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Turfgrass



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MANAGEMENT JOURNAL

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for Aussie invasion

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Subterranean menace

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Australian Turfgrass
 MANAGEMENT JOURNAL



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COVER

Royal Wellington Golf Club, NZ: The 5th (and number one stroke hole) at Royal Wellington Golf Club, host of the 2018 Toro AGCSA Golf Championship on 24 June.
Photo: Courtesy of RWGC



PHOTO: DAVID BRADLEY/RWGC

LEAD STORY: Historic Heretaunga - Royal Wellington Golf Club

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Royal Wellington Golf Club has had a long and prestigious history in the fabric of New Zealand golf. This June, it adds a little Trans-Tasman slice to that when it becomes the first overseas course to host the hotly contested Toro AGCSA Golf Championship. ATM editor Brett Robinson catches up with one of New Zealand's most respected and experienced superintendents John Spraggs to get an insight into Royal Wellington, his maintenance operations, the course's recent remodeling and some of the challenges and issues facing our New Zealand superintendent counterparts.

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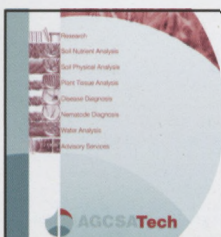
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In a first for the Australian industry, the annual turfgrass conference heads to New Zealand! ATM previews the inaugural Australasian Turfgrass Conference and Trade Exhibition to be staged at TSB Arena in Wellington from 24-29 June.



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Brett Balloch (AGCSA); Gary Beehag; Simon Bourne (GCSAWA); Andrew Cannon (Strathfield GC); Chris Chapman (STA NSW); Bentley Conn (Victoria GC); Vicki Crowe (PGA of Australia); Peter Donkers (Long Reef GC); Dan Gardner (Swan Hill LT&CC); Brendan Hansard (Kew CC); Mal Harris (Northbridge GC); Paul Locke (City of Boroondara); Paul McLean (GCSAQ); Terry Muir (epar); John Neylan (Turfgrass Consulting and Research); Mark Parker (Concord GC); Barry Proctor (VGCSA); John Spraggs (Royal Wellington GC, NZ); STA Victoria; Shay Tasker (Carnarvon GC); Kate Torgersen (Environmental Golf Solutions); Mark Unwin (AGCSA); Jim Vaughan (Turf Queensland); James Wilcher (Golf by Design); Jenny Zadro (Turf Australia); 2018 AGCSA FTMI delegates and finalists of the 2018 AGCSA Graduate of the Year Award.

Head and shoulders above all

He was a giant of a man both physically and mentally and he totally changed the face of turfgrass research during his lifetime. Those were the words of Australia's own turf industry doyen Peter McMaugh after the industry learnt of the sad passing of Dr James Beard, who died on 14 May 2018 aged 82.

The global turf management community collectively gasped when news filtered through that the great man had checked out. Dr Beard's influence on a generation of superintendents, turf managers, students and researchers the world over was simply profound and the body of work he amassed over six decades was nothing short of staggering. He contributed more than 650 scientific and technical papers as well as some of industry's seminal texts. The 1973 publication 'Turfgrass: Science and Culture' and the follow-up 'Turf Management for Golf Courses' are still affectionately referred to as 'bibles', while he was also a founder of the International Turfgrass Society (ITS) which is still going strong some 50 years on.

It was at one of these early ITS research conferences that McMaugh met Dr Beard for the first time. They would immediately hit it off and became lifelong friends and collaborators. It was McMaugh who convinced Dr Beard to make his first visit to Australia for the 4th National Turfgrass Conference on the Gold Coast in 1976. Dr Beard would venture Down Under on two further occasions (in 1986 and 1988) to impart his knowledge and wisdom on Australian practitioners who had rarely been exposed to such thinking before.

"Jim changed the whole of turfgrass science from a fairly mundane agronomic approach to a highly scientific, plant physiological approach," states McMaugh. "He was head and shoulders above everyone else in the US at that time and that's why I went to a lot of trouble to get him here. He gave Australian turf managers totally new concepts of how to manage turf. Some of the research he did was totally ground-breaking, particularly in the field of warm-season grasses. I don't think we'll ever see his like again, certainly not in my lifetime."

Although never meeting the man personally, I was fortunate enough to have semi-regular contact with Dr Beard in my role with ATM. One of his great legacies and something he devoted himself unstintingly to in latter years, was sourcing and procuring one of the most comprehensive collections of turfgrass publications and periodicals. Along with the likes of McMaugh, Gary Beehag, David Aldous (dec.), Bill Casimaty and Don Loch, the AGCSA helped to furnish Dr Beard with many Australian publications from over the years.

The end result was the 2014 publication of 'Turfgrass History and Literature'. Compiled with the assistance of wife Harriet and son James, it was Dr Beard's final gift to an industry he helped transform. At 647-pages, the book is a stunning chronicle of the history of turfgrass evolution and development and provides a bibliography of worldwide turfgrass authors and publications, some dating back as far as 1892.

In the post-conference edition of ATM – Volume 20.4 – we will look back at the legacy Dr Beard has left and with the help of members of the Australian turf industry, such as Peter and Gary, will paint a picture of just how profound his influence was.

No doubt there will be many memories recounted of Dr Beard when the industry gathers shortly for the inaugural Australasian Turfgrass Conference. I personally cannot wait to get across to Wellington and catch up the fantastic cohort of Kiwi turf managers. One of those is Royal Wellington Golf Club superintendent John Spraggs, who I had the great privilege of catching up with for this edition's lead story. He's a ripping bloke – even if he does support the Waikato Chiefs – and in true trans-Tasman spirit he is eagerly anticipating the Aussie invasion and the banter that will ensue. I look forward to seeing you all in Aotearoa...



Brett Robinson

Brett Robinson, Editor

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The AGCSA's 'Thank a Superintendent Week' initiative in May proved a great success



The largest turf event in Australia and New Zealand is almost upon us with the AGCSA team focusing efforts over the past few months on planning and preparation for the inaugural **Australasian Turfgrass Conference and Trade Exhibition** in Wellington, New Zealand (24-29 June).

In this issue of ATM we've given you a quick look at some of the highlights of the conference, including information on the number of leading turf professionals from Australia and New Zealand who will be presenting throughout the week. Alongside presentations from local researchers and professionals, the line-up also includes a number of industry experts from the USA, Asia and the UK, including keynote speakers **Professor Scott McElroy** (Auburn University, USA) and **Andrew Johnston** (Sentosa Golf Club, Singapore).

In addition, we outline some of the exciting product and service releases happening during the trade exhibition. I encourage you all to spend a few hours at the conference visiting the trade exhibition to see some of these first-hand and support the organisations that support your association. Also, keep an eye out for some exciting news regarding AGCSATech services and be sure to stop by the dedicated stand.

PARTNERSHIPS AND INITIATIVES

In late April, the AGCSA announced a partnership with epar to launch the **Golf Environment and Safety Compliance Initiative**. This partnership will be used to fund research projects and educational bursaries, as well as assist smaller clubs and turf facilities in developing environment, health and safety (EHS) compliance systems. If you are looking to develop an EHS system for your facility, contact the AGCSA and we'll get the process started.

The partnership also forms the basis for the AGCSA to facilitate the development of an online Golf Environment and Safety Compliance Portal. This will provide AGCSA members (along with all other state associations) with the latest news, legislation updates, alerts, research and case studies relating to compliance and risk management.

A few weeks following the compliance initiative announcement, from 14-20 May the AGCSA conducted the very first **'Thank a Superintendent Week'**. The week was designed to drive awareness and recognition of the great contribution golf course superintendents and their teams make to the game of golf in Australia.

We were thrilled with the coverage this initiative received from Australian golfing media outlets, with information appearing in print, websites and social media, as well as being supported by golfing associations right across Australia. Further, the volume of messages of recognition for superintendents and their teams throughout the week greatly exceeded our initial forecasts for the campaign.

Judging by the feedback received, for many turf professionals this initiative provided the perfect platform for clubs, members and guests to say thanks for the many hours and the passion that course and turf management teams put in to managing their facilities. It was a great result and we can confirm that it will become an annual event on the Australian golfing calendar.

NEW-LOOK AGCSA WEBSITE

Largely in the background, the AGCSA has also been undertaking a significant piece of work over the past six months around the development of a new website and member management portal, which launched in late May. This new portal allows



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the AGCSA to work closer with state associations in sharing and supporting events, resources and information, in addition to significantly expanding the range of benefits that the AGCSA is able to provide to members.

One new member benefit I can provide an early outline of relates to expanded benefits for being a part of the AGCSA. Starting in July, we will be launching a tailored **AGCSA Member Benefits Program**, providing access to a wide range of discounted products and services – both professionally and personally. More information will be available via the website following the launch of the programme at the 2018 conference.

FAIR WORK SUBMISSION

Finally, an update on the proposal to amend industry employment Awards put to the Fair Work Commission. This is an important issue for the whole of the turf industry, not only AGCSA members. It is for this reason that the AGCSA has met and consulted with a range of turf industry bodies and is acting on behalf of members from these associations in presenting a response – from a united turf industry.

Our recent survey, which attracted a strong response rate from turf professionals, highlighted the significance of this issue and has been paramount in forming our response to the Commission. The AGCSA submitted a statement for submission during the first week of May, with the next step in the process being the Commission hearing in Sydney, scheduled for the first two weeks of July where the AGCSA will be representing the turf associations.

Again, while no changes are possible to any Awards until a final determination has been made by the Commission, we will continue to keep members updated as much as possible through communications moving toward the July hearing.

I hope you enjoy this conference edition of ATM and as the upcoming Australasian Turfgrass Conference will be my first since joining the AGCSA, I looking forward to catching up with as many members as possible in Wellington. 🙏

CORRECTION

In the feature article '**Bonville blows them away**' (p30-36, **Australian Turfgrass Management Journal, Volume 20.2 – March-April 2018**), we incorrectly referred to Harley Copeland as superintendent of Woolgoolga RSL Golf Club. Steve Geyson is in fact the superintendent, Copeland is a qualified turf technician of some 17 years' experience. ATM and the AGCSA apologises for the error and any confusion or embarrassment that may have resulted.



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Historic Heretaunga

Royal Wellington Golf Club has a long and proud history in New Zealand golf and this June it adds another chapter by becoming the first international course to host the Toro AGCSA Golf Championship. ATM editor Brett Robinson catches up with highly respected course manager John Spraggs to get an insight into the course, its recent remodelling and his exacting maintenance operations.



Between 2011 and 2013, Royal Wellington Golf Club underwent a major transformation. A new-look championship 18 - the 'Heretaunga course' - was constructed which included four brand new holes including the par five 4th pictured

Pirongia Golf Club. Ever heard of it? For the vast majority of Australian Turfgrass Management readers that name will probably mean absolutely nothing. For NZGCSA members, some might have heard of it but only a few would be able to tell you exactly where it is.

A quick geography lesson then if you will. For the Kiwis, Pirongia is in the heart of the mighty Waikato, 12 kilometres west of Te Awamutu and half way along the back road between Ngaruawahia and Otorohanga. Sweet as... For the benefit of Aussie readers - who are probably still trying to pronounce 'Pirongia' - it's about two hours south of Auckland... Google Maps is your friend.

Why on earth are we talking about a small rural golf course with a membership of no more than a few hundred? Well, just ask one of New Zealand's most experienced golf course superintendents John Spraggs, for it was there that his journey in golf began some five decades ago. It's a world away from where he finds himself now - as course superintendent of Royal Wellington Golf Club, one of New Zealand's most exclusive and historic establishments - but Pirongia still holds a special place in the heart of this proud 'Mooloo' man.

A native of Te Awamutu - again, for the benefit of Aussie readers, Te Awamutu is famous as being the home town of Tim and Neil Finn, of Split Enz



PHOTOS COURTESY OF ROYAL WELLINGTON GOLF CLUB ▶

MAY/JUNE 2018

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◀ The approach to Royal Wellington's closing hole. As part of the recent remodelling, 18 greens and tee complexes were built, while the bunkers and surrounds were significantly reworked to provide a more rustic natural look

and Crowded House fame – Spraggs grew up on the family dairy farm. The Waikato region, of which Te Awamutu is part of, is renowned as one of New Zealand's prime intensive agricultural districts and, just like his father and grandfather before, by the age of 10 Spraggs was up at the crack of dawn every day milking cows.

As a kid growing up in rural Waikato in the 1960s and 1970s you either played rugby union or you played rugby union. If you didn't play rugby union, well, that simply wasn't an option. Fortunately for Spraggs, he was blessed with tall genes and was a perfect specimen to play lock forward. For much of his teenage years he could be found emulating All Black heroes of the day, such as the legendary Colin 'Pinetree' Meads, and schooling himself in the dark art of tight five politics. However, it was another sport that would grab Spraggs' attention.

His father was a regular at Pirongia Golf Club and was on the committee there. When the young Spraggs wasn't working on the dairy farm or playing rugby, he was with his dad at the golf club helping out. In those days Pirongia Golf Club was maintained by an efficient and loyal flock of sheep and one of Spraggs' earliest and fondest memories of golf is erecting and pulling down the protective fences to keep the sheep off the greens.

Spraggs fell in love with the game of golf and quickly became a good player, but it never occurred

to him to work on a golf course. He was destined for a life on the farm until one of his childhood mates got a job as a greenkeeper at a golf course in Hamilton, about 30 minutes north of Te Awamutu. It just so happened that at the same time – we are talking 1978 here – a position came up at Hamilton Golf Club under head greenkeeper Laurie Stubbing. Spraggs was put on and spent four years there and knew he had found his calling.

A BIT OF LUCK, A BIT OF PLANNING

With a solid grounding under Stubbing, Spraggs then dipped his toe in the water and headed to New Plymouth in 1982 to take on his first superintendent gig at Westown Golf Club. He was just into his 20s and couldn't have picked a better spot. The Taranaki region's fertile soils are perfect for growing turf and to boot he had one of New Zealand's foremost superintendents, Nigel Lloyd, working down the road at Inglewood Golf Club. Lloyd, who later in his career was bestowed NZGCSA life membership, was a constant source of advice and counsel for the fledgling superintendent.

Off the course it was also a life-changing move as no sooner had he arrived there Spraggs met his wife-to-be Denise. Their honeymoon was spent at the picturesque seaside township of Mt Maunganui, on the east coast of the North Island, and six months later, in 1985, Spraggs found himself as course superintendent at the 'Mount' and a week out from hosting his first New Zealand PGA Championship.

Spraggs would go on to spend seven enjoyable years at Mt Maunganui, transforming the layout through a significant tree removal programme. It was also a great upbringing for sons Mark and Brendan who were born during his time there. However, Spraggs then did something that perplexed many of his peers – he moved to Wellington and a role as superintendent at Hutt Golf Club in the Hutt Valley.

"A lot of people thought I was mad," laughs Spraggs, who landed there in 1992. "Why would you leave the Mount to live in Wellington, especially when we had a great operation, a great climate and a great lifestyle? But I semi-planned it I guess.

"I had always loved Royal Wellington from when I first saw the place back in the late 1970s. I have a passion for the game and its traditions and Royal Wellington had always appealed to me. I fell in love with the landscape, the setting and the traditions of the club and I knew that I had to get closer if I was to ever get a chance of one day working there.

"I guess I took a conscious step sideways, or maybe even backwards, by going to the Hutt Golf Club. Don't get me wrong, it was still a really good job. It was an A-grade course, but it was in Wellington and a lot of my peers questioned my decision. But I knew if I could produce the surfaces at Hutt Golf Club, then that would put me in good stead if the Royal Wellington job ever came up."



John Spraggs, pictured right during last year's Asia Pacific Amateur Championship, has notched up a career that has spanned four decades, including the past 13 as course manager at Royal Wellington

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CONTINUED FROM PAGE 8

And 13 years later, in 2005, it finally did. With the club looking for a different direction, Royal Wellington advertised for a new course manager and Spraggs, a board member of the NZGCSA at the time, duly found himself appointed to the role he had for so long coveted. Such a role at one of New Zealand's most prestigious clubs rarely comes around and Spraggs found himself vying for it alongside many of his close friends. But it was ultimately his and he was over the moon.

By no means, however, was his time at Hutt Golf Club just spent idly waiting for the Royal Wellington job to come up. During his tenure there he built six new greens, a number of bunker and tee complexes and on nine occasions reinstated the course after major floods. But moving 10km up the Hutt Valley to Royal Wellington, it opened up a new chapter

for Spraggs, one that has proved to be perhaps the most productive and rewarding of his career.

ROYAL REMODEL

Spraggs has achieved much over his four-decade turf management career but none probably quite as big as the remodelling of Royal Wellington between 2011 and 2013. When Spraggs arrived at the club six years earlier, it was all set to embark on master plan works to transform the 27-hole parkland style course which then comprised a championship 18 and short 'inner nine' (the inner nine was constructed when the club acquired additional land in the 1970s).

Club captain of the time Peter Cutfield, who is now the current day president, was a key driver behind the redevelopment and with Spraggs on board entrusted him with shortlisting architect submissions. The club eventually appointed Michael Clayton whose layout showed a lot of promise. However, as things progressed, the members balked at the Australian's desire to remove a large number of trees and it was eventually thrown out.

Redevelopment plans were shelved for the next couple of years, but that all changed when, somewhat ironically, the club milled a 15 hectare stand of maturing pine forest on the club's river boundary. As well as netting the club a tidy financial gain, it opened up a valuable track of land and new vistas which provided impetus for getting the redevelopment back on the agenda. The club duly engaged the services of Turner Macpherson Golf Design, headed by former Kiwi pro golfer Greg Turner, to come up with a new masterplan, which was ultimately approved by the members.

Starting on 1 February 2011, the redevelopment would see the construction of four new holes (4, 5, 7 and 14) on the cleared land. Those four new holes enabled the existing front nine and the short inner nine holes to be reworked and together they formed the new championship 18, what is now known as the 'Heretaunga' course (named after the suburb where the course resides). The existing back nine was left untouched and is now known as the 'Terrace' nine.

It was a massive undertaking and the Royal Wellington team played a significant role throughout the redevelopment, in addition to maintaining 18 holes of golf for play at all times. They prepped the site for contractors TIC Projects who undertook the bulk earthworks and final shaping. They then carried out the final rake and prep before seeding all of the new surfaces.

In total, including the four new holes, 18 new greens and tee complexes were reconstructed. The greens were constructed using a slightly modified USGA spec – 300mm sand profile overlaying a 100mm deep 6mm-chip drainage carpet with porous pipe trenched into the base. A 2.0mm sand (with no amendments) was sourced just south of Auckland and railed down. All bunkers were reconstructed with fescues around the lips and tongues providing a wonderful rugged natural look.

KEEPING IT IN THE FAMILY

You'd be hard pressed to find someone more passionate about the game of golf than Royal Wellington Golf Club superintendent John Spraggs. Over a career that has already stretched more than four decades, the 57-year-old has prepped courses for numerous major tournaments, overseen significant course remodelling projects and served an incredible 21 years on the executive of the NZGCSA.

And it's not just in turf management where Spraggs has carved himself a unique niche. For the past 10 years, Spraggs has been on New Zealand Golf's men's teams selection panel and will shortly name his fifth Eisenhower Trophy team to represent the Silver Fern at the 2018 World Amateur Teams Championship in Ireland this August.

In addition to his national role, Spraggs is also convener of the selection panel for Wellington Golf, where he is responsible for overseeing all of the province's representative golf teams. He has been convenor for the past four years and come the Toro Interprovincial Golf Series, New Zealand's primary amateur teams competition, Spraggs will be on the bag for one of Wellington's leading amateurs. As Spraggs says, such roles are his way of giving back to the grass roots of golf and to a game which has given him so much over the years.

Despite immersing himself in all facets of golf, ask Spraggs what has been one of the more rewarding aspects of his journey to date and it has been seeing his three sons – Mark, Brendan and Matthew

– all follow in his footsteps and forge successful careers as superintendents and greenkeepers.

Indeed, the Spraggs name is now synonymous in greenkeeping circles on both sides of the Tasman. Eldest son Mark, who trained as an apprentice under his father while he was at Hutt Golf Club, is currently superintendent at Club Taree on the NSW Mid North Coast. Middle son Brendan joined Royal Wellington as an apprentice shortly after dad started his tenure as course manager and is now one of his qualified staff there.

And youngest son Matthew, arguably the best golfer of the lot, completed his apprenticeship at Boulcott Heritage Farm Golf Club (formerly Hutt Golf Club) and 18 months ago took on his first superintendent posting at Karori Golf Club, which resides over the hills to the west of the Wellington CBD.

"It was never supposed to be a dynasty," laughs Spraggs when asked if he planned it like that. "I guess the boys got the golf bug too and love the game just as much as I do. I guess it was almost a logical progression for them to follow into the industry given that I was always heavily involved in the golf clubs I worked for. I even trained a couple of them!"

"They all play the game very well and we are super competitive when we get together. It's great to reconnect when you are walking the fairways with them and invariably the discussions will turn to turf. They have an inquisitive nature, just like their old man, and I couldn't be more proud of what they have all achieved."

A BENT FOR CHANGE

From an agronomic perspective, the redevelopment afforded Spraggs the opportunity to change turf varieties on Royal Wellington's greens and, as it transpired, tees. As Spraggs quips, New Zealand is 'Poa central' and although they were once Egmont browntop, over time Royal Wellington's greens had reverted to *Poa annua*.

Always the innovator and willing to give things a crack, Spraggs had a nagging desire for Royal Wellington's surfaces to have a point of difference. As a keen golfer himself, he wanted to be able to provide his members with the superior putting surfaces that creeping bentgrass afforded and thus began a quest to find a suitable variety. After plenty of searching and trial work he found it – T1.

The T1 option came about after Spraggs ventured to the US in 2009 while his eldest son Mark was interning at Pine Valley. While there he visited a number of clubs, among them Merion and Baltusrol, and discussed T1's potential with superintendents Matt Schafer and Mark Kuhns. At the time a number of courses were overseeding T1 on their tee boxes, while Kuhns had interseeded T1 on the Upper Course at Baltusrol with impressive results.

Backed up by some promising trial data which had demonstrated the T1's ability to make noticeable visible gains against *Poa*, once back home Spraggs set up some trial plots. Over a two-year period prior to the redevelopment he put it through its paces and discovered it thrived under local conditions. T1 would end up being used across both greens and tees as part of the redevelopment, with Royal Wellington becoming the first course in New Zealand to use the variety to such an extent.

"Six years on and we have absolutely no regrets," says Spraggs of his decision to go with T1. "We will always have our battles with *Poa annua* here – it's *Poa* central – but the T1 continues to perform well and is holding its own with a little help from paclobutrazol. We have about 20-30 per cent *Poa*, but we do make inroads into it during the summer.



The problem we have is that our fairways are 80-90 per cent *Poa*, but we have just embarked on a long-term programme to hopefully reduce the invasion."

Indeed, starting this March Spraggs kicked off an ambitious project to convert the Royal Wellington fairways to colonial bentgrass. Maintaining a consistent surface on the fairways has become increasingly challenging in a warming climate, especially in summer, and it's Spraggs' desire to have a surface that will stand up better, in addition to addressing the issue of *Poa* ingress onto the greens.

Last summer Spraggs let the *Poa* in the fairways melt out before drill and drop seeding colonial bentgrass into those voids before the *Poa* had a chance to regenerate. This September he'll start regular herbicide treatments to knock more *Poa* out and continue seeding. Spraggs is under no illusions it will be a lengthy process, but is hopeful that in five years' time the club will have far more manageable, and consistent, fairways during summer.

INTENSIVE REGIMES

The quest to continually refine and improve the playing surfaces, along with the changes to the course via the redevelopment, has certainly sparked a renaissance of sorts for Royal Wellington. Fifteen

During his tenure as course manager, Spraggs has seen player rounds at Royal Wellington increase to between 35,000 and 40,000 a year from just 5000 15 years ago



As part of the redevelopment, the Royal Wellington greens were converted from *Poa annua* to T1 creeping bentgrass. Pictured is the 5th hole which was one of the four new holes constructed



The beautiful natural setting of Royal Wellington's par three 8th, the shortest hole on the card



Royal Wellington hosted the 2017 Asia Pacific Amateur Championship last October

Spraggs has just embarked on a major five-year project to convert the Royal Wellington fairways from *Poa annua* to colonial bentgrass. Pictured is the 10th



years ago the club was lucky to register 5000 rounds of golf per year, with members simply able to turn up and walk straight on to the first tee. All that has changed and the club now pushes through between 35,000 and 40,000 rounds per annum.

Always a golfer, Spraggs is delighted to see such numbers enjoying the course, but it does place added pressure on his maintenance regimes. Royal Wellington is one of the few courses in NZ which walk-mows greens, tees, collars and approaches (greens are either cut or rolled every day) and with a crew of just 12 it is often quite the exercise.

While such maintenance regimes are exacting and befitting the status of a club such as Royal Wellington, they aren't a patch on renovation practices. With heavy, silty clay soils which easily wet up in winter, combined with cool-season turf varieties which love to thatch up, Spraggs employs what can only be described as an aggressive aeration programme.

"It's pretty intensive," explains Spraggs. "We core the greens three times a year – April, September and December – with 5/8" hollow tines and between April and September will also put some 1/4" solids across to vent the surface and keep them breathing. On top of that is frequent sand topdressing and dusting every two to three weeks during the summer and every three to four weeks in the cooler months.

"We pedestrian core the fairways four times a year and the first cut of rough twice a year. We also have a large Verti-Drain which we put across the fairways twice a year. And the tees are cored three times a year. It sounds like a lot, and it is, but it's the only way we can keep the porosity levels up in this place and keep the organic matter levels manageable. That's the downside of having wall-to-wall cool-season grasses – they develop a lot of thatch pretty quick.

"As part of the fairway conversion we are also embarking on high applications of gypsum to improve the soil structure. We have 32 tonnes arriving the second week of June so hopefully it'll be gone by the time the AGCSA tournament arrives!"

AUSSIE INVASION

Spraggs has hosted numerous tournaments during his long career – a couple of NZ PGA Championships, NZ Amateur Championships and last October's Asia Pacific Amateur Championship – but nothing quite as unique as preparing his course for 108 fellow superintendents and an 'Australian' national championship. Yet come 24 June, Royal Wellington will add that slightly quirky fact to its history books when it becomes the first overseas course to host the Toro AGCSA Golf Championship.

Spraggs, ever the consummate host, is looking forward immensely to having his trans-Tasman counterparts walk his patch of turf, but is even more excited about the fact that the Australian and New Zealand industries are uniting in the days following for the inaugural Australasian Turfgrass Conference.

"I'm so happy that the conference is coming to New Zealand," says Spraggs, who was on the NZGCSA board for 21 years. "I remember having the discussion in the early days when I was on the NZ board with the likes of Euan Laird, Doug Robinson and Peter Frewin. We've been trying to get this to happen for so long and I am just absolutely thrilled it's now happening. It's so exciting and I'm sure it'll be an eye-opener for all those who haven't been to New Zealand before. I am sure they will love it."

And what tips does Spraggs have for those set to tee it up at Royal Wellington? "Well, apart from being able swing a club wearing three jackets, it's pretty simple – keep it on the short stuff. There's plenty of fairway, nothing is hidden and it won't be tricked up – it'll play as it plays. The hole to watch out for is the short par four 14th, a lovely golf hole which plays across a wetland. A well-positioned laid up drive is the perfect option there.

"They'll have a lot of fun. I'm hoping we'll have a reasonably calm day – our windy season is September through to December – but you can guarantee it'll be cool. We had a southerly come through the other day (first week of June) and the wind chill factor was minus 1. I'm sure the boys will figure that out pretty quick. Above all, I hope they enjoy the walk and hope they all bring their winter-weight golf shoes!" 🍷



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Departing Concord Golf Club superintendent Mark Parker writes about the club's recent impressive course redevelopment project which has transformed one of Sydney's iconic golfing establishments.

New-look Concord takes flight

Over a seven month period Concord embarked on an audacious course redevelopment programme which saw the redesign and resurfacing of all greens and surrounds and bunkers. Pictured is the 15th green with the 16th in the background

In mid-September 2017, Concord Golf Club started a greens reconstruction programme that included the rebuilding of all greens and redesigning several holes, all bunker complexes, minimising several out of bounds problems and generally providing golfers with a more enjoyable course.

The course was originally founded in 1899 and while a book could be written on its full history, in recent times a project in 1996 saw all greens and bunker complexes redesigned by Ross Watson. In what could be considered a very recent time scale, the previous project was prior to the now common practice of 'dusting in' and thatch had accumulated in the top 75mm of the greens during the early years. Bunker liners were also not industry practice and with an underlying clay base all the bunkers had become contaminated and were poorly drained.

These two issues being resolved formed the origins of the latest project which, with all good things in life, grew into a much larger proposition. These projects grow due to two main reasons - economies of scale and opportunity. This project went smoothly as it was recognised early and incorporated into the design, budget and planning.

ARCHITECT SELECTION

Following an extensive process, the club was very fortunate to acquire the services of Renaissance Golf Design (RGD), whose principal Tom Doak has gained a reputation of being one of the best golf course architects in the world. Brian Slawnick, one of RGD's senior design associates, has carried out various successful projects in Australia and was willing to relocate his family for six months to oversee the design and shaping.





Early meetings with these two gentleman helped refine the design brief, which was essentially to create the best possible members course within the confines of the existing layout. The Ross Watson design work, while appropriate for the time and exactly what the club had asked for, had become too difficult for the average golfer.

RGD was asked to provide a course which was fun and playable for the average golfer, and yet still challenge the low handicapper. This brief rolls off the tongue very easily, and is now almost an industry cliché, however, the reality is that it is very difficult to achieve.

With a Concept Master Plan in hand, it was then time to plan a project that was palatable to the membership from a disruption perspective and economically acceptable to the club. Consistency in greens has always been paramount in my decision-making process, hence an optimistic timeframe was devised which included closing nine holes in mid-September and providing the team the opportunity to de-construct and build nine holes uninterrupted. Members would play a loop on the other nine along with the club organising golf times at other clubs around Sydney to reduce the burden.

