

CELEBRATING THE EFFORTS OF AUSTRALIA'S TURF MANAGEMENT PROFESSIONALS

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# Turfgrass



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MANAGEMENT JOURNAL

## Making a difference

Eastern's environmental excellence

Vale Bill Casimaty  
1935-2019

## Victoria unveiled

Restoration of  
a Sandbelt icon







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PHOTO: EASTERN GOLF CLUB/GARY LISBON

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When The Eastern Golf Club sold up its existing suburban site and headed to the far outskirts of Melbourne, it was presented a blank canvas upon which to create something unique. Greg Norman Golf Course Design duly obliged with a much lauded, brand new championship golf course, while an exhaustive plan to transform the natural environment was put in place to complement it, turning what was once degraded grazing land into a thriving, diverse landscape. Four years since its opening, The Eastern Golf Club environment has matured majestically and the hard work put in by a dedicated crew was ultimately rewarded at the recent Asia Pacific Turfgrass Conference when horticulturist Bivek Inderjeeth was bestowed the AGCSA Claude Crockford Environment Award, presented in partnership with Syngenta.

*Cover:* Eastern Golf Club's 10th hole  
*Photo:* Gary Lisbon/Eastern Golf Club

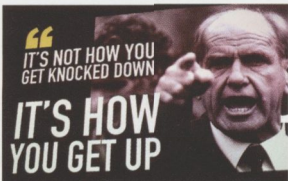


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PHOTO: NEARMAP

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# Finding balance and harmony

**N**o, the above heading doesn't refer to the very unhelpful suggestions my therapist recommended to me after I witnessed EVERY SINGLE BALL of the recent ICC Cricket World Cup final (please, don't get me started, I could write a 50,000-word Masters dissertation on that last half hour at Lords). Breathe...

Rather, I'm talking about the great little exercise that delegates in Craig Haldane's Jacobsen-sponsored Monday workshop at the recent Asia Pacific Turfgrass Conference were asked to take part in. Conducting a day-long workshop on change management and what drives your management practices, the Gleneagles course manager split the group into two, grabbed some 3m-long tent poles and proceeded to have some fun at the delegates' expense.

If you haven't seen it before, it's a team building exercise. It goes by various names – 'Levitation stick', 'Helium stick', 'Magic stick' – and involves two rows of people standing either side of a long stick (or tent pole in this case). They are instructed to stick two fingers out at chest height upon which the stick is rested. The aim of the exercise is to lower the stick to the ground, but the catch is that ALL fingers must remain touching the stick at ALL times. Simple enough you would think – no! Almost invariably the stick will start to lift up as each person tries to maintain contact with it, resulting in collective upward pressure. Only by working together, communicating and being patient will the group successfully lower it to the ground.

It's a deceptively simple yet powerful team building game and helps drive home the importance of several concepts all at once – working in harmony, effective communication, patience and how to manage small contributions to achieve effective results with the correct balance. When you think about the myriad on and off site elements that comprise a turf manager's remit these days, it was little surprise that this exercise resonated with many.

It was one of many highlights during Haldane's quite superb series of presentations in Brisbane. You don't get to manage some of golf's most prime pieces of real estate – Emirates Golf Club in Dubai and Gleneagles in Scotland – without having a bit of smarts about you. He was engaging, highly practical, down to earth and, most importantly, brutally honest about his failures and the lessons he has learnt every day from 22 years in golf course management.

It was another wonderful gathering and in this edition we look back on some of the key moments of the week which saw nearly 1100 delegates, trade representatives and trade exhibition visitors converge. Congratulations to all AGCSA and STA Award winners and also to Peter Lonergan who deservedly attained AGCSA life membership status, only the second superintendent to achieve the honour. In this edition we look at the work achieved by award winners Jon Carter (AGCSA Excellence in Golf Course Management Award, presented by Bayer) and Bivek Inderjeeth (AGCSA Claude Crockford Environment Award, presented by Syngenta) and also ask Peter to reflect on his 35-plus year involvement in the industry.

It was great catching up with everyone in Brisbane and I thank everyone who took the time to come up and have a chat with me and pass on their feedback about the journal. It is always greatly appreciated. Enjoy the read...



Brett Robinson, Editor







## What side of history will you be on?

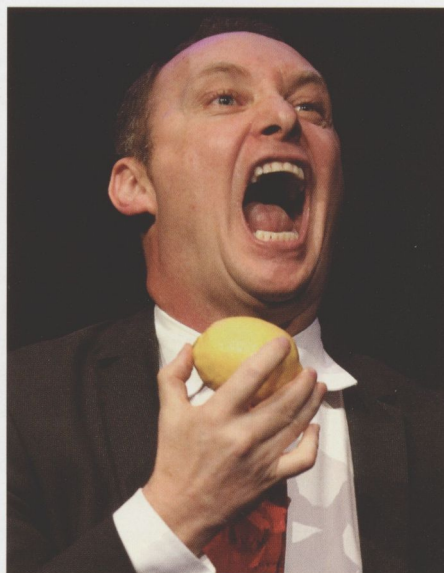
**W**ith the 2019 Asia Pacific Turfgrass Conference and Trade Exhibition completed, the weeks following are spent internally reviewing the operations of an event of this scale, looking at the areas we did well and those we can continue to develop for next year.

We couple this with delegate responses from the conference survey and trade exhibitor feedback to pull together an initial plan of how next year's event may look. This review has even greater significance this time around given that Melbourne 2020 will be much larger with the incorporation of Golf Business Forum into the mix.

While there are many areas to continue to improve, the key takeout from survey feedback to date is that delegates immensely enjoyed the Brisbane conference, with many rating it among one of the best yet. Indeed, in this edition we take a snapshot of some of the key 'take homes' that delegates took out of their week in Brisbane and the importance delegates place on continuing education.

Looking at the delegate feedback, we have seen overwhelmingly positive feedback on the focus of adjusting the conference programme to include more in-depth content on leadership and development. In Tuesday's Plenary session, world-class presenters such as **Jason Cunningham**, **Paul Warren** and **Cameron Schwab** really struck a chord with delegates, all rating among the most impressive sessions of the week.

This was coupled with an expanded line-up of turf industry experts, including the likes of **Dr John Kaminski** from Penn State



University and Gleneagles course manager **Craig Haldane** who were standout presenters during the Jacobsen-sponsored Monday workshops.

Feedback also commonly indicated that turf managers attending were greatly appreciative of the expanded sports field and grounds content, the increased focus on agronomic management and leadership development from local and international experts, as well as the range of dedicated workshops which delved into areas such as water management, construction projects and Growing Degree Day modelling.

With nearly 1100 people through the doors across both the education sessions and trade exhibition over the course of the week in Brisbane, it would be remiss of me not to take this opportunity to thank the entire AGCSA team for their passion, efforts, long hours and energy over the last few months.

*Delegates took plenty of pointers away from Mark Carter's talk on leadership and communication, including how to bite an imaginary lemon – you had to be there...*

What now seems like countless hours and behind the scenes work required for an event this size, I'd like to express my gratitude to the dedication of Allison, Phil, Bruce, Tim, Brett and Jo in working together to deliver outstanding education and networking opportunities of such high standard to turf managers and exhibition partners alike. Of course, my sincerest thanks and acknowledgement must also go to AGCSA events and education manager **Simone Staples** for the coordination, planning and communication to develop and deliver a truly world-class turf management conference and trade exhibition.

## WINNERS AND CHAMPIONS

We extend our congratulations to all AGCSA and STA award winners announced during a fabulous National Turf Industry Awards Gala Dinner, sponsored by Syngenta, held on the opening night of the conference.

**Jon Carter**, long-serving course superintendent of Wanneroo Golf Club in Western Australia, took home the 2019 AGCSA Excellence in Golf Course Management Award presented in partnership with Bayer. **Bivek Inderjeeth** won the coveted AGCSA Claude Crockford Environment Award, presented in partnership with Syngenta, for his extensive horticulture work and environmental stewardship at The Eastern Golf Club in Victoria. Check out this edition's cover story which outlines the amazing breadth of work that Bivek and the team at Eastern have achieved over the past five years.

Monday's dinner also showcased the future of the industry, with the Graduate of the Year Award winners announced thanks to the continued support of Toro. In another year of impressive presentations, former Kooyonga Golf Club apprentice **Thomas Burridge** created history by becoming the first South Australian representative to win the AGCSA Graduate of the Year Award. The STA Sports Turf Graduate of the Year saw Victorian representative **Nathan Andrews** from Citywide Service Solutions collect the honour ahead of a strong and inspiring field.

*The power of Paul Warren's Plenary address on resilience and an adaptive mindset was something that resonated with many delegates in Brisbane*





All graduate finalists should be proud of their achievements in being recognised as state winners and we wish them well in their future endeavours. AGCSA finalists included **Jack Schmidt** (Cardwell Golf Club/GCSAQ), **Jax Battye** (Meadow Springs Golf and Country Club/GCSAWA), **Jordan Phillips** (Newcastle Golf Club/NSWGCSA), **Jordan Thompson** (Royal Canberra Golf Club/STA ACT) and **Nicholas Fiddelaers** (Huntingdale Golf Club/VGCSA). STA finalists included **Micah Mathewson** (Toowoomba Grammar School/STA Qld), **Jake de Marigny** (University of Sydney/STA NSW), **Mitchell McKenzie** (Canberra Racing Club, STA ACT) and **Jacob Moon** (SACA, SA).

And lastly, in what could likely become a regular note of congratulations, Nedlands Golf Club superintendent **Tony McFadyean** made it back-to-back Red Jackets at the 2019 Toro AGCSA Golf Championships. McFadyean cruised to a four shot win at the Brisbane Golf Club, which was turned out for the day magnificently by host superintendent Mitch Hayes and his crew.

## THE ROAD AHEAD

With the conference now behind us, our focus turns to the second half of the year and delivering on a range of initiatives under the AGCSA's strategy. This includes an increase in the level of support for state associations, further advocacy work at State and Federal Government levels and a reconfiguration of our membership structure.

The AGCSA currently operates a somewhat complicated membership structure based on job roles (superintendent, assistant superintendent etc...) that has been added to as the association has expanded over time.

Following a review of operations and benchmarking against other leading industry associations, we believe the current structure is no longer fit for purpose and is not the type of model that is being run by industry peak bodies. Pending a few final reviews, the AGCSA will be looking to adopt a revised membership structure within the next month, the details of which will be sent to all members prior to the changes taking effect.

Work is also underway on delivering three pilot programmes late in 2019. These include the areas of;

- Environmental sustainability;
- Attracting talent into and retaining talent within the sports turf management industry; and



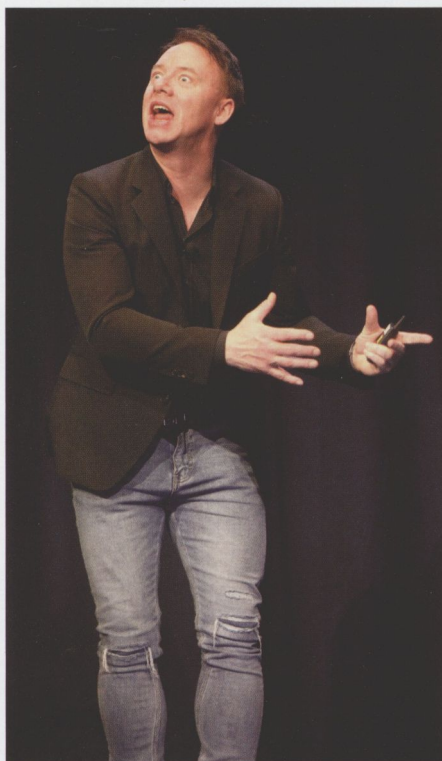
*Golf Australia's golf development manager David Gallichio joined with The R&A's director of sustainability Steve Isaac during the Brisbane conference Plenary session*

- Developing an industry-based accreditation programme for sports turf managers.

## WORKING TOGETHER

I'll finish this issue's update by touching on a topic that was discussed by many in Brisbane and many who addressed the issue with me personally from all areas of the industry, both members and non-members.

The common thread during these conversations was that the sheer number of associations in our industry was becoming a hindrance to turf managers rather than a benefit, one that we as an industry needed to do something about sooner rather than later.



As many of you will be aware, for some months the AGCSA has been undertaking a tremendous amount of work in this area to try and unite and better align all associations to work together in the turf industry.

With 27 individual associations currently operating across all areas of turf management, not only does the current structure significantly diminish our ability as a profession to advocate effectively for improvement to the sector, it also regularly duplicates effort, resources and activities undertaken right across the industry every month. Additionally, it places increasing strain on our valued trade partners who continue to work hard in supporting the industry in as many ways as they are able.

As I addressed for those at the Brisbane conference, this issue will define the next era of sports turf management as a profession in this country. We can either be proactive in working together to support the future of sports turf management, or we can continue to focus inward and neglect the opportunities available to us to redefine our industry.

I know which side of history I'll be on... do you? 🙌



*Jason Cunningham's dynamic presentation on mastering your financial situation was one of a number of sessions that delved into areas outside of turf management and focused on personal development*



AWARDS

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# Making a difference

PHOTO: GARY LISBON/EASTERN GOLF CLUB



*When The Eastern Golf Club sold up its existing suburban site and opted to build a new course on the outskirts of Melbourne, it was presented a blank canvas upon which to create something unique. Greg Norman Golf Course Design obliged with a championship layout, while the club devised a comprehensive plan to transform the natural environment to complement it. Four years on since opening, Eastern has become a shining example of proactive environmental management and was recently recognised when club horticulturist Bivek Inderjeeth received the AGCSA Claude Crockford Environment Award.*



*Eastern Golf Club demonstrates a steadfast commitment to the protection of the existing natural environment, environmental best practice and stewardship. Pictured is the par three 13th which features one of the many waterbodies on the course as well as revegetated areas behind the green*



It was a massive decision for any golf club to make, but the numbers simply made it a compelling one. Up until the mid-2000s, The Eastern Golf Club in the Melbourne suburb of Doncaster had happily resided on its undulating site for more than 60 years. However, with a declining membership base and some financial issues starting to bite, management of the time started to explore options to keep the club viable going forward.

Working heavily in the club's favour was the fact that it owned the land it was on, which also happened to be zoned 'residential'. Combined with Melbourne's burgeoning population growth and its prime location less than 30 minutes from the CBD, the club decided to sell to developers and build a brand new course on a greenfield site at Yering on Melbourne's eastern fringe. Greg Norman Golf Course Design was commissioned to come up with a 27-hole layout as well as a nine-hole par three course.

It wasn't all plain sailing however. There was substantial objection to the new course development, with one of the key areas of concern the environmental impact of the golf course on the Yarra River which flowed next to it. The project ended up at the Victorian Civil and Administrative Tribunal which dragged on for a number of years, before the government of the day intervened and granted the permit. Ground was broken in late 2013 with the first 18 holes opened on 1 July 2015.

Visit The Eastern Golf Club today, just over four years since its opening, and you would be hard pressed to understand why there was such initial objection. The golf course development has turned what was once degraded pastureland into a thriving and biodiverse-rich landscape and the results that have been achieved are a shining



*Eastern Golf Club's Bivek Inderjeeth and superintendent Jay Infanti with Syngenta's Tim Bilston (left) and Paul Jackson (right). Inderjeeth is the second horticulturist to win the AGCSA Claude Crockford Environment Award*

example of how golf courses can, and do, have a hugely positive impact on their surrounding environment.

Such an achievement, borne out of an immense amount of planning, hard work and dedication, was recognised at the recent Asia Pacific Turfgrass Conference in Brisbane. Eastern Golf Club's Bivek Inderjeeth was bestowed the coveted AGCSA Claude Crockford Environment Award, presented in partnership with Syngenta, becoming just the second horticulturist to win the award in its 24-year history. (Interestingly, the other was Jodie Grainger who won in 2010 for her work at the neighbouring Yering Meadows course).

While it has been a whole-of-team effort to help realise the potential of the site, it has been Inderjeeth's passion and guidance which has played a big role in getting the course environs to where they are today. Leading and managing a small team, he has ensured the club demonstrates a steadfast commitment to the protection of the existing natural environment, environmental best practice and environmental stewardship.

## BLANK CANVAS

Originally from Durban in South Africa, Inderjeeth moved to Melbourne around 12 years ago. Gaining a Diploma of Horticulture from Holmesglen TAFE, Inderjeeth spent two years at Settlers Run Golf and Country Club (another Greg Norman design) as a full-time horticulturist/greenkeeper. There he was involved in all aspects of course maintenance, construction, horticultural maintenance and bushland development for the endangered south brown bandicoot. From there he moved to a full-time role with the Southern Metropolitan Cemeteries Trust between 2012 and 2014, involved in the presentation and horticulture operations of the grounds.

After a few years on the arboriculture crew there, Inderjeeth wanted to get back into the golf industry. As it happened, ground had just been broken on the new Eastern Golf Club development and they advertised for a horticulturist through the AGCSA website. Gaining an interview and ultimately the job, Inderjeeth started on 13 January 2014 and didn't look back.

"It was a dream role for me," says Inderjeeth, who is also nearing completion of his Diploma in Conservation and Land Management through Swinburne University. "I arrived during the start of construction and have been a part of the grow in, plant procurement for the property and the maintenance, upkeep and development of the natural and landscaped environments. My role has been to engage and enhance the 'native' spirit of the existing landscape, while still enabling the continued development of the golf course and its infrastructure.

*A schematic of the Eastern Golf Club site showing the extensive network of waterbodies and wetland system which play a critical role in reducing run off and improving water quality*





"When I arrived, the site was effectively a blank canvas to work on, with little to no biodiversity. I saw it as a massive opportunity to make a difference. Over time we have reinstated local plant communities, developed and maintained wetland environments and riparian areas, as well as protected and rejuvenated existing environments and their associated flora and fauna.

"It has been wonderful to watch the ecosystems and the natural environment grow over the past five years and just what can be achieved with proactive environmental stewardship."

Adds Eastern Golf Club superintendent Jay Infanti: "Bivek has made an invaluable contribution to the success of our environmental initiatives and the recent recognitions have far exceeded what we were hoping for.

"The Eastern Golf Club is committed to enhancing and working with the natural environment rather than working against it. The club continues to try and take an 'environment first' approach to all its methods, with a positive outlook on environmental stewardship, community and environmental awareness and environmental best practices.

Our current results and future works quantify the club's commitment to the environment, land management and sustainability."

## SENSITIVE SITE

The Eastern Golf Club is a private golf course comprising 27 holes plus Shark Waters, a nine-hole par three course. In addition to the golf courses and impressive clubhouse, it boasts tennis courts, a gym, practice facilities and a golf academy. Other features include an on-site turf farm, water storage dams and an extensive stormwater treatment wetland system, a 120-acre private nature reserve with walking trails and an accommodation precinct (Yering Gorge Cottages).

Importantly, the Yarra River flows through the property on its western boundary, with the Christmas Hills and Great Dividing Range seen from certain vantage points around the course. The total site area measures an impressive 240 hectares of which 180ha is developed and 60ha remnant bushland, with a total irrigated area of about 54ha. Playing surfaces consist of T1 bentgrass (greens and collars), Grand Prix couchgrass (fairways, tees and roughs), while a pasture grass mix comprises the secondary rough areas.

The Eastern site has many natural environments, but one of the biggest, and where a lot of time and energy has been spent, is the Yarra River and its natural riparian areas. The Yarra flows through the property, with the club responsible for protecting and enhancing about 4.5 kilometres of river frontage.

The entire property is environmentally sensitive due not only to its proximity to the Yarra, but also indigenous flora and fauna (aquatic and terrestrial), neighbouring properties, Sugarloaf Reservoir and Winneke Pumping Station (1.5km downstream), not to mention the many vineyards, berry farms and other important horticultural entities that reside in the area.

The Yarra River riparian areas have a very diverse and sensitive ecosystem. There are living and senescent trees with hollows along the edge of the river which provide habitat for native birds and mammals, while shrubs provide nesting sites and materials for all animals. By increasing flora populations and removing noxious species in the riparian areas, the aim is to attract more native flora and fauna species by offering adequate environments for them to live in.

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*Eastern's wetland areas have created a haven for birdlife. Poles have been installed to provide a safe spot for roosting and sunning*



PHOTO: GARY LISBON/EASTERN GOLF CLUB

Native fish and platypus live in the river along the 16th hole and Yering Gorge Cottages precinct. There are many half-submerged logs and snags in the river providing habitat for Macquarie perch, Murray cod, platypus (sighted) and other aquatic animals. There is also an abundance of mammals, reptiles and amphibians living in and around these riparian areas, all of which points to a healthy functioning ecosystem with minimal pollutants.

## POSITIVE RELATIONSHIPS

In 2018 the golf club was successful in obtaining advice and a grant through Melbourne Water's Stream Frontage Management Programme. This grant catered for eradication of woody weeds and future plantings along the club's riparian areas. With this grant and the environmental works already carried out, the club is hoping to gain further funding for follow up weed eradication, as well as more beneficial plantings and advice on wetland/river management.

The club has also forged a strong relationship with the Yarra Ranges Council's environment and sustainability department. Eastern was selected for the council's 'Ribbons of Green' (ROG) programme in 2018 through which the club received 2000 plants

for planting along the riparian areas. These consisted of all indigenous species which were in the appropriate ecological vegetation classes (EVCs). The club was again chosen to be part of the ROG programme in 2019 and hopes to again in 2020.

A big issue planting near waterways is the pollution of plastic planting bags. Eastern was one of the first properties in the ROG programme to trial new biodegradable planter bags made from corn starch. Designed to break down if they make it into the river, the new bags have so far proved successful.

With these current and future works in the riparian areas, the club's objectives are;

- Minimising and eradicating noxious weeds by using approved chemicals and methods;
- Planting of appropriate indigenous species to help create animal habitats, a sustainable seed bank for future populations and aiding in bank stabilisation and minimisation of soil erosion;
- Monitoring river flows and harvesting water appropriately; and
- Utilising and acquiring professional advice, grants and assessments from Melbourne Water, local council and other environmental organisations.

"The Yarra River provides us with water, cultural heritage and beneficial natural environments which need to be enhanced and protected appropriately," says Inderjeeth. "Our 'environment first' approach, coupled with advice and grants from environmental organisations, is having a positive effect on the entire natural environment of our golf course. The Eastern Golf Club hopes this positive relationship and support continues for years to come as environmental stewardship is an ongoing responsibility, especially maintaining adequate care of the iconic Yarra River."

## WATER HARVESTING, STORAGE AND TREATMENT

In addition to the care and enhancement of the club's riparian areas, The Eastern Golf Club also boasts a complex waterway network which is comprised of eight major waterbodies and a linear wetland system (see site schematic on page 8). These provide;

- Water quality treatment for site run off;
- Visual amenity;
- Significant opportunities for flora and fauna establishment;
- Water storage; and
- Conveyance of flows from external catchments.



The club has a licence to harvest 152 megalitres a year from the Yarra River, with Melbourne Water regulating the club's harvesting quantities and setting environmental standards, policies and guidelines which the club adopts. These regulations help with the environmental balance of the river and all subsequent aquatic/terrestrial ecosystems within the course. Water harvesting capacity depends on river flow rates and height, with harvesting restrictions enforced when they drop.

Since the opening of the course, extensive drainage has been installed throughout the site to not only improve the performance of the playing surfaces but to also aid in capturing as much water from them and minimising runoff. All wetlands, with the exception of one (Pond M), drain towards the Yarra River which heightens the need for the treatment of site run off and minimising maintenance impacts on the environment. Many of the wetlands are in the flat area of the site which is also Yarra River flood plain storage.

There is approximately 1m of fall through the network of waterbodies (from Ponds G to A) which covers a flow path distance of 1500m. With the combination of having an inter-related network of wetlands and a flat site, isolating and draining a water body was always going to be difficult. Therefore, the course's drainage and reticulation system was designed with water level controls for each water body and a pipe network that drains to a sump downstream of Pond A. This sump pit houses a pump which captures and redirects outflows through a pressurised reticulation network to any of the ponds upstream of C1 (except M) or to an irrigation storage.

This flexibility in water movement is an important feature of the club's algal management plan. The capturing of flows through the sump means the maximum amount of water is retained on site. Capturing and recycling the outflows provides a flushing mechanism and mixing action/aeration to break up pond destratification which encourages algal growth.

The drainage and reticulation system also provides the facility to cycle pond water through densely vegetated linear wetlands (between ponds C1 and C4) for additional water quality treatment through reedbeds and beneficial plantings. Aquatic plants in the wetland system are flourishing and in return provide a diverse ecosystem with beneficial invertebrates, amphibians, reptiles, mammals and birds.

Terrestrial plants are also doing well and have established nicely. Water quality is good and the beneficial plantings help filter the water as it moves through the wetland system. Weed control is ongoing and the club has received positive feedback with the work it has been undertaking from Melbourne Water. Each wetland has a buffer zone where only spot spraying of weeds can occur to help minimise the risk of spills or environmental damage.

## FLOURISHING FLORA AND FAUNA

The Eastern Golf Club's new home enjoys an abundance of new plantings and naturally occurring plant varieties. Revegetation is done annually in the cooler months, with predominately upper story tree specimens currently growing in certain areas to provide protection and a micro-climate for lower storey plants to flourish when planted. With the club being selected again for the ROG programme in 2019, a further 2000 lower storey plants are currently being planted in the biggest revegetation area between holes 9 and 18 (see photos page 12).

There are numerous habitat corridors and revegetation areas around the entire property, including sensitive areas such as the riparian zones along the Yarra and semi-dry creek

beds or billabong areas which the club wants to enhance and rejuvenate substantially. These areas were planted up with appropriate species according to the council's EVC list during construction.

Significant terrestrial plant species on site include;

- *Eucalyptus crenulata* (Buxton gum) – an endangered species. Currently there are over 100 growing plants on site;
  - *Eucalyptus yarraensis* (Yarra gum);
  - *Kunzea leptospermoides* (Yarra burgan);
  - *Bolboschoenus fluviatilis* (river club-sedge);
  - *Dianella sp aff longifolia* (benambra); and
  - *Gahnia radula* (thatch saw sedge).
- Important aquatic plants include;
- *Triglochin procera* (water ribbons);
  - *Baumea articulata* (jointed twig-rush);
  - *Bolboschoenus fluviatilis* (tall club sedge);
  - *Myriophyllum sp* (milfoil); and
  - *Eleocharis sphacelata* (tall spike-rush)

One of the club's real success stories has been with the endangered Buxton gum. The club acquired from Parks Victoria some seedlings that were grown from nearby Spadonis Reserve which were incorporated into the billabong, lowland and tubestock planting schedule. This was significant as there are only two other known strongholds

## A TIER ABOVE

**D**ue to the sensitive nature of The Eastern Golf Club site, in particular its proximity to the Yarra River, right from the start of the course's development significant work was undertaken to assess its likely impact on the environment

Extensive modelling was carried out to look at the characteristics of all the available chemicals that could be used on the golf course and their potential risk for entering the river.

Proposed chemicals for use on site had to go through what is called a 'Tier 2' assessment process, which tested them for potential impact on human drinking water, fish species, water invertebrates and other environmental effects. This was carried out by consulting scientists and originally a list of 56 chemicals were submitted of which 35 were approved for use on the site.

The work that was undertaken had to be peer reviewed by an overseas expert before being accepted by the regulatory authorities. Consequently, several pesticides were excluded or were permitted for limited use only.

The Tier 2 assessment provides the club with guides as to the use of certain chemicals on specific days that are appropriate in or near aquatic environments. By using approved chemicals, the club minimises any detrimental run offs into the storage ponds and the Yarra River during major weather events or irrigation.

These environmental best practice guidelines were put in place to prevent the contamination of the Yarra River. The Winneke Treatment plant (1.5 km downstream), part of Sugarloaf Reservoir, draws water out of the Yarra River, filters it and then uses it as potable water for the northern suburbs of Melbourne.

This highlighted the need for stringent environmental awareness, including the protection and development of all the site's existing natural environments, environmental stewardship and constantly developing the environment maintenance management plan in sensitive aquatic and non-aquatic sensitive areas, as well as precise documentation and record keeping of chemical applications.





Among the many reveg areas around Eastern, the one between holes 9 and 18 ranks as one of the biggest and most impressive. The photo left shows the area shortly after planting in 2015 and, right, the flourishing present-day landscape. More plantings have occurred this winter

of this species left – the Buxton Silver Gum Reserve (in Buxton, Victoria) and Spadonis Reserve (Yering). It is hoped that in time Eastern Golf Club will become a third stronghold for the species.

Thatch saw sedge is another success story. This species of grass/shrub was grown from tissue culture by Melbourne Water as there was no available seed. Again, the club was able to purchase some available stock and incorporate them into plantings in 2015.

Recently a Melbourne Water field officer returned to the club and was able to collect some seed from the established plants which will hopefully be viable and can be grown on. It is Inderjeeth's aim that the site becomes a source of seed and cuttings for local nurseries and government organisations in the future.

"With over 20,000 terrestrial tubestock planted over the last five years throughout our entire property, these plantings are now creating habitats, animal corridors and creating a seed bank for native vegetation to occur naturally in generations to come," says Inderjeeth. "Our job is to create and protect the biodiversity of these areas and the flora and fauna occupying these spaces.

"Over 900 mature trees have been planted around the golf course and surrounds, which has enabled us to enhance the landscape, create habitat and add diversity to areas which were once just pasture grazing lands. These mature trees were grown for us by a local eucalyptus grower using provenant tubestock, Buxton and Yarra gum included. The club also had tree reports prepared by ArborCo on over 60 significant trees around our entire site for a better understanding of our mature specimens and their requirements."

The improved flora has had a significant flow-on impact on fauna populations around the course. With the vast pasture grass areas and revegetation areas, there is now a thriving Eastern grey kangaroo population, resident wombats, echidnas and other small mammals and reptiles. Significant fauna includes:

- Brush-tailed phascogale (*Phascogale tapoatafa*) – a tree-dwelling marsupial;
- Powerful owl (*Ninox strenua*);
- Southern myotis (*Myotis macropus*) – bat;
- Numerous platypus sightings in the Yarra;
- Macquarie perch (state protected species) and other native fish;
- White-bellied sea eagle; and
- A pair of nesting wedge-tail eagles (largest bird of prey in Australia).

The diversity in birdlife is increasing around Eastern's wetland ponds and revegetation areas with nesting water fowls, spoonbills, pelicans and a diverse duck population. There are currently 81 birds on the club's bird list and it is hoped that number will surpass 100 in the near future. Poles are being installed in wetland ponds providing a safe spot for roosting and sunning and protection for birds from any ferrel predators.

