf professionals and share their stories

■ Thorndon Park's head greenkeeper David Byron talks candidly about his mental health and the breakdown that led him to the job he loves





Chippenham team get course back in play after burst main closes five holes



Course manager Chris Sealey was in for a shock after his return to Chippenham Golf Club from a winter holiday in South Asia.

A ruptured water main led to significant flooding and a huge amount of repair work.

Here, Sealey shares his story of a day he won't soon forget.

"I had only been back at work three hours after a three-week break in Sri Lanka when my phone rang, interrupting a chat with the director of golf and one of the office staff.

"A member called to tell me we had a leak in our irrigation system, which was a concern as it had been drained and switched off since November. "I asked him to send me a picture and I knew immediately it wasn't the irrigation system. We went down there, and water was still pouring out of the ground – the 21-inch water main that runs across the course had split, blowing a fair-sized chunk of turf a couple of meters in the process.

"Wessex Water were soon on the scene as the water was coming out at 7,500 litres a minute. They reckoned they lost over two million litres before they could get it isolated and fixed.

"By that time there were large areas of the 2nd hole covered in mud, gravel, silt and stones. We had debris 200 metres away from the break.

"That first day was difficult as we didn't know how much damage there would be while it was still under water.

"We found out the next day. We had to close the 1st, 2nd, 3rd and 4th holes, and the 17th as they had to dig a huge hole to get to the pipe to fix it.

"We're a team of six, with one parttimer, and once the water had cleared we did everything we could to get those holes back in play. We had to take the sand out of four bunkers and brush it out, and cleared away as much of the debris as we could.

"The incident happened on a Thursday and the holes were open again by the following Tuesday. We'll have a contractor in to do a deep scarification and get rid of the stones and the silt that are buried in the grass.

"It was intense but hopefully the sort of thing you only experience once in your career!" **GI**





Ahead of Mental Health Awareness Week, we hear about one man's journey from a breakdown to discovering the profession that would change his life

"I got to the point where I couldn't cope anymore," confides David Byron, who is disarmingly candid for someone recalling an experience many would find difficult to talk about.

Thorndon Park's head greenkeeper is reflecting on the position he found himself in more than 15 years ago, when the daily grind of a high-pressure job running a pub and hotel simply got to be too much for him. He was working long hours and, though the pay was good, the support was non-existent and the expectations crippling. The surprise is not that David suffered a breakdown, but that he lasted so long before it happened.

"I was doing so many hours and missing the family – I'd not long had a baby daughter," he explains. "The company I worked for wasn't very good at looking after staff and their wellbeing. We had 40 staff that I was responsible for, and I was there sometimes from six o'clock in the morning until one o'clock the following morning. That was six days a week. In the end I had to come out and go long-term sick."

A shock at the doctor's

David had been to see a doctor and, while it was not news to him that his mental health was at a low ebb, he was taken aback by the findings of some tests he underwent.

"The doctor gave me a couple of aptitude tests and asked a lot of questions and, even though I didn't feel like it, they told me I was in the range for suicide. I got signed off for six or seven months."

With bills to pay and a family to support, David tried to return to work and see if he could find a way to manage those factors that had overcome him previously – the demanding workload, the poor work-life balance, the absence of any meaningful backing from his employer. It didn't go well.

"They tried to pin a load of problems on me that had occurred when I was off. I can't be accountable for the fact that three months after I left, there's a stock deficit. They tried to lump it on me because I think they were worried I was going to take them to the cleaners, but it didn't happen like that. What actually happened is I left; I literally just walked out."

Trying to start again

David lost his house and was ultimately declared bankrupt. Even his search for work threw up unforeseen obstacles as fate seemed to conspire against him at every turn. He saw that London Underground were looking to bring in new staff in readiness for the 2012 Olympics. However, just as he was progressing through that process, the recruitment programme was put on hold by incoming mayor Boris Johnson and David was left in limbo.

It was then that the prospect of greenkeeping first came onto his radar, although it was perhaps inevitable that it



would, given an existing link David had to nearby Thorndon Park – his mum lived on site with the club steward. She called to say that Course Manager Robert George was looking for summer staff and it might be something David would be interested in.

"I'd never heard of greenkeeping – I didn't even know it was a thing. I think that's quite common that a lot of people fall into it, and it tends to happen later in life. I was nearly 30 when I started, and I just wish I had discovered it sooner."

A new lease of life

Those first six months were a breath of fresh air for a man who desperately needed an escape. Out there on the Essex parkland course, he felt free of the stresses that had plunged him to such depths that a doctor had raised suicide concerns. There was something in the simplicity of the tasks that now filled his day as a casual greenkeeper that made him feel lighter, as though a burden had been lifted.



"A bit of mowing, some raking here and there – compared to where I'd come from with all that pressure, this was easy. My biggest concern was, 'Am I going to be able to rake that bunker ahead of the golfers coming out in two hours'. There was no worrying about bottom-line profits, food stocks,

liquor stocks, turnover, the employment budget – none of that."

The early starts were nothing new, but the mid-afternoon finishes certainly were. David now had the luxury of time and the priceless gift of seeing more of his little girl.

What was initially a six-month casual position has turned into a 16-year career in which David has enjoyed a couple of promotions. He may have come to it late, but he's certainly made up for it.

Full circle

Being head greenkeeper at a top 100 course brings its own expectations and David still has to pay attention to his mental health, as everyone should, but he is in a far happier place and his job has played a major role in that.

"From losing my house and bankruptcy, I've gone full circle now, and I'm back on top. Even when you're under pressure in this job, it's not the same kind of pressure – it's much more manageable and I have more people I can speak to. I was very isolated in my old job but now there's a whole network of people I've met through volunteering at tournaments and through events organised by BIGGA, like BTME.

"Even if I might still have some wobbles – this year has been particularly tough with the weather – there are people out there I can talk to and share it with. You realise you're not the only one."

David experienced one of those "wobbles" a few years



About BIGGA's Mental Health First Aiders

BIGGA is committed to improving conditions for greenkeepers and sports turf professionals to maintain a healthy, positive working environment.

To support this aim, we are offering members an internationally recognised Mental Health First Aid qualification, free of charge.

The course is two days long and has a focus on recognising the signs of poor mental health. The workshop provides the awareness, knowledge and skills to start a conversation about mental health.

Richard Ponsford and Daniel Stock of Clevedon Golf Club both went on the course to become Mental Health First Aiders and vouched for the value of what they learned.

Assistant greenkeeper Stock is relatively new to the industry but quickly recognised some familiar issues from his old job as a prison officer.

"I saw in greenkeeping, even in a smaller team, that there were still people struggling with the same mental health issues I saw in prison and that's why I wanted to go on the course — to brush up on my skills and get a better understanding," he said. "The course was fantastic. It's something that should be rolled out across every greenkeepers' shed nationally."

The workshop focuses on the potential benefits that

connections and conversations between individuals can bring. While it will not in itself make you a mental health professional, you will be able to advise about services that may help.

Those who undergo the training will be able to assist those around them by becoming a person that someone experiencing poor mental health can turn to in the first instance.

Ponsford, Clevedon's course manager, said the workshop had given him the tools to recognise when someone may be in need of support and how to deal with such situations.

"I would highly recommend everyone signing up. It's been a great learning curve," he said. "Everyone's going to have a mental health problem at some point in their life and they just don't know when it's going to come along

"Every business has a first aider, so why shouldn't we all have a Mental Health First Aider as well?"

He has already put his training into practice on multiple occasions, highlighting how important it is for every club to have a qualified individual who can provide

support and advice to those struggling. BIGGA's Mental Health First Aider course has the potential to help many people and undergoing the training offered is strongly encouraged.



Scan Me to find out more



ago when, for reasons he's still not entirely clear on, he was struggling again. This time he recognised the warning signs and immediately sought help, which resulted in some group and one-on-one therapy sessions. That was before the Covid outbreak but, in a fashion that many can relate to, David found solace in the isolation of lockdown as he was still able to work.

Greenkeeping once again provided a positive outlet to soothe his mind, nourish his spirit and replenish his energy.

In the right place

The impressive reputation of the course at Thorndon Park

is testament to how effectively David has channelled that energy into a job he clearly loves. Though much credit is due to the current team, David is quick to pay tribute to his predecessor.

"Rob left us with a really good foundation to build on here. He mentored me and trained me, and I'll forever be grateful to him for that; without him, I wouldn't be where I am now.