RGD provided a second senior design associate – Brian Schneider – to assist base shaping the first stage of nine greens in a two week period, during which time Tom Doak was to be on hand to design the greens complexes. Once the front nine holes were complete and open for play (three months later), the process was to be repeated in early January on the back nine, with the entire course to be open for play in early April 2018.

Club captain Ross Haron was instrumental in selling the project to the membership. Ross is an outstanding captain who dedicated an enormous amount of time and energy to this project. He went through an extensive education process with the membership which included emails, open discussion groups and information evenings.

RGD generally don't provide any detailed plans, preferring to sculpture 'on the ground' to acquire best results by not being limited to adjust original

designs as more fitting components come to mind and shape. I consider this is the best process, however, it takes a good understanding from the client. RGD term this process 'trust me golf design', and from the club's perspective it was a matter of taking the members on a journey!

Once approved, planning and implementation was paramount to success. The team responsible for construction was built around the key roles and included;

- Brian Slawnik from RGD – lead architect and base shape (amazing skills and design knowledge);
- Nathan Bradbury from Golf Spectrum – final trim and placement of all greens materials;
- Craig Brown from Flemming Golf – trimming out and drainage of all bunkers;
- Miles Raicevich from Links Golf Construction – building several tees and paths;
- Graeme Colless from Dad & Dave's Turf – supply and lay all turf (with the exception of greens);
- Frank Casimaty from StrathAyr – supply of bentgrass turf;
- Jason Roberts from Elite Haulage – supplied all soil and gravel; and
- Paul Delaney from Australian Turf Projects – installed bunker liner.

While these people are noted due to incredible work in meeting timeframes, it is the fact they

A large part of the success of the redevelopment came down to the efforts of the entire Concord maintenance crew, led by course superintendent Mark Parker (white shirt)

The redevelopment has seen Concord's greens increase in size on average by 20 per cent





Right: The greens were turfed with A1/A4 bentgrass grown by StrathAyr

Above: Concord Golf Club captain Ross Haron (left) with Renaissance Golf Design principal Tom Doak



were willing to work together on one project which speaks volumes for their dedication to the industry and lack of ego. From the club's existing course staff, the following roles in managing both staff and productivity were provided:

- Adrian Kuiper – prepare golf holes in play and grow-in of new holes;
- Ian Gallagher – irrigation of greens etc;
- Joe Claysey and James Strong – civil works including drainage and truck movement; and
- Chris Howe (assistant superintendent) – overseeing all activities and linking with Brian Slawnik.

Without delegating these roles to individuals with motivation and dedication to work around the clock, the project once again would never have been completed in the amazing timeframe. The key personnel mentioned above signed up to a pre-commitment contract regarding hours willing to work over the project, with incentives clearly defined and negotiated. The team delivered as per the agreement and, in fact, went beyond expectations.

The concept of getting the guys to sign such an agreement came from a book called 'Pre-suasion' by psychology of influence expert Robert Cialdini which discussed studies where people are more inclined to fulfil commitments when they sign. We actually used it on the members as well, having them sign a register once they read about staying out of construction zones etc. I actually think it assisted on both fronts, albeit the boys probably would have still followed through.

The burden of the hours of the project included disruption to home life, particularly affecting their wives, partners and, in one case, Tinder dates! However, the satisfaction of being involved in a major project of this nature and actually having an influence was well worth the effort.

able to sell kikuyu on three fairways that were initially taken out of play. This provided a nice income for the club, reduced the thatch on those holes and helped a few other clubs complete their projects.

Several clubs picked up our old bentgrass greens turf for use at their own courses, with most assisting with a contra deal, in particular trading some machinery hire. All trees were removed, mulched and spread on site in rough areas requiring new plantings and even some of the much-maligned lomandras found new homes.

Due to the very quick timeframe, some of the base greens material was not pure clay. As a result, we decided early that rather than waste valuable time stripping all the material and sourcing the best clay that we would instead line all the green bases with a thick plastic to minimise potential of the base being compromised and ensuring all water went into the drains.

Such a process is rare, but I remember an engineer recommended doing it about 15 years ago at Bankstown Golf Club when I was constructing. It made sense and, more importantly, it worked. While it was a pain to install, especially in windy conditions which we experienced, it was the best solution and currently is working a treat.

Sydney had a very dry period during our construction which obviously assisted and we grabbed the opportunity to increase the scope of work. This included the installation of more than a kilometre of mainline irrigation and 800 lineal metres of 300mm stormwater pipe to direct rainwater from the clubhouse car park to our dam. Both these were scheduled for later years, but by being able to complete them during the project means the members have been spared future disruption.

The dry weather also resulted in the club purchasing Sydney Water, with increased water required for the new turf. This had been factored in and, in fact, was seen as extremely positive as the extra expense for water was saved on not losing valuable time to rain events that would have delayed getting golfers back on a full course.

Concord crew members James Strong and Joe Claysey installing drainage on the 17th green. Due to the short timeframe, the bases were covered with a thick plastic to minimise potential of the base being compromised



TRANSFORMATION BEGINS

The redevelopment kicked off on 18 September 2017. With Sydney having a shortage of turf on production farms around that time, the club was

Key materials used as part of the redevelopment included;

- Greens construction sand from Newcastle with 10 per cent coir fibre mixed at plant and to a depth of 260mm;
- A1/A4 bentgrass mix on greens;
- Santa Ana couchgrass used on greens surrounds;
- Kikuyu retained as fairway grass;
- Greenlees Park couchgrass used in short rough to reduce maintenance;
- Matrix (porous asphalt) used as bunker liner;
- Bunker sand from Cowra, NSW (wow, how difficult is it finding bunker sand!)

Selection of materials was based on research, trials and fantastic feedback from industry 'friends'. The greens species selection was difficult. The new Pure Distinction variety was looking very promising with its finer texture, however, without adequate time to trial it in our own conditions we considered it too risky given the previous success of the A-Series.

MORE TURF, LESS SAND

The redevelopment has seen some significant changes to the size of the playing surfaces and the playability of the course. Key aspects of the new-look course include;

- Green size has increased on average by 20 per cent. The increase in size has provided more interest in the putting component for the



members, albeit more difficult. The design by RGD provides for a great mixture of shapes and sizes which will really eventually define the course.

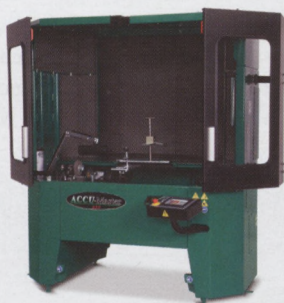
- Greens surrounds low cut grass has increased from an average of 100m² to 2000m². This provides golfers far more variety of shots to play when close to the green. Where previously it was a flop wedge only option, golfers are now using a variety of golf clubs from putter to 7-irons and wedges.
- Fairways increased from 14 hectares to 20ha. Increased fairways, through widening and linking of several holes, has provided an easier opportunity to reach the green and a new aesthetic dimension to the course.

Dry weather during the reconstruction period resulted in the club purchasing Sydney Water, with increased water required for the new turf

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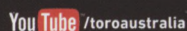
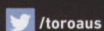
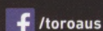


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In addition to redeveloping the playing surfaces, Concord also took the opportunity to upgrade its irrigation mainline and install stormwater pipe to direct rainwater from the clubhouse car park to the dam

While the number of bunkers has remained at 70, their overall size has dropped by 40 per cent. Matrix asphalt liner was installed in all bunkers



- Bunker numbers remained at 70 but overall size has dropped by 40 per cent. Bunkers have a new shape that is not as free flowing as the original design, thus appearing more natural. The design feat of reducing the actual overall size of bunkers without appearing to reduce their impact was pure mastery.
- Around 170 trees were removed along with various small shrubs and lots of lomandras. Tree removal was artfully designed to provide a major impact without taking many out (given we have over 3000 trees). The new vistas through the course are being greatly admired by the players.
- Distance of the course reduced by 200m. Distance reduction is all in the mind! Well not exactly, however, with the greens becoming larger and predominately at the front of the complexes, the centre point changes for measuring. Taking that into account, along with the reduced run on kikuyu fairways, don't expect Concord to play any shorter!

FOR THE MEMBERS

The details above provide a brief summary of the quite significant changes that have taken place at Concord over the past seven months. The genius of the RGD design work is that they delivered on their sketch plan and description of what they would achieve. Golfers are now 'in the hole' for longer periods, making golf more fun. The challenge for them is now being in the right location with each shot and improving their short game.

RGD will not be the right fit for every golf club, nor do they have time to work at every club. However, we feel they are the MacKenzie of our era in golf course design and we were privileged to have them weave their magic at Concord.

The construction timeframe could probably be considered 'audacious' and not necessarily recommended for other clubs. To meet member expectations and budgets, ensure consistency and, in particular, ensure Tom Doak was involved in all greens design, it was just the best way to proceed for Concord. The decision was only made knowing there was a great team of both Concord Golf Club

staff, external contractors, along with help from various fellow superintendents and members, that the process was in fact feasible.

At this point in time, some four weeks after opening while penning this article, the feedback from members has been outstanding. Once a good growing season has provided time to sharpen the turf quality, I suspect the members will be ever grateful for the changes.

On a personal note, seeing the redevelopment through to a successful conclusion was somewhat of a fitting way to see my time out. After 32 amazing years at Concord, taking over as superintendent at the ripe old age of 21, it is with very mixed emotions that I will be leaving the club in June to take on the role at New South Wales Golf Club.

Concord has literally been my life during these years, with an unbelievable membership that have always made me feel part of a family. I have never suffered the frustration of the 'less than competent' Boards that apparently besets many a superintendent. Many Board members have assisted with my education, provided guidance and also assisted with various tasks on the job (in particular an ex-captain who is an electrician that turns up any time of the day to fix pump problems).

I am thrilled that one of my best friends and long-term work colleague Chris Howe will be taking the reins at Concord. We have worked, played and travelled together for over 20 years. He has the same dedication and passion for Concord as I have and will ultimately take it to new heights. The course team at Concord are just phenomenal and when you work more hours than you spend at home awake, this is really paramount for job satisfaction. 🙌

LESSONS LEARNED – CONCORD REDEVELOPMENT

Mark Parker provides fellow superintendents five key pointers to consider when undertaking a major course redevelopment:

- Plan, plan, plan, plan and plan – there's five straight off the bat! I suspect that highlights my thoughts that planning is the most critical component of any project.
- Select the appropriate architect for your club – Renaissance Golf Design completely understood the club, what it stood for, our budget and delivered on all aspects.
- Surround yourself with the right team; one weak link can bring down the entire project.
- Communication with membership is paramount to attain their approval and support, both before and during the project; at the end of the day, the project is FOR the members.
- Question every process and assumption; it never ceases to amaze me how many times people come up with superior and innovative ideas when given the opportunity.

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Pink ground pearl has for many years been a nemesis for Australian turf managers, particularly along the Eastern Seaboard. Gary Beehag provides some background on this mysterious pest, while superintendents write about their experiences and attempts to lessen its impact on their surfaces.

Above: The combination of a subterranean lifestyle and the insect's waxy outer covering partly explains why the pink ground pearl is so problematic for turf managers

Going to ground

Several species of scale insects commonly known as earth or ground pearls occur in the warmer regions of coastal, mainland Australia and elsewhere. The pink ground pearl (*Eumargarodes laingi*) is arguably number one turfgrass insect pest wherever it occurs. Once established in turfgrass swards, populations of this insect pest inevitably remain problematic.

The combination of a subterranean lifestyle and the insect's waxy outer covering, partly explains why the ground pearl is so problematic for those grounds curators, bowling greenkeepers and golf superintendents unfortunate enough to have had first-hand experience in attempting to manage this pest.

DETECTION AND DAMAGE

The ground pearl is a true bug (order Hemiptera) that largely has a subterranean lifestyle rendering it difficult to detect let alone manage. Official entomological records of the occurrence of ground pearl in Australia are limited to coastal regions of Queensland and New South Wales. However, the pest's true distribution range in Australia is unknown.

Ground pearl was reported as a troublesome insect pest of turfgrass in Australia from as early as the 1970s. I observed the presence of ground pearls on Tifdwarf couchgrass bowling greens way back in 1988 in the Northern Territory.

Ground pearl populations and damage has been observed on bowling greens, golf course fairways and sportsgrounds. The only way to confirm the presence of ground pearl populations is by monitoring and careful observation. When locally abundant, pink ground pearl populations may be detected by very careful separation of the soil media from turfgrass root material, looking for the insect's tell-tale, lifeform stage known as a cyst.

If found, the cyst of the ground pearl is circular-shaped, up to 4mm in diameter and pink-coloured; hence the name. The coating of the cyst is wax-based and highly water-repellent. Careful squeezing of ground pearl cysts between the fingers reveals the small-sized insect inside.

Conventional flushing techniques using liquid detergents and other water-soluble products have proved unsuccessful to lodge this insect beneath turfgrass swards. Studies have indicated that ground pearls are capable of moving vertically through soils to lay their eggs up to depths of approximately 25cm, under ideal conditions.

Monitoring and actual sighting of ground pearls is best achieved over the summer period during bright and hot sunny days. Many years ago one Sydney bowling greenkeeper even observed ground pearls on the green's plinths one extremely dry and hot day in summer!

Damage symptoms to turfgrass plants caused by ground pearls may simply appear lacking vigour and be confused with drought (water) stress or displaying yellowed or chlorotic foliage. In severe cases, entire areas may be devoid of turfgrass cover contributing to highly-compacted soil media, depending on circumstances.

The known turfgrass host range of pink ground pearl appears to be limited to grasses of tropical and sub-tropical origin. In Australia, the known turfgrass host range is couchgrass, Queensland blue couch and kikuyu grass. No doubt other turfgrass species are affected.

Overseas, the turfgrass host range of the pink ground pearl includes buffalo grass (*Stenotaphrum*), centipede grass and zoysia. Damage by ground pearl toward temperate grass species is unclear. A lack of awareness of damage to grasses of temperate origin in Australia and elsewhere may be due in part to cooler temperatures discouraging pest occurrence in cooler climates.

GROUND PEARL BIOLOGY

Unfortunately from a turfgrass management perspective, the insect's high-pest status on turfgrass in this country is not reflected in the current level of scientific knowledge of its biology and ecology. Much of what is known about ground pearl biology emanates largely from applied research conducted over many years in economic crops, such as sugarcane, in Queensland, northern NSW and elsewhere. Nonetheless, many aspects of ground pearl biology in economic crops is likely to have some similarities in turfgrass swards.

Adult ground pearl insects are all female and they reproduce asexually. There are no known adult male ground pearls in Queensland. The precise length of the life cycle of pink ground pearl is unknown but may be around two years. Interestingly, a cyst of another species of ground pearl maintained in soil media under laboratory-controlled conditions in the USA lived for 17 years! Entomologically interesting, but managerially problematic.

Like all insects, the overall life history and length of the individual life stages of ground pearl in any given location will largely be governed by seasonal climatic and environmental conditions. Adult pink ground pearls occur from early spring to summer (October to February). The population density of ground pearl varies widely, hence the necessity for very close observation when examining the soil media. Ground pearls possess sucking mouthparts and feed on their host's roots and stems which partly explains why this insect is so difficult to manage.

MANAGEMENT OPTIONS

The lack of thorough understanding of ground pearl biology and ecology, secretion of its outer waxy covering, combined with the current absence of any active ingredient insecticide registered for turfgrass application, presents insurmountable problems



when ground pearl populations are present. In Australia at this time, unlike sugarcane research projects, there is no applied turfgrass research project being conducted in turfgrass into ground pearl biology nor its ecology.

CULTURAL

Factors contributing to high populations of ground pearl include relatively dry growing media and high ambient temperatures. Thus, on established turfgrass swards having a known history of ground pearl populations, key cultural practices in an attempt to reduce or minimise damage includes sound irrigation and fertiliser regimes.

Implementation of soil media decompaction practices (e.g. hollow or solid tining) to improve turfgrass root growth and soil moisture, thatch minimisation practices combined with programmed applications of proven soil wetting agent products to minimise water repellence in sandy loam type soils may prove helpful. Water repellence (hydrophobicity) together with reduced water infiltration may be associated with excessive accumulation of organic matter in the form of thatch.

Care and certain hygiene practices are required during any cultural turfgrass operations that involve use of soil media decompaction or thatch-management machinery. Thorough washing of such

Damage symptoms to turfgrass plants caused by ground pearl may simply appear lacking vigour and be confused with drought (water) stress or displaying yellowed or chlorotic foliage

Subterranean menace – pink ground pearl under the microscope

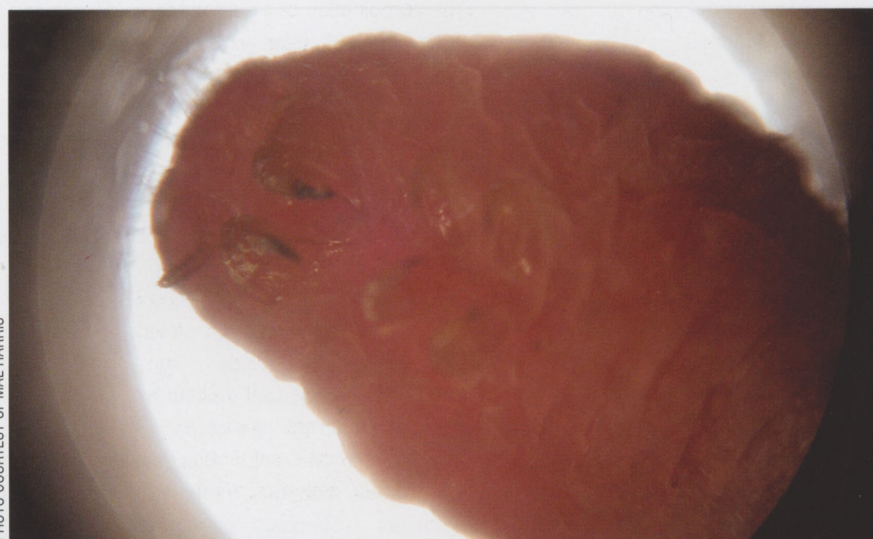


PHOTO COURTESY OF MAL HARRIS

◀ In Australia, ground pearl is known to affect couchgrass, Queensland blue couch and kikuyu grass. In severe cases, entire areas may be devoid of turfgrass cover contributing to highly-compacted soil media



equipment before and after use must form part of normal routine. In the absence of such hygiene practices, ground pearls may be inadvertently transported in attached soil media. Such hygienic approaches must be mandatory when utilising the services of turfgrass contracting equipment to avoid the introduction of ground pearl from other regions.

There are no definitive comparative studies which have clearly demonstrated certain turfgrass species or cultivars have greater resistance (or less susceptibility) against the pink ground pearl than others. In NSW, in coastal turfgrass sites where the sward composition comprises a mixture of turfgrass species, areas of severely-damaged kikuyu grass have been observed to be gradually replaced by couchgrass. Curators and course superintendents have reported some short-term success with Santa Ana couchgrass.

Widespread transportation of couchgrass (*Cynodon*), either Greenlees Park, Tifdwarf or 328 Tifgreen, vegetative planting material in the form of 'shavings' or stolons from established bowling and golf greens and other turfgrass sites has probably contributed to the introduction of ground pearl numbers from existing to newer regions. Survival of ground pearls during transportation whilst attached to turfgrass stem material is possible.

Thus, the message here is be aware of the origin of any imported turfgrass, particularly from a coastal region in Queensland and NSW. Close observation of samples of turfgrass stems is advised because, as previously stated, once established populations of this insect pest will inevitably remain and prove problematic.

PESTICIDAL AND BIOLOGICAL

As stated above, against the pink ground pearl there are no insecticides currently registered for turfgrass application in Australia. Product development trials

CARNARVON GOLF CLUB

Carnarvon Golf Club in Sydney has had ongoing issues with ground pearl since 2008, with damage then to stressed areas on one or two kikuyu fairways. Infestation has since spread to all 18 fairways. Damage first occurred in areas of high stress, whether it was through wear, tree roots or poor soil quality, before spreading to any and all areas of kikuyu. Prior to the first patches developing 10 years ago, I had never experienced ground pearl in a golf environment.

Our fairways are the worst affected areas. Symptoms start with yellowing and thinning of the turf in circular patches, with the centre dying off as the patch grows. Left untreated, patches join up making large bare areas. Having dry summers, like those we have experienced over the last two years, hasn't helped as the turf is struggling just to stay alive and is more susceptible to ground pearl.

We have trialled several control measures, including chemical control, but having heavy soil on our fairways, getting the product to the target area was/is impossible. Over \$15,000 worth of turf has been laid on ground pearl



From left: Ground pearl damage on one of Carnarvon's kikuyu fairways; preparation of couch trial site; three different couch plots – Wintergreen (left), Santa Ana (middle) and Grand Prix (right)

infected areas in the last three years alone and we're in no better position now than we were then, if anything we're looking worse.

The only success we've had is by turfing out the damaged areas with Santa Ana couchgrass. We conducted a trial with three different types of couchgrass – Wintergreen, Santa Ana and Grand Prix – on a ground pearl affected area. No further preparation of the area was carried out with the couchgrass laid straight over the top.

If kept watered and fed, the couch can keep up with the spreading damage caused by ground pearl. Patches we turfed a few years ago that might have been as small as 1-2 square metres are now 15-20m².

The Santa Ana performs so well that we are actually looking at the option of line planting our kikuyu fairways and transitioning to Santa Ana as it seems to be the only viable option left to us.

I think the impact of ground pearl can be reduced by keeping the kikuyu well-watered and fed. Unfortunately for some, us included, water storage capacity doesn't allow for constant watering in summer, therefore putting the plant under stress and opening the door for ground pearl. The ground pearl is always there, but the severity of any damage is governed by the health of the plant.

SHAY TASKER, SUPERINTENDENT



The cyst of the ground pearl is circular-shaped, up to 4mm in diameter and pink-coloured, hence the insect species' common name. The coating of the cyst is wax-based and highly water-repellent

conducted over many years in Queensland in sugarcane that have used a multitude of active ingredients in many insecticide groups, consistently failed to prove effective against ground pearl in the long-term.

On couchgrass bowling greens, numerous, registered soil insecticides applied with water-soluble oils against other turfgrass pests have only suppressed not controlled pink ground pearl populations.

The key problems relating to gaining effective management of ground pearl populations by insecticides is threefold.

- The uncertainty of the insect's life history with respect to the timing of the immature life stages and when they are likely to occur near the surface. Remember, ground pearls are capable of moving vertically in a soil medium.
- The wax coating secreted by the nymphal stage of the insect affords effective environmental and chemical protection of the insect. The waxy covering is water repellent providing an effective physical barrier to insecticidal absorption.
- The insect's method of feeding using sucking mouthparts presents major challenges in insecticidal chemistry and having an adequate amount of active ingredient where movement

in the plant's vascular system is required, if the insect is to be controlled systemically.

At this time in Australia, there is no biological control agent that has proven efficacy against pink ground pearl.

Editor's Note: More information about the pink ground pearl and other scale insect and mite pests of turfgrass known in Australasia can be obtained by consulting the recent CSIRO publication 'Pest Management of Turfgrass for Sport and Recreation' compiled by Gary Beehag, Jyri Kaapro and Andrew Manners.

The AGCSA is aware of the issues that superintendents and turf managers are experiencing with ground pearl and is investigating the possibility of undertaking some form of research into it. 🌱



PHOTO: SHAY TASKER

Some superintendents have found that Santa Ana couchgrass performs well in areas previously affected by ground pearl



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Over the past two years, which has coincided with prolonged dry periods, Sydney's Long Reef Golf Club has noticed a big increase in the presence of ground pearl



LONG REEF GOLF CLUB

Ground pearl was a minor issue at Long Reef Golf Club for many years, but that has all changed in the last two years. For many years we treated small patches which appeared randomly around the course, mostly in roughs and a few spots in some fairways. Often years would go by and we did not need any treatment but the past two years it seems ground pearl is everywhere and doing substantial damage.

We currently have many areas all over the course, again mostly in the roughs and also some large areas on certain fairways, which have become very weak and thin which upon closer examination are infested with ground pearl.

We recently rebuilt our 14th tee, replacing kikuyu with Santa Ana couchgrass and re-levelling the surface. Prior to starting any work, the tee had a great grass cover and was very healthy with no sign of any pest damage.

We poisoned the grass and followed up over the next few weeks to ensure a good kill before cutting and removing the dead turf from the tee. As we were stripping the turf, we noticed the entire tee was riddled with ground pearl in massive numbers like I have never seen before.

Over the past two years Sydney has endured long extended dry periods. It seems our weather patterns have changed quite a bit and rainfall is inconsistent, with large amounts of rain falling at once and then very little for long periods.

Over the last summer I noticed we often had large flocks of seagulls feasting on the grass, not causing any damage but constantly eating. The seagulls were consuming ground pearl and doing a great job, but obviously not enough to eradicate them. As time went on and the drought persisted, the grass became weaker and drier. Then certain

areas became bare and sure enough they were infested with ground pearl. The affected areas expanded rapidly, but due to the lack of water we were unable to treat the areas with insecticide.

I was always of the opinion that ground pearl was very slow moving through the profile and not abundant in numbers. This is not the case as we currently seem to have them in huge numbers in many areas. It seems that ground pearl are coming to the surface in drought and dry conditions; maybe they always live deeper in the soil profile or when conditions are wet and the soil profile is moist they don't do damage.

Our water table has been very low for long extended periods over the last few years and our dams have not been full for almost 12 months. I think this is the reason ground pearl is now so noticeable. Over the years we have completed many construction, drainage and excavation projects and I have never noticed any ground pearl in the soil profile while digging.

When we do get some rain and have some moisture back in the ground, we try to treat the areas as best we can with reasonable results. The problem we have is follow-up treatment because we don't get follow up rain anymore.

I have been treating areas with a variety of insecticides and always add five litres of white oil and wetting agent in the 400-litre tank. We use the hand gun mostly, giving the affected areas a fairly heavy coverage and follow up with deep-hand watering and irrigation at night.

Results on the whole are good especially if we can follow up after a month or so. The other thing I have noticed is that Santa Ana couch grows happily in the damaged areas.

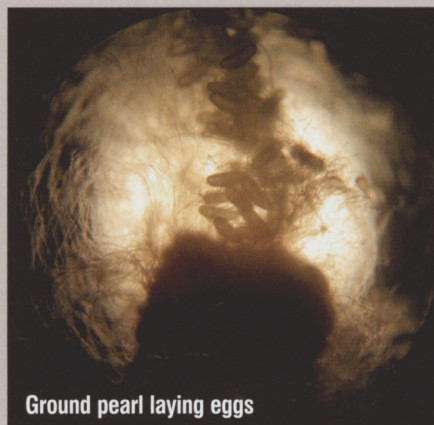
**PETER DONKERS,
SUPERINTENDENT**

NORTHBRIDGE GOLF CLUB

We first diagnosed ground pearl at Northbridge Golf Club about eight years ago, although it has probably been present a few years longer than that. Each year the damage from them is getting worse. The symptoms usually appear as unthrifty areas that are riddled with Helmo and mite damage. The soil becomes hydrophobic easily despite plenty of wetting agent applications. The roots are also damaged.

I once left an adult ground pearl sitting on our microscope slide overnight and come the morning it had begun spinning its waxy filament and releasing eggs – see photo right. There were over 50 eggs! It was then that I could see first-hand the scale of the problem and the exponential way they were likely to populate.

We have trialled numerous products to control them with absolutely no success. We have made extra efforts to manage them by giving the affected areas extra aeration,



Ground pearl laying eggs

fertiliser, kelp, wetting agent, organic fertiliser and fungicide applications. It seems to have only limited effect with damage increasing into the summer months. The past two summers have been particularly bad with the prolonged hot and dry conditions.

We suspect they have been present for quite a while as I used to get bare patches in a few fairways which we would re-turf. These patches when re-turfed would also die back. After several attempts re-turfing with kikuyu we switched to Santa Ana. The couch patches survived while the surrounding kikuyu continued to die out. We are now considering digging some of our effected areas up and replanting with Santa Ana.

MAL HARRIS, SUPERINTENDENT

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To date, a total of 16 greens, surrounds and tee complexes have been reconstructed at Strathfield

Strathfield

all set

Course architect James Wilcher and superintendent Andrew Cannon write about the major redevelopment occurring at Sydney's Strathfield Golf Club.

When completed, all holes will have a consistent look from the 1st tee to the 18th green



Strathfield is a long-established golf club as close to the geographic heart of Sydney as you could possibly get. Golf was first played at 'Strathfield Golf Club' in 1898. The push for more residential land in this exclusive area, plus the cost of maintaining the club land (which was then situated between what is now 'The Boulevard' and 'Homebush Road') resulted in the original club being disbanded in 1906 and members joining with Concord members to establish the nearby Concord Golf Club.

The 'new' Strathfield Golf Club was not formed until October 1931 and incorporated in 1934. Following its inception, the course consisted of nine holes, using the land known as Freshwater Park leased from Strathfield Council as well as NSW State Railways. During its subsequent 75-year

history, the club has undergone many changes, including the acquisition of land to increase its size to 18 holes, erection of a clubhouse, installation of an irrigation system to the course and numerous design changes to the layout.

The location of the club is now on the fringe of the municipality, being adjacent to many stately and leafy homes within the suburb of Strathfield. It is approximately 20 kilometres west of the Sydney CBD, two kilometres from the Homebush Olympic Games site and Sydney Showgrounds.

The club was carrying a reasonable level of debt, had a shrinking but very loyal membership and therefore lacked the funds to improve its facilities, both in terms of the course and clubhouse. Enter Neil Hardy, the club's energetic general manager, who after a failed merger with Canterbury Bankstown Leagues Club initiated a rezoning of the club's driving range, clubhouse and car park. Ultimately the club was successful in this endeavour, staving off any need to amalgamate with others.

The success in rezoning meant that the clubhouse required relocation and, in turn, meant the club required the services of a golf course architect. After several interviews, it appointed Golf by Design which was tasked with devising a new layout. The relocation of the clubhouse to the 'western paddock' necessitated a change to the current golf course routing and coupled with a desire to see two starting and finishing holes within easy reach of the new clubhouse (which the club didn't initially have), we kicked off the planning aspect of the project.

