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COVER STORYOAKS CYPRESS LAKES **EXCELLENCE**

A detailed vision that was 'out of this world' helped Oaks Cypress Lakes Resort superintendent Craig Molloy win the ASTMA Excellence in Golf Course Management Award. In a detailed and ambitious yet innovative plan, Molloy and his team addressed water consumption and drought management, flora and fauna, the resort's overall health and the roles of his staff. The series of operational objectives, while not revolutionary, remained essential if the popular and impressive layout was to realise its full potential in an efficient manner. A successful outcome means the golf course at Cypress Lakes is in the best health of its near-30-year existence.

8

Cover: Oaks Cypress Lakes Resort Photo: Oaks Cypress Lakes Resort/AirSwing Media.

ALSO IN THIS EDITION...

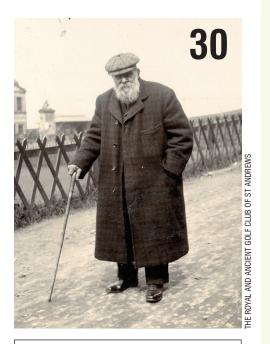
Foreword Thinking	4
Picture perfect posts	6
Around the Trade	66
Association Reports	68



FEATURES

To preserve and protect	16
Fields of dreams	22
A portrait of Old Tom Morris	30
Following in Old Tom's footsteps	36
Modern day custodians	40





COLUMNS

JOHN NEYLAN	46
PETER MCMAUGH AM	50
JOHN FORREST	54
KATE TORGERSEN	60
BEN GIBSON	62



Contributors to Australian Turfgrass Management Journal Volume 23.4 (July-August 2021): AirSwing Media; Shane Baker (CSTM, GCSAWA); Nathan Bennett (CSTM, SAGCSA); Nathan Bradbury (CSTM, NSWGCSA); Matthew Cairns (Blacktown International Sports Park); John Flaherty (NSW Bowling Greenkeepers Association); John Forrest (Forrest and Forrest Horticultural Consultancy Services); Ben Gibson (The Toolbox Team); Shane Greenhill (VGCSA); Karl Hansell (BIGGA); Paul McLean (CSTM, GCSAO); Peter McMaugh AM (Turfgrass Scientific Services); Craig Molloy (Oaks Cypress Lakes Resort); John Neylan (SportEng); Jason Perkins (NZGCSA); Kate Torgersen (Environmental Golf Solutions); STA Wictoria; STA Wittoria; STA Wit Mark Unwin (ASTMA).

A short apprenticeship

ome articles stick in the memory bank more than others, and this was one of them. A dozen years or so ago, *Australian Golf Digest* (where I've spent all but five of the past 21 years on the editorial staff) published an article that put forward the question: Who has the most important role at a golf club?

As a sidebar to the main article, we asked our editors and contributing writers for their opinion and – incredibly and completely independently of each other – all six people came back with a different response. "The general manager," wrote one before elaborating his case. "The head professional," opined another. Other responses covered the club captain, president and possibly even the bar manager.

I'm proud to say that I was the one who voted for the course superintendent, and I stand by that choice today. Why? With no golf course there is no golf club. And, by extension, a substandard golf course leads to a substandard experience. Sure, you could quite rightly argue that each of the roles is vital (otherwise, why would they exist?) but to me, the super's job stood out then and it still does today.

I've long admired the dedication to the craft of our course superintendents, greenkeeping staff and all turf professionals. You literally get your hands dirty (more on that in a moment) for the betterment of our sport and make the arenas of our chosen recreational pastime a more enjoyable environment in which to spend our leisure hours.

In the same breath I would also say: golf-course staff – along with course architects – rank among my favourite people in the industry to talk with. I am a lifelong golf 'nut' and, sure, every facet of the game intrigues me, from instruction to equipment and through to the tournament realm. Yet there's something special about speaking with the professionals whose work directly enriches the playing experience.

Through the years I've sat in dusty course-maintenance vehicles and been chauffeured across all manner of terrain by dedicated turf professionals who were more than happy to go beyond their normal scope of duties to explain or demonstrate an aspect of their work. I've picked the brains of others to get my head around grass types and listened intently to theories about the benefits of one strain over another amid the vagaries of a volatile Australian climate. In all instances, the overriding takeaway as the listener was: there's a universal passion here.

Another far less serious course superintendent-related memory comes from a long-time super who is sadly no longer working in the industry. A group of us were on the Gold Coast for an industry event and enjoyed a night out with him one of the evenings. There were five of us, and when it came time for his shout, he returned from the bar carrying five beers. That's no easy task, unless you carry them using five fingertips from one hand. That's right – the five beer bottles were delivered to us with our super friend's fingers embedded into the throat of each one as we plucked them off in the same fashion a dairy farmer might remove the milking machines from the udders of his herd. Now, in their time these hands had seen some labour and quite likely an assortment of mechanical lubricants, to say nothing of chemicals. One of my colleagues in particular, a noted germophobe, went ash white when he realised how his beverage was being delivered. But ultimately the moment was a source of a few laughs and now a story that lives on to this day. Those of us gathered there that night recognised that a super's work stays with him long after the sun sets.

Which, I suppose, is my way of giving acknowledgement and saying a hearty 'thank you' to all of Australia's turf professionals from someone who normally sits in a slightly different corner of the golf media. Brett Robinson unfortunately had to sit out most of this issue to take care of some important family matters, and I offered to step into the chair temporarily and help get this issue to the printers. He'll be back from next issue, but in the meantime I'm sure he won't mind me saying: Enjoy the read...



Steve Keipert



A Conference to be proud of, with challenges still ahead

t time of going to print with this issue, we have more than 11 million people in Australia currently under lockdown. What remains clear is that the challenges we face continue, and will continue into late 2021 - adding pressures on us all individually and collectively as teams, and an industry. As it has been for the past 18 months, our focus remains on advocacy efforts that have seen sports turf management continue throughout lockdowns and restrictions until we can return to a more normal environment.

We were fortunate to be able hold the 2021 Sports Turf Management Conference and Trade Exhibition in June, though it certainly didn't come without its challenges to make the starting line. A quick note of thanks to the ASTMA staff who undertook two weeks of quarantine prior to the event in NSW, allowing the ability to travel to Queensland in order to set up and facilitate the Conference. It was a significant sacrifice and one that is greatly appreciated by the team, as it was by delegates and exhibitors alike in order to ensure the event could be staged in 2021.

My thanks must also go to the huge number of delegates, exhibitors and visitors that made their way to the event, with just fewer than 900 people through the doors over the four days; an outstanding turnout given the travel restrictions that were in place, and an uncertain environment. With cases increasing and localised lockdowns immediately preceding the event, there were consistent adjustments to plans and requirements to host the Conference, though given this uncertainty it was welcoming to see the number of industry personnel committed to investing in their education and networking opportunities.

Thanks need to go to each of the Conference delegates and our trade partners and exhibitors who made their way to the Gold Coast for the event. With many stories of late adjustments, staff changes and extended travel requirements highlighting the efforts to attend from so many, ensuring the event progressed didn't go unnoticed and it was most certainly appreciated by the Association.

Those who attended have provided remarkably positive feedback on the education sessions. Delegates commented on the range and variety of education presentations available across the week on management, resilience, research, agronomy, workshops and leadership, which offered delegates the ability to tailor education to their requirements.



Australian **Sports Turf Managers Association**

Each was greatly received, as were the variety of presenters and guest speakers.

A detailed review of the Conference and National Turf Industry Awards is included in this issue (from page eight) and I would like to acknowledge and pass on my congratulations to each of the award winners for 2020. All are true leaders of the turf industry.

Looking forward to the Sports Turf Management Conference in 2022, we recently announced our plans to hold the event in Melbourne in conjunction with Golf Management Australia (GMA) to expand both the education and exhibition offering with an additional 300-400 attendees expected.

and we continue to see a gap in the market in relation to availability of qualified staff to fill positions, which places continued pressures on existing turf management teams.

Nationally, irrespective of the facility or area of the industry, we see continued staff and labour shortages being a significant challenge, alongside the issues of wage growth for turf managers. This is a significant issue that requires considerable attention - for assisting turf managers in both the immediate term and the long-term sustainability of the industry.

As has been highlighted previously, throughout the period of 2017 to 2020 some concerning trends are evident in relation to qualified staff and apprenticeships. Notably, the reduction in qualified numbers (and overall industry percentage) at facilities has fallen from 62% to 48% during the same period.

Couple this with the challenges we face in relation to education - be it delivery options, access to training, declining education enrolments and worryingly low completion rates - and the future labour prospects for the industry are concerning and an area that the entire industry needs to address as a priority.

With a marked increase in usage of recreational amenities, greenspaces and sporting facilities, the significance of the

Looking ahead to the priorities and approach for the Association moving towards 2022, our focus remains on advocacy efforts that have been pivotal in ensuring that sports turf management can continue throughout lockdowns and restrictions until we can return to a sense of normal in the (hopefully) near future. These efforts, while difficult and immensely time consuming, have been critical in promoting the efforts and importance of the industry and turf management teams. With a marked increase in usage of recreational amenities, greenspaces and sporting facilities, the significance of the profession must continue to be advocated, and turf managers supported to continue the management and maintenance of these critical functions.

STAFF RETENTION BECOMES KEY

As was highlighted for those attending the Conference, a priority of the Association is attracting and retaining talent in the industry. We have seen a decrease overall in the past 24 months of qualified staff across the country

Nationally, the average of all apprentices completing their apprenticeship is 52.6%, where that figure sits at 22% for Sports Turf Management. Of those who drop out of Sports Turf Management Apprenticeships before completion, 65% do so in the first year compared to 35% in all other trade industries.

We need to do more at both ends of the employment chain - attracting new workers into the industry, and supporting them and turf managers through the first year of the apprenticeship, to reduce these attrition rates. We need to do more in the middle - actively working through retaining qualified staff and keeping the skills in the industry, and more to ensure we are continuing to drive and promote the recognition and awareness of the industry throughout the community.

More information will be made available to members and the industry on the approach by the Association to support and progress education in the months ahead as we look towards implementing a range of strategies in the second half of 2021 and into 2022. W



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did go on

Despite challenging circumstances, the COVID pandemic could not stop the 2021 Australian Sports Turf Management Conference on the Gold Coast from going ahead.



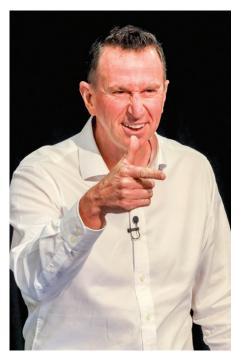


Top left: Brett Woodward in action during the ASTMA Golf Championships, which were held at Coolangatta Tweed Heads Golf Club

Above: Eric Bailey's session on leadership had the room moving

Below left: Author and fitness coach Murray Altham's keynote speech drew attention to mental health and physical wellbeing

Below: Former Olympic gold medallist Duncan Armstrong spoke about the importance of teamwork







Above: Thaxted Park superintendent Jordan Sherratt won the ASTMA Golf Championships to claim the prized Toro red jacket

Below left: Paralympic gold medallist Kurt Fearnley delivered a powerful motivational speech

Below: Delegates had a choice of sessions to attend

Bottom: The trade exhibition provided an opportunity to network















t's a catchy term. Effective too. So effective that Craig Molloy's concept of "moonshot goals" helped earn the Cypress Lakes Resort superintendent the ASTMA Excellence in Golf Course Management Award for 2021.

Yet a profound vision alone is not enough to guarantee results. There was plenty of substance behind Molloy's catch-cry as he delivered on a series of ambitious but important objectives that have helped improve the practices and raise the overall standard of the NSW Hunter Valley course.

The Hunter region experiences its share of extremes. Scorching summer days and frosty winter mornings plus a largely clay base has made for a challenging existence for course staff at Cypress Lakes, which first opened for play 30 years ago next April. While Molloy sought to lessen the course's reliance on water, that was just one in a series of operational aims that, while not revolutionary, remained essential if the popular and impressive layout was to realise its full potential in an efficient manner.

Mission: accomplished. Molloy and his team overhauled water management practices, wildlife and plant management and the approach to people management ways that have drastically improved multiple facets of the golf course and resort. The happy byproduct is: Cypress Lakes looks rejuvenated in the eyes of the core constituents: golfers. It has re-entering the conversation when it comes to the leading resort courses in Australia. It also re-entered Australian Golf Digest's biennial Top 100 Courses rankings of 2018 and 2020 after a 12-year absence.

"There's no proven formula for success, particularly when it comes to innovating golf course maintenance operations," says Molloy, who has been the superintendent at Cypress Lakes for the past seven years. "I set out to transform our operations with some significant 'moonshot goals'. This was a bold step and I hoped to set an example and influence others to follow. I didn't want to settle for incremental goals. I believe that if you want to transform something, set high aspirational moonshot goals. They may be uncomfortable, but after all, if it were easy, it would have been done already.

"So, my ambitions were something I knew the whole team and the organisation could rally around. I was right. They did, and the results speak for themselves. We started with a powerful vision to innovate and through



The ASTMA Excellence in Golf Course Management Award winner for 2021 Craig Molloy (left) with Bayer's Wayne Ryder (right)

our actions show the golf sector the value of systems innovation."

- Molloy's objectives included:
- Developing and implementing a dynamic Drought Management Plan.
- Ensuring the course could adapt to and mitigate the impacts of drought conditions.
- Continuing to deliver quality golf course playing surfaces with limited water.
- Meeting regulatory obligations to reduce water consumption during any drought emergency.
- Identifying areas of the course that could be managed with limited water during a drought emergency.
- Commencing the journey to decarbonise operations by reducing inputs of electricity and transport fuel used by Hunter Water to treat and pump the water consumed at the property.
- Conserving natural resources, improving water storage, collection, irrigation and recycling to be better equipped during drought-prone conditions in the Hunter Valley region through: golf course bunker upgrade program and earth shaping, installation of improved irrigation systems and replacement of golf course turf species.
- Introducing and managing a sustainable vegetable garden at Elysia Wellness Retreat, which is located next door to Oaks Cypress Lakes Resort.

A BROADER INFLUENCE

Cypress Lakes might be the direct beneficiary of Molloy's plan, but he sees the steps taken at the resort as an opportunity for other golf

It's not just a game. It's not just a grass.





WHEN IT COMES TO GOLF, SIR GRANGE CAN DO IT ALL.

Sir Grange is a fine-leaf Zoysia Matrella that has unique qualities. Fantastic droughttolerance, high shade and wear-tolerance, combined with a very fine, deep green leaf, make it the perfect short-mown surface.

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Due to a strong and vigorous root system, Sir Grange can withstand wear and divots much better than other grass-types. This also leads to the sheer density of the plant that helps cover divots quicker – meaning a lot less time spent on divot-maintenance.

WEED RESISTANCE

Sir Grange's superior density also makes it much more difficult for weeds to invade which is music to the groundskeeper's ears.

SHADE TOLERANCE

The superior shade tolerance of Sir Grange makes it ideal for shaded greens and fairways that exist on most golf courses; where other grasses tend to struggle.

MOWING HEIGHTS

Sir Grange looks fantastic at a variety of mowing heights. Sir Grange can be mown short for when we're talking fairways and green-surrounds-height, or even unmown in the rough – Sir Grange can handle mowing-maintenance at these varying levels without much in the way of scalping or bruising that can occur on other grass-types.

LOW INPUTS & REQUIREMENTS

Sir Grange has a very high drought-tolerance that significantly reduces water usage. It also requires 75% less nitrogen and up to 50% less mowing compared to other grass-types, saving the golf industry valuable time and money.



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Craig Molloy's innovations were multi-faceted, covering the golf course, resort and staff

courses to examine their own practices and vision, particularly in an era when resources and staff are growing ever more scarce.

"The golf course maintenance sector is facing critical challenges," Molloy says. "They include the need to do more with less, to meet and exceed golfer and management expectations, to keep people safe and the environment protected, and to adapt to, and mitigate, the impacts of climate change.

"Golf course maintenance systems need to change to become more resilient, more equitable and future-proofed. At Cypress Lakes, we work hard every day to find practical ways to achieve this. It involves system innovation, which I call the big shift because it involves a set of actions that have shifted our operating systems onto a pathway to excellence.

"For any golf course without a target, plan and sustainability pathway, there will be increasing challenges, not only on environmental grounds, but also on whether our economic and business model will be future-viable. I have committed our team to an innovation mindset to embed a culture of best practice experimentation and creativity. Through our excellence programs we have created something that is new and every day

I encourage my team to change established ways of course maintenance, enabling our operations to adapt and thrive. Innovation in the golf sector can be a frustrating pursuit and frequently fails, but I have actioned a detailed innovation success strategy that has delivered significant results."

Water consumption, usage and redirection ranks highly among the solutions and systems innovations at Cypress Lakes. A signed and certified drought plan is now in place. Water consumption has been reduced by 18%, while Molloy's team now reuses more than 30 million litres of recycled water to irrigate the property. All wastewater (grey water) is reclaimed and treated on site, producing 'class A' recycled water. The onsite sewage treatment plant (STP) produces 180,000 litres per day when the hotel is at 75% capacity, which is a significant amount of recycled water.

Sewage is processed on-site in the designated treatment plant, located 200 metres from the main resort and public areas. The plant is located underground and does not impact guests. The golf course, gardens and lawn areas around the main resort building are irrigated with a mix of stormwater and STP water. A new effluent irrigation line extended from the STP to a new dam means the whole

course can be irrigated with this captured resource. Prior to its construction, Molloy and his team could only use effluent on the practice range.

The entire resort acts as a water catchment site through careful earth shaping. Surface rainwater from roads and buildings is collected through subsurface drainage and stored in the dams for irrigation. A new bunkering drainage system feeds back into the irrigation dams. Any rainfall greater than three millimetres previously flooded the bunkers and in a 12-month period the course staff were pumping more than 12 million litres of stormwater from the bunkers. Where once there was a concern that the cost of maintaining the bunkers was approaching the cost of maintaining the greens, that is no longer an issue. The success of the bunker program has seen a significant change to water management, with the new system now collecting more than 7.5 million litres of stormwater from the bunkers (outside drought

For wildlife and plant management, specialised drought-tolerant native plant species have been planted wherever possible. For areas in play on the course, drought-tolerant turf has been chosen that also provides a desirable playing surface. Nutrient products and practices (such as fertilisers) are used that can reduce the potential for contamination of ground and surface waters, while soil conditions are tested and monitored regularly. Habitats are managed to maintain healthy populations of wildlife and aquatic species.

Locally native vegetation was introduced into 'no-play' areas on the course and no-mow zones created where natural regeneration is likely. This has assisted in providing food and shelter for animals, birds and insects currently threatened by loss of habitat, reducing mowing, chemical applications and water



Cypress Lakes offers up some challenging ground



Renovation of the bunkers alleviated one of the course's former problem areas

use as well as promoting the opportunity to enhance biodiversity. Cypress Lakes has also been active in increasing the numbers and diversity of birds on the site. It constitutes a unique area of remnant bushland, with banksia trees and other native trees and shrubs forming a fragmented chain of vegetation traditionally home to a variety of birds, some of which are migratory.

Any animals found injured on the resort or course are reported to the local animal rescue for assessment and any dangerous animals that need to be removed (such as some snakes) are collected and relocated safely.

The course has engaged in the digital space with the introduction of a cloud-based environment, health and safety management system. Molloy says the most valuable resource remains the people, and they take safety and the safety of the planet seriously.

ELATION AND ENRICHMENT

Molloy was naturally full of gratitude upon receiving his award. Yet more than just the single accolade, Molloy likes the fact that he joins an elite club who play a vital advisory role in the profession.

"Winning the ASTMA Excellence in Golf Course Management, as you might expect, is an overwhelming honour and to date a highlight of my turf management career," Molloy said. "To be recognised in a room filled with some of the most accomplished sports turf managers in the country is a memory that I'm extremely proud of.

"This accomplishment is not something that I did alone, and there are many others who deserve to share in the award, including



Water consumption at Cypress Lakes has dropped by 18% since late 2019

my past assistant Stephen Blain who worked with me for seven years. Stephen had been with Cypress Lakes from virtually day one (he retired after 27 years). Plus my current course supervisor Joshua Willard, landscape supervisor Daniel Ho and Peter Young, our turf technician for both resorts and the golf and landscape team. These guys continually strive day after day to achieve our moonshot goals and I'm very proud of them.

"One of the amazing things about winning the ASTMA Award is the incredible alumni of past winners. These winners in Excellence in Golf Course Management are from all over Australia who have been judged by industry leaders for the excellent work they have done and are doing for their facilities. These alumni have helped with mentoring my career and now I have been given the opportunity to encourage and do the same for the next

generation of turf managers. Winning this prestigious award is great recognition for all the years and contributing efforts by the agronomy team. It has been a great morale booster.

"Oaks Hotels and Resorts are extremely proud and supportive of the results we are achieving. The award's recognition is being posted across all social media platforms and the feedback we have received from our hotel guests, Country Club members, NPS (Net Promoter Score) and industry partners has exceeded our expectations."