"We do feel proud of what we've achieved here, but we're still trying to do better. I'll have been here 16 years in June, and I still come in every day with enthusiasm and a desire to do the work and improve things. I think for as long as that's my mindset, I know I'm in the right place." GI

I was nearly 30 when I started, and I just wish I had discovered it sooner

David's top tips to take care of your mental health at work

Focus on the positives and don't let criticism bring you down. It's easy to let one complaint cloud the fact that 99 per cent of people are perfectly happy with the job you're doing

You're outside working in nature – appreciate the fact that even a bad day in greenkeeping is better than a good day in some other jobs!

Take pride in the work you do and be comfortable with praising your colleagues. Making others feel good can make you feel good

Whatever you're going through, there's a good chance someone else is experiencing or has experienced the same thing – you're not alone

If you feel like you might be struggling, talk to someone











Breaking the silence to help others

Mick Davie suffered in silence. He was surrounded by noise – criticism, complaints, condemnation – but the Hazel Grove greenkeeper stayed quiet.

Things were tough at work, with playing conditions worsened by factors beyond his control, and Mick bore the brunt of people's anger.

It felt like there was no escape from it, with harsh words bombarding him from all quarters.

"I was doing everything I possibly could," he recalled in an interview with National Club Golfer in 2020. "But the more I was doing and the more nothing was happening, the more complaints were coming in and the more it was getting on top of me."

Mick did not go to his doctor but was looking for help and one day attended a stress awareness meeting by BIGGA at Sale Golf Club. It was an eye-opener.

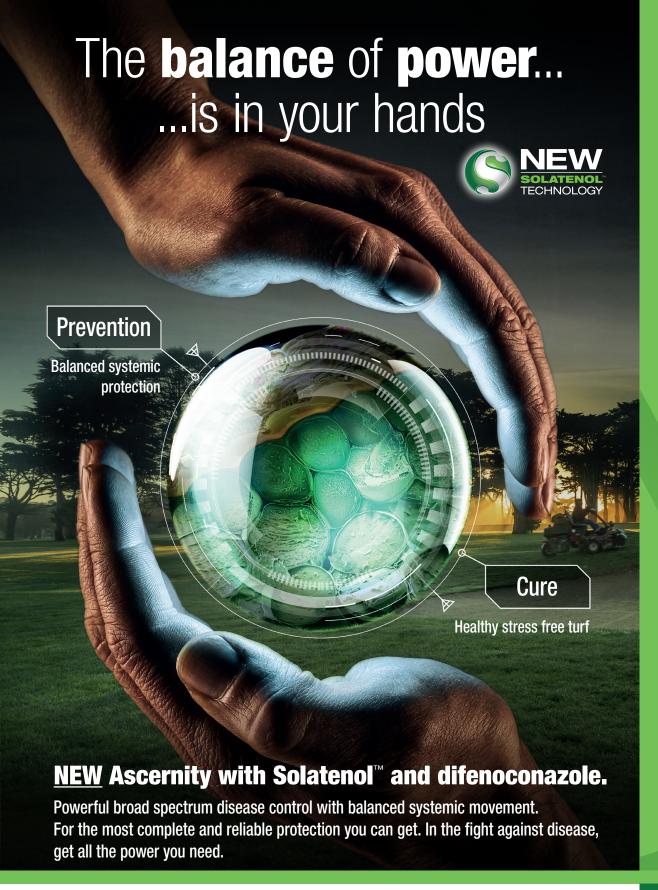
"When I walked into the room, it hit me the hardest. There were 40-plus greenkeepers, many of them from prestigious golf clubs, many whom were friends and I realised none of us had been talking to each other. It was a big wakeup call."

He couldn't stay quiet any longer. Mick initiated regular meet-ups in Manchester for greenkeepers to get together and chat, then set up the 'Greenkeepers mental health support group' on Facebook. It now boasts 800 members.

Mick retired in 2020, going out on a high after being honoured with BIGGA's Outstanding Contribution of the Year Award at BTME. He still wanted to help those working in the industry that he was leaving behind.

"It's not a case of pulling others out of the water, it's trying to prevent them from being pushed into the water in the first place."

I realised none of us had been talking to each other





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- Taylor takes on a restoration project in his new role at The Addington
- Recruitment: see the latest industry vacancies



Perennial's Career Hub to build career confidence for turf professionals

Perennial is upping the horticultural trade's career game with a new career hub called SnapDragon.

The free online tool is packed with insightful resources to help all those working with plants, trees, flowers or grass to build career confidence.

Whether just starting out as a student or apprentice, or employed or self-employed with years of experience, SnapDragon – provided by Working Transitions – can help with professional development.

Those thinking about a change or looking to progress can:

- Get direction with career assessments to understand their strengths, motivations, aspirations and preferences
- Improve themselves with e-learning

programmes and tasks around areas of interest

- Be in the know with the latest industry news and reports
- Use the job search engine to follow companies of interest and find the latest opportunities
- Stand out with the CV builder and checker
- Prepare for interviews with a simulator offering personalised feedback

Clare Downs, head of preventative services at Perennial, said: "There are so many amazing jobs available to people working in horticulture with real potential for training and skills development.

"SnapDragon is packed with interactive resources to give career

newbies, climbers and movers the advice and tools they need to help them have successful working lives that feel right for them professionally and personally.

"We want everyone to take advantage of our new career hub and use it to understand more about themselves, what skills and training would be good for them and to start planning how to get where they want to be. Whether they're looking for a promotion, to broaden their skill set or focus on a different area, it's the go-to place for career support so they can move forward with confidence."

Perennial is the UK's only charity dedicated to helping everyone who works in, or is retired from, horticulture and their families. **GI**

Jonathan Taylor

Jonathan Taylor's career has taken him to some spectacular venues on both sides of the Atlantic and he is now enjoying life at The Addington, in Croydon.

Aside from the arresting views of London that the impeccable heathland course affords, he has also set his sights on delivering on the long-term vision of Managing Director and co-owner Ryan Noades.

With a huge restoration project in full swing, Taylor's new post has given him plenty to get stuck into.

Tell us about your new role

I'm the course manager at The Addington, leading a team of 13. We're maintaining the incredible heathland golf course we've got here that's ranked inside the top 100 in the UK. My key responsibilities are to enhance turfgrass playing conditions, alongside managing the restoration project, which has been ongoing since 2020.

How does it fit into your career path?

All I've wanted to do is challenge myself with each role that I've taken on, and I looked at this as an excellent opportunity. I have the chance not only to enhance playing conditions but also to manage ongoing projects in line with the long-term vision for the club.

This role was outside my comfort zone because all my previous experiences have little to do with heathland courses, so it's also a really good opportunity to continue to expand my knowledge.

What skills have you found vital to your job?

I need to be personable, organised and adaptable. I get to deal with a lot of people day to day and not just the team, who all see each other more than we do our own families, so I need to be personable with all of them.

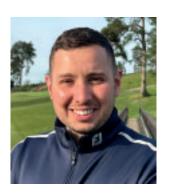
I've got to be organised to deal with restoration plans, budgets, contractors, Mother Nature – there are a lot of balls to juggle. And I need to be adaptable because there are so many things that can change, and you have to be able to adapt to that.

What is the best thing about your new job?

Anybody who has been to The Addington can be a testament to the view that you've got over the entire skyline of London – it's breathtaking. On top of that, the potential of the course and the team we've got to deliver on that is definitely one of the best things about it.



The Addington's new course manager was previously at Brocket Hall and The Grove and has worked in America





What do you wish you'd known at the start of our career?

I feel like I've managed to achieve the goals I set out for myself, but perhaps I didn't take as many networking opportunities as I could have along the way. BIGGA offer some great opportunities, but I've always thrown myself so far into the deep end with whatever role I've had that I've never felt like I had the time for them.

What has been your best career break?

The biggest thing for me is that I've had a couple of great mentors who have helped me over the years. Scott Furlong, the superintendent at Robert Trent Jones Golf Club in Virginia, was the first one that believed in me and gave me the opportunity as assistant superintendent when I was 21. When I came back to the UK, Phil Chiverton gave me the



Taylor on applying for a new job

Describe the recruitment process for your role

I'd seen it when Kerr Rowan got the position, but it was early days for me at Brocket Hall.

When it came around again, I'd seen it on BIGGA's website, but I was happy at Brocket so wasn't necessarily looking to move on. Then Greg Evans, who was helping the owner with the recruitment process, rang me up and said, 'Have you seen this and is it something you'd be interested in?'. I came down for a site visit, went through the interview process and thankfully got the job.

What do you think set you apart from the other candidates?