SIGNIFICANT CHANGES

Initially the club believed that layout changes would be minimal but had neglected to understand the implications of building homes within 30 metres of the centreline of existing holes and the safety implications of such. So some holes' proximity to their new residential neighbours increased the need for change.

Ultimately, the new Strathfield course, when finished, will measure 5897 metres from the championship tees and have a par of 70, very similar to what it measured previously despite the loss of available land. It will measure a little less from the white tees at 5649m. The ladies championship course will total 5250m and play to a par of 71 which is little changed from the current length.

Of course, the new Master Plan, largely because of the scale of change needed, required the approval of the local council through a typical Development Application (DA) process. The issue of tree removal, flood modelling (as the course is surrounded by residential land and is largely flood prone) and erosion control were the main thrust of council's interest in the redevelopment. After several iterations to the earthworks design and fiddles associated with tree removal, a DA was granted.

By the time the Master Plan is implemented in full, as many as 14 new greens will have been built. Current thinking is that this will continue progressively until such time as all greens have been replaced. Our specific aim has been to create a better course, enhance all the natural features on the site while not departing from our aim of making the new course a desirous and fun place to play.

Ultimately, the construction of 16 new greens and associated bunkers (inclusive of putting and chipping greens), as well as 16 tee complexes, has presented an opportunity to change the look and quality of these vital components of the golf course.



When completed, all holes will have a consistent look from the 1st tee to the 18th green, at the same time improving greatly the overall strategy of the golf course.

As well as the works to the golf course, additional work to the Cooks River, which flows through the middle of the golf course, has enhanced the appearance and overall ambiance of the course. Ultimately, through initiatives like the enhancement and weed control of the riparian areas adjacent to the Cooks River, the golf course will continue to be a significant contributor to the environmental sustainability of the local area.

Greens were constructed to USGA specifications and seeded with a combination of A1 and A4 bentgrass

KEY COMPONENTS

Planning aside, the club sought to undertake changes such that the specifications didn't compromise the medium to long-term quality of the facility, including:

- Greens construction to USGA specifications and seeded with a combination of A1 and A4 bentgrass;
- Tee construction to a 'California' method;
- Tees, green collars and green surrounds turfed with Santa Ana couchgrass;

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Once the A1/A4 seed was ferti-sprayed on, the seed was dimpled in with a bunker rake to ensure uniformity and optimise germination

- Bunker surrounds turfed with zoysia matrella (variety Shade Tuff);
- The balance of the site turfed in kikuyu; and
- Bunker drainage using Klingstone 300 (10mm blue metal, 50-75mm thick).

We have used the A1/A4 bentgrass mix on a range of our recent projects in Sydney and found it to perform better than just about all before it. Grow-in, given a push along from the moment the seed becomes established, would allow for play most of the year within 10 weeks of sowing.

But there's no doubt the most interesting aspect of the golf course works has been the introduction of Shade Tuff zoysia to the edges of the bunkers.

We felt that it would reduce the maintenance of the edging by a considerable amount and for this reason alone felt it was a good choice. The aggravation of only being able to purchase this turf commercially from Queensland has proved to be more than worthwhile. If we were turfing larger areas, this aspect of the project would have required far more precise pre-planning

Edging of the zoysia bunkers, when compared to typical couch or kikuyu, has seen a reduction of time spent on such a task of around 80-90 per cent. In addition, the zoysia, as a result of its strong structure and root mass, means that the edges themselves are more structurally sound and far less prone to collapse from mowers and golfer traffic, so often a disappointing aspect of bunkering.

As an architect, I am also interested in colour and colour retention and in this regard it seems to trump all of the couches and makes kikuyu look lacklustre. In addition we have found that the zoysia seems to prefer a very heavy soil, meaning that we don't need to find a specific soil for the bunker edges to get a premium result, quite the opposite in fact.

While the weather has been pretty favourable during the entire duration of the project, which started mid-2016, the fact that we are doing work within a

CHALLENGING, INTENSE, BUT ULTIMATELY REWARDING

With the reconstruction of Strathfield Golf Club, the grow-in, the unplanned events on a daily basis, along with maintaining the 'as is' course, it has been a challenging yet rewarding experience for myself and the maintenance staff. The learning curve for all involved with this project has been invaluable. As a team we have had to be flexible in our daily works, grow-in programmes and maintenance practices, as being only a small team we have all been involved in all aspects of the redevelopment.

All new greens were seeded with a mix of A1 and A4 bentgrass. Seed was mixed together at a rate of 400g/100m², pre-soaked in 300ml of Banol, 300ml of Rely and let soak for 3-4 days prior to seeding. Once the seed was ferti-sprayed on, the seed was dimpled in with our bunker rake ensuring every inch of the green was done in a uniform manner. This ensured optimum germination. An irrigation programme was then set to water the seed, keep it moist at 2-3 hour intervals for four minutes per head. Once germination was noted, usually around the 5-6 day mark, we applied TX10 fertiliser to promote growth.

Weekly applications of fungicide and foliar fertiliser were made to a programme which helped ensure optimum growth with minimal disease occurrence. By 3-4 weeks coverage was good so a water-filled roller



Topdressing the Santa Ana green surrounds and tees will be a priority come next season

was used to roll the green prior to rolling it with our Jacobsen walk behind cylinder mowers. The green was rolled in this way in various directions to produce a smooth surface prior to mowing. Our first cut was at 10mm and lowered by 1mm increments until we reached 3mm. All greens took between 8-12 weeks to grow in from seed to play.

All our tee and green surrounds were laid with Santa Ana couchgrass. Once turf was laid, a grow-in irrigation programme was set at less frequent intervals to the greens. I endeavoured to begin mowing these areas once the turf had taken root. The biggest lesson I learned was how aggressive you could be with the lowering of height of cut on the couch. It seemed the more aggressive we were, the better the end result. I will be taking

this approach into the next growing season and am excited and confident at what the outcome will be. Next season the topdressing of these areas will be intense to produce the best surface possible.

As James Wilcher mentions, all our bunker edges were turfed with zoysia matrella. Once this turf was laid, the grow-in process was slow and we found some inconsistencies in turf quality. We also found that the heavier the soil, the better the zoysia responded.

Water was the biggest contributing factor to the zoysia during grow-in. It couldn't get enough of it during the heat of the Sydney summer. All edges receive foliar applications of fertiliser. Kikuyu control is our biggest problem, however, regular applications of Monument have helped keep this under control. Getting the zoysia edges on the bunkers strong, dense and consistent next growing season is a priority as this turf, once established, will look and play fantastic.

To date, we have constructed 16 greens and surrounds, including the new chipper and putter which were seeded late May, as well as 16 tee complexes. The remaining four greens and two tee complexes are programmed to be rebuilt over the next few years.

**ANDREW CANNON,
SUPERINTENDENT**

flood zone meant that the project was very much subject to rain events. One such rain event occurred immediately after we completed construction of a tee, inclusive of turfing. Unfortunately, after one such rain event the tee needed a complete rebuild, something we hadn't budgeted for despite being mindful of the issues associated with building in such circumstances.

ENVIABLE POSITION

Speaking of budget, we started the project with the club believing the quantum of works necessary to reconfigure the golf course would be of the order of \$1 million. But as we near completion, due by the end of May 2018, the budget is just touching the \$5.5 million range. Of course, this 'blowout' might have troubled many clubs, but in the case of Strathfield the sale of the land netted about \$52 million, against a projected rezoned value of \$35m.

These additional funds have helped the club enormously, but of course nothing is free and the new clubhouse alone has chewed up the lion's share of the revenue from the sale of the rezoned land. All in all once the project is completed, the club will be in a very enviable position in having a brand new facility and substantial funds in the bank going forward.

Of course, the club's Board needs to be re-educated in terms of necessary maintenance budgets and it will take a lengthy and diligent



effort from new course superintendent Andrew Cannon and his staff to make the course shine once construction is complete. Andrew, who originally joined Strathfield as assistant superintendent in October 2016, took over as superintendent last November. Prior to Strathfield, Andrew was superintendent at Campbelltown Golf Club for 10 years.

In terms of getting a result on the ground, all work was designed and tendered so that the club had clarity of what to expect and what it would cost. While budgets have expanded, they had at

Tees, green collars and green surrounds have been turfed with Santa Ana couchgrass

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The new greens took between 8-12 weeks to grow in, from seed to play



all times been privy to what decisions meant to the bottom line. We know that in some instances clubs proceed with upgrade projects without any detailed drawings. This is fine if budgets aren't important, and if we were building in dune sand I'd be happy with such an arrangement, but working on paper gives any project a great head start, both in terms of planning for change and implementing change.

I think that while every project is different with varying issues that influence outcomes, all well-executed projects have one common ingredient, that being sound planning. Planning is always important and project programmes, complete with key milestones, generally results in a project successfully achieving what was desired.

Things like temporary greens are key and temporary course layout(s) are critical to how golfers perceive the project is managed and how much they can tolerate in terms of disruption. Smart execution in this regard will take pressure from the delivery dates as long as golfers feel they are still getting a decent game of golf. After that they are influenced by the quality of the outcome rather than the duration of the project.

I'd also suggest that documentation of the project, from commencement on the ground to completion, is something that engages the members both in the club and on social media. In this regard Strathfield's new drone has been a very useful tool and one would suggest any superintendent could put to good use regardless of activities. We ourselves are finding more uses for such gadgetry on each and every project we become involved in.

Early stages of the works were undertaken by Michael Donohue and Sons who are a very capable contractor based in Sydney, however, as the scale of the project increased it became clear that we needed a contractor on site with greater capacity. In stepped Flemming Golf, with whom we have worked with on several past projects. Both contractors have done an excellent job and along with Andrew Cannon and his team will hopefully see Strathfield recapture its standing within the Sydney golf landscape.

If early indications are anything to go by, with a steady stream of new members signing up, things indeed look pretty bright for this once proud and established club which had, for a number of years, slipped from favour. 🌱



The most interesting aspect of the Strathfield redevelopment has been the use of Shade Tuff zoysia matrella for the bunker edges

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Pace and perfection

In the last edition of ATM,

Swan Hill Lawn Tennis
and Croquet Club curator

Dan Gardner wrote about
his preparations for Tennis
Victoria's Country Week.

In this edition he ruminates
about preparation, pace
and what constitutes
a perfect grass court
surface.

I have always wondered and questioned the general opinion that grass tennis courts are perceived as a fast surface. I'm no scientist, but my basic understanding of physics implies that the softer the surface the more energy that will be lost on impact, thus the ball has to slow down and lose pace.

Here in Australia, where we primarily grow couchgrass tennis surfaces, we tend to have higher organic matter content and softer surfaces. So how can grass courts be perceived as one of the fastest surfaces if they seemingly lose so much pace?

The answer to this lies partly in how the International Tennis Federation (ITF) defines court speed, which is basically not how fast the ball is moving but how high it is bouncing and how much friction is involved. The other part may be perception, in that it is probably easier for the human eye to see a ball bounce higher rather than see an increase in speed.

So how does the ITF rate the speed of courts? There are two factors affecting ball bounce – COF (co-efficient of friction, horizontal movement) and COR (co-efficient of restitution, vertical movement). Together, these two interactions form the CPR (Court Pace Rating). Basically speaking, the more friction the less horizontal movement and the slower the court. Also, the higher vertical bounce, again the slower the court.

Fancy equipment is used for testing of court surface COR and COF. Other variables are punched into an equation that gives each surface a CPR number. These are then generalised and categorised as:

- Slow (CPR value between 0-29);
- Medium slow (CPR 30-34);
- Medium (CPR 35-39);
- Medium fast (CPR 40-44); and
- Fast (CPR 45+).

There are other things going on with bounce, like ball spin in reaction to friction, but to summarise the ITF definition:

- High friction and a high bounce produces a slower court (think clay).
- Low friction and a low bounce produces a faster court (traditionally, think grass).

I found it difficult to find CPRs for grass courts, perhaps due to their variability, and using the ITF system you would think low friction and low bounce would produce a medium-fast to fast court. (For more information on the ITF court pace rating system visit www.itftennis.com/technical/courts/court-testing.)



THINKING VELOCITY

So as greenkeepers, in reaction to the ITF's explanation, we think we can do that with higher organic matter (thatch) to produce a lower bounce (lower COR). Here is where I think velocity starts to get in the way. As a tennis player there is nothing worse than getting on a grass court, lining up a groundstroke and then at the last second feeling you have to grope forward to get the ball. The ball hits the turf, pulls up, decelerates and has a shorter bounce. Is this a fast surface?

Think beach cricket. You don't have the pitch up on the dry sand because there is no bounce. You put it down on the wet compacted sand where the tide has recently been. Indoor courts on polished floors are extremely fast, but not soft either. To pinch a golfing term in this situation, 'firm and fast'.

Due to my thinking here I have always preferred a harder surface over a softer one, allowing the ball to bounce higher and lose less velocity. Whilst probably not traditional thinking and something that is not easy to attain, it has the benefit of allowing the court to be fit for play quicker after irrigation or rain and also the ability to hold more moisture in extreme heat.

However, this is related to the vertical bounce, or COR. The part that I find more confusing is the friction side of things – COF. Can we manipulate the pace of the court with the amount of friction the surface produces? There are so many variables here:

- Moisture in the plant leaf – moisture picked up by the ball will make heavier conditions, but is



There are so many variables when it comes to producing the perfect grass court – irrigation, weather, thatch, height of cut, soil types and the standard of player. Being consistent is the key

there more friction in a greener grass leaf? I've seen slip created due to rain and also extremely dry conditions.

- Moisture in the base – different sands can compact differently under different moisture levels, wetting agents can be different to dry down. Thatch is known to hold moisture.
- Temperature – more heat quicker through the air, is that the same on the surface?
- Humidity – more humid, more moisture, slower through the air, slower through the surface?
- Leaf density – does tight density make the surface more slippery than open density?
- Mowing height – will a higher cut slow the ball down or lower the bounce?
- Cultivar habit – a semi-dwarf grass like Santa Ana is more likely to have a tight, upright leaf compared to Legend which is more prostrate and open. Cultivar also affects height of bounce with growth habit, stem length, stolon and rhizome formation, node length.
- Clipping retention – will dry clippings sitting in the canopy produce more slip?

At the moment we don't have a great understanding of these variables and there are many opinions and innuendo out there as to not only how conditions are best presented but also what conditions should be presented. Having prepared grass courts for the past 12 years, I think it would be great if one day we could have an idea how to produce a court for an attacking baseliner or a serve volleyer for example and have metrics to accurately define the grass court conditions.

CONSISTENCY THE KEY

Neil Stubbley is head of courts and horticulture at Wimbledon. The grounds and courts at the All England Lawn Tennis Club are renowned for being the best in the world. When Neil took over the role from his predecessor back in 2012, he started to look at what was the perfect surface for play. However, it soon became apparent that there are too many factors to have one defining answer.

Stubbley explains: "In a nutshell, there isn't a perfect surface as there are too many variables with grass – irrigation, weather, thatch, height of grass, type of soils, standard of player, time of the day. Being consistent is the key.

"What I have learnt is if you follow a good turf management programme and look at a surface that is around 200 gravities you are going to have good grass courts that suit most players. Players like

The International Tennis Federation rates courts based on how high the ball bounces and how much friction is involved





As a player, there is nothing worse than getting on a grass court, lining up a groundstroke and then at the last second having to grope forward to get the ball

consistency; they don't like moving from court to court and it feeling different."

While a good turf management programme for Wimbledon may not be aiming to produce the perfect court, it goes mighty close. The regular maintenance practices used reproduce similar predictable results year in, year out. Post-tournament each year, the surfaces are sprayed out, fraise mown, ryegrass reseeded and then grown in. It is like hitting a reset button each year to control, among other things, thatch levels and *Poa annua* and thus the desired surface firmness targets.

John Neylan, from Turfgrass Consulting and Research, explains that hardness is affected by thatch depth, soil type, moisture content and to some extent grass height. Clegg hammer example readings locally range from sports fields needing to be less than 100 gravities and cricket wickets in excess of 250 gravities. For golf greens (with a different, domed head) 100-130 gravities is considered very firm. Wimbledon's maintenance programme is able to manage all of the hardness variables to achieve the desired 200 gravities, a very firm surface.



Post-tournament each year, the Wimbledon surfaces are sprayed out, fraise mown, ryegrass reseeded and then grown in. It is like hitting the reset button

A PLAYER'S PERSPECTIVE

Eight-time Wimbledon champion Roger Federer has a bit of a different take on Wimbledon's grass courts – he actually thinks they are "too perfect"! Federer explained to Stubley that he believes that if a grass court is too consistent then it takes out the skill of adjusting to odd bounces. Players end up in long rallies waiting for their opponent to make a mistake, as you see often on hard or clay courts.

If that can be taken as a complaint, then personally I would be prepared to cop that. It seems we have come a long way from the 'grass is for cows' comments of the past!

Australian tennis champion Wally Masur joined the pro tour in the early 1980s during what was then a grass court heyday. His playing career saw him rise to world number 15 and semi-final showings at the Australian and US Opens, as well as grass court wins over Wimbledon champions John McEnroe and Boris Becker. Masur's involvement in the game continued on as Davis Cup coach and captain, respected commentator and now as Performance Director with Tennis Australia.

Quizzing him on grass courts, his preference was for the hard and fast courts produced at Kooyong Lawn Tennis Club in Melbourne: "The preparation that went into the Kooyong Davis Cup finals in 1983 and 1986 meant the courts were perfect," says Masur. "The black clay base was rock hard and the grass was cut so fine it was incredibly quick. The hard base provided plenty of height to the bounce, hence the ability for baseliners like Guillermo Vilas and Mats Wilander to win there (they couldn't get past the quarter finals of Wimbledon, traditionally much softer and lower bouncing, now much harder). However, given the pace of the court, the ability to neutralise your grip and block the ball back, chip and improvise was key and obviously rewarded the aggressive serve volleyers like Stefan Edberg and Pat Cash.

"So I say Kooyong, because it gave all game styles a chance. The pace of the court also meant that athleticism was paramount – you had to have good wheels to win there."

ALWAYS LEARNING

I still feel we have a lot to learn about how best to prepare our grass court surfaces. For now, however, I attempt to produce surfaces that;

- Have a full cover of grass;
- Have as little thatch and are as hard as possible;
- Are cut at 4-6mm height (clippings collected);
- Have high leaf density; and
- Are coloured from medium to dark green.

This is in the hope that players have decent bounce height regardless of the conditions, with minimal post-bounce velocity deceleration. All playing styles are possible, with good aesthetics coming a distant second. I would love for someone to tell me otherwise – what sort of court are you trying to produce? 🙏



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Launching at the 2018 Australasian Turfgrass Conference is the latest product innovation from Bayer, delivering:

- A new fungicide active ingredient for turf
- Turf health benefits from Stressgard Formulation Technology
- A second unique formulation technology

Join us at the Bayer stand to find out more.



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Stressgard**



**?
Stressgard®**

TORO

Toro Turf Tour



NSW Golf Club's unforgettable 5th hole gets an early morning cut courtesy of two Reelmaster® 5510s

New South Wales Golf Club ranks as one of the most iconic golfing establishments in Australia. Outside the likes of Royal Melbourne and the Barnbougle stable of courses in Tasmania, no course is more instantly recognisable than the sprawling links course which plunges its way down the La Perouse headland towards the entrance of Sydney's famed Botany Bay. It is a workplace that is the envy of almost every course superintendent the world over and for one man it has been his backyard for the past 29 years.

Gary Dempsey is an icon himself of the Australian turf management industry. Brought up in the western suburbs of Sydney and unashamedly old school, Dempsey arrived at NSW Golf Club back in 1989. As he quips, at that time "you wouldn't have even tied your dog up at the course!" Despite its stunning location, the course was nowhere near its potential and Dempsey was charged with fixing that and delivering a golf course befitting its prized setting.

Nearly three decades on and it's safe to say that Dempsey has more than delivered. The club has recaptured its glory and the course

now comfortably resides inside the world's top 30 and top 10 in Australia and boasts some of the finest turf surfaces you'll come across. It has been a time of great change and great achievement for Dempsey, now 60, but one which will shortly come to an end as he calls time on his superintendent career on 30 June.

PROVING GROUND

NSW Golf Club is an unforgiving site – all 125 acres of it – and demands a lot of both man and machinery. Dempsey's crew of 19 – well, 20, if you include his much-loved seven-year-old border collie lieutenant Macy – have undoubtedly one of the best offices in world

"Toro always comes to the fore quickly and that's why they're a good fit for NSWGC." – Gary Dempsey



Course: New South Wales Golf Club, NSW **Superintendent: Gary Dempsey**

Dempsey says the Toro ProCore® is one of the best machines the turf industry has seen in his 29 years as NSW Golf Club superintendent

golf, but it can have its extremes. Some days you can stand atop the 5th fairway looking down to the green far below and the Pacific Ocean in the background is a millpond. On other days the wind can be that strong it "blows oysters off rocks" (one of Dempsey's pet sayings) and it can be "as cold as a mother-in-law's kiss" (another Dempsey favourite).

It makes for a pretty tough proving ground for machinery, especially with the exacting maintenance regime Dempsey employs at NSW. The pure Mackenzie bentgrass greens are walk-mowed every day at 3mm and during the height of summer the whole course is cut three times a week. A fleet of 17 Greensmaster® 1000s and two Greensmaster® 1600s take care of the greens, collars and tees (which are walk-mowed too), while four Reelmaster® 5510s maintain the undulating Windsorgreen and native couch fairways. Spraying operations are taken care of by three ultra-versatile Multi Pro® sprayers – two 1750s and a smaller 1250 unit – while the crew is transported around in a fleet of ever-reliable and efficient Toro Workman® utilities.

While Toro's cutting equipment does the job that Dempsey demands of it, there's one specific piece of Toro hardware that has significantly transformed the way he manages the NSWGC surfaces. In 2013, two years after the club converted its greens from *Poa annua* to bentgrass, Dempsey purchased two Toro ProCore® 648 pedestrian aerators. Always the innovator, around the same time Dempsey started importing 4mm 'ninja' tines into Australia after discovering them through a Japanese friend while in the US. With these fitted to the ProCore®, they have radically changed the way he approaches renovations.

"There are a number of things in the past 30 years that I think have made a huge difference to the turf industry – the Toro ProCore® is one of those," states Dempsey. "It's the most outstanding piece of equipment I've seen during my time at NSW. The other machines cut grass and do it well, but the



ProCore® is the one machine that has made a huge difference for me.

"Together with the ProCore® and the ninja tines, we have totally changed our greens renovation practices. We now don't put anything bigger than the ninja tines over our greens and dust every week. We ninja tine the greens up to 10 times a year and that wouldn't be achievable without the ProCore® 648. We can do all 20 greens by 10.30am in the morning – cored, cleaned up, cut, rolled... everything! That's an amazing feat.

"We have been able to keep the thatch down, the members are happy because there is

minimal disruption as the greens heal quicker and it doesn't affect ball roll. It's the secret to my success here and the quality of the greens back that up."

From the innovative wheels within the coring path to the large 122cm aeration swath, there's nothing ordinary about the ProCore® 648 aerator. Years of research, customer input, testing and attention to detail went into making the ProCore® 648 the most productive and efficient walking aerator on the market. Dempsey can certainly vouch for that and it has become a principal weapon in his course management arsenal.

The other big game-changer for Dempsey has been the installation of a new irrigation system. Completed over two stages in 2016 and 2017, NSWGC upgraded its antiquated irrigation infrastructure to Toro's innovative Lynx® central control system with Infinity™ Series sprinklers. While it was something that Dempsey had to push hard for, the Toro system's reliability and efficiency will reap the club significant savings for years to come.

"The Toro irrigation system with Lynx® central control and VP satellites is probably one of the best investments the club has made for its future in my time here," says Dempsey.

NEW SOUTH WALES' RED SHED

- 17 x Greensmaster® 1000s
- 2 x Greensmaster® 1600s
- 5 x Greensmaster® 3250s
- 4 x Reelmaster® 5510s
- Groundsmaster® 328D
- Groundsmaster® 4700
- 10 x Workman® utilities
- 2 x ProCore® 648s
- 2 x Multi Pro® 1750s
- Multi Pro® 1250
- Irrigation: Toro Lynx® controller, VP satellites and Infinity™ sprinklers

Toro Turf Tour

TORO

Course: New South Wales Golf Club, NSW **Superintendent:** Gary Dempsey

NSW Golf Club's fleet of Toro machinery gets a solid workout week in, week out

"We had a lot of detractors, but I told them simply – by the time this asset needs to be discussed again at board level, we'll all be six feet under!

"The system was designed around the fact that we don't have much water at NSW, so we had to make it as efficient as possible. Over the last two years we have been able to fine-tune the system and use that water as judiciously and economically as possible. Unfortunately, the club has gone down the 'green is good' path in recent times which means we are using more water, but we now have the ability to do that but in a far more efficient manner thanks to the Toro system.

"And it has really proved its worth. The past two years have been really dry in Sydney and we still have very good surfaces. Prior to the new irrigation system, the roughs would turn to sand! The greens sprinklers are still the same, but the big difference has been the new Infinity™ sprinklers on the fairways and in the roughs. They are simply outstanding.

"We also can have up to 200 Turf Guard® soil moisture sensors across the whole course. While I still think the best tool in the shed is your eyes, they do help to give you a good picture of what is going on out there."

A key benefit of Toro's new Infinity™ 35/55 and 35-6/55-6 Series rotors is the innovative Smart Access™ feature that allows users quick and easy access to internal components, including solenoids, pilot valves, wire splices and control modules in non-satellite systems – all without digging to provide significant labour savings. The dual trajectory main nozzle provides exceptional performance at the 25° standard angle position. Trjectory™ models are adjustable between 7° and 30° in 1° increments to provide flexibility to adjust for wind, slope and course features – perfect for a course as exposed as NSW is.

LASTING RELATIONSHIP

If there is one thing you can be guaranteed with Dempsey, it's his endearing ability to call a spade a spade. He doesn't suffer fools, is as blunt and forceful as a one-inch punch and can see off spin better than Michael Clarke or Ricky Ponting ever did. In sales parlance, Dempsey would be what you'd describe as a 'difficult' customer and if you want to sell him something then you'd better hope your product performs or it's out the gate.

Toro has always prided itself on how it listens to customer feedback and uses that to



The Toro Multi Pro® 1750 sprayer

improve its products and services. Whether the company has liked it or not, over the years Dempsey has never been backwards in coming forwards when giving feedback to Toro. To the company's credit, they have always listened and found a way to assist Dempsey with his needs, a critical reason he feels why the relationship between the club and company has lasted and continues to be strong today.

"They know they'll always get a frank and honest assessment from me," laughs Dempsey. "They might not always like it, but it will always be honest! I have been around the traps a while now and, contrary to popular belief, I wasn't born with a silver spoon my mouth and haven't worked at NSW since kindergarten. In my first superintendent job there was just me and two others and that made you appreciate the importance of good quality machinery to make the job easier.

"At the end of the day, Toro needs to produce something that I need to do my job – simple as that. Regardless of the colour, they all cut grass and the most important thing is the machine doing what I want it to do.

"To be honest, there have been a number of times when Toro's machinery didn't do what I wanted it to do. But to Toro's credit they always listened, were willing to modify it or make changes so that it did meet our needs. They were willing to lift their game and have done so over the years, and continue to do so.

"They're still not an automatic shoo-in to sell a machine here, but they always come to the fore pretty quick and that's why they're a good fit. Toro has been very forthright in maintaining its relationship with New South Wales Golf Club and I've been more than happy to deal with them. No other has come close to knocking them off their perch!" 🍷



A fleet of 17 Greensmaster® 1000 walk-behinds keep NSWGC's Mackenzie bentgrass greens looking immaculate

TORO®



Australasian Turfgrass Conference and Trade Exhibition

Wellington, New Zealand
24-29 June 2018



Conference Guide





WELCOME TO WELLINGTON, NEW ZEALAND

On behalf of my fellow AGCSA directors, the AGCSA staff and NZGCSA president **Steve Hodson** and executive members, welcome to Wellington and the inaugural **Australasian Turfgrass Conference and Trade Exhibition** to be held at TSB Bank Arena. I sincerely thank everyone for making the effort to cross 'the Ditch' to attend; I am sure a great week of education and fellowship awaits.

The idea of a joint conference between the two associations was first mooted some three years ago and much work by many people has brought it to fruition. Keeping with the joint collaboration, the theme of the conference is '**Tipu Tahi – Growing Together**'.

The conference programme offers a diverse range of seminars and workshops to be presented to delegates. Leading off the week's proceedings once again are the ever popular Monday workshops presented in conjunction with AGCSA Gold Partner Jacobsen. The agronomic workshop, presented by **Scott McElroy** (Auburn University, USA) will focus on 'Understanding the problems of herbicide-resistant weeds in turfgrass' and 'Manipulating fertility to control *Poa-annua*'. The management workshop is to be presented by **Andrew Johnston** (Sentosa Golf Club, Singapore) with the topic being 'What drives your management practices?' Both of these workshops and the various smaller workshops on the Wednesday are fully booked, confirming the continued popularity of this format.

The remainder of the week promises varied educational content and I am sure there will be plenty of seminars with interest for all delegates, ensuring plenty of thought-provoking discussion and providing some excellent ideas to be taken back to your workplace.

The trade exhibition will this year give delegates the unique opportunity to view products from both Australian and New Zealand companies who will have some trade specials on offer. I encourage delegates to take the time to visit all booths and support those companies that are supporting the conference.

Special mention must be given to our conference industry sponsors **Golf Australia** and **Golf New Zealand**, as well as major sponsors **Bayer, Jacobsen, John Deere, Nuturf, Syngenta** and **Toro**. The AGCSA and NZGCSA also wish to acknowledge industry partners **STA Australia**, the **Society of Australian Golf Course Architects** and **New Zealand STI**.