The course's frog population has also increased in the last few years, providing food for birds, reptiles and other wildlife. This is due to the diverse habitats, water and food that is now available to all these living organisms. Birds of prey are also seen hovering over the grasslands and wetlands hunting for small amphibians, mammals and reptiles which again demonstrates the characteristics of a healthy ecosystem.

"Through all our operations, The Eastern Golf Club recognises the value in a sustainable approach to course maintenance management during these times of heightened environmental awareness," says Inderjeeth. "We strive to ensure that we maintain a high environmental standard in all aspects of course maintenance operations.

"The club's environmental business principle is to actively minimise and manage the environmental impact of its operations and offerings, while creating different natural environments and ecosystems. The club's environmental policy tries to integrate environmental management into the club's everyday operations and to improve overall environmental efficiency as a whole." 🌱

## ENGAGEMENT TO THE FORE

One of the successful aspects of the work achieved at The Eastern Golf Club is the level of engagement it has engendered within the local community and members.

In 2018, Inderjeeth started up a 'Community Friends Group' at Spadonis Reserve through the Yarra Ranges Council. Spadonis Reserve, situated upstream from the club, is significant as it was where original seedlings of the endangered Buxton gum were grown by Parks Victoria for the club to plant.

As a representative of the golf club, Inderjeeth can answer any environmental questions from the local community regarding the golf course and make them aware of the environmental works and results being achieved.

The group consists of about a dozen volunteers from around the local area who help council environmental officers with works such as planting, weeding, removing of bags and stakes, rubbish removal and mulching.

Eastern also has a very strong volunteer group. Monthly working bees are held where club members assist with tasks on the course and those involving land management and sustainability. Among those tasks include planting and bagging of plants, weeding, mulching, recycling of plastic planting bags and any other required tasks required on the golf course.

The club also ensures it utilises a network of local businesses where possible for all horticultural and land management supplies and services. Among those suppliers are Candlebark Community Plant Nursery, Bushland Flora Nursery, Established Tree Transplanters, Eucaflora Tree Nursery, Supersoil garden supplies (Lilydale), Reece (Lilydale) and Hoogies hardware and rural supplies (Yarra Glen).



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# Best from the **West**

*Long-serving Wanneroo Golf  
Club superintendent Jon Carter  
took home the AGCSA's longest-  
running award at the 2019 Brisbane  
conference.*





**W**estern Australian golf courses have a knack for punching well above their weight. From the much lauded layouts of Lake Karrinyup and Joondalup through to the more recent links offerings of The Cut and Kennedy Bay, the calibre of courses that reside in the West is simply impressive and were it not for the tyranny of distance would unquestionably receive far greater recognition than they presently receive.

The West is also home to a group of highly skilled course superintendents who, like their courses, also rank among the best, delivering exceptional playing surfaces despite some pretty challenging climatic conditions.

Take the AGCSA Excellence in Golf Course Management Award for instance. The national association's longest running award has recognised a who's who of the Australian superintendent profession in its 30-year history. While Victorian superintendents can boast the most recipients of the award with 11, it might surprise many to know that Western Australia comes in second.

At the National Turf Industry Awards Gala Dinner, held on the opening night of the recent 2019 Asia Pacific Conference in Brisbane, Wanneroo Golf Club's Jon Carter became the latest in that distinguished cohort, the seventh WA recipient of the award which was presented in partnership with AGCSA Silver Partner Bayer.

In collecting the award, Carter joined a prominent list of fellow WA winners that includes the likes of past superintendents Trevor Strachan (winner in 1993), Jeff Lane (1996) and Allan Devlin (2000), as well as present day practitioners Idris Evans (Western Australian GC, 2003), Darren Wilson (Wembley Golf Complex, 2007) and current GCSAWA president Simon Bourne (Cottesloe GC, 2015). You can also add Hartfield Golf Club superintendent Nick Kinley to the list of WA winners, having collected the AGCSA's other primary gong, the Claude Crockford Environmental Award, in 2015.

Indeed, as part of his acceptance speech in Brisbane, Carter gave special mention to the likes of Strachan, Lane and Evans not only for their ongoing support over many years but for the way they have championed and furthered the superintendent profession in the West.

"I have been coming to these conferences for many years and always found myself in awe of the superintendents who have been up on stage to collect such an award and hoped that one day I could be at the same



*AGCSA Excellence in Golf Course Management Award winner Jon Carter (second from left) with Bayer representatives (from left) Martin Ball, James Royal and Craig Burleigh*

level as them," Carter told more than 270 guests at the awards dinner. "It has taken me a long time to join them, but I have enjoyed every minute of it."

## FROM BUSH COURSE TO 'GEM OF THE NORTH'

The Excellence Award is just recognition for Carter who has devoted pretty much his entire working life to the club, which resides about 40 kilometres north of the Perth CBD. After serving his apprenticeship at both Wanneroo and Gosnells golf clubs, Carter was appointed Wanneroo superintendent back in 1991 and in 2018 notched up a total of 30 years' service with the club.

In recognition of being one of the state's longest-serving superintendents and for his outstanding contribution over an extended period, Wanneroo nominated him for the GCSAWA Superintendent of the Year. He went on to collect that at the WA Golf Industry Awards night held earlier this year, which put him in the running for the national award.

In the club's nomination, general manager Mick Smith was effusive in his praise of Carter and for the dedication and commitment he has shown the club over a long period and the continued level of improvements that have occurred to the course.

"During Jon's tenure, Wanneroo has been transformed from a bush course to a high-class metropolitan course," says Smith. "This was acknowledged when the club was crowned 2016 Metropolitan Golf Course of Year by the WA Golf Industry Council. In addition, the condition of the course was one of the main reasons that Wanneroo was selected to co-host the Australian Amateur Championship in 2018 and from that went on to host the WA Amateur Championships this March.

"Ultimately, the condition of the course is Jon's responsibility and his outstanding care and diligence in performing his role as superintendent is the reason Wanneroo has been able to present the course to a championship level. But this is not just a



*Since taking over as superintendent in 1991, Jon Carter has helped to transform Wanneroo Golf Club from a bush course to a high-class metropolitan facility*

*Wanneroo's parkland style course has constantly evolved over the years, with numerous greens and tee complexes reconstructed to improve playing conditions for members*



*Carter and his crew showcased their skills when Wanneroo co-hosted the 2018 Australian Amateur Championships with Lake Karrinyup*

one-off occurrence. It's the consistently high standard in which the course is presented on a week-to-week basis that is recognised and appreciated by both the management committee and members."

## BODY OF WORK

As Smith mentions, Wanneroo's parkland-style course has evolved significantly over Carter's tenure as superintendent. Carter and his close-knit team have undertaken a raft of course improvement works over the years, with the in-house design and construction of numerous putting surfaces and tee complexes. In addition to the comprehensive list outlined in the panel below, most recently Carter and his team have;

- Made changes to a number of bunkers to make them more suitable for entry and play in line with older members' needs;
- Redesigned and expanded the 12th green complex to add character and increase playability and pin options (completed on time and within budget); and
- Raised and extended the 8th tee to provide more teeing options and improve playability.

Carter has been able to maintain the course at its high standard with what is a 'modest' budget for a metropolitan course. This has required diligence on Carter's behalf to continually adapt his maintenance practices to ensure savings are achieved. An example of this has been the implementation of a low nitrogen fertility programme on the greens which has led to a reduction in fertiliser use of around 50 per cent.



During 2017, Carter was also presented with the additional challenge of needing to modify the practice putter and its irrigation infrastructure to accommodate an alfresco extension project. Carter was able to undertake these extra challenges while not compromising the ongoing high standard and maintenance required on the course. In more recent times, Carter has been a driving force in the design and installation elements of the club's pump station upgrade, which forms part of a wider course irrigation system upgrade proposed for the coming years.

While being able to witness the continual evolution of the course through such projects has been rewarding, one of the big highlights for Carter and his crew came when the club co-hosted the 2018 Australian Amateur Championships. Put to the test, Carter and the crew delivered a course befitting a national championship and feedback from

Golf Australia's tournament director on course conditioning was extremely positive. It was indicated that the club would be considered for future national events and, as if to back that up, subsequently hosted the 2019 WA State Amateur Championship.

"We have achieved a lot of goals during my time and it would not have been possible without the help of many people," says Carter. "My sincere thanks go to the members and management, my assistant Craig Nutchey and the many staff who have supported me over this time."

"We have a small but very dedicated crew here and the many results we have achieved would not be possible without their hard work. But the biggest supporter of all has been my wife Linda. She has put up with all the early morning starts and late finishes for a long time; this would simply not have been possible without her." 🙏

## WANNEROO'S ROAD TO EXCELLENCE

**1991:** Carter appointed Wanneroo course superintendent in February. Continued with phase two of a three-phase irrigation upgrade. Supervised the construction of a new below-ground pump station, power upgrade and irrigation lake extension.

**1992:** Completed phase three of irrigation upgrade with installation of new fairway station valves, pipework and sprinklers.

**2000:** Supervised the construction of a pond and stream network attached to main irrigation dam for both aesthetic and water aeration/circulation purposes.

**2002:** Involved with the replacement and construction of the golf course maintenance facility.

**2003:** Implemented first works on new golf course reconstruction masterplan. Reconstructed 2nd green, 3rd green and partial 3rd fairway and associated bunkering. Also constructed new fairway bunkers on the 5th, 10th and 13th holes. Club hosted the Western Australian PGA Championship.

**2008/09:** Reconstructed the 10th and 17th greens and some fairway bunkering on these holes.

**2011:** Introduced Tranche 1 of course equipment operating lease.

**2011:** Awarded Greenline GCSAWA Superintendent of the Year.

**2012:** Reconstructed 8th green complex.

**2014:** Reconstructed 9th green complex.

**2015:** Reconstructed 4th green complex.

**2016:** Resurfaced the 12th green. Wanneroo awarded Metropolitan Golf Course of the Year at WA Golf Industry Awards.

**2017:** Club constructed a new alfresco area, requiring modifications to the practice green and irrigation.

**2018:** Club co-hosted the Australian Amateur Championships with Lake Karrinyup. Resurfaced the 14th green. Carter awarded the 2018 GCSAWA Superintendent of the Year Award. Reconstructed 9th tee complex.

**2019:** Golf course hosted the WA State Amateur Championships.

**Other works:** Reconstructed all tees during this period.

**Current/upcoming projects:** Currently reconstructing irrigation pump station. Proposed upgrade of course irrigation including mainlines, sprinklers and communication cables over next couple of years. Continuation of greens reconstruction and/or resurfacing programme.





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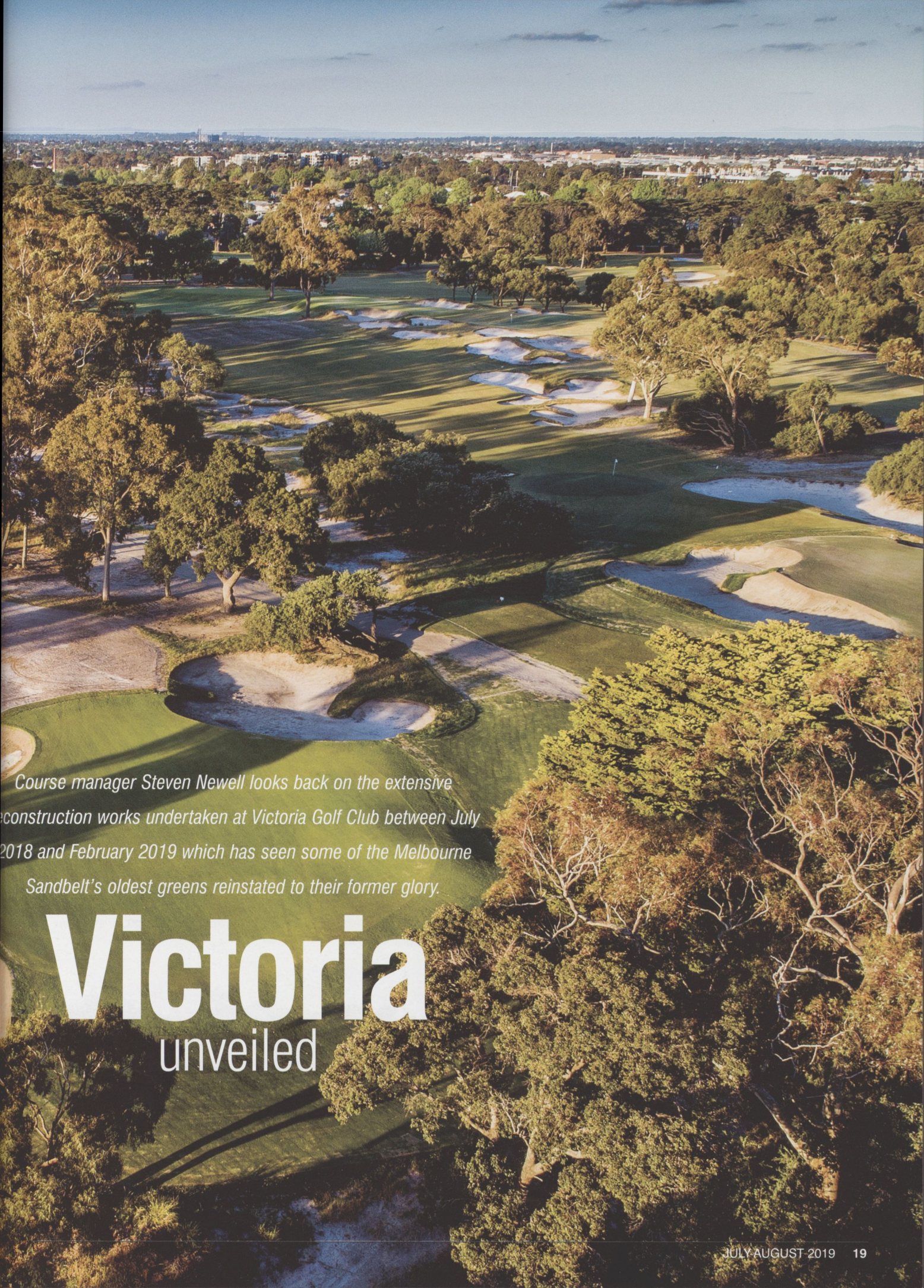




PHOTO: NICK WALL - AIRSWING MEDIA

Over a six month period all greens at Victoria Golf Club were converted from predominantly *Poa annua* to *Pure Distinction* creeping bentgrass. Pictured is the 7th green in November 2018



An aerial photograph of the Victoria Golf Club course. The image shows a lush green landscape with several sand traps and water hazards. Large, mature trees are scattered throughout the course, casting long shadows. In the background, a city skyline is visible under a clear blue sky.

*Course manager Steven Newell looks back on the extensive construction works undertaken at Victoria Golf Club between July 2018 and February 2019 which has seen some of the Melbourne Sandbelt's oldest greens reinstated to their former glory.*

# Victoria

unveiled



**T**he Victoria Golf Club (VGC) was first established in 1903 at Fisherman's Bend in Port Melbourne before relocating in 1926 to its present 128-acre site in the Melbourne bayside suburb of Cheltenham. It is a club steeped in history, designed by two members with the assistance of the great Alister MacKenzie and the home club of arguably Australia's greatest ever golfer Peter Thomson. Over the years it has hosted many national and international tournaments, including six Australian Opens and two Australian Masters.

I was appointed VGC course manager in July 2016 following 19 years at Kooyonga Golf Club in Adelaide. It was a homecoming of sorts as prior to my time at Kooyonga I had spent eight years at Metropolitan Golf Club, including the last four as assistant.

At the time of my appointment, VGC had three major projects under consideration;

- Converting the greens to a bentgrass variety that would help produce more consistently firm and fast putting surfaces, synonymous to 'sandbelt golf';
- An irrigation system upgrade; and
- Construction of a new course maintenance facility.

Victoria's existing native sand greens were constructed back in 1927, with only five being reconstructed in the 90 years since. The greens were predominantly *Poa annua*, with couchgrass infestation a serious problem in summer. They were difficult to manage through the warmer months and were prone to disease. Coupled with that, some of the contours on the greens built back in the day were quite severe. This created a number of issues in terms of pin placements and playability, especially when windy.

## SCOPING WORKS

Before any decisions were made on construction methods or contour changes, consultants were brought in to carry out several tests. Leading agronomist John Neylan was engaged to test the profile of each green to determine the depth of thatch

to be removed and whether the existing soil types were suitable for reuse.

The results from the profile testing were very interesting. It was discovered that the native sands actually exhibited very low infiltration rates. Over 90-plus years, the greens had also built up to a point where coring and topdressing holes were visible at the bottom of the hole when changing holes!

From these tests it was determined that the accumulated organic build up was suitable for reuse and that no more than 75mm of thatch would be required to be removed, although deeper excavation would be required where couchgrass was present.

At this point we had a clear idea of what needed to be done and how we were going to do it. It was then up to the club to figure out whether to carry out the works in stages and if so how many. After much deliberation it was decided to resurface all the greens, install a new irrigation system and carry out all architectural changes within a six month period.

The course was closed for nine weeks starting 31 July 2018 to complete major earthworks before golfers came back to play a temporary course until the planned opening on 16 February 2019. A temporary course was created using temporary tees and greens cut in to the existing Santa Ana fairways.

Following extensive surveying and modelling by course architects Ogilvy Clayton Cocking Mead (OCCM) and Yellowbox Computing Services, it was decided to complete six greens at a time. The first six greens required little architectural modification, the second six required minor architectural modification and the final six consisted of three rebuilds and three significant adjustments (see page 22 for more on the design changes). The putting, chipping and 19th greens were also completed along the way, so needless to say the amount of work going on was substantial.

## PURE SURFACES

One of the key decisions made early on in the process was the new bentgrass variety

to be used on the reconstructed greens. Several varieties were considered, along with the use of fine fescue surrounds which was discounted early in the process.

Attributes we were looking for in a creeping bentgrass included excellent density with a fine leaf texture, low nutritional requirements, disease resistance and herbicide tolerance and the ability to grow all year round in Melbourne. An ongoing supply of seed was also important.

Two varieties, Mackenzie and a mix of A1/A4, were already present on the practice greens. As part of the selection process we visited a number of local clubs and spoke to their superintendents, while John Neylan researched overseas trends. We eventually determined that Mackenzie wasn't suitable based on its performance on the chipping green and also that the A1/A4 mix had a tendency to go dormant in winter, increasing green speeds to undesirable levels.

Weighing up all the factors, we ended up deciding on Pure Distinction based on our research, both locally and internationally, and a site visit to Peninsula Kingswood Country Golf Club where it had been growing successfully for three years. A 3m Pure Distinction collar would also be incorporated around each green.

## IRRIGATION UPGRADE

With the scale of alterations taking place, a key component before works began was to overhaul VGC's ageing irrigation system. By way of background, VGC relies on groundwater with 11 bores on site which produce 8L/s. Water is stored in a 42ML plastic-lined dam adjacent to the 17th fairway.

The old irrigation system was installed in the 1970s with ad hoc modifications carried out in the years since. The design was very basic with centerline fairway sprinklers and full circles around the greens. There was no handheld radio or phone control and operation in the field was limited to six sprinklers operating at a time per satellite. We were also limited to just 750KL of irrigation per night.



To ensure the best chance of keeping *Poa annua* out of the new Pure Distinction bentgrass greens, six hectares of cool-season turf surrounding the greens and tees were sod cut out and replaced with Santa Ana couchgrass. Impressively, a total of 7.5ha of turf (greens included) was sod cut out in just four days



After a lot of inspecting and assessing other local golf course irrigation systems, we decided to select a Toro two-wire smart hub decoder system. Irrigation installation started in May 2018 with all new irrigation mains in the ground prior to the course closing to ensure water was available to establish the new greens ASAP.

We installed separate pipe networks to the bentgrass and couchgrass areas to allow for individual treatments to each turf type through dedicated injection pumps. All sprinklers were placed to provide hard edge irrigation with selected areas of rough, bunkers and native sandy areas able to be irrigated if necessary. Infinity Series sprinklers were installed and PVC pipe was used for all mainlines and laterals. Town water was installed to each green as a back-up supply via a QCV.

## GREEN LIGHT

On 31 July 2018 the course was closed and the redevelopment truly swung into gear. To ensure we had the best chance of keeping *Poa annua* out of the new Pure Distinction greens, it was important that we removed all the cool-season turf surrounding the greens and tees and replaced it with Santa Ana matching our fairways. The amount of cool-season turf surrounding the greens and tees totalled six hectares. This also provided an opportunity to enlarge and level all the tees.

Seven sod cutters were hired, complimenting the two we owned, and we allocated two weeks to complete the sod cutting of all tees, surrounds and greens – a total of 7.5ha. Sixty millimetres of thatch was removed from the greens and 30mm from the tees and surrounds. Deeper excavation was carried out by hand and machine where couch was evident in the greens.

After a few teething problems and a lot of hard work, we completed the sod cutting in four days which put us ahead of schedule.



*No more 75mm of thatch was removed from the greens, although deeper excavation was required where couchgrass was present. Bunker edges were rebuilt to eliminate couch encroachment*

Contractors began pushing up the thatch which was then loaded into six dump trucks and stockpiled in our dumpsite.

To eliminate couch encroachment, greenside bunker edges were rebuilt using an imported clay loam to aid stability and water holding capacity and to allow greens to be mown to the bunker edges. Where deeper excavation was required to remove couch (up to 250mm in parts), a compatible sand was imported to restore desirable levels.

Gypsum (15kg/100m<sup>2</sup>), Dolomite (15kg/100m<sup>2</sup>) and Calrite (7kg/100m<sup>2</sup>) were added to improve soil structure and to combat poor quality irrigation water. Amendments were rotary hoed in to a depth of 300mm in two directions then wheel-rolled to recompact the profile.

OCCM director Mike Cocking was responsible for reinstating the surface contours on the greens utilising a GPS-guided laser level. The information gathered from the original surveys and any modifications made were entered into the machine which

reinstated the contours to a tolerance of 90 per cent. Irrigation was installed to the greens at this stage prior to fumigation.

R&R Fumigation were engaged to fumigate the greens with Basamid (65g/100m<sup>2</sup>) which was left on the surface and watered in and kept moist for 10 days before a further 10 days of airing. After that time germination tests were conducted and the architects reinstated the final contours to a tolerance of +/-2mm.

Michael Riordan from Australian Seed and Turf was contracted to carry out the hydroseeding of the greens. The greens were seeded at 1kg/100m<sup>2</sup> (coated seed) along with a turf starter fertiliser at 3kg/100m<sup>2</sup>. During the fumigation and seed development stage, the greens were irrigated on an as needed basis up to 10 times per day. The irrigation system was never operated without supervision and never at night so as to avoid sprinklers sticking on and causing major setbacks.

Depending on soil temperatures, germination of the Pure Distinction seed ranged from 12 days in September to five days in November. A fungicide was applied two weeks after germination to guard against pythium, while additional granular fertiliser (7-9-4) was applied to encourage growth.

*For the most part, greens were reinstated with their original contours following extensive surveying and 3D modelling prior to resurfacing*



*Three greens – 5, 12 and 17 (pictured) – were complete rebuilds. The 17th has been shifted forward and to the left and matches the strategy of the new fairway bunkers on the right by the dam*







The first six greens were sown in September and mown initially at 6mm after four weeks. The last six greens were sown in November and received their first mow at 3mm after three weeks, allowing 14 weeks to establish before the February 2019 opening. The greens received their first dusting five weeks after seeding and an aggressive dusting programme has continued matching the growth rate of the turf ever since.

During the early development of the greens, nutritional inputs were higher than expected and preventative fungicides were applied to ensure no setbacks were

encountered. As the greens have matured less fertiliser and fungicides have been required to maintain healthy turf.

### FROM COOL TO WARM

In conjunction with the greens works, the resurfacing of the cool-season turf areas also took place. Native sand was mined on site to use on areas that required levelling and sodding. The architects were responsible for enlarging and levelling the tees, with course staff responsible for ensuring all other contours blended into the existing surfaces seamlessly prior to any sod being laid.

*The first six greens were sown in September and mown initially at 6mm after four weeks. The last six greens were sown in November and received their first mow at 3mm after three weeks*

In total there was 7ha of Santa Ana to be laid – 3ha harvested from our existing fairways and 4ha purchased from the old Kingswood Golf Club site that had closed. Harvesting sod from our fairways saved many thousands of dollars but was a major concern for the members who doubted it would recover in time for opening.

During the grow-in of the greens and the 7ha of new sod, we were limited to 250,000 litres of water per day. Due to the irrigation installation being prioritised to the greens, tees and surrounds, as well as a delay in the electrical connection to the new pump shed, the fairways did not receive any water all summer.

As a result, the fairways were extremely dry and some turf quality was compromised, however, they recovered extremely well following inputs of water, wetting agents, fertilisers, miticides and insecticides. Another month of warm weather is required to achieve full turf coverage of irrigation trench lines and other scarring.

### OPEN FOCUS

After a mammoth six month stretch, the new greens reopened on time in February and to date they have been very well received by the

## RESTORATION OF A MELBOURNE SANDBELT ICON

**P**rior to their reconstruction, Victoria Golf Club boasted some of the oldest original greens on the Melbourne Sandbelt, the significance of which wasn't lost on course architect Mike Cocking from OCCM who was charged with overseeing the resurfacing and design changes.

While it was acknowledged that some of the existing contours were too severe, the club was steadfast in its desire to retain as much of the original features of the greens. To that end, Yellowbox Computing Services were engaged to survey all greens and created detailed 3D models to allow modifications to be made where necessary.

From the surveys it was determined that 12 greens would be reinstated to their original contours, while three greens – 6, 11 and 13 – would maintain their contours but have the severity of their slope adjusted from 5 per cent to 2.5 per cent to allow for more pin placements.

The biggest changes would come to greens 5, 12 and 17. These three greens weren't original and OCCM felt significant improvements could be made to recapture their former glory. The following design changes were made;



*Victoria's 5th green has been shifted slightly left and is wider at the back and narrower at the front*

- **5th (par 4):** The green has shifted slightly left and combined with some adjustments to the fairway bunkers offers a more interesting hole and helps differentiate it from the 2nd and 3rd which all featured similar tee shots. The new green is bunkered left and right and is wide at the back and narrower at the front. Back left pins reward play down the right near the original fairway bunker, while pins in the right half favour tee shots over the new short left fairway bunker and near the indigenous area up the left. A larger high tee behind the 4th green offers the alternative to play the 5th as a short par four.

- **12th (par 4):** The new 12th green better matches the strategy set up on the tee, with hazards front left and back left rewarding play from the inside corner of the dogleg and near the hazard. What was previously a fairway bunker here has been converted into a shallower indigenous area which offers a better chance of recovery.
- **17th (par 5):** At the 17th, fairway bunkers now feature down the right of the hole which help soften the bank of the dam but also guard the inside corner of the dogleg. The new green has been shifted a little forward and left, out from behind the trees, and matches with the strategy of bunkers down the right. The new green has hazards guarding the left and back of the green while a deep hollow sits front right, similar to the fabulous hollow on the 4th hole.

Another aspect of the changes has seen the putting surfaces extended all the way to the edge of the bunkers. This small change not only has an aesthetic difference, but also helps maximise pin positions and emphasise the strategy by allowing pins to be tucked closer to the surrounding hazards.



membership. Looking back, this project was very labour intensive, with staff required to work 10-hour days five days per week as well as a weekend roster.

A large turnover of staff occurred and at times we were six permanent staff down from our usual complement of 18. We recruited from the local high school, employed from a recruitment company and utilised staff from other departments, including clubhouse and pro shop, to get the job done.

From day one the Pure Distinction greens have continued to mature and improve and have stood up to the elements and golf traffic as well as could be expected. We are currently cutting the greens at 2.5mm and dusting as often as we can to dilute thatch as it develops. No long-term renovation strategies have been determined as yet. Apart from some rhizoctonia, there has been no significant disease pressure and they are remaining weed free at this point, but couch encroachment and *Poa annua* invasion will be issues to closely manage going forward.

The success of this project can be attributed to a strong Board and general manager who had the fortitude to make the initial decision and then allow the relevant experts to get the job done. Using experienced and reputable contractors and suppliers who all worked well together was



*The greens received their first dusting five weeks after seeding and an aggressive dusting programme has continued since, matching the growth rate of the Pure Distinction turf*

critical, as was having strong commitment from key staff. Due to all the above, including the support of members, the project was delivered on time and within budget.

Just weeks into the greens reconstruction starting, Golf Australia announced that Victoria would play host to the 2022 Men's Australian Open. It will be just the fourth occasion the club has hosted the tournament and comes two decades after its last visit. We

are very much looking forward to fine-tuning the playing surfaces over the next three years and getting the opportunity to showcase the changes that have been made to the course.

## ACKNOWLEDGEMENTS

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# The rise of high safety screens

The dilemmas facing golf course architects and golf clubs alike, with safety issues around errant golf balls in an increasingly litigious market, are in many cases now pitting golf course design against the sometimes more stark but certain containment option of high safety netting...

**C**ountry Club International (CCI) has been at the forefront of the design and construction of most of Australia's high safety golf nets for the past 25 years. CCI founder and Managing Director Mike Baker says golf industry clients now need to balance their aesthetic expectations with a responsibility to safety.

"I believe both course design and screen options have their place," said Mike. "As a golfer myself I prefer the re-design option first but if that compromises the integrity of the golf course then the fall-back position of safety screens can be for the best."

"I think we all prefer the outlook of trees and green grass but the combination of many golf courses making bad decisions in the past by selling off land, the re-development of previously rural land into housing estates, construction of new roads and freeways, and the golf equipment evolution is forcing Clubs and course architects into some hard, pragmatic and often costly options."

Safety and potential litigation are bringing these decisions forward. Where once the odd golf ball into adjacent houses was accepted as a necessary inconvenience of living



there, many residents are now demanding total protection – and if Clubs don't act, both they and their management can potentially be found culpable should any injury to property or person occur.

Mike explained that 'effective containment' was often seen as the reasonable determinant of action on golf courses; whereas 'total containment' was sometimes demanded when an incident occurred, or a new development emerged. Some of the tallest and longest high safety screens were naturally now separating golf courses from new freeways or busy highways for that reason, he said.

"Sometimes the decision is easy," Mike continued. "Golf driving and practice ranges are dealing with players who are testing their ability (or lack of) and sometimes combine that with their behavioural issues of wanting to test the limits. If there are dangers beyond those boundaries then no amount of re-design will help greatly, so safety screening is a must."

Golf layouts differ from course to course. Players are generally

endeavouring to keep their balls in play, so good research can more properly predict quantifiable results and therefore determine the value of design revisions and/or screening.