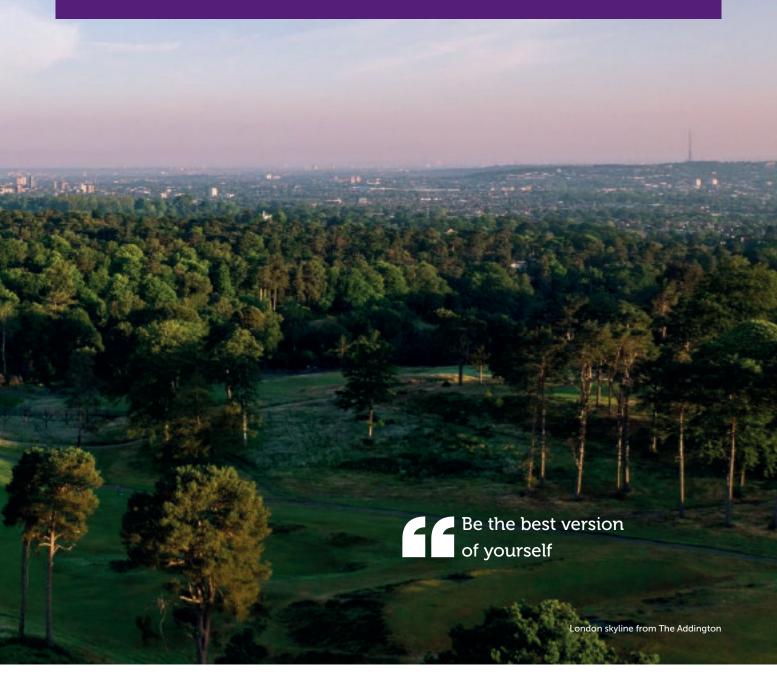
I think I showed some good knowledge in the interview and on the course walk, so when they asked questions about how to address certain issues, I had prepared for that and had potential solutions. The other thing was my time spent in America and having that private members' club experience at high-end venues.

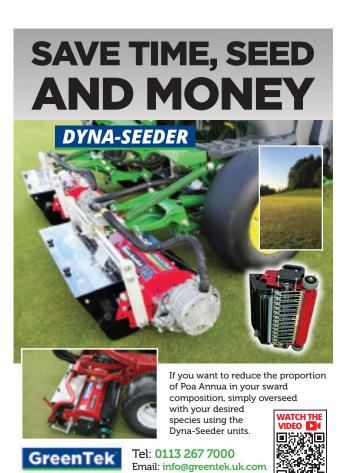
What were your new employers looking for?

I think it was somebody who had that adaptability and could roll with an ever-changing project. I had some good references, and I think they wanted someone who would be committed to the position.

What advice would you give to anyone applying for a similar role?

Do your homework. Research the club, its structure and its ownership and ultimately its vision. Go and see the course and facilities before you apply – you have to check that it matches your goals and ambitions. It's also really important to be yourself. The people who are hiring you want to know who you are, so don't put on a false front. Be the best version of yourself.





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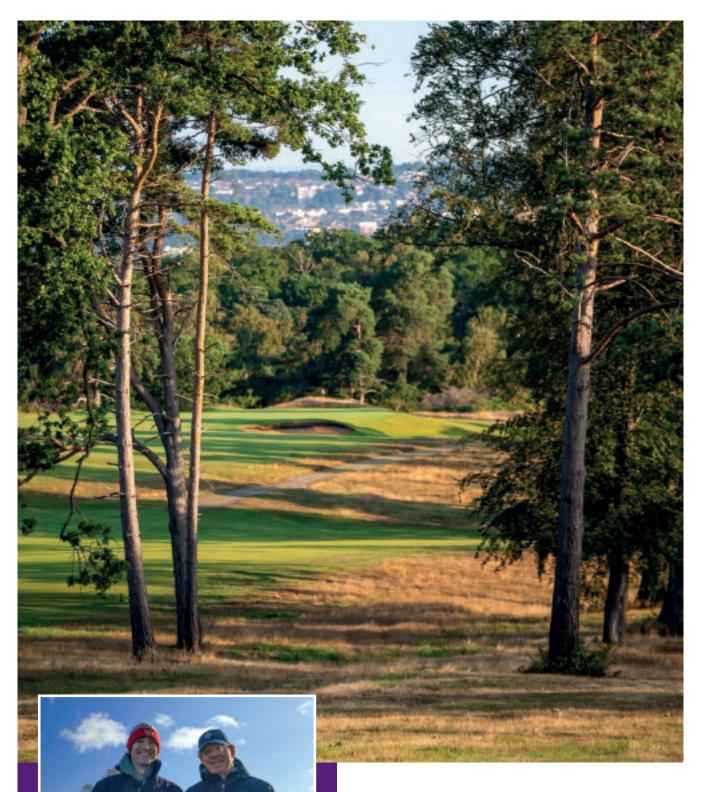
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What do you hope to achieve at The Addington? Ryan (Noades, the owner of The Addington) has got special plans to restore the course back to its original design by JF Abercromby from 1913. We've teamed up with renowned architects Clayton, DeVries & Pont in order to achieve that, so that's one of my main goals – to deliver on that vision of Ryan's for the benefit of the members and guests.

opportunity at The Grove and afforded me the exposure to everything I would need to become a course manager, from budgeting, human resources and agronomy.

Without those two, I wouldn't be where I am now.

What do you think you would like to be doing in 10 years' time?

I think working at a leading world-class venue such as The Addington and delivering unrivalled playing conditions and experiences, that's my long-term goal.

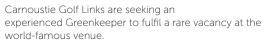
I've taken this job at The Addington because this is the place that I want to be and there's so much to achieve here. If we implement the vision, this will be the place to be. **GI**

Latest job vacancies

From trainee vacancies to senior management roles, new greenkeeping job opportunities are added daily to BIGGA's online recruitment pages. Our website receives 1.6m page views per year and 55% of those are to our careers pages. Visit bigga.org.uk/careers to see our latest opportunities and find out more about advertising your position. Call 01347 833 800 or email info@bigga.co.uk

Greenkeeper

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The ideal candidate will have a professional attitude plus experience of maintaining courses to Open Championship venue condition. Knowledge and experience of cutting, aeration, turfing and construction is essential.

Additional requirements include (Sports Turf) Level 2 Cert or equivalent, Spraying PA1 and PA2a, Spraying PA6 Knapsack and full UK driving licence.

If you would like to be considered for this role, please send your CV to recruitment@carnoustiegolflinks.co.uk or call the HR team on +441241 802270 for more information.

Assistant Greenkeeper

Rochdale Golf Club, Gtr Manchester

Rochdale Golf Club are looking to recruit a motivated and ambitious greenkeeper to join their hardworking team and assist them in maintaining the very popular golf course.

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PA1. 2 & 6

The following is desirable but not essential: Chainsaw license

The position is full time based on 40 hours per week, plus overtime at weekends on a rota basis. Benefits include full uniform, further training, pension contributions, free golf and a competitive salary.

Please apply with CV and cover letter to: ground@rochdalegolfclub.co.uk

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To promote the sales and support services of all Reesink UK products. To provide product advice, demonstrations, and quotations to end user customers and to work with customer support colleagues.

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Refine your skillset and expand your knowledge



Head Greenkeeper Stephen Davey on producing top-quality playing conditions despite the weather

What we do in... Mav Club: Queenwood, Surrey

Queenwood will be hosting its first major tournament of the year this month and it will be a chance to show off the hard work the team have been putting in to get the course up to the standard members would expect.

We spent our winter trying to implement improvements that would stand us in good stead for the return of the playing season and, despite the best efforts of the seemingly relentless rain, we can reflect on a job well done.

That doesn't mean everything has gone to schedule, because the weather has definitely had an impact - I'd say it's probably set us back about a month.

The biggest issue has been the fact we haven't even been able to get out on the surfaces as often as we'd

like. It wasn't until April that we could get everything mown, whereas last year we were doing that in March.

It's at this time of year that we're making sure all our winter projects are primed and ready for play and there's no ground under repair. The unprecedented rainfall flagged up some issues with drainage, so we've been undertaking work on fairways and approaches to ensure they are good to go.

We've got a bunker

renovation programme ongoing where we're replacing the liner and reshaping a few bits, so they need to be prepped and ready too.

The rain has at least helped compact the sand, but it's sometimes been so heavy that it's washed it out, and that has set us back.

But you have to adapt to the circumstances and get on with the stuff that can be done - the drainage, tree work and other bits around the external areas

where you're not going to do any damage.