The 2018 AGCSA Golf Championship, once again proudly sponsored by Platinum Partner Toro, will be contested at one of New Zealand's premier courses, **The Royal Wellington Golf Club**. Host to the 2017 Asia Pacific Amateur Championship,

course superintendent **John Spraggs** and his staff will, I am sure, present a stern test for the quest of the Toro Red Jacket. Leading into Sunday's championship is a fantastic pre-conference golf tour also sponsored by Toro. For those fortunate enough to have secured a place on the tour, they will get the chance to play two of New Zealand's most celebrated layouts – **The Kinloch Club** and **Cape Kidnappers**.

The conference's famed social functions are to be held at two outstanding venues and will no doubt be among the highlights of the week. The first of these, the Syngenta President's Dinner, will be held at **Te Papa – The Museum of New Zealand**. The turf bodies of both Australia and New Zealand will honour their award winners during the night. AGCSA Bronze Partner Simplot Partners will present the Farewell Bash to be held at the **Te Wharewaka o Poneke**, a fitting venue in which to wind down the week. Te Wharewaka houses some traditional Maori canoes and carvings which will be on display during the evening.

After a hiatus for a number of years, back on the conference programme this year to complete a memorable week is the post conference Turf Tour. This year delegates will take in some of Wellington's finest sporting venues including **The Basin Reserve** (Test cricket venue), multi-purpose sporting arena **Westpac Stadium** (the 'Cake tin') and **Miramar Golf Club** which is situated adjacent to Wellington's airport which has had an interesting history.

In what has been a great undertaking to present, I sincerely hope all delegates have a wonderful conference and enjoy your time in Wellington. The wonderful staff of the AGCSA and the boards of both the AGCSA and NZGCSA will be on hand to assist in any way needed throughout the conference.

New Zealand is a beautiful country and I am sure that there will be many of you who will take some time to enjoy what the country has to offer either before or after the conference. To those of you that do, safe travels and I look forward to seeing you in Wellington.

BRETT BALLOCH
PRESIDENT, AGCSA
SUPERINTENDENT, ANGLESEA GC

CONFERENCE REGISTRATION DESK OPENING TIMES

Sunday: 2pm-4pm
Monday: 8am-4pm
Tuesday: 7am-6pm
Wednesday: 8am-5.30pm
Thursday: 8am-3pm



New Zealand's capital city
Wellington will be host for the
inaugural Australasian Turfgrass
Conference and Trade Exhibition

'TIPU TAHI – GROWING TOGETHER'

For the first time in the history of the event, the AGCSA, in conjunction with the NZGCSA and its major partners, is taking the industry's biggest gathering overseas! The inaugural Australasian Turfgrass Conference and Trade Exhibition, to be staged at TSB Arena in Wellington New Zealand from 24-29 June, will be unlike any other conference that has come before it. The Australian and New Zealand turf industries will come together truly for the first time and whether it's the education sessions, the social functions or the post conference tour (which makes a welcome return), there is literally something for everyone

Tuesday's Plenary session is one not to be missed. Following a traditional Maori welcome, MC for the day will be one of New Zealand's most inspiring personalities – former Olympian and marathon rowing champion **Rob Hamill**. His extraordinary achievements include winning the inaugural Atlantic Rowing Race then managing two successful defences of the event. Prior to that he collected silver at the Rowing World Championships, a Commonwealth Games gold medal, a world record on the indoor rowing machine and double gold at last year's World Masters Games. And just for fun, he has directed several expeditions, the latest planned being a trek to the South Pole!

While Hamill's sporting and endurance feats are quite remarkable, there's another journey he has been a part of which will leave delegates speechless. Hamill will recount this incredible tale during his motivational address as part of the Plenary session. Simply put, it is a powerful and inspiring message on tenacity, hope, love and the last human freedom – the power to choose your attitude and how you respond to any given situation.

Men's mental health issues have always been at the forefront of every conference and this year will be no different. The Wellington session – 'Rethink/Recharge – Rethinking men's mental health' – will

be conducted by Kiwi experts **Jamie Scott** and **Dr Karen Faisandier**. Hailing from the South Island of New Zealand, Jamie spent the first decade of his career working as a personal trainer, rehabilitation assistant and nutrition consultant. After leaving the fitness industry, he became a health researcher, writer and presenter for one of New Zealand's largest organisational health and well-being companies.

Dr Faisandier is director of The Integrative Practice based in Wellington. Conventionally trained in clinical psychology, her interest in nutrition in health care led her into the study of nutritional and environmental medicine and its application to modern psychology to assist with optimising individual wellbeing and vitality.

On the agronomy and management side of the coin, this year's conference features two heavyweights – **Prof. Scott McElroy** and **Andrew Johnston**. Both will conduct separate Monday workshops, presented in partnership with Jacobsen, and will also give a number of other presentations throughout the week.

Since 2014, McElroy has been a professor of crop, soil and environmental sciences at Auburn University in Alabama and is considered one of the industry's pre-eminent weed experts. His professional and academic record speaks for itself, including a number of years as assistant professor of plant sciences at the University of Tennessee, an associate professor for the College of Agriculture, Forestry and Life Sciences and an executive board member of the European Turfgrass Society (International) between 2012 and 2016.

Johnston has spent the last 10 years at one of Asia's pre-eminent golfing destinations, during which time he has overseen the remodelling of Sentosa's heralded Serapong Course in 2006. In 2010 he was appointed as the club's director of agronomy and in 2016 expanded that to include the general manager role. That same year he produced



MAJOR SPONSORS



INDUSTRY PARTNERS





Plenary session MC and motivational speaker Rob Hamill



Men's mental health session presenters Jamie Scott and Dr Karen Faisandier



a new design for the Tanjong Course. Both projects required innovative thinking, vision and leadership to ensure Sentosa Golf Club maintained its reputation as home to the finest conditioned golf courses in the region and regular host of the Singapore Open.

Other highlights that delegates should put on their list of must-attend sessions include:

- **Syngenta Spray Workshops:** Last held at the 2014 conference on the Gold Coast, Syngenta's popular spray workshops make a welcome return in Wellington. Spraying is one of the most critical cultural practices at any turf facility and Syngenta's group of experts will impart their knowledge on calibration, nozzle selection and application methods to get the best efficacy. **(Wednesday workshops 9am-10.30am and 2pm-3.30pm; Thursday workshops 11.30am-1pm)**
- **Managing volunteers workshop:** Many golf clubs and turf facilities could not survive were it not for the assistance of volunteers. While volunteers can be a fantastic resource, if not managed properly they can become a liability. In this workshop **Andrew Johnston, Brett Balloch, Chris Burgess, Steve Hodson and Pat Wilson** look at strategies to get the most out of volunteers and some of the important managerial considerations. **(Thursday workshops, 8.30am-12.30pm)**
- **Turfgrass management in a changing climate:** Australia's leading agronomist **John Neylan** will deliver a thought-provoking Plenary session address on the impact of climate change on the way we manage our sports surfaces. He will espouse to turf managers the need to identify the implications that climate change may have on their practices and the importance of long-term planning rather than just a reactionary approach. **(Tuesday Plenary, 2pm-3pm)**
- **Career benchmarking – Planning and progressing your career:** In this workshop convened by **Guy Chapple**, delegates will be assisted in considering the career routes available to them now and into the future, as well as identifying the skill sets and knowledge they will need to reach their target turf management role. **(Wednesday workshops, 8.30am-10.30am)**

Once again the AGCSA has developed a smartphone app for the Australasian Turfgrass Conference which can be downloaded through Apple's App Store and GooglePlay for Android devices. The app includes all the important information relating to the conference – speakers and programme, trade exhibitors and floorplan, delegates attending and any important updates throughout the week (make sure you 'allow notifications' upon signing up).

The AGCSA and NZGCSA, together with our industry partners and major sponsors, welcome you to Wellington! We hope you enjoy your week. 🌱

KEY CONFERENCE EVENTS

2018 TORO AGCSA GOLF CHAMPIONSHIPS

TORO

Sunday 24 June, 12 noon shotgun

Royal Wellington Golf Club

Buses to depart TSB Arena approx. 10am (TBC), returning approx. 8.30pm.

JACOBSEN MONDAY WORKSHOPS

Monday 25 June, 10am-3pm

TSB Arena – Rooms 1 and 2

JACOBSEN

SYNGENTA PRESIDENT'S DINNER

Monday 25 June, 6.30pm pre-dinner

drinks for a 7pm start

syngenta

Te Papa Museum – Amokura Gallery

Dress code business formal (jacket optional)

2018 AUSTRALASIAN TURFGRASS CONFERENCE TRADE EXHIBITION VIP OPENING

Tuesday 26 June, 4pm-5.30pm (for fully registered delegates only)

TSB Arena

2018 AGCSA AND NZGCSA ANNUAL GENERAL MEETINGS

Wednesday 27 June, 7.30am

TSB Arena – Rooms 2 and 3



2018 AUSTRALASIAN TURFGRASS CONFERENCE TRADE EXHIBITION

Wednesday 27 June (9am-5pm) and

Thursday 28 June (9am-2.30pm)

TSB Arena (free entry)

SIMPLOT PARTNERS FAREWELL BASH

Simplot PARTNERS

Thursday 29 June, 6pm-8pm

Te Wharewaka o Poneke

POST-CONFERENCE TURF TOUR

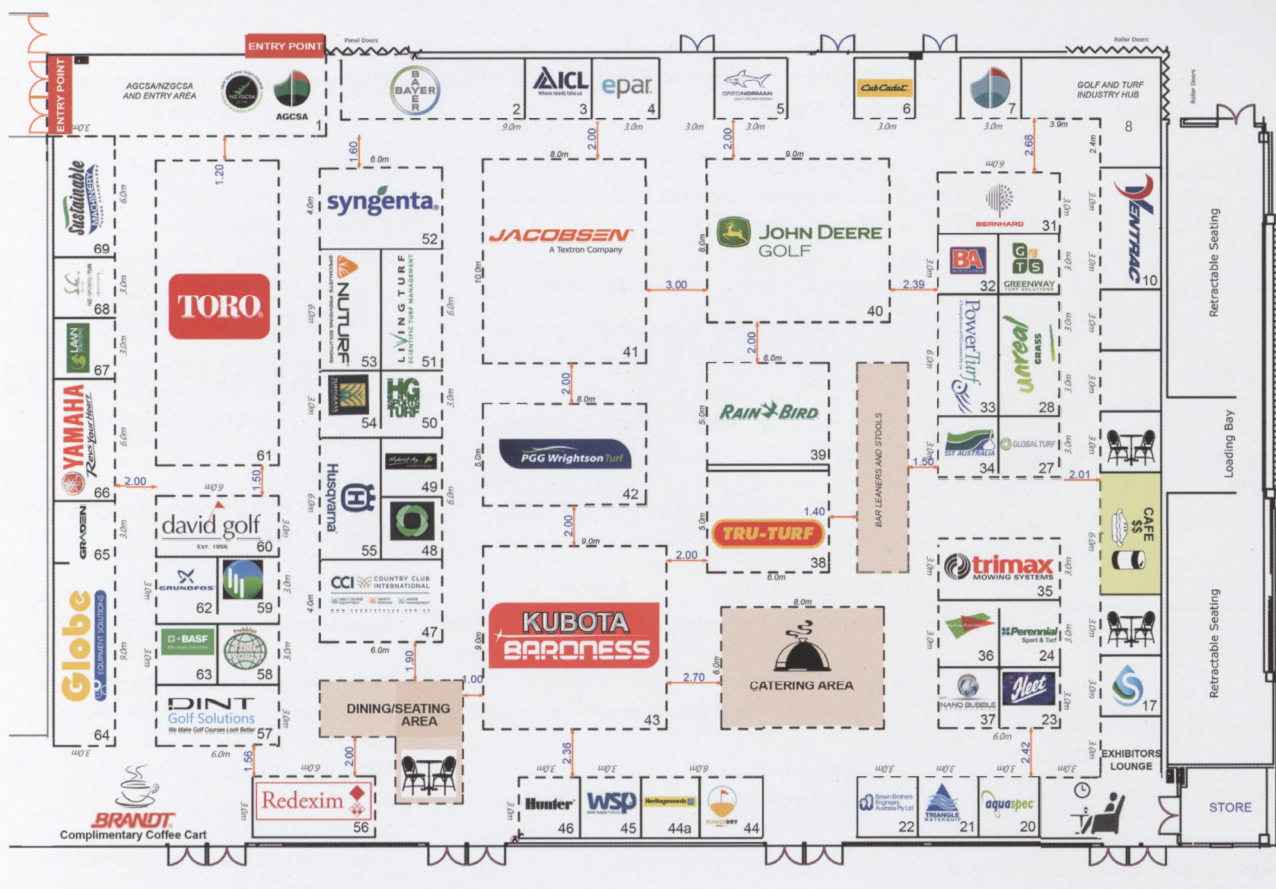
Friday 29 June, 10am-3pm

Westpac Stadium, The Basin Reserve and Miramar Golf Club

Bus will depart TSB Arena approx. 9am (TBC).

The bus will do an airport drop off after visiting Miramar Golf Club, before returning to TSB Arena





2018 AUSTRALASIAN TURFGRASS CONFERENCE TRADE EXHIBITION

MAJOR CONFERENCE SPONSORS

Stand	Company
1	AGCSA/NZGCSA
2	Bayer Environmental Science
40	John Deere
41	Jacobsen, A Textron Company
52	Syngenta Australia
53	Nuturf Australia
61	Toro Australia

AGCSA SILVER PARTNERS

39	Rain Bird Australia
43	Kubota Tractors Australia
64	Globe Growing Solutions & Equipment Solutions



AGCSA BRONZE PARTNERS

3	ICL Specialty Fertilizers
22	Brown Brothers Engineers
46	Hunter Industries
47	Country Club International
57	Dint Golf Solutions
60	David Golf & Engineering



EXHIBITORS

Stand	Company	Stand	Company
4	epar	42	PGG Wrightson Turf
5	Greg Norman Golf Course Design	44	Bunker Dry
6	MTD Products	44A	Heritage Seeds
7	AGCSATech	45	Water Supply Products
10	Ventrac	48	Sports Surface Design & Management
17	Swan Systems	49	Hybrid-Ag
18	Exhibitors Lounge	50	HG Sports Turf (AU)
20	Aquaspec	51	Living Turf
21	Triangle Waterquip	54	Turfgrass Specialists
23	Fleet Australasia	55	Husqvarna Group
24	Perennial Sport & Turf	56	Redexim
27	Global Turf	58	Prebbles Seeds
28	Unreal Grass	59	Ground Science
30	Greenway Turf Solutions	62	Grundfos
31	Bernhard and Company	63	BASF Australia
32	BA Group Australia	65	Graden Industries
33	PowerTurf NZ	66	Yamaha
34	SST Australia	67	Lawn Solutions Australia
35	Trimax Mowing Systems	68	NZ Sports Turf Institute
36	No Fuss Event Hire	69	Sustainable Machinery
37	Nano Bubble Technologies	69A	Fieldturf NZ
38	TruTurf		

Coffee cart: Brandt

Exhibition times: Wed 27 June (9am-5pm) and Thurs 28 June (9am-2.30pm).

Exhibition floorplan correct at time of publication



SUNDAY

2pm - 4pm Registration desk opens

11.45am - 4.15pm
2018 Toro AGCSA
Golf Championships

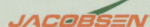


4.30pm - 5.30pm
Pre-dinner drinks and canapes

5.30pm - 8pm
Toro Golf Presentation Dinner

MONDAY

ROOMS 3 AND 4



AGCSA Jacobsen Workshops -
10am - 3pm (lunch 12.30pm)

Management Workshop - **ROOM 3**
What drives your management
practices? - Andy Johnston

Agronomy Workshop - **ROOM 4**
Morning: Understanding the problem of
herbicide-resistant weeds in turfgrass
Afternoon: Manipulating fertility to
control Poa annua - Scott McElroy

10am-12pm
Partners Morning Tea

6.30pm - 10.30pm **syngenta.**
SYNGENTA PRESIDENT'S DINNER

TUESDAY

PLENARY

ROOMS 1 AND 2

8am
Housekeeping and Traditional Welcome
Brett Balloch, Steve Hodson and
MC Rob Hamill

8.30am - 9.30am
Choosing the correct weed control
programme and turfgrass cultivar
- Deciphering opinion, data and
marketing to make the best decision
Scott McElroy

9.30am - 10.30am
Inspirational Speaker
Rob Hamill

10.30am - 11am - Morning Tea

11am - 1pm
Rethink/Recharge: Rethinking Men's
Mental Health
Jamie Scott and Dr Karen Faisandier

1pm - 2pm - Lunch

2pm - 3pm
Turfgrass management and climate change
John Neylan

3pm - 4pm
Soil moisture sensors and their usage
Carmen Magro

4pm - 5.30pm - **VIP TRADE OPENING**

WEDNESDAY

GOLF

ROOM 1

7.30am - 8.20am - 2018 AGCSA and
NZGCSA AGMs - **ROOMS 2 AND 3**

8.30am - 9.30am
Tournament preparations - Andy Johnston

9.30am - 10am
Greenkeeping: A great career - Sam Keats

10am - 10.30am
2017: A year to remember - Billy Koopmans

10.30am - 11am - Morning Tea

11am - 12.30pm
A look at the state of golf in Australia and
New Zealand - Paul Vardy, Golf NZ, Harley
Kruse, AGCSA and NZGCSA

12.30pm - 2pm
Lunch and Trade Exhibition

2pm - 3.30pm
Wednesday PM Sessions - see below

3.30pm - 5pm
Afternoon Tea and Trade Exhibition

WEDNESDAY

SF&G

ROOM 4

8.30am - 9.10am
Poa control for overseeded and non-
overseeded sportsturf - Scott McElroy

9.10am - 9.50am
Recognising and rectifying drainage
problems on sportsfields - Alex Glasgow

9.50am - 10.30am
Comparing sand-based and soil-based
sportsfield performance - John Neylan

10.30am - 11am - Morning Tea

11am - 12.30pm
Industry opportunities and challenges
within the SF&G arena - Panel of Australian
and New Zealand curators

12.30pm - 2pm
Lunch and Trade Exhibition

2pm - 3.30pm
Wednesday PM Sessions - see below

3.30pm - 5pm
Afternoon Tea & Trade Exhibition

WEDNESDAY

PM SESSIONS

CHOOSE FROM...

2pm - 3.30pm
Talkback Forum: Managing for important
course/club events - Various **ROOM 2**

Using and improving your profile through
social media - Jef Kay **ROOM 3**

Turf tolerance: Understanding and
combating wear and tear on sports
surfaces - David Greenshields, Tim
Fankhauser and TBC **ROOM 4**

3.30pm - 5pm
Afternoon Tea and Trade Exhibition

WEDNESDAY

WORKSHOPS

7.30am - 8.20am - 2018 AGCSA and
NZGCSA AGMs - **ROOMS 2 AND 3**

8.30am - 10.30am - **ROOM 3**
A practical approach to project
management for greenkeepers and
groundsmen - Bruce Macphee, Chris
Burgess and Brendan Hannan

8.30am - 10.30am - **ROOM 4**
Career benchmarking: Planning and
progressing your career - Guy Chapple

9am - 10.30am - **VGM ROOM syngenta.**
Spray Workshop: Syngenta experts

10.30am - 11am - Morning Tea

11am - 12.30pm - **ROOM 2**
Moving from a superintendent into a
management role - Brendan Allen, Leo
Barber and Andy Johnston

11am - 12.30pm - **ROOM 3**
HR management: So you need to run a
workplace investigation... - Vicki Crowe

12.30pm - 2pm
Lunch and Trade Exhibition

2pm - 3.30pm - **VGM ROOM syngenta.**
Spray Workshop: - Syngenta experts

THURSDAY GOLF

ROOM 1

8.30am - 9.10am

Disease - A turf manager's nightmare - David McGearry

9.10am - 9.50am

Insect management - Albie Leggett

9.50am - 10.30am

Investigating thatch-mat and root architecture beneath new bentgrass putting greens - Peter McMaugh and Gary Beehag

10.30am - 11.30am - Morning Tea

11.30am - 1.00pm

Predictive modelling - Management tools used to predict weed emergence, dew formation, disease and insect activity - Scott McElroy

1pm - 2.30pm

Lunch and Trade Exhibition

2.30pm - 4.00pm

Turfgrass Talkback - Talkback host to interview, intervene and moderate our team of experts on audience-based questions - Andy Johnston, Scott McElroy, John Neylan and Alex Glasgow

6pm - 8pm

FAREWELL BASH



PLEASE NOTE: SESSIONS, TIMES AND SPEAKERS LISTED HERE WERE CORRECT AT THE TIME OF GOING TO PRINT.

THURSDAY SF&G

ROOM 4

8.30am - 9.10am

Managing damage to stadium turf surfaces associated with temporary flooring - Andrew Stone and Will Bowden

9.10am - 9.50am

Results of AFL ground survey using Precision Sense - Bruce Macphee

9.50am - 10.30am

Strategies for maintaining sportsfields within local government - Mike De Luca

10.30am - 11.30am - Morning Tea

11.30am - 12.15pm

A look at the science behind breeding a cultivar with characteristics tailored to the needs of the sports turf industry - David Greenshields

12.15pm - 1pm

Efficient management of sportsfield use - Karl Nesbitt

1pm - 2.30pm

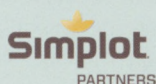
Lunch and Trade Exhibition

2.30pm - 4pm - ROOM 1

Turfgrass Talkback - Talkback host to interview, intervene and moderate our team of experts on audience-based questions - Andy Johnston, Scott McElroy, John Neylan and Alex Glasgow

6pm - 8pm

FAREWELL BASH



THURSDAY WORKSHOPS

8.30am - 12.30pm - ROOM 3

Managing volunteers - The benefits and issues associated with using volunteers at your facility - Andy Johnston, Chris Burgess, Brett Balloch, Pat Wilson and Steve Hodson

11.30am - 1pm - VGM ROOM **syngenta.**
Spray Workshop: Improving your spraying applications - Syngenta experts

1pm - 2.30pm

Lunch and Trade Exhibition

FRIDAY TURF TOUR

10am - 3pm

Post-conference Turf Tour - Westpac Stadium, Basin Reserve, Miramar Golf Club

TRADE EXHIBITION SPOT PRESENTATIONS

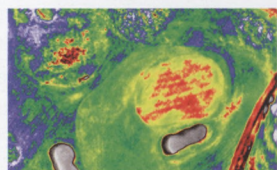
JYRI KAAPRO - BAYER (STAND 2)
STRESSGARD TURF FUNGICIDE

WEDNESDAY: 1.30PM

THURSDAY: 11AM AND 1.30PM



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Joel Manson (far right) can't quite believe his luck when he was named 2017 AGCSA Graduate of the Year at Twin Waters

ATM profiles this year's finalists for the coveted AGCSA Graduate of the Year Award, presented in partnership with Platinum Partner Toro Australia.

2018 AGCSA GRADUATE OF THE YEAR AWARD

It was pretty hard to wipe the smile off Joel Manson's face at last year's Twin Waters conference. Announced as the 2017 AGCSA Graduate of the Year Award winner, the Anglesea Golf Club apprentice cupped his head in his hands and looked in total shock as his name was called out by Toro managing director Richard Walne.

Winning the award kick-started what has become quite the journey for Manson who now finds himself taking the next step in his career in the US. As this edition of ATM was going to print, Manson was one of a number of Australians helping to preparing the Jack Nicklaus-designed Muirfield Village for the US PGA Tour's famous Memorial Tournament.

Muirfield Village has been Manson's home for the past couple of months after he took up a placement there through The Ohio Program. This was after he attended the Winter School for Turf Mangers at the University of Massachusetts and the 2018 Golf Industry Show in San Antonio which formed part of his 2017 award prize.

It has been a life-changing year for Manson and such opportunities are likely to await the 2018 AGCSA Graduate of the Year Award winner who will be anointed on the opening night of the Australasian Turfgrass Conference and Trade Exhibition in Wellington, New Zealand. Judging for this year's award will take place on the eve of the conference with the following seven state finalists looking to impress the expert judging panel. The AGCSA, together with long-time Graduate of the Year Award sponsor and Platinum Partner Toro, wish them all the best.



DANIEL HENDRIE

NSWGC SA

Toronto GC/Morisset CC

Twenty-one-year-old Daniel Hendrie is currently assistant superintendent at Morisset Country Club, an 18-hole par 72 championship course located in Lake Macquarie, NSW. Hendrie

served his apprenticeship at Toronto Country Club, also in Lake Macquarie, and attended Kurri Kurri TAFE in the Hunter Valley.

In addition to winning the coveted NSWGC SA Vince Church Graduate of the Year Award, Hendrie rates his two volunteering stints at the 2015 (The Australian GC) and 2016 (Royal Sydney GC) Emirates Australian Opens as career highlights to date. Such experiences gave Hendrie a taste of what it takes to prepare first class turf surfaces at an elite level. Closer to home, Hendrie also enjoyed being involved in the planning and construction of several tees and greens surfaces during his TAFE studies and at both Toronto and Morisset.

Now in the assistant's role at Morisset, Hendrie is aiding superintendent Nathan Reynolds in all facets, including formulating maintenance and capital works projects, programming agronomy practices and overseeing the club's environmental management and WHS systems. Hendrie is also assisting in reporting all golf course matters to committees and management.

"I got into the industry from having a love of the game of golf and being outdoors," says Hendrie. "I really fell in love with the turf industry once I started to learn more about the technical side and how you can manipulate turf to do different things to achieve an outcome. My goals in the industry are to complete The Ohio Program and return to Australia and work my way towards being a top superintendent."



STEVEN LEWIS

GCSAQ

Chinderah Golf Course

Born and raised in the picturesque Tweed Valley in the Northern Rivers region of NSW, like many children growing up Steve Lewis had a fascination with machinery. From an early age he was heavily involved in helping with grounds maintenance on the family property and with a



natural affinity for the outdoors he would go on to complete work experience at two local golf courses. Thoroughly enjoying the experience, Lewis knew he had found the career for him.

Lewis was duly offered an apprenticeship by Jeff Holloway at Chinderah Golf Course which he completed through Wollongbar TAFE. Holloway is both a golf club professional and also a golf course superintendent/manager, which afforded Lewis the unique opportunity to develop skills and an understanding of different sides of the golf industry. Such a solid grounding saw Lewis named as the GCSAQ Apprentice of the Year Award at the Queensland Golf Industry Awards in March.

"My confidence and skills were nurtured from day one of my apprenticeship," comments Lewis. "My apprenticeship has been unlike that experienced by many others I have spoken with. I have been involved with every task on the golf course including mowing of all surfaces, fertilising and spraying for pests and diseases, irrigation repairs and fault finding, right through to equipment maintenance and repairs. I have also been involved in major projects such as tee replacement/enlargement, green reconstruction, bunker construction, irrigation overhauls and setup of a new workshop.

"Being recognised as GCSAQ Apprentice of the Year highlights the confidence in my attitude and ability by my mentors and peers. I look forward to further developing my skills and knowledge in the industry through further courses and opportunities as they arise."



THOMAS SCHOTT

SAGCSA

The Grange Golf Club

Twenty-four-year-old Thomas Schott has certainly experienced the pointy end of golf course management and preparation in the four years he has been at The Grange Golf Club in Adelaide. The Grange has held a number of major tournaments in that time, including the 2016 Women's Australian Open which Schott rates as the real highlight of his career to date.

"I have experienced a number of highlights within my time at The Grange, with three international tournaments held at the club in my first three years," says Schott, who completed his training through Maxima. "The one that I really enjoyed was the Women's Australian Open. The course and the team came together really well and it was great to be a part of an international event. The weeks prior to and throughout the week of the tournament were such an exciting time to be around the golf club. As a team we provided a world class course."

Major projects Schott has been involved with at The Grange include dealing with couch encroachment in the club's bentgrass collars/greens, drainage works on the recently redeveloped East Course and improving the playability in bunkers and surrounds.



LUKE SNEDDEN

STA ACT

Gold Creek Country Club

It is very much a family affair at Canberra-based Gold Creek Country Club with apprentice Luke Snedden not needing to look too far for motivation when it comes to furthering his turf management career.

Snedden is following in the footsteps of his older brother Simon who just happens to be Gold Creek superintendent and also a former AGCSA Graduate of the Year Award finalist back in 2014. Twenty-two-year-old Snedden started his apprenticeship in 2015 at Gold Creek, completing his studies at CIT, and is now assistant superintendent under big brother who has been a major influence in his career to date.

"My first greenkeeping influence simply came through playing sport from a young age and experiencing the differences in the quality of sports



PATERSON-HILL WINS STA GRAD AWARD

Mark Paterson-Hill, Sports Turf Association of NSW member and TAFE NSW Graduate, was named the new STA National Graduate of the Year at Toro's Sports Fields & Grounds Forum held at Wesley College, Melbourne in April. All state STA graduate finalists were invited to the forum organised by Toro Australia and event partners Syngenta and the STA.

Paterson-Hill is a graduate of TAFE Ryde and is currently employed by HG Sports Turf in the role of NSW Farm Operations Manager. His role includes the growing, maintenance and preparation of turf venues such as ANZ Stadium and Moore Park. Previously, he has been involved with many turf installations for the Commonwealth Games, at the MCG and the new Optus Stadium in Perth.

"Winning the national graduate award is something I never thought I would achieve during my career," says Paterson-Hill pictured below, third from right. "It's great to be recognised for something you love doing."

Paterson-Hill headed home a quality field of state finalists that included:

- **Sam Nickolls (St Andrews Anglican College – STA Queensland):** Nickolls is a graduate of TAFE Queensland and is currently employed by St Andrews Anglican College on the Sunshine Coast. Nickolls was introduced to the turf industry by volunteering at his soccer club.
- **Rhys Taylor (Benalla Racing Club – STA Victoria):** Taylor is a graduate of the Wodonga Institute of TAFE and is currently employed by Benalla Racing

Club. Taylor enjoys working at Benalla because there is always something new to learn and provides endless opportunities to continue growing as a turf manager.

- **Aaron Crofts (Green Options – STA Western Australia):** Crofts is a graduate of South Metropolitan TAFE and is currently employed by Green Options at Murdoch University. His previous roles working in the Mount Barker region has exposed him to many disciplines of turf management including preparation of wickets, AFL fields and Mount Barker Racecourse.