WATER THE CONSTANT FOCUS

When asked about his most satisfying achievement, Molloy pointed to his Drought Management Plan, which like many parts of regional Australia is vital in the Hunter. During the extended drought across south-eastern





Australia two years ago in particular, Molloy saw the need to step up Cypress Lakes' efforts when it came to water use.

"Droughts do not follow any pattern and can occur at any time of year, exhibiting differing characteristics," he says. "In order to mitigate the impacts of the drought, I developed a robust plan with a range of options available in the event of drought to reduce our water consumption. The plan provides our water reduction savings in terms of litres and where on the course those savings will be realised.

"Managing our water supply is of paramount importance, especially during severe drought conditions. We responded to the current drought conditions by developing a plan that would secure water for the property. Water restrictions are an effective and relatively low-cost tool for responding to the drought and having a drought restriction regime is important to the ongoing management of our business and our commitment to sustainability."

Molloy's water plan was implemented in November 2019 and saved 18% – or 13,582,999 litres – in that first summer alone. Plus, there was no monetary spend required to implement the plan.

Meanwhile, there's more to come.

"Cypress Lakes continues to strive to become industry leaders," Molloy enthuses. "Currently we are working with Brain Pool Tech and epar to precisely measure our ecological sustainability goals and develop best practices

for operational excellence. Drone technology enables Cypress to become more sustainable by applying latest technology that can 'see' turf issues from the air and predict turf health days before it is visible from the ground. This allows us to provide the best playing conditions for all members and visitors while play continues, enabling me to take the highest measures for responsible environmental stewardship."

Molloy lists their key values as:

- Saving water: sensors attached to a drone understand the ideal level of irrigation turf needs to thrive.
- Saving on applications: detecting turf issues days in advance allows proactive treatment and precise issue identification, resulting in fewer chemical applications.
- Better playing conditions: a one-hour drone flight can improve playing conditions and turf health through an efficient and tailored approach for all maintenance activities.
- Responsible sustainability practices and reporting: taking advantage of the data-driven approach to reach the highest measure of responsibility with regards to saving resources, protecting the environment and complying with government regulations.

In terms of passing on his knowledge, Molloy is poised to carry on in that capacity, something he feels strongly about.

"I am a passionate advocate of staff training and development and I consider the progress and career achievements of my team



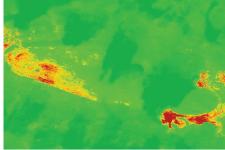
A series of stunning natural features and heavy undulations across the land are a highlight of the Cypress Lakes course

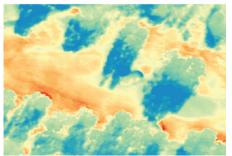
members to be one my greatest successes," he says. "I have mentored 15 apprentice greenkeepers, five of which have progressed to successful superintendent roles and one to a stadium manager position.

"Along this journey we wanted to do more than enhance our brand or improve our sustainability; we want to share our story, our pathway and progress to influence others to achieve excellence in golf course maintenance operations.

"I set goals to change our operations, to change our business and to influence the golfing world. Looking forward, I am excited about what I can achieve next at Cypress Lakes. It is possible to create a product that is of social, environmental and ecological value, and if anyone can do it, everyone should."







Capturing drone imagery can reveal turf issues from the air before they're evident at ground level



In a climate of extremes, Cypress Lakes is in 'career-best' form





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For Earth, For Life



Claude Crockford Sustainability and Environment Award.



very golf course is unique, yet Eastlake Golf Club in Sydney's east owns physical qualities that set it apart from almost all others. Split across two narrow parcels of land separated by a busy road, the course measures no wider than 350 metres at any point and is three-and-a-half kilometres from one end to the other. More pertinently, the layout is bordered by the Sydney Freshwater Wetlands and covered in protected Eastern Suburbs Banksia Scrub. In short, the site is a fragile marvel in an important location and at a time of intense scrutiny from outside golf on all things environmental. For the course and club to continue to operate successfully, every ecological box needs to be ticked.

Fittingly, it is Eastlake course superintendent Nathan Bradbury taking out the ASTMA Claude Crockford Sustainability and Environment Award for 2021 thanks to his and the club's focus on protection and a commitment to uphold a policy to preserve their delicate site.

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A SLICE OF SYDNEY'S 'SANDBELT'

Eastlake is nestled among three of Sydney's most prestigious private sandbelt golf courses: The Australian, The Lakes and Bonnie Doon. Unlike its neighbours, however, Eastlake is a publicly accessible club that is open to its members and the community alike.

The club was established as a result of leasing a large area of land fronting Gardeners Road and forming part of what was known as the Sydney Water Reserve. The Metropolitan Board of Water Supply and Sewerage granted





The environmental work at Eastlake has been carried out in unison with ongoing upgrade work to the golf course

the lease to The Lakes Golf Club for a period of 20 years, starting on September 26, 1928, for the purpose of constructing a private golf course. As a condition of the lease, the lessee was also required to construct an additional 18-hole course with accommodation for changing clothes including bathrooms and showers for the use of the general public. This course was constructed on the eastern side of the leased area and became known as the Eastlake Public Golf Course. The first nine holes were completed and ready for play in 1930 along with the completion of the building for the use of the public. The remaining nine holes were completed and in play by 1932.

The course is located within the Botany Wetlands, which is a series of interconnected open freshwater ponds, former water supply dams, shallow swamp areas and adjacent lands used for recreation purposes such as golf. The wetlands precinct holds considerable heritage value for Sydney and NSW because it retains substantial parts of its original water supply layout and infrastructure – primarily the dam system and pumping station. As Sydney's third water supply, it supported the expansion

of the metropolis for most of the latter half of the 19th century. As with its predecessors it relied upon aquifers to supply water, which became obsolete once the Upper Nepean Scheme and later catchment dams were implemented and is therefore representative of the first stage of water supply technology.

As well as its importance to the water supply, the Botany Swamps area provides environmental significance that includes two regionally rare and distinct remnant vegetation communities of state significance: the Sydney Freshwater Wetlands and Eastern Suburbs Banksia Scrub. They are listed separately as 'Endangered Ecological Communities' under the Threatened Species Conservation Act 1995 (NSW). The Eastern Suburbs Banksia Scrub is protected under the Environmental Protection and Biodiversity Conservation Act 1995.

The place holds special interest as a landmark cultural and recreational landscape for the regional community. The Botany Swamps are of regional environmental importance as a major recharge source for the Botany Sands Aquifer. The wetlands have regional ecological value as native

animal habitat and movement corridors and may include animal species of conservation significance.

As a result, Eastlake Golf Club and its operations have a responsibility to preserve, protect and promote its cultural heritage and environmental surroundings as part of their daily and long-term operations and key values.

ENVIRONMENTAL CHALLENGES

Bradbury, on behalf of Eastlake Golf Club, has facilitated, implemented and operates an Environmental and Safety Policy that is accessible by all staff and members of the course. The policy drives the commitment within the business operation to protect and enhance the natural environment that the golf course manages as part of its daily operations.

Bradbury and Eastlake engaged Narla Environmental to formulate an Environmental Management Plan (EMP) on behalf of the club. The Eastlake EMP sits alongside the policy to broaden and focus on the key values involved with the site to not only maintain but also enhance the local environment as part of their stewardship responsibilities.

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More than 25,000 native plantings have been added to the Eastlake landscape

The policy is the framework for establishing and reviewing the measurable objectives and targets relating to Eastlakes' environmental and work health and safety operations to meet the requirements of Environmental Management and Occupational Health and Management systems. As part of the policy, Eastlake Golf Club is committed to:

- Implementing and maintaining an Environmental and Safety System
- Protecting the environment, including its biodiversity and ecosystems
- Preventing pollution and other adverse environmental issues
- Protecting the health and safety of its staff, contractors, suppliers, visitors, players, members and the general public
- Co-operating with their local community to understand and meet their needs
- Making continual improvements that enhance environmental and safety performance
- Complying with legal, regulatory and other requirements
- Use the policy as the framework to their environmental and safety objectives
- Making the policy available to all golf course staff and all interested parties
- Reviewing the policy annually to ensure it remains suitable and effective

The overall objective laid out in the EMP is to guide best practice management of native vegetation and rehabilitation works within the grounds of Eastlake Golf Club, including:

- Specifying best practice native vegetation rehabilitation works in accordance with Sydney Water's management guidelines of the Botany Wetlands
- Ensuring the EMP is consistent with the aims and requirements of all current local, state and Commonwealth legislation
- Ensuring consistency and compliance with policy and lease conditions
- Enhancing visitor/user satisfaction
- Controlling priority and environmental weed species
- Reducing and maintaining exotic plant species populations to low levels of growth and cover

 Enhancing local habitats for fauna on the site and surrounds.

A HUMBLE RECIPIENT

Truth be told, Bradbury initially dismissed the notion of being nominated for the Claude Crockford award, insisting that it should instead be Eastlake Golf Club being nominated rather than he individually.

"To say I was shocked is an understatement," Bradbury said. "There are many golf clubs in the country doing some really good things around environmental stewardship, so for Eastlake to even be considered let alone win the Claude Crockford was a big shock. The club management and board of directors have been extremely supportive in the process and understand the site the club sits on needs high attention to the out-of-play areas so we can continue to co-exist within the Sydney metropolitan area. There is a large push for greenspace area, not only from developers but also councils, and golf courses are a large target, so to be able to demonstrate the club is very committed to the



Preserving the Eastern Suburbs Banksia Scrub is a focal point for the club

ongoing improvement and sustainability of the property is great.

"Eastlake Golf Club is very proud of what has been achieved in the past 10 years. The site the club is lucky enough to be on is extremely sensitive and has a very rich history. To be able to not only co-exist but also improve the area around the wetlands and Eastern Suburbs Banksia Scrub-protected areas as well as the playing surfaces with a budget not similar to our neighbours is a proud achievement. The sensitive areas are an integral part of the course layout and have become a feature of the property."

Ridding the course of noxious weeds, while a decade-long process, has been the most satisfying for Bradbury.

"The removal of the noxious weed in and around the 12 hectares of sensitive areas and the replanting of these areas has been a long process that started some 10 years ago," he said. "For the first two or three years it was not evident what was happening, but with the removal of the noxious weeds opening up the native sand dunes and the inclusion of more than 25,000 native plantings, the areas are starting to really take shape now and be a standout of the course. The areas have also been enlarged and boundaries reshaped to give a natural flowing look to fit in with the fairways and surrounds."

In humbly accepting the award, Bradbury was quick to pay tribute to Eastlake and his team.

"This achievement would be impossible without the support of the club's board of directors and general management. They allow the staff of Eastlake Golf Club to complete the job to the best of our abilities and at the same time throw immense support behind us but giving us all the necessary resources to complete it," he said. "The club has a very strong relationship with the landlord of the property, Sydney Water, who also assists with the planning and management of areas adjoining the course. The staff have also embraced the change that the club has embarked on and the results of their commitment are evident. As the superintendent. I am verv lucky. We have only eight staff but all eight of them commit to the iob and show great pride in their work and it shows across the entire property.

"The club has a very forward-thinking board. There is a very strong five-year strategic plan in place that includes the completion of the tee renovation program (10 tees completed in 2021), a bunker rebuild program, a greens collar upgrade plus clubhouse renovations. A maintenance facility upgrade is also planned for the next five-year period. The sensitive area program is ongoing and will develop more and more as work across the course is completed. The club understands its place in the industry

and its target audience and with this have some really good plans in place to make it the best it can be."

TWIN PRIORITIES

There are two key sensitive areas within the Eastlake Golf Club site that require specific management operations to protect and promote those assets and their importance for both cultural and environmental significance.

Botany Wetlands/Sydney Freshwater Wetlands

A complex of vegetation types largely restricted to freshwater swamps in coastal areas. These vary considerably due to fluctuating water levels and seasonal conditions. As part of the management of these areas, many operations need careful considerations as part of the operations with focus on:

- Water use and quality preservation regular water testing and monitoring
- Control of weed, both vegetative and aquatic
- Management of disturbance issues rubbish and erosion
- Promotion of fauna and their habitats
- Appropriate and informed chemical usage.

2. Eastern Suburbs Banksia Scrub (ESBS)

The recovery plan for the ESBS identifies actions to be taken to ensure the long-



Environmentally sustainable practices are at the forefront of everyday operations at Eastlake

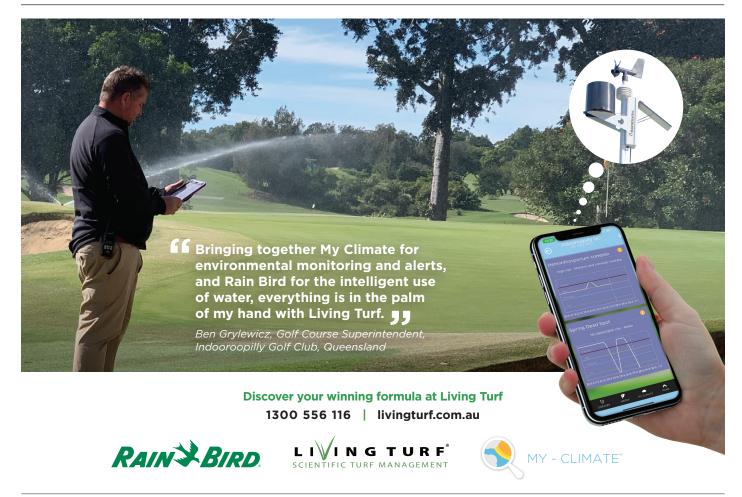
term viability of the ESBS in nature and the parties who will carry these out. The overall objective of the recovery plan is to maintain and enhance existing ESBS remnants and, where possible, expand the ESBS into the adjacent areas. Sydney Water, as the owner of the land on which the golf course lies, has committed to undertaking the management

of the identified ESBS within the grounds of Eastlake Golf Club. As the lessee of the land on which the ESBS occurs, Eastlake takes on the responsibility of managing vegetation surrounding areas of the identified ESBS that is consistent with the recovery plan.

As part of that arrangement, Bradbury works closely with Toolijoora Environmental Restoration (engaged by Sydney Water) to facilitate the mutual goal of the companies' operations towards the ESBS as part of their landholding stewardship.

Outside these two key sensitive areas there are many other environmentally sustainable practices carried out at Eastlake as part of its daily and long-term stewardship towards the environment as part of its operations. Bradbury is the driving force for:

- Removing non-native species and replanting endemics to the greater course area
- Regular (every four to six weeks) feral animal control by having a professional shooter on the site
- Stormwater and drainage works to better facilitate water runoff and minimise erosion
- Creek cleaning and beautifying to heighten functionality and the aesthetics of the course and its water movement
- Beautifying the aesthetics of both the course and the surrounding "out of play"





- areas for promotion of the endemic flora and fauna
- Regular machinery updates to keep abreast of the latest technologies and advancements in this area. The fleet was recently updated to include new hybrid cutting head technologies to reduce noise and other emission pollutions to the environment. The recent purchase of a GPS-guided spray unit not only increases course efficiencies but also increases the accuracy of course chemical and pesticide applications



The Eastlake Golf Club site is long, narrow and environmentally sensitive

- In-house new tee upgrades to 10 holes that incorporate and enhance a more traditional and natural landscape off the playing areas by using a fescue blend that will be left long for aesthetics, mowing reduction and for housing native and endemic species of flora and fauna
- Continual upgrading of the irrigation system to facilitate advancements in water efficiencies
- Regular moisture meter readings and benchmarking on turf surfaces to determine best practice of irrigation and water usage and conservation to maximise efficiencies
- Regular water testing to monitor the groundwater utilised for irrigation
- Regular drone mapping of the course for historic data logging of moisture management, vegetation percentages and plant stresses.



The course remains popular for the golf-playing public and members alike

LONG-RANGE VISION

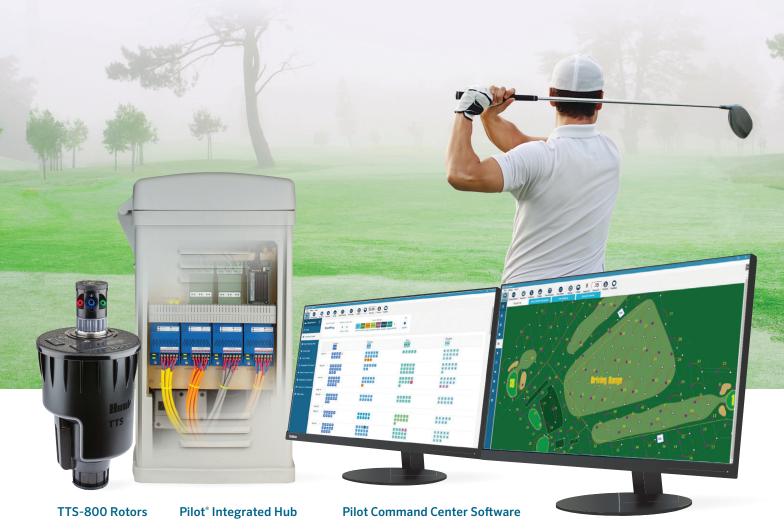
In the 10 years Bradbury has held the superintendent's role at Eastlake Golf Club, there has been continual commitment towards the long-term sustainability of not only the golf course proper but also the environment in which it is situated. Understanding that he and the club are the custodians and caretakers for the area, they are not content with just maintaining but are constantly improving the site and its sustainability.

Bradbury introduced, manages and continually improves an Environmental Management Plan at Eastlake that harnesses the ideals in accordance with Sydney Water's Botany Wetland Plan of Management 2018-2028. Working under these guidelines is how he and the club are committed to the sustainability and improvement of the property.



Noxious weed removal opened up the site's native sand dunes

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Matthew Cairns has watched
Blacktown International Sportspark
continue to evolve ever since it
played a hosting role at the 2000
Sydney Olympics. Cairns' part in
the park's ongoing improvement
sees him a deserving first winner
of the new ASTMA Excellence
in Sportsfields and Grounds
Management Award.



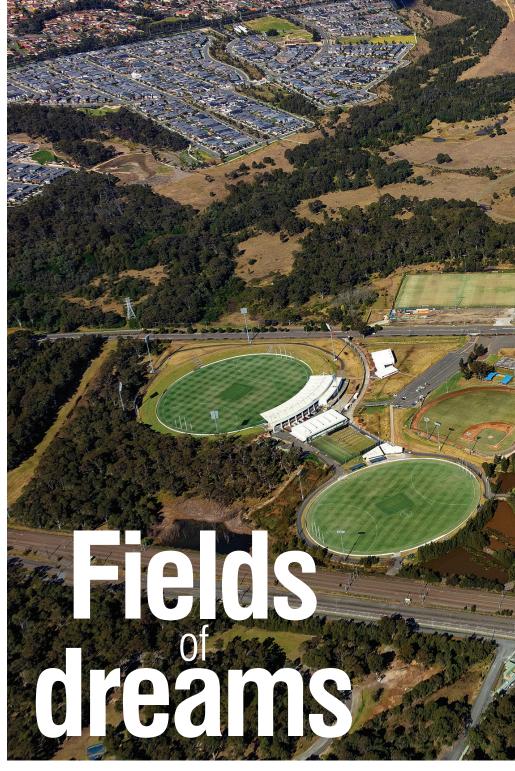
n a career that's taken in an Olympic Games and preparation of surfaces for all manner of high-profile sporting contests, Matthew Cairns, the grounds and operations co-ordinator at Blacktown International Sportspark (BISP) in western Sydney, is the inaugural winner of the ASTMA Excellence in Sportsfields and Grounds Management Award. It's an accolade that caught him off guard.

"My first reaction was surprise and shock that I had been nominated – and my sportsturf career was being read out in front of elite golf and sportsturf managers," Cairns said. "My surprise then turned into pride when selected by the committee for the award for my contribution to sport turf management and, finally, very honoured that my manager, Kevin Jones, nominated me for the award."

Cairns has watched or been directly part of the development of BISP for more than two decades – prior to the Sportspark's role as a venue at the 2000 Sydney Olympics for the baseball and softball competitions and a training facility for athletics events. During the Games, the park consisted of three baseball diamonds, three softball diamonds, an athletics track and practice throwing fields.

Blacktown Council continued to invest in BISP after the 2000 Olympics. Since then, it has expanded into:

- three baseball diamonds
- four softball diamonds
- an athletics track
- a throwing field
- a multi-purpose rectangular turf field
- a designated area for goalkeeper training
- two shared ovals for AFL/cricket with a



seven-wicket table on each oval

- designated outdoor turf wicket practice area
- 15 additional soccer fields (two synthetic and 13 turf), and
- maintenance of Joe McAleer Oval, a satellite venue for Blacktown District Cricket Club.

However, Cairns says his most satisfying project was a recent conversion of an old, disused throwing field from those Olympics into a high-quality turf field now used for multiple sports.

"This was a team project where staff installed irrigation, replaced turf, created

a program to remove weeds, encouraged growth of existing turf, top-dressed for levels and installed fencing and posts for users," he explains. "This was all completed on a very tight budget. All staff can look back at this project and know they contributed to the development of the field. To see the team work together, bounce ideas off each other and come up with a game plan to deliver the field is rewarding as a manager. We saw buy-in from all staff."

OUT OF THE BUBBLE

Cairns also describes it as an accolade that shows his team hasn't toiled without reward,



even when their work might at times appear to be quite insular.