When we can get out there the challenge is striking a balance between achieving the best surfaces for performance while maintaining healthy turf and making sure you're not causing yourselves any problems further down the

We collect a lot of data - weather station data. performance data, clipping yield, soil sampling – and that is part of our toolkit for planning general maintenance. The weather can throw a spanner in the works but that's part of the challenge.

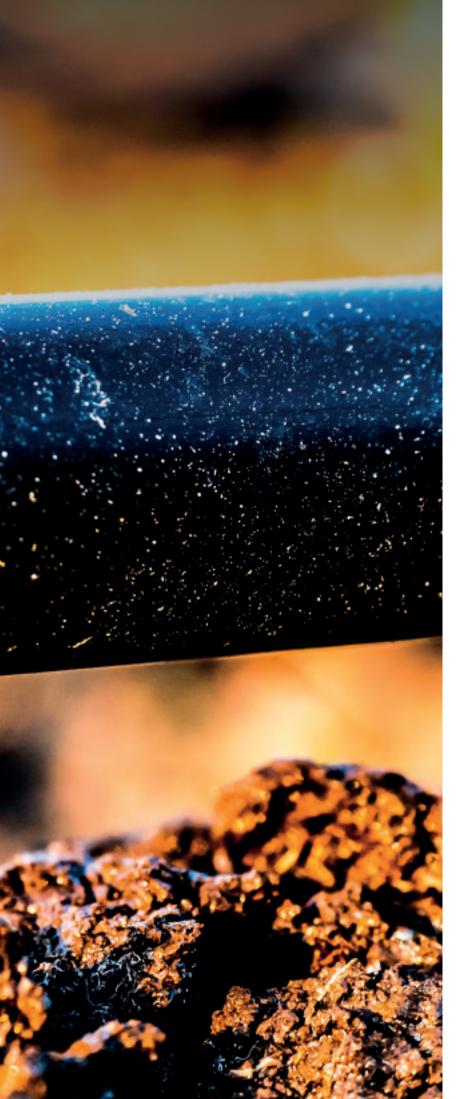
That's something I enjoy because it keeps you on your toes, and you know at some point you'll be facing a completely different set of challenges. GI



The weather can throw a spanner in the works but that's all part of the challenge

Irrigation: Repair, upgrade or replace?





Adrian Mortram, managing director of Adrian Mortram Associates, discusses what steps you should be taking to make sure your irrigation system is prepared for summer

The point of the year has arrived, or possibly even passed for some, when it is time for commissioning the irrigation system. There is little or no justification for having an expensive piece of maintenance equipment and not having it ready and primed for when it will be needed. The past few years have provided us with cold, dry springs tapering off to wetter summers. With such a wet winter and early spring, this year may be different. Are we due for a hot dry summer? And if so, are you ready?

Audit

Many irrigation systems in the UK and Ireland were installed in the 1980s and 1990s and currently may be nearing the end of their productive life. They may perhaps even not be fit for purpose or indeed not meet current health and safety standards. That's without even mentioning the fact they could be wasting considerable amounts of water.

It may be the time to analyse whether it is expedient to sit back and do nothing, to repair the ailing system, to upgrade it – or to grasp the nettle and replace it.

The first step in each of these decisions is to undertake a thorough irrigation system audit/ evaluation and seek advice from a competent and independent irrigation professional.

This should consider all aspects of the irrigation system looking at the following areas:

- Water resourcing
- Water storage and provision
- Pump house and pumping station
- Distribution pipework
- Control valves
- Sprinklers (operation, spacing and efficiency of application)
- The central control system

The options

1) Repair

Repair may be one option, and almost certainly the least expensive, but will it be the most cost effective over time? Replacing a pump with a new or reconditioned one may put intolerable pressure on the pipework causing future problems. The pipework itself may not be of sufficient integrity to support modification to the system, uPVC pipework having long been replaced by PE (polyethylene). Poorly maintained junction boxes and old solenoid valves may be causing leakage and subsequent wastage of water.

Over the years, green putting surfaces migrate with different cutting regimes, styles and shapes, and the current distribution of the sprinkler heads may not be set up to give head-to-head contact and the subsequent distribution pattern of the water will therefore be poor. If the quantity of water used is a problem either as a cost, or as a diminution of supply, reducing the sprinkler arcs may be a possible solution. A reduction from 360 degree to 180 degree will make a substantial saving in water usage.

2) Upgrade

Upgrading the system may involve looking at the whole ethos of 'What do we wish to irrigate?' Is it to be greens and tees only or do we aspire to cover green approaches, green surrounds, walkways and even fairways? Any upgrade should always be balanced with the integrity of the existing system. Questions need to be asked:

Do we have enough water? Do we have sufficient water storage? Is the pipe sizing sufficient to allow for the increasing amounts of water? Is the irrigation time window sufficient to allow us to apply this increased amount of water? Do we have sufficient power supplies? And many more too numerous to mention here.

3) Replace

An independent audit and evaluation will undoubtedly help to resolve many of the questions. If the decision is to replace then, while this is optimal and the most cost effective, it may not be possible to replace the whole irrigation system in one year. However, if a phased approach is adopted it is imperative the new irrigation design masterplan is embedded in the overall golf club management and financial plan to be implemented over a few consecutive years.

An irrigation system is arguably the most expensive single piece of maintenance equipment in which a golf club can invest and, as most of it is out of sight and therefore out of mind, it is frequently neglected and sometimes poorly designed.

Two factors must be considered: Firstly, whether you believe in global warming or climate change, the need for irrigation will increase as the grass plant is 90 per cent water. And secondly water costs will rise and rise significantly.

So, a correctly designed, installed, maintained and managed irrigation system will help to sustain the overall quality of the facility. Quality, as we all know, is what keeps the punters clamouring to become members or seek out your facility as a visitor or a society. **GI**





About Adrian

Adrian Mortram is managing director of Adrian Mortram Associates, who are international golf course and sports turf irrigation designers and consultants based in the UK. Adrian has provided irrigation design consultancy to eight of the current Open Championship venues and recent UK Ryder Cup venues and has undertaken numerous education sessions on behalf of BIGGA both at regional and national levels. In his spare time, he is a keen outdoor enthusiast and can be found climbing, mountaineering or cycling the roads of the UK.







Beekeepers are appealing for help to stop the spread of this invasive species that is the biggest threat to honey bees in a generation

The British Beekeepers' Association (BBKA) have appealed for help from greenkeepers as they attempt to prevent the spread of an invasive species with the potential to destroy populations of pollinators.

Working alongside Defra and the Non-Native Species Secretariat, the BBKA highlighted how the numbers of Asian Hornets increased dramatically last year, when more were discovered than in the previous six years combined. There are concerns the insect may soon become established in the UK.

Asian Hornets are considered the

greatest threat facing honey bees in a generation, as one hornet can consume up to 60 honey bees in a day. If native pollinators and insects are reduced, the ecological disaster will have a huge impact on other wildlife species, as has already been seen in a number of European countries.

Furthermore, there is also a public health risk, as Asian Hornets can be aggressively defensive of their nests if disturbed. Nests are often built low to the ground and can easily go undetected.

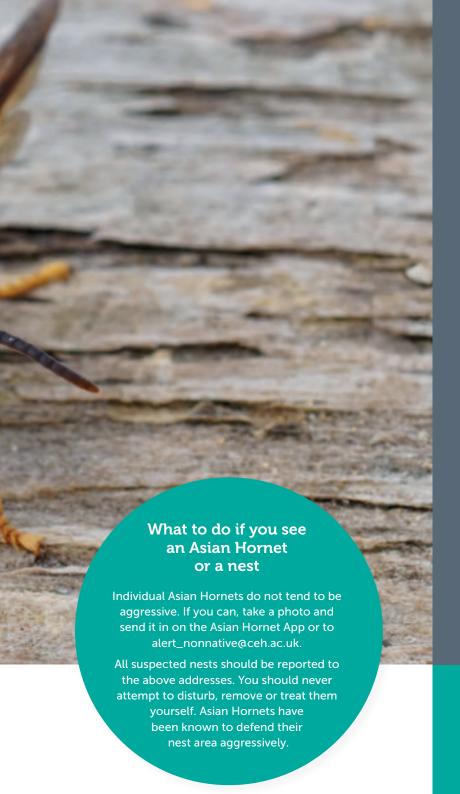
It is therefore important that people who enjoy outdoor spaces and

engage in outdoor sports know how to identify and report any suspected sightings or nests and know how to keep themselves safe in the process.