Toro senior marketing manager Elise Willemssen says the company was thrilled for Paterson-Hill and the opportunities that now face him as winner of the award: "We had an amazing group of young professionals through the programme this year, but Mark was a standout with his experience, knowledge of the industry as well as his presentation.

"We are extremely proud to be a part of the graduate award programme and are positive that Mark will be a great ambassador for sports turf in Australia and internationally when he travels to the US next year as part of his prize."



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surfaces as I got older and played at a higher level," says Snedden. "My brother Simon, who has worked in the industry for 10 years, has been a big influence on me. He provided me with my first insight into the industry through general conversations along with photos of his own work."

During his apprenticeship, the younger Snedden experienced an irrigation system upgrade and was also involved in tee reconstruction works. A career highlight was hosting the Austbrokers 2017 Pro Am, a two-day event during which Snedden gained valuable insight into tournament preparations.



DECHLAN TURKINGTON

VGCSA

Green Acres GC/Royal Melbourne GC

Dechlan Turkington's entry into turf management came after he arrived home from travelling around Europe with friends and was trying to find a job he would be passionate about. Sitting at home watching cricket one day, it dawned on him that he would love to work on cricket wickets. However, with a lack of jobs around at that time, he took on an apprenticeship at Green Acres Golf Club. He quickly came to appreciate all the different intricacies of the turf industry and it captured his attention so much that he hasn't looked back since.

"I started at Green Acres in March 2014 under superintendent Mat Poultney," explains Turkington. "I had such a good apprenticeship there and can't thank Mat and the team enough for all the great experiences I had. After I had completed my apprenticeship there, I was lucky enough to receive a role at Royal Melbourne Golf Club under superintendent Richard Forsyth. I completed my studies at Holmesglen's Glen Waverley campus and am very grateful, as the experiences I shared there and long-term friends I have made are a testament to the culture and practices that Holmesglen preach."

Career highlights for Turkington to date include tournament volunteering stints at the 2015 Australian Masters (Huntingdale Golf Club) and the 2017 Fiji International at Natadola Bay Golf Course. Turkington also received the 2016 and 2017 awards for most outstanding Holmesglen student.

"As for the future, I hope one day I can become a superintendent at one of the great courses around Australia or the world," says Turkington. "However, I'm in no rush as I'm still keen on experiencing all that the industry has to offer and learning and developing my own craft along the way."



MATTHEW VROOM

GCSAWA

Mandurah Country Club

The elder statesman of this year's graduate contingent, 31-year-old Matthew Vroom initially started his working career in the construction industry. After six years of that he decided he had had enough and took on a Certificate in Horticulture, an area he had always been interested in.

Taking on a night job to pay the bills while he completed his certificate, upon finishing he did a week's work experience at Mandurah Country Club and loved it. He was offered a groundsman's role straight away and with the arrival of Neil Graham as superintendent a short time later, he was given the chance of undertaking a turf management apprenticeship through Murdoch Challenger TAFE.

During his time at Mandurah, Vroom has taken on many tasks and projects including installing and maintaining irrigation infrastructure, applying nutrients and chemicals, reshaping bunkers and hand watering greens. One of his biggest accomplishments was reconstructing Mandurah's turf nursery which was seeded with Pure Distinction bentgrass. He also recently volunteered at the World Super 6 tournament at Lake Karingup where he assisted with greens and bunker preparations.

"My future goals are to pursue an assistant superintendent role, continue to learn and push towards being a superintendent myself," says Vroom. "It was such an honour to receive the GCSAWA Apprentice of the Year Award and would like to congratulate all the apprentices, not just the ones nominated for the award but also all those that have received their certificates. I hope you all continue to push yourselves and look forward to working with some of you in the future."



BRYCE WALSH

TGCSA

Royal Hobart Golf Club

After finishing his Year 12 studies, Bryce Walsh applied for a number of horticultural positions before being fortunate enough to gain a full-time apprenticeship at Royal Hobart Golf Club, home to long-serving superintendent and AGCSA director Steven Lewis. Just a month into his apprenticeship, Walsh (now 24) knew it was the industry he wanted to be involved in and is now an integral part of the small Royal Hobart crew.

Walsh undertook his studies at TAS TAFE Warrane Campus under the guidance of teachers Mark Potter (turf) and Tanya Norris (horticultural). During his TAFE course he was fortunate enough to tour high quality venues such as Blundstone Arena (Hobart) and the Barnbougle stable of courses.

During his time at Royal Hobart, Walsh has been involved in a number of projects and more will likely come as the club looks set to shortly embark on major master plan works. Among those include the removal and clearing of more than 1000 dead gum trees, blackwoods and radiata pines which has helped transform the course and contributed to it re-entering Australia's Top 100 courses rankings.

Walsh also helped prepare the course for the club's centenary events in 2016 when it hosted 30 fellow 'Royal' golf clubs from all parts of the world. He also played a role in preparations for the 2013 Australian Amateur Teams Championship and the 2017 Australian Senior Amateur Championship. 🌱

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Optimising hours of ground usage



Agronomic
expert John
Neylan looks

at some of the first year
results from an STA
Victoria-funded sports field
project and also reports
on the recent *Poa annua*
forum held at Avondale
Golf Club.



In April 2017 a research project funded by the Victorian branch of the Sports Turf Association (STA Victoria) was commissioned to study the effects of hours of use on sportsfields of different construction types and levels of maintenance.

The project, undertaken by John Neylan and David Nickson (Grand Prix Turf), is being conducted over 18-24 months with seven detailed assessments, as well as collating the maintenance information, the hours of use and the level of sport (e.g.: junior vs senior). This information will then be compared to the turf quality parameters being measured. Over the research period the results are being provided as interim reports available on the STA Victoria website (www.vicsportsturf.asn.au) and presented at STA Victoria seminars.

This article is the first of two to be presented in Australian Turfgrass Management Journal on the study being undertaken and presents the soils data collected over the first 12 months. Part two will examine the data collected on surface quality parameters including turf composition, wear, traction and turf health. ATM is grateful to STA Victoria for allowing publication of this research.

FIELDS AND SOIL TYPES

The project is being undertaken on four local government sports fields in Melbourne's south east suburbs that are in play and maintained by the respective council maintenance team or their service provider. The fields being used include sand profiles with a subsoil drainage system and fields constructed with a native soil profile. All fields have an irrigation system.

There are two Santa Ana couch sports fields of which one is oversown each autumn/winter with ryegrass and two kikuyu sports fields. The project has selected both elite sports fields and community fields so that a good comparison can be made in terms of budget, resources and playing surface quality. The description of the sports fields are:

Sports Field No.1

- **Soil type:** Sand profile with subsoil drainage.
- **Turf type:** Santa Ana couchgrass overseeded with ryegrass.
- **Cricket:** Turf pitch.
- **Sports played:** Senior football, junior football, Auskick, women's football, cricket, Victorian Amateur Football Association (VAFA) Premier C.

Sports Field No.2

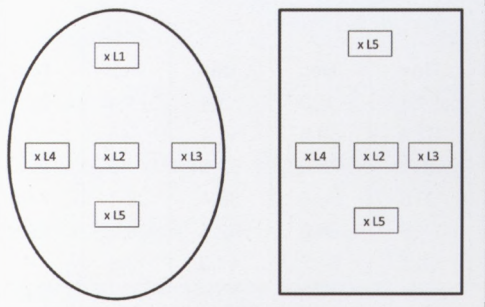
- **Soil type:** Fine sandy loam, no subsoil drainage.
- **Turf type:** Kikuyu.
- **Cricket:** Synthetic pitch.
- **Sports played:** Junior football and cricket, Auskick.

Sports Field No.3

- **Soil type:** Fine sandy loam, no subsoil drainage.
- **Turf type:** Kikuyu.
- **Cricket:** Nil.
- **Sports played:** Senior soccer – State League 1 SE, Bayside, Bayside Women's Premier League.

Sports Field No.4

- **Soil type:** Sand profile with subsoil drainage.
- **Turf type:** Santa Ana couchgrass.
- **Cricket:** Turf pitch – Premier Cricket (2nd XI).
- **Sports played:** Senior and junior football, Auskick, cricket. Peninsula Football Netball League - Peninsula Seniors.



Each site has five sample locations (Figure 1, above left) with each sample location being 10 metres x 10 metres in which each measurement has been undertaken. The following soil test parameters have been determined;

- At each sample location, profile samples were initially taken to a depth of between 300mm and 500mm (or to subsoil depth) to describe the soil texture, depth of topsoil, thatch depth, compaction and root growth. At subsequent sample dates, thatch depth and root depth have been measured.
- The soil moisture content is measured using a TDR probe at five locations in each test area and is related back to the soil type, condition of the playing surface and recent weather conditions (particularly rainfall).
- The soil infiltration rate is measured at each test location using a single ring infiltrometer and is



related back to soil type, compaction and thatch depth. It also relates to the effective irrigation of the sportsfield.

- Soil strength/compaction is measured at five locations in each test area using the soil penetrometer and is used to gauge the degree of soil compaction.

RAINFALL DATA

Rainfall data was collected for the closest Bureau of Meteorology weather stations and the results are detailed in Table 1 (see page 52). The weather from March through to November 2017 was relatively dry and the rainfall was below the long-term average for all sites. In contrast, December 2017 was wet and the rainfall was well above the long-term average. Through January to March 2018 it was very dry and the rainfall was well below the long-term average.

Far left: Figure 1. Each sports field site has five sample locations

Left: At each sample location, profile samples were initially taken to describe the soil texture, depth of topsoil, thatch depth, compaction and root growth. Other test parameters include soil moisture content, infiltration rate and soil strength

Opposite page: STA Victoria is funding a research project to study the effects of hours of use on sportsfields of different construction types and levels of maintenance. Pictured is the high quality Santa Ana surface on one of the four assessed sites in November 2017



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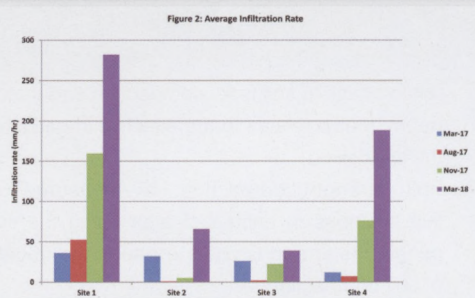
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TABLE 1: MONTHLY RAINFALL DATA (MM)

	2017										2018		
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Moorabbin	29.6	94.6	32	15.6	38.2	61	38.6	48.4	31	130	64	1.4	23.2
Long term average	44	63	69	56	62	65.1	64.6	68.8	62.4	60.5	44.4	45	43.7
Mornington	21	12	6	9	9	67.1	73	59.5	66.3	75.6	53.6	5	27.6
Long term average	49	62	70	71	69	71	71.5	69	59.8	53.6	38.4	38.1	44.9
Frankston	26.4	67.3	35.9	23.3	37.3	56.7	57.5	44	33	138.8	52.5	0.8	29.6
Long term average	47	65	68	73	71	65.6	68.9	68.7	60.5	64.2	47.3	48.3	47

Figure 2. Infiltration rates at the four sites across four assessment dates.



SOIL INFILTRATION RATE

The infiltration rate varied across each field and varied throughout the year (Figure 2). As would be expected, the infiltration rate was highest on the relatively new, sand-based construction and quite low on the native soils. There was variation in the infiltration rate across each field which was related to thatch depth, soil moisture content and soil compaction at each particular location.

Across all sites there was a substantial reduction in the infiltration rate by the end of the winter months, even on the sand-based fields. This highlighted the compaction and surface sealing that occurs during winter sports and the importance of post-winter renovations to restore the infiltration rate and soil aeration. At all sites the soil aeration process improved the soil infiltration rate.

SOIL MOISTURE CONTENT

The soil moisture content varied across each field and varied throughout the year (Figure 3). There was variation in the soil moisture content across each field which was related to thatch depth, soil compaction, surface contours and traffic. An example of the variation is provided in Figure 4.

There are several observations that can be made from the data collected;

- The sand-based field was never at an excessively high moisture content or saturated throughout the year.
- The soil-based fields became saturated in June and remained that way through to the late August assessment.
- Fields 1, 2 and 4 were quite dry at the March 2018 assessment and reflected the very dry summer. There were some other compounding factors including poor irrigation coverage and keeping the surface dry to assist in stressing out a persistent *Poa annua* biotype.
- In March 2018, Field 3 was at an expected moisture content due to an increase in the

irrigation regime to assist in preparing the surface for high level soccer.

- Figure 4 highlights the potential high variation in soil moisture across a field which in this case reflects the variation in soil compaction, infiltration rate, thatch depth and irrigation distribution.

SOIL STRENGTH/COMPACTION

The soil strength and soil compaction was highly variable across most sports fields and was affected by thatch depth, soil moisture content, traffic and soil decompaction practices.

All fields had the shallowest compaction layer at the end of the winter sports season (August 2017) and reflect the high traffic and wet soils (Figure 5). At Site 1, the field was being solid tined mid-winter and when checking the effects of the solid tining

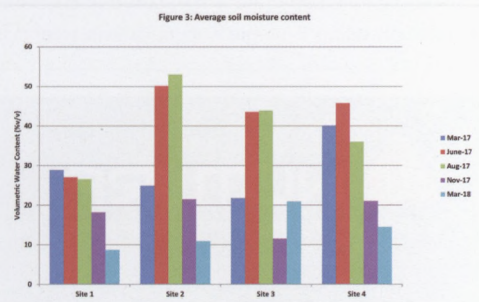


Figure 4: Variation in soil moisture content across Field 2

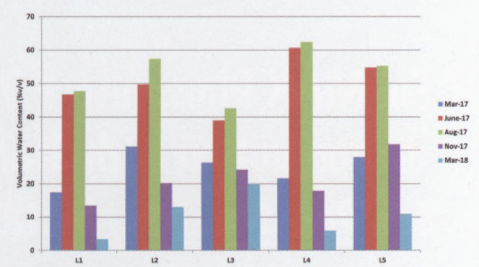
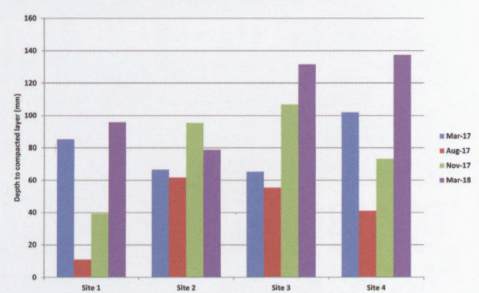


Figure 5: Average soil strength



Figures 3-5: Figure 3. Average soil moisture content readings at the four sites across five assessment dates. Figure 4. Variation in soil moisture content in five sampled locations on Field 2 across five assessment dates. Figure 5. Average soil strength of the four sites across four assessment dates

CONTINUED ON PAGE 54

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Mike Baker



The fields being assessed include sand profiles with a subsoil drainage system and fields constructed with a native soil profile

CONTINUED FROM PAGE 52

there was no positive result and the soil was very compacted at the bottom of the tine hole (i.e.: about 20mm). This particular observation highlights the importance of monitoring soil compaction, selecting the most appropriate equipment and reviewing the results of the operation.

Fields 1, 3 and 4 were aerated in spring/summer and this was reflected in an improvement in soil conditions at both the November 2017 and March 2018 assessments.

CONCLUSION

So, after the first 12 months of the project there are several obvious conclusions regarding the soils and soil management;

- The oval constructed on a heavy soil type deteriorated very quickly once the rain came in August 2017 and further highlights the importance of a well-drained profile.
- Thatch depth has a significant influence on surface moisture retention and infiltration rate even on a sand profile.
- A sand profile that has some drainage substantially improves the ability of the surface to cope with high traffic loads.
- The increase in soil compaction and reduction in the infiltration rate over the winter months reinforces the need for a targeted renovation programme in the spring.
- Field 4, while damaged due to high traffic loads and wet soils late in the winter, responded extremely well to the programme of aeration and fertiliser applications.
- The poor water distribution at some sites was affecting the consistency of the soil moisture content and consequently the overall turf health, turf density and root growth.
- One field was being aerated during the August assessment and provided a good opportunity to assess the effect of the process being

undertaken. The field was being solid spiked and the depth of penetration was no more than 5cm. On checking the soil strength (compaction), the spiking process was actually increasing the level of compaction at the bottom of the tine hole. This observation reinforces several important aspects of compaction control and aeration;

- It is important to understand where the problem is within the soil profile.
- Use the most appropriate equipment (e.g.: deep compaction control requires a Vertidrain or similar with some 'kick' to disrupt the compacted layer).
- The only way to reduce compaction is to increase soil volume.
- Thatch control requires a different process compared to compaction control.
- Post-renovation, measure soil strength or infiltration rate (or both) to determine the effectiveness of the treatment.

POA ANNUA SYMPOSIUM

In May 2018, 26 golf course superintendents from several states and New Zealand gathered at Avondale Golf Club in Sydney to discuss in detail how to manage pure bentgrass surfaces and, in particular, how to keep these surfaces 'free' of *Poa annua*. This is the third such event organised by host superintendent David Warwick with the last event held in 2012 (see ATM Volume 15.1 – Jan-Feb 2013 – 'The *Poa* brains trust', pages 28-32 for an account of this discussion).

Over the past six years this group has continued to tackle this ubiquitous weed and again met to further discuss their successes and failures in keeping their bentgrass surfaces '*Poa* free'. On this occasion there was more discussion around *Poa annua* control in warm-season turf.

The *Poa annua* discussion day was very successful where superintendents, chemical

Native soil-based fields became saturated in June and remained that way through to the late August assessment



company representatives and consultants freely shared how they tackled this universal challenge. It was also a privilege to have the doyen of Australian turf, Peter McMaugh, in our presence. Given the volume of notes Peter took, it emphasises the fact that you never stop learning regardless of age or experience. Professor Mike Richardson from the University of Arkansas (Department of Horticulture) also joined the group via Skype and shared his recent experiences.

As with previous events, the superintendents came from far afield and represented a range of locations, climates and management techniques which provided the group with a broad range of strategies that can be more broadly applied.

With each of the superintendents presenting their programmes, it was interesting to note that while there were obvious similarities there was little repetition and highlighted that every set of circumstances is different. As we have learnt from recent VGCSA trials, while the general principles remain similar, the specifics can be quite different dependent on location and microclimates.

As we often discuss about any get together, the value is often about the 'getting together' with your peers and sharing experiences. Importantly this involves not only sharing the successes but also the failures! A few of the key points that came from the discussions that I found valuable included these from Dr. Mike Richardson;

- *Poa annua* control requires a slow and persistent approach. Interestingly, this point came across from several superintendents in the group.
- You must create a competitive environment for the bentgrass over the *Poa annua*. It is not just a straight herbicide approach.
- Keeping nitrogen to 1-2kg/100m²/year. This has probably been standard practice in Australia for some years.
- Keeping soil phosphorus loads to less than 20-30ppm (test method unknown).
- Need to promote bentgrass roots and then to use water management to help in the control process. The use of TDR moisture probes was strongly endorsed as a means of managing water.
- Avoid autumn renovations.
- Utilise the high density bentgrass cultivars.
- Paclobutrazol is the best product for suppression. Of all of the herbicides used and trialled over the years, paclobutrazol is still very much a 'go to' chemical.

Andy Wood from Kauri Cliffs in New Zealand provided an excellent presentation on using paclobutrazol and timing the applications by using Growing Degree Day modelling (GDD) (see ATM Volume 20.1 – Jan-Feb 2018 – 'GDD game-changer', pages 20-22). The programme not only used paclobutrazol, but incorporated ethephon, endothal and spot treatments for a well-rounded control

“Its genetic diversity, ability to seed prolifically at low cutting heights and for the population dynamics to alter with changing conditions, makes *Poa annua* a formidable opponent.”

-John Neylan





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The recent *Poa annua* forum at Avondale Golf Club did not reveal any new 'silver bullets', but it did reinforce some excellent strategies as well as the importance of getting the basics right

strategy. It was interesting to note that in addition to the herbicide/growth regulator treatments, it also involved a double tine and topdress in spring and the strategic use of nitrogen.

GDD modelling was also being used by other superintendents for timing the application of Trinexapac-ethyl and paclobutrazol. The concept of GDD has many other applications related to weed control and warrants further consideration (J. Kaapro 2016 and 2018).

Pre-emergent use is seen as a key part of any control strategy and requires a 'whole of course' approach. With the loss of bensulide several years ago, a number of superintendents have been successful in getting an APVMA permit to use dithiopyr on bentgrass greens.

Ethofumesate is also being used as a pre-emergent and may provide an option. There has been limited experience with ethofumesate on bentgrass, though it does require well-drained greens and wet weather must be avoided. This herbicide should only be used following on-site trials.

There was a discussion around the use of pre-emergent herbicides on couchgrass fairways and the take home message for me was that the 'little and often' approach was very effective because it ensures there is good overlap between the herbicide applications.

This approach closes potential gaps that may occur through the missed timing of herbicide applications because of weather, golfing programmes or other interruptions. The result is there is a constant "film" of pre-emergent always present. This programme makes sense when you consider the factors that may affect the efficacy and longevity of pre-emergent herbicides such as shade, soil type, soil moisture and rainfall.

The use of the herbicide Nominee (AI: bispyribac-sodium) to control *Poa annua* continues to be fine-tuned. The key to its successful use is;

- Making multiple applications at reduced rates;
- Careful observation after treatment to make sure that the bentgrass is not being damaged; and
- Stop the treatments if turf thinning is observed.

SUMMARY

Poa annua is still the most challenging of weed species and is a true opportunist in that if you give it the slightest chance to invade a turf area it will. Its genetic diversity, ability to seed prolifically at low cutting heights and for the population dynamics to alter with changing conditions, makes it a formidable opponent.

The *Poa annua* forum did not reveal any new 'silver bullets' but it did reinforce some excellent strategies as well as reinforcing the basics, including;

- Use Growing Degree Day modelling for the strategic application of paclobutrazol.
- A healthy plant and a dense turf with a strong root system are imperative for control.
- Know your grasses and herbicides and do your homework.
- Know your site conditions and monitor the interactions between your conditions and the herbicides. Stop further applications if plant health is being compromised.
- The whole golf course must be included in the control strategy. A little and often approach is well worth considering to close up gaps that may allow *Poa annua* to germinate.
- Use a combination of strategies – herbicides, nutrition, cultural etc.
- Manage the wear and high traffic points.
- Monitor the results of the control strategies and regularly assess the *Poa annua* population.
- Make sure the herbicide programme is based around a resistance management strategy.

AUTHOR'S NOTE

The *Poa annua* control strategies stated in this article are general in nature and are not meant to be implemented without careful thought and planning and taking into account local conditions. Any reference to chemicals not registered in Australia is mentioned for education purposes only.

ACKNOWLEDGEMENTS

John Neylan and David Nickson wish to thank STA Victoria for their support and funding of the research project 'Compare hours of use for different sports field construction types and maintenance inputs'. They also wish to thank the councils that have allowed access to the sports fields being assessed as part of the project.

FURTHER READING/VIEWING

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Wood, A. Graham, N. and Warwick, D. 2018. 'GDD game-changer'. Australian Turfgrass Management Journal Vol 20.3, pp 20-22. AGCSA. 🌱

Anthracnose
(*Colletotrichum*
graminicola),

Brown Patch
(*Rhizoctonia solani*),

Dollar Spot
(*Sclerotinia*
homoeocarpa),

Helminthosporium
Disease (*Bipolaris* spp,
Drechslera spp,
Exserohilum spp),

Pythium Leaf Blight,
Pythium Root Rot,
Seedling Damping Off
(*Pythium* spp),

Fusarium
(*Fusarium nivale*,
Microdochium nivale),

Take-All Patch
(*Gaeumannomyces*
graminis var. *avenae*),

DISEASE SUCCESS



Ectotrophic Root
Infecting Fungi (ERI)
[Autumn strategy]

Spring Dead Spot
(*Ophiosphaerella*
narmari),

Take-all Patch
(*Gaeumannomyces*
graminis var. *avenae*)

Ectotrophic Root
Infecting Fungi (ERI)
[Spring and Summer
strategy]

Couchgrass Decline
(*Gaeumannomyces*
graminis var. *graminis*),

Take-all Patch
(*Gaeumannomyces*
graminis var. *avenae*)

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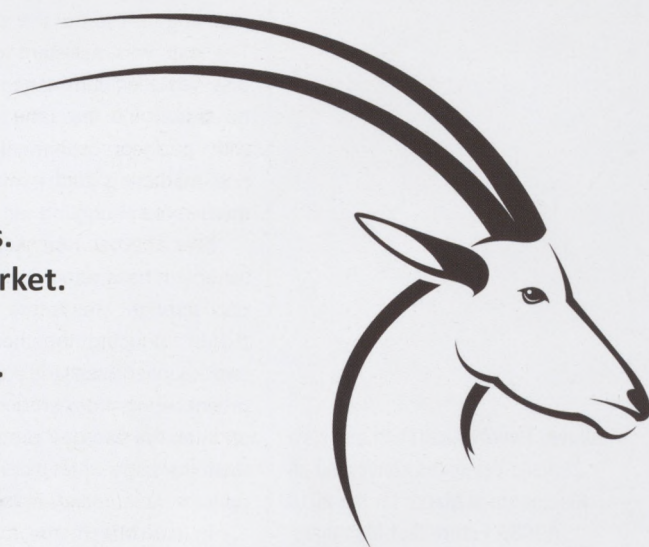
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ATM looks back at the
2018 AGCSA Future
Turf Managers' Initiative,
presented in conjunction
with Gold Partner
Jacobsen.

Above: Twenty Australian and New Zealand delegates converged on Melbourne in March for the 2018 AGCSA Future Turf Managers' Initiative

There's a well-worn footy cliché about grabbing opportunities with both hands. Taking the next step up the career ladder is all about taking advantage of the opportunities that come your way to expand your skill set and give yourself the best possible chance of progressing.

Career advancement in the turf industry can be challenging. Superintendent postings only come around so often and the resignation of one will spark almost a musical chairs type effect as fellow superintendents and aspiring assistants vie for the vacated role.

For assistant superintendents it can be a daunting task to put themselves up for such a role. The leap from assistant to superintendent is a big one. While the turf management skills are generally no issue, it's the off-course skill set – dealing with budgets, communicating with committees and managing staff – which assistants often find themselves struggling with.

Since 2016, the AGCSA and Gold Partner Jacobsen have attempted to bridge that knowledge gap through the Future Turf Managers' Initiative (FTMI). Bringing together some of the brightest and keenest assistant superintendents and senior greenkeepers from around the country, the FTMI is an intensive two-day programme that aims to give them the edge when it comes to putting themselves up for a superintendent role.

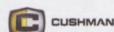
In late March, the third FTMI instalment was conducted and for the first time in the event's short history it was held outside of the annual Australian Turfgrass Conference. It was the desire of both the AGCSA and Jacobsen for participants to get the most from the initiative and to keep it fresh and it was thought that having it as a stand-alone event

would do that. Going by the feedback from this year's successful candidates, the move certainly proved a hit.

Held at Quest Cheltenham in Melbourne's southeast, 16 delegates from around Australia and four from New Zealand converged for the two-day programme which centred around honing their skills for future career development. This year's cohort was joined by four superintendent mentors, including first-timers Lincoln Coombes (RACV Royal Pines) and Leo Barber (Paraparaumu Beach GC, NZ). They were joined by returning mentors Leon Hennessy (Cromer GC, NSW) and Travis Scott (Riversdale GC, Vic).

This year's FTMI intake comprised: **Craig Anthony** (Royal Melbourne GC, Vic), **Bradley Ayres** (The Grange GC, SA), **Jeremy Clarke** (Peninsula Kingswood CGC, Vic), **Adam Fry** (Kooyonga GC, SA), **Michael Giamboi** (Meadow Springs G&CC, WA), **Benjamin Hardie** (Portland Golf Club, Vic), **Mark Holmes** (The National GC – Long Island, Vic), **Ian Howell** (The Ridge GC, NSW), **Gareth Kelly** (Royal Hobart GC, Tas), **Blaine Knox** (Palm Meadows GC, Qld), **Nathan Lindsay** (Hamilton Island GC, Qld), **Peter McNamara** (The Brisbane GC, Qld), **Christopher Mitchell** (Sanctuary Cove G&CC, Qld), **Shaun Page** (Southern GC, Vic), **Rhett Pinder** (Club Mandalay, Vic), **Greg Smith** (Muirfield GC, NSW), **Andre Arthur** (Kauri Cliffs, NZ), **Sam Davis** (The Hills GC, NZ), **Benjamin Finn** (Paraparaumu Beach GC, NZ) and **Yannick Weber** (Cape Kidnappers, NZ).

This year's programme included workshops and seminars on topics such as budgets, career planning, CV and resume writing and interview and presentation techniques. HR experts Vicki Crowe



TEXTRON GOLF

(PGA of Australia) and Susanne Macphee returned to impart their wisdom, while superintendent mentors Leo Barber and Lincoln Coombes provided practical tips in their presentation on building course budgets.

"The FTMI is a fantastic initiative," says Barber, who holds the dual role of course manager and superintendent at Paraparaumu Beach, one of New Zealand's top links courses. "I have no doubt that it will be a career-changing experience for many of those that participated this year. I really appreciated being selected as a mentor; it was wonderful to meet some people that will be great for our industry in the future."

A new addition to this year's programme was leadership expert Mark Carter who provided an overview on performance management as well as understanding modern leadership and expectations of being a manager. The group also had the opportunity to visit Peninsula Kingswood Country Golf Club (course manager Glenn Stuart) to view the impressive redevelopment works that have been ongoing for a number of years.

Karen Proctor, Jacobsen's global head of marketing, made the journey from the UK for the AGCSA FTMI and was again impressed with the calibre of this year's delegates. "Over the course of several days I witnessed the enthusiasm that the 20 candidates brought to the programme and it is this passion that makes the turf industry great," says Proctor. "The FTMI is a unique course which provides talented individuals the tools needed to progress to a management position."

"Jacobsen is proud to support educational events such as the FTMI which helps enthusiastic and talented individuals to further their careers. There are an impressive number of individuals who have been promoted after being on this unique course and I look forward to seeing the class of 2018 do the same. I would encourage anyone who is thinking of applying to talk with one of the students who have already taken part to see how this event has positively impacted their career."