"For myself, the award means that our time, effort and passion as sportsturf managers is appreciated and recognised by our stakeholders but, more importantly, my manager who supports and believes he has the best grounds team to maintain the facilities at BISP," he says.

"This award shows that our team, our practices and the surfaces we produce are elite. Life at the Sportspark can at times have a bubble-like effect; shielded from the public eye going about our business. This award showed this is not the case. The team has

learnt from the high-quality turf experience we have at the park and have always bought into the direction we want to go as a team. Since accepting this award, the team has taken further steps to improve their turf maintenance and programming practices. We believe that there is always room for improvement and this award has gone a long way towards showing our team what can be achieved by continual hard work, motivation and commitment.

"The award confirms the Sportspark is home to the highest quality facilities and playing surfaces and allows our key stakeholders to tell this story with us. AFL NSW/ACT, Baseball NSW, Blacktown District

Soccer Football Association, Cricket NSW, Progressive Goalkeeping, Softball NSW, Super 6 High Performance and the Western Sydney Wanderers all now have a point of reference when selling the facilities within their individual sports or seeking venues to house their highest quality content. The response has been overwhelming."

Like so many turf professionals, Cairns was also quick to point the spotlight towards his hard-working colleagues at BISP.

"My team consists of the grounds team, key venues administration (which includes a manager, operations manager, marketing, finance, safety and client liaison), board of



Matthew Cairns (front), the grounds and operations co-ordinator at Blacktown International Sportspark in western Sydney, with his team

directors and Blacktown City Council," he says.

"I am very fortunate to have a dedicated and passionate team that takes pride in presenting the playing surfaces and associated landscape areas for all of the Sportspark and our stakeholders. We currently have 14 staff that includes myself, grounds supervisor (2IC) Heath Taylor, team leaders Kieran Meurant and Lachlan Ridgewell and 12 grounds staff: Matthew Hubbard, Luke Midgley, Sean Glashoff, Adam Whitelaw, Braden Sole, Colin McAlister, Luke Collins, Jay Redman, Andrew Mallitt-Calver and Michael Daley.

"Over the years, a tremendous amount of hard work has gone into training and mentoring the staff coming through our ranks. This is proven by our ability to promote from within the team to give our staff on the ground the best possible chance to not only succeed, but also prove themselves as quality turf managers. A great example of this is staff member Heath Taylor, who started as an apprentice greenkeeper for Council and has worked his way up through the ranks to be the grounds supervisor (2IC). Heath runs the day-to-day operation of the grounds team and sportsfields."

Cairns' own career spans more than 30 years, with more than 20 of those spent at BISP. In March 2000, six months before the Sydney Olympics, he was appointed head greenkeeper and Council's representative with the Olympic contractors – Manoeuvre Mow, led by Geoff Hatton Jnr – to maintain the facilities at Blacktown Olympic Park (as it was known then) for the Games. Through this period, Cairns used a variety of machinery as well as

from within the team to give our staff on the

Cairns used a variety of machinery as well as

ASTMA Excellence in Sportsfields and Grounds Management Award winner Matthew Cairns (centre) with Toro's Richard Walne (left) and Ben Cavanagh (right)

developing his skills in baseball, softball and ryegrass sportsfields.

It's been a period of tremendous evolution for the Sportspark with no shortage of voices willing to share expertise, however shrewdly. Baseball guru, the late Jack Gaynor, was able to mentor Cairns on the maintenance techniques of baseball and softball preparation and continued to do so after the Olympics for several years until his passing. Cairns recalls many Claxton Shield tournaments where Gaynor would come out after every game to assess the field and point out where Cairns could improve. One night in 2003, Gaynor came out to review the field only to turn and say, "See you tomorrow." It was at that point Cairns knew he was getting close to perfecting the fields.

"Over the 20 years, I have had the privilege to employee a number of staff. Some still work at the Sportspark and [there are] those that have moved on to bigger (I can't say better, as the Sportspark is the best place to work) or green pastures. Some are within the turf industry and some are not. Every staff member that has been at the Sportspark has taught me something from previous job experiences in different sports, types of turf managed or simple personal qualities. These have helped me to continually improve as a turf manager but also as a person."

HIGH HOPES

Meeting the expectations of multiple stakeholders and working with seven different couch varieties, inevitably there is no single turf management program that fits all. Pest management is a key component included in all BISP's turf management programs. Protection against black beetle and its larvae is critical, especially through the spring/summer period when there is a lot at stake in hosting summer national tournaments and winter pre-season events. Another key component in all BISP's turf maintenance programs is the use of stormwater harvesting that requires the water to be tested systematically with regular modifications to the soil to maintain water quality. The mission is always to meet stakeholder expectations.

Meanwhile, innovations introduced at the Sportspark include:

- Introduction of a GPS-controlled fairway mower and an 1100-litre spray unit, both from John Deere. The technology has provided better precision and accurate data on litres used, speed, etc. In future, Cairns hopes to be able to use this equipment autonomously, which will help increase productivity.
- Introduction of a robot marker that is able to mark a soccer field without any previous markings in less than 30 minutes. With multiple soccer fields and two AFL ovals to

- mark, this not only saves time but has also reduced paint consumption by 30%.
- Use of POGO to measure soil moisture content and temperature
- Use of TurfKeeper software to document daily scheduled works and control inventory. TurfKeeper has been excellent in assisting with budget management and breaking down the cost of maintaining each individual field.
- The biggest innovation to date: using drones to help monitor the turf for dry spots/patches and to track wear and usage.

Cricket NSW has utilised BISP for full turf winter training practice pitches for the past three years. A regular season's use of practice turf pitches is normally from September to March or April. In 2018, Cricket NSW approached BISP to trial the possible use of turf practice wickets for July to September. As expected, the first season was challenging with little to no growth due to low temperatures and over-use. Learning from the first year, in 2019 Cairns and his team introduced growth blankets, shortened the width of pitches to provide more rotation, implemented start and finish times to avoid early morning and afternoon dew setting on the wickets and used large blowers to help control the surface moisture. Strict usage conditions were also



The team achieved great results in the short transition periods between sports

included. Season 2020 was able to begin in July 2020 and continue all the way through until April 2021.

In collaboration with colleagues at AFL and Cricket NSW, they have trialled the non-introduction of ryegrass to Ovals 1 and 2 through the winter to assist with keeping the field in play longer and create a shorter transition period for both sports. Working with a turf adviser has changed maintenance techniques, increased nutritional program and led to a trial of different turf colourants.

Close communication with the sports about usage and wear has helped reduce the need for large turfed areas in small, high-use areas around the goalmouths and interchange areas. At BISP, the AFL season begins in early February and runs until early September. Cricket takes over from September to late January. Due to the short changeover periods, any field renovation adversely impacts either sport. They're also trialling the use of synthetic



The Winter of 2021 saw Draslovka Services heading up to the Sunshine Coast for the first collaboration project in line with Headland Golf Club tee reconstruction.

Headland Golf Club, located in Buderim, Queensland, was established in 1956. Well known for its old-world charm and rich history, the golf course prides itself on the maintenance of its greens and modern facilities.

Opting to recycle their existing tee profile instead of bringing in new soil, Headland wanted to start with a clean slate in order to achieve ideal turf conditions. Through conversations between Draslovka Services and Headland Golf Club at the ASTMA Conference 2021, EDN™ became the suitable treatment solution.

"Shadetuff". We wanted to use EDN™ to create a clean environment." - Ben Tilley, Course Superintendent.

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Not having fumigated the golf course before, Ben Tilley found the service of EDN™ treatment to be hassle-free and very professional.

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and hybrid goalmouths across some of soccer fields and monitoring the results.

VISION FOR THE FUTURE

The major work is far from done at BISP, with a busy few years ahead.

"Council is investing \$100 million in the first stage of the Sportspark masterplan," Cairns says. "A new international centre of training excellence is being built in the Sportspark and will open in the first quarter of 2023. The centre will host facilities and expertise to enable our local community, along with national and international athletes, to benefit from environments and services designed to improve health and performance for individuals of all ages. The vision for the new centre is to support life-long health in our community by providing accessible services and facilities that promote recovery and performance."

The development will include:

- a biomechanics laboratory for analysing kicking, throwing and striking actions
- a 60-metre analysis track for gait, jumping

- and landing mechanic assessments
- physiology spaces for the assessment of body composition, blood profiles, lung function and cardiovascular fitness
- a strength and conditioning gym
- aquatics, including a recovery pool and contrast (hot and cold) pools
- a sports medicine clinic
- a patient-centred medical home
- two rectangular pitches (turf and synthetic)
- physical literacy area for children
- café
- auditorium
- team and individual changing rooms, and
- academy accommodation with accessible, twin and dormitory style rooms.

"After winning the award, we will continue to build on using new technology to assist with sportsfield maintenance," Cairns adds. "We currently use GPS mowers, spray units and robot markers to maintain the sportsfields at BISP and would like to expand this into tractors, use of drones to monitor and manage surface usage and maintenance. In addition to technology, we will look at ways to continually fine-tune and improve the nutrition program across all venues, eradicate weed across the common areas and, most importantly with the times we are in, continue to work with staff on safety and health and wellbeing." w

BUSY GABBA STAFF THE TEAM OF THE YEAR

he team at Brisbane's famous Gabba stadium proved themselves to be not just excellent turf managers, but also able to change and be flexible throughout the year. As such, they are worthy winners of the ASTMA Team of the Year Award.

Despite a large number of challenges, David Sandurski and his team showed the flexibility and professionalism required in managing a significant increase in games in 2020 to maintain the turf in pristine condition despite frequently changing schedules.

Originally scheduled to host seven Big Bash games, a Test match and 11 AFL games, the Gabba team was swamped due to changes coming from COVID-19. Just as the 2020 AFL season started, COVID lockdowns meant no games for a period of nearly two months.

The plans for the AFL season changed completely with the hubs in Queensland meaning that the Gabba, and Sandurski and his team, wouldn't be hosting 11 games. Instead they would be hosting 33 games in a 13-week period, sometimes with four games a week. Added to this, the Gabba played host to a number of AFL finals games, including the historic first-ever night grand final – when 40 millimetres of rain fell in a 20-minute period just after



3 o'clock on the afternoon of the game. Showing their composure, the Gabba turf management team headed out and managed the conditions, cleared the grounds of excess surface water, fixed lines and logos and delivered an outstanding surface for the showpiece of the AFL. Before and after the AFL season, the Gabba hosted 12 Big Bash games in 2020 and an international Test match where the pitch was again rated highly despite a significantly COVID-impacted summer.

Throughout perhaps the most challenging of years – when changes were made almost daily, requirements changed

weekly and fixtures changed hourly – Sandurski and his team remained in close consultation with stadium management, Cricket Australia, the AFL and clubs, and managed the Gabba surfaces outstandingly well. The ability to change quickly, adapt and present the playing surfaces they did regularly is a demonstration of the skills, commitment and ability of Sandurski and the team at the Gabba.





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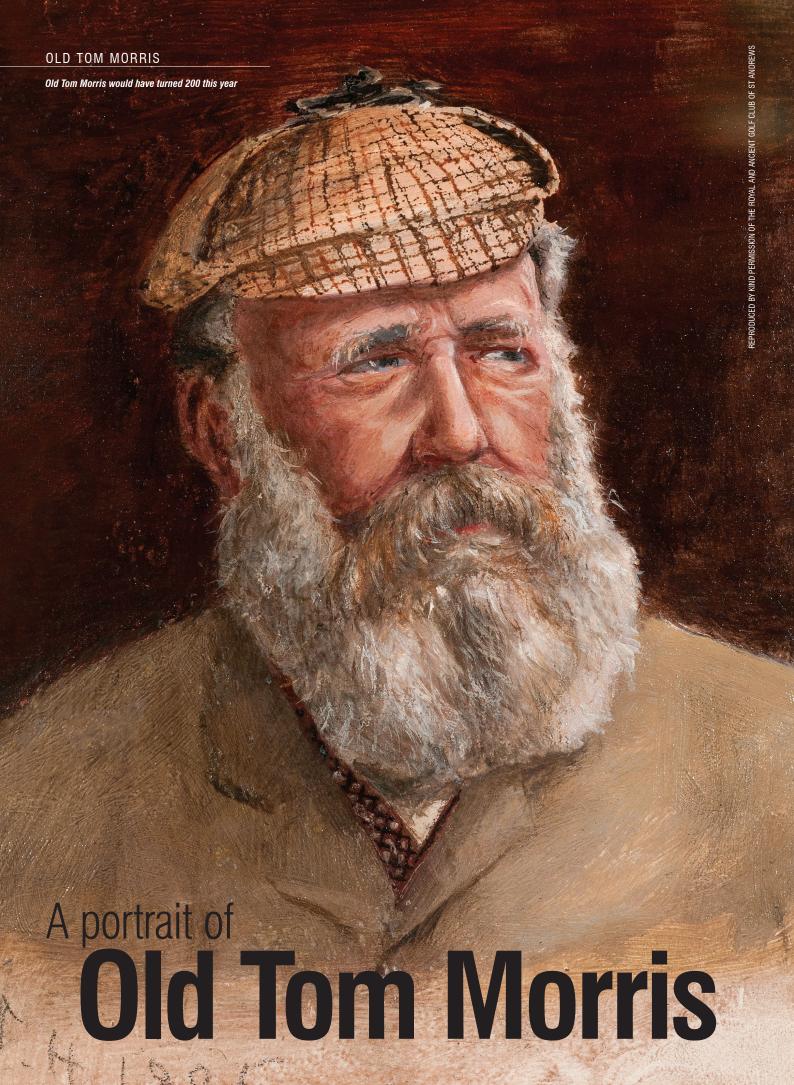
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On 16 June 1821 in a modest house in the run-down walled town of St Andrews, Scotland, Thomas Mitchell Morris was born, the son of a weaver. Across the following 86 years Tom would witness the genesis of golf as we know it. He played a role in redefining the sport that would never be rivalled and in doing so would almost single-handedly invent the greenkeeping profession. On the 200th anniversary of his birth, Greenkeeper International editor Karl Hansell reflects upon his life and achievements and in the following two articles meets the greenkeepers who continue his legacy today.

n 1901, the Daily Advertiser of Dundee reported that Old Tom Morris, then aged 80, could be seen each day "enjoying a walk on the classic links and at the same time supervising with his keen eye the work of the green-keepers, while on other occasions he can be observed wielding his club with youthful vigour."

Tom's life was defined by golf and in return no one would have a greater impact on how the sport is played. Likewise, he would redefine what it meant to be a greenkeeper, implementing methods that are still used today and which help fuel the multi-billion-dollar industry of which today's greenkeeper is a part.

For a number of years one St Andrews native revived the spirit of Old Tom, achieving worldwide fame in the process. David Joy starred in Titleist commercials alongside John Cleese, he graced magazine covers alongside Ian Poulter and he brought Tom to life for audiences all over the world. He also has a direct familial link, with his English grandfather being found a role as an official window cleaner for The R&A by Old Tom after the decline of the merchant navy visiting the town.

"Old Tom was the James Dean of his

time," says Joy from his artist's studio, overlooking the town and the Forth of Tay.

"He'd stand his ground, but in all my research I couldn't find a bad word said about Old Tom, apart from being grumpy in later life. I would often say he was like Father Christmas in tweed."

Hugh Lyon Playfair, the provost of St Andrews, began the clean-up and issued 40 rules that every resident and visitor must adhere to. He also organised the construction of the first railway line to St Andrews, paid for on subscription by the residents. That, combined with new affordable ball

No green has... good chance of being kept in good order... unless they have a man like Tom Morris to organise, superintend and direct the work and who is ready to insist on the necessary work being carried out, however much the best of golfers may grumble at what is being done.

-Mr H. W. Hope, Luffness Club, 1895

CRADLE OF GOLF

In 1821 St Andrews was in a poor state. Down to a population of just 1800 people, the Reformation of the 16th Century had seen the dismantling of the cathedral and in the 300 years since the town had not recovered from bankruptcy, lying impoverished to the extent that an act of Parliament sought to relocate the town's historic university to Perth.

technologies and the innovative activities of greenkeepers led by Tom Morris from 1863 onwards, would see St Andrews transform into the cradle of golf as we know it today.

Tom opened up the fairways, widening them to make the course easier for recreational golfers. He discovered the use of sand as topdressing, invented metal hole cups, used seaweed as fertiliser, introduced lawn mowers



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Andrews into the 'cradle of golf' we know it as today

to the links and established 18 holes as the industry standard for golf courses.

He was also an adept course designer. lending his hand to some of the most admired courses in the world, such as Muirfield, Royal Portrush, Royal County Down, Carnoustie and Royal Dornoch. He famously charged just £1 a day plus travel expenses and would comfortably design nine-hole courses if that was all the available land would allow.

"When Allan Robertson and Tom Morris ran their grand tournament in 1857 there were only 10 clubs in existence," explains Joy. "When Tom retired, there was about 1700 around Britain. He lives through the whole progression of the game and by the 1890s had designed about 90 courses himself. He used to walk along the beach and pick up the old seagull feathers and use them as markers for where he thought should be a green or a tee. He'd then say 'it's up to you gentlemen, but this could possibly be the finest course ever conceived'."

Allan Robertson is known as the first ever golf professional and had taken Tom under his wing as an apprentice in his golf ball making business when Tom was just 14. The two formed a successful business and unbeaten playing partnership until falling out over the advent of the new gutta ball, which was cheaper and more durable than Allan's feather creations.

In 1851 Tom moved his wife and infant

son to Prestwick to take up the position of 'Keeper of the Greens' and it is there that he accidentally, as the mythology surrounding the man states, invented the practice of topdressing. Joy explains: "Old Tom built his career around the cry of 'mair sand', but he'd actually discovered its impact on turf by accident. He was bringing a barrel of sand from the beach over to fix the Cardinal Bunker, when he spilt some by the 10th green." With it impossible to pick up the sand, Tom spread it out and six weeks later noticed the grass in that area growing with increased vigour. When other areas of turf struggled he repeated the 'accident' and found that the results were replicated.

Despite achieving everlasting fame as a son of St Andrews, during the 1850s he was actually known as 'Prestwick Tom' on account of his representing the club in many matches, particularly against Willie Park Jr. of Musselburgh, winner of the first Open

Championship. Following the 1859 death of Robertson - the undisputed best golfer of his time who would die undefeated - the members of Prestwick issued an open challenge to find the new world's best golfer, and in 1860 The Open Championship was born.

THE OLD COURSE **AS WE KNOW IT**

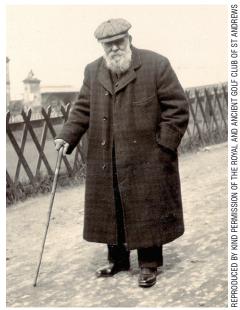
In 1863 Tom Morris returned to St Andrews. He was given a salary of £50 per year, but that also constituted the entire budget for maintaining the links. In The Soul of St Andrews: The Life of Old Tom Morris, author. William Tulloch recounts: "His duties were explained to him: to keep the putting-greens in good order, to repair when necessary, and to make the holes. For heavy work, carting, etc., he was allowed assistance at the rate of one man's labour for two days of the week, and it was understood that he was to work under the Green Committee. Emblems of office were

then handed over to him, to wit, a barrow, a spade and a shovel."

Tom's return to St Andrews marked the beginning of the Old Course as we know it today. One of the first projects he completed was the construction of an access road to the sea for the lifeboat, known today as Granny Clark's Wynd, while in 1865 the Swilcan Burn was banked and controlled, although the famous bridge had been present since at least the 1700s.

Tom also oversaw radical improvements in the maintenance of the course. Originally, players had putted and then were required to play their next tee shot from within a club's length of the hole. Tom built separate teeing areas, allowing the improvement of greens surfaces. Originally the course had been cropped short by cattle, but Tom encouraged the use of sheep as they were lighter underfoot. Greens were mown using hand scythes, "like a barber shaving a chin" explains Joy, but having seen the use of horse-drawn lawn mowers in cricket and tennis, Tom introduced them to his golf course. This caught on and suddenly quicker and more efficient mowing practices made parkland golf on more fertile soil possible.

Tom catered to the poorer golfer, removing a large number of 'whins', the thorny



One of the first projects Tom completed on the Old Course was the construction of Granny Clark's Wynd

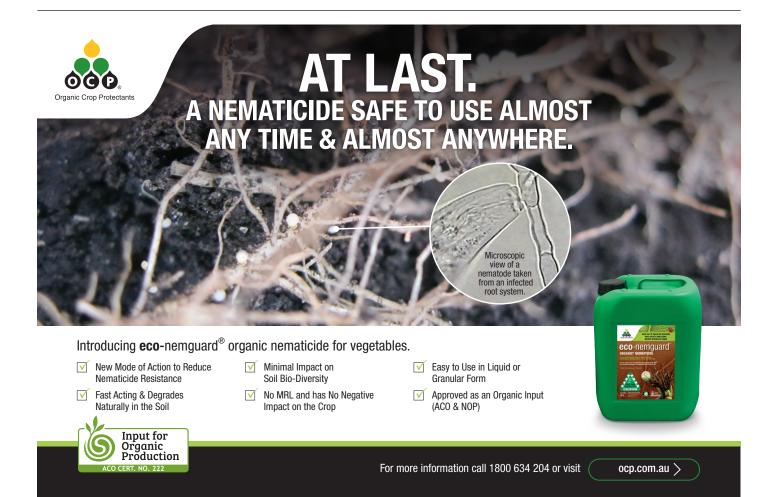
impenetrable bushes that enabled weaker players a different approach to the green that didn't require hitting over bunkers, while he also widened fairways.