Mike said the study with the largest sample base to date was overseen by Dr Mark Brodie, Professor of Business at Columbia University in the USA. The study was called "Assessing golfer performance using Golfmetrics" and it analysed 40,000 shots representing about 500 rounds of golf from over 130 golfers on six courses in tournament and casual play. It divided the golfers into four groups – from professional to three amateur levels.

(Interestingly, Dr Broadie's 'day job' involves research focussing on problems in the pricing of derivative securities, risk management and portfolio optimisation; but he is also the author of *'Every Shot Counts'* – a book which outlines his invention of the 'Strokes Gained Method' of measuring golf performance – something that's now used by the PGA Tour.)

CCI commission Probable Golf USA to provide trajectory



## WORLD LEADERS IN HIGH SAFETY SCREEN DESIGN & INSTALLATION





studies using the Broadie data overlay to determine or confirm the danger areas and help assess any alternative solutions.

Mike says high safety screens have developed and improved significantly over the past 30 years. Recalling the early days, he said: "I built my own golf range in Melbourne back in 1987. To protect public in the park on one side and housing on the other, I built then massive 12m high screens. They stopped a lot of balls – not all by any means, but at least I was seen to be doing something. The pole and backbrace structure derived from chain mesh fencing, polyethylene netting from fish net suppliers and wire rope rigging all inevitably failed."

After visiting and researching high safety screens in the USA, CCI brought a lot of the technology and materials back to Australia.

"They were far more developed on these screens over there," said Mike. "They had greater access to much better netting and their engineered poles with high-tensile rigging was designed to withstand semi-cyclonic winds, snow storms and more. Some were being built 100' tall!"

Back in the mid-1990s, Commonwealth Golf Club was facing the potential closure of its practice range. A fully engineered CCI solution using the latest Redden #930 polyester netting from the USA saw the construction of a new 90m-long by 18m-high screen which survives to this day – setting the benchmark then as the highest engineered safety screen in Australia.

Since then CCI have worked with Opus Engineering in Australia and Valmont Engineering in

Canada to design and construct some of the best and highest safety screens in the world, including some notable ones such as on Eastlink and Peninsula Link in Melbourne, Wembley Golf Course in Perth, Ryde Paramatta and Thornleigh in Sydney, Darwin GC in NT and the list goes on.

Many of these are 30 metres and higher, although they almost pale in comparison to the new Top Golf facility on the Gold Coast, with 53m-high screens using Redden #930 polyester netting.

More recently, CCI have introduced the new tapered pole design from Valmont, using the exotic Dyneema netting – a world first. These have been installed at Royal Melbourne GC, Metropolitan GC and the new Curlewis golf range.

Modern high safety screens are getting taller but also stronger and

lighter, with the use of high-quality polyester, Spectra and Dyneema netting yarns that reduce the wind loads; and provide almost total transparency and exceptional longevity.

No longer the visual blight they once were, safety screens today can in fact help modern course design by letting architects retain key features of individual holes – without the need to compromise.

Mike says that in hindsight, holes such as Metropolitan's signature 13<sup>th</sup> – which was demolished over safety issues that could have been easily rectified with a concealed screen – may well have been retained.

"High safety screens can provide a total containment in part. They should be used by golf course architects to simply block out the negative, so hole design and playability can be enhanced."









# Sand, sand and more sand...

*In the last edition, ATM looked at some of the latest research and thinking around topdressing and dusting. In this follow-up piece, ATM canvasses Australian superintendents to get a snapshot of their current practices and the important role it plays in the management of their greens.*

**T**opdressing and dusting is without doubt one of the most critical cultural practices in helping to deliver quality putting surfaces. As was highlighted in the last edition of ATM (**'Little and often' – p34-40, Volume 21.3**), a regimented sand topdressing programme that considers the sand type, application rate and frequency is essential to achieve optimal greens.

In the absence of such a programme, putting greens accumulate excess thatch and organic matter which results in soft, spongy surfaces that retain elevated levels of soil moisture. Putting surfaces of this nature are also susceptible to mower scalping and disease problems. Footprints, tyre tracks from maintenance equipment and deep ball marks are also problematic on soft greens.

To complement the information presented by USGA agronomists in the last edition, ATM wanted to get an indication from Australian superintendents how they managed their topdressing and dusting programmes. An email was sent out to AGCSA superintendent members in mid-July asking them to provide a brief overview of their topdressing/dusting regimes, whether their practices had changed over time and if they were encountering any challenges. ATM thanks the many superintendents who responded and what follows is a snapshot of their feedback.

## **LYNWOOD CC, NSW**

### **Superintendent: Matt Bailey**

Since implementing our dusting programme we have seen a huge improvement in overall turf health and quality of putting surfaces. Our dusting programme, in conjunction with more regular aeration and more frequent penetrant applications, has seen great results to root mass and health.

Dusting has become a pivotal part of our course maintenance programme, with the main components being;

- Putting surfaces are dusted weekly from September to May using a Tycrop tow-behind spreader. The most common rate for dusting is 6T/ha with WM Dusting Sand from Vermont Sands.
- Ninja-tine monthly September to May. After aeration we apply a Vermont Sands construction sand which was used in the original greens construction. It is a coarser sand which aids in water percolation rates.
- After dusting is applied, the greens are treated with a penetrant and/or a wetting agent with a wash-in cycle following application.
- Once putting surfaces are dry, an astroturf mat is used to rub in.

Since we began our programme of frequent aeration and dusting I've found major spring and autumn renovations are no longer



## BYRON BAY GC, NSW – SHAUN CROSS

**T**he key to true warm season surfaces... sand and more sand! We apply 2-3m<sup>3</sup> of washed river sand (USGA spec)/ha every 7-10 days from September to approx. May, depending on growth patterns. In winter this is backed off to monthly applications, however, this year with unusual warm temperatures through June we were still dusting every two weeks. In my opinion this is the key to maintaining warm-season putting surfaces, with minimal grain and minimal thatch, while also producing a firm, true surface.

We apply generally after the morning mow which incorporates nylon rotational brushes rotating in front of the cutting unit. Sand is applied with a traditional belt/brush style topdresser (Toro 1600) and rubbed in with a synthetic grass mat once the sand is dry. A light overnight irrigation cycle is applied to incorporate the sand into the canopy and the following morning a syringe cycle is run prior to mowing (brushes are now turned off and raised) and then an application of a wetting agent is applied, with another light syringe.

I now find that we are applying less sand a lot more frequent which allows us to keep the mowers on the greens. As a result we have reduced verticutting/grooming to every second dust application over summer and spring. We have found the more regular dusting interval was keeping thatch levels at an acceptable level in conjunction with our

one major renovation and a second aeration renovation incorporating varied depths of solid and hollow tines.

As with any cultural practice, you are always looking to tweak it and find a better method to achieve an even better result. Hopefully in the near future we will be dusting with a spinner topdresser to reduce labour inputs. Trying to fit in this regular cultural practice around golf is challenging at certain times of the year, but have found that once the programme was in place and we made the commitment to implement it, our greens perform consistently year round and the members can see the benefits – a little bit of pain for a lot of gain!

It is a catch-22 though. Warm-season greens in my opinion that are managed intensively probably do not cater for all golfing abilities as they definitely firm up and do not receive the ball as well, particularly if it is not hit that well. But with this style of programme, I think we can get the ball to roll nearly as good as any other putting surface species.



required. Light, frequent aeration and dusting removes a higher amount of thatch and provides a higher amount of sand to putting surfaces without causing major disturbances to golf.

Reduction in maintenance budgets is the main reason for changing our practices to the current programme. By removing the major renovations we have opened up an additional six weeks of quality surfaces. This means six weeks additional revenue, whether that's social golf, member competitions or lucrative corporate events.

One additional corporate event during the time our putting surfaces would usually be recovering from renovations pays for our yearly aeration budget. Two corporate events pays for the additional wages and sand needed to carry out our programme. The numbers are pretty compelling.

To allow dusting and aeration practices to be carried out, tee times on the first Monday of each month have been pushed back to 8am. This did cause some angst at first, but after some education the members have adapted.

## TOWNSVILLE GC, QLD

**Jason Foster**

Being in North Queensland our growing window never closes so dusting is a critical part of our greens management. We go out monthly with an application rate of about 0.25T/100m<sup>2</sup>. We use a Toro ProPass, rub in with a drag mat covered with carpet or a brush, followed by a water in that night. Being where we are, we are limited with our sand selection, but we use double washed and sieved >3mm sand that is tested and is as close to USGA spec as possible.

I definitely dust lighter and more often than in the past. I would like to change to every two weeks but budget, staff and wear on the mowers play a big part in my decision making. By dusting monthly our major renovations have less impact on golf as we don't have to be as aggressive. When I first started greenkeeping, it was commonplace to topdress heavily at renovation time and sometimes it took over two weeks before a mower went back on the greens! The old rule of 'little and often' fits perfectly with sand applications to greens.

## MEDWAY GC, VIC

**Col Winterton**

At Medway we average eight dustings per year using 2.5m<sup>3</sup>. We use a Tycrop and brush in and usually undertake it in the afternoon prior to golf committee meetings so the directors can see the process and explain to membership if needed. Thatch dilution, surface firmness and trueness are the principal aims. Our sand supply is currently okay, but it is important to monitor specs as sources change.

We currently undertake two aggressive renovations per year to address issues identified in our AGCSATech greens audit. The autumn renovation is the one that is hard to sell, as the greens are in good nick and golfer numbers high. Once reno'd the golfers stop, along with cash flow. As a result I am looking at an alternative reno for autumn, but not under pressure to eliminate. At the end of the day greens are our performance barometers and it is important that we as superintendents defend best practices.

## NEANGER PARK GC, VIC

**Brendan Brown**

We don't really have a dusting programme as such at Neanger Park due to a number of reasons. First, the budget doesn't allow for enough sand to apply monthly and we have an old belt-style topdresser which makes application difficult. I find that I can't get the sand to come out thin or even enough to do a good job. That becomes a problem in the hotter months because if you can't get the sand thin enough that can lead to burn and sets the greens backwards.

My programme on the greens does, however, involve topdressing to help keep the surfaces smooth. We groom the greens about 4-5 times per year to a depth of about 2-3 mm and then lightly topdress (0.5m per green, 10m for 18 greens) and rub in with a drag mat. We then lightly water to settle the sand into the canopy. We perform one annual renovation per year and put out about 30m of sand and usually follow up about two weeks later with a light dust of about 10m.

In the future I am looking to purchase a better topdresser/duster that can put the sand out thinner and quicker so that we only have to wash the sand into the profile. This will remove the need to rub the sand in which I believe is damaging the grass, especially when it's hot. The main thing that I want to be able to do is get the sand out quick, thin and at an even consistency.

## ROYAL CANBERRA GC, ACT

**Ben Grylewicz**

Dusting is performed fortnightly from the end of September through to end of April. We use





PHOTO: MATT BAILEY

a kiln-dried sand (Vermont Sands) paying \$150 per tonne which makes it expensive. We store 30 tonnes at a time in a shipping container to keep it dry. We apply using Lesco and Andersons fertiliser spreaders with an application rate of 6-8T/ha. Spreaders are wide open with a wheel to wheel application in two directions and takes about five hours to complete the greens. We usually water in.

At renovation time we use a regular sand from Eulonga quarries in Gundagai, the same as what the greens were built from. Application rate depends on the type of renovation but about 40 tonnes is applied. This season we are looking at using a mechanical topdresser (Turfco) that drives across the green to save on labour and speed up the process.

## ELANORA GC, NSW

**Dan Cook**

Elanora's dusting programme is in conjunction with its coring or total renovation programme. Our ideal goal would be to apply 10-12L of sand per square metre per year in the dusting programme alone. Our application process is through rotary spreaders using dry sand on a weekly basis. The application in summer is a 100 per cent overlap (wheel to wheel) with the application in winter being no overlap (throw to throw).

In order to get to 12L/m<sup>2</sup>/yr this would be 50 applications of the 100 per cent overlap rate. As this is not possible due to golf events, rain and human resources, we usually end up making 25 applications resulting in 5-6L/m<sup>2</sup>/yr through dusting. The coring programme results in 21 per cent IA and sand is also left on the surface which cannot be calculated.

The overall renovation programme is dusting weekly (where possible) and three coring renovations. Dusting is getting more difficult as golf numbers grow and encroach into previously used maintenance times. For me, light and infrequent dusting is my philosophy and it also keeps my mechanic happy.

## LONG REEF GOLF CLUB, NSW – PETER DONKERS

**T**he greens at Long Reef Golf Club are old *Poa/bent* push-ups without drainage and most are probably 60-70 years old. The greens are spiked once a month throughout the year using 6mm solid tines at 110mm deep and we renovate greens twice a year using larger tines.

During our spring renovations in the past three years we have changed from using 16mm hollow tines (120mm depth) to now using 16mm solid tines to a depth of 160mm. For our autumn renovation we changed from 10mm hollow tines (75mm deep) to 12mm solid tines at 110mm deep. At renovation time we now topdress the greens heavily before spiking using very fine WM sand from Newcastle.

The pointed tips of the tines are ground off flat so they punch a clean hole into the green and we then broom the sand directly into the holes which fill to the surface. The next day the greens are rolled and if required any holes are filled with sand or excess sand is removed.

We try to dust at least monthly using a Dakota 410 towed behind a Kubota utility vehicle. In total we put out around three tonnes of fine sand on 18 playing greens,

## TWIN CREEKS G&CC, NSW

**Justin Doyle**

The topdressing/dusting practices at Twin Creeks are an integral part of our greens maintenance programme. The past summer we were able to dust greens on a regular basis and there was a noticeable difference in

the practice green and putting green (total area around 9000m<sup>2</sup>). The sand is broomed in using a tow behind broom set up on a greens mower and the whole process is done within three hours.

On average we would put out about 4-5T of sand per green per year. Looking at the soil profile and the veins of sand which are very obvious when changing the holes (see photo below), I think the practices are working well. Recovery after renovations is usually very quick and we are back to normal cutting heights within 2-3 weeks. Using the big tines we are able to get plenty of sand deep into the greens which I feel really helps the old push-up greens to drain and allows better pore spacing for the health of the soil.







PHOTO: IDRIS EVANS

plant health observed. On average we apply 2.5 tonnes/ha of sand for a moderate dusting. The rate and frequency is adjusted according to plant health, weather conditions and golf fixtures. The idea is to keep as much sand in the canopy as possible, without being too disruptive or visible to members.

When possible, we have been mixing a greens grade granular gypsum with the sand to amend and dust at the same time. This process essentially frees up two staff members and eliminates the need to apply the gypsum through a push spreader. Timing the application with irrigation or rain events

has worked well. I found that reduces the amount of sand the greens mowers will pick up the following day as the sand is washed into the canopy. The sand we use is of a coarse nature and in the future I would like to use a finer sand to assist with incorporation into the canopy.

We usually do two major greens renovations annually. Being able to do one major renovation in spring is certainly the short-term goal. Down the track, eliminating all major greens renovations all together would be something to work towards. The dusting method for thatch and organic matter dilution is a must and will be a staple of my greens programme in the future.

## MALENY GC, QLD – MICK MCCOMBE

**A**t Maleny Golf Club we have a limited budget but endeavour to keep the highest possible standards. During renovation we apply sand at  $0.27\text{m}^3$  per  $100\text{m}^2$  performing necessary amendments twice a year. We dust once every 4-6 weeks depending on our budget and have commenced blending gypsum into our dusting sand which saves us hand-spreading it separately each month.

Dusting our greens at  $0.1\text{m}^3$  per  $100\text{m}^2$  helps keep thatch under control and creates a smooth ball roll. We normally groom a week before to clean out the surface and also a week or two after to bring the sand back up and smooth the surface. We have a brush delivery system, but would love a spinner type so we could

apply lighter amounts of sand. Also, a big factor for us is our limited nutrition input – this helps us on one hand as the thatch is not building as quick but also has its drawbacks with plant health and recovery.

My original dusting programme was causing problems as the product I was receiving had a lot of large particles and our members were always commenting on their putts bouncing. Being a new course, I was very reluctant to move from the original construction sand (GTS 2000) and use the GTS 1000 as I did not want to cause layering. However, earlier this year I did decide to change and I found the last article in ATM very helpful in putting my mind at ease. As a result, we no longer have any negative comments about our dusting!

## ROYAL HOBART GC, TAS

**Steve Lewis**

We topdress twice a year during greens renovations in March and September. We use a fairly coarse white washed sand to help with surface drainage. This sand is spread using a topdressing unit over the greens after aerating and brushed into all of the holes. Dusting is carried out every two weeks between the major green renovations. We do have a few problems being able to complete this task



during the summer months mainly due to manpower and a lot of golfing events.

For our dusting programme we use a fine white sand that can be applied as a light coating over the green. This can then be brushed in and is not visible and also does not harm mowing equipment. We carry out this practice to try and firm the surface of the green, especially during the winter months, and it also helps with thatch issues. This practice is highly important to us in helping keep the surface playable all year round. We try to map out our programme well ahead of time to avoid clashing with golfing events. It is very important to keep the programme on schedule.

## RIVERSDALE GC, VIC

**Travis Scott**

Here at Riversdale we attempt to dust the greens every 2-3 weeks if possible, but this can blow out due to our heavy golfing calendar. We dust using a kiln-dried medium topdressing sand which allows us to brush in immediately behind the topdresser. The dusting of greens has greatly assisted in our improved playing conditions at Riversdale with firmer greens, less thatch accumulation and improved ball roll.

Moving to a kiln-dried sand has allowed us to continue this programme on such a busy course. Saying that, the dry sand does tend sit around the surface a little longer which can cause issues with machinery for a few days unless washed in.

The sourcing of a consistent medium topdressing sand is becoming an issue, along with our large volume of golf not allowing us out on the course. It's important to remain strong when committees and boards want to reduce your renovation practices as they are essential to producing a quality surface.



## ROWES BAY GC, QLD

**Jason Bushell**

We try and dust our greens fairly lightly every four weeks, but in reality it probably isn't quite that often due a range of issues. I do believe it is an important part of our greens management programme, helping give a smoother, firmer surface. It is a fairly fine sand that we put out with a Toro ProPass and then rub in with a tow-behind broom, normally followed by a light water. The amount we put out does vary, but generally other than renovations once rubbed in it isn't noticeable.

Our practices have changed over time as we haven't always had the ProPass which makes the job achievable in a couple of hours and also allows a lighter amount to be applied. It can be a challenge sourcing a good sand in North Queensland, but we have a good source at the moment. We also have

to be careful in summer applying sand with the heat. At times you can get leaf burn if it is too hot or left on the surface for too long.

## WATERFORD VALLEY GC, VIC

**Stewart MacFarlane**

We solid tine greens monthly and follow this up with a dusting programme as soon after as we can during the growing season. This is dependent on the number of golfers we have booked in. Ideally we dust the day after coring (usually Wednesday – takes two days to core) but sometimes push it back to the following Monday. We don't like to dust any later than Wednesday due to trying to keep the greens sand free for the weekend play.

The sand is spread first thing in the morning after the greens are cut (dew removed) and is left as long as possible to dry before golfers are due to play the hole. We try to mow them next once the dew has lifted (mid-morning) towards the end of the week to help reduce the amount of sand we pick back up again. We have a set of cutting units specifically for using after dusting and topdressing to reduce wear on our good cutting units. We are scheduled to hollow core greens mid-September (once annually) and this will be followed with a heavy topdressing (120 tonnes) using a medium fine sand. We are looking into changing from solid tines to 4mm Ninja tines prior to our dusting procedure.

Obtaining sand has been an issue occasionally. Sometimes it has taken a few weeks, so if this is the case we order twice as much. Keeping the sand dry enough to get through our topdresser is also an issue. Our sand is stored in a public area and on occasions the tarps we have purchased to keep the sand dry have been being stolen overnight!

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Seed**





PHOTO: IDRIS EVANS

Using an older style topdresser means the ideal rate and application uniformity are hard to achieve. We adjust the settings to get as close as we can on both aspects, but we rarely get it perfect. Wet sand also effects what settings we can use. Based on our average settings we are applying  $0.06\text{m}^3$  of sand per  $100\text{m}^2$  ideally every four weeks.

## TEA TREE GULLY GC, SA

Ivan Swinstead

In late October/early November we hollow tine our greens and topdress with the idea of filling the core holes. This can take two or three topdressings over several days to fill the holes adequately and we incorporate the sand with a 'Sweep-N-Fill' brush. It's our major renovation each year along with regular solid tining (8mm) up to 150mm depth.

Most of our bentgrass greens are now more than 20-years-old with layering and organic content in the top 50mm-75mm. Over the last 3-4 years we have started a regular dusting programme during the growing season (October to April) using our local Mt Compass dusting grey sand. Fortnightly we dust with approximately  $4\text{m}^3$  over 1.2ha of bentgrass. Our process is to mow the greens prior to dusting, dust using a Dakota 410 and follow up with an artificial turf drag mat. We don't mow the following morning. We have noticed that the greens are becoming firmer under foot, especially during the winter.

## CONCORD GC, NSW

Chris Howe

At Concord we aim to dust greens weekly during the growing season (ideally on Mondays) and fortnightly into monthly outside of the growing season. We utilise a tractor-drawn Turfco spreader with rates around 5T per application. The sand is left to dry on the leaf before being incorporated into the canopy utilising a dew broom as it is less aggressive and to mitigate bruising to the leaf.

The sand we use is the 'WM' sand derived from Salt Ash near Nelsons Bay. This is the same sand in the existing profile. The practice is extremely important in so far as refining our putting surfaces, assisting with thatch mitigation which in turn will improve water and air movement through the canopy and can help minimise pest and disease incidences.

If anything, we have probably increased the frequency of dusting events in light of the greens being only 18 months old to now consider it the norm. Carrying out this process, along with regular aeration, means our greens renovations (which take place once a year in mid-December) don't need to be as severe at this point in time. We also achieve some flexibility regarding renovations if hampered by weather.

The main challenge we face is course access, which the Board is conscious of and is addressing. We should never miss out on being able to undertake fundamental

processes, of which I deem dusting as one. As mentioned, we get one renovation opportunity in December, so all processes throughout the year revolve around supporting that. Finally, this process will only improve greens quality and playability no matter what your course budget!

## BALLARAT GC, VIC

Jeff Powell

During renovations it's the normal practice to heavy topdress the greens to fill all core holes and scarifying grooves. We groom our greens beforehand then dust over the top. The sand is a medium topdress sand and we use around  $0.2\text{m}^3$ - $0.3\text{m}^3$  per green (greens average  $500\text{m}^2$ ). This is only done during the growing season (we don't dust over the winter). In regards to how important the practice is, I believe it's very important and the results help keep thatch under control, improve surface smoothness and firmness. Overall, our greens, which are only 11 years old, continue to show improvement.

Our practices haven't changed that much but we have scaled back to one coring a year as a result of dusting. We used to go out every fortnight to dust greens but with reduced staff, the time it was taking and the golfing programme, we have reduced this to once a month. We now Vertidrain regularly with needle tines (around every 6-8 weeks) and 12mm tines with a quick double scarify



over the top as a spring reno and heavy topdress. We reduced dusting to once a month mainly to help free up staff and disruption to golfers during the process which hasn't shown any negatives in relation to greens performance. We find that grooming before dusting helps keep the sand below the surface and less in the catchers.

Among the challenges we face include scheduling such practices in between golf. There seems to be more and more golf comps during the week and less opportunities to complete such works. The biggest challenge though is finding a sand that is compatible for our needs at a reasonable cost. The sand we used for construction has too much silt as the pit has moved to another area. We were also using this for the bunkers but it's only sealing them up. We had been using a medium topdressing sand from the other side of Melbourne for the past 10 years but that has now closed. We are now on the hunt for sand closer to replace this as cartage costs had risen to almost double for a truck and trailer load (\$2500). There is such a shortage of sand in this area and in Victoria in general for topdressing/dusting and bunkers.

In my opinion it's always important to test sand and test regularly. Don't rely on someone down the road who's using a sand that hasn't been tested but says 'it's okay because old mate down the road uses it on his greens and they're fine'. I'm finding this a lot in my travels where supers are using a sand that hasn't been tested, only to find its 20 per cent silt and 40-50 per cent fines. Don't rely on the sand and soil guy either – they have no hesitation in telling you that their sand is the best and that 'a lot of greenkeepers use it'. When asked if it's ever been tested for particle size and infiltration rate, they'll just give you a blank stare!

## BURLEIGH GOLF CLUB, QLD

**Darryl Edwards**

We push through between 55-60,000 rounds of golf a year. We dust greens with a fine sand every 3-4 weeks between October and March (ideally I would like to do every two weeks) and every 4-5 weeks between April and August. Rates are 5m<sup>3</sup>/ha applied with a Turfco SP 1530 spreader. During renovations (two times per year) the rates are 30m<sup>3</sup>/ha with a medium to coarse sand, rubbed in with a broom or fibre mat. Regular dusting is important as I cut my 328 greens at 4mm all year round and this is another tool to keep a tight and smooth surface which achieves an acceptable speed (for most).

Not much has changed over the past 7-8 years as these applications, combined with regular light verticutting, have achieved good results for our club. However, I have been using on-head groomers for the past three

years and have been very pleased with the results (four times/week growing season, two times/week off-season).

The hardest thing is to be regular with these practices due to course accessibility, weather and staff numbers. I feel the best dusting programmes are of the 'little and often' variety, rubbed in and syringed asap. It is important superintendents try and convince their committee of the benefits of these practices as they will improve your greens.

## KEW COUNTRY CLUB, NSW

**Brendan Hansard**

When I started at Kew Country Club we didn't have a topdresser, so any type of topdressing or dusting was near impossible. I believe regular dusting is one of the most important practices in achieving better greens. We managed to purchase a good second-hand tow behind topdresser which has helped significantly to incorporate a quality sand into a poor quality existing profile.

## THE SANDS TORQUAY, VIC – KEEGAN POWELL

**L**ike many golf courses in Victoria, The Sands has been impacted by the recent ceasing of operations at the Langwarrin Quarry, which has led to numerous challenges finding a reliable supplier that can produce a consistent sand product with certain specifications on a long-term basis.

We now use an Inverleigh turf sand (fine to coarse brown) with an application rate of 0.08 cubic meters of sand for 100m<sup>2</sup>. We go out every 18-21 days during the growing season (depending on weather conditions, course availability etc) and every 35-40 days outside the growing season. We undertake one hollow core per year. Ideally I would like to get the application frequency down to a 12-14 day cycle as I strongly believe less but more frequent dusting applications will not only lead to less disruption to the playing surface and less machinery maintenance, but produce a consistent, firm, fast playing surface with lower organic matter concentrations.

When it came to choosing a new sand after formerly receiving medium fine sand from Langwarrin, I required a sand that was a fraction coarser due to the concern of layering. This led me to the Inverleigh turf sand which I believe to be the best option with our current soil profile. This upcoming summer will be the first summer using this new sand so it will be interesting what results we have in the short and long term.

We try and dust between 2-3 times a month depending on golf, weather and irrigation cycles. Finding a good quality sand at a reasonable price has been difficult. We have found a quality product, but the travel cost raises the price significantly and not being able to order smaller quantities is inconvenient at times.

After dusting the greens we usually give the greens 3-4 minutes of irrigation followed by 15-20 minutes at night. We are experimenting with rolling straight behind the topdresser and/or rolling the following morning. It helps save the blades on the mower, but I think it is bruising the leaf more than I would like. We will continue experimenting and fine-tune our practices to get the best results for the turf with minimal disruption to the golfers.

## GRAFTON DISTRICT GC, NSW

**John Nelson**

Sand topdressing is a critical cultural practice to dilute thatch and produce firm true putting greens. Dusting of our 328 greens usually starts mid-August then every four weeks right through until late May, applying sand about 1mm thick. I like to double groom (always changing angles) prior to applying the sand. I rub in with astroturf under a metal drag mat, alternating clockwise/anticlockwise. Importantly, I reduce the amount of thatch accumulation by reducing the growth rate by 50-70 per cent using Trinexapac-ethyl.

Thatch accumulation is still an issue and we heavily scarify twice a year at renos, followed with sand topdressing. With the combination of a very good coarse rootzone sand and our topdressing programme we rarely need to hollow tine (we solid tine twice a year).

I would like to topdress more frequently, so I am looking at purchasing a spinner type topdresser as opposed to our mat and brush style topdresser, for speed of application. The topdressing sand we use has less coarse particles than the rootzone sand which results in much less mower pickup. This sand is expensive as it has to be freighted 350km, but the quality and results justify the expense.

## PHILLIP ISLAND GC, VIC

**Dan Walker**

When I took over as superintendent the first maintenance programme put into place was a dusting and dethatching regime both at monthly applications two weeks apart. We were using Sports 40 sand from Sandbelt Industries and we would apply using a JD Pro-Gator with TD100 attachment set at 1 in 3rd gear at 10kph. We had fantastic results from this and found it was a very important practice in managing our greens, especially being old push ups with poor drainage,



heavy thatch layer and organic material and using Class A effluent water which is high in bicarbonates, salts, nitrogen and off-the-chart sodium levels.

Unfortunately over the past 12-18 months we have had to completely change our practices due to financial restraints, staffing issues and ageing/broken down machinery. We have not been able to continue with our dusting programme which in turn has probably created more headaches for us in regards to layering, thatch and organic matter accumulation etc. Our maintenance regime is now as follows – two major renovations per year (coring greens with 19mm cores), removing as much thatch as possible, topdressing with Sports 40 sand at a rate of 2.5 to 3 in 2nd gear at 5kph (I am in the middle of getting this sand tested). Monthly applications of Humavator soil conditioner at 50L/ha, monthly applications of Forte (900ml/ha winter and 300ml/ha summer) and monthly applications of TruGyp Micro at 300kg/ha.

We actually hope to purchase a new topdresser within the next few months which will see a lot of headaches gone when trying to borrow the equipment and see us once again be able to put a dusting programme back in place.

## THE CUT, WA

**Dave Cassidy**

Our dusting rate is at 0.5mm which is an ultra-light rate using a Toro ProPass 200. This is performed every 2-3 weeks from September through to early May. I use a sand called Lawnsand (which is like a USGA spec) from Hinds here in WA.

The biggest challenge is golfers' perspective, with the belief you will dump a lot of sand on the green and that it will be like that for weeks. I give a lot of information on why we dust greens to golfers through newsletters and the committee for a better understanding. Sticking to the frequency of dusting is very important.