The AGCSA's Mark Unwin, who was attending his first FTMI since being appointed CEO last September, was delighted with the programme and impressed with the talent coming through the ranks. "This type of education to our members creates lasting change, where they can take back learnings and start implementing actions on the course or in the shed from day one and carry it with them for the rest of their careers," says Unwin.

"The feedback we have received from the FTMI attendees was great, with many acknowledging that the ability for them to spend a few days sharing knowledge and experiences with peers, hearing from industry leaders and learning from experienced mentors was extremely beneficial."

Indeed, in this year's post-FTMI survey, 65 per cent of delegates said the programme exceeded their expectations. Such feedback reaffirms how



FTMI delegate Mark Holmes shares a laugh with superintendent mentor Leo Barber during the interviewing techniques interactive session

important programmes such as the FTMI are for the development of aspiring superintendents. What follows is a selection of some of the feedback received from this year's delegates and what they got out of it.

NATHAN LINDSAY

Hamilton Island GC, Qld

"The FTMI was a great way to further my learning and experience in the management side of the turf industry. It gave me the building blocks to help me further develop new skills and knowledge that I possibly would not have otherwise had the opportunity to experience. I have been able to take the lessons learned from the programme and try to apply them in my current role to continue my professional development. It far exceeded my expectations and I would highly recommend this to others who have thought about participating."

IAN HOWELL

The Ridge GC, NSW

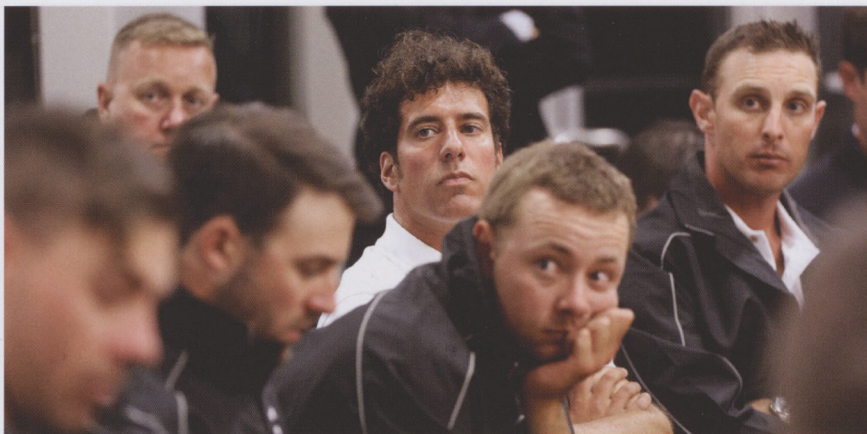
"The FTMI was two days full of expert speakers and stimulating discussion on fundamental topics. It was very useful having the four superintendent mentors there to hear and learn from their experiences throughout their careers. I feel that the FTMI is just the start of a relationship with the mentor and it is excellent to have them in that capacity and with whom I can keep in contact with and bounce ideas off down the line."

The FTMI aims to take assistant superintendents and senior greenkeeping staff outside of their comfort zone and impart the skills they need to take the next step in their careers

Relevant Skills:

Staff management ✓
Communication—multi layer ✓
Budgeting ✓
Agronomy skills ✓
Environment
HSE ✓
Preparing reports
Business modules
Staff development & PRD
Planning
Relationship Building
Leadership & motivation
Patience & handling stress
Problem solving
Project management
Strategic planning
Environmental Knowledge





◀ New Zealand FTMI delegate Yannick Webber (pictured centre): "A great programme delivered by the legends to the rookies."

BENJAMIN HARDIE

Formerly Portland GC, Vic

"The FTMI has given me the experience, knowledge and the connections that I never thought I would gain in my career. It has given me the confidence and drive to follow my goals to become a better turf manager and hopefully one day a leader in our industry."

ADAM FRY

Kooyonga GC, SA

"The FTMI is an incredible initiative conducted by the AGCSA and Jacobsen. You will come away feeling inspired and reinvigorated, gaining a vast amount of knowledge that will greatly assist you throughout your career. The opportunity to network was also extremely valuable."

RHETT PINDER

Club Mandalay, Vic

"The FTMI was the most in-depth, jam-packed two-day seminar I could possibly imagine. Time was of the essence, but the entire programme was so well structured we managed to fit everything in and a little more it seemed. A few of the topics covered were new to me personally, but still really simple to follow along and understand. Honestly, I couldn't recommend the programme more."

ANDRE ARTHUR

Kauri Cliffs, NZ

"I loved the programme and thought it provided a great insight into what I will need to do to reach the next step in my career."

CRAIG ANTHONY

Royal Melbourne GC, Vic

"The FTMI was great and I took a lot out of the sessions. The sessions taken by industry leaders and proven professionals has allowed me to develop and enhance the skill set required to take the next step. The programme was both enjoyable and informative allowing plenty of time to network with like-minded turf professionals. The mock interview session involving mentor Leo Barber and Susanne MacPhee was a personal standout. This session allowed delegates to get out of their comfort zone

and experience what it's like to be in an interview for a superintendent's position. The feedback and experience will prove invaluable going forward with my career."

YANNICK WEBBER

Cape Kidnappers, NZ

"The FTMI is an invaluable opportunity to network, share, learn and put yourself on the front foot to succeed with upcoming opportunities. The format with speakers presenting the topics and groups led by acknowledged superintendent mentors to discuss and deepen the topics is very effective, allowing the delegates to get the most out of the subject. It was challenging and the quality of the speakers and topics will make a massive improvement to our daily lives. The amount of new, useful information we gained was stunning."

MARK HOLMES

The National GC, Vic

"Being a part of the FTMI has opened up my mind and planted many a seed to help me with my future endeavours. I highly recommend it."

MICHAEL GIAMBOI

Meadow Springs G&CC, WA

"The course met my expectations and I learnt heaps. It was great getting to know other like-minded people from around Australia and New Zealand with a passion for turf. You can't get taught these things at work, so this is a great opportunity to discuss certain subjects."

SAM DAVIS

The Hills GC, NZ

"The 2018 FTMI was an unreal experience for me. It has given me plenty of tools and strategies to achieving my goal as a superintendent in the future and was a great way to network with other colleagues in the industry."

BLAINE KNOX

Palm Meadows GC, Qld

The FTMI was an amazing experience. I was challenged and at times put out of my comfort zone. I feel like I've had an invaluable insight into what the future holds as a leader and a better understanding of the demand for professionalism in the industry. The sessions on preparing for an interview and planning a budget were particularly helpful. I also found the personality profiling and leadership sessions very interesting and I hope to implement what I learned from them into my current role as assistant superintendent at Palm Meadows. Being in a room full of such dedicated professionals and seeing so much passion for what we all do was very inspiring."

Editor's Note: The AGCSA FTMI will again be conducted in early 2019 with applications opening in November 2018. 🌱

Royal Melbourne's Craig Anthony gets grilled during the mock job interview session



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A safe workplace is a productive workplace. Even if your workplace hasn't had an accident for a long period of time, it is vital that complacency does not start to set in when undertaking routine tasks

Speaking up for EHS



This edition sees the start of a regular column from environment, health and safety expert Terry Muir. He kicks off by espousing the importance of EHS management and outlines the exciting new joint initiative between the AGCSA and epar to improve industry practice in this area.



Every superintendent and turf manager has, on occasion, observed decisions or behaviours that cause them to consider whether the best care is about to be delivered to their staff and to the protection of the environment. How they respond is generally a reflection of their training, their appetite for risk, the culture of their workplace and their own personal belief system.

We should all appreciate that golf course and turf maintenance is a fast-paced environment and it can be the easy option to turn a blind eye to environment and safety management when having to meet deadlines. However, most can attest to the turbulent outcomes that can arise if something goes wrong.

New technology, a changing user market, the need to upskill, the importance of business and personal reputation and the need to improve productivity are all new drivers for superintendents and turf managers engaging with environment, health and safety (EHS) management. This is why the team at epar is excited to join forces with the AGCSA to assist its members to make gains in this area of their operations.

As part of this joint venture, information and seminars will be provided to assist superintendents and turf managers identify and then improve their patterns of EHS communication, behaviour and culture within their teams. Specifically, a focus will be on how to develop team and organisational social environments that foster genuine workforce engagement and commitment to EHS that ultimately promotes workforce ownership.

This model was certainly a resounding success at Alcoa when its chief executive officer Paul O'Neill challenged his company to become the world's safest by focusing on one thing – worker safety. He declared, "If you want to understand how

the business is doing, you need to look at our workplace safety figures. If we bring our injury rates down, it will be because the individuals at this company have agreed to become part of something important. They've devoted themselves to creating a habit of excellence. Therefore, safety will be an indicator that we're making progress in changing our habits across the entire institution."

O'Neill also knew he had good employees and if you have good employees you want to keep them. He didn't want them injured and he wanted to show them that he and the company cared about them. Over a five-year period, the company's earnings increased 600 per cent and every year sales grew by 15 per cent. Safety improved so significantly that on average, workers are now more likely to get injured at a software company, animating cartoons for movie studios or doing taxes as an accountant than handling molten aluminium at Alcoa!

So, when it comes to demonstrating to your board or owners the value of EHS, the proof is out there. There's also a word that comes to mind for a superintendent or turf manager being able to address potential EHS incidents before they occur – priceless!

COMPLACENCY CREEP

So far in 2018 epar has responded to three major EHS incidents in the golf industry and conducted what we term 'root cause analyses' for each incident. The root cause is 'the evil at the bottom' that sets in motion the entire cause-and-effect chain that led to the incident. In all three cases, the theme that emerged was complacency creep. It's a significant issue facing the golf and turf industry and we need to make sure it doesn't go unnoticed.

Complacency occurs when you've been doing something one way for so long without incident

that you assume there can never be an incident. Whatever it is that you're doing must be effective because, until now, there have been no issues.

All three sites that had major incidents were star EHS performers. We found that each site had gone for long periods without incident for so long that they were no longer alert to the risks. We found that when the employees first started to conduct the activity they were very alert to the risk and exercised extra caution. But, over time the work activity migrated from an activity with a high degree of caution to a habitual activity with limited caution. Once a high-risk task moves to a habitual task, complacency has set in and something unexpected or unplanned enters the equation.

Recognising this problem, we are developing solutions with the AGCSA to tackle the issue head-on. We will be working together to provide superintendents the information to be able to carry out an effective observation, recognise poor EHS practices and behaviours, communicate effectively with their team and their board/owners and actively promote and maintain EHS standards.

TIME FOR A RETHINK

EHS is evolving at a fast pace and the turf management profession will look very different a few years from now. New and emerging technologies will continue to change fundamentally the way maintenance teams perform their work. Rather than being siloed, many superintendents and turf managers need to be wearing multiple hats within their organisation. This will include risk management, streamlining operations, employee training, communications, compliance management and costs reduction.

Rethinking their current management practices for employee performance and motivation will also become a big-ticket item. What's important here is that the big trend in performance management assessment will be the shift toward data and analytics. Simply put, it's time for a change to a more meaningful, forward-thinking approach to EHS and the business benefits it delivers.

Many do not appreciate the indirect costs of workplace accidents which are usually greater than the direct costs. A conservative estimate of losses for every \$1 of direct accident costs, there is \$3 of indirect costs. Some indirect costs include:

- Time lost from work by injured employee(s);
- Loss in earning power;
- Economic loss to injured worker's family;
- Lost time by fellow employees;
- Loss of efficiency due to break-up of crew;
- Lost time by supervision;
- Cost of training a new worker;
- Damage to tools, equipment and other property;
- Time lost for replacing damaged equipment;
- Spoiled work;
- Loss of production; and
- Overhead cost (while work was disrupted)

Some of the hidden costs as a result of EHS incidents include:

- Production loss/worker distraction;
- Training costs/replacement worker;
- Loss of skill/efficiency – slowed production;
- Paperwork and admin time;
- Loss of morale;
- Legal issues;
- Medical expenses;
- Insurance premiums;
- Wages; and
- Equipment.

Preparing superintendents and turf managers to be proactive in preparing for EHS incidents will have a dramatic beneficial impact on the business. We are thrilled to be partnering the AGCSA in the **Golf Environment and Safety Compliance Initiative** to assist in the delivery of a phased, industry-leading EHS transition opportunity that will assist practitioners meet their current and future EHS challenges. 🌳



EHS should be a cornerstone of every turf maintenance operation

INTRODUCING TERRY MUIR...

Terry Muir needs little introduction to Australian Turfgrass Management readers. One of Australia's foremost environmental, health and safety experts, Terry is the founder and managing director of epar and eparUSA.

Terry started his working life as a groundsman at New South Wales Golf Club before moving onto a career in the AFP where he became a Designated Detective. He then moved to the EPA and established their Specialist Investigation Unit. Remaining at the EPA for a decade, Terry investigated and prosecuted some of Australia's biggest environmental crimes.

After completing his Bachelor in Environmental Assessment and Management from the University of Newcastle, he established epar. Terry then completed his Masters in Science and Technology from The University of NSW where his major project focussed on the golf sector. He was also awarded The University of NSW Whitely Prize and after graduation travelled to Harvard University Executive School where he completed a Golf Course Environmental Considerations Program.

Terry dedicated epar to focus on golf course management and went on to develop golf's first interactive online environmental

management system software in 2004 that went on to win multiple national and international awards. Epar has since expanded its operations into America and Canada and is continually reinvesting in research and development to deliver the latest technologies to the golf sector.

"The golf course maintenance sector is complex and we entered into this challenge open-eyed," says Terry. "Reducing the industry's environmental impact and improving safety outcomes has been well worth the effort and we have now expanded our operations to include clubhouse and hospitality management."

In 2016 Terry committed epar to the development of the most advanced and sophisticated EHS platform ever seen for golf. Due for release in 2018, it will be golf's first turnkey EHS solution that will deliver what Terry terms "instant everything".

Epar has teamed up with the AGCSA as part of a joint venture to develop and deliver a national EHS initiative for AGCSA members. Says Terry: "This joint venture partnership demonstrates the commitment of the AGCSA to deliver significant benefits to its members and we are thrilled to partner with them in delivering significant environmental, safety and professional benefits that its members will gain through our alliance."



Terry Muir



How leaders interact and communicate with employees is one of the key areas that will define your workplace culture



Think of the culture in your workplace as the personality of your business. It's what makes your workplace unique

Critical culture



ATM's HR expert Vicki Crowe asks

what is workplace culture and why it is so important to the success of your operations? She also addresses some ATM reader feedback relating to the signing of HR documents.

If you were asked to describe your workplace 'culture' in three or four words, could you? Workplace culture is often said to be more important than your business strategy because it either strengthens or undermines your business. In many small businesses it is often overlooked, not discussed and often hard to define.

Workplace culture is becoming an important part of a job interview with the majority of candidates I interview asking me to describe our culture. So what exactly is workplace culture?

Think of the culture in your workplace as the personality of your business. It's what makes your workplace unique. It includes your values, traditions, beliefs, interactions and communications, behaviours and attitudes; in other words it's the internal way you do business on a daily basis.

Culture is usually defined by the personalities at the top – the leaders (e.g.: this could be the CEO, general manager or course superintendent). There is always a shift in culture when a new leader takes over in the business. Depending on communication from the top down, culture filters down through the next tier of management and then to the team. Regardless of the size of the business or operation, you will have your own unique culture.

So, why is workplace culture important?

- Potential job applicants will be evaluating your culture from the time they arrive at the interview and this often determines whether they want to work for your business;
- A toxic culture causes people to leave;
- It drives employee engagement and retention;
- Research shows that employee happiness and satisfaction is linked to a strong workplace culture (Source: Deloitte).

- Businesses with strong cultures mostly outperform their competitors and usually have higher productivity.

Below are the key areas that will define your workplace culture.

- **Leadership:** How the leaders interact and communicate with employees. This includes how they communicate the future vision for the business, how transparent they are, their authenticity, decision-making and beliefs, trustworthiness and how they convey their expectations.
- **Management:** Whether the managers empower employees to work autonomously and make decisions, or hinder employees by micromanaging and controlling them.
- **Systems:** How the goals and objectives, policies and procedures, code of conduct, remuneration, flexibility with hours and the structure are managed.
- **People:** The people in the company and how they interact, respect and communicate with each other.
- **Beliefs and values:** Whether the beliefs and values are communicated to employees on a regular basis and are truly reflective of the business.
- **Built environment:** Created by employees, it includes the objects in your workplace, what people have on their desks, the pictures on the walls or plants, how any offices are set out and the lunchroom or common areas used by employees.
- **Communication:** This is a critical area. Often disputes arise and employees become frustrated due to miscommunication or a total lack of communication. Consider the type and frequency of interaction and communication between managers and employees and leaders and employees.



SIGN OF THE TIMES?

Recently I received a question from an ATM reader regarding what to do if an employee won't sign their employment agreement. If employees refuse to sign HR-related documents, there is usually a very good reason and most likely they have a concern about something contained in the document.

The best approach is to have a one-on-one conversation with the person and find out why they have refused to sign it. The main purpose of getting HR documents signed is to be able to prove, should the company need to in the future, that the employee was provided with a copy of the document and they have signed the document to say they have read and understood it. Below are some of the HR documents that really should be signed.

Policies and procedures: These important documents should be signed because they are often relied upon in cases of termination for a breach of company policy. Refusing to sign a policy document or manual, however, does not give the employee the right to not follow the company's policies.

You cannot insist that the employee signs a policy or procedures manual. If they absolutely refuse, make a note and place it in their employee file that they were provided with the policies on [date] and that they [name] refused to sign.

A recent incident I was dealing with involved a written warning that was given to an employee for a breach of company policy. When the employee was

given the warning, they questioned management stating they had never seen the policy, nor did they receive any training. The company had to withdraw the warning as it posed a risk under Fair Work.

Written warnings: Ideally disciplinary warnings should be signed by the employee to prove that they were provided with a copy. At the end of the document, add "I have read and received this document". If they don't sign, document it.

Employment agreements: An employment agreement serves two purposes – it sets out the terms of employment and mostly protects the interests of the employer. Again, you cannot force a new employee to sign an employment agreement.

With existing employees, if they refuse to sign a new agreement that has been updated or changed, they will be considered to still be covered by their previous agreement and must be permitted to remain working for the business.

However, if the employee doesn't make their concerns known or object and accepts the benefits provided under the new agreement, it would most likely be deemed they have accepted the terms of the new agreement, despite their refusal to sign it.

If you threaten to terminate an employee for refusing to sign a new agreement, you may risk an unfair dismissal claim or an adverse action claim under the Fair Work Act. In saying that, you can still win a case taken by an employee without having a signed document. 🙌



Research shows that employee happiness and satisfaction is linked to a strong workplace culture



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Burning is a great management tool and if planned well can have great environmental benefits for the golf course now and into the future



Rising up from the ashes



Environmental
management
expert Kate

Torgersen looks at the benefits of prescribed burns in managing and promoting native vegetation areas on golf courses.

Evidence suggests that fire was a part of the Australian landscape long before the existence of human beings. It appears that with the arrival of humans over 50,000 years ago, the frequency of fire may have increased. Aboriginal people used fire skilfully, managing various areas to sustain their own survival and that of future generations. They used fire as a tool for a variety of purposes such as hunting, warmth and cooking, to encourage grassland development in some areas and also to increase the abundance of plant foods and animals.

Prescribed burning is a common and valuable management tool that is widely used within several industries and on golf courses worldwide. In the past it has not been a common practice within the Australian golf course industry (apart from a few select courses), however, with many clubs putting greater focus on their native areas they are now looking at different management techniques.

In this article we will look at how fire can be used on your golf course, the benefits it can provide and some great examples of courses that use fire as a regular maintenance tool. We will also provide some

practical guidance on when you should burn, how often you should burn and how to conduct a burn.

FIRING UP

There are many reasons why prescribed burning should be considered as a management tool. It can be used to;

- Stimulate native seeds to germinate;
- Encourage regeneration of native indigenous species;
- Reduce, and in some instances eradicate, weed species;
- Preserve the health of certain species;
- Rejuvenate habitat for many animal species; and
- Reduce biomass (allowing golf balls to be found).

In saying that, depending on your situation and habitat type, fire can also be a disadvantage, so you should always consult with an environmental expert to determine whether it is an appropriate course of action.

Royal Melbourne Golf Club has been using fire as a management tool since the days of the legendary Claude Crockford. Speaking with present day head horticulturalist Stuart Moodie, he can remember his first involvement with burns on the course in April 2000. Burns were conducted on a regular basis until the drought period hit in 2004, at which time it became difficult to obtain a council permit. It wasn't until 2013 that the club was able to obtain permits again and reinstated yearly burns.

"A lot of our remnant heathland is in the direct line of play for golfers, whether it be carries in front of tees or around bunker edges, so there is always



Once a fire permit has been obtained, the area may need to be cut down to dry out the fuel. This can usually take three to four weeks depending on the species

pressure from the golf play aspect,” says Moodie. “These areas are maintained by trimming them once a year to around slightly less than half a metre high.

“Over time the larger shrub species, such as *Leptospermum myrsinoides* and *Banksia marginata* etc, can become quite woody at the base. This makes these areas harder for golfers to find their balls and even play a shot out of them, with the possibility of doing an injury to themselves. By burning such areas periodically it helps remove the woody structure of the plant, making the fresh growth softer and more player-friendly.”

Burning has played a huge part in preserving the highly significant remnant heathland areas at Royal Melbourne. This practice has given greater opportunity for smaller plants, such as herbs or wild flowers co-existing amongst larger plants, to have their time in the sun for a couple of years, whereas previously they would be shaded out. Within this region there are many rare orchid and heathland species that can only be found on golf courses.

In Sydney, soon to be retiring New South Wales Golf Club superintendent Gary Dempsey introduced fire as a management tool in the early 1990s to help control noxious Bitou bush and regenerate the endangered Eastern Suburbs Banksia Scrub (ESBS) plant community.

The club now has a fire regime that coincides with the National Parks & Wildlife Services Recovery Plan for the Botany Bay National Park. This regime sees a burn take place every eight to 15 years, but no longer than 30 years. Since the regime has been in place, there has been a more than 90 per cent reduction in Bitou bush and substantial improvement in the quality and diversity of the ESBS plant community. Golfers are barred from playing in the areas that have been burnt until such time that the club deems it has recovered sufficiently, so the impact of golfers is negligible.

Mosman Park Golf Course in Perth also uses prescribed burns to preserve the health of its beautiful stand of grass trees.

CONDUCTING A BURN

Many factors should be thought about when assessing an area for a burn – is the area remnant; how old is the area; what types of vegetation are found on the site; is it going to have a decent native seed bank; do I have the resources to manage the area after the burn; and can I safely perform the burn without putting anyone in danger and without it becoming out of control.



Burning usually occurs through autumn and spring, however, timing will vary depending on your vegetation type and species. In Victoria, for example, autumn is a perfect time to burn heathland on sandbelt courses.

If you are considering conducting a burn, here are the steps you will need to follow;

- Identify the burn area.
- Contact your local council. Local councils will require you to submit a form to obtain a permit to burn. Depending on the size, location and permit conditions, the local fire brigade may need to be in attendance;
- Once the permit has been obtained, the area may need to be cut down to dry out the fuel (this is usually three to four weeks depending on the species).
- Communicate your plans to members.
- Before the burn takes place, make sure you follow any requirements set out in your permit (e.g.: contact the local fire brigade).
- Conduct the burn.

One of the most important tasks after the burn is to regularly weed the site. By not maintaining the site after the burn it can potentially become infested with weeds. Patience is also needed and while you may see signs of regeneration as early as a week after the burn (generally grasses), it may take longer for wild flowers, shrubs and other species to start to emerge. The wait will be well worth it.

How often you should burn the same site will vary depending on vegetation type and can be anywhere from five to 25 years apart. In the cases mentioned above, Royal Melbourne will burn the same site on a five to seven year rotation, whereas at NSW it is every eight to 15 years.

Regardless of what the timeframes are, burning is a great management tool and one that can work well for clubs. If planned well it can have great environmental benefits for your course now and into the future. 🌱

While you may see signs of regeneration as early as a week after a burn (generally grasses), it may take longer for wild flowers, shrubs and other species to emerge. Patience is a virtue



NSW Golf Club in Sydney has used prescribe burns to great effect to control noxious Bitou bush and to help regenerate stunning stands of the endangered Eastern Suburbs Banksia Scrub plant community

The new eight megalitre dam at Freeway Golf Course is part of a larger multi-party water harvesting project



It has been a busy past 12 months for team leader Paul Locke and the turf maintenance department at the City of Boroondara, in Melbourne.

Freeway forges ahead

Freeway Golf Course is situated along the Eastern Freeway, 10 minutes from Melbourne's CBD. The course is under the auspices of the City of Boroondara, with the council's turf management department responsible for its maintenance along with more than 50 sports grounds in the local government area.

The team has had an eventful 12 months with a number of projects on the go, including a water harvesting project, fairway drainage installation and the complete reconstruction of our 15th green. In addition to that, the team also had the opportunity to help prepare wickets for a number of games in the Women's Big Bash League which has become a centrepiece for the City of Boroondara.

FUTURE PROOF

In April 2017 construction began on a new dam between the 14th and 15th holes. The dam project formed part of the wider Bolin Bolin Integrated Water Management Project led by Manningham City Council, in conjunction with the City of Boroondara, Carey Grammar Baptist School (whose playing fields neighbour the golf course) and with the support of Melbourne Water and the Department of Environment, Land, Water and Planning.

The new eight megalitre dam is part of a larger water harvesting project that collects stormwater from a 35-hectare catchment on the east side of Bulleen Rd. The water caught then filters through from a wetland site at the north end of Bulleen Rd

and pumped to storage sites at Bulleen Park and Freeway Golf Course.

Once the new dam site between the 14th and 15th was cleared, contractors began excavating. One of the challenges encountered was finding a site on course to take all of the spoil. We managed to choose an area between the course maintenance facility and the 7th fairway, one of the few available areas that was above the flood zone.

This required hundreds of truck movements from one side of the course to the other which brought with its own issues given we still had golfers out on the course. A traffic management company was engaged to ensure everything ran smoothly, however, at times the entire course resembled a construction site.

A transfer line was bored from the course pump shed out to the dam site which caused minimal disruption to golf. We also shuffled a couple of holes around to reduce the impact on golf. The 15th hole was closed for works at the same time (more on that later) and the 14th hole was shortened to a par three, meaning golfers were kept away from the construction site. Freeway's 19th hole was also brought into play to maintain a full 18 holes, thus reducing the impact on the golfing public.

Considering Freeway Golf Course resides on an old tip site, there was very little contamination found in the soil. There were, however, two significant issues encountered. First, a 2000-litre fuel tank was found buried, but fortunately there was no fuel in it and it was easily removed. The second issue arose when the excavator hit a soft spot in the base of the dam and sunk to the cabin! As a result, the dam shape was lengthened and the base kept slightly shallower to avoid the soft profile.

With the dam now complete, it is a practical and aesthetic addition to the golf course. It will allow us

Work on the new dam started in April 2017



to irrigate during future dry periods when the Yarra River levels drop below trigger points and reduces our reliance on taking water from the river. It will also be used by neighbouring Carey Grammar to irrigate their ovals and Manningham Council to irrigate Bulleen Park.

OLD TO NEW

With the dam works underway and the 15th hole closed, the team took the opportunity to reconstruct the green and install fairway drainage. The 15th was an ideal green to reconstruct as it was a very old push-up which always had its challenges – we seemingly had to put twice as much water on this green than any other green on the course!

SJM carried out the reconstruction and drainage works which included filling in a fairway bunker opposite the dam site – we figured that a large body of water was enough punishment for the golfers. We also engaged Planned Irrigation to install irrigation around the new green and extend where we had minor fairway alterations.

Once the shaping was near completion, we used a rotary hoe to incorporate amendments into the profile, which was then followed by the final shaping. In previous years we have used our bentgrass nursery for new green constructions, however, due to our generous timeframe we decided to hydroseed the new green.

We have been converting the greens to 007/ Tyee bentgrass for several years now as part of our

green reconstruction programme. We find we get a good year round density with this mix. Also, the wear and disease tolerance is very good which is extremely important for a public course that has in excess of 50,000 rounds of golf each year.

Before the seed was applied it was pre-germinated in water and Ban-Flo fungicide was added for early protection. After the green was seeded it was covered with a growth mat. The results were fantastic. We had a great strike and very quick growth, without the worry of importing any thatch from our nursery and allowing for a much stronger rootzone and quick root penetration. Six months on and after a very dry start to 2018, the 15th green is one of our best performing greens on the course.

BIG BASH

While the works at Freeway were continuing, in September last year I had the opportunity to work a secondment and manage the sports grounds team for the cricket season. During this time Ben Hartley stood in as superintendent at Freeway. We have 56 ovals in Boroondara which equates to 72 hectares. We have 15 turf wickets, of which 14 are curated by contractor or cricket clubs, and we have a curator based at Camberwell Sports Ground which is the council's premier ground.

In mid-January we started the reconstruction of Highfield Park North in Camberwell as part of our capital renewal project. This project saw the removal



PHOTO: NEARMAP

An aerial view showing the dam works between the 14th (right) and 15th (left) holes. Additional fairway drainage was installed, while the 15th green was also reconstructed

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Freeway's new 15th green was hydroseeded with a mix of 007 and Tyee bentgrasses



The 007/Tyee bentgrass mix provides good density year round and also has good wear and disease tolerance which is extremely important for a high-traffic public course like Freeway



of an average surface with a mix of kikuyu, broadleaf and cool-season grasses and re-shaping to a 1.8 per cent fall. The existing synthetic cricket wicket was removed, along with the existing irrigation system.

A new Rain Bird irrigation system was installed followed by drainage laterals at 5m spacings and 2.5m sand slits. We re-used the existing soil for the profile which was stockpiled onsite. Santa Ana couchgrass, which has been oversown with ryegrass, has been grown in South Australia and was due to be laid as this edition was going to print.

The highlight of managing the cricket grounds, however, was preparing the Camberwell ground for four Melbourne Renegades Women's Big Bash League games. This was a great opportunity for both Boroondara's sports ground and golf course teams to help prepare the ground for an elite event. The Renegades hosted Brisbane, Sydney and Perth with players including Jessica Jonassen, Molly Strano, Ellyse Villani, Alyssa Healy and Ellyse Perry.