J Gordon McPherson, in *Golf and Golfers* (1891), compared the Old Course of 1890 to what it was like in the 1860s: "The course was

narrow, the bunkers were yawning traps for topped balls, the whins were deadly snares for screwed or heeled gutties; now, one can slip along the side [of bunkers] without risking anything... The putting-greens, too, are quite changed. Then, there was a variety of surface which brought out the greater skill; now, all are nicely turfed over and artificially dressed like billiard-tables."

But Tom didn't have it all his own way, whether due to the environment of the West Sands or the input of greens committees, who made their voice heard then as much as they do today. In 1891 Tom was instructed that his greenkeepers should dig up the bunkers properly and see that no grass is allowed to grow in them. That year he was also told to roll the greens more frequently than twice a year, as had been standard.

Despite his reputation as the grandfather of greenkeeping and his standing as a four-time Open champion, Tom wasn't free from the interference of layman committees. Mr H. W. Hope of the Luffness Club is quoted as saying in 1895: "Old Tom Morris has often told me of the immense difficulty he has always had, and still has, at St Andrews, to get the greens committee to consent to the necessary work and regulations for keeping the course in order. I refer especially to the seeding, and the





Tom helped move golf from an aristocratic pursuit to one accessible to all

shifting of the play from one part of the ground to another... No green has... good chance of being kept in good order... unless they have a man like Tom Morris to organise, superintend and direct the work and who is ready to insist on the necessary work being carried out, however much the best of golfers may grumble at what is being done."

With an unrivalled knowledge of the links and his role as designer of the New Course in 1895. Tom was able to appease the greens committee who were left in no doubt that his actions had directly led to the town thriving as a golfing destination, whether visitors played or simply watched Tom play alongside Allan Robertson or his ill-fated son Tommy, himself a four-time Open champion but who would die in tragic circumstances on Christmas Day in 1875.

Yet even Tom's love for the links wasn't universal, and there's actually a hole of which



Tom was not enamoured with every hole of the Old Course

Tom is quoted as saying he wasn't particularly fond. The High Hole is the Old Course's 11th and despite being a par three, it's among the trickiest in golf. In Tom's day that wasn't helped by the shifting sands of the Eden Estuary. Tom is quoted as saying: "[High Hole has] given me mair bother than a' the rest o' them put together. The hole was a great deal nearer the Eden in oor young day than it is noo; an' the neighbourhood o' the hole was aye changin' an' the hole itsel' sometimes filled up after a heavy storm at sea."

The green would shift and change and so Tom constructed a bank and planted turf behind the green to hold it in place and reduce drifting. In a world first, that would serve as a daily reminder to every golfer about the legacy of Tom Morris, he utilised a treacle tin on the High Hole as the original metal hole cup. Tom again: "I fell on that plan after a gude deal o' study, an' it suited to a tee. Then, when ither holes got raggit round the edges I had them dune up I' the same way, an' that was the beginnin' o' the modern style o' the hole tin."

HUMBLE GIANT

Although the death of his son hit Tom hard, he was a robust character, as evidenced by the fact he bathed each morning in the sea (three strokes out, four back). He kept himself hugely fit by walking the links each day and kept a window open in his house all through winter to ensure good air circulation.

In recognition of his service, he was made an honorary member of The R&A, but would rarely enter the clubhouse. "He was accessible to everybody," explains Joy. "But when golf magazines and books started to be published from the 1890s onwards, he became a sporting legend in his time, the first one really, and was known as the grand old man of golf. But he knew his place and had an old-fashioned respect for the gentlemen."

A century later and one of Tom's professional descendants, Walter Woods, would decline membership of The R&A for the same reasons.

Tom Morris played an incredible role in the transformation of golf from an aristocratic pursuit to one that could be enjoyed by the general public. Despite personal tragedy, he acted selflessly in refusing to charge more than a nominal fee for his course design work and took great pains to ensure the game remained accessible to all. He also implemented countless techniques that greenkeepers continue to utilise today.

Speaking in character as Old Tom Morris at the conclusion of his documentary film Keeper of the Greens. David Jov recalls Tom's attitude to the game, with a spirit that endures to this day: "Folk are far more interested in their own game these days, instead of appreciating the comradeship, the courses and what's all around them. It may look as if my early days were a wee bit subservient but no, there was a mutual respect, a common ground, a sharing of this great game which has been my life."

ACKNOWLEDGEMENTS

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The final resting place of Old and Young Tom Morris in St Andrews

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Following in Old Tom's footsteps

Sandy Reid is director of greenkeeping at St Andrews. He was previously links superintendent across the Tay at Carnoustie in a unique Scottish double.

Id Tom became director of greenkeeping through iron will, an incredible dedication to golf and an innovative spirit that saw him shape the game as we know it today.

We wanted to find out what it takes to get to the highest position in golf today.

ATM: How are you settling into your role? Sandy Reid: I've been here 2.5 years and this is very similar to Carnoustie. It's the one role you could compare to St Andrews in that you've multiple courses with a similar demographic of customers, with thousands of members, who get the golf relatively cheap, and visitors that pay a lot of money and for a once-in-a-lifetime trip. The governance structure is also very similar.

I'm not involved in the day-to-day running of the courses per-se. I'll speak to the course managers individually fairly regularly and we currently catch up on Microsoft Teams once a fortnight as we're all spread over different sites. Before COVID we would gather in the Jubilee sheds along with the workshop manager and irrigation engineer and I see my role as supporting them. When I was at Carnoustie I worked under John Philp, a legendary greenkeeper, but I didn't necessarily want him telling me what to do when I was head of the Championship course. I let the guys running the courses have the ability to do so and they have the accountability to manage their course and staff accordingly.

One of my jobs is to make sure no one is doing something completely different, especially when it comes to man management.

I see myself as a diplomat at times with the rest of the organisation. One of the main differences between here and Carnoustie is the size of the organisation here and there's way more that goes on away from the courses that I'm involved with. For example, I look after health and safety for the whole organisation, not just greenkeeping, and so I have to have my eyes and ears open elsewhere.

ATM: One of the things Old Tom Morris did was be a public figure in and around the town of St Andrews – are you? You're not just a greenkeeper responsible for the club, you're director of greenkeeping for the region's biggest asset. Are you a very public figure in St Andrews?

SR: I'm probably more well-known than I may think I am. I view my role as responsible for the courses and the guys that run them. I'm a custodian looking after it for a short period in the grand scheme of things and just hope to leave it slightly better than I found it, and it was pretty good when I found it! This place is way bigger than any individual.

Golfers quite enjoy those interactions with their greenkeepers. It doesn't have to come from the top and in my experience, golfers enjoy speaking with the greenstaff and having a bit of banter and a laugh. I would suggest that greenkeepers shouldn't be afraid to say 'hello, how are you doing?' Anything that creates less of a 'them and us' situation so they view you less as a grass cutter is positive. I'll speak to people, ask them how their day's going, where they come from, that sort of thing is going to help you build a rapport, so don't be afraid of that.

ATM: Have you achieved your career ambitions?

SR: In greenkeeping I guess it doesn't get any bigger than here, but for me it is just about personal satisfaction and hoping I can play my part to improve St Andrews. It comes with the territory that you're slightly higher profile within greenkeeping circles and people may look up to you, but I'm just a greenkeeper. I became a greenkeeper when I was 16 and I've worked my way up. I'm no better than anyone else and there's way better greenkeepers than me out there.

ATM: If that's the case, what was it about you that made you rise to this level?

SR: I wanted to be a gamekeeper but I'd worked at Pitlochry as a schoolkid from 14 during the holidays and I just enjoyed the outdoors. How I got to where I've got is perhaps by working hard and a love of the game of golf. Those are the two things I would put it down to. I've not got loads of qualifications and Level 4 is as high as I got qualification-wise. I can't speak for those who interviewed me for this position, but I came with experience of looking after another large venue that's very similar.

Not that I was resting on my laurels but I thought, when I got the Carnoustie job eight or nine years ago, as a 35-year-old, that it may be my last job. This was the only place that would turn my head, but I hadn't thought about it.

ATM: What was the application process for the St Andrews director of greenkeeping role?

SR: You had to submit your application by post, you weren't allowed to do so by email. When the job came up at the end of June 2018 I was busy preparing for The Open at Carnoustie, so there was a million other things going on in my mind. The closing date was the Friday after The Open finished and I still hadn't made up my mind whether I wanted to apply for the job. I drove over to St Andrews at 8 o'clock Thursday night and handed in my application to the reception desk in the Eden clubhouse. It was a single-sided covering letter with my two-page CV included with it. It was supposed to have been posted to the chief executive, Euan Loudon, so I wasn't sure who to give it to. I'd been unsure because I didn't want to apply for it if I didn't want the job and I loved Carnoustie, my job, the courses and everything we had as a family there. I always felt that if I was fortunate enough to get the job we would be moving house. Carnoustie's only 45 minutes away, but I've always been one to live close to work.

ATM: You said you don't have loads of







Modern technological advances do have and will continue to have a place at St Andrews – even down to the seemingly unlikely sight of drones and robot mowers someday

qualifications, so what's the most important thing that's on your CV?

SR: Proven experience of looking after a similar venue and the tournaments we hosted. Just before I left, I counted it up and the final Dunhill Links was my 31st professional or elite amateur golf tournament in 21 years there.

I've been fortunate in my career that I didn't have to move courses and I could move up the ladder. Positions became available and what I always said to myself was make it straightforward for those who are making the decisions. I remember when I was 22, the foreman's job came up on the Buddon Course and I didn't get that position and was gutted. I was disappointed because I thought I was the man. I worked hard and it reinforced my view that I just had to make sure I was the right man next time. I didn't do anything extra, I just understood that these opportunities would come up again and, whether it was John Philp's choice or the committee's choice, I like to think I made it very easy for them to decide.

ATM: Have you been so diplomatic your entire life?

SR: No, and I had a difficult time with a

greens convener at Carnoustie when I was head greenkeeper of the Championship. But over time, especially when I became links superintendent, I would have viewed him as an ally rather than an enemy. As you mature you understand that there are relationships you need to have, there are battles worth having and sometimes there are others worth letting go. You know the important fights and where you can have compromises with others.

ATM: What is Tom Morris' legacy for you, the greenkeeping team and the course?

SR: He was an innovator and he made a lot of changes, whether it be physically to the course, building or rerouting the layout of the Old, the old story of finding out about topdressing by spilling a barrow of sand and using treacle tins as the first metal hole cups. He didn't invent the lawn mower, but he introduced it to St Andrews during his time as keeper of the green, so he was always looking at new ways to present the course. I would say he understood the game, he was one of the best players of his time and understood the golfer experience. He was an innovator and I want to make sure we continue innovating to help the greenkeeping industry progress. As

everything becomes more electric or robotic, we want to be a part of that story, but always with an eye on the heritage and history of the game of golf and St Andrews.

ATM: Could we one day see a robot mower doing the Old Course's 18th green?

SR: Absolutely, yes.

ATM: Is that a worrying thing for the industry?

SR: I can see why people would be fearful of that and when it comes to having an eye on the past, golfers would love to come along and see people cutting the 18th green, I get that, but time moves on. I would expect to be using robotic equipment here in the next 10 years, probably sooner if you're talking semi-robotic. I wouldn't see it necessarily as a threat to jobs as there are other things we can do, albeit availability of labour is an issue in the greenkeeping industry. We utilise a lot of seasonal fixed-term contract staff and that's becoming more difficult to get, so technology may replace seasonal rather than permanent staff.

ATM: For the younger, PlayStation generation, is technology the way we attract people to the profession?

SR: Those sorts of things can attract people, but I don't know whether it will necessarily make them good greenkeepers because you will always need your eyes and feet on the turf. Golfers won't be playing virtually, they will still come to play the golf course, so their eyes and feet are on the golf course and therefore a greenkeeper will always need that. As we embrace technology, drones may help you identify turf health issues or other bits and pieces, but in my opinion, they won't be able

Some things don't change with the passage of time, including water use and managing foot traffic



to dictate everything you do out there. We as managers of the turf have to appreciate what the golfer experiences.

ATM: Do you see it as a responsibility of your role to speak up for greenkeeping?

SR: With my position comes a responsibility to do the right thing for golf and greenkeeping. I want to ensure we do the right thing. My way is not shouting from the rooftops as I don't think it's my responsibility to seek that attention, but if I'm asked then I'll give my opinion or some advice. There are better greenkeepers than me and I love nothing more than going to another course for a game or a chat in the sheds with the greenkeeper and seeing things they do differently that we can improve upon. It's not like we do everything better here than anywhere else. I love going to the sheds and seeing things like how someone hangs up the flagpoles and thinking 'why don't we do that?'

ATM: What do you think would go through Tom's mind if he could see the links now? What questions would you ask him – what height of cut are those sheep getting you, perhaps?

SR: I'd be asking him about routing and foot



Sandy Reid remains mindful of the way Old Tom Morris looked after the cherished links

traffic. The game was played differently back then. The course was there before him and he altered it, but I'd ask how he adjusted things, such as lines for play.

I'd like to think that he'd have appreciated our mowing and irrigation technology. At that point he only had native grasses and I'd love to ask him how he managed them. I'd like to think he would have appreciated what irrigation gives you from a turf health perspective, given the demands. We use water sparingly but irrigation was a big part of allowing links greenkeepers to maintain courses as the volume of golf increased.



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St Andrews' modern day custodians

ordon McKie is course manager on the Old Course, while Graeme Taylor looks after the New and the Jubilee. They're directly responsible for managing the courses that Tom cared for.

ATM: Old Tom Morris, the founder of modern greenkeeping, is sat in this room, what do you ask him?

Gordon McKie: The first thing I'd probably ask him is what do you think of the place?

His advice to us would probably be to just keep putting the sand on. He developed the philosophy of topdressing and the benefits of promoting the finer grasses.

I'm only the ninth head greenkeeper since Old Tom so we're looking after history and we're only here to nurture it and try to improve it a wee bit before passing it on to the next person. The links have been here for 600 years and will hopefully be here another 600 years, depending on what the sea wants to do.

The 11th green [High Hole, which caused Tom so many problems] sloped from front to back in the most exposed area of the site. The wind blows the back side of the green and if it's 40 miles an hour on a smooth green, there's nothing to hold on to the ball, so we've redone that to see if we can help ourselves

out, but to date we've struggled. We've got to the point where the 11th pin may be on the 7th green and we'd push the 7th pin as far to the side as we could. There's no separation between the greens so there's nothing to say you couldn't.

Things have got too good and we're losing the fun element. It's not about having fast greens, so long as they're all the same. If the greens are running at 6ft then that's up to you as a golfer to use your skill to adapt to that.

ATM: Old Tom was certainly a figurehead in the industry. Do you see yourself as fulfilling that same role for today's greenkeepers? Graeme Taylor: Do we want to drive sustainability? Yes. Do we want to be seen as using fewer inputs? I would certainly want people to know about that.

GM: I changed the fleet of machines last year to include two fully electric machines. We also went to another six hybrid petrol machines and moved away from diesel. The technology that's coming on to the market, we want that.

We took two electric machines as a trial and they're working well. We're working with Toro to see how much energy we are using and they are working with another company to look at the potential for solar energy to



Gordon McKie and Graeme Taylor look to the past in maintaining the St Andrews courses for the future

power our machines. I realise that I'm just a custodian, trying to continue on the way Old Tom's done it. Some of the philosophies that he's done, we continue to do, such as sanding and producing finer grasses. Yes, the whole scope has changed and it's nothing like what he would have had to deal with, but part of the role is maintaining the course in much the way as he did; we just have different technologies

to allow us to do that and it's a completely different ball game now.

ATM: Tom also took a daily dip in the North Sea on a morning. If you're filling his shoes, is that part of the role?

GM: You'll be asking us next if we drink a glass of milk every day like Tom did! At the back of the 4th green there's a bunker called Ginger





Sustainable operations are an ongoing focus in the course maintenance of St Andrews

Beer and that's where old Daw Anderson would have his drinks cart, where you could get milk and ginger beer. So that's another thing St Andrews invented, halfway houses.

ATM: Tom was always innovative and is reportedly the first to use walk-behind mowers on a golf course. Do you continue that ethos and what's the next evolution, is it the use of robotic mowers at St Andrews? GM: That will happen in our lifetime. After the year we've had, because we had to reduce our staffing numbers down to four, including myself, for most of last year, it changes your outlook on how you do things. It takes you back to how Tom would have done things and the standards he was achieving.

Over the years the standards on golf courses have become very excessive in terms of presentation. Last year that was taken away and we had to say 'we can't do this'. I'm now thinking, well we've not done it for a year, do we now have to do that particular task as frequently as we used to?

We've had this debate at Open Championship level among the managers at the various venues. You're going out every day and you're mowing fairways, but what are we mowing? You're mowing nothing, so is there a need to do it and is it sustainable?

One of the things we're looking at ahead of next year is no pedestrian mowing and instead we'll use triples to become more sustainable. Instead of having 25 people cutting greens, eight people will be able to do them.

People watch an Open and they see these things and it makes an impact. I've experienced going to a US Open and there's 100 staff preparing the course each day and it looks absolutely fantastic, but most people are never going to be able to achieve that standard, so how sustainable is it?

In a way we've come full circle, back to Old Tom's methods. We've built up and built up and I think we're going to get to a stage where we're going to drop back down, where staff numbers may drop and begin to even out. We definitely need to get more sustainable in our operations and not get hung up with how we've done things in the past.

Triple mowing our greens could be a big message because clubs may ask, if St Andrews are going to mow their greens for a Major tournament using only triples, why are we spending money on pedestrians or needing to find resources to put a body behind it?

ATM: With an increased drive towards sustainability, are you seeing increased pest damage?

GT: We do have worm casts in some areas and the Home end of the Old used to be pretty bad so we've been sanding a lot on there.

Leatherjackets are becoming more of a problem and I saw my first couple this week,

but I don't know how bad our situation is. We do tolerate a certain level of damage before we act, the same with disease. We let it run a little bit, reach a threshold and then we'll consider doing something. Don't make the mistake of thinking they're perfect out there. Leatherjackets haven't been a major problem yet but clubs down south are getting decimated, so it's heart-breaking what they're going through.

GM: We have to be sustainable in all we do. In the past we've had to spray chemicals, but there's a way to do it. It's very rare we'll spray and last year I took advantage of it being a pandemic and sprayed one green twice because we had issues with pearlwort in the grass. The only way to get rid of it is to chemically treat it. It's all impacted by the pressure on presentation and heights of cut. In Old Tom's day your height of cut was nowhere near as he had sheep chewing away at it. Are we now cutting too low and that's putting pressure on the grass, which is getting weaker and causing the weed to come through? You go a foot into the semi rough and you barely get any weed problems because the grass is longer and stronger.

The pressures we put the grass under because of the expectation levels create another problem that you have to effectively manage.

I've seen the greens in the 1960s, when

the height of cut was so high and the greens were so slow; they were using cylinder mowers and I imagine they never had any of the issues we have now.

ATM: When your greens are as undulating as they are, how do you ensure the grass is mown uniformly?

GM: The floating heads achieve that today. We look after the Himalayas [St Andrews Ladies' Putting Club] and even going back a couple of models ago, the 3250 just wouldn't flow and it caused issues. This season we're using our new machines and what a difference the new technology has made. But grass species and height of cut also comes into that. There were some guys visiting us from a putting green in the area and they said they were struggling to keep grass on their green. I asked them what height they were cutting at and they said 2mm. That was why they had problems, there's no way high spots can sustain that length of cut. We cut the Himalayas at 6.5mm all the way across and you couldn't go much lower because that would stress out the tops. Having the correct species of grass - the fescues and bents - helps you with that as well.

GT: We have so many undulations that if you tried to put the green at 10ft, how would you

stimp it? That's a problem for so many of the greens out there, that there are not enough spots where you can actually measure speed. We're able to set our own heights of cut and it will be between 4mm and 6mm depending on the time of year. Our target speeds are between 8.5 and 9.5ft.

GM: We're always questioning why we're doing things. I know there's a question of standard, presentation and visual image, but how sustainable is it? The last couple of days we've been discussing our own tournaments and whether we cut everything or go for a really relaxed set up? Do we only cut the greens, rake the bunkers and move the holes. instead of having the whole team in, cutting fairways? That's all come out the back of the pandemic, having to change the way we do things. I don't think we'd get away with that for an Open Championship, but perhaps on a lesser scale. We've reduced the number of staff we have doing bits and pieces and we don't full rake bunkers any more at weekends.

ATM: St Andrews' double greens are a feature instituted by Old Tom. What are the positives and negatives of these unusual features?