## METROPOLITAN GC, VIC

**Dave Mason**

We are currently on a dusting programme that fits with the growth rate of the turf. With a strict PGR programme and reduced fertility, dusting schedules vary from every two weeks in peak growing times to 6-8 week intervals in winter. We apply our sand using the walk behind Eco-lawn topdressers. Two staff take a topdresser each followed by a staff member with a MH-400 trailer. Application rates vary from time to time, as low as 2T/ha up 5-6T/ha.

Light dustings are rubbed in with a steal mesh drag mat covered with synthetic grass towed by a Sand Pro 14 with slick tyres – this is the only petrol ride-on piece of equipment that goes over our greens. A single pass with the mat is followed by irrigation if required, usually prior to mowing the following morning. If the opportunity allows, following rubbing the greens are given a dry cut and left the following morning. Minimal sand is picked up and the surface is very good.

Sand types have varied over the years and following the use of kiln dried sands, the Eco-lawn spreaders allow damp sand to be spread evenly – storing sand undercover is a great help. Finding a consistent good quality sand type that fit the parameters is key. Although a challenge, coarse sands with angular particles are my choice.

Since the elimination of all coring and needle-tining of the greens and only using air injection (Air2g2), the need for large volumes of sand have reduced, only requiring smaller amounts for dusting. Annual measuring of thatch and loss on ignition tests are showing that organic matter in the surface is reducing with these practices. Three closures are booked in each year to allow the works on the greens to be completed unhindered. 🌱

## THE DUNES, VIC – SIMON MULLER

**O**ur current programme has been conceived over many years of trial and error as to what works best for our Penn A1 greens at The Dunes. We are very fortunate to have several large areas to mine our own native soil which change from area to area. We have large amounts of large particle yellow dune sand and also several veins of grey finer particle native organic sand. These two sands enable us to custom our own blend depending on the season and the result we are looking for in greens performance.

Our typical programme is to +1mm groom the greens prior to dusting which opens the surface as well as removes surface organic material. The dusting is done prior to play the next day with our Dakota 412, with the sand used been 5mm sieved prior and mixed in the bays before going out on course at around 3-4m<sup>3</sup>/ha. This equates to around four Dakota hoppers for 18 greens and collars plus our 2000m<sup>2</sup> putting green.

The sand is matted in with our Toro bunker rake fitted with slick tyres and a custom made synthetic grass mat floating behind off the hydraulics. This reduces the need to overlap and turn on the green. The green is then mown with our dusting greens mower at 3mm to collect small rocks and help to smooth the surface. Depending on



time of year, we also irrigate three minutes to help incorporate the sand into the profile.

This process has been refined to take us around three hours and the ability to stay ahead of play (if conditions are favourable). With no golf on our course until 7am each day we can wait for a favourable condition day and have little effect on golf as the process has minimal detrimental disruption to ball roll.

We are tending to use more grey native soil in growth periods as it tends to firm up the surface and we get a stimulation of growth and smoothing of the surface. The sand mix is more 50/50 (grey/yellow) in winter time to help with surface infiltration,

while again smoothing the surface and getting a larger particle into the profile. We are dusting at least once a month and twice a month in growth periods.

The stimulation the greens receive from the dusting programme enables us to only minimally fertilise greens and has eliminated the need to core greens or topdress. All our greens have not been renovated since being resurfaced more than eight years ago. This dusting programme, followed consistently each month, combined with our costumed Primo programme has given us the ability to maintain firm, dense greens all year round with minimal fungicide applications and relatively *Poa*-free surfaces.



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Vale  
**Bill Casimaty AM**  
(1935-2019)



*One the icons of the Australian  
agriculture and turf industries, Bill  
Casimaty passed away in early July  
at the age of 83. ATM pays tribute  
to the StrathAyr founder.*

**T**ributes flowed far and wide in early July when news of the passing of StrathAyr founder Bill Casimaty AM filtered throughout the Australian sports turf industry.

One the innovators and entrepreneurs of the Australian agriculture and turf industries, Casimaty led a full and active life right up until his passing at the age of 83. Indeed, only as far back as April he was alongside son Frank at the official turning of the sod for the \$12.5 million redevelopment of the Elwick Thoroughbred Racetrack in Glenorchy, Tas where StrathAyr is head contractor.

At his funeral held in North Hobart, which was attended by over 400 people, Casimaty was remembered for his innovation and business prowess across agriculture and horticulture, including the development of StrathAyr as one of the most recognisable brands in the sports turf management industry, both in Australia and overseas.

Whether it was the development of the first machine to produce washed turf sod, through to dedicated systems for race tracks, sports fields and drop-in cricket wickets, Casimaty's pioneering spirit has more than left an indelible mark on sports turf management. Among those to have benefited from Casimaty's innovation include sports stadiums in the US, Lords in England, the Melbourne Cricket Ground, as well as race tracks like Flemington and Moonee Valley.



*The StrathAyr turf production farm in Richmond, Tasmania*

Sadly, Casimaty became the third prominent figure within the Tasmanian golf and sports turf industries to pass away in recent times. In February, former Tasmania Golf Club superintendent and founder of what is now the TGCSA, Ted Gilligan, passed away at the age of 89. Then, in the first week of June, former champion amateur golfer Peter Toogood died, also at the age of 89.

"Bill Casimaty was a man of enterprise, innovation and vision," says Tasmania's

Minister for Primary Industries and Water Guy Barnett. "Bill's significant contribution to Tasmanian agriculture and business is well recognised and he helped put Tasmania on the national and world stage. It was a mark of Bill's drive to provide the best product, and he invested heavily in research and development – "Science is the essence of good turf" Bill would say."

### **FROM FARMER TO INNOVATOR**

Casimaty was part of a large family that had migrated to Australia from Greece. His father settled in Hobart in the early 1900s and after starting out in fishing (crayfish and scallops) bought farm land near Cambridge, Richmond and in the Southern Midlands.

Casimaty attended Dookie Agricultural College in central Victoria in 1956, returning to the Apple Isle to take over the management of the family farm 'Strathayr' in 1957. Casimaty quickly decided that the existing wool and cereal producing enterprises on the farm weren't viable due to the climate and size of the property and started growing mushrooms instead.

In 1966, Casimaty applied for and was unsuccessful in gaining a Nuffield agricultural scholarship, which afforded farmers (and still does) the opportunity to travel overseas to study best management practices. Undeterred, Casimaty successfully reapplied and between February and August 1967

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Many racetracks and sportsfields the world over (pictured is the Hong Kong Jockey Club's impressive Guangzhou training centre in China) have benefited from Casimaty's commercialisation of reinforced profiles

travelled to Africa, the UK and the USA studying various farming and management techniques.

While mushroom farming was the primary focus, the trip would ultimately help him with his future forays into many different ventures. Prior to going over, one of his good friends from Dookie College, turf farmer Tony Trumble, suggested he look into turf production. Heeding that advice, while in the US Casimaty spent a day with Wisconsin-based turf cultivation pioneer Ben Warren, a visit that would ultimately steer him down a career-altering path.

Seeing cultivated turf species for racing and sporting events for the first time, as well as discussing innovative turf farming practices, opened up Casimaty's eyes to the potential of turf production and the development of an industry in Australia. Returning home to Strathayr, he started trialling turf, among other crops, and bought

some turf farming equipment off Trumble whose Victorian farm had since closed.

Casimaty had immediate success, particularly selling to the mining towns on the West coast of Tasmania. However, he soon

realised the Tasmanian market was limited in size and started growing in Victoria in 1972.

Not content with the domestic turf market, Casimaty looked to the sports turf market looking for problems to solve. In this field his innovation knew now bounds and the quality of many sports fields and racetracks all over Australia today are thanks to these innovations including washed turf, reinforced sand profiles, ready to play turf replacement and drop-in cricket wickets.

With washed turf he set up a global group of turf growers who were washing turf called the Strathayr team. This covered countries such as England, the USA, Canada, Japan, and Austria as well as the eastern states of Australia. The group met at many and varied locations for many years, not only to exchange ideas but to have a lot of fun.

In marketing terms Casimaty had few peers in both innovating market techniques and sheer persistence. His optimism and determination were legendary and he



Casimaty perfected the technique of washing turf, developing the required machinery and building a market for it

## KING OF THE CASTLE

One of Bill's great achievements was the development of the mesh element in sand profiles. The StrathAyr mesh element profile is used in racetracks around the world and Bill would love to demonstrate this whenever there was the chance.

About 10 years ago, Ground Science had completed some research work with Bill on the superior stability benefits of the mesh elements in different soil types. Bill devised a simple method to demonstrate this using an old fashion sand castle.

On this particular day he had some international guests visiting Melbourne, so he took them to Moonee Valley race track so

they could walk a track that had the mesh elements in the profile. Bill asked me if I could bring a range of sands from the recent trials to the track and build these large 20-litre sand castles.

We placed the various sands with different blends including the mesh elements into the plastic tubs and turned them over to make 3-4 sand castles. He had me place a square timber board on the top of each sand castle and I would stand on it to see if it could hold my 60kg weight. Most of the sand castles would collapse except for the one with the mesh element blend.

I stood upon the sand castle and it did not move, holding my full weight. Bill was

so proud of this demonstration he said to the crowd assembled, 'Ernie is almost the weight of a jockey and this product is capable of more weight', so he proceeded to walk towards me and asked me to assist him to climb upon the sand castle.

Bill placed his left foot atop the sand castle and as he stepped up, he split his slacks right down the middle! The assembled crowd roared with laughter and Bill just smiled as he stood atop the sand castle without it collapsing. Bill was the kind of person that was more focussed on the game than such an insignificant accident.

- Ernie Gmehling, Ground Science



## A GREAT AND FIERCELY LOYAL MEMBER OF THE TURF INDUSTRY

I first met Bill not long after he had returned from his Nuffield Scholarship trip in 1967 during which he met Ben Warren in Minnesota. Ben was one of the founding fathers of the American Sod Producers Association (ASPA) and its inaugural president from 1967 to 1969. ASPA became TPI (Turf Producers International) of which Bill became a fervent member.

Bill was trying to diversify his family farming business and at the time was more interested in mushroom growing. His visit with Ben sparked an interest in turf which he then pioneered at the family farm at Richmond in Tasmania. Bill's main interest was in cool-season grasses at that time and after quite a bit of experimenting he set up a large scale operation at Seymour in Victoria which took on the family farm name Strathayr and is still a notable player in the turfgrass industry worldwide.

A great deal of Bill's success was due to his almost ferocious tenacity. If Bill got a sniff of a notable turf job anywhere in the world he would doggedly pursue it, going to almost unbelievable effort to achieve his goals.

In 1976, when I first brought Dr James Beard to Australia, Bill couldn't get enough of him. He even bought Jim a fax machine so that he could have contact whenever he needed it! Anything Jim said was gospel truth for Bill and he fell in love with his and Sifers' work on Netlon reinforcing of turf profiles, as it was known then. He very quickly seized the moment to commercialise it in his Strathayr 'all weather turf profiles'.

Turf wasn't Bill's only business interest and he diversified into opium poppy growing, being a leading supplier to Glaxo and vigorously campaigned for and won Australian access to the USA market.

Bill, like Jim, loved to eat and enjoyed fine wines. He set up his first family vineyard which produces high quality wines. He later set up Tolpuddle Vineyard which attracted the commercial attention of Shaw & Smith and is one of the highest quality vineyards in Australia.

Bill's efforts were always wholehearted and his notable achievements in agriculture were rewarded with the Member of The Order of Australia in 2009. Bill was never pushy about this honour and was even a little reticent about it.

Bill always liked to remind me that he, Jim Beard and I were all born in the same year – 1935 – making for somewhat of an unholy trinity. Our industry has lost a great and fiercely loyal member who did a wonderful amount of work to put the industry on the map. Well done Bill.

- Peter McMaugh AM

persisted in marketing products that any normal person would have given up on long before. In many cases this persistence and determination paid off.

According to son Frank, now the managing director of the StrathAyr Group, one of Casimaty's proudest marketing achievements was selling turf to Hong Kong.

He had heard that the Shatin track was being rebuilt and so on a visit to Hong Kong with wife Janet, he decided to take a couple of rolls of washed turf in his suitcase. He showed this to the Hong Kong Jockey Club engineer and soon after ended up with a contract to send 80,000m<sup>2</sup> in 20 jumbo loads to Hong Kong in 1988.

Following this, StrathAyr soon started its unique brand of all-weather racetracks and sports fields, starting with the MCG in 1991 and Moonee Valley racecourse in 1995. Many of the top racetracks and sports fields in Australia and Asia can thank Casimaty's persistence in those early years for the quality of their playing surfaces now. 🏏

## A DETERMINED ENTREPRENEUR AND INNOVATOR

Having known Bill Casimaty for close to 35 years, it was sad to hear of his recent passing. His name was and is synonymous with StrathAyr and there would have been very few in the Australian turf industry that did not know of or recognise Bill during the 1980s, 1990s and early 2000s. Bill was a polarising character and could easily put people off-side because of his persistence and determination. However, it was this very determination to be an industry leader that made StrathAyr an industry innovator.

One of my first turf jobs in the early 1980s related to the old Waverley Park football ground in Melbourne where bluegrass/ryegrass turf had been laid some years previously with a clay soil base. Based around the problems associated with poor infiltration rates, washed turf was introduced to Victoria by StrathAyr.

The very early 1980's was the time that sand profiles were starting to be constructed on sportsfields and Bill was

a strong advocate for USGA or perched water table constructions. It was this push towards well-drained profiles that started the ball rolling for a more modern, scientific and consistent method for sportsfield and racetrack constructions. In conjunction with the Canberra-based Technical Services Unit and the soils expertise of Bent Jakobsen and unit leader Keith McIntyre, the turf industry started to see a refinement of the perched water table construction specification and methodology.

Bill's determination to get his way created some interesting discussions. While attending a seminar in Tasmania, I was interrogated by Bill as to why I had suggested a certain approach to a client regarding a field upgrade which he didn't agree with. The same day, when travelling to the next seminar venue, our driver said, "We are calling in on a friend". Blow me down if we didn't drive through the gates at the Strathayr farm in Richmond, Tasmania! This is where we saw the other side of Bill,

the perfect host, with our earlier discussion packed away for another time.

There are several turfies that worked alongside the StrathAyr team with the construction of the first reinforced sand profile racetrack in Australia at Moonee Valley. In fact, the name StrathAyr became synonymous with the racetrack and for a while it looked like Moonee Valley would lose its identity when racing there was referred to as 'racing on the StrathAyr'! That track had many challenges as all involved tried to understand the practical management versus the theory. Again, it was a polarising time for those involved, but that said and done there was also a lot learnt around the keys to presenting a suitable racing surface.

Bill was an interesting character and a very determined businessman. He was also an innovator and entrepreneur. He was a man of the times when the Australian turf industry was changing and certainly assisted in that change.

- John Neylan





JOHN NEYLAN

*Improved water use efficiency and reduced water use is the most obvious area where sportsfields can make savings and therefore be more sustainable in terms of their operations*





# Sustainable sportsfields

*Sustainability has been a buzzword throughout the turf industry for a while now. But as ATM expert columnist John Neylan writes, when it comes to improving the sustainability of sportsfields it requires a substantial change in mindset and work practices to achieve.*

In recent times, primarily due to the cost and availability of water, there has been an increasing interest in Local Government to construct and maintain more sustainable sportsfields. An admirable sentiment, however, can it be achieved and, more importantly, what do we think is meant by 'sustainability'? The word sustainability is easy to use and does have some generic appeal and provides a feel-good response, but making it happen requires substantial commitment.

In various discussions there have been generic theories being floated that the use of finer textured soils that have greater water holding capacity or the use of compost will improve the sustainability of sportsfields. While this may have some merit, there is no short cut to improved sustainability and as with all things related to turf management the devil is in the detail.

## DEFINITION OF SUSTAINABILITY

So what does sustainability mean? The broad, global definition is where sustainability is about living within the resources of the planet without damaging the environment now or in the future. This is about meeting the needs of the present without compromising the ability of future generations to meet theirs. It has three main pillars – economic, environmental and social. These three pillars are informally referred to as people, planet and profits.

From a turf perspective, the late great Dr James Beard (2005) defined sustainability as "managing soil and plant cultural practices so as not to degrade or impair environmental quality on or off site, and without eventually reducing the yield potential as a result of the chosen practice through exhaustion of either on-site resources or non-renewable inputs."

At the 2019 Asia Pacific Turfgrass Conference, Steve Isaac spoke on sustainable golf and low input golf and is a topic which is the centrepiece of how The R&A believes that golf courses should be managed. The R&A

considers sustainability to be a key priority for golf, and to be considered sustainable the golf operation (be that a new development, existing facility or golf tournament) should protect nature, benefit communities and conserve resources ([www.randa.org/Sustainability](http://www.randa.org/Sustainability)).

Golf is relatively unique compared to sportsfields because of the area of land involved. For example, it has huge potential to develop the natural landscape/environment of out of play areas and has increased capacity to collect and store water. Due to the confined space of sportsfields, the ability to exploit the greenspace for this is considerably limited.

## SUSTAINABILITY AND ITS RELEVANCE TO SPORTSFIELDS

So do any of these definitions have relevance to sportsfields? In their own way they all have relevance, but they produce some challenges for local government entities and in particular how to work out what is sustainable.

Cisar (2004), in a review paper titled *Managing Turfgrass Sustainability*, highlighted the drivers for more sustainable turf including concerns over turf environmental impacts, regulations ending the use of certain pesticides and limiting the use of natural resources (i.e. water, fertiliser etc.).

Cisar states that the turfgrass industry has developed turfgrass management systems which require fewer inputs. This has been achieved through the breeding of more resource-efficient turfgrasses, increased use of effluent water and new agrichemicals applied at lower rates of active ingredient and less frequently.

These have combined with traditional programmes such as integrated pest management (IPM) and best management practices (BMPs) to provide a path toward the goal of real turf management sustainability. In reality we may well be there, however, there hasn't been enough research to determine one way or the other.



*What are the factors affecting wear? Undertake a sportsfield audit reviewing turf cover and composition, soil conditions and training practices and locations*





## SUSTAINABILITY AND TURFGRASS AGRONOMY

If we consider BMPs and IPM to be the cornerstones of sustainability, there are key agronomic areas that need to be investigated if more sustainable practices are going to be implemented. These include;

- Turfgrass selection;
- Water use and efficiency;
- Soil management (including thatch/organic matter control);
- Fertiliser and pesticide use; and
- Turf damage and repairs

The above factors are closely related and strongly interconnected with the quality and safety of the playing surface and the hours of use. The starting point is to understand the requirements of the playing surface around which the structural aspects (i.e. soils, drainage, grass selection and maintenance) can be formulated.

Before you can begin planning a materials programme, it is important to first establish what the targets are for the overall levels of field presentation and playability. The 'Best Use Modelling Project for Sports Fields' and



*Implementing an integrated pest management strategy to improve playing surface quality is an important cornerstone of any drive to enhance sustainability*

the 'Best Use Measurement Tool for Defining Hours of Use' ([www.parksleisure.com.au](http://www.parksleisure.com.au)) are useful references for providing assessment parameters for particular standards of playing fields.

If we examine each of the key agronomic parameters (see table below), then it is possible to identify where improvements can be made. Purely from an agronomic perspective, there is a lot that can be done to improve the sustainability of a

sportsfield, particularly as it relates to the use of resources. There is no quick and easy solution that doesn't require some effort to better understand the soil/turf/water/use relationships and then to implement an appropriate management strategy.

Improved water use efficiency and reduced water use is the most obvious area where sportsfields can make savings in terms of water volume required and the cost of water.

FACTOR	QUESTION	POSSIBLE ACTION/NOTES
<b>Turfgrass selection</b>	<ul style="list-style-type: none"> <li>● Warm or cool-season grass?</li> <li>● Grass species (e.g. couch or kikuyu)?</li> <li>● Grass cultivar (i.e. within the same species)?</li> <li>● Wear and recovery characteristics of the current turfgrass?</li> </ul>	<ul style="list-style-type: none"> <li>● Change the grass species/cultivar.</li> <li>● Look for <u>independent research</u> data<sup>1</sup> to support selection.</li> <li>● Trial new grasses before implementation.</li> </ul>
<b>Water use and water use efficiency<sup>2</sup></b>	<ul style="list-style-type: none"> <li>● What is the water source?</li> <li>● What is the CU/DU?</li> <li>● What are the factors affecting water distribution uniformity?</li> <li>● What is the scheduling coefficient?</li> <li>● Water quality?</li> <li>● System functionality (e.g. identifying leaks, sprinkler operation, nozzles)?</li> </ul>	<ul style="list-style-type: none"> <li>● Prepare a water management plan.<sup>3</sup></li> <li>● Undertake an irrigation system audit.</li> <li>● Implement the recommendations from the audit.</li> <li>● Undertake a study into water source options.</li> <li>● Change irrigation frequency.<sup>4</sup></li> <li>● Use soil moisture probe/sensors.</li> </ul>
<b>Soil management</b>	<ul style="list-style-type: none"> <li>● What is the soil type?</li> <li>● Infiltration rate?</li> <li>● Compaction?</li> <li>● Root depth and root mass?</li> </ul>	<ul style="list-style-type: none"> <li>● Maintain a regular programme of soil decompaction and thatch control.</li> <li>● Monitor the results of the above programme.</li> <li>● <b>Note:</b> Managing soils is critical in improving water use efficiency.</li> </ul>
<b>Fertiliser use</b>	<ul style="list-style-type: none"> <li>● How much NPK is used? Cost/unit?</li> <li>● What fertiliser types are used (e.g. liquids, granular, controlled release)?</li> <li>● Frequency of application and timing as it relates to growth patterns and wear?</li> </ul>	<ul style="list-style-type: none"> <li>● Undertake fertiliser audit.</li> <li>● Apply fertiliser more strategically.</li> </ul>
<b>Pesticide use</b>	<ul style="list-style-type: none"> <li>● What are the key weeds and pests?</li> <li>● When do they occur?</li> <li>● What is their impact?</li> </ul>	<ul style="list-style-type: none"> <li>● Implement an Integrated Pest Management (IPM) programme.</li> </ul>
<b>Turf damage</b>	<ul style="list-style-type: none"> <li>● Where are the high wear areas?</li> <li>● What are the factors affecting wear (soil infiltration rate and soil moisture content, turf quality, numbers of players, location of training drills, maintenance etc.)?</li> </ul>	<ul style="list-style-type: none"> <li>● Undertake sportsfield audit reviewing; <ul style="list-style-type: none"> <li>● Turf cover and composition.</li> <li>● Soil conditions.</li> <li>● Training practices/locations.</li> </ul> </li> </ul>
<b>Other inputs</b>	<ul style="list-style-type: none"> <li>● What are the mowing requirements?</li> <li>● What are the labour requirements?</li> </ul>	<ul style="list-style-type: none"> <li>● These aspects are best reviewed as part of the overall field audit.</li> </ul>

**Notes:** 1. The problem in Australia is there is a lack of independent research taking place that can objectively determine the most appropriate turfgrass species/cultivar; 2. The AGCSA website ([www.agcsa.com.au](http://www.agcsa.com.au)) contains useful resources for irrigation management planning; 3. The best reference on improving water use efficiency is 'Water Use Efficiency for Irrigated Turf and Landscape' by Geoff Connellan (February 2013); 4. To be discussed in a future edition of ATM.



In a research project undertaken by Henderson (2007), it was determined by auditing irrigation systems across project fields that low maintenance (with <65 per cent of sprinklers operating optimally) was a major problem. Retrofitting better nozzles and adjusting sprinklers improved irrigation distribution uniformity to 75-80 per cent.

Research showed that reducing irrigation frequency to weekly, and preparedness to withhold irrigation longer after rain, reduced irrigation requirement by 30-50 per cent, compared to industry benchmarks. However, there is going to be a need to invest in undertaking irrigation audits, investing in upgrading systems and staff training to better understand irrigation management.

## OTHER CONSIDERATIONS

Sportsfields positively contribute to the financial, environmental and social well-being of the communities in which sport is played. Whether it is organised sport, casual use by walkers and joggers or exercising dogs, there is some additional community value. The question is whether a value can be placed on these aspects.

Sportsfields are important areas of greenspace and a quick look at Google Maps shows how important they are as buffers in urban environments. There is considerable data around that demonstrates the moderating effect that turf areas have on regulating summer temperatures and acting as a carbon sink.

Sportsfields at a community level are not necessarily businesses as such, however, there is still an economical value that can be contributed to local sporting clubs based around social clubs, canteens etc. They are also an important gathering point for the local community. If the facilities are poor, including the playing surface, this economical worth will be diminished.

From an energy perspective, most sportsfields have lighting and the number of lighting upgrades has increased in recent times to meet the increasing demands for winter sport use. This includes lighting that is suitable for both training and night games.

Energy is becoming increasingly expensive and it needs to be used as efficiently as possible. Undertaking an energy audit across all of the sportsfields in a municipality will provide a basis for improving the reduction and more efficient use of energy including electricity and fuels.

## OTHER REFERENCES

There have been numerous reports written over several years that have tackled the sustainability of sportsfields, principally from a water use perspective. Many of these sit

au/swf/projects/water-efficiency) where there are several studies worth reading.

## CONCLUSION

Within the definition of improved sustainability I am certain that improvements can be made and sportsfields made more sustainable. In the research undertaken by Neylan and Nickson (covered in ATM Volumes 21.2 and 21.3), it has been clearly identified that a high use sportsfield (about 30 hours of use/week over winter) can be sustained in good condition if it is constructed as a sand profile with a couch turf and receives a moderate to low level of maintenance.

Well-constructed fields remain drier and experience considerably less damage from wear and the post-winter recovery is quicker with fewer repairs required. The research also identified that improvements in sustainability can be achieved through improving irrigation practices, timing of fertilisers and strategic pest and weed control.

To make a claim that a sportsfield is "sustainable" requires a considerable amount of background work to be undertaken. It is not necessarily going to be a single factor that will make a sportsfield "more sustainable". One particular example is believing that constructing a field out of a low drainage rate soil high in silt and clay will reduce water requirements. Each element of the field in terms of its physical structure, irrigation, grass type, maintenance and use must be factored into the sustainability equation.

Where I believe that Local Government will find it difficult to make significant improvements is the size of the task and the commitment to change. Changing irrigation practices in particular will require a substantial change in mind set and work practices. However, if there is a commitment to change and a programmed response, it is achievable. 🏏



*By examining key agronomic parameters such as soil management – soil types, infiltration rates, compaction, root depth and thatch levels – it is then possible to identify where improvements can be made*

hidden within government archives and on obscure websites and are the product of research funding provided to various institutions prompted by the drought period through the 1990s and early 2000s.

These references have been prepared by university academics and other than a few exceptions they appear to have had minimal input from turf experts. However, they are still useful references in understanding the processes required to understand how sportsfields can become more water sustainable. The main website that I suggest referring to is the Victorian Government SmartWater website (<https://waterportal.com>).



*Sportsfields are important for local communities. Poor facilities, including the playing surface, can have a significant impact on its economic and community value*





PETER McMAUGH

*Acquiring knowledge is a staircase exercise – a step by step learning both from practical experience and from formal educational*

*As the old adage goes 'knowledge is power' and the quest for it separates the elite turf manager from the average, writes columnist Peter McMaugh.*

**R**ecently I had the pleasure of meeting up with Michigan State University's Dr Joe Vargas at an event graciously sponsored by one of our commercial associates. Sitting and listening to Joe talk and dispense the accrued wisdom of his 48 years in the industry, I knew again why many, many years ago I asked him to come to Australia to present at our annual conference.

Joe has worked primarily as a plant pathologist but he also has a deep understanding of plant physiology. The way he blends his knowledge into the practical problems faced by superintendents is wonderful to see. For me it was a master class of engagement and delivering his messages in a context that those attending could easily catch onto.

You may be wondering why I am showering Joe with so much praise. He hasn't died. He hasn't received a Nobel Prize. I am using his recent visit to Australia and his great personality and talent to highlight the value of hard, scientifically based learning for all of us to use in our decision making.

Joe had a very sincere and somewhat cynical joke. He said he was going to start a church specifically for golf superintendents and only golf superintendents. Why? Because they made most of their decisions about treatments on their course and the purchase of products for their course based on faith. Are you a candidate for his church?

He likened superintendents to the congregation that give money to the church collection based on faith. Are you just giving money away when you buy a product? Are your decisions based on the programmes your supply company wants you to agree with and follow? Are your decisions faith-based or fact-based? What all this comes back to is the value of accurate knowledge; of learning based on facts. If we don't get the facts right, we can't get the decisions right.

# The fine art of learning

## SEEING IS BELIEVING

Over many years of dealing with the problems about which superintendents ask for help, I would habitually say, when we started the serious discussion, 'Please don't tell me what you think the problem is. What I want you to do is look at the area and tell me what you see'. We would then expand that discussion to try to get the superintendent to see what I saw.

This was a very intentional approach because I was trying to educate the superintendent as we worked through the exercise. Some resented this approach, feeling it was demeaning them. This is always a problem for a consultant and I experienced it many times in the early days of the Australian Turf Research Institute and especially with the bowling greenkeepers in NSW.