The BBKA is spearheading a nationwide campaign of awareness and is encouraging as many people as possible to download the official Asian Hornet app so suspected sightings can be logged.

Experts from the Government's National Bee Unit will then be notified and nearby nests traced and safely destroyed. **GI**





Think you've seen an Asian Hornet? Report it!



Report through the Asian Hornet Watch app or www.bit.ly/asianhornetreport





Animal & Plant Health Agency

How to identify the **Asian Hornet**

Body: Generally dark in colour, black/dark brown

Rear: Key feature is dark brown with a distinct yellow/mustard band

Waist: Fine, bright yellow 'belt'

Legs: Brown upper part with distinct yellow lower leg, in fact it is often called the 'yellow-legged hornet'

Head: Black head with orange/yellow face

Shape: Sleek, wasp/hornet-like as opposed bee-like, or fly-like, with large compound

Size: Slightly smaller than the native European Hornet, but larger than the Common Wasp. Worker hornets measure up to 25mm, while queens are 33mm.

Nests: Early in the season the nests may be the size of a tennis ball, and from late July the size of a football and larger, up to backpack size. Nests during early season can be found around brambles, hedges, building and roof spaces and cliffs. During the late season, nests can also be found high up in trees. They are usually well camouflaged among foliage and very difficult to see.

Important guidance for outdoor workers

This advice is for anyone working outside, commercially or privately, and applies to gardeners, tree surgeons, farmers, branchage contractors, roadside maintenance personnel, parks and gardens staff, footpath and countryside maintenance personnel.

Examine the area before you start work. Look for any unusual insect activity or anything that could be a hornet's nest. If you suspect unusual insect activity or a nest, stop!

Stay at least 10 metres away and do not touch, disturb or cause vibrations around a nest.

Report any possible hornet or nest sightings to the alert_nonnative@ceh.ac.uk, or on the Asian Hornet Watch App with a photo if safe to do so.



The Syngenta Dollar Spot State of the Nation Survey earlier this year has given a clear picture of some of the reasons why the disease has become more severe and why it's occurring for longer each season.

With over 100 responses, and 90% from the UK, it included feedback from some of the most severely hit golf courses across the country. Importantly it has provided an essential insight into Integrated Turf Management (ITM) techniques that could help to reduce the frequency and damage caused by attacks.

One of the encouraging findings was that high disease pressure, as predicted by the Smith-Kerns model, does not necessarily mean a high incidence of disease – where management practices are in place to mitigate against outbreaks.

However, the results also showed

that outbreaks can frequently occur even at relatively low disease pressure risks, if the management practices on the course are conducive to the pathogen's development.

It was quickly evident that dollar spot outbreaks can occur anywhere on course, with greens identified as the most frequent target (64% of reports), along with tees (50%), approaches (36%) and fairways (26%). That was interesting, since in many instances it is often the less intensively managed areas, such as tees and approaches, where dollar spot is frequently seen.

Responses showed that all grass

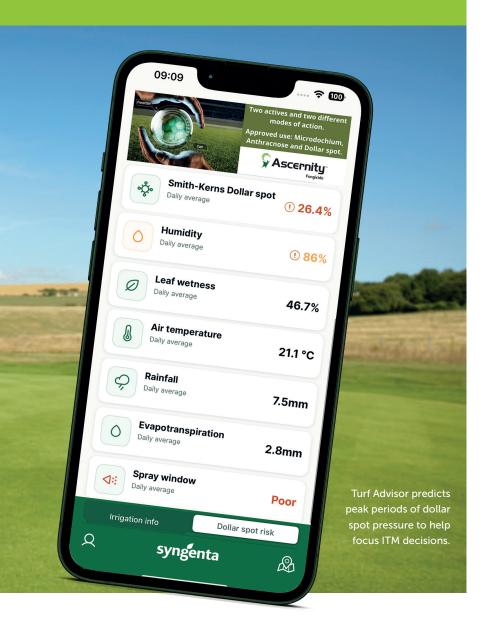
Read this for:

- Dollar spot management
- Dollar spot survey results
- ITM strategies

species were susceptible to dollar spot. The general feeling was that Poa annua was the worst affected, but when the data was analysed of putting surfaces alone, it showed greens that contained fescue were more likely to be impacted.

As expected, dollar spot outbreaks typically begin to be identified in May, peak in July to September, then rumble on into October and fewer in November. However, it was notable that incidences were reported as early as January and increasing through March and April.

With nutrition recognised as a key component of dollar spot ITM, analysis of the survey data supported the trend that those who manage surfaces at higher nitrogen inputs have lower risk of infection breaking out. Of those who were applying less than 90 kg/ha of N on greens, more than half report-



Greenkeeping actions can create conditions more favourable to dollar spot



Author: Sean Loakes Syngenta Technical Manager UK & Ireland

ed seeing dollar spot infections.

Furthermore, the survey picked out that rolling turf surfaces can be a good management practice to reduce dollar spot on greens. For those who never rolled or only roll once a week, disease outbreaks occurred on 68% - 75% of courses, while no outbreaks were reported on greens rolled six or seven times a week.

International research had previously indicated that lower soil moisture content can make turf more susceptible to dollar spot outbreaks – which has been confirmed by the UK survey. Overall, of courses managed with a target soil moisture below 20% VMC (Volumetric Moisture Content), 61% reported suffering dollar spot outbreaks, compared to 39% clear of infection.

Feedback from greenkeepers also indicated that there is no implication for

dollar spot from lower heights of cut.

Where greenkeepers are managing surfaces at lower VMC %, using lower N inputs and raising the height of cut for finer grass fescue-mix swards, they could be creating conditions more favourable to dollar spot.

Nearly 60% of respondents reported they have used fungicides to manage dollar spot. Advancements in fungicide technology, improved disease modelling - using the Turf Advisor app to better time applications during high-risk periods – and enhanced application techniques are key to getting the best results.

New Syngenta fungicide R&D trials last year, under extreme dollar spot pressure at Burnham & Berrow Golf Club in Somerset saw up to 70% reduction in disease damage through peak summer periods.

From the end of June to mid-October the site experienced dollar spot disease pressure above the 20% Smith Kerns threshold on over 105 of the 120-day trial period.

Once initial disease infection had been controlled in the trial, the fungicide programme, including Ascernity and Instrata Elite, maintained completely clean tee surfaces through the season, when disease damage on untreated tee areas consistently remained between 16% and 27% of surface area affected throughout August and September.

The advice and experiences of the survey can help to set your dollar spot strategy, in time for the summer season. **GI**





Water is a huge public, political and business issue – in the UK and across the world. It is arguably golf's single biggest resource dependency and risk, so the time to act is now, says Roddy Williams of Sustainable Golf

With the spotlight on equitable availability for priority purposes, climate change, increasing demands and public expectations – and with new regulations in place and being planned – it is vital that, course by course, golf gets on top of the issue now.

Perhaps the most important part of the water equation for golf is what grassroots facilities are doing, and are planning to do, to improve their overall water stewardship and resilience.

In bringing current actions and plans together, it is important for clubs to consider some of these key elements.

In parallel, it is important that golf associations are able to access pooled data and stories, so that along with industry water resilience plans and roadmaps, the sport can represent itself most effectively. Dialogue with regulators

Key questions to ask at your club

Over the past year, our agronomy team has repeatedly encountered the same key concerns facing our industry and has been working to draw attention to them.

- · Do we know where our current water is coming from, how much we use and where it goes?
- How much potable water do we consume for non-potable purposes?
- How can we diversify our water sources?
- Can we combine drainage improvements with water attenuation?
- What immediate no and low-cost actions can we take to reduce water consumption (including
- · What technological and capital investments should we be planning or have in the pipeline, and over what timescale?
- What agronomic decisions can we make that might result in water savings?
- Who should we be speaking to or partnering with to find solutions?
- · How can we bring this together in a comprehensive and yet practical water resource management plan for our facility?
- · What stories or highlights can we share locally and across golf to inform others about some of our water conservation projects?

and water companies is also vital so that drought management. In some cases, this

mutual needs and goals can be discussed, targets and actions agreed.

There are some good examples of this across Europe, in particular where golf has co-regulatory agreements with governments to manage golf's access to different types of water resources through various levels of

ensures access to water for the most essential playing surfaces.