GT: You have to do whatever you need to

quickly. I've only one double green on each of the New and the Jubilee and you have to make sure you get them cut early because if we try in the afternoon when there's two sets of golf coming into the green, there's no break and you can't get work finished.

GM: There aren't many positives. One of the biggest headaches is the size and how you manage them. It takes a lot of resources to treat them, for example I've got 2.5 hectares of greens compared to Graeme's 1 hectare. It's a huge budgetary drain. The greens are huge but there aren't many pinnable areas, hence why we've been around this morning looking to extend the size of the greens, to try and create more pin positions.

For The Open next year, our main philosophy is going to be to make the rough as thick as we can. We've spoken to [R&A Chief Executive] Martin Slumbers and on the first we're considering where the grandstand behind the green will be because he thinks somebody is going to go for it. DeChambeau is probably going to stand on the first and think, 'let's have a go'. So how do we toughen that hole up?

But then again, you can flip things and people want to see an exciting game. The game's at a point where it has a very ageing





Adapting to a changing game is one of the challenges for all greenkeepers, at the Home of Golf and elsewhere. Meanwhile, the greens on the Old Course are flourishing ahead of the 150th Open next July

demographic, so how do you make it exciting to get kids into it? You want to see birdies and eagles, which make it exciting. You don't want to see someone winning with 18 pars, that's boring.

ATM: Old Tom said the High Hole (11th on the Old) was his least favourite – which is

your least favourite hole and why?

GM: For me that's a very difficult question because I look after Old Tom's jewel and it's the home of golf, where everyone around the world wants to come and play.

GT: I would love to have seen the links with no maintenance roads through them as it would

have been quite special with all the links rolling into each other. At the moment each course is defined by the maintenance road and to see it as just one big golfing land would be quite special.

GM: But you'd have no vehicles then. **GT:** Yeah, you'd have to walk everywhere and be fit!

GM: One of the unique challenges we have is managing the grass and over the years we've had to change our philosophy. That's probably one of the things, when Old Tom's looking down, wondering how you do things now, thinking 'I wouldnay be doing that', but the games changed, the number of players, the wear patterns, the machinery used, technology has changed in terms of grass species and we've potentially come away from using finer grasses close to greens and are using more ryegrasses just so we can keep grass cover. A lot of things have changed.

Over the last year if you asked me what the biggest thing I've noticed is, it's that our greens have got better agronomically. Out there we've got some of the best grasses I've seen on links greens and they've just flourished in the last 18 months because we don't have the same foot traffic. w





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Seed bank of **KNOWledge**

ATM columnist John Neylan looks at a number of ongoing trials which add to the industry's knowledge base surrounding Poa annua and its ubiquitous nature.

n Victoria during 2020, there was a lot of time to fill in during the periods of lock down brought about by COVID-19.

Getting out and about was limited and it provided me with yet another opportunity to explore and test some theories that I had regarding my favourite weed – *Poa annua*.

The area of interest that I had was whether the *Poa annua* types that had exhibited herbicide tolerance/resistance in specific locations were similar in there morphological characteristics. This is based on *Poa annua* exhibiting a high level of self-fertility and a rapid life-cycle that ensures a single plant is enough to build up a large population of potentially herbicide-tolerant plants within a year or two. Based on this theory it could be expected that there will be less diversity in the *Poa annua*

population as the herbicide-susceptible plants are killed off.

The project involved collecting plants from several golf course fairways where there had been herbicide tolerance or confirmed herbicide resistance. The plants were collected, established in pots and then various plant characteristics measured.

TRIAL METHOD

Plant morphology: Individual Poa annua plants were collected from seven fairways on two golf courses. The number of plants collected was limited to 30 or less depending on the number of surviving plants. The plants were collected as a 50mm diameter plug and then the plant carefully dissected from the plug. The individual plants were grown

in pots and then several characteristics were measured to better understand the variability in the plant population.

In addition to the collection of plants from the golf courses, annual plants were selected from a home lawn to determine what variation may exist in a population that has had little or no herbicide pressure. This provided a basic morphological map of the *Poa annua* population where the observable characteristics, such as plant height, plant diameter, tiller number and flower numbers were measured. The plants were not cut down at any stage and were allowed to grow to their full size.

Seed bank: In addition to growing the plants collected, the thatch layer they were growing in was broken up and then planted in pots

to determine the underlying seed bank. As a second phase of the project, the plants that were established from the seeds were also grown on as individual plants and the morphological characteristics also described. This was to gauge how close to type the progeny were to the parents and what variation may exist.

Herbicide trial: The final trial was to take the seedling plants that were grown to maturity and then a herbicide was applied to determine what level of tolerance there was across the populations. The plants used in the herbicide trial were regularly trimmed to maintain a compact plant.

Other observations: During the trials other observations were made such as rooting from the node and the rapid germination of new seeds

POA ANNUA SEED BANK AND GERMINATION

Once the individual plants were removed from the plug, the thatch layer was dissected and spread onto a prepared seedling tray to observe the rate of germination and seedling numbers (Figure 1). There were several interesting observations between the different locations on the same golf course:

 Seedling numbers varied between each location and ranged from 833 – 5000 seedlings per square metre.



These trials looked at whether Poa annua types that had exhibited herbicide tolerance/resistance in specific locations were similar in there morphological characteristics

The pattern of germination varied between each location. At three locations (S6, S9 and S11) the majority of the seedlings appeared around 15 days after planting. At locations S10 and S14 there was small amount of early germination with the peak at about 33-42 days after planting. At S5 it was more of a staggered germination across 33 days.

Wu et.al. (1987) noted the same germination patterns in different *Poa annua* populations when germinated at 25°C. The lag in the germination of seeds or inbuilt dormancy reflected the source of the seed. That is, the seed from roughs where there was limited water had a greater percentage of dormant seeds. In this current research, all locations received the same level of water and nutrition and the possible variation in the germination of

seeds appears to be mainly related to natural variation and in-built survival mechanism.

TAKE HOME MESSAGE 1: The seed bank is large and careful attention to the application of pre-emergent herbicides is essential.

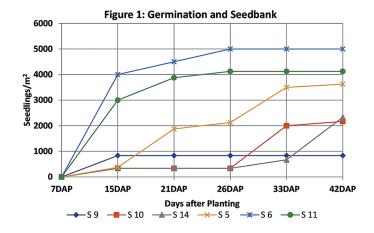
TAKE HOME MESSAGE 2: With the variation in the pattern of germination, it is essential that there is sufficient pre-emergent herbicide available across the entire period of likely germination.

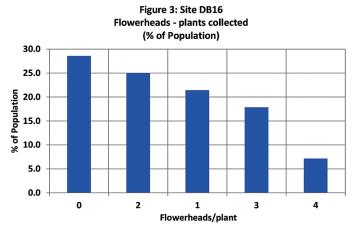
QUESTION: On a golf course with a diligent pre-emergent herbicide programme, would we expect the seed bank to gradually reduce?

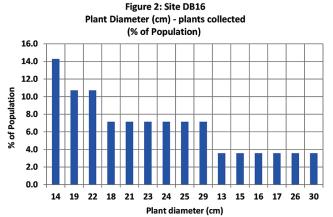
POA ANNUA COLLECTION AND MORPHOLOGICAL VARIATION IN COLLECTED PLANTS

At each of the seven sites there was variation in the plant characteristics including plant height, tiller number, plant diameter and flower number with an example of the data provided in Figures 2, 3 and 4. It was postulated that the plant population would have less variation due to the selection pressures from regular herbicide applications. However, the population distribution is similar to that noted by Neylan and Peart (2009) where there is a concentration of plants with similar characteristics but a small proportion representing the extremes.

This variation in the population demonstrates that while there are significant







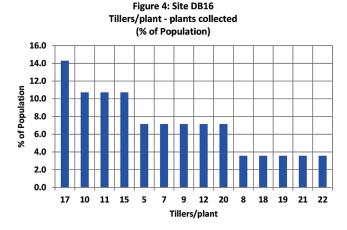


TABLE 1: AVERAGE CHARACTERISTICS OF COLLECTED POA PLANTS

Location	Height (cm)	Diameter (cm)	Flowers (No.)
S5	14.3	23.3	8.2
S6	11.5	23.3	7.5
Annual	11.5	24.0	12.0
S11	10.7	17.7	9.5
S9	10.7	16.5	3.5
S10	6.0	10.7	2.8
S14	6.8	13.8	5.3
LSD (P>0.05)	1.5	2.6	3.2

selection pressures by herbicide applications there continues to be enough variation in the plant population to aid in the survival of this persistent weed. This variability provides a survival mechanism for the plant population where there may be a change in the growing conditions such as climate or the use of a new herbicide.

Across the plants collected from the same golf course but different fairways there were significant differences in plant height, plant diameter and the number of flowers produced (Table 1). The annual plants produced the highest number of flower heads (except for the plants from S11) and were typically in the taller group of plants and those with the greatest diameter.

TAKE HOME MESSAGE 3: There will always be variation in the Poa annua population and the potential for 'survivors'. Wherever there are surviving Poa annua plants following herbicide applications, manually remove them.

POA ANNUA COLLECTION AND MORPHOLOGY VARIATION IN SEEDLINGS

The seedlings that were grown from the seed bank were established into separate pots and grown on to maturity and then the characteristics determined as above. The purpose was to measure the variation in the population and to determine the relationship with the parent population. Figures 5 and 6 provide an example of the data and there are two observations;

 The seedling population still represented a broad spread of plants with variation in tiller number, number of flower heads, plant diameter and plant height.

 There wasn't any apparent similarity between the two populations with the plants collected from the fairway having a narrower spread in the population characteristics.

The difference between the two populations may well be related to the number of plants collected (i.e. too few plants). However, given that the seedlings were from immediately below the individual plants the expectation would be that there would be some similarity. There is still a lot to understand.

TAKE HOME MESSAGE 4: With the potentially broader range of plants from the progeny of established plants, there is increased opportunity for survival of the Poa annua population.

QUESTION: With the seedling population, is there a certain proportion of natural seedling death that results in a narrower population variation?

Question: Are some of these seedlings killed with a herbicide application that narrows the mature population?

HERBICIDE TOLERANCE

A collection of plants from the same population were treated with propyzamide at 1.2L/ha (a.i. 500g/L propyzamide) to determine what variation there may be in herbicide susceptibility. There were two applications of herbicide on 19/9/20 and 18/10/20 with 12mm of irrigation applied after application and 24 hours after application. The weather was warm and mild across the 48 days of the trial.

The herbicide treatments were applied



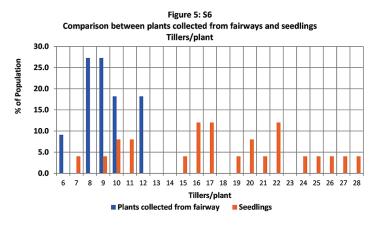
During the trials other observations were made such as rooting from the node and the rapid germination of new seeds

to the five populations of plants collected from golf course fairways and the results were similar in that there was variation in the susceptibility to the herbicide. Some of the data for one *Poa annua* population is detailed in Figures 7 and 8 and the following observations were made:

- There is some variation in the susceptibility to propyzamide.
- None of the plants were killed completely with a single application.
- The single application of herbicide affected 100 per cent of the population to some degree.
- The single application caused moderate damage to 50 per cent of the population with the second application resulting in 17 per cent of the population suffering severe damage or death.
- Interestingly, after the second application there was 13 per cent of the population exhibiting complete recovery and no observable damage.
- A population of annual plants was collected from a couch lawn that had no history of herbicide applications and included as a control population. There was a 100 per cent kill on the annual plants.

TAKE HOME MESSAGE 5: There was some observable variation in the reaction to the herbicide applications.

TAKE HOME MESSAGE 6: These results highlight the importance of follow up herbicide applications if reasonable control is to be obtained.



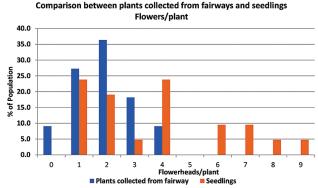
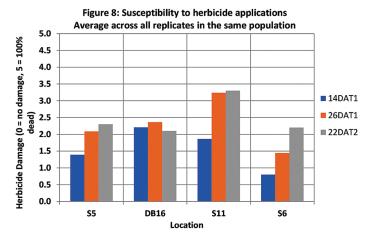


Figure 6: S6

Figure 7: DB16 Susceptibility to herbcide applications 60 50 50 % of Population 40 ■ 26DAT1 30 ■ 22DAT2 20 10 n O 5 Herbicide damage

0 = no damage, 5 = 100% dead



OTHER OBSERVATIONS

Over the past 12 to 18 months of observing Poa annua and growing them, there are always some interesting observations to be made.

Two occurrences are worth noting:

- With some of the plants, there were individual tillers that began to initiate roots at the node. It only occurred in about 10 per cent of the populations studied and only on 1-2 of the tillers on a multi-tillered (>10) plant.
- Many of the flower heads that matured (and presumably produced seed) collapsed and fell to the soil surface.
 Once this occurred germination and new seedlings emerged within about 14 days. The key seemed to be bare soil and sufficiently exposed to light to initiate germination. This capacity to flower, set seed and germinate was observed from May through to November.

TAKE HOME MESSAGE 7: Once plants flower and set seed they can rapidly establish within

the turf sward, particularly if there is adequate soil moisture. Having an adequate preemergent programme is critical.

CONCLUSIONS

These ongoing trials continue to add to our knowledge base and again highlight the peculiarities of individual sites. So, what have I learnt?

- There is variation in the Poa annua population within fairways and between fairways on an individual golf course.
- While there may be a concentration of plants with similar characteristics there will be some variation to ensure plant survival.
- The differences in plant characteristics may affect the efficacy of herbicide applications. For example, multi-tillered plants may protect some tillers from herbicide applications and therefore reduce the control of *Poa annua*.
- Surviving plants need to be removed manually.

 The seed bank is large and the use and timing of pre-emergent herbicides is critical in the control of new plants developing.

In well-watered fairways and during mild

weather, year-round germination can be expected. Pre-emergents are critical. Because of the variation in the *Poa annua* population there is the potential for survival through several mechanisms. It is therefore important that every turf manager that is undertaking a *Poa annua* control programme thoroughly reviews the successes and failures

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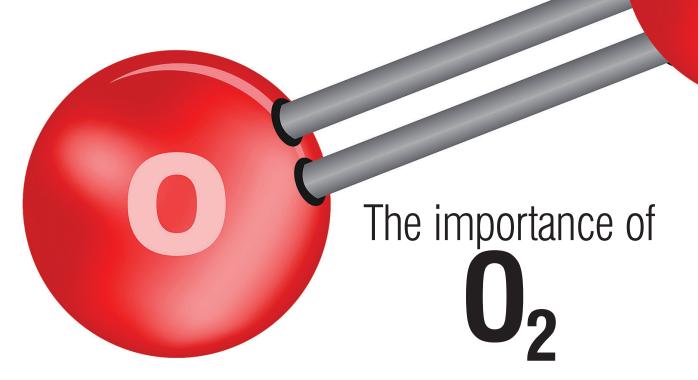
and the survivors are removed.

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The importance of adequate oxygen is something that hasn't been explicitly discussed in the many years of turf research. It has been implicit when looking at the emphasis on renovation techniques, but it needs to be added to the NPK mantra as an essential element for plant growth



Stress can come in many forms, writes ATM expert columnist Peter McMaugh AM, but the most common and most important stress in turf comes from a lack of oxygen in the soil.

have often described a golf green as a

super large pot plant. That is essentially how you have to think about it if you want to have long-term success in managing it.

When I began my career in turf with the Australian Turf Research Institute (ATRI), I was located at the Ryde School of Horticulture in Sydney and I shared the staffroom facilities with all the members of the school staff, including the many part-time staff recruited as specialist teachers. They were a diverse and interesting group.

One very interesting topic of conversation was potting mixes. At that time there were big changes occurring around the world in the type of potting mixes used for growing container plants and quite large ones at that. Work in California was concentrating

on the use of well composted sawdust as an alternative to peat. This was of particular interest to me because research at UC Davis in the USA was also interested in sawdust mixtures in putting greens mixes.

The benefits of peat in potting mixes for long-term use were because it is the major component providing the long-term air porosity in potting mixes. It is the special structure of the sphagnum moss, with its balloon like cells, which has always made sphagnum peat the number one component of high grade potting mixes. Other peats may offer more cation exchange sites but they are inferior in the air/water balance of growing medium mixes. Like all natural resources, peats of this quality are limited in the environment and the role they play in many eco systems makes them



environmentally valuable. This makes mining of them for horticulture an environmentally dangerous exercise.

Most of the sphagnum moss in the market place today is not peat. That is it hasn't been composted. It is a specially grown crop and harvested when mature before it senesces and starts to compost. It is still a valuable source of structural material for keeping a potting mix open but it doesn't have the cation exchange factor that the composted material has.

Australia has no significant peat land that could produce anywhere near the market demand and it is located mainly in delicate ecological places from which it cannot now be mined. Any imported peat moss is also very expensive. There has therefore been a huge effort put into finding suitable substitutes for moss peat. The major market player is 'Cocopeat' coming mainly from Malaysia and India. Various treatments of the fibre husks from a coconut make an acceptable but not perfect alternative for moss peat.

These changes in potting mixes were happening just at the time I was at Ryde and the Australian Institute of Horticulture held a major seminar on potting mixes at the Manly Pacific Hotel. One of the students at that time was the once publicly popular TV host Don Burke AM. At that time the Australian potting mixes had a high sand component and that balance has now swung to a dominant organic component.

The potting mix guru of that time, and is still, was a scientist with CSIRO Soils in Adelaide by the name of Kevin Handreck. He later teamed up with Neil Black, another scientist who was on the staff at the Ryde School. Neil came on staff just as I was leaving Ryde for our new premises at Concord West.

Much of the turf information in their book 'Growing Media for Ornamentals and Turf' was derived from many conversations with me. Neil later became Head of School at Ryde.

SELECTION KEY TO SUCCESS

There are two major differences between horticultural pots and putting greens. The first one is that the expectant life of a potting mix is about two years, while greens are supposed to last 30. The second is the big one – pot plants are not trafficked while greens are. This is the defining difference to the way they are made and the way they need to be managed.

So we have a very large pot where the potting mix is not predominantly organic but sand. It is the selection of this sand that is the key to success. The overarching principle that is guiding the whole process is how much air is in the mix and how much air there will be over time. When I have just said air, I should have said oxygen.

Listening to the medical experts discussing the shortage of oxygen in India earlier this year and the effect it was having on the treatment of Covid-19 infections, you are reminded very vividly that every biological organism is affected in some way by the presence or absence of oxygen. Covid-19 is a haemorrhagic pathogen that stops lung function and damages the lungs so that oxygen exchange into the blood is impeded. Without oxygen we die. It is that simple and it is the same with plants. Without oxygen the roots die and as they decline in health the ERI fungi storm in and finish them off.

It has been very interesting looking at the damage levels to various grasses after the recent floods in NSW and Queensland. The The grass that suffered the most was zoysia. This was borne out in other floods that John Neylan has written very well about in his article for this journal (ATM Volume 23.2 – March-April 2021). Here he has raised a very interesting difference between the more detrimental effects of deeper flood water on grasses over the effects of shallower water. John gives three levels – 100mm-150mm from the work of Jack Fry and the differences between 300mm and 500mm.

I have just one observation to make about the water itself and that is that the deeper the water, not only is there not going to be much light (even though most floods are not clear water), but there will be notably less oxygen at 500mm than at 300mm. At 100-150mm there would still be some oxygen, so it is not very surprising that in Fry's experiments there would be less damage.

So much for the water matter, let's look at the grass itself. I think that the major reason that zoysia takes such a hit is that it has hollow internodes. With no available carbohydrate reserves and no active photosynthesis going on, the grass will very quickly die. It is the same for bentgrass on greens. Couch, especially the *C.dactylons* with robust rhizomes, have by far the most carbohydrate reserves. The hybrids, which notably lack strong rhizome development, have much less of a survival chance because they will run out of energy very quickly.

The length of time that grass is under water is also a major contributing factor to their survival. Greens grasses, by the fact that they are cut very short, have restricted reserves of carbohydrate which means their survival time under water is going to be in the low number

Without oxygen we die. It is that simple and it is the same with plants. Without oxygen the roots die and as they decline in health the ERI fungi storm in and finish them off. •Peter McMaugh AM

three grasses that I have had the most to do with have been buffalo, couch and zoysia. With buffalo under a shallow and quick flood, the majority of varieties haven't had a lot of damage, but those that are susceptible to grey leaf spot, such as Palmetto, fared very badly.

With the couchgrasses, the hybrid crosses of *C.dactylon x C.transvaalensis* suffered much more than the *C.dactylons* as a general rule. The longer they were under water the worse the affect, especially in the more thatchy ones. TifTuf was much worse affected than Santa Ana. Among the *C.dactylons* the more dwarf varieties such as Grand Prix suffered the worst, while the vigorous varieties with huge rhizome volume shrugged off the inundation as if it was a sun shower.

of days rather than weeks, which some couchgrasses can achieve. The longer grasses are water logged the greater the damage they are going to see from root infecting fungi (ERI). This again is highlighted in John Neylan's article. ERI fungi are not normally aggressive root pathogens but they will readily attack grasses that are under stress. Stress comes in many forms, but the most common and most important stress in turf comes from lack of oxygen in the soil.