When I was helping the redevelopment of the greenkeeping syllabus for TAFE NSW, the very first lessons were based around

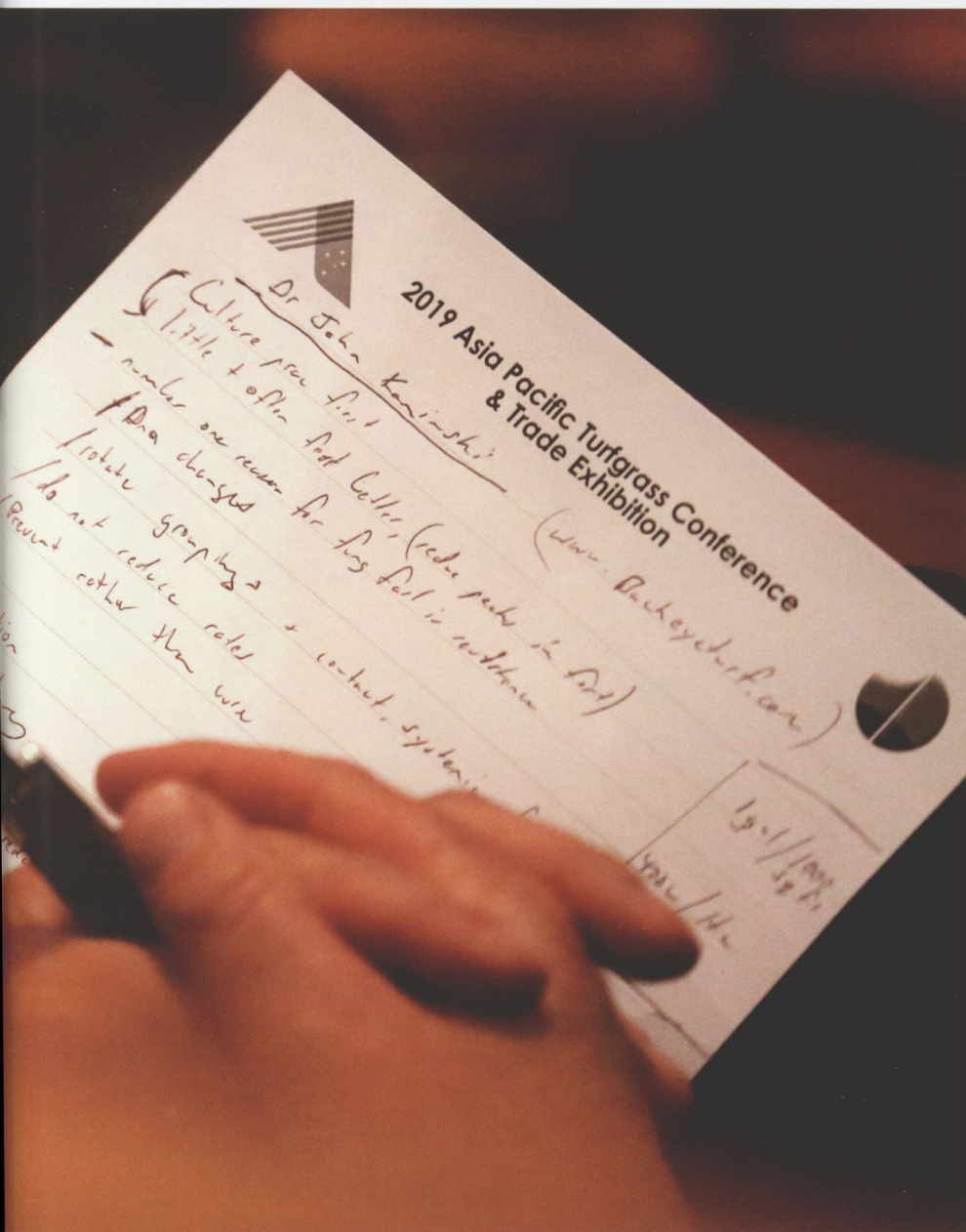
observation. I would take the student group out into the grounds of the college and give them 10 minutes to take some notes on what they saw. Then I would ask them one by one to tell the class what they saw.

About 90 per cent of the class would be quite mystified by this exercise and say they just saw trees and grass and some people walking. They didn't see the differences – the mix of tree species, the understory shrubs, the diseased pine, the kikuyu and paspalum, the closely mown couch beds.

I would then give them an infrared photo of the scene we were looking at and after explaining what infrared photos tell us, I would ask them to look again before reporting back. This time about 25 per cent of the class still did not see the diseased pine or the water stressed grasses and shrubs.

Just to get the required 100 per cent of the group to understand the object of this exercise, I would pair off the students, putting the most observant with the least responsive





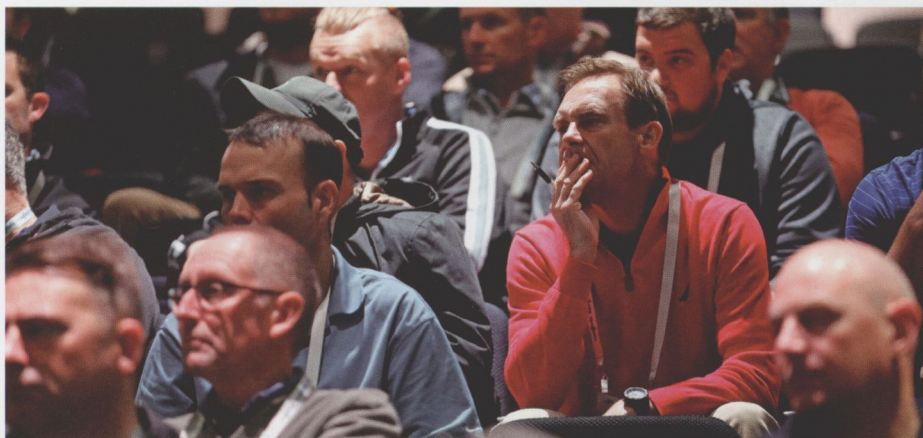
and do the exercise again at another site. Using pair reporting we got the success rate to very close to 100 per cent, but it took three exercises to do it!

'Seeing' is not innate in all of us. For many of us it has to be acquired and it is the most basic skill we have to acquire if we are going to succeed in the world of turf.

Again recently I was asked by a superintendent to look over his greens with a view to selecting out superior clones of grasses for him to develop into a nursery. The greens on this course are predominantly *Poa annua* because of shade problems, but some greens are predominantly bent.

We (three of us) went onto the first green and I asked the other two to go over the green and identify where they saw superior quality turf. They were finding it very hard. I then asked them to squint through their

eye lashes and look again. This time the differences stood out much more clearly. Why? Because this exercise causes the light coming into your eye to be polarised and you see the differences much more clearly. We selected quite a few different grasses for growing out, both *Poa annua* and bent.



**Knowledge needs to be balanced. It needs you to be able to see the big picture and see the relationships of one piece of knowledge to every other piece**

Why you might ask *Poa annua* when we spend a lot of time and money trying to eliminate it? The reality is that *Poa annua* can be both friend and foe. Dr David Huff from Penn State University has spent the last 30 years working on *Poa annua* genetics (which are quite complex) looking to select strains which give the best quality turf. He has sorted them very well and at the end of the exercise, at this stage, the best turf types don't set seed or at least enough to be commercial. So Dr Huff is now trying to alter the plants so they set seed.

Here I have a conundrum. Up until World War II, all the new greens in the USA were sown vegetatively with exclusive bent types. Why not *Poa annua*? If the mini-tine heads on greens mowers developed by Maredo B.V. are not the best propagation tool for *Poa annua*, I am a dunce.

Why am I telling this story in such detail? Because I want you to see that often old knowledge is very good knowledge, just as old techniques can be very helpful.

## STEP BY STEP

Acquiring knowledge is a staircase exercise – a step by step learning both from practical experience and from formal educational exercises at institutions such as TAFE. Our TAFE teachers need much more support and recognition than they get. They also need time and training to keep them up to speed on the latest developments and research findings for progressing their knowledge.

Unfortunately, and primarily instigated by a very dubious philosophical base, the whole structure of TAFE has been bastardised by governments right across Australia, to the point where even if a different mentality is brought to focus on TAFE, it is going to be very difficult to rebuild the quality that has been shredded.

Teaching is a very noble profession but it is a tough one. Every lesson, whether in class or in the field, is a hard slog. It requires the exercise of great skill to keep every student attached to the thread of learning that you are





*“When you reach the status of course superintendent there is inevitably a desire to put your individual stamp on the course. This is where you enter the snake pit. The best antidote for venom is knowledge. Make sure you are up there before you take the step.”* - Peter McMaugh

weaving. It is an exercise in communication which needs part performance and part nursemaid to often very disparate groups of students.

It also requires performance skills on the part of the students. Not every student has the skill to articulate exactly what their problems are. This is where getting the building blocks of the staircase in place becomes supremely important.

Every experience you have on the job or in the classroom has to have a learning outcome. Even a failure is a chance to learn

and many things are better learned through failure than success.

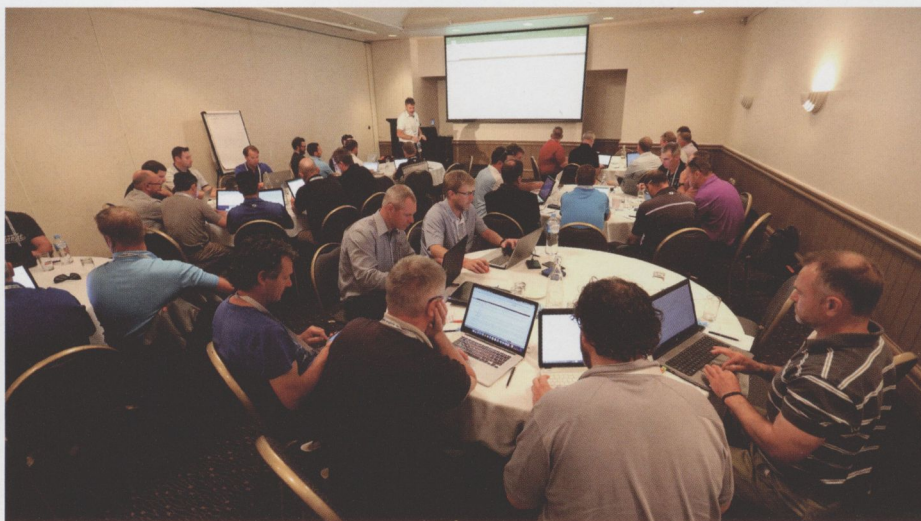
Wisdom comes from the long accrual of knowledge in every facet of your life experience. Slotting together the pieces of the jigsaw is a skill you learn over time and every time it is repeated the more firmly entrenched it becomes in your routine. If the knowledge is false, or in some cases taken to extremes, then it doesn't strengthen your skills, it destroys them.

Many years ago I was called to a golf club which had reconstructed a hole, including the green which the designer had sloped to the rear. The green was thin and poor and take-all was beginning to show.

As I talked to the superintendent I realised he was obsessed with the low phosphorus theory of controlling *Poa annua* invasion, to a point where the green was going backwards. As Joe Vargas (who visited this very point on his recent trip Down Under) showed, P is essential for all the energy cycles in the plant. Where are they located? In the leaf. What

*Seeing' is not innate in all of us. It has to be acquired and it is the most basic skill we have to acquire if we are going to succeed in the world of turf*





*Every experience you have on the job or in the classroom has to have a learning outcome. Even a failure is a chance to learn and many things are better learned through failure than success*

landscape of disease occurrence? Oh, the travellers (the 'consultant' salesmen) will fill the gap. They haven't and they can't because 90 per cent of them are tradesmen who, for one reason or another, have exited the daily grind of greenkeeping.

Listening to Joe weaving his magic brings me back to the reasons I invited him to Australia. Back in the 1970s the greenkeeper or curator conferences were a talk fest with attendees giving their opinions about topics like *Poa annua* (still going) or topics raised by questions from the floor. If conferences are just a gob fest of ideas and half-baked opinions about silver bullets, then all they become is a race for the bar at the end of the day.

Yes, the regulatory scenery for curating a course is vastly different today than it was in the 1970s and the duties of care for health and safety are much more clearly spelled out

now than they were then. But if these become the focal points for the industry rather than some basic knowledge around topics such as water and soil management, then we are going in the wrong direction.

When you reach the status of course superintendent there is inevitably a desire to put your individual stamp on the course. This is where you enter the snake pit. The best antidote for venom is knowledge. Make sure you are up there before you take the step.

Do yourself a favour and listen to the Joe Vargas's of this world when they explain to you why morning sun is so important to grasses. Take every opportunity you can to catch this window and in participating in your association. Do your part to demand access to the wisdom bank of the owners of great knowledge.

Through learning we all succeed; when we stop learning we are dead. 🕯

are you removing every day? P, among other things. Yes, grasses can get away with less P than many other plants, but not when you are continually removing it. You need some P – not massive amounts, but you need it.

This is just one case of where your knowledge needs to be balanced. It needs you to be able to see the big picture and see the relationships of one piece of knowledge to every other. If they jar, then you haven't got the jigsaw right.

One of the very sad things about TAFE from my perspective, were decisions made, at least in NSW, that no university graduates were to be employed as trade teachers. The tunnel vision of those who want trade to be taught only by trade is somewhat mind-boggling when you look at subjects like diseases.

How can someone with no scientific training cope with the ever-changing

**Brains trust** – Pictured with Michigan State's Dr Joe Vargas (middle) during his recent visit to Australia are Peter McMaugh and Dr Percy Wong

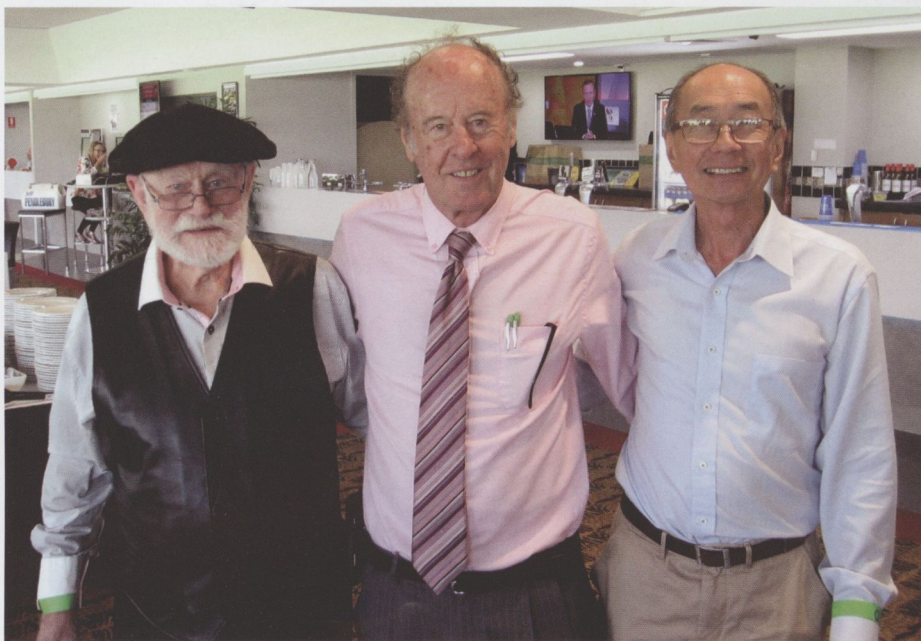


PHOTO: GARY BEEHAG



*Former Richmond and Melbourne AFL CEO  
Cameron Schwab's Plenary session presentation  
was one of the most powerful in recent memory*





# Something to be...

*The annual conference made a welcome return to Brisbane in June.*



It was the most unassuming of starts. Cameron Schwab, the former chief executive of AFL powerhouse clubs Richmond and Melbourne, took to the stage for the final Plenary session address of the 2019 Asia Pacific Turfgrass Conference and in a reserved, deliberately measured tone began to speak. It was quite the contrast from the previous keynote speaker, human behaviour expert Mark Carter, who for an hour had energetically prowled around the stage and at one point had the audience biting into imaginary lemons (you had to be there).

Schwab went deep, very deep and for the final hour of that day you could have heard a pin drop in the Great Hall of the Brisbane Convention and Exhibition Centre. He drew on and described in immensely personal and at times emotionally painful detail some of the most challenging and confronting times he has had to encounter – as a son, as a father, as a CEO – and how each of these had taught him invaluable lessons and made him a better person.

It was inspiring stuff and all in the hall could relate to the many inspiring quotes and take-home messages that Schwab was trying to convey. From the slide showing the iconic photo of St Kilda legend Nicky Winmar pointing to the colour of his skin with the words “We are not going to put up with this crap” next to it, to the photo of indomitable AFL coach Allan Jeans, giving a half-time spray, with the accompanying words “It’s not how you get knocked down, it’s how you get up.” And the simply powerful – ‘It’s not who you are, but who you want to be’.

AGCSA Board member Peter Lonergan perhaps summed up Schwab’s presentation the best: “Cameron had everyone spellbound

– it was extraordinary! As a superintendent we get knocked down verbally and mentally a lot from our clubs and players, but his quote from one of his heroes, Allan Jeans, to him – ‘It’s not how you get knocked down, it’s how you get up’ – is now written on my desk pad. It’s so bloody true!”

## ENGAGED AND ENTHUSIASTIC

It was one of many ‘you had to be there’ moments during this year’s conference which returned to Brisbane for the first time since 2006 and attracted nearly 1100 delegates, exhibitors and trade show visitors.

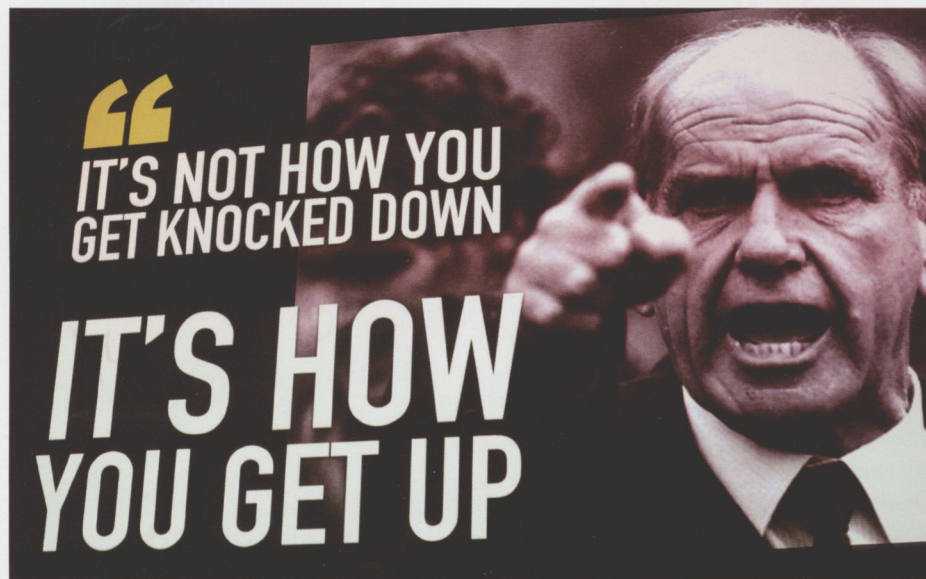
Schwab was one of a hugely diverse lineup of local and international speakers brought together for the conference, one which had a greater focus on non-turf related topics such as leadership, communication and personal development. That said, the calibre of the agronomy components was equally top class.

The expanded Monday workshops, sponsored by AGCSA gold partner Jacobsen, were conducted by three leading figures – the head of Penn State University’s turfgrass

programme Dr John Kaminski, The R&A’s director of sustainability Steve Isaac and Gleneagles course manager Craig Haldane. They were joined by the likes of local experts Dr Chris Lambrides and Dr Andrew Geering (University of Queensland), Graham Stirling, John Neylan, Jyri Kaapro and Les Burdett, as well as a host of superintendents and sports turf managers who willingly talked about their operations and their successes and failures.

For Haldane, who was actually slated to speak at last year’s New Zealand conference but was a late withdrawal after accepting the Gleneagles role, was delighted with the level of participation during his presentations which delved into course management practices, leadership and staff management and managing poor quality water sources.

“This was my first visit to the conference in Australia and the enthusiasm and participation was as good as I have been a part of,” says Haldane. “What really struck me was the hunger for knowledge and sharing of information. When you deliver workshops, the participation from those attending is



*This quote resonated with many during Schwab’s presentation, especially in light of the daily challenges that turf managers have to confront*





*Hands up who attended Craig Haldane's Jacobsen-sponsored workshop on management practices?*

as important, if not more important, than the information being shared. An engaged atmosphere allows everyone to learn and this is exactly what we got, which was brilliant.

"Conferences like this are important, as is supporting your association. They are investing in our industry and by not participating you are missing out on a great opportunity to learn from others, share what you know, getting together with like-minded individuals and making new friends."

## TAKE HOMES

In the weeks following the conference, ATM canvassed delegates to get a feel for some of the take home messages that resonated with them during the week. Here is a snapshot of some of the feedback...

"I learnt to accept the issues that I face in life are way less significant than those that are faced by others. Deal with what you can control and ask for help when you need to. You are important and matter to someone, even if you have trouble seeing or believing it." **Superintendent, Qld**

"Mark Carter was the highlight – simple advice regarding true leadership and flattening the hierarchy. Lead from the front – don't expect others to do what you won't do and have candid conversations with everyone with no ambiguity." **Sports Turf Manager, Vic**

"I enjoyed John Kaminski's agronomy session on the Monday and look forward to adjusting our chemical application practices for better results and efficiency." **Superintendent, Qld**

"This was my first conference having recently taken on a team leader role in the parks and gardens department. It was an extremely productive four days and I took a lot of notes which I summarised and reported back to my management team. It was great to catch up

and meet fellow practitioners. Every day had something different, from John Kaminski's spray workshop on Monday through to the sportsfield stream sessions on Thursday.

I took a lot away from Tuesday's Plenary, with each speaker shining a different light over aspects of my job that I have to deal with each and every day. It made me realise there is always someone to talk to that can help with what you're trying to achieve, whether it's bettering your mental health, feeling purpose or managing your finances. Also growing as a leader through better communication with my team and not just doing the leader's role, but being a leader and sticking by my values and beliefs of what a leader should be. It was a great event." **Council Team Leader, NSW**

"The conference offered us valuable opportunities to meet with experienced stakeholders in turf management and maintenance. It was of great benefit for



*Craig Haldane imparted some of the many lessons he has learnt over the past 22 years in the industry*

my work and further study on turf related issues through the sharing of knowledge."

**Government Dept, Hong Kong**

"I got quite a few 'take homes', but 'the one' for me was on spray nozzle selection. In John Kaminski's Jacobsen workshop he showed nozzle performance on some water-sensitive paper which demonstrated that the nozzles I have been using perform terribly. I have already changed them out!

There were also some great ideas on managing volunteers from Pat Wilson's talk, especially the importance of having everything documented and embracing them to improve the course." **Superintendent, Qld**

"This was my first conference for three years and I really enjoyed the diverse range of speakers, in particular the management stream. In my current role, the understanding and managing of negative publicity is something I could relate to and these were some of the tools I took out of it;

- Relationships are priority No.1;
- Don't take things personally;
- Over communicate – clarity of message;
- Call back – respond in a timely manner.

From a mental health aspect, the one tip I took away from the conference was to ask, 'What does it feel like being you today?'"

**Open Spaces Manager, NSW**

"Being a first time delegate at the conference, I must say I enjoyed the entire week immensely. I got so much out of it in terms of professional development and education, while personally it was awesome to engage with others in the industry.

"The array of speakers was terrific. I spent most of my time in the sportsfields space with highlights being the presentations from John Neylan, Les Burdett and Eric Kinlon. I also really enjoyed the Q&A session with grounds managers. Jason Cunningham, Mark Carter and Cameron Schwab all delivered amazing presentations too and I enjoyed the fact that it wasn't all about turf!

"The take home message for me, and one that really resonated, was just how passionate everyone is in this industry and how challenging it can be. It was a fantastic week and I look forward to getting involved in future events." **Head Curator, Vic**

"Firstly, I learnt that my golf game is in ruins at Brisbane Golf Club. I attended the sustainability workshop on the Monday and Darius Oliver was of special interest to me



commenting on how golf courses around the world make significant changes that seem to only last a few years in some cases. Each speaker at this workshop was excellent.

"On the final day I attended the water management workshop to learn about varying clubs and their success in differing ways to attain water sources. This was very relevant as my club is embarking on trying to obtain more water and storage also. The networking allows us to get a broader picture of contacts and the work they are doing which can be shared. A great week! **Superintendent, Vic**

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"I enjoyed the chance to get together with many old friends and, of course, the opportunity to make new friends at the sessions and in the trade hall. The AGCSA continues to put on a show that meets all expectations. Great sessions and presenters of a very high standard make coming to the AGCSA show a highlight in my diary."

**Superintendent, NZ**

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"I was unprepared for the power of the presentations of Paul Warren and Cameron Schwab – inspiring!" **Superintendent, Vic**

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*Celebrating her birthday, Rae Bonney's talk on mental health awareness was uplifting and thought-provoking*

"As a first-time attendee I found the seminars very informative and useful for my operation here in Fiji. I enjoyed all the talks, especially Dr John Kaminski and Craig Haldane.

I also enjoyed discussions with fellow superintendents and discovered all of our

issues are similar – budgets, staff, turf stress, water quality to name a few. I was amazed what some Australian superintendents can do with so few staff and will be trying some of these strategies here." **Superintendent, Fiji**

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"It was my pleasure to attend the conference and everyone was very nice and made us feel welcome. I was impressed by the article on Bankwest Stadium in the last ATM and Erik Kinlon's presentation, especially in regards to the AirPat technology used. Moreover, we got to know the grower of Zeon zoysia and its SE Asia representative Nigel who said he could arrange a site visit to Singapore Sports Hub. It would be great to share experiences with neighbouring regions as we are going to build a new world class stadium in Hong Kong. It was a truly valuable experience!"

**Government Dept, Hong Kong**

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"Another great conference with a good spread of information available through a wide variety of speakers. Zoysia was a popular topic and the info I picked up was invaluable, something that will definitely be put into practice at our club as we have already started using it."

**Superintendent, Qld**

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"Craig Haldane in the Monday workshop was brilliant – so much experience and knowledge. I will be incorporating his ideas and experiences at my workplace."

**Superintendent, Qld**

"A couple of things that spring to mind;

- Managing volunteers: The importance of having the correct insurance, policies and procedures in place and making them feel a part of the team and that their contribution is valued and appreciated;
- Vegetation management: On a site with a lot of pockets of remnant native vegetation, the allocation of sufficient time and effort to maintain and showcase these important areas to the membership."

**Superintendent, SA**

"I find the opportunity for networking with colleagues during the conference of vital importance. You share the same passion and experience similar issues and it gives you extra support knowing you're not alone.

"I was fortunate to have a discussion with AGCSA CEO Mark Unwin which was very positive. I look forward to seeing the progression of our industry association in the near future."

**Superintendent, WA**

"The Brisbane conference was the most relaxed and casual feeling one I've been to, with the quality and variety of the speakers outstanding."

**Superintendent, Vic**

"Most of this year's seminars attended were in the leadership/management field and I had two of my managers also in the sessions. The take home messages were;

- Lead your staff by demonstration;
- Have personal accountability;
- Develop a culture of competence and willingness to develop;
- Set clear boundaries; and
- Have good quality of communication as this will equal the quality of relationships.

"It reinforced the importance of providing staff with opportunities to grow which is achieved by the support and coaching that we can give."

**Sports Turf Manager, WA**

"This year's conference was one of the best. Cameron Schwab's presentation was powerful and engaging. 'It's not who you are, but who you want to be' and 'It's not how you get knocked down, but how you get up again'. The water management workshop was very informative and practical."

**Superintendent, NSW**



*Penn State University's Dr John Kaminski*

"Having not been to a national conference for a few years, it was great to catch up with industry friends and have a good chat. The Paul Warren and Cameron Schwab presentations showed how if you seek assistance you can overcome the difficult challenges in life that come your way."

**Assistant Superintendent, Qld**

"Some of the take homes for me included how to manage the height and size of our native grass areas. Also how to get seed from the native plants and grow them ourselves. Golfers and boards have put pressure on these areas to be cut out or made much smaller so as to speed up play. Learning how to combine these issues was really helpful. I



*The R&A's director of sustainability Steve Isaac*

also picked up a lot more detailed information on nematodes."

**Superintendent, Tas**

"The opportunity to network with peers is always a highlight. Catching up with those you may not have seen since the last conference, but also meeting new, like-minded people who understand the industry, passion and challenges that we all face is fantastic. Rubbing shoulders with industry leaders and being able to hear the goings-on throughout the turf industry worldwide is invaluable."

**Superintendent, Vic**

"That slide of Cameron Schwab's – 'It's not how you get knocked down, it's how you get back up!' – is a phrase that can be used by superintendents in many different circumstances. From Mother Nature causing us heartache with weather events, to decisions made by boards or general managers which can affect our daily duties.

"We are a very resilient people, sometimes too resilient for our own good, but this line for me just says that when the chips are down don't give up, don't just throw your hands in the air. There is always a solution and getting back up or overcoming a situation will provide great satisfaction."

**Superintendent, NSW**

"Cameron Schwab's presentation was the best I have been to in all the conferences I have attended. Thinking about what's important and instead of going 'faster, higher, stronger' try 'slower, deeper, wiser'. You could have heard a pin drop during that presentation. I also really enjoyed Craig Haldane's workshop on what drives our maintenance practices and instigating change."

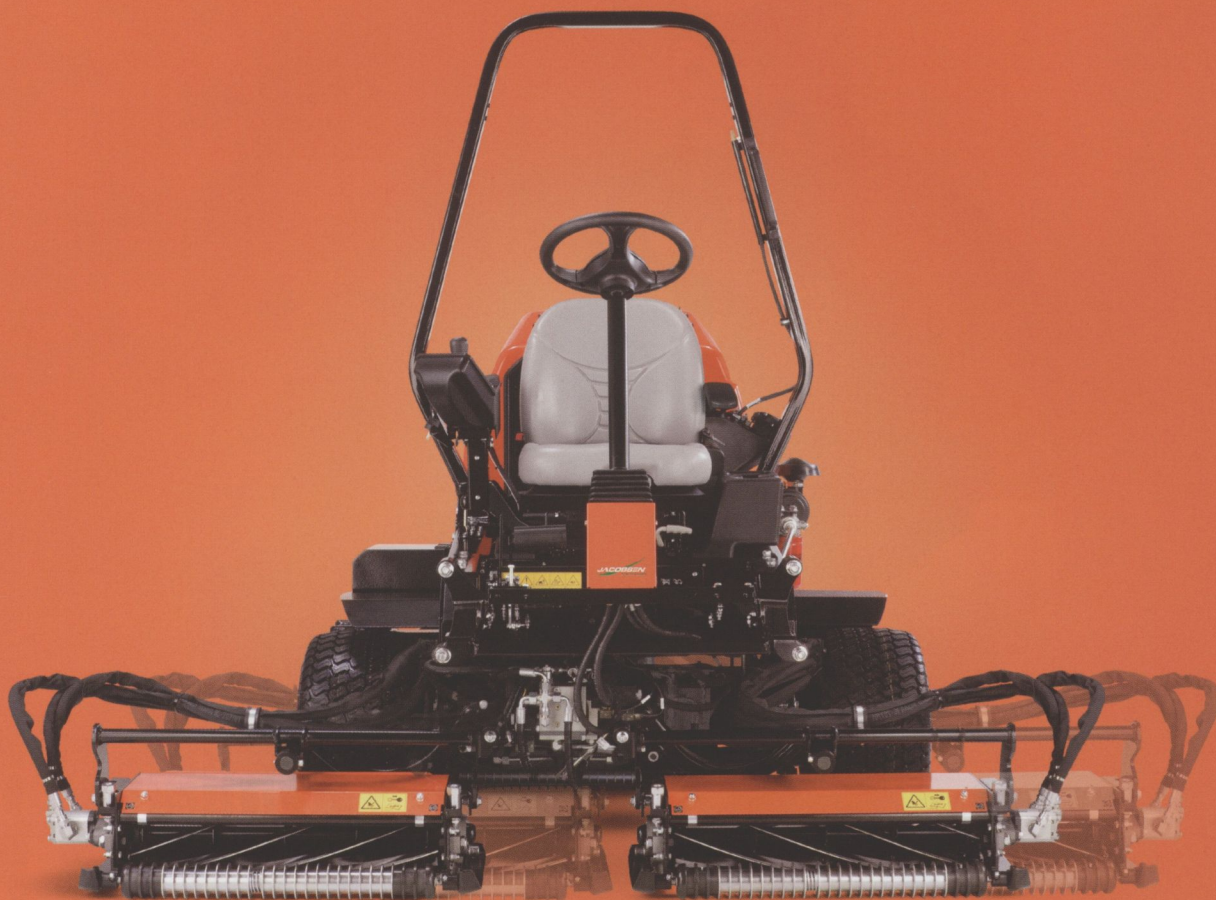
**Superintendent, Qld**

The final word, however, and some feedback that really sums up the essence of what the annual conference is all about, came from Western Australian superintendent Callum Hitching who is based in Karratha...