This is an issue for the whole business of golf. An area where course managers need to be supported for their expertise and ideas, but with responsibility shared across all those within clubs and across the sport. GI

Industry experts share their perspectives on water dependency

Simon Squires

Senior Manager – Golf Irrigation, EMEA & International at The Toro Company

management have rightly become key drivers in the sports turf sector in general and in golf in particular. Manufacturers are leading the way with innovations that will help turf managers do more with less. Modern controls offer high-speed field communications, which deliver two-way diagnostics and to-the-second run times. Modern part-circle sprinklers will complete the end-of-arc watering with minimum dwell, performance nozzles ensure consistent water distribution uniformity. Innovation will and does help, but it is vital that irrigation systems are properly maintained and regularly audited to ensure they are performing as expected. Watering programs should reflect actual needs and systems need be accurately set and nozzles need to be selected for the application in hand if water is to be applied with minimal waste."

Owen James

Sustainability Manager at England Golf

"Water management is a national issue already, and one that could be a huge issue for golf in the near future. At a national level, it is important golf clubs showcase their appreciation of the value of water so that conversations regarding future access show us in a positive light rather than an inefficient user. Using data to influence decisions regarding irrigation cycles, watercourse flows and water storage requirements is fundamental when it comes to catchment-wide water management approaches, so capturing, analysing and utilising data is going to be a key play for golf clubs moving forward."

Junier Browne MBE

Director at JBEL Environmental Services Ltd

"The way UK golf clubs think about their course watershed management, land drainage and water attenuation will be vital to their future water resource security. Few clubs can afford to ignore the real benefits of ensuring that their course watershed and drainage are



100 acres of managed turf replaced with indigenous vegetation

Mirimichi, United States

Through a substantial renovation and ongoing refinement of grassing plans, Mirimichi replaced 100 acres of managed turf with indigenous vegetation. As well as creating a naturalistic feel and strategic interest for golfers, irrigation and mowing requirements are significantly less, saving water, fossil fuels – and costs.

Closed-loop water protects the natural environment in the local area

Golfclub Zwolle, Netherlands

Golfclub Zwolle has the golf course's land on lease from the municipality. One of the conditions the municipality has included is that the golf club must provide a plan for the course and water management.

Golfclub Zwolle has a closed water system that is independent of the bordering waterways under the control of the district water board. Drainage water flows into the attenuation area and this surface water is used for course irrigation and machine washdown. Excess water in the closed system is filtered through wetlands before exiting the site via a one-way valve. That valve prevents nutrient-rich agricultural runoff from entering the golf course's water sources, protecting the habitats within the course and managing the water quality for irrigation.



designed to retain and save water, for use in these ever-increasing times of drought. Sustainable water resource management planning will help your club prepare for this water-poor future."

Matt Johns

Owner, Johns Associates Ltd

"A range of organisations can provide advice and support on sustainable water management. These include environmental consultants, irrigation specialists, including designers and suppliers, Government conservation, flood and pollution agencies, water companies, academia, professional bodies and associated charities. By leveraging the expertise and resources of these organisations, greenkeepers can develop effective strategies to minimise water consumption, protect natural habitats, and promote responsible land management practices for the benefit of both the environment and the golfing community."





Advanced water management and positive impact Costa Navarino Bay, Greece

A water management study of western Messinia identified local water resources and explored the impact of climate change on water availability. Based on the findings, which revealed that a substantial quantity of surface water from the local rivers (50 million m³/year) ends up in the sea without being used due to the lack of storage infrastructure, two reservoirs with an approximate capacity of 700,000 m³ were designed and constructed to meet the irrigation needs of Costa Navarino. The reservoirs, fully integrated into the surrounding landscape, are filled by a small percentage of the excess runoff from local rivers, just before flowing into the sea. This water, together with highly treated recycled water from a wastewater plant, is more than enough to cover the irrigation needs of Costa Navarino for the whole season.

Irrigation overhaul saves water and electricity Harjattula G&CC, Finland

In a recently renovated irrigation system, every sprinkler in the fairways, approaches and greens is individually controlled. A new cable spans the whole course, and a new pipe and cable around the greens service the new sprinklers. Sector sprinklers apply water only where needed on greens and exact times can be set for every sprinkler. The club save both water and electricity as pumps run less.



The rhizosphere of turfgrass — what's it all about?

Stan Kostka, Ph.D., Mike Fidanza, Ph.D.

Turfgrass roots and the rootzone are important and necessary to maintain a healthy and functional playable surface.

The rhizosphere is defined as the zone or vicinity of soil immediately surrounding a plant root where biophysics (i.e., the biology, chemistry, and physical properties of the soil) are influenced by the root.

Dr. A. Carminati (Federal Institute of Technology in Zurich, Switzerland) and colleagues provided a review of current research into the rhizosphere and how roots take-up water. This is now possible due to advances in imaging technology that includes neutron radiography, magnetic resonance imaging (MRI), light transmission imaging, and X-ray computed tomography designed to measure water properties and soil

structure specifically at the rootsoil interface. This results in high resolution three-dimensional images of water distribution in the soil and rootzone.

Detailed images of soil pore spaces and water content around roots confirm the heterogeneity of the rhizosphere compared to the soil further from the roots. In other words, the water content immediately surrounding roots are not evenly distributed. MRI imaging revealed a depletion of water around roots where the root hairs are located. Healthy and functional root hairs are vitally important, as they act like an underground sponge and absorb water and nutrients.

In 1904, the German plant physiologist Lorenz Hiltner first described the rhizosphere as the area around a plant root that is inhabited by a unique population of microorganisms influenced, he postulated, by the chemicals released from plant roots (Figure 1).

Today we know these chemicals as root exudates or mucilage. These substances are exuded from the root tip, and shrink or swell as the soil dries and is rewetted.

Mucilage is partially degraded by soil microorganisms, and some of those microorganisms also produce extracellular polymeric substances which are similar to mucilage.

Mucilage is essentially a gel that is capable of absorbing water, however, it becomes hydrophobic (or water repellent) after dying. Mucilage helps stabilize soil moisture in the rhizosphere during periods of drought stress (i.e., low soil water content), and possibly maintain the 'hydraulic connection' between roots and soil (Figure 2).

High resolution tomography of water distribution around roots showed that during a drying-down period, the

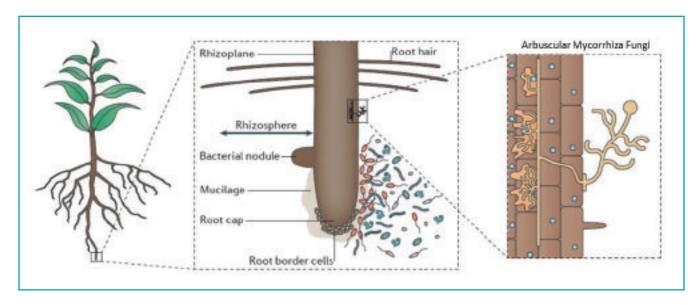


Figure 1. The rhizosphere is the zone of soil surrounding a plant root where the biological, chemical, and physical properties of the soil are influenced by the root (Source: Phillipott et al., Nature Rev Microbiol, 2013).



Advances in research have begun to unravel the relationships between soil, water, nutrients and plant-microbial-soil interactions within the rhizosphere."

soil around roots remained wetter than the adjacent bulk soil. In other words, mucilage is helping those root hairs function to access water and nutrients. However, with severe drying-down of the soil rootzone, mucilage becomes viscous and hydrophobic (i.e., water repellent) which can delay during rewetting of the rootzone when water is applied by rain or irrigation. Does this sound familiar with extreme drying-down of sand-based putting greens?

Recent research into the rhizosphere has revealed more insight about the role of mucilage exuded by roots. As plant transpiration increases during the day, roots shrink and lose some of their connectivity with the soil. However, rhizosheaths limit the loss of contact between roots and soil.

The rhizosheath is defined as the soil that "sticks" to the roots. Rhizosheaths are formed by the combination of root hairs and root exudates (~mucilage) that essentially connect those glued soil particles to roots. Besides their influence on water relations in the rhizosphere, root exudates help to stabilize the soil around roots. Thus, roots modify soil rootzone properties.

Figure 2. Changes in soil water status can have profound effects on rhizosphere properties, root-to-soil contact, and turf quality. ProWet Evolve soil surfactant applied at 12.5 L/ha/mo onto an unirrigated fairway at Ludlow Golf Club, UK. Volumetric soil water content (VWC) measured at 7.6 cm depth. A: August 2021 after two applications. B: Sept. 2021 after three applications (root cross-section images from Nature and Properties of Soils, 2016).



Figure 3. ProWet Evolve soil surfactant applied at 12.5 L/ha/mo onto a putting green in Ireland; image from May 2020 after two applications. Soil surfactant applications facilitate the modification of rhizosphere properties to enhance turfgrass physiology, function, and performance.