GETTING THE RECIPE CORRECT

For healthy grass you need to have healthy soil. Here we are right back to the question of how long can we keep our big pot growing medium healthy? Over many years we have developed numerous renovation techniques to try and make this happen.

It is very interesting to listen to Dr Frank Rossi (Cornell University) talking with John Neylan earlier this year, when he questioned John on the success of the technique developed by Claude Crockford at Royal Melbourne Golf Club (continued to this day) of lifting the turf periodically and removing the next thatch layer and renovating the growing medium. This is really the ultimate renovation technique short of a total rebuild. Claude was only doing what the Scots have done forever.

The real question that we have to ask ourselves is, how do we get it right the first time so that we make the need to do a process like this at longer and less frequent intervals?

It is very clear from historical experience that the USGA greens construction method, by and large, has been very successful. But ultimately its success comes down to two things – the quality of the ingredients used to build the profile and the success of the laboratory methods used to assess them. Now I have opened a can of worms, because unless the recipe is put together properly, the cake will fail.

If there is a lack of quality control in the execution of the blending of the ingredients, then no matter how good the initial ingredients may be the project can easily run off the rails and end up failing to achieve the expected result. Uniformity, uniformity and more uniformity is the key to achieving the perfect result. There are far too many traps that you can fall into for me to discuss in detail in this article, but let me say very clearly that if the

proper procedures of mixing and testing are not thoroughly adhered to, then you are looking for trouble.

Now we get to testing. There is one laboratory test of which I am highly suspicious and it is the moisture release curve. When a USGA accredited laboratory provides you with a test result they simply say that it either conforms to the USGA guidelines or it doesn't. They don't make any other comments.

My problem with the moisture release curve is that when I use the guidelines appropriate to interpreting and choosing the depth of the growing medium, when I build it it is always lower in moisture retention than the predicted result, especially in the top 100mm. I am not the only scientist to see this problem; Brendan Hannan at STRI sees the same problem.

The transfer of soil physics tests to the field interpretation has been, in my experience, the weak point in the USGA system. In practical terms what this means is that there is a bias towards air porosity over water porosity. Is this a bad thing?

I am a great fan of the need for good air porosity right from the start of any greens construction, but there is a hidden factor in the long-term success of this. It is compaction. If the mix is to stay open over a long time period then it needs to be compaction-resistant, especially when wet. The magic of the mix lies in the particle shape of the sand used in the construction. If you use a rounded dune sand which fits the USGA spec envelope, you are guaranteeing a quick failure. Round sands, even with high uniformity indexes for particle

size, will quickly fail. You must have sharp irregular sands which once they bridge will not move further. Sure the green will be very firm to start with, but that is where your skill comes in as a master of turf, to produce a softer shot accepting surface which you can maintain.

There is one new factor which was not around when the USGA developed its recommendations and that is the super dwarf bentgrasses. Their density of surface is equally reflected in the density of roots. No matter how good you make the air porosity volume, they will quickly fill those large pores with roots if you let them.

If handled properly, without the excessive nutrient load that has been the hallmark of the North American turf scene for many years, they can be the new wonder grass. If you don't keep them adequately lean they will bury you. But they don't and can't live on nitrogen alone. They still need oxygen and in a balanced, sustainable way.

I began this article with statements about the importance of air to water balance, but it is really oxygen to water balance. The supreme importance of adequate oxygen is something that we haven't explicitly discussed in the many years of turf research we have seen. It has been implicit when looking at the emphasis on renovation techniques, but it needs to be added to the NPK mantra as an essential element for plant growth.

I hope that in future articles we can systematically take apart the oxygen cycle and how we can manipulate it to achieve our goals of providing healthy turf for a healthy community. w



The success, or otherwise, of greens construction comes down to two things – the quality of the ingredients used to build the profile and the success of the laboratory methods used to assess them



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A life full

Delving deep into the remarkable life and career of Geoff Osborne, recipient of the prestigious WA Golf Industry Recognition Award.

he 2020 winner of the prestigious WA
Golf Industry Recognition Award held
in March 2021 was Geoff Osborne,
a very worthy recipient and a man
known as a gentleman of the golf
course industry.

To sit and listen to his story was a wonderful experience. He came to Western Australia to build the Sun City golf course at Yanchep. From there it was onto constructing Joondalup Country Club, then Araluen Country Club and his last course was The Cut at Port Bouvard, south of Mandurah, which is located

between the Indian Ocean and the Peel Inlet.

The more Geoff told his story, the more it was clear his achievements were many and his skills in the turf industry and life unparalleled. In his early days, Geoff did not enjoy school and a teacher suggested he go to James Ruse Agricultural High School in north-western Sydney. It was a school that gave him passion, as he was interested in what was taught. He confessed he enjoyed being at an all-boys school, as he was shy and very self-conscious in front of girls.

His first job was working on a poultry farm,

Left: Geoff Osborne with his restored Ferguson TEA tractor on his property at Denmark in southern WA

before an opportunity at Pennant Hills Golf Club came up. His superintendent was Vince Church, a man Geoff says had an immense impact on his skills and approach to turf management and life. Jack Jones, the Pennant Hills mechanic and a close friend of Church, combined to teach Geoff greenkeeping, mechanical and engineering skills that he further developed throughout his career. Church insisted that Geoff attend a Ryde greenkeeping course. He successfully passed in 1965, with Doug Corbett as his lecturer.

Pennant Hills trialled many chemicals in those days, looking at Poa control with Endothall and DSMA control for Paspalum and LV 57 (2-4-D ester) for broadleaf weed control. Arsenic applications were also used, as it was thought they could bind phosphorus and limit its availability to subpress Poa annua growth, however the results did not support the theory. It was a learning environment well suited to a budding future turf manager, learning from two of the industry's best in Church and Jones, and Geoff became known as ideas man.

Flying was another passion, but it was difficult for a young man managing his money carefully on a wage of seven pound, 10 shillings, as flying lessons were five pounds an hour. He learnt to fly a Tiger Moth at Camden Aero Club in half-hour and hour increments, depending on the budget, and the outcome was an exhilarating experience. By the age of 21, he reached a huge milestone by completing his commercial pilot licence.

Yet his next opportunity came upon completion of his greenkeeping course, working for Connellan Airways in Alice Springs. He flew as a co-pilot on the mail runs and spent six months as a traffic officer, booking in and loading planes. Geoff then returned to Pennant Hills Golf Club for three years and tells a couple of humorous stories. Mistletoe had spread among the trees and Geoff and a fellow worker had the task of thinning out the branches to bring the problem under control. Using an extendable ladder, which allowed them to reach heights of six metres, handsaws were used. On one occasion a branch had not quite been severed when Geoff thought that if he jumped out and grabbed the branch, the other branches would break his fall. It was a theory that worked but bodyweight delivered him to the ground before the branch, which duly landed on his head. He felt a little unsteady as he went to ride his motorbike

Geoff spent nine years building and establishing the Sun City course at Yanchep



Geoff's expertise was instrumental in building Perth's unique 27-hole Joondalup course

home. The next thing he knew was waking up in hospital recovering from concussion.

A SHINING RUBY

A life-changing event occurred when one of Geoff's co-workers told him about an attractive blonde girl who lived next to the course and after a while he plucked up the courage to ask her out. He took her flying and he realised they were a match when she enjoyed flying upside down. Ruby became the love of Geoff's life and he will tell you that if it weren't for Ruby, he would have never been able to achieve all the things he did and described his marriage as fantastic.

Ruby and Geoff were married in 1970. Land was too expensive in Sydney and the superintendent's job came up at Tamworth Golf Club. The young couple set off on a new adventure, encouraged by being able to afford a spec house near the course. Geoff had started his path as a superintendent at the ripe old age of 23, yet that first job was not without challenges. Greens were watered by sprinklers on hoses and the fairways by pipes in what he described as the C&D System: carry and drag.

The Tamworth course had its challenges with solid swards of Cape weed during the winter replaced by Paspalum during the summer. The LV 57 (2-4 D Ester) trial work with his mentor at Pennant Hills came in handy. Under the weed infestations, couch encroachment had become a serious problem and five greens were sprayed with Tupersan (Siduron). The bent in the greens was an old cultivar called Flossmor bent, one that had a puffy growth habit not ideal for a good putting surface. Results from the spraying





Geoff has an impressive collection of restored Howard rotary hoes

certainly bought forward the plan to change the cultivar on the greens as the five that were sprayed died. Greens were gassed with methyl bromide – another skill taught by Vince Church – and all 20 greens were replaced with hybrid Penncross.

While at Tamworth, an opportunity arose when the principal of the local technical college asked Geoff to teach Turf Management, mainly to bowling-green keepers, for two years. It was an experience he enjoyed, while it improved his knowledge and skills in botany and soils.

GOING WEST

He eventually became restless and started looking at what employment opportunities were about and, as he often commented, he found committees difficult. A course construction job in Western Australia came available in Yanchep, north of Perth. Ruby and

Geoff packed up the ute and headed across the Nullarbor to WA.

Upon arrival, he found the irrigation design was all sown up: Southern Cross sprinklers at 60 percent spacings on the fairways and class 6 mains 50Hp pump for 18 holes. Fairways were a Brunings seed mix consisting of Kentucky Blue, Couch and Chewings Fescue. An irrigation system that had a 22-hour watering window was not ideal for a hot, dry, windy location, especially growing cool-season grass. The pump cut out on a thermal overload on a regular basis.

A 2IC was employed from South Australia and as he arrived with his caravan, a winter squall rolled the caravan over. So he packed his furniture on the train and headed back home.

A plan was devised to upgrade the irrigation system that was split in two with another irrigation lake, reducing the watering

window down to a manageable 10 hours.

Tees were shaped up with a back blade on a two-wheel Ferguson tractor, tee tops were pegand-railed to achieve final levels and greens were hydro seeded with Penncross.

A flight to Sydney was undertaken to obtain an aerial application rating to be able to spray crops by air. Geoff could see it was an opportunity to earn extra money to purchase a house. His instructor told him that when flying in between trees, instinct would stop you from clipping a tree. The theory sounded good but in practice he found it to be not absolutely true, a story he tells with a cheeky grin. While spraying the fourth fairway, he smashed the wing tip off, showing that maybe more than instinct is required.

An airstrip was built at the end of the golf course and he bought shares in a plane that was used for joy flights to the Pinnacles, a well-known rock formation 160 kilometres to the north. The name of the charter was Tombstone Tours, relating to the shape of the Pinnacles, but a name that was probably not ideal to give customers confidence. In addition, he became radio station 6PR's 'eye in the sky', undertaking beach patrols and reports while pulling advertising banners up and down the coast over Perth.

After nine years building and establishing Sun City, the next project presented another challenge: building Joondalup Country Club, a 27-hole Robert Trent Jones Jnr-designed course on an old limestone quarry and sand dune site with limestone caprock adding to the challenge. The natural vegetation and topography enabled three nines, Quarry, Dune and Lake, each with very different characteristics. One of the highlights was working with George Munn, Trent Jones Jnr's shaper.

Greens were planted with Penncross Bentgrass and Santa Ana fairways. A coolseason fescue rye mix created definition in the primary rough. The course is defined by the





Before and after... the par-4 second hole on Joondalup's remarkable Quarry nine takes shape



The primitive spray unit that was used at Pennant Hills

use of the natural terrain and holes such as the third on the Dune nine, which is surround by shear limestone cliffs.

Ashley Watson is the superintendent at the course today and he keeps the course in excellent condition, which Geoff is proud of, as when he built the course, Ashley was one of the young greenkeepers who he trained and worked with.

GEOFF GOES GLOBAL

Bill Casimaty from Strathayr approached Geoff while he was superintendent at Joondalup and asked him to assist in the development of Carabooda Turf Farm. His role was to

develop turf management programmes and supervise their implementation in conjunction with Casimaty. The relationship expanded. A trip to Hong Kong to check trials on washed turf (Tifway) surfaced but Geoff did not have a passport, which normally took six weeks. Yet by that night he had one.

Happy Valley Racecourse was a trial location and then he assisted in planting four hectares of turf at Sha Tin Racecourse. The turf-washing system was showing good success and Geoff travelled to the USA to promote the system to turf farms, which involved 22 flights in 28 days. One of the jobs he was involved in included the planting of Foxboro Stadium in Boston, a venue that held games for the FIFA World Cup in 1994.

Araluen Country Club was next after a consulting engineer contacted Geoff about building the course. Sun City was constructed on deep coastal sand, Joondalup was sand and limestone cap rock, while Araluen is in the Darling Range to the west of Perth on undulating laterite country, so water was limited compared to the Swan Coastal Plain.

Michael Coates and Roger McKay designed the course. The topography made for several dramatic elevation changes, such as the par-3 16th, which has a 30-metre descent from tee to green. While this sharp drop is



The 'before' shot of Geoff's now restored Ferguson TEA tractor

interesting for golfers, it was challenging from an irrigation perspective.

From the pumping station it was 100 metres down and 70 metres up. At the top of the course, sprinklers did not pop up and a booster pump had to be installed halfway up. Peter Buck assisted in the design of the booster station. A 70-metre rise equated to 700kpa loss from the pump to the highest sprinkler. On the way down, 100 metres equated to a 1000kpa increase, which meant reducing valves were required.

Araluen opened in 1994. It's a course with spectacular views and is known as the 'Enchanted Valley' due to the vegetation and



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His fully restored 1942 WLA Harley Davidson with side chair

undulations. The vegetation and landscaping were a large part of the construction and to visit the course in autumn is eye-catching. During construction, any tree with tape around it was marked to let the contractors know that if it were knocked over, a \$5,000 fine would result.

One of his tricks for weed control was to spray the couch fairways with a light application of paraquat/diquat mix to set the couch into dormancy then follow up with a heavier rate, which controlled any weeds present, including Poa. The fairway went brown but always recovered weed-free.

During his time at Araluen, Geoff was engaged to do the specifications for grassing and maintenance at the new Joondalup Arena sports ground. It was not something he had a lot of time for or planned to do. The Watson brothers, Stuart and Ashley, who worked at Joondalup with Geoff, created Gro Turf. After the initial planting and grow-in, Stuart took over the maintenance contract and he is still the director of Gro Turf today.

Trevor Delroy was the Araluen project manager and offered Geoff the opportunity to work with his company Eclipse Resources, fixing and improving the irrigation system at Abercrombie Rd in Postans, near Kwinana, south of Perth. The landfill site was for non-putrescible rubbish that is not readily decomposed by micro-organisms. Geoff worked on the irrigation system to mitigate any dust on site and irrigate the trees.



Flowers in full bloom in the early days of Araluen Country Club

TIME FOR A SEA CHANGE

A quiet life was sought by moving south to Denmark, a beautiful town next to the coast and home to tall karri trees. He started up Rainbow Water Carting and Little Acres Mowing and Maintenance. Geoff was making ends.

Trevor Strachan rang him to see if he was interested in building another coastal golf course: The Cut Port Bouvard, designed by James Wilcher and located on the coast only metres from the beach. Geoff stayed there for 18 months clearing bush lines and shaping the course. Once nine holes were constructed, Geoff handed over the reins to a very capable young man in Daryl Outhwaite.

It was Trevor Delroy who enticed Geoff away from the golf course with an offer to assist in setting up a horse property at Wilyabrup, near Margaret River. Managing the farm and overseeing fencing and irrigation installation was a very enjoyable job and he and Ruby were looked after well. After a stint of a little more than six years, Ruby had become unwell and it was time to move back to Denmark, although Geoff still did some consulting to the farm.

After a while Geoff got a little bored at Denmark and, at the age of 63, he went and saw Denmark Haulage who gave him a job driving refrigerated B Doubles and Road Trains once per week to Perth, a job he did until he retired at the age of 70.

It is hard to believe a man that had achieved so much in his life was retiring and to some that may have meant slowing down. The day I travelled to talk to Geoff for this article, I was amazed at his place nestled into the base of karri trees with irrigated gardens left and right as I drove up to the house. We spent a couple of mornings getting together and he showed me what he did in his spare time.

He drove up to the back of his house on a Ferguson TEA 1951 grey tractor, fully restored, towing a set of 1960s Scott Bonnar ground-driven gang mowers in excellent condition. Walking into his shed to see a fully restored 1942 WLA Harley Davidson with side chair, 1926 Douglas motorbike and 11 mainly Howard rotary hoes ranging from the 1940s to the 1950s was a sight. The workbench certainly summed it all up: everything was neat and tidy and in its place.

The story set out to find out about the WA Golf Industry Recognition Award winner for 2020 but the story that was told is an exceptional one about a man who has numerous skills not untypical of many of his generation. An article is not long enough; a book would be more fitting.

Geoff would say that his best friend was responsible for him being able to do all that he has, and sadly Ruby passed away just days before this interview.

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Turning used tyres into rubber crumb has the twin benefits of giving old tyres a second use and providing drainage solutions

uch like COVID, sustainability is at the forefront of many minds these days. Through Melbourne's lockdown Environmental Golf Solutions had a chance to investigate innovations that could potentially benefit the sports turf industry.

Being invited into waste management networking circles, we were introduced to a product, Flexisport, which was being used on many sports surfaces, including netball courts, equine centres and athletics tracks. Instantly we thought this could be a great product for cart paths on golf courses.

Through Tyre Stewardship Australia, we were introduced to the managing director of Flexiroc Australia, Gary Bullock. Gary was enthusiastic about a product they had been using for some time and felt that with some modification could easily be adapted onto golf courses. Converting used tyres into hardwearing, durable, flexible and porous rubbercrumb pavement was right up our alley. Gary was more than confident we could convert used tyres into cart paths and help limit the 60 million used tyres that go into landfill every year in Australia. We had noted that rubber crumb had been used extensively throughout Europe on cart paths, bunker liners and outdoor areas, but it had not been taken up here.

Reducing landfill is a huge challenge at all levels of government in Australia and hence the race to find alternative uses for our waste. We believe the golf industry can be a conduit in reducing landfill and linking with the circular economy.

As increasing numbers of players choose to use golf carts, it is quite evident the damage that is caused. Many clubs are feeling the squeeze with turf quality and access around greens and tees being compromised. Most clubs have cart paths that are manageable but often need consistent maintenance, topping up and cause surrounding erosion issues.

Knowing a rubber-crumb product had been used successfully in Europe, we knew our next step was to bring it to Australian courses. And that led to the arrival of Golflex.

While we were searching for funding opportunities for the cart path and bunker trials, Environmental Golf Solutions helped fund an outdoor seating area with Nhill Golf Club. The club in western Victoria has an outdoor undercover area that is very popular and was looking for a floor that was durable, multipurpose and easy to clean. With the help of local tradies, farmers and volunteers, the



Tredding a new path

ATM environmental expert Kate Torgersen explains how used tyres can become new cart paths.

club set about preparation works and setting up for the rubber crumb to be installed.

At least a dozen helpers came to assist and were amazed at how light the rubber crumb was and the ease of installation. A benefit of Golflex is that grounds staff and volunteers can install it, which keeps costs down.

After a fleeting conversation with Ballarat Golf Club superintendent Jeff Powell about some bunker draining issues, EGS Victorian operations manager David Flood suggested using Flexiroc's rubber crumb product. Upon a site meeting at Ballarat Golf Club with management and committee, it was agreed to lay 40 metres of cart path and re-line two of the club's worst draining bunkers with Golflex. This project was funded by Tyre Stewardship Australia.

Jeff and his team prepared the bunkers and cart path ready for Golflex to be laid. Gary flew into Melbourne to oversee the preparation and laying. Fortunately we were lucky to complete both bunkers and the cart path before Melbourne was again thrown into

lockdown. The silver lining of the lockdown was golf not being able to be played, which allowed the bunkers and cart path sufficient time to cure.

The cart path is between the 13th green and 14th tee. The grounds staff at Ballarat prepared it and TurfOne handled the installation with their specialised screeding machine.

"We have a lot of issues with our bunkers not draining, sand washing off the faces in rain events and being contaminated with the clay preventing drainage," Jeff says.

"Our experience with Golflex was surprisingly simple once we cleaned out the bunker and installed new drainage. Golflex was delivered in concrete trucks and shipped on course to the bunker with our Workmans.

"It was easy to install in the bunker, covering the whole bunker at a depth of 40 millimetres and taking about three hours for a bunker. Once the Golflex had set, I was impressed with the porosity of the product and how quickly it drained.

"We are also trialling a 40-metre section



Above: Golflex is particularly beneficial for improving bunker drainage

Right: Ballarat Golf Club is trailing one section of Golflex path, which is performing well so far

of path with the Golflex to see how it stands up to the wear and tear of golf traffic as well as maintenance machinery traffic. To date, it is holding up very well."

Golflex has great potential in the golf/ sporting industry – for golf cart paths, walking tracks, wash-down areas, bunker liner, drainage lines and car parks. The list of possibilities is exciting. The golf world needs to look for opportunities to be part of the solution rather than the problem.