"For me the whole point of conference week is to take advantage of all the amazing people you get to rub shoulders with and hear their stories. The volume and depth of sharing is amazing and each year it seems to go to another level. This is not only true of the guest speakers, but also the information received and life lessons from other delegates.

"For me, if you don't go out of your way to meet and listen to at least one new person every day during conference week, you've done yourself a disservice."





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AGCSA CHAMPS



# Unflappable Fads

*Can anyone stop Tony McFadyean  
after he cruised to his second  
consecutive AGCSA Golf  
Championship title at Brisbane Golf  
Club in June...*

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WORDS AND PHOTOS: BRETT ROBINSON

*Nedlands Golf Club superintendent Tony McFadyean  
fired a 1-under 71 to collect his second Toro AGCSA  
Golf Championship title in Brisbane*





*One more roll... McFadyean's 170m 7-iron almost aced Brisbane Golf Club's 4th which would have seen him win a Toro Workman utility*

**H**e's a former pro, plays WA pennant and after securing his second consecutive AGCSA Golf Championship title at Brisbane Golf Club in late June looks set to have a mortgage on the coveted Toro Red Jacket for what would seem many years to come.

Nedlands Golf Club course superintendent Tony McFadyean was unflappable en-route to registering a one-under 71 around the Yeerongpilly layout to take out the 2019 event. Out in 34 and home in 37, McFadyean finished a commanding four shots clear of the field, successfully defending the inaugural title he won at a wild and wintry Royal Wellington Golf Club, NZ last year.

The defence got off to a flyer in what proved to be an eventful opening four holes for McFadyean. A birdie on the opening short par five 1st was quickly followed by another on the par four second to be 2-under within 25 minutes. But that momentum ground to a halt after he air mailed the elevated 3rd green, his approach shot landing in the garden bed adjacent to the fourth tee.

After eventually holing out for a double bogey to bring him back to even, an unfazed McFadyean then stepped up onto the par three 4th tee and pulled off the shot of the day. With a Toro Workman utility on the line for a hole-in-one, McFadyean's 170m 7-iron went within a role of dropping into the hole. Had it fallen it would have been McFadyean's ninth career hole-in-one. The tap-in birdie had him in the red again and with another birdie on the par five 9th McFadyean turned a very healthy 2-under.

Three holes later that became 3-under. His tee shot on the par five 12th caught the downslope and ended up 321m, before he proceeded to arrow his approach shot into the flagstick. The eagle putt fell short, but a

birdie was enough to effectively secure the title. Despite a bogey on the penultimate hole (after his tee shot found the gaping right hand side fairway bunker), McFadyean ended up cruising to victory over his WA compatriot Michael Dennis and Barwon Heads' Adam Lamb (both 75).

The hard-luck story yet again was AGCSA president Brett Balloch. The Anglesea Golf Club superintendent has racked up a number of second places over the years and after a 1-under 35 front nine was seemingly well in contention. However, Brisbane's trickier back nine came into play and a horrid inward 44 scuppered any title hopes Balloch harboured.

He wasn't alone, though, and his Victorian counterpart and playing partner Adam Lamb suffered a similar fate. Lamb, also a previous

championship runner-up, was out in 35, but four bogeys on the back nine saw him finish 3-over. Coral Cove's Brett Woodward, the 2016 champion, was the only player to buck the back nine trend, shooting a one-under 35, but it was too little too late after an outward journey of 41.

McFadyean now joins a gaggle of players to have pulled on multiple Red Jackets and when the championship heads to Melbourne in 2020 he will be looking to join an elite group to have won three titles. Former Sawtell Golf Club superintendent Trevor Ridge won in 2004, 2005 and 2010, while former Glenelg Golf Club superintendent Daryl Sellar's record of three consecutive championships (2001-2003) could well be equalled.

McFadyean helped anchor the WA team for its second consecutive state teams title, combining with Michael Dennis (Royal Perth GC), Idris Evans (The Western Australia GC) and Darren Wilson (Wembley Golf Complex) to finish five points ahead of the Queensland team which was comprised of Jason Bushell (Rowes Bay GC), Steve Milgate (Beerwah GC), Woodward (Coral Cove) and Peter Fraser (Hervey Bay GC).

Royal Queensland superintendent Adam Mills took home the stableford title, the 17-handicapper posting 35 points to win the trophy by a point from Milgate and Trent Jones (Coffs Harbour GC). Murrumbidgee Country Club superintendent Cambell Griggs won the Nett trophy on countback from McFadyean and Lamb. Lamb didn't go home empty handed, winning the longest drive competition, while the unlikely Clint Raven (Yarra Yarra GC) jagged nearest the pin on the 180m 13th, his shot finishing 26cm from the cup. 🏌️



*The sole female in this year's AGCSA Championship field, Royal Melbourne's Gerri O'Callaghan gave her playing partners a few lessons during their round, the three-handicapper nailing this birdie putt on the 16th*



*Coolangatta & Tweed Heads Golf Club  
superintendent Peter Lonergan was  
recognised for his many years of service  
to the AGCSA, VGCSA and GCSAQ by being  
awarded AGCSA life membership during  
the recent 2019 Asia Pacific Turfgrass  
Conference in Brisbane*



AUSTRALIAN GOLF  
COURSE SUPERINTENDENTS'  
ASSOCIATION



# Life achievement

*At the recent Brisbane conference, Coolangatta & Tweed Heads Golf Club superintendent Peter Lonergan became just the second person to be bestowed life membership of the AGCSA.*

I have mentioned elsewhere that receiving life membership of the AGCSA was a humbling experience and a complete shock. I doubt I will ever forget being introduced onto the stage at this year's Syngenta Gala Dinner by current AGCSA president Brett Balloch and it is a moment and an achievement I will always treasure.

My journey in the industry started in 1975 at Latrobe Golf Club in Melbourne where I was a member. I worked the summers shifting sprinklers in a pair of footy shorts and nothing else – that's right, barefoot on a motorbike! In 1977, my father was stand-in general manager and I asked him if the club would consider putting on a turf apprentice.

After applying to the committee, I was duly appointed and started duties in November that year, with my apprenticeship starting the following February. Glenn Cain was my boss and I had a lot of fun at Latrobe and have many fond memories. I read somewhere once that the drinking culture of your first place of employment has a large bearing on your own drinking habits, so Glenn and the boys have a lot to answer for!

My trade schooling was undertaken at Oakleigh Tech and was also a lot of fun. I must admit though the only thing I really tried hard at was to get a date with one of the two blond female nursery apprentices (unsuccessfully) and to make sure I finished everything so I could get out early.

In March 1981, while still an apprentice, I applied for and was appointed curator at Colac Golf Club where, due to the start of the 1982/3 drought and the subsequent lack of water, I only stayed until March 1982. I look back at some of the things (experiments) I did on the course there and am amazed I kept the job. One such experiment was oversowing a green with 'Regal ryegrass' in an attempt to get a grass cover – it worked too!

One thing of note, which rarely happens in the profession these days, is that I went to Colac for the Award wage and worked some very long hours with no overtime. The job was always planned in my mind to be a springboard to a metropolitan job and I would have done it for nothing just to get the experience and improve my skills.

I reluctantly left Colac and started as assistant to Bruce Grant at Victoria Golf Club in March 1982. On arrival, Bruce informed me that he was taking two weeks leave immediately and that we had better take a look around so I would know what was happening. On the following Monday I realised that I hadn't met all the staff and wasn't sure of all their names, but struggled on regardless.



*Loneragan (left) becomes just the second person to receive AGCSA life membership and follows in the footsteps of Doug Robinson (right) who was also a past superintendent at Coolangubra & Tweed Heads GC*

In 1984 Bruce resigned and I was informed by the club that I would “look after the course until we appoint someone else”. I politely informed them that I wouldn’t be doing so and that if I wasn’t good enough in the present then I would leave immediately. To my surprise I was appointed the next day and so started 12 years as superintendent which unfortunately finished on a rather acrimonious note in 1996.

## GETTING INVOLVED

It was during my time at Victoria that Peter Sawyer urged me to get involved with the Victorian Golf Course Superintendents Association (VGCSA) which is a decision I will never regret. It was a period of great change not only for the VGCSA but also the national body and the profession itself, including the introduction of the title 'course superintendent'.

Many other things were changed during that time, including the running of VGCSA meetings. In the early 1980s, trade members were required to leave the room while we discussed our issues with them. New members were also required to leave the room while their application was discussed.

The new members were generally brought back in within a few minutes, but I remember one occasion where the prospective new member waited for over 30 minutes at a meeting at Yarra Yarra Golf Club – that prospective member was yours truly!

My time on the VGCSA committee was made a lot easier with the likes of Peter Sawyer, Col Winterton and our various committees continuing on the great work by predecessors such as Ray Keane and Bill Powell. A lot of our own time and money was devoted to the running of the association and we all could not have done it without the great support of our families.



In 1999 I moved to Coolangatta and Tweed Heads Golf Club and set about working hard and didn't really get involved with the Queensland association until 2003 when Jeff Gambin suggested I should nominate for the committee. I was unable to attend the AGM but was informed that I had been elected secretary which in those days was the job you didn't want!

I had a great 12 years on the committee and formed some friendships that will last forever with some of the great characters of the industry. People such as Rod Cook, Jon Penberthy, Dave Morrison, Justin Kelly, Brian Cox and stalwart Barry Cox were a great crew to work with and we set about revitalising the association and had some good fun along the way. One of the great benefits of being on the AGCSA Board is that you have the staff to do the work for you which helps enormously, whereas in the state association environment it's all hands on deck.

## NATIONAL FOCUS

It was back in the early 1980s that a desire was shown around the country to establish a national association, which was achieved in 1981. At the Surfers Paradise conference in 1986, it was decided that a new incarnation of the AGCSA be formed with WA's Niel Adams and Trevor Strachan elected as president and secretary. That was back in the day when each state would put forward two delegates who made up the AGCSA committee.

Prior to this, there was a lot of discussion (often heated) about us becoming a trade union which some states were vehemently for and some equally against. A number of friendships were soured during this time which is a great shame as everyone had the good of our profession at heart.

This phase of the association lasted until 1991 when, after much discussion, it was felt that bringing 12 delegates together for a meeting was too draining on the already small financial resources available and that a streamlined structure was required.

So a meeting was convened at Metropolitan Golf Club in Melbourne and the 'new', fully incorporated association was formed. Doug Robinson was elected president with Peter Sawyer, Wayne Dale and Jeff Lane as directors. This sounds like a very simple process, but I can assure you that it didn't 'just happen', and took many long hours of hard toil from all involved.

The hard work and toil certainly didn't stop there and the new board, assisted by some of the former state delegates, set about establishing the new association. It soon became apparent that we would need someone to be employed to help run the association and a part-time secretary was employed to help out. Fast forward 12 months and Euan Laird was appointed as general



*Lonergan with AGCSA president Brett Balloch. Lonergan has been on the AGCSA Board since 2011, including two terms as president from 2012 to 2016*

manager and what happened during his tenure was simply mind-boggling.

Those formative years laid the foundation for what we enjoy as the AGCSA today. Incredibly successful conferences, our own magazine, AGCSATech, our own staff and a dedicated office set the tone for what has been a remarkable journey that shows no sign of slowing.

The AGCSA members who have served on the Board over the years and the staff (many long-term who are still with us today) deserve the plaudits for the dedication to see the job through. If you ever visit AGCSA HQ in Clayton, it is hard to believe that the first office was literally a cupboard at the then Australian Golf Union offices.

## SUPER SUCCESS

Longevity in the superintendent profession can be tenuous at the best of times. ATM asked Peter Lonergan to proffer a few tips for success for those just starting out...

1. A quote from Henry Ford – "It's not the employer who pays wages – he only handles the money. It's the product that pays wages."
2. Keep your eyes and ears open and remember that on a golf course there is almost always someone watching you, so act professionally.
3. Always question if something can be done better – keeping in mind resources available.
4. Don't be a 'yes' man. If resources are slim, be prepared to say 'no' to the myriad of requests for work that you will get. Don't bury yourself.
5. Play golf, particularly at your own course, and see it from the golfers' perspective.

## PROFESSION AT HEART

The other people to be recognised as part of our growth are the superintendents themselves who have helped lift the image of our profession to where it is today. In no particular order but Graeme Grant, John Spencer, Trevor Strachan, Peter Williams, Peter Sawyer, John Odell, Dave Warwick, Richard Forsyth, Gary Dempsey, Mark Parker, Michael Bradbery and many others have helped lift our stature in the game of golf. Obviously these are the high profile guys, but they have all had our profession at heart.

I remember first meeting Royal Melbourne superintendent Peter Williams at a VGCSA day at Northern Golf Club in 1979 when I was paired with him on the golf course. I had never been so nervous, but he turned out to be 'just a normal bloke' and became a great mentor for me. I had a conversation with a couple of younger supers at a conference a few years ago who were amazed that Royal Melbourne's Richard Forsyth was also 'just a normal bloke' and great to chat with. This is in my opinion one of our strengths, that no matter who you are or what club you are at we are always willing to help each other out.

I have been involved in the associations now for over 35 years and look back on it all very fondly. The people I have met around the country and indeed the world have made it an incredible journey, not to mention the golf courses I have been privileged to play. I would strongly recommend younger course superintendents to get involved with their association as it is a great character builder and helps you keep your finger on the pulse of just what is happening in the industry.

I didn't set out on my journey for any personal gain, but AGCSA life membership is something I will hold very close to my heart and will be forever grateful. 🌳



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# TORO Toro Turf Tour

**COURSE:** OCEAN SHORES COUNTRY CLUB, NSW **SUPERINTENDENT:** SHANE HEANEY

*The Ocean Shores Country Club brains trust – course superintendent Shane Heaney (left) and assistant superintendent Troy Makin*



**T**ake a drive along the northern reaches of the NSW coastline and you'll come across numerous picturesque seaside hamlets tucked away just off the M1 highway. One of those, about 30 minutes south of Coolangatta and 15 minutes north of Byron Bay, is the township of Ocean Shores.

Home to a population of around 6000, the undoubted centrepiece of this vibrant coastal community is the 18-hole championship length Ocean Shores Country Club, designed and constructed back in the early 1970s by former Australian professional Bruce Devlin and US course architect Robert von Hagge.

Ocean Shores is home to superintendent Shane Heaney who has been custodian there for the past eight years, his first posting in the big seat. Heaney's turf management career started three hours south at Coffs Harbour Golf Club as an apprentice, before he headed to Sydney for a four-year stint as a qualified greenkeeper at Bonnie Doon Golf Club. Moving up to an irrigation tech role there,

Heaney then moved to Scotland and worked two summers at the prestigious Mortonhall Golf Club, the oldest golf club in Edinburgh.

Returning home, he joined the crew at Bonville Golf Resort just outside of Coffs Harbour. Six months after starting he was elevated to assistant superintendent, one of two, and for the next three years helped superintendent Chris Neal in the maintenance of one of Australia's vastest and most visually stunning layouts.

## SIZEABLE JOB

Arriving as the new superintendent at Ocean Shores in 2011, Heaney literally had a big job on his hands. The golf course sprawls across 90 hectares and measures 6350m off the tips. Somewhat uniquely, the routing comprises six par threes, six par fours and six par fives, with golfers never playing the same par consecutively.

One half of the course borders a marine reserve – the clubhouse is literally less than



*Ocean Shores is currently 15 holes through a full irrigation system upgrade*





*Above: The lightweight and manoeuvrable Reelmaster 5510 fairway unit makes short work of Ocean Shores' expansive couchgrass fairways*

700m as the crow flies from the coastline, with the tidal Marshalls Creek wending its way along the course's northern boundary – while the other half borders residences which form an amphitheatre around its southern and western fringes.

As if to match the expansive nature of the site, the greens too are sizeable – all 1.4 hectares of them. Ocean Shores currently has 12 Tifdwarf couchgrass greens and seven newer TifEagle couchgrass greens, the result of a conversion project that has been put on hold for the time being. There are also two Tifdwarf bowling greens that the club manages, which adds another 3000m<sup>2</sup> to the total. Over the past eight years, fairways and tees on 15 holes have been transitioned over to Wintergreen couchgrass, with the remaining three holes comprising a mix of warm-season varieties.

Helping Heaney to manage the course, which pumps through 35,000 rounds a year, is a crew of seven. Troy Makin has been his right hand man for the past 4.5 years and also looks after the two bowling greens. The remainder of the crew is made up of a senior greenkeeper, two groundsmen, two apprentices and full-time turf technician Jim Stewart.

Heaney employs two Toro Greensmaster® 3250-D triplex mowers to trim the greens four times a week at 3mm pretty much year round. The fairways and surrounds are cut twice a week in the summer and once in winter, with two Toro Reelmaster® 5510s making short work of around 14ha of closely mown green couch. A Toro Groundsmaster® 4700-D and Groundsmaster® 4000-D work in tandem to rip through a combined 25 hectares of rough once a week, while two Toro Sand Pro® 3040s take care of an impressive 1.5 hectares of bunkers.

## GREATER EFFICIENCIES, PERFECT PRESENTATION

With the golf course such a focal point of the thriving Ocean Shores community, presentation is paramount and for the past 12 years the club has relied upon Toro to take that aspect

of its operations to the next level. It was back then that the club began its first operating lease for mowing equipment with the AGCSA Platinum Partner, something which Heaney has continued to refine since taking over the reins.

While effectively having a shed full of relatively new equipment upon arrival, Heaney could see some limitations. He had just one Reelmaster® 5610 to mow 14ha of fairways and two Greensmaster 3250-D greens mowers. With the assistance of Toro reps – initially Ben Cavanagh and then Ben Marshall – Heaney set about tweaking the composition of his fleet to suit his course management operations.

He swapped out the 5610 for two lightweight and more manoeuvrable Reelmaster 5510s, doubled the number of Greensmaster 3250-Ds and, importantly, added a Multi Pro 5800 sprayer to the arsenal. Having the flexibility to restructure, with minimal impact on expense, has resulted in Heaney now having a fleet that not only gives him more bang for his buck, but has created greater workflow efficiencies (important with a small crew) and a significantly improved standard of course presentation.

"Ben (Marshall) was instrumental in brainstorming a way that we could fit more in without smashing the budget," says Heaney. "What we did was change the years up; we stretched out the broad acre mowers over

*Below: With 1.5 hectares of bunkers and a small staff, Ocean Shores' two Sand Pro 3040s play a huge role in improving efficiencies and course presentation*



*Below: The Multi Pro 5800 has been a game-changer for Heaney with its ability to spray broad acre areas far more efficiently than in the past*





# TORO Toro Turf Tour

**COURSE:** OCEAN SHORES COUNTRY CLUB, NSW **SUPERINTENDENT:** SHANE HEANEY



*The Groundsmaster 4000-D (above) and 4700-D (left) are the real workhorses of the Ocean Shores fleet, cutting 25ha of rough area between them each week*

five years and shrunk our greens mowers to three years which enabled us to make our fleet bigger.

"Having the two 5510 fairway mowers made a difference straight away. All of a sudden we could mow the fairways twice a week, including all the surrounds. Basically having two of them in the shed with such a big area to cover, and being able to mow from the start of the fairway right up to the green, has been a huge timesaver.

"Going from two Greensmaster 3250-Ds to four means we now have two designated for

greens and two for tees and collars. With the size of our greens and the fact that golfers tee off both the 1st and 10th each day, having the two 3250-Ds means we can split them and stay in front of the field without a problem.

"We also have a full set of verticutting units for the 3250-Ds which means we can get out regularly and dethatch during the growing season. It's basically an eight-hour day for us to get over 1.4ha twice with our verticutting units, but having the equipment to now be able to do that has made such a difference to the quality of the greens.

"I love the 3250-Ds and we are more than happy to continue with them. I know in some way they have been superseded by the TriFlex, but you cannot beat the 3250-Ds' user comfort, reliability, efficiency and power. There is never any lag in power, especially when we are verticutting. The finish is always clean and the quality of cut is never an issue; it's just a great all-rounder."

The big game-changer, however, has been the addition of the Toro Multi Pro 5800 sprayer, a far cry from the old tow-behind Hardi spray unit Heaney and his crew had to persist with. Boasting a 1100L capacity and three different nozzle types, Heaney admits that spraying greens, tees and especially fairways is now actually pleasurable.

"The inclusion of the Multi Pro 5800 has made a massive improvement to the quality of our playing surfaces," continues Heaney. "When I first started we were unable to spray foliar fertilisers or pesticides on broad acre areas effectively. Now with the Multi Pro 5800 we are able to basically spray wall-to-wall and ensure our applications are precise. Programming it is so easy – everything is at your fingertips and having the ability to pre-set application rates helps speed up the process."





*Ocean Shores recently upped its fleet of Greensmaster 3250-Ds from two to four – two for greens and two for tees*

## WATER WHERE HE WANTS IT

The efficiencies don't just stop with the Ocean Shores machinery fleet and over the past seven years the club has also gradually rolled out a full irrigation system upgrade. Fifteen holes have been completed in-house to date, with the remaining three to be finished in 2020.

Prior to the upgrade, the course only had automatic irrigation to greens and tees, making it extremely difficult to effectively manage their broad acre areas. The new system is a single row decoder with Toro SitePro® central control, with FLX55 Series sprinklers used on fairways.

The greens have been upgraded with efficient valve-in-head FLX35 Series sprinklers.

"The new fairway irrigation has made such a difference to the quality of the turf," says Heaney. "We now have the ability to apply fertilisers, pre-emergent herbicides and wetting agents to our surfaces and water them in efficiently and effectively, which has seen a vast improvement to their condition for members. Also, with our water sources being finite, having the valve-in-head control allows us to programme efficiently and put the water where we need it to go."

"You already know that with each Toro machine you are getting what you pay for – quality of cut, consistency, reliability," says Heaney. "But one thing that is really important I find is the fantastic relationship between my turf technician Jim and the Toro technicians."

"If there are any issues with a machine and we can't fix it, Toro is straight onto it and keen to work out what's going wrong and help out. They have never said 'no' to us on any warranty claims and the reps are fantastic and always there for a phone call."

"And it's not just the support of us. It's the way Toro supports the industry as a whole, such as through the Apprentice of the Year Award. They seem happy to give back and are very generous in doing so – they even sponsor our Ocean Shores Pro-Am. It's those little things which make a significant difference and demonstrates their commitment." 🙌

## OVERALL PACKAGE

Ask Heaney what makes Toro the right fit for his operations and he could mount a strong case for all the above, but overall it's the relationship he, his crew and the club has with Toro which makes Ocean Shores remain red.



*Toro plays an invaluable role in helping maintain Ocean Shores in peak condition year round*

## OCEAN SHORES' RED SHED

### OPERATING LEASE

- 2 x Greensmaster® 3250-Ds (3yrs)
- 2 x Reelmaster® 5510s (5yrs)
- Groundsmaster® 4000-D (5yrs)
- Groundsmaster® 4700-D (5yrs)

### FINANCED MACHINES TO OWN

- 2 x Greensmaster® 3250-Ds
- Multi Pro® 5800
- 2 x Sand Pro® 3040s
- 2 x Workman® MDXs

### IRRIGATION

- Toro SitePro® Central Control
- Sprinklers: FLEX800™ Series - FLX55 (fairways), FLX35 (greens/surrounds) and TS90 (tees)

### ON THE WISH LIST...

- Reelmaster® 3550-D
- Groundsmaster® 3500-D





*The Queensland Cricket trial was established in May 2017 at Allan Border Field to compare new turfgrass varieties under ground management conditions. Pictured middle is the TifTuf wicket, with OZ TUFF on the left and Legend on the right*

# On the right wicket

*Matt Roche from Australian Sports Turf Consultants writes on a two-year trial of new couchgrass varieties by Queensland Cricket to assess their suitability for community clubs.*

In May 2017, Queensland Cricket grounds manager Jarrod Bird embarked upon a case study to trial and compare new and improved turfgrass varieties for use on cricket wickets.

The trial, supported by Queensland Cricket, was initiated to help provide independent advice on new turf varieties to community cricket clubs who are re-establishing or building a new cricket wicket or block. Gone are the days of recommending 'common couch' because what that is exactly these days is debatable.

Following input by Australian Sports Turf Consultants (ASTC), Bird chose five different grasses to trial. These included;

- Three green couch (*Cynodon dactylon*) varieties Grand Prix, OZ TUFF and Legend; and
- Two hybrid couch (*C. dactylon* x *C. transvaalensis*) varieties AgriDark and TifTuf.

The trial was established in May 2017 at Allan Border Field in the Brisbane suburb of Albion. The unreplicated trial was established within Ray Lindwall Oval to compare new turfgrass varieties under ground management conditions, while also providing additional centre wicket (not cricket net) practice for elite cricketers that utilise the facility.



*Preparation of the final wicket to be planted with OZ TUFF by Queensland Cricket staff in May 2017*

The five cricket wickets were constructed by Rick Shenton of Premier Greenkeeping to Queensland Cricket specifications with the exception of not having a road base layer as sandstone was struck during construction. The wicket soil was from Bruce Raleigh of Totally Cricket Wickets (Ebenezer, Qld) which is usually 73-82 per cent clay composition.



*OZ TUFF in the foreground and AgriDark far right on 20 September 2018*



The in-field study undergoes the same turf management conditions which would be seen across other cricket facilities (e.g.; mowing, fertilising, irrigation and rolling). The only difference is to when each pitch is prepared for use. At present the blocks are utilised by elite cricketers every two weeks.

## FINDINGS

Observations made to date by Queensland Cricket staff on varietal difference during establishment and preparation include;

- **AgriDark:** Was fast to establish, similar to TifTuf. The hybrid variety has shown to produce less thatch than the other varieties trialled, it has improved winter growth and colour, recovered very well in the footmarks and high wear areas and has had very good lateral growth across the wicket soil.
- **Grand Prix:** Was slow to establish like OZ TUFF and does not have strong lateral growth when compared to AgriDark. Recovery was average.
- **Legend:** Was also slow to establish and in need of supplementary fertiliser (hungry) even when all five varieties were fertilised at the same time. Legend also seemed to have different variants throughout the turf and had the appearance of a patchwork quilt.
- **OZ TUFF:** Was slow to establish and produced a high level of thatch. The pitch was not able to be used for a period of six months due to poor establishment and ability for the wicket to be prepared. However, after six months, once the variety was well rooted it performed very well. The variety was heavily scarified in Autumn 2019 and it will be interesting to watch its progress come the 2019/20 summer.
- **TifTuf:** Was fast to establish like AgriDark. The deck containing the TifTuf variety was the first to be prepared as an important trial for its use within The Gabba (2017 season) following the Adele stadium tour and placement of the stage on the field. The variety performed very well yet was slow to recover particularly within the bowler's footmarks.

Queensland Cricket had to undertake some repair work to the AgriDark wicket block shortly after construction due to the depth of the cricket wicket soil in one area. After repair work in September, turf replacement was also undertaken using washed AgriDark supplied by All Turf Solutions.

Bird was surprised that AgriDark was very fast to establish and was ready for preparation within 2-3 weeks and could have been played



on within four. Plugging of AgriDark turf within the bowlers' footmarks has also shown to be successful with the variety. Commonly, other turfgrass varieties do not root or take sufficiently and are quickly torn out.

In June 2019, ASTC collected multiple soil samples from each of the five turfgrass varieties to undertake comparative organic matter testing of samples 0-20mm beneath the surface. In-house testing was conducted by ASTC consultants using the loss on ignition (LOI) method which is by a blast furnace set at 650 degrees Celsius. LOI is a simple industry-accepted method for estimating the content of organic matter and carbonate minerals in the rootzone.

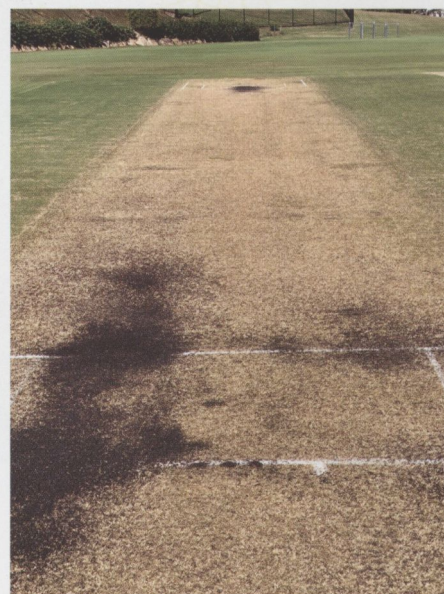
LOI is converted to estimated organic content using the following formulae provided by Ground Science:

$$\text{Estimated organic content (EOC)} = \text{LOI} - ([\text{estimated}] \text{ clay content} \times 0.09)$$

Test results identified from the representative samples collected, the wicket soil, as determined by an estimated clay content of 82 per cent, contained the following amounts of LOI and estimated organic content (EOC) within the turfgrass wickets at the time of testing.

| Turfgrass Variety | LOI (%) | EOC (%) |
|-------------------|---------|---------|
| AgriDark          | 15      | 8       |
| Grand Prix        | 15      | 8       |
| Legend            | 12      | 5       |
| OZ TUFF           | 11      | 4       |
| TifTuf            | 15      | 7       |

The study has been well received by community cricket clubs and players who use the world-class facilities located at Allan Border Field. It not only supports player development of elite cricketers throughout Australia, it also helps to inform grass root



*The trial was initiated to help provide independent advice on new turf varieties to community cricket clubs who are re-establishing or building a new cricket wicket or block*

community cricket clubs to help increase club standards for all players.

For further information about this trial please contact Jarrod Bird. For more details on the new couchgrass varieties used, visit [www.TurfFinder.com](http://www.TurfFinder.com).