How does all this "rhizosphere stuff" relate to turfgrass? Those basic and sustainable agronomic practices of mowing, fertilization (plant and soil health), and irrigation (water management) and maintaining consistent and uniform soil moisture are the best approaches to help those roots function and remained connected within the rhizosphere and thereby produce desirable playing surfaces (Figure 3).

Significant advances in research have begun to unravel the relationships between soil, water, nutrients, and those vital plant-microbial-soil interactions within the rhizosphere. So, to quote our colleagues working on these biophysical connectivity interactions, let's "stay in touch." GI

Continue the conversation by connecting with TurfCare using X @TurfCare_IRL_UK





Organic Matter (OM), or thatch, is defined as a tightly bound layer of vegetation – dead grass, roots, shoots and leaves etc – that builds up around and between the grass blade and soil surface

Accumulations on heavy-traffic areas such as golf greens are a normal consequence of these type of intensively managed turf surfaces which are cut at relatively short heights and often treated with applications of N to combat high wear. OM isn't always bad, but it does require management. Redexim UK explore.

A small thatch layer is widely considered to be beneficial, improving wear tolerance and insulating soil from extremes in air temperature. Issues arise when organic matter accumulates

quicker than it can degrade, and this is where the disadvantages far outweigh the benefits. One of the biggest contributory factors to OM build-up is a skew in the 'input-output' ratio. Achieving a balance with a feeding programme is the key to preventing excess OM, along with understanding the chemical properties of your soil to prevent potentially avoidable flushes of growth

Along with nutritional imbalances, high OM levels can also be encouraged by compacted soils, and vice versa, can restrict water and nutrient absorption and limit gas exchange between the atmosphere and the rootzone. A thatch layer will restrict microbial activity and retain moisture which encourages shallower

rooting weed grasses to establish and will offer a successful environment for disease and pests to take control. The Microdochium nivale pathogen is just one example that is naturally present within the soil profile and will thrive within thatch layers.

This is part of the reason why cultural practices such as aeration and scarification, that reduce thatch levels and increase airflow within the sward and profile, are two of the basic methods in the modern fight to prevent disease from occurring.

Alongside Redexim's well-documented Verti-Drain, Verti-Quake and Verti-Core ranges are a number of effective scarification solutions. Of particular note is the Verti-Cut range. Specifically designed to tackle lateral



Redexim





Above: The Redexim Turf Tidy with fully floating head.

growth and remove organic material, the Verti-Cut is available in three working widths from 1.3m to 2.0m to suit smaller or larger turf surfaces. The improved downward movement of air, moisture and nutrients achieved by the removal of dead plant material can help to deliver more uniform, vigorous and vibrant growth in return.

For larger areas, or for situations where collection of the extracted material is preferred, clubs can consider the Redexim Turf Tidy. The fully floating head of this versatile scarifier-collector accurately follows contours, while the wind paddles ensure an effective clean-up of organic matter, clippings, cores, leaves or other debris in a single pass.

Scarification in isolation will not cure

a thatch issue however. A 500m2 green with thatch to a depth of 20mm has 10m3 of problem! With linear aeration or less intensive scarification impacting only a small percentage of the surface area of the green in any one pass, the amount of physical material removed is negligible. In addition, heavier scarification operations are labour intensive; detrimental to the short term playing characteristics of the sward and can increase plant stresses.

The aim of any and all thatch removal is to increase oxygen within the immediate plant environment to help aerobic microbes break down the thatch. Something as simple as regular brushing can bring many benefits to the health of a turf surface, including a reduction in thatch build-up. Brushing with implements such as the Redexim Speed-Brush for greens, or larger Top-Brush for fairways, can remove surface moisture, clear debris and stand the plant upright – contributing to improved airflow and an environment less optimal for disease to move and thrive.

The Top-Brush is a six-metrewide poly-brush, comprised of three sections, that can quickly and effectively rid large areas of organic matter, worm casts and dew. Its large working width, and adjustable working depth make it a versatile tool to achieve a light surface brush-in or more aggressive, deeper surface agitation on fairways, winter sports pitches and other sizeable green spaces. In addition to the benefits already listed, the Top-Brush is also an effective method of incorporating topdressing material down into the profile which, in itself, can help to dilute the density of thatch accumulations.

Mechanical means of enhancing the soil and plant health, and reducing thatch levels, may be viewed as invasive or labour intensive but needn't be such. Removing dead material through scarification ensures water and nutrients get to where you want it to be, ensuring more effective results from other areas of your maintenance

programme and contributing to a healthier plant that will be more tolerant of other mechanical work. And so the virtuous circle continues.... GI



COVU Research sh Stressgard formula

Stressgard - Beyond Disease Control

Over the past 25 years, one technology has revolutionised an entire category of plant protection products for turf managers worldwide. Envu Stressgard formulated products offer plant health benefits that go beyond disease control to mitigate biotic and abiotic stresses across turf areas. The physiological benefits of Stressgard have been proven in the laboratory, controlled environments, university field trials, and real-world golf course demonstration trials.

Unique Stressgard Technology

Stressgard Technology, unique to Envu, encompasses a special blend of active substances, inert ingredients and turf specific co-formulants. This unique combination enables the product to perform exceptionally well in various turf stress conditions, offering benefits beyond those solely provided by the active substance(s), these include:

- Enhanced turf colour
- Improved UV stress management via turf specific pigments
- Increased drought tolerance
- Optimised photosynthesis
- Improved overall turf quality and performance

A New Era of Turf Health Research

Envu continues to spearhead research projects worldwide to explore the beneficial effects of Stressgard. Across numerous trials, one commonality is that Stressgard

formulated products consistently outperform other pigments and plant health products, significantly improving overall turf quality and effectively mitigating stresses such as wear, heat, shade, and drought. Despite years of research, the question of how Stressgard works physiologically has remained unanswered.

Now, through collaborations with leading turfgrass physiologists and using modern advances in biochemical research, we've taken a deeper look into the underlying mechanisms that drive plant health to answer this question.

A recent research trial by Dr. Bingru Huang at Rutgers University investigated, in the absence of any disease pressure, the influence of Stressgard formulated fungicides (Signature Xtra Stressgard) and other phosphonate-based products and pigments on factors involved in turfgrass stress responses. These factors included:

- Chlorophyll-related enzymes: Chlorophyll is built and destroyed in a cyclical pattern. Individual components of this process can be influenced by various abiotic stresses (heat, drought, traffic etc.). We can measure the enzymes associated with chlorophyll synthesis (the builders) and degradation (the destroyers) to gain a better understanding of what's going on during plant stress.
- Chlorophyll content: Chlorophyll is the machinery in the plant which carries out photosynthesis and builds energy reserves. Direct measurements of chlorophyll via extraction are most indicative of the health of the photosynthetic systems in the plant.

The Results

Previous research from 2003, has shown the positive effects of Stressgard formulated fungicides on chlorophyll and photosynthesis under heat stress (Figure 1). However, new research further confirms stress mitigation through the maintenance of chlorophyll and membrane stability with Stressgard products. Under heat stress conditions, when compared to the untreated control and other competitive products, turf treated with the Stressgard formulated products exhibited:

- 1. Significantly higher levels of chlorophyll indicating healthier photosynthetic systems during stress (Figure 2).
- Significantly lower chlorophyll degrading enzyme activity indicating protection or mitigation of chlorophyll destruction during stress.
- 3. Significantly lower electrolyte leakage indicating greater membrane stability during stress (Figure 3).

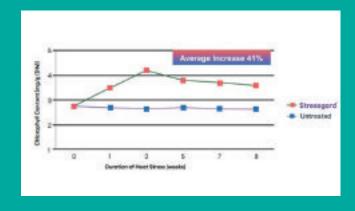


Figure 1: Growth Chamber Heat Stress Trial, Dr. Bingru Huang, 2003, Rutgers University. Results from 8-week heat stress trial on bentgrass (Agrostis stolonifera) conducted in a growth chamber.

nines new light on tion benefits

 Membrane stability: Measured via electrolyte leakage, membrane stability is a hallmark of stress response in intact plant cells and is widely used as a measure of plant stress tolerance.

Conclusion

Photosynthesis is the driver of all plant energy production and subsequent processes. The protection and maintenance of chlorophyll with Stressgard ultimately improves the turf's ability to photosynthesise, which is beneficial under any stress condition. Two decades of research has continued to support the unique and unparalleled effects that Stressgard fungicides deliver beyond disease control. GI

Implications of Stressgard for Turf? When we analyse turf health and performance using NDVI*, it is evident that Stressgard formulated products go beyond disease control, profoundly impacting turf health:

The Stressgard Process



The Treatment

A prescribed Stressgard solution is applied to prevent or address biotic and abiotic stresses.