In the weeks leading up to the first match between the Renegades and Brisbane, I was in very regular communication with the Renegades staff including coaches, venue organisers and broadcast

contractors. We had scaffolding set up for the broadcasters which also meant public consultation and strict guidelines on where we could set up and the risk implications.

We decided to use the centre pitch for all Renegades games. Two months prior we had laid washed Santa Ana turf on the middle pitches. Feeling confident, I had Ben Hartley cut stripes towards the cameras which paid off. The oval was looking in great condition. We aerated Camberwell twice in the lead up and put out two applications of liquid fertiliser as well as growth retardant.

After sitting down and reading Cricket Victoria's rules and regulations, we were ready to go. The game day went well. Ben Hartley and his staff came across from the golf course to assist with the final touches including a double cut of the oval, pitch roll and the wicket table cut with a cylinder mower. The Renegades went on to win two of their four matches, collecting wins against the Heat and Scorchers.

It was great to be able to experience a different area within the turf management profession and witness some of the differences and similarities. It was also a good way for both crews to work together and prepare a surface for major events. 🙌



Camberwell Sports Ground hosted four Melbourne Renegades Women's Big Bash League games last summer



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Kew Country Club is a very challenging layout with tight fairways, doglegs left and right, water on several holes and plenty of trees. Pictured is the par three 10th

Kew Country Club, NSW

After the hurly burly of plying his trade in the Middle East and Sydney, superintendent Brendan Hansard now finds himself managing Kew Country Club on the NSW Mid-North Coast.

Superintendent: Brendan Hansard (40).

Nickname: Baldy.

Family: Wife Joanne.

Years in turf management: 22.

Years as a superintendent: Eight.

Association involvement: AGCSA (eight years), NSWGCSA and GCSAA.

Qualifications: Certificate III and Diploma in Sports Turf Management.

Major hobbies/past-times: Fishing, tennis, camping, enjoying the beautiful beaches and water ways of the NSW Mid North Coast.

Social media: Kew Country Club on Facebook.

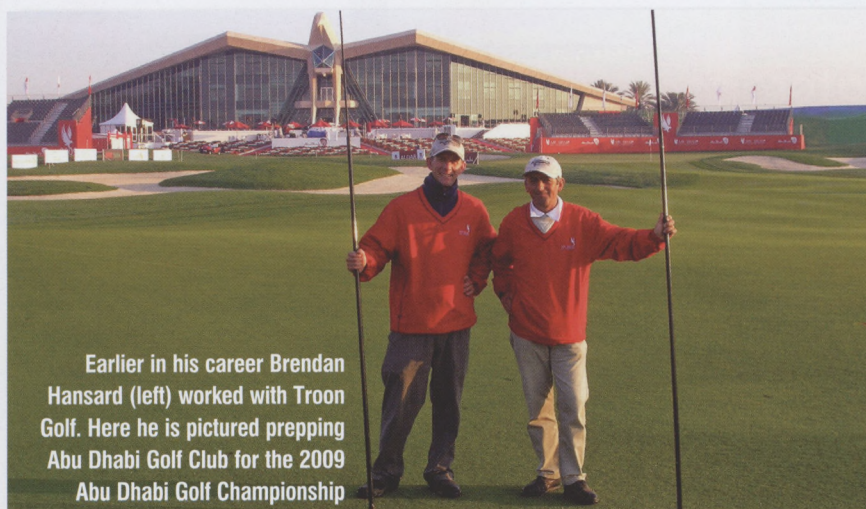
Where in Australia is Kew Country Club? Kew Country Club is on the eastern seaboard about 385 kilometres north of Sydney and 40km south of Port Macquarie. It is well known for its friendly and welcoming atmosphere with beautiful beaches and pristine waterways.

Tell us a bit about your background and how you came to be a superintendent. I got my first taste of greenkeeping working at Caloundra Golf Club on the Sunshine Coast and not long after that I started my apprenticeship at Nambour Golf Club. My TAFE teacher at the time suggested that I talk to the guys at Pelican Waters, which was then managed by Troon Golf, as they were a worldwide management company looking to expand in Australia.

It turned out to be a great move as Troon gave me many opportunities to work at some fantastic golf courses in Australia and the United Arab Emirates, among them Pelican Waters, Brookwater, Pacific Harbour, Twin Creeks and Saadiyat Beach. Another great experience was doing The Ohio Program. I was posted at Pinehurst No.8 where I spent 12 months learning the trade at one of the top golf resorts in the world and making some lifelong friendships.

Who were some of your early mentors and what did your early postings teach you about the industry and turf management? Early on in my career guys like David Lunardelli and Marcus Hartup from Troon were great mentors. Later in my career Phil Beal, who I worked with at Twin Creeks, has become a great friend and mentor. All of these men taught me basic agronomy skills and how to produce high quality turf surfaces. More importantly, they taught me leadership skills and how to lead by example. We all have one thing in common – we always strive for perfection.

You worked with Troon for a number of years – talk us through your time with them and the experiences you had. When Troon first came to



Earlier in his career Brendan Hansard (left) worked with Troon Golf. Here he is pictured prepping Abu Dhabi Golf Club for the 2009 Abu Dhabi Golf Championship

Australia there was bit of a golfing boom. Courses like The Vintage, Kooindah Waters, Settlers Run, Twin Creeks, Pacific Harbour and Pacific Dunes were all in the process of being built or in the hand-over stage. It was exciting times for the golfing industry and great opportunities for staff progression.

At the end of 2008 I moved to Abu Dhabi (United Arab Emirates) to start work on the new Gary Player designed Saadiyat Beach Golf Club. For the first two months I worked at the Abu Dhabi Golf Club helping with preparations for the 2009 Abu Dhabi Golf Championships. After the tournament finished I started as the assistant superintendent on Saadiyat Island which was quite the experience. The golf course and most parts of the island were built from a dredge that would suck up the ocean floor and pump it onto sections of the island. Extensions of the island would just appear overnight!

With more than 100 staff involved in the whole project, busloads of workers would arrive for work each morning. This was a massive project which needed a lot of coordination between the construction company and the agronomy team. The maintenance team alone peaked at 48 made up of Filipinos, Pakistanis and Bangladeshis. With some careful and persistent training, our productivity increased and we were able to reduce numbers to 40. All staff wages, meals, accommodation, visas and transport to and from work were provided by the club.

Back home you spent five years at Twin Creeks – talk us through that period, what you achieved there and some of the challenges you faced. It was a great experience being at the club before it was open for play. It was interesting to see what was involved in starting up a new golf club and watching both the agronomy and clubhouse operations take shape.

Twin Creeks was built around old pastures, which were heavily infested with paspalum. This created some big headaches trying to stop it spreading around the golf course. You would see golf carts come back from a round of golf covered in paspalum seed. I would think to myself, "How am I supposed to stop that from spreading?!" Insufficient water and budget restraints made it very hard to keep surfaces in good condition all year round.

My biggest achievement there was holding an ALPG event and was greatly appreciative of my staff at the time and, in particular, the volunteers that I called upon. Some were old employees and friends I had made over the years in the industry. Without their help the event would not have been as successful as it was.

How did the job at Kew Country Club come about and why the decision to head to a regional course? I heard about the job from my brother-in-law who is the golf pro at Kew. My wife Joanne has family in Port Macquarie and we had visited the area



several times. It reminded me of the Sunshine Coast where I grew up and a more relaxed lifestyle seemed very appealing. It was an easy decision for me, but took a little convincing for my wife who has been very supportive.

What do you like most about being the superintendent at Kew? It's a great club with passionate members who want to see the golf club develop and progress. We are always looking at the future and continually making course improvements to keep our existing clients and attract new ones. My staff are hardworking and always willing to step up and go above and beyond their normal duties. They are very much on board with what the club is trying to achieve which makes my job a lot easier.

Give us an overview of Kew CC and some of its unique characteristics from a course perspective?

In 2009, Camden Haven Golf Club amalgamated with Laurieton United Serves Club and became Kew Country Club. After the amalgamation, the club spent a lot of money on drainage and concrete cart paths as the course was well known to be a 'wet bog hole' after rain events. It was great foresight by the club committee and previous superintendent who need to be congratulated for that.

We have two synthetic bowling greens in addition to 18 holes of golf. It's a very challenging golf course with tight fairways, doglegs left and

Hansard also spent time as assistant superintendent of the Gary Player-designed Saadiyat Beach Golf Club during its construction and grow-in

The Kew Country Club crew (from left) Damon Booby, Robert Smith, superintendent Brendan Hansard, Rodney Piper and Peter Monaghan





◀ One of the most rewarding moments so far for Hansard has been seeing through the reconstruction of the 8th green

right, water on several holes and plenty of trees. The current course record is 64 and boasts one of the best finishing holes on the Mid North Coast.

Is it an easy/hard facility to manage? What's the most challenging aspect? At times it's an easy facility to look after. We are lucky in some ways because we only have 30 bunkers, 0.8 hectares of greens, 1ha of tees and 9ha of fairways. It doesn't take us long to get all playing surfaces cut and prepped for play. After a heavy rain event we can have all bunkers back in play by lunch time.

The most challenging aspect would be the age of some of the greens and the poor root growth on these older greens. We also have a problem with couchgrass encroachment. The couch becomes very aggressive during the summer months and is difficult to eradicate as the herbicides available are not reliable. We are currently in the process of building a bentgrass nursery to replace the couch.

What changes have you implemented in terms of managing the course during your tenure as superintendent? We have introduced more renovations on all playing surfaces, monthly verticutting and aerating on greens, aerating and topdressing tees and slicing fairways. In addition,

Like many regional courses, Kew relies heavily on volunteers to assist with jobs around the course. Pictured are volunteer members John Sykes (on tractor) and Rob Plante



we are hand-watering more during the summer and using soil moisture data so as not to overwater the greens.

What other maintenance changes are you hoping to introduce? I would like to renovate the tees more and aerate/verti-drain the fairways. I feel both surfaces get a bit neglected and would benefit greatly from some type of regular renovation practice.

Any special environmental considerations that you have to incorporate into the management of the course? Our waterways do overflow into the local river so we are always conscious of that. We also keep an eye on the weather and time our herbicide applications so as not to risk any run off or contamination.

What are some of the major challenges facing Kew CC both from a turf and club management perspective? I don't think our club is any different from most others and our biggest challenge is getting golfers to play and stay or join as new members. The club is always looking at ways to attract new members or social play by offering cheaper rates, discounted food, kids golf camps, advertising etc. It's our job as greenkeepers to make sure the golf course is in its best possible condition to attract new players and for them to advertise for us by spreading the word. Another challenge is the funding and relative small population of the area.

Outline any major course improvement works recently completed and coming up. In the two-and-a-half years I've been at Kew we have completed a fair amount of construction work which has included two green rebuilds and two new tee blocks. The first green that we rebuilt was the 2nd which was a boring rectangular shaped green with a back-to-front slope. We did a complete rebuild with new drainage and local dune sand as the growing medium. We added two new bunkers which give an extra challenge and better visual aspect from the approach shot.

Most recently we completed the 8th green rebuild. The original green only had 50 per cent usable area for pin placements. The new green has a split level and we have enlarged the existing bunker which was rebuilt with new drainage and new sand (as a trial) from Elite Haulage.

The club is committed to rebuilding a new green every year, but I have outlined that we might need to re-think that and look at doing some work on our bunkers. Most bunkers have poor drainage, no shape and unsuitable sand. Considering bunkers are a hazard they get a lot of attention, but I do think they can add visual appeal and change the way the hole is played. All works are done in-house with the help from one of our members who owns a road construction company with excavators, bobcats etc.

How is Kew CC faring in the water management stakes? We are in a reasonably comfortable position with water. Our holding capacity is 38 megalitres of stormwater catchment between three dams for greens and tees watering. We have a reliable source of recycled water for our fairways and can use this on the greens and tees if we get desperate.

How has Mother Nature treated the course in recent times? The Mid North Coast gets its fair share of rain and storms. We are lucky that floods don't cause any real major damage other than bunker washouts. The major water flow goes through the middle of the golf course without affecting greens or tees. The lying water generally disappears fairly quickly.

The one product I couldn't manage my course without is... Primo, because during the summer months our fairways would need to be cut everyday if we didn't use it! With Primo we can get away with two cuts a week which is manageable with five staff. I time our Primo applications on greens using Growing Degree Day modelling (200GDD) with good consistent results.

What are some pros and cons of being a regional superintendent? The cost of freight has surprised me the most. As a result I try to minimise the number of deliveries I get. Quality sand is also very expensive because of transport. A major pro to being a regional superintendent is the collegiality between the neighbouring clubs. The lifestyle is also pretty good.

Are expectations of course presentation any less than that placed on your metropolitan counterparts? I think there is less pressure on regional courses because we don't have the same resources that other clubs have. Our budgets are generally lower, less staff etc. There's still an expectation that members and us greenkeepers have on a daily basis, but we try to push those boundaries and exceed expectation.

Do you have to be more resourceful as a regional superintendent? Without doubt our biggest and most useful resource is our volunteers who I rely on heavily during summer. I was a bit sceptical at first, but I have a few guys that will sit on a mower all day, sometimes one or two times a week. This allows us to concentrate on the 'one percenters' that otherwise wouldn't get done. We have working bees that the members organise prior to events to tidy up the golf course.

How important are the relationships you have with other course supers/trade reps? I value the relationships I have with the other supers around my area. They have more local knowledge and they know what has worked for them and are happy



to share ideas. As we don't have easy access to seminars and field days, I rely on the reps to deliver new information or product releases.

What are some of the more unusual requests/things you have had to do as a regional superintendent? Just recently we had to help a lady golfer who was stuck knee deep in mud after trying to get her ball from the dam. It took four of us to help her out! She was playing match play and after a short rest she kept on playing – in wet and muddy clothes!

What have you got in your shed? Toro 3250-D (greens), Toro 3250-D and Jacobsen GP400 (tees and aprons), Toro 5010H (fairways), Jacobsen TR-3 (tee and green surrounds), Toro 4000-D (roughs), Toro Workman mounted sprayer, Toro Pro Force blower, Turfco topdresser, John Deere Z-turn and John Deere bunker rake.

What's your favourite piece of machinery and what's next on the wish list? The Toro Workman mounted sprayer is used 2-3 times a week on greens, tees and fairways and hasn't let us down. It is a massive time saver. Our next major purchase will be a new greens mower as the current one is old and needs to be retired. We're also looking at a backhoe to replace our front end loader. The digger attachment would be very beneficial for irrigation repairs, upgrades etc. Half of the equipment fleet is very old and it would be great if it could be replaced. However, I am lucky enough to have some handy members and staff who are able to keep our machines in working order.



Since starting as Kew CC superintendent two-and-a-half years ago, Hansard has introduced more renovations on all playing surfaces, including monthly verti-cutting and aerating on greens, aerating and topdressing tees and slicing fairways

Reconstruction of the 5th tee



◀ Kew's par three 15th

Do you think regional superintendents have a better work-life balance than their metro counterparts? It helps living in a relaxed atmosphere – it's easier to switch off from work. I can't really speak on behalf of others, but I am definitely enjoying regional life more and have embraced a better work-life balance.

If you could change one thing about your job as a regional superintendent what would it be and why? I would like to have better access to training and seminars for myself and my staff.

Favourite spot on your course? The 12th hole. It's a short 118m par three with a big teeing area and a nice green surrounded by bunkers and large trees as a back drop.

Best advice you have received about being a course superintendent/greenkeeper? Geoff Bird, who was one of my teachers at Grovely TAFE in

Brisbane, once said use a little and often approach. It's something that has stayed with me and I try to implement it as much as possible.

What do you think is the most challenging aspect of a superintendent's role today? Staff management, for the superintendents who have big crews, is definitely a challenge. There's a lot of training, staff development, WHS and environmental management consideration that needs to be included in day-to-day operations before even getting to our area of expertise... turf management! Having five staff does have some benefits. We can complete our training quicker and there is less paperwork.

I have tried to enhance my communication skills by researching and working closely with my current general manager (Robert Dwyer). I try to spend more time with my staff – talking with them, asking questions and passing on as much information as I can.

What gives you the most job satisfaction? Leaving the day knowing that everyone has put in their best efforts and the golf course is in its best possible condition.

Most pleasing/rewarding moment during your time as Kew CC superintendent? The most rewarding moment so far has been the completion of the 8th green. I was involved in all aspects of the design and build of this green. While it was a daunting task, I am extremely pleased with the end result and the positive feedback I received from members and guests. 🌳

AT A GLANCE – KEW COUNTRY CLUB, NSW

Course specs: Par 70, 5807m. Greens 0.8 hectares *Poa annua*/bentgrass; tees 1ha kikuyu/Santa Ana couchgrass; fairways 9ha kikuyu/carpetgrass; two synthetic carpet bowling greens

Members/rounds: Golf 450 and bowls 125.

Annual rounds: 40,000.

Major tournaments: Pro Am, Veterans Week of Golf, Jack Newton Junior golf.

Annual course budget: \$400,000.

Staff structure: Brendan Hansard (superintendent), Damon Booby (assistant superintendent), Rodney Piper and Robert Smith (qualified greenkeepers) and Peter Monaghan (mature age apprentice).

Climate: Warm and temperate. There is significant rainfall throughout the year (even the driest month still has a lot of rainfall) with an annual average of 1258mm. Average annual temperature is 17.9°C.

Soil types: Clay.

Water sources/irrigation system: Greens and tees stormwater catchment, fairways recycled water. Rain Bird decoder irrigation system.

Cutting heights/regimes: Greens heights range from 3mm-4mm depending on the time of year

cut six times a week. Tees 9mm cut twice a week, fairways cut 12mm twice a week, short rough 50mm.

Renovations: Performed twice a year on greens with 12mm hollow tines, amendments and heavy topdressing. Also monthly solid tining, verti-cutting and dusting. Tees aerated 1-2 times per year with ½ inch hollow tines. Fairways sliced 1-2 times per year.

Major disease pressures: Given the high humidity during summer, we spray preventively for Pythium, regularly rotating Signature, Banol, Subdue and Heritage. Our other main disease is dollar spot. I'm a fan of the Stressguard technology and try to incorporate them as much as possible.

Nutrition management: When I first started at Kew I was starving the *Poa*/bent greens and I was paying the price for this during summer. I've since changed my approach and I'm now feeding the greens more often and getting better results during those stressful times. I try to stick with a little and often approach and keep a steady growth curve where possible.

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Introducing Vitalnova- a new range of biostimulants and turf conditioners designed to support integrated turf management strategies for the tough Australian conditions.

Vitalnova Stressbuster is a specially formulated liquid treatment to help condition turf against stress and also aid recovery from stress. Stressbuster is a unique combination of macro and micro nutrients, wetting agents, biostimulants and amino acids. The iron content is specifically included to provide an instant colour response and help guard against biotic stresses.

Also available Vitalnova SILK, Vitalnova Blade & Vitalnova AminoBoost.

For more information on Vitalnova, visit the ICL stand at the upcoming Australasian Turfgrass Conference & Trade Exhibition 2018 -Wellington stand No.3. Or visit our website www.icl-sf.com/au-en/

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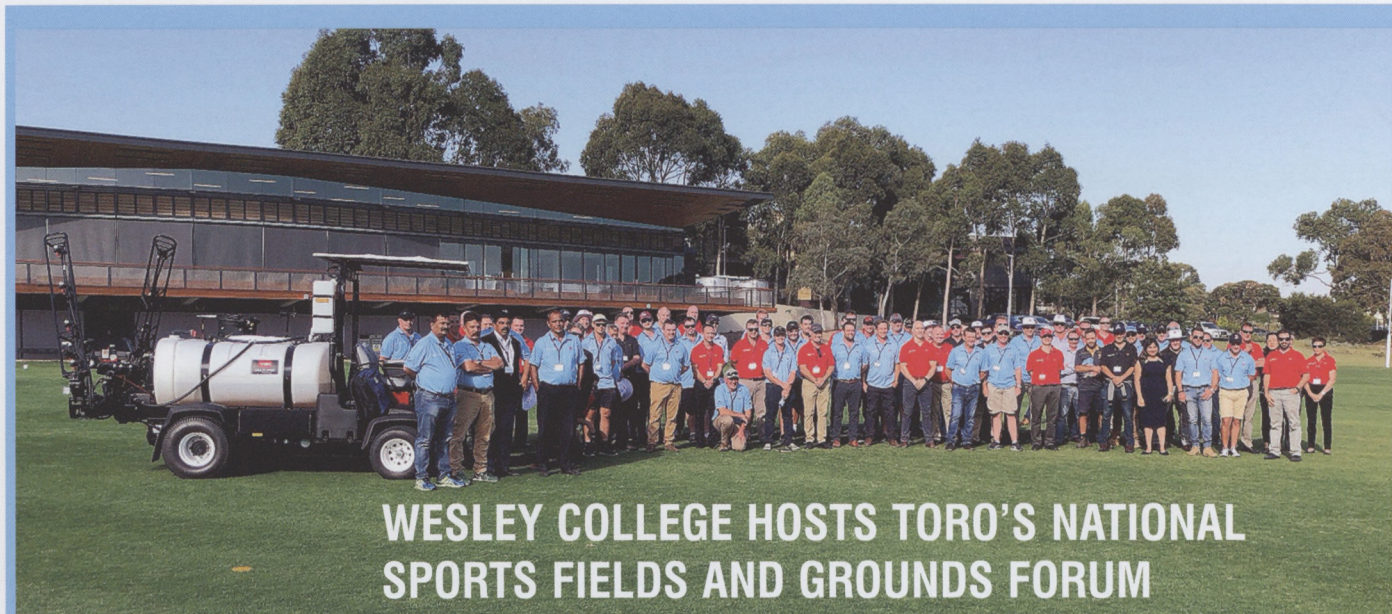
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WESLEY COLLEGE HOSTS TORO'S NATIONAL SPORTS FIELDS AND GROUNDS FORUM

Wesley College's Glen Waverley Campus hosted Toro's 5th National Sports Fields and Grounds Forum in April

Sports turf managers from around Australia, as well as some from India and New Zealand, attended Toro's 5th National Sports Fields and Grounds Forum held at Wesley College's Glen Waverley campus in Melbourne in early April.

The event has become a popular addition to the turf industry calendar and aims to assist customers in their preparation and presentation of sports grounds. Customers are able to see Toro's equipment and irrigation product range first-hand, speak to staff and try a variety of products for themselves.

"Customers really enjoy being able to mix and socialise and share ideas with people from different sized sports grounds, ovals, racecourses, schools and turf maintenance companies," says Toro's senior marketing manager for equipment Elise Willemsen.

The opening day included a tour of the Melbourne Cricket Ground by Michael Salvatore, a welcome dinner and round of lawn bowls at the City of Melbourne bowling rink. The second and third days, held at Wesley College (superbly presented by experienced host curator Rob Savedra), included product rotations, training, product updates and an open forum. An official dinner was held at AAMI Stadium and included a

very entertaining 'night on the couch' with industry icons Tom Parker and Kevin Mitchell.

Also in attendance at the forum was industry partner Syngenta, along with Toro senior marketing manager EMEA, Anthony Nadalin. Nadalin talked about product development at Toro and reiterated the importance of customer feedback and how it played a critical role in assisting the company meet the needs of the end user.

AFL Queensland sports turf manager Chris Dalton was among this year's forum delegates and commented that he really liked the idea of Toro not only providing information, but also looking for feedback. "I thought it was well done. The event was really well organised and delivered."

David Sandurski, who moved from the MCG to The Gabba in late 2017, added: "Everything from flights, accommodation, transport and content was spot on and really reflects well on the professionalism and dedication to improvement that Toro have for the industry."

Toro Australia wishes to thank Syngenta and the Sports Turf Association for being partners in this event. Special mention also goes to Rob Savedra and his team from Wesley College for hosting the forum and to Michael Salvatore, Kevin Mitchell and Tom Parker.



Bayer's Chipco Signature Systemic Fungicide has been rebranded and is now called Signature Stressgard Systemic Fungicide

BAYER'S SIGNATURE FUNGICIDE GETS NAME CHANGE

The registered brand name of AGCSA Silver Partner Bayer's Chipco Signature Systemic Fungicide has changed to Signature Stressgard Systemic Fungicide.

The Chipco brand has been synonymous with Signature since the product launched in the 1990s, as well as several legacy product brands like Chipco Choice and Chipco Rovral. The Chipco brand was originally introduced to collectively represent a family of innovative products that were developed specifically for turf managers.

Stressgard Formulation Technology (FT) has been a key element of the Chipco Signature formulation since its launch and a major driver of Signature's performance in preventing pythium and managing the summer decline complex in highly maintained sports turf.

With the recent introduction of other fungicides containing Stressgard FT, such as Interface Stressgard and Reserve Stressgard, and the proven turf health benefits from programmed applications of Stressgard FT products, Bayer says it was time that the branding of Signature was changed to ensure consistency.



Bayer remains committed to furthering the development of new formulations containing the proprietary Stressgard FT and anticipates launching more fungicides containing Stressgard FT in coming months and years. For any questions on the name change to Signature Stressgard, please contact your Bayer territory manager.

In other Bayer news, the company is now the new sponsor of the AGCSA's longest-running award – the Excellence in Golf Course Management Award. Bayer has come on board and will present it for the first time at the inaugural Australasian Turfgrass Conference and Trade Exhibition in Wellington, New Zealand (24-29 June).

The AGCSA Excellence in Golf Course Management Award has been handed out since 1990 and over the years has been bestowed upon some of the leading lights of the Australian superintendent profession. Lakelands Golf Club's Phil Soegaard became the latest to etch his name on the honour board after collecting the award at the Twin Waters conference in 2017.

AGCSA CEO Mark Unwin welcomed Bayer's decision to back one of the association's pre-eminent awards: "Bayer has been a long-term partner of the AGCSA. It is great to see an industry-leading company support an industry-leading award which celebrates and acknowledges the outstanding work of our members."

Martin Ball, general manager of Environmental Science, a business unit of the Crop Science Division of Bayer, says the company is very proud to put its name to the award for 2018: "As an industry leader, Bayer's commitment to innovation, sustainability and excellence in turf management, as well as our underlying stewardship principles that drive our business, match closely those of the AGCSA and this worthy award for excellence."

GET THE ECOBUNKER EDGE

Turfcare Australia has become the exclusive distributor of EcoBunker in Australia. EcoBunker is a synthetic bunker facing product which enables golf courses to have better, attractive and more consistent bunkers which are long-lasting and easier to maintain. Utilising synthetic grass tiles, the UK-designed EcoBunker product has advanced the bunker revetting concept, introducing a high performance alternative designed to meet the needs of the modern greenkeeper.

Resistant to all forms of erosion (all extreme weather conditions and burrowing animals), its superior structural integrity means a guaranteed 20-year minimum life expectancy. In addition, there is no risk of balls plugging in the faces, edging costs are reduced by as much as 81 per cent and it is approved for use in events sanctioned by The R&A and PGA Tour. It is also relatively easy and quick to install once a few basic skills are mastered.

Southerndown Golf Course in the UK became the first golf course to convert all its 79 bunkers using the EcoBunker product. According to course manager Andrew Mannion, the need for bunker edge repairing has almost been eliminated and bunker maintenance costs have reduced by £20,000 per annum, money which is being reinvested into other areas of the course.

For more information about EcoBunker, visit www.ecobunker.co.uk or contact Australian distributor Turfcare Australia on (02) 9684 6611 or email sales@turfcareaustralia.com.au.

OASIS EXPANDS INTO TASMANIA

AGCSA Bronze Partner Oasis Turf has announced its expansion into Tasmania with the appointment of Adrian Box (pictured) to its team. Box, formerly course superintendent at Kingston Beach Golf Club,

EcoBunker's synthetic bunker facing product is now available in Australia through exclusive distributor Turfcare Australia.



Adrian Box



VISIT THE HERITAGE SEEDS TEAM AT THIS YEAR'S AGCSA CONFERENCE, BOOTH 44A.

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Heritage seeds 

Heritage Seeds is a supplier of leading sports grass varieties to Australian and New Zealand markets.



Paul Masterson

has joined Oasis as a territory manager. He spent the past 10 years at Kingston Beach just outside of Hobart during which time it was regarded as one of the finest courses in Tasmania.

Oasis Turf directors Rick Henley and Peter Harrington are excited to be expanding their business into Tasmania. They believe that the turf knowledge and hands-on experience that Box has will provide Tasmanian turf managers with the support, advice and technical knowledge that will be of great benefit.

Oasis Turf will be warehousing its stock at Rocherlea, Launceston, which will ensure a quick turn-around time when orders are placed. Box will

be calling on all professional sports turf facilities in Tasmania and can be contacted on **0457 006 199** or by email **adrianb@oasisturf.com.au**.

GLOBE GROWING SOLUTIONS APPOINTS PAUL MASTERSON

AGCSA Silver partner Globe Growing Solutions has announced the appointment of Paul Masterson (pictured left) to the position of National Customer Service and Sales Support Manager.

Masterson has over 20 years' experience in the turf industry and was a golf course superintendent prior to his original tenure with the Globe group. Masterson is no stranger to Globe, having previously

WHAT TO WATCH FOR IN WELLINGTON...

ATM highlights some of the new product releases that will feature at the upcoming Australasian Turfgrass Conference Trade Exhibition in Wellington, New Zealand.

BAYER (STAND 2)



AGCSA Silver Partner Bayer will be launching its latest fungicide with Stressgard Formulation Technology (FT) in Wellington – Exeris

Stressgard. Exeris Stressgard contains a new and exciting active ingredient for turf and is the first Bayer turf product in Australia to combine Leafcote and Stressgard FT. Local and overseas trial work has shown Exeris Stressgard to deliver outstanding control of key diseases like dollar spot and brown patch while promoting healthy, high quality turf.

Place an order for Exeris Stressgard at the Bayer stand (No.2) and receive a free golf umbrella – you may need it in Wellington – or choose to have it delivered to you when you are back in Australia. Join Bayer's Twitter competition to go in the draw to win a Mavic air drone. Competition details are at the Bayer booth and while you are there pick up a free Berocca Twist 'N Go!