*Wear tolerance and recovery within the bowlers' footmarks is critical. Photo is of the TifTuf wicket block in early June 2019*







# Black gold

*Gary Beehag looks at some of the new cricket wicket soils that have hit the marketplace recently and writes of the importance of knowing their source and properties before deciding to use them.*

*When purchasing unfamiliar cricket wicket soil, be aware of its source and physical-chemical qualities. When topdressing or rejuvenating an existing wicket, know the nature and properties of the underlying clay soil*

**C**ricket wicket soils are unique turfgrass growth media. Generally speaking, cricket wicket soil sold in Australia is a mono-soil. That is to say, each soil type is produced using one source of clay soil as opposed to many construction sands which may be blends of more than one sand source.

Technically called vertisols, because of their high shrinkage/swelling and cracking behaviour, Australian cricket wicket soils are primarily sourced from privately-owned land. The precise location and production of many cricket wicket soils remains somewhat secretive to their suppliers. Typically, the cricket wicket soil is mechanically excavated from beneath a vegetated surface, screened to size and possibly crushed before storage.

Some sporting facilities in country regions are fortunate in obtaining their cricket wicket soil from within their own property. In NSW and Victoria in recent years, additional and alternative sources of clay soil for cricket

wicket construction and topdressing has become available, thus providing more choice in the marketplace. However, some homework is required by clients given the fact that physical characteristics of wicket soils do not always provide all of the answers to the performance of unfamiliar soils.

## HISTORICAL BACKGROUND

In Australia, the earliest written reference of using cricket soil ("black soil and manure") dates from the late 1850's in Victoria. The earliest published, science-based study of Australian cricket wicket soils dates from the early 1930's. The specific reasons prompting the selection of Australia's earliest and two most famous wicket soil types – Bulli soil from Wollongong south of Sydney (NSW) and Merri Creek soil from Beveridge north of Melbourne (Victoria) – is forever lost in time.

From the early 2000s, several sources of commercially-available cricket wicket soils in NSW became unavailable (e.g. Berry, Queanbeyan and Wamberal), while





*Typically, cricket wicket soil is mechanically excavated from beneath a vegetated surface, screened to size and possibly crushed before storage*



PHOTOS: GARY BEEHAG

new or alternative sources (e.g. Bungonia and Coolac) have become available. One additional source of clay soil from the Grampians in Victoria has also recently become available.

The author is aware of the geographic locations of where the original Bulli and Merri Creek soils were first excavated, but sadly are no longer available from their original sites. Nonetheless, black-earth, cracking clay soils from other locations in the Merri Creek Valley have been excavated over the years; some unscrupulously sold in small quantities to

unaware clients in Victoria. In NSW, black-clay soil has been excavated from further sites around Wollongong.

Needless to say, the physical-chemical characteristics and consistency of these additional soils vary to lesser or greater extents from the original source.

### CURRENT WICKET SOILS

Basic details of the chemistry, particle size distribution and organic matter content of a range of commercially available cricket wicket soils has been published. Further, the

historical development of cricket wicket soil assessment, albeit based on certain false premises and some non-validated laboratory methodologies (e.g. cracking pattern) has been documented.


In recent years, alternative sources of black-earth, high-content clay soils from privately-owned land in southern NSW is being successfully marketed (Table 1). The colour of cricket wicket clay soil ranges from dark grey to black, depending on source. Soil colour is largely governed by clay and organic matter contents.


TABLE 1. TYPICAL VALUES OF NEW CLAY SOIL SOURCES

| Parameter          | Source A | Source B |
|--------------------|----------|----------|
| Clay (%)           | 70       | 47       |
| Silt (%)           | 19       | 24       |
| Sand (%)           | 11       | 29       |
| Organic matter (%) | 2        | 1        |


Information of the basic chemistry (i.e. pH and salinity), texture (i.e. sand, silt and clay) and organic matter content allows clients to make an informed decision when purchasing unfamiliar cricket wicket soil. Similarities, as well as differences, based on accredited-laboratory test results of a current and unfamiliar source of cricket wicket soil can be compared. However, acceptable performance of a wicket soil for a traditional Test match cannot be predictably assessed from measuring soil texture and organic content alone.

On relatively new cricket tables the source, supplier and basic physical-chemical properties of the wicket soil is probably known. In stark contrast, the source, depth and basic properties of clay soils beneath many older cricket tables, particularly in country regional areas, may be unclear even unknown.





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*Examples of different wicket clay soil shrinkages and cracking*



For many of these older turfgrass cricket wicket tables, the soil currently used for topdressing or re-levelling purposes is unlikely to be from the same source as used for the original construction soil. Do you know of the nature and source and have a laboratory analysis of the original construction soil beneath your wicket?

A common question asked among cricket curators and others concerns the textural thus physical compatibility of different sources of wicket soils (see photo above). This question arises for topdressing purposes or when re-levelling. Does this question infer that different sources of high-clay content soils are by their nature physically incompatible causing delamination at their interface and, if so, how can the degree of compatibility or, alternatively, incompatibility be objectively measured?

Physical engineering measurements of plasticity (range of water content over which clay soils remain in a plastic state) and coherence (ability to hold together when dry) of clay soils is widely practiced in civil engineering. In Great Britain, where the clay content of their wicket soils is around 30 per cent, the "motty" or Adams/Stewart Soil Binding test adopted to measure soil strength has been modified in an attempt to quantify compatibility between different clay soil types. Differences in shrinkage/swelling and cracking behaviour between different clay soils has been partly attributed to their clay content and mineralogy.

Here in Australia, any investigations conducted into physical compatibility between different cricket wicket clay soils has not

been published. The author has observed various degrees of shrinkage and cracking of unreplicated cricket soil mixtures following their blending in small quantities when dry and crushed then remoulded in a moist state.

Some previous commercially-available cricket wicket soils have been the result of uncontrolled blends between two different clay soil types. Nonetheless, many cricket wicket curators have produced acceptable wickets when using a clay soil different from the original construction type for their topdressing and surface rejuvenation purposes. The key being to remove from the surface all partly-decomposed organic matter accumulation and loose soil.

## WICKET SOIL RECYCLING

In an environmental and material recycling age, the question arises of what to do with cricket wicket soil excavated from an existing wicket table. Does this provide an opportunity for the beneficial re-use of the existing soil?

As previously mentioned, the physical-chemical properties, source and consistency of wicket clay soil beneath very old wicket tables, particularly in regional areas, is often unknown. However, while the recoverable volume of existing wicket soil beneath old wickets may be significant on large-sized tables, its physical quality and consistency always remains questionable. Inevitably, the organic content increases because of only partial decomposition of plant tissues over time in old wickets.

In some cases where the nature and origin of the wicket soil is known and its field performance is acceptable, any excavated soil

could be salvaged by the cricket facility for potential re-use at the same site. Of course, any future use will require the salvaged soil to undergo processing and storage.

Excavation and salvage of wicket soil from old wicket tables presents marketing and legislative issues for cricket wicket soil suppliers. Nevertheless, there are numerous examples of excavated wicket soil having been excavated and stockpiled in all sorts of locations by clients in urban and suburban regions. While feasible, the economic benefits of salvaging and re-processing excavated soil require assessment.

Soil suppliers are unlikely to want the excavated product for re-sale in view of its unknown nature, let alone questions about soil purity, quality and consistency. Further, what of future couchgrass contamination from the re-growth of live rhizomes in the salvaged soil? Marketing of recovered wicket soil of unproven nature and source against a proven 'virgin' soil may prove problematic. Furthermore, there becomes the issue of how to physically change and stockpile the excavated material into a usable product then store for future use.

Some take home messages. When purchasing unfamiliar cricket wicket soil, be aware of its source and physical-chemical qualities. Request a copy of the most recent laboratory test report. When topdressing or rejuvenating an existing wicket, know the nature and properties of the underlying clay soil. If unknown, have a physical and basic chemical test conducted on at least one sample. As always, let the buyer and user beware. ♣



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*As well as the direct costs relating to a workplace incident, there are many unseen indirect costs, such as loss of production stemming from worker distraction and lower morale*

# The numbers don't lie

*Compliance expert Terry Muir asks when was the last time you went to your manager with an idea that would save money, jobs, lives and limbs?*

I've lost count of the number of times I've heard this old chestnut – "Our sports turf maintenance operations just chew up cash, it's nothing but a cost centre." So managers look at what to cut and what to keep and in too many cases, environment, health and safety (EHS) ends up in the "cut" options.

The reason for this is undoubtedly due to the basic misperception of what being safe is – if everything goes as it should, it is business as usual with no accidents and no injuries, no regulator investigations, no laws to comply with and no need to make that difficult family telephone call.

However, in the real world it's not always business as usual, as evidenced by the following data from Safework Australia. Safework Australia reports that of the 13.4 million persons who had worked at some time in the last 12 months;

- One in 20 (563,000) experienced their most recent work-related injury or illness.



*Research shows that environment health and safety management is officially a 'bottom line booster' and proves the real value of keeping staff and the environment safe*

- 42 per cent took 1-4 days off;
  - 26 per cent took 11 or more days off;
  - 16 per cent took 5-10 days off;
  - 11 per cent took off part of a day or shift;
  - 6 per cent had not returned to work since an injury or illness occurred
  - Fractures, wounds, lacerations and amputations average cost impacts were \$90,150 and \$65,400 respectively per case.
  - The direct cost to the business of even a short work absence as a result of a work injury is \$4180.
  - In NSW, during 2016/17 the average weeks off was 5.3 weeks per injury.
  - Mental health and deafness were the top two occupational health issues in NSW and the average gross incurred cost for occupational diseases was \$34,584.
- Many employers incorrectly assume that worker's compensation is the only cost associated with work-related injuries. The direct costs of treating a workplace injury or



illness are just the tip of the iceberg. They form only about 20 per cent of a company's total liability from a workplace incident. The real cost of a workplace accident is at least five times what you think it is (Source: Safework Australia). It is estimated that for every \$1 in direct costs associated with workplace injury and disease, there are another \$5 to \$7 in indirect costs.

Direct costs include:

- Worker's compensation;
- Doctor's visits;
- Hospital care/treatment;
- Rehabilitation;
- Physical therapy; and
- Medicine.

The indirect costs of a workplace incident include:

- Time lost from work by injured employee(s);
- Loss of efficiency due to the break-up of a crew;
- Cost of training a new worker;
- Damage to vehicles, tools, equipment or other property and the time spent cleaning up, repairing or replacing that equipment;
- Loss of equipment if impounded by regulators;
- Loss of production stemming from worker distraction and lower morale;
- Loss of skill/efficiency slowing production;
- Accident investigation;
- Paperwork and additional administrative time;
- Implementing corrective actions;
- Fines and penalties;
- Legal costs;
- Time spent managing consumer/public/member reactions;
- Damage to client goodwill and reputation; and
- Rising insurances.

Even fines for environment and safety breaches are on the rise. A maximum penalty of 20 years imprisonment for an individual or \$10 million for a body corporate applies and even lower range offences carry fines for a corporation of up to \$3 million and an individual worker up to \$300,000 or five years jail.

## THE REAL COSTS

Let's say you have one incident of a hand injury and the total cost of that injury is \$4180. If the profit margin of your business is five per cent, the total sales you will need just to cover that one incident is a staggering \$83,600.

Tim Wies, president of US-based T.J. Wies Contracting and a big advocate for workplace safety, appreciates the costs to his business of an injury. He tells his staff "Don't try to save me money! Don't try to help me out by cutting



*If you want to cut expenses, slashing the EHS budget could end up being a very costly mistake*

corners and taking risks. The hours you may save me will cost me in the end."

He continues: "Say by doing something unsafe, they save me two hours of time. In my market (building and construction), that's \$100, \$50 an hour at cost. Now if they don't build the scaffold properly and fall off and break a leg, that broken leg is going to cost me \$15,000 to \$18,000 on the insurance alone."

Wies also adds: "If it is a severe accident, work stops that day. If it's a horrible accident or a fatality it will cause grief and distress on the job site for days, if not weeks. It's hard to put a finger on cost, but you know it's happening. The accident becomes the topic of the site and everybody will have an opinion and will want to weigh in. It's a very real cost."

Wies, who owns his company, also views every employee as family: "I consider everybody who works for me a friend and I don't want to see any of them hurt. As I tell them, 'The worst day in my life would be having to call your wife or your husband, mother or father, sister or brother and tell them that you were severely injured or killed on one of my projects. I can think of nothing worse. So, please whatever you do in the field to help the company, I beg you – never put me in a position where I have to make that call'."

## THE EVIDENCE IS IN...

Research shows that environment health and safety management is officially a 'bottom line booster' and that a good safety and health programme can save \$3 to \$6 for every \$1 invested.

Katherine Harmon, in Science 2012, reported a study of 818 companies where the

409 that were randomly selected for safety inspections saved an average of \$355,000 over five years in worker injury claims and compensation at each firm, compared with the other 409 similar companies that were not inspected.

Harmon's study also reported gains in firm survival, payroll, creditworthiness, sales and employment in the companies that had been inspected. Her takeaway message was that the inspections succeeded in improving safety without appreciably increasing the cost of doing business and that random inspections are a worthwhile investment.

Another study, published in the Journal of Occupational and Environmental Medicine, tracked the market performance of companies that embrace health and safety. They found that companies recognised as award winning for their approach to the health and safety of their workforce outperformed the market. The companies that did well in health and safety performance achieved a 333 per cent return, compared to the stock market (S&P 500 index) return of 105 per cent during the same period.

The research also reported on other data that employers with highly effective health and safety programmes generate 20 per cent more revenue per employee, realise a 16.1 per cent higher market value and deliver 57 per cent higher shareholder return.

## THE 'SELL'

For sports turf managers whose bosses, managers, employers or Boards 'don't get it', convincing decision makers to invest in environment, health and safety is no longer as difficult as it once was – the numbers don't lie.

If you or your business is thinking of skimping on safety or you think the cost of an EHS programme is expensive, think again. The research demonstrates EHS is an opportunity to increase profit and employee engagement, reduce medical and workers' compensation costs, enhance your business reputation and improve the bottom line.

Many companies still think they can save money by ignoring environment and safety. They are pleased that they saved some time on training or procedures and they are simply pleased if their workforce goes home healthy. If your company behaves this way it equates safety with the absence of accidents and ends up tricking itself into thinking that the precautions it's taking are sufficient. In reality, all they've done is to have been lucky.

If you want to cut expenses, don't slash the EHS budget. Move from the mindset of EHS being just a legal requirement and a black hole of money. Work on getting rid of injuries and incidents because that's where the real expenses are. 🙏





*Knowing what native species you have on your course can be a valuable resource, not only in maintaining these areas but also for propagation purposes*

**M**any clubs have approached me wanting to embark on native vegetation projects, however, budget restraints have often stopped them from progressing. But there are many different low cost measures that can be implemented to improve and enhance native vegetation on your course.

Whether it's protecting native areas, utilising existing species on course and growing them on or sourcing funding through local council grants, there are many avenues that clubs can potentially explore.

### PROTECTING NATIVE AREAS

Allowing select areas (mostly out of play) to grow and naturally germinate is one of the most cost-effective techniques you can implement on your course. The existing vegetation and seedbank in the areas you select will determine the results you will achieve and the maintenance required.

When starting out try and choose an area you know may have a good seed bank as this will assist in a more successful outcome, especially if you are trialling an area to demonstrate the benefits to the members and committee. You will need to manage these areas to a certain degree, such as applying a selective herbicide to manage any weeds that appear or weeding the area as needed.

Leongatha Golf Club, south east of Melbourne, is a small country club maintained by three full-time staff and keen volunteers. It is an absolute gem of a course and in 2018 course superintendent Dylan McMeekin approached me for advice on how to best go about promoting native areas. Dylan was



PHOTO: DOMINIC BOWD

# Doing it yourself

*Enhancing native areas on your golf course doesn't have to be an expensive exercise writes ATM environmental expert Kate Torgersen.*

keen to reduce the costs associated with mowing rough and wanted to promote the native vegetation on his course.

The areas selected were roped off and left to grow to see what species were there and luckily for Dylan the seed bank was full

of native indigenous species. Maintenance going forward included selectively spraying unwanted weeds from these areas and the results have been very impressive.

### UTILISING EXISTING SPECIES

Knowing what native species you have on your course can be a valuable resource, not only in maintaining these areas but also for propagation purposes. Propagating your own plants and planting them back on course in revegetation areas will save you money and can be a great programme for members and volunteers to get involved with.

Having had plenty of experience with member volunteer groups, they love getting involved, take ownership and derive great satisfaction in growing a plant that they have personally collected from seed and replanted on the course.

You can set up a basic nursery to start with and build on it when and if needed. Small greenhouses can easily be purchased

*Visiting a local native plant nursery will provide you with the knowledge of the native species in your area and you'll find they are more than willing to assist and offer ways to get started*





from hardware or gardening stores, such as Bunnings, along with potting mix and seedling trays. There is no wrong way, as long as you give it a go and learn along the way. There are also many free or low cost courses out there run by councils, community groups and local nurseries where they are more than happy to assist and educate you in the process.

Approaching or even just visiting a local native plant nursery will provide you with the knowledge of the native species in your area and you will find they are more than willing to assist and offer ways to get started. Many of these are run by volunteers. Sending staff or members to help will not only educate them in the process of propagation but you will also be building a valuable relationship with the community.

As an example, Greenlink Sandbelt Indigenous Nursery is a local nursery within the Melbourne sandbelt region that has volunteers come in on a regular basis. Pete Murray, vegetation manager at Kingston Heath Golf Club, is one of those and often volunteers for a few hours on a Wednesday to build his propagation skills, build relationships and learn about the unique species on his course. Pete often propagates many rare species and introduces them back onto his course with great success.



*Propagating your own plants and planting them back on course in revegetation areas will save you money and can be a great programme for members and volunteers to get involved with*

## FUNDING AND FREEBIES

Encouraging the community to undertake environmental projects is high on the list for

many local, state and federal government agencies, with clubs able to apply for grants and in some cases obtain free plants.

Many local councils offer a free plant programme. The Eastern Golf Club in Victoria, recipient of this year's AGCSA Claude Crockford Environmental Award, regularly receives free plants through the Yarra Ranges Council's free plant programme 'Ribbons of green'.

There is also the potential to gain funding through environmental grants offered at all levels of government. You may be surprised how much funding could be available to you by doing a quick internet search for available grants in your area. Approaching local businesses is another option as many local businesses are now supporting community-based environmental projects.

Above all, just have a go. As mentioned there is no right or wrong way. Harness the skills of staff or members who have an interest in such areas and do some research within your local community for those organisations that may be able to assist. And don't forget to promote what you are doing as well. Creating habitat for local wildlife, promoting local indigenous species and improving the overall landscape of your course has many long-term benefits and helps to reduce costs associated with maintenance. 🌱

## SUSTAINABILITY TO THE FORE AT ROYAL PORTRUSH

The recent Open Championship held at Royal Portrush Golf Club had a firm focus on nature, resources and community. Ahead of the tournament – the first time The Open had been played in Northern Ireland since 1951 – Royal Portrush successfully renewed its GEO Certified status.

The club first became GEO Certified in December 2015 and has continued to strengthen its commitment to sustainability and protecting the stunning natural links habitat that it resides on. Examples of this include grassland and scrub improvement and maintaining a thriving habitat for native bee species.

"We as a club are delighted to renew our GEO Certification and are able to track our progress and achieve continued improvement in our commitment to being an environmentally sustainable business," says Royal Portrush's course manager Graeme Beatt. "We are custodians of the Links here at Royal Portrush and take great pride in the flora and fauna within its sand dune grassland, while also managing all departments of the business in a sustainable manner."



*Royal Portrush hosted the 148th Open Championship*

Hosting The Open for the second time in its history, Royal Portrush was home to several sustainability initiatives, as outlined by The R&A's director of sustainability Steve Isaac during his talks at the recent Asia Pacific Turfgrass Conference in Brisbane.

This year's Open had a focus on Fairtrade, local and ethically sourced produce, waste management efforts and The Open Water Initiative. The latter saw free purified, chilled local water delivered directly to fans, players, staff and officials through the use of on-site water stations and special edition refillable stainless steel bottles.

The initiative shone a light on the impact of global marine plastic pollution, while helping to drive behaviour change away from the single-use mindset that

has led to an epidemic of ocean pollution. The initiative has been developed by The R&A in collaboration with Bluewater and is supported by UN Environment's Clean Seas campaign.

"It is important that all venues which stage The Open set the standard in sustainability and we are delighted that Royal Portrush demonstrated its continuing commitment to addressing issues concerning the local environment, use of resources and the local communities," says Isaac. "Our commitment to only host The Open at certified venues has been very well received and is a good match with The Open GreenLinks initiative across the staging of the Championship related to nature, communities and resources." The Open GreenLinks initiative was set up with the assistance of GEO Foundation's OnCourse Tournaments programme, utilising many of the guidelines and resources that are designed to help golf tournaments around the world accelerate their own commitments, actions and results. Other recently GEO Certified venues include Portmarnock and The Island, which co-hosted The Amateur Championship in 2019.





*It is well documented that successful people focus a good portion of time on improving themselves and are dedicated to continuous learning*

I'm sure many people have pondered whether continuous education is worth the time, effort and money, but there is overwhelming evidence indicating the advantages certainly outweigh any perceived disadvantages.

It is well documented that successful people focus a good portion of time on improving themselves and are dedicated to continuous learning. As an example, personal success guru Brian Tracy notes that successful people usually read an average of 2-3 hours per day to improve their skills or knowledge.

Continuing education is accepted across a range of industries as the most effective way to provide individuals with significant benefits that improve career outcomes through enhanced job-related skills, increased variety of employment opportunities, extended tenure in positions and improved remuneration.

A Deloitte survey conducted in 2017 found that employees at all levels now recognise 'the learning curve is the earning curve' and, on average, people with higher qualifications earn more money.

Today, the skills required in all industries are changing rapidly, making continuous learning a must for professionals to stay relevant with the latest developments and new technologies required in their fields. It is also vital to focus on 'livelihood learning' – continuing education that keeps you current in your field and is considered to be the most important.

We have certainly seen this in the turf management sphere where those aspects of the job 'off the course', traditionally not taught during an apprenticeship, are taking on greater prominence. Areas such as HR, WHS and environmental management, leadership and communication and budget management.

LinkedIn notes that continuing education provides employers with a range of benefits, stating the following advantages;

- **Highly skilled workforce:** There are intrinsic benefits to having a well-educated and skilled workforce, with skilled employees bringing new ideas and creativity to the job. Course superintendents for instance have specialist skills in a wide variety of areas and manage a golf club's most important asset, so it is in a club's best interest to ensure they have the requisite skills.
- **Upgrading of skills:** Given the rapidly changing market and improvements in technology and techniques, organisations need to be ready and prepared for these changes. Course superintendents and



# Learning is earning

*With another successful turf conference recently held in Brisbane, ATM HR expert Vicki Crowe espouses the importance and value of continuing education in helping advance your career and business.*

turf managers that combine their excellent base agronomic knowledge with a desire to keep up to date with latest best practice techniques will be valuable and in high demand.

- **Employee retention:** Companies that invest in the skill development of their employees have a better chance of retaining their staff and improving job satisfaction. Organisations that have dedicated professional development plans for employees will maintain a highly skilled workforce.
- **Profits:** Employee skill development will see a direct benefit for the company via increased profit which in an increasingly competitive sports and recreation market is extremely vital.
- **Future leaders:** Employees who demonstrate a willingness and capability to improve their skills via continuing education are often the best candidates for future leadership roles.

The AGCSA has for a number of years provided its members with access to continuing education whether through the annual turf conference, roving workshops

or one-off seminars. The AGCSA also runs an Accreditation Programme to encourage superintendents to undertake continual training throughout their careers and thereby promote the position of superintendent as a highly skilled and professional role.

Members who are part of the accreditation programme receive Continuing Education Points (CEPs) by attending registered events such as the recent Brisbane conference. State association days also often qualify for CEPs. AGCSA members can find out more about the accreditation programme by visiting the Membership section on the AGCSA website [www.agcsa.com.au](http://www.agcsa.com.au) or contacting AGCSA events and education manager Simone Staples on (03) 9548 8600.

As the conference delegate feedback earlier in this edition suggests, the importance of continual education cannot be overstated. Individuals need to be proactive in seeking out such opportunities and, just as importantly, clubs and organisations need to be willing to invest in staff development and encourage their staff to better themselves. Not investing in yourself or your organisation is doing a disservice to both. 🙏





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*Bermagui Country Club resides across 70ha on the NSW south coast. It has a number of elevation changes and off the back tees has enough length to make it a challenging prospect. Pictured is the 14th*



# Bermagui Country Club, NSW

*Bermagui Country Club is home to long-serving course superintendent David Thomson who was elected onto the AGCSA Board at the recent Brisbane conference.*

**Superintendent:** David Thomson (53).

**Nickname:** Thomo.

**Family:** Partner and two dogs, sometimes five if the step children require.

**Social media:** Facebook 'David Rohan Thomson'.

**Years as a superintendent:** 23 (five o/s).

**Association involvement:** AGCSA, NSWGCSA, STA, Far South Coast Greenkeepers (NSW).

**Turf management career:** Tura Beach Country Club (apprentice), Pambula-Merimbula Golf Club (assistant), Hope Island Resort (assistant), Clearwater Sanctuary Golf Resort, Malaysia (superintendent), Mollymook Golf Club (assistant) and Bermagui Country Club (superintendent)

**Qualifications:** Certificate IV in Sports Turf Management.

**Major hobbies/claims to fame:** Fitness instructor, squash coaching, proud to have won the Far South East Coast singles titles in squash and tennis. I love riding my Harley Fat Bob which has led me to be vice president of CRAB (Cancer Research Advocate Bikers). We have fundraised nearly \$400,000 for cancer research.

When I was at Hope Island, I used to play in the Saturday comp. All winners went into a barrel to have a chance of winning a Lexus car at the end of the 30-week period. Adam Scott was a 13-year-old kid playing off 4 or 5 and Terry Price's caddie, Roger, was the course marshal and was relaying the finishing holes, hole by hole, knowing we were both in the running to win the competition. I won the day by a shot, so I can say I beat Adam Scott! What I never mention is that I was playing off 13 at the time and Scotty was just a kid and had to give me nine shots. A win's a win though!

**Where in Australia is Bermagui Country Club?** Bermagui is on the Far South East Coast of NSW, 5.5 hours south of Sydney and three hours from Canberra. Being only 15km from the continental shelf, Bermagui is famous for its game fishing.

**How did you get into the turf industry?** I was born in Shepparton, Victoria and when I was four my parents decided to travel up the East Coast (Melbourne to Cairns) to find a business opportunity and start a new life.

They found two businesses, one in Noosa Heads and one in Merimbula which is where we started our new life.

My first job preference was signwriting and I did work experience with Wilson's Signs in Pambula (yes, Pat Wilson's father and uncle). I couldn't secure an apprenticeship and, not being a fan of school, I started a carpet laying apprenticeship instead. After two years I decided I wasn't going to spend my working life on my hands and knees and got a job as a fitness instructor/squash coach at the local gymnasium.

After that went under, I dabbled in the building industry for a while, but it wasn't until a friend of mine (Craig Gale) was constructing the second bowling green at Tura Beach Country Club and I asked if I could give him a hand, that I knew this industry was for me. I loved being outdoors, I loved operating machinery and I wanted something in which I could apply my creative side.

**Who were some of your early mentors?** My first boss was Roger Harle (Tura Beach Country Club) and it didn't take me long to realise that I was learning what not to do



and how not to manage people. I finished my apprenticeship under the tenure of Pete George before making the move to assistant superintendent at Pambula-Merimbula Golf Club under Greg Smith.

With Greg just finishing the design/construction of a third nine, I grew more and more interested in the construction side of the industry. Greg gave me some freedom to apply my artistic impressions on some of the follow up work on the third nine and the balance of the 27-hole facility. He also taught me how to lead, but work alongside staff members, something which still I practice to this day and believe has contributed to our success with apprentices over the years.

After working on golf courses with moderate budgets, I had a desire for more construction and to learn construction with little budget restraints. I moved up to Queensland and worked under Paul Bevan at Hope Island Resort, constructed by Shinko Australia. I learnt a lot through the construction phases at Hope Island. We had a great team, but I still had an undeniable itch for more construction. With some apprehension Bevo gave me the confidence to take on my first position as construction superintendent with Australian Golf Management at Clearwater Sanctuary Golf Resort in Malaysia.

**What took you to Malaysia and how did you take to the new role?** We had finished the grow-in of Hope Island and were back to day-to-day maintenance and, to be perfectly honest, after the excitement of construction and opening day I was bored. I wanted to be in charge of a construction project but didn't have the CV or experience to attain this sort of position in Australia. So, like a lot of us, I ventured overseas. Malaysia was booming, there were golf courses popping up everywhere and there were expats like Phil Knight, Scott McKay, Pete Smith, Laurie Walsh, Martin Greenwood, Kym Fuller, Collin Coles and many others making their mark.

Malaysia was a real eye opener. I always remember the words of Martin Greenwood during a visit to Kuala Lumpur prior to commencing the job. He said, "Don't think you're going to come over here and change the world". My immediate thoughts were, 'Of course I'm going to change the way things are done – we will follow my SOP's and that's final!' It wasn't for some time that I realised he was talking about the people, the culture, Ramadan, Deepavali, Chinese New Year.

All these festivals come with endless public holidays, but deadlines don't change.



*The Bermagui Country Club crew with superintendent Dave Thomson third from left*

It's not just people that you're managing, it's cultures and harmonising cultures with strong religious beliefs. I learnt my lesson. I was too aggressive on the work site. If you back them into a corner where they 'lose face' in front of their peers, you lose them for ever. I sacked my assistant without thinking of any repercussions. Malays are very loyal to each other. His friend was my spray technician. Enough said!

One thing I did a lot of was revision. There were no turf registered pesticides on the market, all agricultural, with different active percentages. It's fair to say I did a lot of trials, especially herbicides. You couldn't just ring up a soil supply company and order 10,000 tonnes of growing medium. Located in the Kinta Valley, Perak, the most productive tin producing district in the world, there were lots of sand washing plants still erect. Mesh sizes and water pressures were painstakingly

adjusted and site pan tested until we thought we were close to USGA spec. Then we would send the sample away to the US for analysis.

The Chinese are the best replicators in the world, which was repetitively relied on in my time overseas. But they are also stringent business people. If someone walked in off the street, it wouldn't matter if it was someone else's order, they just loved a sale. There was no contract, just a shake of the hand. So we asked them to start producing and stockpiling it away from the other piles. We even requested they put a sign with 'CWS' (Clearwater Sanctuary) on the pile! Who else would require USGA spec sand up here?