Golflex is a construction product that can be tailored to meet the demands and specifications of the client. Through its innate properties, it is able to flex under force and dissipate the energy through the system, instead of shattering under load without cracking, and returns to its original shape when the load is removed. It is also a fantastic option around tree roots. It is highly porous and provides an effective infiltration system to allow surface water to quickly drain and prevent localised flooding and erosion.



Infiltration rates in field tests on pavement laid by road paver have shown the material to be very effective as a drainage medium.

Laboratory testing to ASTM C1701 Infiltration Rate of In Place Porous Concrete has provided infiltration results as high as 45 metres per hour.

Golflex is a sustainable product made with a large proportion of recycled, non-biodegradable material, helping to minimise the greenhouse gas emission. Traditionally, most of this recycled material is disposed by being burned, which releases toxic gases and greenhouse emissions and contributing to global warming. Golflex's use of recycled material also helps to reduce non-biodegradable landfill, thereby reducing impact

on the ecosystem and wider global climate concerns.

As Golflex is a sustainable product, we believe there are potential opportunities out there for facilities to apply for funding to use the product, reducing your costs while creating a waste management solution for millions of used tyres.

Golflex is the answer for golf clubs across Australia, thanks to the collaborative work of Environmental Golf Solutions, Nhill Golf Club, Ballarat Golf Club, Tyre Stewardship Australia, Flexiroc Australia, TurfOne, Eureka Concrete and Westmix Concrete. These partnerships for the betterment of the game can help make a difference and help golf become the most sustainable sport in the country.



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Culture

What is workplace culture and how can we measure it? As Ben Gibson explains, the secret lies in discretionary effort.

orkplace culture is described as the qualities and dynamics that make up a team and influence how motivated people within it are thinking, acting, and working together towards common goals. Culture is an incredibly important part of an individual's success at work. It is also essential to the success of the team and the leader. A great workplace culture provides everyone with the opportunity to initiate change and to grow on a professional and personal level. A great culture promotes openness, and encourages your team to contribute without judgement or fear of retribution. It creates satisfied team members and increases productivity.

"Leading a team of 45 spread across two maintenance facilities, our culture has to be at the top of my list," says Adam Marchant, the course superintendent at Royal Sydney Golf Club. "Life is too short for the workplace not to be enjoyable, and I take this as my responsibility to instill this in our culture. Maintaining good communication channels and having strong trust among the team is the only way we can manage such a diverse operation."

What I love about the turf industry is that it wears its heart on its sleeve. Turf managers are some of the most resourceful, resilient individuals I have ever met and I think it is these shared experiences and challenges that build relationships beyond your average workplace.

Things as simple as the volume of laughter or chat coming from the lunchroom, the amount of banter in the WhatsApp group and the way team members speak to each other and to their leader are all effective, practical and simple barometers of culture.

The strength of these relationships can

directly influence the safety culture of the team and organisation, and the differentiator is discretionary effort.

DISCRETIONARY EFFORT

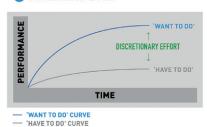
Discretionary effort is the level of effort your team members contribute above the minimum requirement; the energy, ideas and enthusiasm they provide because they want to, not have to.

- Discretionary effort is simple to observe and quick to assess.
- Did the team drop tools at 2.25pm and leave a job unfinished – even though it could have been finished in a few minutes and will take far longer to come back the next day and start again?
- Have senior staff members walked past a standard or level of quality that was questionable and accepted average?
- Has your apprentice not only cleaned their

Left: A strong culture helps unite co-workers for big moments, including a long Australian Open week

own tools but also all the other tools in the rack without being asked, simply because they knew it was the right thing to do?

DISCRETIONARY EFFORT



Discretionary effort stems from an individual's connection to their team, leader, workplace and purpose. If we convey our vision as leaders, build a positive and supportive culture and support our team, we will see discretionary effort rise among the group.

To be clear, this is not saying you must be 'best mates' with everybody, but by having a strong professional relationship built on trust and mutual respect, you can earn discretionary effort from your team and enjoy the benefits that come from an engaged, proactive team.

Culture is the way a team talks about their workplace and leader when they are away from work, plus an individual's willingness to contribute for the benefit of the wider team rather than just their own (covering shifts, offering to help without being asked, etc.).

"To me, leadership and developing culture means you bring others around you up," says Brendan Clark, the course superintendent at Atherton Golf Club in Queensland. "Great leaders have a way of supporting others and making them more productive and effective. It is about putting the right people in the right place at the right time. It's tough, but when you help someone find their 'groove' and you let them stay there, they excel."

CULTURE AND SAFETY IN SPORTS TURF

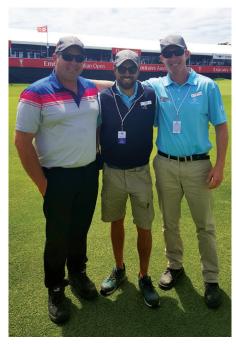
I have been fortunate in the past few years to volunteer at the 2016, 2018 and 2019 Emirates Australian Opens at Royal Sydney, The Lakes and The Australian Golf Clubs, respectively. I absolutely loved the opportunity to get involved (plenty of bunker time!) and am grateful to course superintendents Steve Marsden, Anthony Mills and Phil Beal for helping make it happen.

Working with so many talented turf managers from across Australia and overseas presented a unique insight into the different styles of leadership in the industry.

Steve: very calm, soft-spoken, powerful presence and a strong plan. Well-executed with two talented assistant superintendents in Adam Marchant (current Royal Sydney Golf Club superintendent) and Jake Gibbs (current Royal Canberra Golf Club superintendent).

Anthony: great communicator, happy and positive relationships with all the staff and volunteers. I really respected Anthony for his choice of two very different assistant superintendents in Simon Blagg (current assistant at The Lakes Golf Club) and Aaron Taylor (current superintendent at Cronulla Golf Club).

Phil: clear and confident, almost had an aura around him, but I noticed him pull nearly every single staff member and volunteer aside throughout the tournament to have a quiet conversation or chat about their week. Phil personally delivered the morning tea



The Lakes Golf Club course superintendent Anthony Mills with Simon Blagg and Ben Gibson during the 2018 Australian Open at The Lakes

to all the work teams on the course every morning, which was a brilliant way to establish relationships and strengthen connections. He saw and had a chat with every team member for a few minutes every day.

All three achieved a fantastic result and led effectively with their distinctly different styles.

I love seeing tournament preparation firsthand and particularly the arrival of the volunteers from across the country. For me, a little like speed dating, this is the ultimate "speed culture-building". The leadership team has such a short period of time to build engagement, ensure the volunteers buy into the vision they have established for the tournament, integrate into the team of



Open communication lines across all roles in the golf-course landscape are essential – especially during an Australian Open

permanent staff, get kitted out, trained and understand their roles for the week ahead.

An example that really struck me from the Open in 2018 at The Lakes was the impact of the leadership team at the (very) early morning meetings. With a brief overview and welcome from Anthony, the morning meeting was run by Aaron and Simon together. Aaron factually outlined the day's activities and was clear on the outcomes required for the day. Simon finished with logistics and how the team was going to work together. They made a great team and I can see why Anthony had them in their respective roles. Simon finished his section of the meeting each morning with a motivational or inspirational quote from a wellknown authority to fire up the team and build team culture.

What was really interesting to watch was the change in the group's reaction to these quotes each morning as the week progressed and the group got closer, knew each other a little better, got more comfortable and became a team. For me, an outsider, this was a great barometer of culture among the group – far more powerful than any report from a consultant.

Initially, the quotes generated a little awkward silence, quiet whispers and one or two uncomfortable laughs as many did not know how to react. For Simon, in front of 50 to 100 of his turf-industry peers, this would have taken guts!

I watched avidly as Simon persevered as the week progressed and he gradually got more and more engagement from each quote or phrase. During the course of the week there were such gems as, "Alone, we can do so little, together we can do so much," and, "Find a group of people who challenge and inspire you. Spend a lot of time with them and it will change your life!"



Phil Beal, at the time the course superintendent at The Australian Golf Club, went out of his way to deliver fruit to staff during the 2019 Australian Open

The tail end of the week saw lots of laughter, discussion and banter as a result of his efforts. He reached a pinnacle on the final day of the tournament when the leadership team had the group in such a fever of excitement and engagement that they stood and sang the national anthem at the top of their lungs at 4 o'clock on the Sunday morning.

This is putting yourself out there to lead and inspire the team; a great example of developing culture among a work group. Simon should be commended for his initiative and demonstrating leadership far beyond his experience at the time. He will no doubt chip me for including this example in the article! Awesome stuff.

Importantly, across all three events, leadership styles and teams, worker safety was paramount. It was discussed at the first induction on day one and highlighted throughout the event. Risk and safety controls were emphasised at every morning meeting. Volunteers were not allowed to operate equipment until trained and deemed competent by paid team members – even qualified, career superintendents. Personal sets of Personal Protective Equipment (PPE) were distributed, meaning no one would ever be caught without it and "just do it", and daily debriefs would be held regarding any incidents or near misses.

With great leadership, systems and consultation, the safety and compliance management was seamless and there was complete involvement from all staff and volunteers. It was widely communicated, "That is just how we do things here."

The mutual respect, trust and engaged culture of the teams meant that tasks were completed with no raised eyebrows, while procedures were followed and PPE worn. No cut corners, no quick fixes or shortcuts; everyone was all in due to the respect for the team and outcome they were all trying to achieve.

This carries into teams right across the industry. When leadership, systems and consultation are on point, our observations show that 99 percent of the time the team is engaged, enthusiastic and ready to support any initiative or idea their leaders throw at them because of the mutual respect and trust. Invest in your culture, watch the discretionary effort across your team rise and enjoy the benefits of a happy, healthy and productive work environment.



Beal thanks a staff member during the 2017 Australian Open at The Australian Golf Club

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SierraformGT	Analysis
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Momentum	22-2.2-9.1+1.2Mg+TE
Preseeder	18-9.6-4.1
K Step	06-0-22.4+1.2Mg+TE
AntiStress	15-0-21.6-+Fe
All Season	18-2.6-14.9+1.2Mg+TE
NK Greens	19-0-15.8+1.2Mg+TE

SierraformGT Product Trial

In the picture below (Picture 1) showed the positive effects of two applications of SierraformGT Momentum has on turf colour, quality and density on a Creeping bentgrass (Agrostis stolonifera) green 10 weeks after initial application and 2 weeks after follow-up application.



Picture 2 & 3 below showed increased in turf density over 10 weeks period on the same trail plot. There was a visible increase in turf density, colour and quality of the Creeping bentgrass plots treated with SierraformGT on the greens surface and a decrease in algae growth over the 10 week trial period.

Start of trial	After 10 weeks	
Control of the Contro		
Carlotte St.		
	1. 对一直来至	
	(人名) (基) (基)	
Picture 2	Picture 3	

A SOLUTION FOR CUP DAMAGE



oday's Golf Cup inserts are now available through ASTMA Silver Partner Country Club International. Produced in the US, Today's Golf Cup is an insert that suits any regulation or practice green golf cup and is designed for golfers to retrieve their ball from the cup with minimal contact. It ensures patrons remain COVID-safe and to protect the cup edges when the flagstick remains in when putting. Today's Golf Cup is easy to use, durable, inexpensive and prevents the ball from bouncing out of the cup.

Today's Golf Cup was designed to help golfers and golf courses adjust to the new R&A and USGA rule beginning in 2019 where the flagstick can remain in the hole while putting a ball that's on the green. With this rule change, the majority of golfers today putt with the flagstick in. Consequently, when the ball is retrieved, golfers' hands reach between the flagstick and the hole and end up damaging the edges of the cup. Today's Golf Cup is not only an added benefit to the golf courses, cups don't need to be changed daily, there is less wear and tear on the greens and less maintenance work required. The benefit for golfers is that it gives them the same option to putt with the flagstick in or out and makes it easier to retrieve the ball from the hole.

Several US courses already use Today's Golf Cup inserts, among them Cypress Point, Olympic Club, TPC Harding Park, La Quinta, TPC Sawgrass, Bay Hill Club & Lodge, Hawk's Landing Golf Club and Palmetto Dunes.

CCI sells a pack of 20 Today's Golf Cup inserts from CCI costs \$385. For more information, visit www.countryclub.com.au

In other CCI news, the company recently announced three new additions to its sales team. Mark Smith has started working within

the existing NSW team, while Brock Agnew and Jake Bushell will be positioned in Queensland. While Smith comes from outside the industry, both Agnew and Bushell have sound experience working in different sectors of the market. The team will be focusing their efforts in golf and range hardware, safety fencing and water treatment sales and service. Lance Coventry, also based in Queensland, will be assuming a new role in project management for the group with the delivery of more capital-style obligations being undertaken by the company.

For sales and service the team can be contacted on; NSW: Mark Smith (m) 0422 680 640 (e) msmith@countryclub.com.au. QLD: Brock Agnew (m) 0447 309 721 (e) bagnew@countryclub.com.au. QLD: Jake Bushell (m) 0410 780 430 (e) jbushell@countryclub.com.au

DRASLOVKA SIGNS ON AS ASTMA BRONZE PARTNER

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can be carried out during any refurbishment or renovation on sports fields, golf greens, bowling greens and turf farms. To find out more about Draslovka, visit www.draslovka-services.com.

FORREST JOINS LIVING TURF WA



ASTMA Silver Partner Living Turf has announced the appointment of John Forrest as turf agronomist for its WA operations.

Forrest brings a wealth of qualifications and experience to the turf market coming from his early days as a turf practitioner, then 24 years as a turf and horticultural lecturer, along with 16 years as a horticultural consultant. John is a trusted adviser and mentor to many people in WA, is highly regarded and respected and has strong long-term relationships in the turf industry nationally.

Living Turf managing director Rob Cooper said: "We are thrilled to welcome John and we are looking forward to the value he will bring, in helping us service turf managers in WA's quality focused and sophisticated Turf Market."

Joining Danny Hambleton, Jeff Lane, Tyson Riley and the WA business admin team, John's appointment furthers the rollout of Living Turf's unique offer – which blends technology, product, irrigation and agronomy expertise, for professional turf managers. Forrest can be contacted by email at jforrest@ livingturf.com or by phone on 0457 766 552.

In addition to Forrest's appointment, Living Turf has also secured the services of a number of former Globe Growing Solutions employees. Jeff Bowtell, National Sales & Operations Manager of Globe Australia, and long-serving Newcastle Technical representative, joined Living Turf from July 1 and was joined by prominent territory managers Craig Jones (Newcastle & Hunter), Kevin Booth (Sydney & West), and Luke Clohesy (South Australia).

"Globe Australia served the Australian turf industry for 49 years, and they leave behind a legacy of prominent sales reps, suppliers, and support staff," Cooper says. "We feel privileged to be in the position to offer many of these highly respected people roles in our growing enterprise. They bring industry and product expertise and, through their new partnership with Living Turf, will continue their service to the industry."

National Sales Manager for Living Turf, Ashley Neuendorf added: "It is unprecedented, that such a seismic reshaping of the commercial turf sector occurs. We at Living Turf are humbled and pleased to welcome top-class operators like Jeff, Craig, Kevin and Luke."

"I am just happy to get back to doing what I love most, calling on turf managers in the Newcastle and Hunter region," Bowtell said. "I am also relieved to continue my association with colleagues like Craig, Kevin and Luke, who I have worked so productively with for so many years."

BAYER APPOINTS RYDER TO TERRITORY BDM ROLE



ASTMA Silver Partner Bayer has appointed Wayne Ryder (pictured) to the role of Territory Business Development Manager

(Turf & Ornamentals) QLD/SA/NT with the environmental science business unit based in Brisbane. Ryder comes to Bayer with a well-established background, including turf management roles across a number of high profile SEQ sporting facilities as well as territory sales rep roles with a number of companies, most recently with Nuturf.

"I am extremely happy to join the Turf and Ornamental team at Bayer and look forward to starting this new and exciting role, as well as supporting agent representatives and turf managers across QLD, SA and NT," Ryder said.

Adds James Royal, National Sales and Marketing Manager (Turf & Ornamentals): "Wayne's appointment represents the next step in Bayer's expansion and commitment to field-based personnel, supporting the turf and ornamentals markets in Australia. As a result of this appointment, Craig Burleigh, currently Territory Business Development Manager (Turf & Ornamentals) VIC/SA/WA/TAS/NT, will be able to provide greater focus on Bayer's turf agents and end user customers across VIC, TAS and WA, and Aaron Cachia, currently Territory Business Development Manager (Turf & Ornamentals) NSW/ACT/QLD will refine his

focus to the large and significant territory of NSW/ACT." Ryder can be contacted on 0456 612 490 or email wayne.ryder@bayer.com.

EDDY JOINS TOOLBOX TEAM



The Toolbox Team has announced Stephen Eddy (pictured) has joined their team as a full-time client manager in Victoria. Eddy

arrives with a career in the sports turf and golf industry and has an intimate understanding of the challenges faced by golf clubs and sports turf facilities across Victoria.

"We are stoked that Steve has taken up the opportunity to represent us in Victoria," says Ben Gibson, The Toolbox Team managing director. "He is such a great fit for our team and family of clients. I think it is really important to have industry expertise combined with compliance knowledge as the golf and sports turf industry is so unique."

Adds Eddy: "I have watched the work being done by Ben and The Toolbox Team for a number of years and believe their positive, practical and engaging approach to OHS and environmental compliance sets them apart in the industry. I am excited at the opportunity and the support I can provide The Toolbox Team clients here in Victoria."

Eddy will be based in Melbourne. He can be contacted on 0458 480 430 or steve@ thetoolboxteam.com.au.

FINAL END FOR DARLINGTON



ASTMA Silver Partner Living Turf has farewelled Mike Darlington (pictured) after 10 years with the company. Darlington, who boasts

more than 40 years in the turf industry, spent the past 10 years with Living Turf and officially retired at the start of August. Darlington is well known in the bowling green industry and wider turf community and over the past decade can be credited with helping shape Living Turf's friendly, open and professional culture.

"Through his extensive journey, Mike has seen many changes in the way we manage turf," said Living Turf's Rob Cooper. "He has a firm understanding of where the industry has come from, what's worked, what hasn't and why certain directions are more likely to yield results. We will miss regularly drawing upon Mike's immense bank of knowledge, his willingness to share his wisdom and experience with colleagues and customers alike which made him an asset whose value is difficult to measure. He will be sorely missed."

HG TURF GROUP APPOINTS HUMPHREYS AS NSW MANAGER



HG Turf Group is pleased to announce the appointment of Nathan Humphreys as State Manager, NSW. Nathan will be

responsible for growing HG Turf Group's business in NSW. In 2000 HG Turf Group began operations in NSW, as the turf supplier to the Olympic Stadium, and it currently supplies its hybrid-grass systems to stadiums, sports fields and parks throughout the state.

"We are all excited to have Nathan back in the team," said Hamish Sutherland, Managing Director, HG Turf Group. "With over 20 years of experience, Nathan is an expert when it comes to hybrid grass and sports field constructions. He will play a pivotal role in making hybrid grass understood and available."

Nathan began his turf management career in 1998 in Canberra with Stadium Turf Management. In the 23 years since, he has worked around the globe in the elite sports field management industry, gaining extensive experience in design, construction, renovation and maintenance of turf facilities.



NZGCSA

reetings from New Zealand in the middle of a wild winter. We have experienced the whole gamut of winter this year with a dry start, to severe flooding, tornadoes and carnage in many areas during the past couple of months. Those championing global warming were nowhere to be seen on my golf course when we experienced the heaviest frost in Tauranga for many years. I certainly subscribe to the theory that our weather is experiencing extremes that seem to keep coming. How many times in the past few years have we heard weather experts talking about "One in a Hundred Year" events? Perhaps this is the new normal - do we even know what normal is anymore? I note with interest that our NZ National Institute of Water and Atmospheric Research (NIWA) is currently researching all of its data taken from the past 30 years to try to find what actually is the new normal. We might be surprised by the results.

MANY HANDS HELP AT TE PUKE

In late April it was a pleasure to see Phil Tataurangi interviewing Matt Ellis, course superintendent at Te Puke Golf Club, on Sky TV. Te Puke was asked to host the NZ PGA Championship with only three months' notice of possibly hosting the event and the date confirmed with only eight weeks' preparation time. I spoke to Matt to get an insight into how the event went for him and his team. Te Puke normally has only three full-time staff and some volunteer help from their members. Matt received many offers of help and greenstaff from Riverside, Royal Auckland, Remuera and Mount Maunganui golf clubs were all involved in the preparation before and during the event.