Also, Bayer research manager Jyri Kaapro will be conducting three 10-minute spot presentations on Bayer's newest Stressgard turf fungicide. These will be held on Wednesday at 1.30pm and Thursday at 11am and 1.30pm.

FLEET AUSTRALASIA (STAND 23)

Fleet Line Markers is the most technically advanced, innovative company in the line marking industry, manufacturing and supplying laser-guided line markers and GNSS-guided line markers and a large range of spray markers and accessories.

The company now services the Australian market with the recent addition of Mark Dando as NSW sales manager. In Wellington, the company will be launching its latest GNSS-guided line marker.

JOHN DEERE (STAND 40)



AGCSA Silver Partner John Deere has for years been a market leader in precision agriculture and in Wellington will be unveiling the new addition to its range – the GPS Precision Sprayer for the John Deere ProGator line.

With the GPS Precision Sprayer, superintendents and turf maintenance professionals will have access to proven, off-the-shelf John Deere solutions for precision spraying that will increase application effectiveness, accuracy and consistency.

GPS Precision Sprayer benefits include:

- The ability to spray a pre-determined area in less time thanks to pass-to-pass accuracy using AutoTrac steering.
- Multiple GPS Precision Sprayers can share coverage maps to eliminate overlap and increase productivity.
- Individual nozzle control allows minimisation of application errors, as well as decreasing spraying costs.
- Advanced satellite technology ensures reliability of boundary maps with Real Time Kinematic (RTK) satellite navigation.
- All spray data is captured and analysed to streamline documentation and provide enhanced, robust analytics.

BUNKER DRY (STAND 44)

Bunker Dry, a uniquely Australian product designed to assist superintendents better manage their bunkers, will be exhibiting at

the Australasian Turfgrass Conference for the first time.

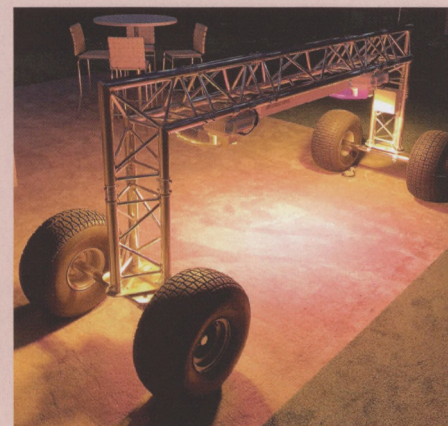
Designed by Sydney-based engineer Russell Druce, the Bunker Dry system simply drains water from bunkers at a higher flowrate than other systems and eliminates sand ingress into drains. It is easily installed to any bunker without undertaking major works and with seven years of development and testing in real golf course conditions, comes in at a fraction of the cost of other bunker drainage systems.



**BUNKER DRY®
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BERNHARD AND CO (STAND 31)

Bernhard and Company will be presenting its fantastic new lighting solutions (pictured) on Stand 31. Following the company's recent partnership with MLR, delegates can come and view its new lighting solutions for stadiums or golf. Come and discuss how Bernhard and Co can help keep your turf healthy, working with you around all those shady obstacles!



held senior responsibilities in the operations and client management areas during his 10 year original term from 1997-2007.

Following Globe, Masterson moved to the Toro Company where he spent 10 years working in both their irrigation and machinery divisions. Masterson most recently finished up a position as sales manager with the Green Horticultural Group before starting with Globe on 12 June.

"Paul brings a wealth of knowledge back to our group and significantly strengthens our customer service team and adds much value to national management team," says national operations and sales manager for the group Jeff Bowtell.

Masterson is based out of Globe's Wetherill Park Service Centre in Sydney and can be contacted on **0409 644 491** or email **paul.masterson@globeaus.com.au**.

NUTURF ADDS GRANT, PETROVSKI TO TERRITORY MANAGER ROLES

AGCSA Gold Partner Nuturf announced the appointment for former course superintendents Mick Grant and Aaron Petrovski (both pictured right) to territory manager roles in April.

Grant, a former superintendent at Melbourne's Koorinal Golf Club, joins Nuturf's Victorian team from Injekta/Wilchem which has worked in partnership with Nuturf over the past two years to further develop and expand its FolIMAX suite of

liquid nutrition products. Prior to this, Grant spent eight years servicing the professional turf market in Victoria in a traditional territory manager role.

"We are excited about Mick's decision to join the Nuturf business and are very pleased that he will strengthen our technical and service offering to our customers in the Victorian market," says Nuturf's Victorian state manager Gavan Hegan.

Grant started his new role on 30 April and can be contacted on **0407 816 786** or email **mick.grant@nuturf.com.au**.

Hot on the heels of Grant joining, Nuturf revealed it had also appointed Aaron Petrovski to the position of territory manager in Western Australia. Petrovski, most recently superintendent at Nedlands Golf Club in Perth, brings to Nuturf a strong background in contractors, local government, schools, golf and some exposure from his early career in nursery and landscape.

"Aaron has a broad and deep knowledge of the Nuturf business and the products and services we offer the turf market, including our market-leading agronomic services products," says Nuturf business manager Peter Schumacher. "I am excited about Aaron's decision to join the Nuturf business and know that he will strengthen our technical and service offering to the Western Australia market."

Petrovski started his new role in late May and can be contacted on **0407 380 759** or email **aaron.petrovski@nuturf.com.au**.



Mick Grant



Aaron Petrovski

DINT
Golf Solutions

See you in
Wellington

DINT
Golf Solutions



Mike Cocking and Steven Newell discuss the upcoming greens and surrounds resurfacing project about to start at Victoria Golf Club during the VGCSA AGM

'G' 'day mate!' I am fortunate enough to have had the honourable role of VGCSA state president being handed my way and I wanted to start this report by introducing myself. I am **Barry Proctor** and I don't think that I have ever said 'G'day' in my life... it doesn't sound all that great with a thick Scottish accent. I'm more of a 'How you doing?' kind of bloke.

Thanks to **Mat Poultny** from Green Acres Golf Club for his outstanding presidency over the past two years and for leaving behind such a fantastic, passionate committee. I am going to enjoy this role and plan to approach it with more of an 'Obama' than 'Trump' attitude.

As the other trades around us are booming, it is hard for our industry to compete and keep up. We are challenged by everything around us – membership numbers, retaining staff due to competitive salaries in other industries, the weather, budget restraints, chemical resistance, increasing cost of goods and forever increasing expectations.

We really must love what we do to still be in our jobs and reading this brilliant magazine. Something has got to change and I'm confident that it will. We have to come together as a national team to workshop these challenges and create solutions.

We have the lifestyle that most people only experience when they retire. We watch the sun rise each morning, experience the delights of nature every day, work outdoors, have a mild all-year tan (all within WHS guidelines of course) and each day is different to the one before. Wouldn't life be great if everyone could enjoy work as much as we do and wanted to work within our industry...

Recently the AGCSA conducted its inaugural 'Thank a Superintendent Week' and it was great to see the response generated. It was a chance for the wider golfing industry to give credit to superintendents and their teams for the relentless effort they put in while having to deal with the many challenges that crop up on a daily basis. The week aimed to drive awareness and recognition of the outstanding work that golf course superintendents and their teams contribute to make the game of golf so great.

We clearly have a lot of support for one another as this year's AGM attendance proved, with over 120 people attending for the second year in a row. Thank you to Victoria Golf Club for hosting and to superintendent **Steven Newell** for an in-depth course tour and course architect **Mike Cocking** from Ogilvy Clayton Cocking Mead.

I am concluding this report (without mention of the weather!) by wishing you all the best for the 'wet' season.

BARRY PROCTOR
PRESIDENT, VGCSA

PROCTOR ELECTED NEW VGCSA PRESIDENT, HEWITT HONoured WITH RECOGNITION AWARD

C ranbourne Golf Club superintendent and AGCSA member **Barry Proctor** was elected president of the Victorian Golf Course Superintendents Association (VGCSA) at the 2018 AGM held in early May. Previously VGCSA vice-president, Proctor replaces Green Acres Golf Club superintendent **Mat Poultny** who stepped down after two years in the role and eight years on the committee.

Proctor's elevation to president was one of a number of changes to the committee announced at the AGM held at Victoria Golf Club. Also stepping off the committee were former president **Steve Hewitt** (Thirteenth Beach GC) and **Kyle Wilson** (Moonah Links). They were replaced by **Simon Muller** (The Dunes), **Adam Lamb** (Barwon Heads GC) and

Travis Scott (Riversdale GC). The full VGCSA committee for the coming 12 months is:

- **President:** Barry Proctor (Cranbourne GC)
- **Vice-president:** Shane Greenhill (Sorrento GC)
- **Secretary:** John Mann (Woodlands GC)
- **Treasurer:** Steve Burchett (Portarlington GC)
- **Committee:** Adam Lamb (Barwon Heads GC), Hayden Mead (Kingston Heath GC), Simon Muller (The Dunes) and Travis Scott (Riversdale GC).

Earlier in the day, out on host superintendent **Steven Newell's** beautifully prepared course, Anglesea Golf Club superintendent and AGCSA president **Brett Balloch** secured the VGCSA's Powell Trophy. It was the eighth occasion that Balloch has won the VGCSA's premier golfing



VGCSA Superintendent Recognition Award recipient Steve Hewitt



The new VGCSA committee (from left) Adam Lamb, Travis Scott, Shane Greenhill, Barry Proctor (president), John Mann, Hayden Mead, Steve Burchett and Simon Muller

trophy and he did so on a countback from Adam Lamb. Both shot 79.

Former MCG arenas manager **Tony Gordon**, now superintendent of the Ocean and Moonah courses at The National GC, returned to the limelight by collecting the Toro Cup stableford trophy. Gordon finished with an impressive 39 points, five clear of last year's winner **David Johnson** (Patterson River GC).

Simplot Partners territory manager **Cameron Williams** topped the trade contingent to win the President's Shield and also bagged a nearest the pin prize on the 7th. Traralgon superintendent **Nathan Arnett** (NTP 14th hole), **Erik Kinlon** (HG Sports Turf, longest drive 18th hole) and **Damien McCartan** (Huntingdale GC, longest drive 9th) also collected prizes on the day.

The AGM also saw the VGCSA recognise some of its outstanding achievers. Steve Hewitt was bestowed the VGCSA Superintendent Recognition Award, while **Brendan Graham** from A&M Watering received the Trade Recognition Award. Royal Melbourne's **Dechlan Turkington** was named VGCSA Graduate of the Year and will go on to

represent the association in the national final at the inaugural Australasian Turfgrass Conference in Wellington. 2018 AGCSA FTMI participant **Jeremy Clarke** (Peninsula Kingswood CGC) received the Diploma Scholarship Award.

2018 VGCSA golf winners (from left) Cameron Williams (Simplot Partners, President's Shield), Brett Balloch (Anglesea GC, Powell Trophy) and Tony Gordon (The National GC, Toro Cup)



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Simon Santosha addresses GCSAQ members during the recent 'Man Day' seminar on mental health awareness

The GCSAQ held its first 'Man Day' in April. The half-day session was held at Brisbane's Nudgee Golf Club and focused on men's mental health awareness. This is a topic of high importance to our industry yet rarely discussed. However, every day more men are becoming aware that maintaining good mental health is important for themselves and their colleagues and it is no longer the elephant in the room that no-one talks about until it is too late.

Nearly 50 members attended the day, which was compered by local comedian and self-confessed golf tragic **Fred Lang**, who himself has suffered from depression throughout his career. Fred shared with the group his own personal experiences and turned

what could have been a somewhat sombre day into a positive – and quite funny at times – forum for all who attended.

Guest speakers included **Phil Beal** (superintendent, The Australian GC) who spoke about his ongoing battle with depression and how he manages it from day to day. Phil joined us via a live Skype chat, a first for one of our education days, and something we may try again, especially for our regional members.

Matt Holmes (epar) brought us up to date with a superintendent's legal requirements when it comes to recognising and dealing with staff members who may be potentially going through tough times mentally. He also highlighted the importance of having staff awareness, acceptance and engagement of workplace policies and procedures before mental health issues arise.

Last but not least, clinical counsellor **Simon Santosha** engaged everyone in the room with his approach to men's mental health and family and general wellbeing counselling, along with practical strategies for dealing with mental health issues for individuals and staff in the workplace. The day concluded with an open forum and a very tasty lunch courtesy of association partners Nuturf, Living Turf and Toro.

PAUL MCLEAN
PRESIDENT, GCSAQ

STA VIC



Carlota Rodriguez from City West Water speaking at STA Victoria's recent seminar at Junction Oval

STA Victoria was delighted to hold its Safety Seminar at the newly renovated headquarters of Cricket Victoria at Junction Oval in April. Once again Bayer teamed up with us as our major sponsor and we thank them again for their support. A record number of delegates for such an event enjoyed the great venue and were able to watch an Australia v Pakistan U16 match during the breaks.

Craig Burleigh from Bayer brought the audience up to date with environmental health and safety issues and we look forward to sharing with you shortly the video produced by Bayer on the day.

It was great to welcome a large number of students to this seminar and no doubt they took home a huge amount of information which will benefit their studies.

Rhys Taylor was chosen as this year's Victorian nomination for the Toro National Sports Turf Graduate of the Year Award from a very strong field of candidates. Rhys is a graduate of the Wodonga Institute of TAFE and employed by the Benalla Racing Club. He is passionate about his work and it absolutely shone through in his presentation. We thank Rhys for his hard work and great presentation which came right from the heart.

All nominations from the states made it a very hard decision for the national selection committee to choose the outright winner. Congratulations goes to STA NSW representative **Mark Paterson-Hill**, a graduate of TAFE Ryde, NSW who was announced the winner at Toro's National Sports Grounds Forum held at Wesley College in April (see more on the national award on page 47). We wish all national finalists a very bright future.

STA Victoria is happy to be a supporter of the National Sports Convention, in particular the National Sports Surfaces Conference, to be held at the Melbourne Convention and Exhibition Centre from 16-18 July. For more information, visit www.nationalsportsconvention.com.au.

The week following, on 25 July, STA Victoria will host its biggest annual event – the Sports Turf Seminar. This year's event will be held at the Melbourne Cricket Ground and sponsored by Toro, Dawn Mowers and AgPower. We have a great line up of speakers and the programme will be released shortly. The STA Victoria AGM will be held prior to the seminar, starting at 8.15am.

COMMITTEE, STA VIC



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TURF AUSTRALIA



Turf Australia recently facilitated a meeting of turf industry researchers in Sydney to review past research projects and consider current issues facing the industry



Opportunity is a word I find myself using a lot when I consider the future of the Australian turf industry, whether that is in turf production, the sports turf and golf management sector, open spaces or general consumers maintaining their home lawns. As an industry we have many opportunities to come together and build a stronger industry, including;

- Promoting and showcasing the value and benefits of turf to our society, environmentally, physically and emotionally;
- Promoting and endorsing the professionalism of the people that spend every waking moment perfecting their treasured turf; and
- Collaborating with the wider green space industry to have a powerful voice.

The challenge is developing a plan to tackle all the opportunities, so they have a significant positive impact for the industry and I hope to be able to share these plans in the coming months.

The past few months have seen a lot of meetings, consultation and planning sessions, collecting information to develop the strategic plan of the Turf Levy Funded National Turf Market Development Project (TU16002). There are many aspects to this project and the focus at the moment is ensuring that the outcomes will be of value to the growth and development of the industry.

Recently, Turf Australia facilitated a meeting of turf industry researchers in Sydney with the purpose of the meeting to review past research projects and consider the current issues facing the industry. The session was positive and provided good feedback, addressing many issues and determining highest priorities. This information will be utilised in the strategic plan for the Market Development project.

Many thanks to the researchers who attended – **Peter McMaugh, John Neylan, Chris Lambrides, Percy Wong, Bruce Macphee, Phil Ford, Don Loch, Mick Battam** and meeting chair **Robert Prince**. It is also hoped that we can expand on this meeting in the future.

The Turf Australia Board, staff and representatives from the state associations held planning sessions in Brisbane in April. It was an intense few days of reviewing strategic plans for Turf Australia as well as conducting a workshop on crisis management and how to deal with possible issues that the industry may face.

The first meeting of the 2018 Growing the Green Industry Leadership Group was held in early May in Sydney and the applications received from the turf industry were very strong. This project is a joint Levy funded project through both the turf and nursery industry and is a great opportunity for future leaders to develop both their personal and professional skills.

I have recently spent a few days in Perth meeting with turf growers and the wider turf industry and learning about the challenges faced by the WA turf industry. The significant difference of the growing conditions in the west is quite dramatic compared to eastern states. Growers deal with sandy soils and amendments required to assist growing conditions, not to mention a major lack of rain across the state. It was great to catch up with representatives from STA WA and the GCSAWA as well as members of the Green Space Alliance.

JENNY ZADRO
MARKET DEVELOPMENT MANAGER,
TURF AUSTRALIA

I hope this report finds you all well and thankful for another reasonably mild summer with some decent rainfall.

The WA golf industry again converged for the annual WA Golf Industry Awards Night held at Crown on 9 March. Congratulations must go to a well-deserving Gosnells Golf Club superintendent **Phil Moylan** who was bestowed the Jacobsen/McIntosh and Son Superintendent of the Year Award. Also, congratulations to **Matthew Vroom**, who won the AGFRI-John Deere Apprentice of the Year Award. I'm sure Matthew will be a strong contender of the AGCSA Graduate of the Year award to be announced at the Australasian Turfgrass Conference coming up in New Zealand.

A prestigious award was presented to a deserving, passionate, dedicated, long-serving, turf-loving, educating mastermind **John Forrest** who received the WA Golf Industry Recognition Award. Personally, and as I'm sure is the case with many in the WA turf industry, I can't thank John enough for his support and advice both as my lecturer at TAFE and throughout my career as a superintendent, especially early on. He embodies the true meaning of the word 'legend'.

A reasonably good showing of superintendents and staff members enjoyed an informative presentation recently from the Department of Water and Environmental Regulation. We were updated on the water situation and future allocations for the Perth metro area and discussed the likelihood of



allocations being reduced by 10 per cent by 2028. At the conclusion of their presentations it was great that the representatives gave up more of their time for a Q&A session.

The GCSAWA committee is currently organising some half-day educational and informative events for members to attend. Afterward at golf or at a light lunch is a great opportunity for supers to catch up. I know from experience that it's at these social gatherings that I gained a lot of valuable knowledge and methods from talking to industry peers which I wouldn't have obtained otherwise.

Any upcoming events will be promoted well in advance. I appreciate that we are all busier than ever, but without your attendance it won't be feasible for these events to continue. Hope to see you all soon.

SIMON BOURNE
PRESIDENT, GCSAWA



Left: John Forrest (left) was recently bestowed the WA Golf Industry Recognition Award, its highest honour

Above: Superintendent Recognition Award winner Phil Moylan (left)



Matthew Vroom (left) collected the GCSAWA Apprentice of the Year Award

STA NSW

The STA NSW committee are thrilled that our nomination for the 2018 Toro National Sports Turf Graduate of the Year Award, **Mark Paterson-Hill**, went on to be awarded the top national award (read more about the national final on page 47 of this edition).

It is wonderful to see such professionalism and knowledge from all of the nominated graduates and it is a testament to the employers in our industry who are supporting graduates to achieve their best. Mark is also a great example of the TAFE system, providing learning outcomes at the highest levels, and it is the aim of STA NSW to ensure that this standard of education is maintained.

Following the recent departure of the magnificent **Jenny Zadro** to Turf Australia, our committee has welcomed **Sophie Devine** as STA NSW's new administration manager. Our aim for 2018 is to continue to provide value to the sports turf industry through our various events, accredited programmes and publications.

In early April we held the annual Golf Day at Twin Creeks Golf and Country Club which was again

deemed a great success by all attendees. The day was superbly run by the Twin Creeks team, who delivered a five-star experience headed up by golf pro Nathan, along with an amazingly manicured course by superintendent **Justin Doyle**. So good was it that we have already booked it for next April!

STA NSW will be holding its first wicket accreditation programme for the year in Richmond on Thursday 14 June. This Wicket 101 programme will provide fundamental techniques of preparing quality wickets. In September, we will follow on with the Wicket 201 programme at the SCG, which will be a more intensive look at the science and techniques behind wicket preparation and maintenance.

And don't forget, our STA NSW committee offer the big event experience, where you can gain hands on experience at the very top end of sports field management. If there is an event on the sporting calendar you wish to experience, let us know and we will do our best to make it happen.

CHRIS CHAPMAN
PRESIDENT, STA NSW



STA NSW nominee Mark Paterson-Hill (centre) went on to win the 2018 Toro National Sports Turf Graduate of the Year Award



STA NSW held another successful annual Golf Day at Twin Creeks in early April

TURF QLD



Since my last article in the January-February 2018 edition, the rains have come to Queensland with most growers having their on-site dam storages filled. It is pleasing to advise that the Townsville area, which was under Level 3 restrictions, received considerable rain with the Ross River Dam 93 per cent full at the time of writing which resulted in the lifting of restrictions.

The problem in this hot, dry area is that installing natural turfgrass requires watering morning, noon and night in the initial phases to ensure establishment. Water sustainability continues to be a major issue across our country.

Our members report that they supplied a considerable amount of quality turfgrass to the various events and stadiums for the Commonwealth Games, including both the competition track and training fields at Carrara Sports Precinct. Now that this has been completed our deliveries can get back to normal without any of the road restrictions. The turf industry in Queensland currently is quite busy with a number of farms facing shortages of various species.

Turf Queensland has as one of its objectives to visit all members face to face at least once per year across the state. During visits in February we undertook a small survey to accurately assess our market and its size within Queensland. This has now been completed for southeast Queensland, north Queensland and far north Queensland.

The outcomes were quite surprising and in some areas extremely revealing as past assessments were only knowledgeable estimates. The turf production industry in Queensland has for some time been

underestimated and thanks to these visits we can now accurately provide the detail that certainly lifts the profile of our industry:

- Total area under managed turf in Queensland is 2725 hectares.
- Since 2010, the total investment by member companies is \$50,790,000 (or \$1 million per farm).
- The intended future investment over the next three years is \$22 million (or \$0.5 million per farm).
- The increased yield across the farms averaged 14 per cent per farm.
- Total number of employees across the 50 member companies is over 350 (full-time).
- The natural turfgrass production industry provides a GDP of an impressive \$327 million per annum.

Other 'on-farm' areas that were measured included energy efficiency, water efficiency and waste reduction. The natural turfgrass industry in Queensland operates with state-of-the-art equipment and best practice processes to ensure productivity and efficiencies are obtained for the sustainability of the business. In turn, this provides ease of mind to the end user/consumer that they are receiving quality turfgrass, provided it is sourced through a Turf Queensland member. Bio-security and risk management are also high on their business agenda.

JIM VAUGHAN
TURF QUEENSLAND

ON THE MOVE

COREY BANDY: From superintendent Rockingham Golf Club, WA to irrigation tech officer City of Melville, WA.

OLIVER BELL: From assistant superintendent Terrey Hills Golf Club, NSW to superintendent Dunsborough Lakes Golf Club, WA.

GREG BURGESS: Resigned as superintendent Portsea Golf Club, Vic.

MARK FINDLAY: From superintendent Midlands Golf Club, Vic to superintendent Sanctuary Lakes Golf Club, Vic.

KEENAN HOBBS: From superintendent Wollongong Golf Club, NSW to superintendent Shoalhaven Heads Golf Club, NSW. Hobbs replaces the retiring Tony Orford.

MAL GRUNDY: Resigned as superintendent Murray Bridge Golf Club, SA after 24 years (37 in total at the club) to become a senior greenkeeper at The Grange Golf Club, SA.

CLAYTON HOWELL: Resigned as superintendent Eastern Golf Club, Vic.

JAY INFANTI: From assistant superintendent to superintendent Eastern Golf Club, Vic.

DYLAN KNIGHT: From superintendent Sanctuary Lakes GC, Vic to superintendent Kingston Beach Golf Club, Tas.

PAUL KORTHOLT: Resigned as superintendent Rosedale Golf Club, Vic.

RHETT PINDER: From assistant superintendent to superintendent Club Mandalay, Vic.

JASON POU: From assistant superintendent Royal Fremantle Golf Club, WA to superintendent Rockingham Golf Club, WA.

MARK PROSSER: Resigned as superintendent Commonwealth Golf Club, Vic after 19 years.

TRAVIS STILLMAN: From assistant superintendent Frankston Golf Club, Vic to superintendent Rosedale Golf Club, Vic.

TIM WARREN: From senior assistant superintendent The Grange Golf Club, SA to superintendent Glenelg Golf Club, SA.



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
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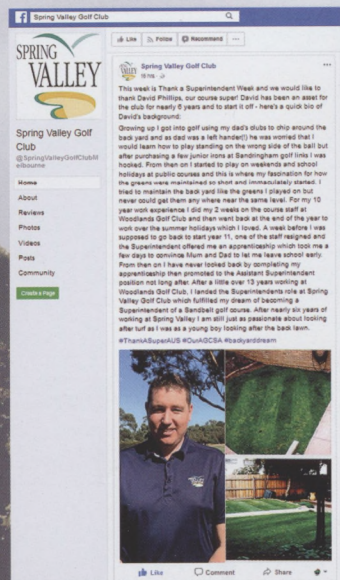
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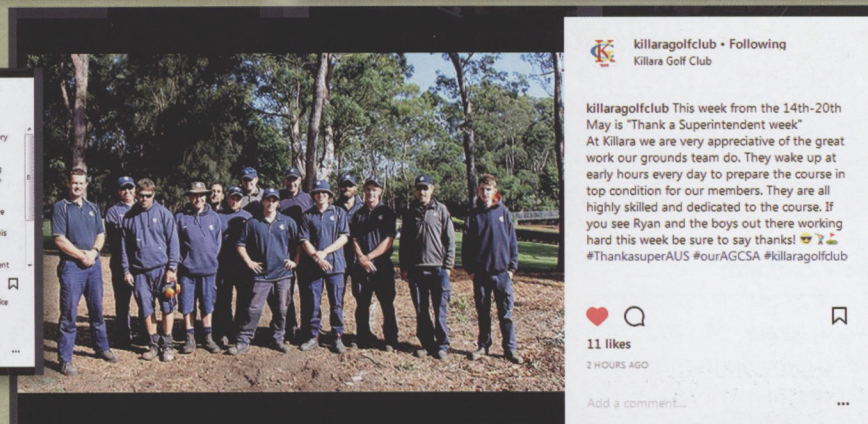
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Saying thanks

The AGCSA's inaugural 'Thank a Superintendent Week' in mid-May gained plenty of traction across social media. Here were some of the highlights.







Together with his uncle Damian, Bentley Conn collected the recent Victorian Dragon class championships sailed on Port Phillip Bay. They will now contest the 2019 World International Dragon Championship

After winning the state Dragon class championships recently, Victoria Golf Club greenkeeper and avid yachtsman Bentley Conn is off to the world championships next January!



A different tack

Sailing has always been a big part of my family and some of my earliest memories are of sailing on dad's 40-footer on the Gippsland Lakes. I was about seven when I started sailing myself at Metung Yacht Club, first in the optimist dinghy class, which taught you the basics of sailing, before progressing into the two-person Cadet class.

Together with my younger brother Bobby – I was the skipper and he was the crew, which made for some pretty decent stoushes out on the water – we started competing and went on to become quite successful. Dad (Robert) had bought us a brand new boat (which was pretty cool for us at the time, having brand new gear to play with) and we ended up contesting four national championships in Adelaide, Sydney, Hobart and Geelong.

A top-10 finish on Corio Bay qualified us for the 2007 world championships in Belgium, but we had to forgo the event as dad was successful in gaining employment as a Port of Melbourne tug master. While it was shame to miss out, it meant the family moved to Melbourne where we became members of the Royal Brighton Yacht Club.



One of the things I enjoy most about sailing, aside from being out on the water and competing, is being a part of a club, which is probably why I enjoy working at golf clubs and being a greenkeeper. You get to meet a great mix of people through the club and at regattas, many of them from all corners of the globe. And, of course, there are always the cold beers in the clubhouse afterwards once you're back on shore.

I sail competitively most Saturdays at Royal Brighton which is just a stone's throw from where I work at Victoria Golf Club as a qualified greenkeeper. Dad has an Etchell class yacht (9.3 metre hull) down on the club's hardstand which I normally skipper and have a rotating crew throughout the sailing season. Back in 2009 I was fortunate enough to contest the word Etchell championships, hosted by Royal Brighton YC.

For the past four years I have also started sailing Dragon class yachts. I got into this class because my grandfather Harold used to sail them and it was important for our family that we kept his memory alive. We sail his old Dragon boat – called 'Imagination' – which we have completely rebuilt over the years.

Dragons are more of a 'gentleman's boat' – a smaller (8.9m long), slower Etchell if you like. It is one of the biggest 'one design' sailing boat classes in the world and is renowned for having some high profile participants, including the likes of Crown Prince Frederik of Denmark.

Over the past three years, together with my uncle Damian, I have contested and won the Victorian Dragon championships, with the latest title coming this April. We have also contested two Prince Philip Cups – the Dragon national championships – in Sydney and Metung.

This year's Victorian championship, hosted by Royal Brighton, was sailed in very light conditions on Port Phillip Bay. We sailed very consistently, winning four out of the six races across the two-day series (21-22 April). There were 15 boats contesting this year's championships, some from as far afield as Western Australia and Tasmania.

It was great to bring home the chocolates for a third time, but more importantly it qualified us for the 2019 World International Dragon Championship to be sailed on the waters off of Fremantle, WA next January.

At this stage I will most likely sail the event with my dad and uncle and possibly my girlfriend as well. The Dragon class is a weight limited class and can be sailed with a crew of between two and four, as long as you are under the combined weight limit of 285kg. We will also be contesting the Prince Philip Cup which is being held immediately prior to the worlds as a warm-up.

This will be the first time I have contested the world championships in the Dragon class and to say I'm excited about the prospect is a huge understatement. 🌊

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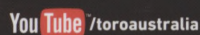
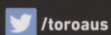
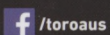


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