Stress mitigation begins

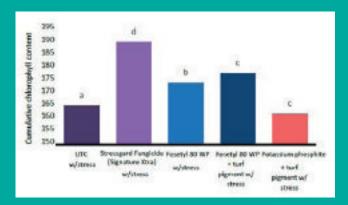
Positive impact to the chloroplasts in plant cells leads to improved shotocynthesis.

Long term colour sets in

Plant begins to exhibit healthier canapy colour as a result of improved chlorophyll stability.

Benefits continue

With sustained plant processes leading to improved rooting, better turf density and resiliency, High performing turf
Turf remains protected
and delivers consistency
in density, colour and





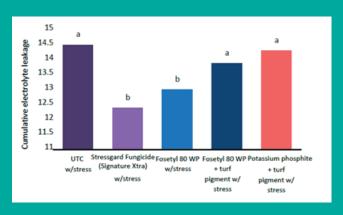


Figure 3: Membrane stability as indicated by cumulative electrolyte leakage throughout the duration of the stress study. Note significant reduction in membrane leakage with Signature Xtra Stressgard treatment, signifying a more stable membrane.





Installation of a Grundfos solar water pump system on a farm in the Scottish Borders is producing excellent ground water flows even in challenging weather.

A remote location and unreliable electricity supply were the primary drivers for a farm run by a large local landowner (Roxburghe Estates) to seek an environmentally friendly water supply solution which harnesses renewable energy sources, with low operating costs.

The water supply is a critical piece of infrastructure on Windywalls Farm in Kelso, Roxburghshire, feeding into a large network supplying farms and residential properties.

Historically, the supply was drawn from a borehole to fill an enclosed reservoir that gravity fed the mains network, which is supported when required by Scottish Water mains supply.

However, the power supply to the electric pump - an air ejection system - was unreliable, with powerlines regularly being damaged.





The driver for this project came in early 2023 when the cost of repair and modernising the electric supply forced the owners to look at alternative options.

Craig Rodger, Managing Director at Holequest Ltd, is a consultant for the Roxburghe Estate. He was tasked with finding alternatives to provide a cost-effective robust water supply.

Following extensive consultation, the Grundfos SQFlex 2.5-2 model was selected for this application.





SUSTAINABLE SOLUTIONS

The SQFlex pump uses renewable energy sources like solar and wind power, and features a built in variable frequency drive that converts DC power from solar panels into AC power for pumping -- resulting in low operating costs. The system is reliable and durable, with features like built-in dry run protection and high temperature protection.

SQFlex offers a choice between helical or multi-stage centrifugal hydraulics and works with any solar water pumping system. It is suitable for various application areas, including commercial buildings (such as schools or hospitals), farms, ponds, lakes and conservation areas, and domestic homes.

Designed using over 75 years of pump experience and over 40 years of solar technology expertise, the SQFlex is built for reliability and durability.

The solar pumping system is designed to work off-grid, withstand different weather conditions, and requires minimal human interference, making it highly reliable in a variety of challenging environments - from the Scottish Borders to the remote Kashmir Valley in northern India.

"After the initial feasibility investigations, we decided to go with a Grundfos solar-powered pumping unit, putting the extraction system off grid.

The pumping unit is working well and is reducing our client's reliance on mains water, as well as removing the electrical connection entirely,"

Craig Rodger - Managing Director, Holequest Ltd

GLOBAL APPLICATION

The SQFlex can be customised to match any application and local conditions, and it is quick and easy to install. As the first solar pumping solution of its kind, the SQFlex has evolved to include a robust range of features and is used in water supply applications around the globe.

For example, in Namibia, the Sandvervaar farm uses a SQFlex solar pump to pump water from a borehole for irrigation and livestock watering, helping the farm to become more sustainable and productive.

Meanwhile in India, in the village of Navargaon, Maharashtra, a Grundfos SQFlex solar pump unit has been installed to provide water to households for the first time. Previously, villagers had to walk long distances through the jungle to fetch water from wells. In the state of Gujarat, Grundfos SQFlex pumps are being used to irrigate crops on small farm - improving the livelihoods of farmers and increasing food production in the region.





ENVIRONMENTAL PROTECTION

Solar energy is a clean, renewable energy source that can help to reduce reliance on fossil fuels and, therefore, reduce carbon while protecting the environment.

This is especially important as, in 2019, water companies in England pledged to reach net zero on operational carbon emissions by 2030. Since then, companies in Scotland and Wales have committed to achieving carbon neutrality across all emissions by 2040, with a pledge from Northern Ireland to deliver the same target in line with UK national requirements, by 2050.

In addition to the environmental benefits of solar energy, there are also financial benefits to installing solar panels. The SQFlex system has been running at the Roxburghe Estate since September 2023, and to date it has been reliable, trouble free and cost saving for the business- equating to approximately £300 per year on electric costs and saving around 290 kg of CO₂ per year.

The Sprouston District Water Supply is now a self-contained supply using solar power. Investigations are underway to assess the feasibility of upgrading the solar panels to incorporate battery storage, with the potential to meet the demand all year round in the future. In addition, the installation of Grundfos SQFlex has removed the need for the mains power supply and mains water back-up.

Due to the project's success, the client has asked Holequest review the suitability of installing SQFlex pumps at various other locations on the Roxburghe Estate.

THE BENEFITS

SAVING

£300

Approximate annual savings on electricity since installing the SQFlex system in September 2023.

SAVINO

kg of CO₂

An annual saving of 290 kg of CO₂ per year.

SUMMARY

Grundfos is pioneering the future of water technology with an expanded range of powered using renewable energy.

According to Market Intelligence Data of the AC and DC Solar Water Pumps, the market is predicted to develop at a CAGR of + 10.1 % between 2023-2029.



The greatest challenges facing



Paul Woodham is The R&A's Head of Agronomy Europe

our courses

While there are variances from one country to the next, recurring themes include climate, water scarcity and golfer expectations

Last month, The R&A Sustainable Agronomy Service gave a presentation at the annual Federation of European Golf Greenkeepers Associations conference (FEGGA).

The conference was a gathering of greenkeeping federations, greenkeepers and turfgrass professionals from across Europe. Our presentations included 'A Vision for Sustainable Greenkeeping' in addition to an update on The R&A research programme Golf Course 2030.

Conference delegates from many regions of Europe offered feedback on what their federation would consider to be the greatest challenges facing golf courses in their countries. Climate and golfer expectations were two dominant threats, alongside water

security (water sourcing and water quality) and pesticide regulation. It was interesting to see the segregation of these threats based on regions. It was no surprise to see south Europe greenkeeping federations, such as Spain and Portugal, prioritise water and particularly the damage caused by poor water quality when using waste water.

Smaller greenkeeper teams, such as Bulgaria and Czech Republic federations, prioritised staffing and financial resources as a key threat, whereas the Nordic federations, such as Finland and Sweden, prioritised access to pesticides as the main threat, particularly with the challenge of ice/winter kill related disease impacting playability with limited time

for transitioning into the main season.

Central European federations prioritised pesticide regulation as the main threat, especially where state regulation is already restricting the availability of the pesticide products used as part of the Integrated Turf Management strategies responsibly practised by greenkeepers.

The reality is that climate, resources, water and regulation present global challenges, which we continue to try and adapt to. The most recent and widely discussed topic is the future of pesticide legislation and how changes will affect all golf clubs and the way their courses are managed.

The conference was in wide agreement that future advancements in grass species breeding was one great hope in helping greenkeepers deal with the impact of climate and regulation.

Our presentations focused on this research and the need to work on creating more favourable golf course environment and maintenance strategies which will facilitate a positive change. Some regions have far greater challenges than the UK but there are common first steps which can set the scene for your course. **GI**

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First steps to consider with your course

- Will the golf course landscape need to adjust for a more balanced and diverse vegetation?
- Water security will be critical is there a plan?
- Irrigation and nutritional management need to be precise and prescribed
- Use data to support the decision-making process
- Be more aware of the physical stress applied to the surfaces
- Setting achievable and sustainable standards routine play vs competition play
- Look towards grass species development and botanical improvement in the correct environment
- Take time to evaluate your situation



Our monthly column from The R&A's Sustainable Golf team shares news and insights on agronomy and sustainability themes. For more information on The R&A's Sustainable Agronomy Service please contact sustainablegolf@randa.org



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