In the week before the tournament. Te Puke received 100 millimetres of rain that washed out paths and bunkers. The extra help Matt received certainly saved a lot of time getting them back into play. Matt is a second-generation greenkeeper - his father Andrew has been greenkeeping for more than 40 years at courses such as Taupo, Waihi and Kinloch. He started Matt in his career with his friend and NZGCSA life member Nigel Llovd. Matt served his apprenticeship at Wairakei Golf Club under Nigel's tutelage before moving to Auckland to work as assistant superintendent at the Grange Golf Club after nine years at Wairakei. Matt continued to hone his craft and learnt a lot from Garth Williams, Grange superintendent. Matt says Garth was particularly good at teaching him man management and budgeting skills, which



NZGCSA Graduate of the Year Alex Neely (centre) with George Flynn (NZGCSA Board Member, left) and Terry Sullivan (Powerturf, right)

definitely provided him with the knowledge to apply for and attain the superintendent role at Te Puke after four years at Grange. The PGA Championship was Matt's first televised golf tournament that he'd prepared a course for, but he has volunteered at the World Cup of Golf at Kingston Heath in Australia. Matt's tournament preparation was surprisingly lighter than expected. He had written a maintenance plan for the event prior to consultation with the PGA but upon speaking with them. Matt said things became easier. The PGA wanted long rough for the event so he didn't mow any rough or green surrounds on the course for the two weeks before the tournament, meaning he could focus on the greens, tees and fairways in particular. Extra fungicide and fertiliser was applied outside of his normal maintenance regime and the result was there for all to see. The course played exceptionally well and Matt and his team should be proud of their efforts.

COMBINING FORCES

In mid-June the NZGCSA and GMANZ (Golf Managers Association of NZ) joined forces to host the first ever Combined Summit and Fine Turf Seminar. The theme of the two-day event was 'Prospering in an Unreal World'. With COVID ever-present, we thought the theme was very apt. The event was first mooted in the middle of COVID-stricken 2020 when the Whole of Golf Conference had to be cancelled because of ongoing lockdowns. Not to be put off, the boards of the respective associations



Allan Turvey (left), winner of the 2021 Distinguished Service Award, with John Spraggs (right)

pledged to host an event this year. With a bit of luck (and some determined organisers), the event went ahead at the Vodafone Events Centre in Auckland. Close to 300 golf course superintendents, golf club managers and trade representatives attended this first-time event. Topics such as mental health and well-being, shared wealth creation to achieve common goals, diversity and inclusion in the workplace, leadership and team dynamics - manager/ superintendent relationships, golf course design and construction and pest trapping and conservation were all presented. With all sessions in the same venue, delegates had the freedom to choose to attend a GMANZtargeted lecture or an NZGCSA one. The cross collaboration worked very well with the feedback from the event well received.

One of the highlights was the NZGCSA Distinguished Service Award being presented to Allan Turvey of Miramar Golf Club. Allan received his award from John Spraggs of Royal Wellington Golf Club. John and the Wellington Golf Course Superintendents Association nominated Allan, who has served at a number of courses in a career spanning more than 40 years. He has been an active member of the Wellington association, serving on countless boards and committees as well as organising and running several conferences and seminars. Allan continues to be involved today and is hugely respected by his peers in Wellington and across the country. A lot of you from 'over the ditch' will know Allan personally through meeting him at various conferences over the years and recognise him as one of life's good guys. Congratulations Allan!

One of the most pleasing aspects of 2021 so far is the re-emergence of our awards program. Following on from Alan's award, we recently presented the 2021 Graduate of the Year Award. The Powerturf-sponsored finals day was held at Pakuranga Golf Club with Titirangi's Alex Neely winning the award from runner-up Tyler O'Leary of Westown Golf Club. Many thanks to Terry Sullivan and Powerturf for their continued sponsorship of this award and NZGCSA life member Peter Boyd for hosting the day at his facility. Well done, Alex!

The last award we are running for 2021, the NZGCSA Parkland Excellence Award, is in its second judging phase and will be announced in October.

> JASON PERKINS PRESIDENT, NZGCSA

NSWGCSA

urrently NSW (mainly Greater Sydney LGAs) is in another COVID lockdown. This our worst so far with all clubhouses closed and golf down to two people per group only. With that said, teetimes are booked out at most golf clubs and the pressure on staff to complete their job safely is high.

On behalf of the NSWGCSA Board of Directors and its members, I would like to thank the ASTMA and especially **Mark Unwin** for his correspondence and updates surrounding the lockdown and work authority. A lot of time has been put in by Mark to assist NSW to continue to stay open to golf and there has been many a late night or weekend phone call or message that he always accepts.

The NSWGCSA had planned to host the Assistant Superintendent Education and Golf Trophy Event at Long Reef Golf Club in August. This will now be postponed and at this stage moved to October.

The Rube Walkerden Golf Trophy and AGM are still scheduled for November 25 at Killara Golf Club, but once again will be a week-by-week/month-by-month situation.

DESERVED ACCOLADES

A big congratulations to **Craig Molloy**, the golf course superintendent at Cypress Lakes Resort, for taking out the ASTMA Superintendent of the Year Award at the recent conference held on the Gold Coast. This is very well deserved for the work Craig has put in since starting at Cypress Lakes. Credit must go to the staff and board at the ASTMA for successfully hosting the conference in very trying times.

Also, a big congratulations to **David Warwick**, former Avondale Golf Club
superintendent and NSWGCSA board
member, for being awarded the Distinguished
Service Award. It's a very big honour for David
and NSW.

A decision has been made to cancel the Annual Golf Industry Awards night that was to be held in conjunction with GolfNSW for this year. This is disappointing but with the current situation around COVID, the right decision was made.

NATHAN BRADBURY PRESIDENT, NSWGCSA

GCSAWA

irstly, I want to thank Mark and the

ASTMA team for a great conference on
the Gold Coast. To put that together
with so much uncertainty was great. And to the
sponsors, trades and delegates who travelled
there, it was good to see so many people.

It was a very wet July here in Perth. If the forecast proved correct, for the last few days of July we will have had rain on 27 days, including 18 in a row, plus some very windy days and pushing towards 300mm for July. That means some very clean sheds, plenty of debris to tidy up and the winter weeds taking over the rough and bunkers with there being no dry and calm days to spray.

Unfortunately the Margaret River
Conference has had to be postponed. With the travel restrictions in place and the amount of movement of supers and trades happening at the moment, it really affected our speaker list.
The new dates have already been booked in for April 3-6, 2022. Hopefully by then we can welcome back all the eastern state guests.

SHANE BAKER PRESIDENT. GCSAWA







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VGCSA 🝮

t was a great start to the year, with the successful dual course education meeting at Portarlington Golf Club and Lonsdale Links followed by our Annual General Meeting at Woodlands Golf Club. Come late May, though, we went back on the COVID rollercoaster of lockdowns and restrictions, causing a series of events to be postponed.

All credit to CEO Mary Napier, whose head must be spinning after all the organising, then in the blink of an eye re-organising of events. With COVID flowing through society so quickly, all we can do as an Association is to continue to plan for events and do our best to reschedule. It is our aim to continue to try to make the best out of a very difficult situation.

If all goes according to plan, the VGCSA July training days are now scheduled for mid to late August: the June VGCSA course staff education meeting is to take place on September 20 at Cranbourne Golf Club and the VGCSA country meeting will be pushed back to a date yet to be determined. Upon initial news of the Victoria/NSW border restrictions, it was necessary to find a Victorian-based regional club to host the meeting. We wish to thank Ballarat Golf Club for their prompt response and assistance. This allowed us to notify members as soon as possible, along with relaunching the meeting program within a short timeframe. In the end, however, the state lockdown followed by

restrictions on density limits would not permit for the meeting to be held in early August.

Let's hope the year ahead offers a more positive scenario. In saying that, the VGCSA is looking ahead to 2022 and is currently in the final stages of planning the annual event calendar with all host clubs soon to be secured. We look forward to launching the program to members later this year.

We also hope everyone across the country has been staying safe during this period and hasn't been too harshly affected by the lockdowns.

SHANE GREENHILL PRESIDENT, VGCSA

GCSAQ Golf Course Superintendents Association of Queensland



ow fantastic was it to see more than 50 members gather for a drink at the Envy Hotel during the ASTMA conference on the Gold Coast?

It was great to see so many familiar and new faces. Congratulations to the ATSMA for putting on such a great event. We always feel spoilt when the conference makes its way to Queensland.

Royal Queensland Golf Club is proud to be hosting the 2021 Australian PGA Championship, from December 2-5. The GCSAQ has had an overwhelming response to a shout-out for volunteers to assist with the preparation of the course for this event. Thank you to everyone who has responded; we are looking forward to a great event.

The Teven Valley Walk and Talk went

ahead on Tuesday, May 11. This event was thoroughly enjoyed by all attendees. Thank you to Nuturf for putting on lunch.

PADDOCK TO PITCH

We are looking forward to the Paddock to Pitch Field Day, which will be hosted by Turf Queensland on August 24. The Paddock to Pitch event is the first event where Turf Queensland (TQ), Sports Turf Association Queensland (STAQ) and the Golf Course Superintendents Association of Queensland (GCSAQ) will come together to provide a day that covers all things sports turf.

The overwhelming support of the associations, members and exhibitors so far has proven to each board how an event like this has been missed. Visit the home page of our website for full details about the event.

Later in the year, we plan to hold Walk and Talk events at Royal Queensland and Eagle Farm as well as a General Manager and Golf Course Superintendent Day.

While several events have been postponed or cancelled due to COVID-19, it is great to see that members continue to support the association when possible.

Although plans and events may be interrupted by the virus for many months to come, we will secure dates and venues and proceed with events when the COVID-19 rules and restrictions allow.

Stay safe everyone.

PAUL McLEAN PRESIDENT, GCSAQ

ON THE MOVE...

LEON BLACKER: From foreman Elanora CC, NSW, to assistant superintendent Manly GC, NSW.

BRENDAN BROWN: From superintendent Neangar Park GC, Vic, to assistant superintendent The Sands Torquay, Vic. DAN COOK: After spending 14 years as director of grounds and property at Elanora CC on Sydney's northern beaches, Cook is heading south of the Harbour Bridge to take over from the outgoing Phil Beal as course superintendent of The Australian Golf Club. Cook will start his new role on October 1, less than eight weeks before the course is scheduled to host the Australian Open for the 22nd occasion during the week of November 22 to 28.

CHAD GILMOUR: From superintendent Chalambar GC, Vic, to superintendent Harden

ALEX GORRIE: Promoted to superintendent Neangar Park Golf Club, Vic, replacing Brendan Brown.

JACKSON JOSEPH: From assistant superintendent Chatswood GC, NSW, to second assistant superintendent Manly GC. NSW.

DYLAN KNIGHT: From superintendent Axedale GC, Vic, to superintendent Gisborne GC, Vic.

TONY McFADYEAN: Resigned as superintendent at Nedlands Golf Club to move to Cockburn ARC (the Fremantle Dockers' training ground).

DAVID PHILLIPS: Resigned as

superintendent Spring Valley GC, Vic, in July. LUKE SLIGAR: Resigned as superintendent

Dunheved GC, NSW.

MATHEW SOLES: From assistant superintendent The Australian GC, NSW, to superintendent Royal Perth GC, WA.

LIAM SPOONER: From superintendent Secret Harbour Golf Links, WA, to superintendent Nedlands GC, WA.

LACHLAN VASSALLO: Elevated to assistant superintendent Kew GC, Vic, replacing former assistant Tim Madder, who has left to pursue a career in the Police Force.

ASTMA CERTIFICATION PROGRAM

Formally recognising the professionalism of sports turf managers and encouraging their investment in continual education and professional development

The ASTMA congratulates the following sports turf managers who have achieved certification and can proudly use the 'Certified Sports Turf Manager' (CSTM) designation after their names...

Dean Bailey Rosanna GC, Vic Shane Baker Mosman Park GC, WA Brett Balloch Anglesea GC, Vic Ed Barraclough Cardinia Beaconhills GC, Vic Mark Bateman Kooringal GC, Vic Tim Bayard Evergreen Turf, Vic **Duncan Begley** Horizons Golf Resort, NSW Nathan Bennett The Royal Adelaide GC, SA John Berthon St Georges Basin CC, NSW Paul Bevan GTS, Qld Shane Bisseker Whitsunday Council, Qld Andrew Boyle GTS, Vic Justin Bradbury Camden GC, NSW Nathan Bradbury Eastlake GC, NSW Harry Brennan Dubbo City Council, NSW Mark Brooks Riversdale GC, Vic Fraser Brown Lake Karrinyup CC, WA Ben Bruzgulis Cronulla GC, NSW Hamish Buckingham Commonwealth GC, Chris Burgess Yarrawonga Mulwala GC, Vic Greg Burgess Northern GC, Vic Jacob Burridge Victoria GC, Vic Jason Bushell Rowes Bay GC, Qld Aaron Cachia Bayer, NSW Patrick Casey Kalgoorlie GC, WA David Cassidy The Cut, WA Brian Cattell Wagga Wagga CC, NSW Peter Cawsey Eastwood GC, Vic Paul Chalmers St Aloysius College, NSW Brenton Clarke Kooyonga GC, SA Dan Cook Elanora CC. NSW Lincoln Coombes RACV Royal Pines, Qld Phillip Cooper GTS, NSW Dion Cope Redland Bay GC, Qld Shaun Cross Byron Bay GC, NSW Joshua Cunningham All Outside, NSW Bruce Davies CIT, ACT Kevin Davis St Margaret's-Berwick GS, Vic Nicholas Douglas Spring Valley GC, Vic Cameron Dunn Woolooware GC, NSW Peter Dunn Federal GC, ACT Ben Evans Ryde TAFE, NSW Tim Fankhauser ASTMA, Vic Peter Fitzgerald Toronto CC, NSW Aaron Fluke NSWGC, NSW Jason Foster Riverway Stadium, Qld

Jason Foulis StrathAyr Group, Vic

Peter Fraser Hervey Bay G&CC, Qld

Patrick Fraser Landscape Solutions, NSW

Tim Allen The National Golf, Belgium

Adam Fry Kooyonga GC, SA Ryan Fury Killara GC, NSW Jake Gibbs Royal Canberra GC, ACT Danny Hack Wellington Shire, Vic Cameron Hall Kew GC, Vic Gareth Hammond Terrey Hills GC, NSW Brendan Hansard Kew CC, NSW Mitch Hayes Brisbane GC, Qld Luke Helm Meadowbrook GC, Qld Tony Hemming Optus Stadium, WA Kirsty Herring Katherine CC, NT Tim Hoskinson Cairns GC, Qld Ian Howell, Bonnie Doon GC, NSW Rhys Hunichen Atlas Golf Services Vic Jay Infanti Eastern GC, Vic Nick Jeffrey Racing Queensland, Qld Mark Jennings Racing Victoria, Vic Steven Johnson Al Mouj Golf, Oman Jason Kelly Royal Fremantle GC, WA Nick Kinley Hartfield CC, WA Dylan Knight Axedale GC, Vic Blaine Knox Beenleigh RSL & GC, Qld Lance Knox Busselton GC, WA Steve Lalor Natadola Bay GC, Fiji Kane Latham Elanora CC, NSW Nick Launer Metropolitan GC, Vic Ben Lavender Newington College, NSW Jason Lavender Riverlakes GC, Qld Dean Lenertz St Michael's GC, NSW Dean Lewis Thurgoona CC, NSW Josh Leyland Box Hill GC, Vic Nathan Lindsay Hamilton Island GC, Qld Peter Lonergan Coolangatta-Tweed Heads Ben Lucas Tocumwal GC, NSW Toby Lumsden ICC Academy, UAE Bruce Macphee ASTMA, Vic Dave Mason Metropolitan GC, Vic

Colin Morrison Flinders GC, Vic Damien Murrell Easts Leisure & GC, NSW John Nelson Grafton District GC, NSW James Newell Magenta Shores G&CC, NSW Kelvin Nicholson Palmer Coolum Resort, Qld Matthew Oliver QSAC, Qld Shaun Page Southern GC, Vic Luke Partridge Manly GC, NSW Mick Pascoe Sports Turf Solutions, Vietnam Ben Payne Peninsula-Kingswood CGC, Vic Michael Pearce RACV Torquay GC, Vic Keegan Powell The Sands Torquay, Vic Luke Primus Deakin University, Vic Scott Prince Evergreen Turf Vic Shaun Pritchard PEGS, Vic Justin Rankin Kooindah Waters GC, NSW Marc Raymond Patterson River GC, Vic Scott Reid Launceston GC, Tas Lachlan Ridgwell Blacktown ISP, NSW Brett Saggus BRG Legend Hill, Vietnam Wesley Saunders Dunblane New GC. UK Robert Savedra Wesley College, Vic Travis Scott Riversdale GC, Vic Bill Shuck Evergreen Turf, Vic Cameron Smith Bonnie Doon GC, NSW Gary Smith Commercial Albury GC, NSW Thomas Smith Waterford Valley GC, Vic Mathew Soles The Australian GC, NSW Clinton Southorn Abu Dhabi GC, UAE John Spraggs Royal Wellington GC, NZ Daniel Stack Windaroo Lakes GC. Qld Lee Strutt Les Bordes International, France David Sutherland The Ridge GC, NSW Lee Sutherland St Michael's GC, NSW Shay Tasker Carnarvon GC, NSW Aaron Taylor The Lakes GC, NSW Heath Taylor Blacktown ISP, NSW Nigel Taylor Sports Turf Solutions, Malaysia Shaun Taylor Southern GC, Vic David Thomson Bermagui CC, NSW Ben Tilley Headland GC, Qld Steve Tuckett ASTMA, Vic Lee Veal Mt Derrimut G&CC, Vic Michael Vozzo Maroondah CC, Vic Earl Warmington Newcastle GC, NSW Tim Warren Glenelg GC, SA Rob Weiks Hoiana Shores GC, Vietnam Shannon White Baileys Fertilisers, WA George Widdowson Geelong GC, Vic Darren Wilson Wembley GC, WA Tim Wright K&B Adams, Vic

Garry McClymont Twin Waters GC, Qld

Paul McLean Sanctuary Cove G&CC, Qld

Keith McPhee Maitland City Council, NSW

Brett Merrell Ras Al Hamra GC, Oman

Braydan Millar Rowes Bay GC, Qld

Ben Mills Hawks Nest GC, NSW

Daniel Metcalfe Beverley Park GC, NSW

Craig Molloy Cypress Lakes Resort, NSW

Tony McFadyean Nedlands GC, WA

Peter McNamara Brisbane GC, QI

Ryan McNamara Rosanna GC, Vic

Michael McMahon GTS, Qld

Jack Micans Manly GC, NSW

NSWBGA



he NSWBGA State Championship week was hosted by South Tamworth Bowling Club in late May with 50 greenkeepers from across NSW and Queensland in attendance. The high numbers were great considering there was some trepidation about moving the event of the coast to an inland area. To those who could attend, a great time was had as always with friendships refreshed and new ones made.

The talk across the four days of the event was how the standard of bowls was some of the highest quality seen in recent memory, with many preliminary games and just about all semi-finals and finals games decided in the final one or two ends.

Unfortunately, much of NSW is in lockdown again. Unlike many golf courses, bowling clubs across the Sydney Metro area closed and are not open for essential exercise, forcing most staff into reduced hours or taking leave.

Club play schedules were jam-packed as clubs and Bowls NSW attempted to catch up on missed/deferred events from 2020 along with completing all 2021 events. This will once again cause a delay and loss of revenue for all clubs.

One of those events to be cancelled once again is the NSWBGA Peter Mobbs Shield.

The event set down for Halekulani BC was

also due to be the venue for the presentation of the 2021 Living Turf Greenkeeper of the Year Award. With some nominees still awaiting inspections, this will award will be finalised at a later date after inspections are completed.

The 2021 State conference set down for early August was also cancelled and we will look at organising a smaller education and trade day later in the year.

The NSWBGA would like to say a big thank you to one of our longest serving and favourite sales representatives, **Mike Darlington**. Mike wound up the "Technical Talks" and a fantastic career in the turf industry at the end of July. Mike has serviced bowling clubs up and down the east coast for the past 40 years, starting off with Maxwell & Kemp and, for the past 10 years, Living Turf. Our association wishes Mike all the best for his retirement. He's looking forward to spending time with his family and I'm sure he'll still be calling on a few greenkeepers across the state on his travels for a coffee and a chat.

Remember to check in on your fellow greenkeepers during these difficult times and let's hope we get back on the greens soon.

RESULTS

Singles winner: Ben Morthorpe Runner-up: Shannon White Pairs winners: Brent Norman & Shannon White

Runners-up: Mitch McDonnell & Hemi Palmer Plate Pairs winners: Adam Moffit & Adam Webb

Runners-up: Dave Hukins & Col McPherson Two raffles were run across the event with the following results:

Final 8 singles raffle: Adam Webb \$500 Anthony Minihan \$250

General raffle:

1st Bowls Taylor GTRs: Dave Hukins 2nd Taylor bowls bag: Luke Wade 3rd \$50 gift voucher: Luke Wade 4th \$25 gift voucher: Matt Keough 5th \$25 gift voucher: Smokey Dawson Lucky door prize: Ditch Scrape donated by Lawford Engineering: Lee Johnson

MEMBERSHIPS

Memberships are now due, **Rod Crean** is encouraging as many members as possible do their renewals through the Team App that can be downloaded onto most smartphones. There several benefits to this, with the app doubling as a communication platform and store where association apparel can be purchased.

MICK WOODS PRESIDENT, NSWBGA

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We are open for business. All our service centres remain open, to continue doing everything we can to keep your business on the move.

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As we do this, protecting the health and wellbeing of all our customers, team members, and the communities we operate in, remains paramount. We will continue to do our best to serve our communities' needs during this difficult time.













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