Well, an Australian contractor building the bowling greens for the Kuala Lumpur Commonwealth Games found our sand, or at least 3000-plus tonnes of it, just a couple of weeks before we required it! It's fair to say that the soil contractor received some



*Four of Bermagui's holes - 1, 9, 10 and 18 – are routed through a tidal zone. The club has worked closely with local community groups and the council to preserve the adjacent saltmarsh areas*





*Improving the playability of bunkers is a current focus for the club, with two bunkers recently refurbished*

expletives from the opposite side of his home security door and he wasn't going to release the locking latch while a crazy 'Gweilo' (Chinese slang for 'Westerner') was on the other side.

Back then I was an eager, gung-ho young bloke trying to prove to the world that I could get the job done. I was very intense and impatient. If I have learnt anything from working in Malaysia it's patience. I am a much more relaxed manager these days. Being demanding and always on someone's heels can be counter-productive sometimes.

#### **How did the job at Bermagui CC come about?**

I had no position to come back to and eventually took on the assistant's role at Mollymook. Eager to get back into a superintendent position, I applied for the bowling green curator's position knowing that old Rossy White (superintendent) was nearing retirement. I guess you could say I strategically went backwards to move forwards. I fell for the golf course's potential and its people. Bermagui is a very tight knit community. I love knowing everyone and love the lifestyle. I'm certainly not a city boy.



*On Bermagui's Pennecross greens, Thomson's focus is major cation ratios and saturations in the soil solution, with minimal nitrogen inputs (no more than 0.5kg actual N per year). Pictured above and top is the 11th green complex*

**Give us an overview of Bermagui CC and some of its unique characteristics.** The routing of Bermagui's layout is exceptional considering it was done by members. Every hole is isolated, none of them run side by side without a wide division separating them. An abundance of land was used for the course (70 hectares). While it looks like fairly flat, there are a lot of elevation changes and being 6085m from the back plates it's got plenty of length. Being on the coast, the wind has a huge bearing on how the course plays.

#### **What are the unique features of the course from a turf management perspective?**

The downside of the course are the four holes in the tidal zone – 1, 9, 10 and 18 – which suffer from tidal water coming up from underneath, while on a king tide it can weave its way through the lower swales. Managing turfgrass on areas with high salinity is an ongoing challenge. These areas have had South African couch sprigged in over the years, which seems to handle the salt loads better than the paspalums we experimented with.

The positive aspect of this is that we have brought the saltmarsh wetland theme into the periphery of the golf course and into the practice areas landscape. Having a tidal lake in between holes also encourages fish breeding along with saltwater plant species, which attracts birds such as pelicans and cormorants. Plant eaters – waterfowl, ducks and black swans – and invertebrate feeders – spoonbills, ibis and sandpipers – help give the course a natural harmonised feel.

**Is it an easy/hard facility to manage?** Any facility on a budget of \$480K can't hide its limitations. Salt levels and tidal zones provide an elevated challenge, but this is compensated by the amazing temperate climate we have in this part of the country. Probably the most challenging is not having a fully automated irrigation system. I don't have the control of getting the water where I want it which is frustrating when we have lots of it.

#### **What changes have you made during your tenure?**

The greens were quite soft and very susceptible to disease from regular fertilising, watering and mowing at a generous HOC. *Poa annua* was thriving and hadn't been addressed. After applying basic cultural practices, the surfaces started to improve – deep infrequent watering, cutting off nitrogen, regular mowing at a reduced HOC, incorporating the use of PGRs, herbicides and pre-emergents to sit the *Poa* back down.



Mowing regimes on all surfaces were changed to more regular and HOC adjustments. Mowing areas were reduced dramatically and contouring re-routed. Emphasis was on the inputs to surfaces. Too many hours were spent on out of the way areas that didn't contribute to the way the course played. These outer areas were being slashed all the time and my first impressions walking onto the golf course was how barren it looked. All these areas were returned to naturalised areas. Proper renovation practices were established and followed, along with regular dethatching and dusting.

There was also an 'us-them' culture in the club. Communication channels had to be repaired, a master plan developed and a clear direction for the golf course laid out for staff, committees and members to follow. There was also an issue with an ageing disgruntled staff who were too eager to ridicule the superintendent and other staff – you know the ones that sit up having a beer in the clubhouse after work. I made it clear that I wanted to make a transition from old staff to young, eager turf managers that enjoyed the trade and loved to learn. With a small staff of six, we always had three apprentices attending TAFE in staggered years.

**What other maintenance changes do you want to introduce?** I want to introduce more dethatching through the growing season so as to key-in the dustings a little bit better. We removed regular dethatching from our programme to experiment a bit on *Poa* control. We definitely have made great breakthroughs with *Poa* sitting at less than 5 per cent and lower in all of our greens. But I'm not happy with the dusting lines in the profile, as there is separation between the applications. I would like them more uniform.

**Any special environmental considerations relating to the course and its management?** We have been working closely with the local Friends of Bermagui Saltmarsh and Shorebirds and South East Local Land Services on the preservation of our saltmarsh areas. We received a \$40,000 grant to remove unwanted species and allow the natural saltmarsh to re-establish. The area was just under a hectare and rejuvenated with seablite (*Suaeda australis*), samphire (*Sarcocornia quinqueflora*) and sea rush (*Juncus kraussii*) which are important for fish breeding. Being close to the harbour, we have to be aware of what we are putting out. All water catchments have riparian zones around the perimeters.



*Looking back down Bermagui's picturesque 16th from behind the green*

**What are some of the major challenges facing Bermagui CC?** We are another one of the many struggling regional clubs. Business is seasonal and locals don't seem to support their club like they used to. Members seem to want everything as far as facilities and quality of facilities, but they don't support the club. Yes, there is probably more competition and our clubhouse is old and outdated and far too big for our membership. It was built in the halcyon days and it costs a bomb to heat and power. Something will have to change if it is to survive.

**Outline any major course improvement works recently completed or in the pipeline.** It is difficult for a struggling club to remain progressive. All capital works had to be aligned with a business model that

focused on keeping the golf course open through periods of inclement weather. We couldn't afford motorised vehicle suspensions due to our aging membership. If carts were suspended due to soft conditions and course protection, then our golfing fields were halved. Therefore we needed to look at the causes for motorised traffic suspensions. From there it was pretty simple – cart paths needed to be sealed, sub-surface drainage required pinpointing and improving the playability of the bunkers (or should I say water hazards).

A cart path working plan was developed and men's golf took it on and invested a lot of fundraised money into building concrete cart paths. They have achieved beyond what they ever anticipated and have improved the aesthetics and more importantly the function of these areas. The same went for the boggy



*Greens are Vertidrain October and February using 12mm solid tines, amended and topdressed, with dethatching and dusting every three weeks from September to February. Pictured is the 9th*



grass areas that prevented cart access. We prioritised these areas for sub-surface drainage installation and followed a working plan. With these two hurdles remedied we rarely have motorised traffic suspensions and never have we closed the course.

Priorities are now focussed on our non-draining bunkers. Two bunkers have been reconstructed, complete with new drainage, BunkerMat, Bidim liner and new bunker sand.

The other ongoing project is our ladies short course tees in an effort to maintain or hopefully elevate the usage of the course. We were experiencing that our older lady members had stopped playing due to the difficulty of the course. After several meetings, I put forward the idea that instead of going off US-based figures for the required length of a short course, that we measure our ladies average distances. One important thing that this highlighted was that all ladies didn't hit the selected clubs as long as they thought they could. The men are the same!

I got them to hit five balls each with their driver, 3-wood and 9-iron. The averages may

shock you but were; driver – 136m, 3-wood – 117m and 9-iron – 78m. With these figures in hand, we could layout the perfect length short course for our lady members. So far we have completed five tees and seven sub-bases.

As mentioned earlier, we have four holes that are affected by tidal water. With rising seawater levels, there is a noticeable difference in the quality of these holes. Future requirements will involve lifting these areas by at least half a metre to prevent the roots from tapping into this brackish layer.

**The one product I couldn't manage my course without is...** I'm not going to say Primo because that record has been played. I would say Spinner as it has definitely eased the Argentine stem weevil pressure.

**Are expectations of course presentation and conditioning any less than that placed on your metropolitan counterparts?** Who walks on a golf course and starts off with, "How many do they have on staff?" or "What budget is this course working with?"

Expectations are always high, but I like it like that. There's no better compliment than to have your surfaces compared to some of the metropolitan clubs. They don't have to be better, as long as they're being compared. That will do me!

**Do you have to be more resourceful as a regional-based superintendent?** We pretty much have to get it right the first time; we can't really afford the cost of a mistake. Cross-training staff so they are capable of doing any job definitely makes management easier. All capital works are done in-house so they learn early on to operate excavators and skidsteer loaders. We make a lot of our own course furniture and implements to do the job. We have replicated a lot of attachments for various machines, not always successful but we try.

I believe our big advantage was investing in good young apprentices. I think some of the metro clubs would love to have the production line of good young country kids coming through their ranks as we have.

## AT A GLANCE – BERMAGUI COUNTRY CLUB, NSW

**Course specs:** 6085m, fairways 10 hectares, greens 1ha and tees 0.8ha. Turf varieties – kikuyu, Santa Ana couchgrass, Pennncross bentgrass.

**Rounds/members:** 10,000 rounds; 150 golfing members, 2000 social members.

**Major events:** Ladies and Men's Opens, Week of Golf, Bermagui Legends Pro-Am.

**Annual course budget:** \$480K.

**Staff structure:** David Thomson (superintendent), Luke Kingston (assistant), Tim Wong and Casey Jack (qualified greenkeepers), Javana Fereti and Angus Lingard (apprentices) and Jarra McKay-Collins (mechanic).

**Climate:** Annual rainfall 800mm. We are lucky to live in one of the most temperate climates in Australia. This allow us to grow cool and warm-season grasses comfortably.

**Soil types:** Sand, loamy sand, sandy loam, loam, clay loam, loamy clay and clay.

**Water sources/irrigation:** 30ML stormwater fed dam. Supported by a 500,000L effluent tank, gravity fed into our pumps. Two 15Kw Lowara vertical turbines controlled by Hydrovar VSD's, 5kw jacking pump. Multiple controllers and sprinkler heads. No central controller.

**Cutting heights/regimes:** Greens (3-3.5mm, mown six days per week), tees (7-12mm,

mown twice per week), fairways (10-15mm, mown twice per week) and roughs/tees and green surrounds (52mm).

**Renovations:** Greens are Vertidrain October and February using 12mm solid tines, amended and topdressed. Dethatching and dusting every three weeks September to February. Dusting only from March to May and no surface disruptions from June to August. Tees are scarified as deep as the machine is capable and cored with 20mm hollow tines. Cores drag matted in then chaff removed followed by Ca application. Fairways are scarified at -15mm, chaff removed, shaved to 6mm then cored with 20mm hollow tines.

**Disease/pest pressures:** On greens, we spray preventatives for pythium from September to May, rotating fungicide activity groups. Winter fusarium is controlled using silica, potash and calcium every fortnight through April to August.

Argentine stem weevil has become a real problem in the last 10 years, which has led us to a fairly thorough spray regime – larvacides applied every six weeks (August to May) and knockdowns every four weeks. Thankfully we have had good control for the last two years now. I tried ENs to control 3rd and 4th instars but still got hit hard in Dec-

Jan. Found more success controlling 1st and 2nd instars more thoroughly, there are new pesticides that control 3rd and 4th instars on the market now.

**Nutrition management:** On greens, my focus is major cation ratios and saturations in the soil solution – calcium (5 meq), magnesium (2 meq) and potassium (0.5 meq). Nitrogen inputs are minimal and I don't apply more than 0.5kg of actual N per year. We mix our own trace element blends to suit soil chemistry results, applying monthly. Bio-stimulants consisting of auxins, cytokinins, vitamins, humic acids and amino acids are applied monthly for assistance in root health, microbiological development, CEC and disease resistance. With the high use of growth retardants and pre-emergent herbicides for *Poa* control, roots are pruned quite severely; therefore these bio-stimulants play a vital role in the health and recovery of the bentgrass.

Some of our fairways are situated in tidal zones and therefore salinity can be high. EC 1:5 levels can be >1.0dS/m and exchangeable sodium >20 per cent. Operating under a limited budget, most inputs are in the way of calcium. Nitro iron and iron sulphate are used for colour and fairway definition.



**What role do volunteers play in the management of your course?** My staff size is being reduced from seven to five, so there will be impacts on the course. We have always had working bees, but now we have to incorporate volunteers to do some of the greenkeeping tasks – bin runs, hole changing, bunker raking, rough mowing etc. I don't think we could survive without them in this economic climate.

I have a member by the name of Derek Quinto (affectionately nicknamed Edward Scissorhands as he always has a chainsaw in his hand) who took on our tree management programme with immense enthusiasm. Derek has probably removed 150 trees by himself, including carting away. I would hate to think how many hours he has put into the golf course. He has also been men's golf captain and is currently on the board of directors.

**What have you got in your shed?** 2 x Toro Reelmaster 5510s, Toro Greensmaster 3400-D, Toro Greensmaster 3250-D, Groundsmaster 4000-D, Ventrac plus contour deck, stump grinder, blower, corer and sodcutter, John Deere tractor, Bobcat skidsteer and excavator,

Toro Workman plus HD200 spraytank, ProPass topdresser, Carry-all Clubcar, Verti-Drain 7316. The excavator ranks as my favourite – when you get good on it you rarely need a shovel.

**If you could change one thing about your job what would it be?** I would like a helicopter so I could attend association days and pay some supers a quick site visit. I've got a bit of saving to do...

**Best advice you have received about being a course superintendent/greenkeeper.**

"You can lead and still work alongside your workers" – Greg Smith. The other good advice came from Barry Mau (Petrik/ex-Commonwealth super) on how to interpret soil chemistry results and balancing the major and minor cations. This would have to be the biggest breakthrough in my knowledge.

**What do you think is the most challenging aspect of a superintendent's role today and what have you worked on to improve your skills?** You have to wear so many hats and everyone wants something from you. You are

always learning. In my early days I used to get nervous when I had to do presentations, so when I was overseas I used to make myself do them.

On our opening day at Clearwater Sanctuary, the course designer was unable to attend so I was asked to do a presentation, with little notice, on the difference between a par 3 course (which we had just completed) and a chip and putt course. I had no idea what the difference was, so I had to do some quick research. The Sultan of Perak, the owners and all the media were there. After my talk they were all invited to play the par 3 course. Well, the media thought I was an expert designer and they wouldn't leave me alone. The point to my story is after speaking in front of the Sultan of Perak, I realised that they're only people experiencing life, as we are, so there's nothing to be nervous about.

**What gives you the most job satisfaction?**

Seeing my boys doing something I didn't think they had the experience to be capable of. And watching them win or just be nominated for Apprentice of the Year and seeing them go on to bigger things. 🏌️

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## BAYER DOUBLES DOWN WITH LAUNCH OF INDEMNIFY, SIGNATURE XTRA STRESSGARD

**A**GCSA Silver Partner Bayer formally unveiled two of its latest products at the recent Asia Pacific Turfgrass Conference in Brisbane – Indemnify nematocide and Signature Xtra Stressgard fungicide. The new products further extend Bayer's focus on solutions to improve turf health and playability in the face of the pressures applied by the demands of golfers, climatic extremes and pests and diseases.

Indemnify represents a new cornerstone in integrated nematode management programmes for turfgrass. Indemnify is a next generation, easy-to-use nematocide that controls key plant parasitic nematodes and improves root growth and turfgrass health, resulting in better playability with improved wear tolerance. Indemnify is a unique liquid formulation, with soil penetrating surfactants specifically formulated for nematode control in turfgrass. Indemnify is now available from Bayer's appointed agent network and comes in a convenient 500ml bottle.

"High populations of plant parasitic nematodes can present significant challenges for maintaining turfgrass consistency and playability," explains Bayer turf market manager James Royal. "We look forward to working with our agents and turf managers over the coming months to introduce this new technology and ensure that our customers who face issues with plant parasitic nematodes enjoy the benefits which come from using Indemnify."

Signature Xtra Stressgard is a new and innovative fungicide that delivers excellent disease control and enhanced plant health effects resulting in improved playability on turf surfaces. Signature Xtra Stressgard is a true systemic fungicide that controls tough turf diseases such as pythium and anthracnose, as well as enhancing turf health and minimising turf stress from abiotic and biotic sources.

A new and improved formulation of fosetyl-aluminium, Signature Xtra Stressgard is optimised with new proprietary components to provide excellent preventative control of turf disease and turf health improvement even under severe environmental conditions.

The label for Signature Xtra Stressgard contains a choice of rates and application intervals to offer turf managers the flexibility to tailor programmes for specific conditions at their facility and to fit in with preferred application practices.



*Bayer launched two new cutting edge products at the recent Brisbane conference – Indemnify nematocide and Signature Xtra Stressgard fungicide*

"Signature Stressgard has been a known and trusted product, adopted as the backbone of summer disease management programmes for more than 20 years here in Australia," says Bayer's senior market development specialist for turf Jyri Kaapro.

"Signature Xtra Stressgard is one of Bayer's most extensively researched innovations in recent times. The large number of local and overseas trials have demonstrated performance that delivers a new level of benefit to turf managers all over Australia."

Signature Xtra Stressgard will be sold in an easy to use 2.75kg HDPE bottle and will be available in the latter part of 2019. Until that time, Signature Stressgard 2.5kg will continue to be available.

### US EXPERT HEADLINES INNOVATION SEMINARS

Following on from the conference product launches, Bayer went on to host a series of 'Innovation Seminars' around the country including Newcastle, Sydney, Perth and Melbourne. The seminars were headlined by international guest speaker Dr Rob Golembiewski from Bayer US who had travelled out for the Brisbane conference. The Green Solutions team member gave two presentations – 'The enemy below... Nematodes' and 'Mitigating plant stress and going beyond disease control'. Jyri Kaapro also presented the research and trial data which supported the registration of Indemnify and Signature Xtra Stressgard.

The seminars were attended by golf superintendents, sports turf managers, turf consultants as well as turf agents. All attendees were very interested in the seminar content with lots of questions being asked and discussions shared throughout the sessions. The AGCSA awarded two Continuing Education Points for those members of the AGCSA Accreditation Programme who attended the seminar.

"Bayer is committed to hosting educational seminars on a regular basis around Australia," says Bayer's James Royal. "It's so important to bring key turf industry representatives and thought leaders together to showcase and discuss the latest innovations and ideas which will benefit our industry. We appreciate the support of all turf professionals who committed time to attend the seminars, as well as the excellent feedback received."



*Bayer US's Dr Rob Golembiewski spoke at the Brisbane conference and headlined a series of Bayer Innovation Seminars*



## SYNGENTA LAUNCHES 'PROTECT YOUR TURF' CAMPAIGN

**A** GCSA Gold Partner Syngenta has launched its new 'Protect your Turf' campaign which is highlighted by the release of a slick promotional video shot on location at Eastlake Golf Club in Sydney.

A team of actors were enlisted to pull on combat gear and pretend to be the turf team responding to an 'emergency weed situation', shining a light on the commitment and passion of golf course superintendents and their teams. The video can be viewed at [www.greencast.com.au](http://www.greencast.com.au).

"We wanted to highlight the constant need for defence against the elements," says Syngenta's Turf and Landscape business manager Paul Jackson. "We love the idea that you're always defending your turf and Syngenta's role is to help turf managers and superintendents prepare, protect and perform."

"The 'Protect your Turf' campaign is a chance to portray those professionals as the unsung heroes, doing their job from dawn until dusk with dedication and passion. Every day, when golf course managers turn up to work, they are having to defend their greens to keep them in tip top condition."

"The video was a lot of fun to make. We had golf buggies charging up the fairway at top speed, greenkeepers diving for cover from golf balls and our superintendent commando-crawling across the green to pluck out a rogue weed."

## GREENWAY TURF SOLUTIONS SNAPS UP SIMPLOT



**I**n a major development prior to the Brisbane conference, Greenway Turf Solutions announced that it had acquired the business assets of Simplot Australia Turf and Horticulture P/L. Included in the transaction is the appointment of Greenway Turf Solutions as the exclusive distributor of Best, Apex and Simplot Performance Pack products in Australia, New Zealand and the Pacific Islands.

The NSW and Victorian branches of Simplot Australia Turf and Horticulture will continue in the same locations. All Simplot Australia Turf & Horticulture territory managers and most internal staff have transferred and will continue in similar roles with Greenway Turf Solutions. Product orders and deliveries



will continue through local branches and territory managers.

"We are pleased to have reached an arrangement with Greenway Turf Solutions, which has similar values to the JR Simplot Company," says Simplot vice-president of specialty business Jeff Roesler. "We're excited to continue the distribution of our turf and horticulture product line in Australia through a staff of industry professionals."

Adds Greenway Turf Solutions chairman John Peaty: "Greenway Turf Solutions are equally pleased and are privileged to have been chosen as exclusive distributors of Simplot specialty products. We welcome the Simplot employees to our team and are excited for the future."

Established in 2014, Greenway Turf Solutions is an Australian owned private company that specialises in supplying agronomic advice, high quality fertilisers, turfgrass seed, pesticides and speciality products to the professional turf, nursery, landscape and related industries. The company has branches in Brisbane, Sydney, Melbourne and Adelaide.

**For more information, visit [www.greenwayturfsolutions.com](http://www.greenwayturfsolutions.com).**

## LIVING TURF TEAMS UP WITH RAIN BIRD

**A**lso making a major announcement in the lead-up to the recent conference, Living Turf revealed it had been appointed as a primary distribution partner for the full range of Rain Bird Golf irrigation products across Australia.

Living Turf already distributes a range of industry-recognised brands for professional turf managers including Bayer, Syngenta and MatchPlay, while also providing

analysis, turf pathology and online climate analysis systems through its My-Results and My-Climate platforms.

Living Turf managing director Rob Cooper says that the inclusion of Rain Bird irrigation products creates a winning partnership that will further strengthen and deliver the most extensive range of premier turf and irrigation products and services to the Australian golf industry.

"The inclusion of Rain Bird irrigation products naturally complements our existing range of turf management products and services," says Cooper. "Combining agronomic management with irrigation systems just makes sense – it's a perfect partnership."

Rob Nadebaum, general manager of Rain Bird Australia, also expressed Rain Bird's excitement with the new distribution partnership: "We're proud to team-up with Living Turf. Their reach, coupled with their expertise, will make Rain Bird products more accessible and even more valuable to more golf courses across Australia."

The distribution partnership between Living Turf and Rain Bird is now active and golf course superintendents can take advantage of the combined benefits provided through Living Turf. **For more information visit [www.livingturf.com](http://www.livingturf.com) or [www.rainbird.com.au](http://www.rainbird.com.au)**

**LIVING TURF**  
SCIENTIFIC TURF MANAGEMENT

**RAIN BIRD**



Greetings from New Zealand where we are all still having nightmares from the recent Cricket World Cup final and the unbelievable events that unfolded. You've got to love the theatre of sport and that final will go down as one of the greatest sporting spectacles ever witnessed. That heartbreak, however, was soon tempered when our Silver Ferns netballers triumphed by a point over Australia in the World Cup final in Liverpool! Talk about the agony and the ecstasy!

Writing as we count down towards the completion of winter, we can reflect on the season as being wet but reasonably warm, with temperatures in the mid-teens for many around the country. So far hard frosts have been few and far between and as we all know they are beneficial in killing off of all the 'baddies' associated with turf, so hopefully we do have a decent cold snap soon.

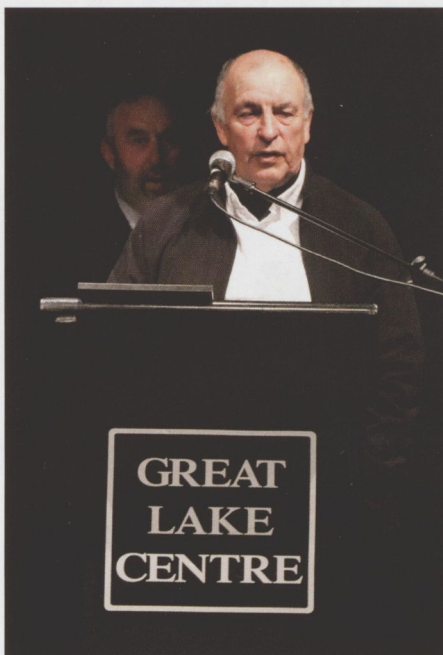
## FINE TURF SEMINAR

Taupo in the central North Island offered itself up as a superb location for this year's Fine Turf Seminar hosted by the Central North Island Turf Managers Association (CNITMA). And boy did they turn it on! Congratulations to all those on the organising committee of the CNITMA, whose hard work and dedication put together a first class seminar for us all.

Theme of the seminar was 'The roots of sustainability' and our minds were challenged to think about whether many of our current practices were sustainable going forward. The future of water as an expected resource in years to come is not guaranteed and we all collectively need to think about how we use it now and how we can improve that usage into the future.

At a time when the world is talking of food shortages and less and less land to grow it on, as well as less water to nurture it, is our watering of fairways to keep them looking good for the punters the best use of that resource? I believe the use of water throughout the next decade in New Zealand will become more scrutinised and challenged, and also used as a political football as more of the 'green thinking' becomes popular among the masses.

Because it has been an abundant resource in NZ forever, we have never really had to think too much about its supply and simply used whatever we wanted to within reason. So, a re-education for us all I think over the next few years.



*Barry Shannon received the NZGCSA Distinguished Service Award at the recent Fine Turf Seminar in Taupo*

The seminar was fortunate to have **Richard Forsyth** from Royal Melbourne Golf Club talk on his preparations for the upcoming 2019 Presidents Cup, the challenges he has had and the enormous set up that comes with it. As we all know the weather plays a major part in many of our outcomes, with major tournaments being no different. December will be a challenging time to showcase his course, but we know he will prevail and we wish his team all the best.

Monday night's dinner saw the 200-plus delegates treated to a great night of friendship and catching up, with **Karl Johnson** (who needs no introduction within cricketing circles or turf itself) doing a superb job as MC and interviewing guest speaker, former All Black **Stephen Donald** (or Beaver as he is affectionately known within NZ).

'KJ' quizzed Beaver (see photo below) on the 2011 Rugby World Cup where he became the most unlikely of heroes. Having made his ABs debut in 2007, Beaver was dropped from the World Cup squad, but after a spate of injuries to other No.10s decimated the squad, he was given a shock call up. Fresh from being put out to paddock and enjoying a regime of no training, beers and whitebaiting, Beaver was suddenly thrust into the limelight and required to play the final against France.

Few Kiwis will forget the sight of Beaver stepping onto the field in an ill-fitting, tight rugby jersey of fashionable mid-rift positioning

and then calmly stepping up to kick the winning, albeit wobbly, penalty goal late in the game to seal an All Black victory. The stuff of legends!

## DISTINGUISHED SERVICE AWARD

During the aforementioned dinner, it was my privilege and pleasure to award **Barry Shannon** (Belmont Golf Club) the NZGCSA Distinguished Service Award. The award recognised Baz's dedication and input into our industry as a whole and also for the tireless work he gave for many years as an industry moderator, ensuring the entire apprentice on-job sign-offs were done to a proper and high standard.

The honour completely blindsided Baz, but in his normal demeanour he was very humble in accepting the award. As it turned out, Baz announced his impending retirement this September so the timing of the award was perfect. Congratulations Barry.

## NZGCSA BOARD

The NZGCSA AGM was held during the seminar and it is pleasing to advise that the entire current board were re-elected. The NZGCSA board comprises;

- **President:** Steve Hodson (Westown GC).
- **Committee:** Greg Safford (Titirangi GC), Jason Perkins (Omanu GC), Sam Keats (Paraparaumu GC), Rick Machray (Arrowtown GC) and Spencer Cooper (Remuera GC).
- **Administration Officer:** Fiona Izzard.

Finally, it is with much sorrow that we convey news of the recent passing of **Brendon McCone** who was course superintendent at Te Awamutu Golf Club in the North Island. Sadly Brendon lost his battle with cancer on 12 July 2019, a day after his 51st birthday. Our thoughts go out to his family at this difficult time.

## STEVE HODSON PRESIDENT, NZGCSA





# STA VIC



The annual STA Victoria seminar held at the MCG on 10 July attracted a record attendance this year. A total of 322 people attended and sponsor members made up 26 tables, adding a great dimension in information sharing and networking.

Thank you to all the sponsor members who supported us and our joint sponsors Bayer and Toro for their valued support this year.

Landscaper, entrepreneur and star of the long-running Better Homes and Gardens Jason Hodges kept us both entertained and in line. His wit and understanding of the industry placed him extremely well in the role of MC and we thank Lilydale Instant Lawn for its support in securing Jason.

Thank you to all the presenters who gave their time willingly to attend and enlighten us all. Among the presentations were;

- Grounds supervisor **Daniel Schwarze** discussed preparations for Premier cricket at Casey Fields;
- **Cathryn Fitzpatrick** talked about her career in cricket, induction into the Hall of Fame and her role within Cricket Victoria as a coaching and development specialist;
- Bayer's **Jyri Kaapro** discussed how to get the best from new herbicide Specticle for *Poa* control;
- Committee member **Grant Greenway** presented findings from the STA Victoria funded research project 'Compare possible hours of use for different sports field construction types and maintenance inputs'. On the topic of research, the STA supports research projects each year and seeks member input as to which areas should be covered. Visit the STA Victoria Facebook page to vote or email your ideas to [vic@sportsturf.asn.au](mailto:vic@sportsturf.asn.au).



*STA Victoria's Nathan Andrews was named the STA Sports Turf Graduate of the Year at the recent Brisbane conference*

- **Ernie Gmehling** from Ground Science shared the science behind preparing a cricket wicket: "Soil is made up of solids, water and air. Density or compaction is defined as the mass of soil in a given volume, but they are different things. Hardness is the measure of strength to resist mechanical disturbance. A soil's ability to be compacted is dependent on the amount of moisture, the weight of the roller and the hardness of the base on which you are compacting..."
- **Jarrod Hill** (SportEng) presented 'Fact or Furphy', a look at what works and what doesn't work during the planning, design, construction and maintenance of turf fields of play.
- Toro's **Clint Shaw** and **Ash Duncan** talked about innovation and new products in the turf industry, including pump integration and monitoring, data capture and remote access.

- 2018 Toro Turf Graduate of the Year **Joe Bolton** took us through his diary entries from his trip to the USA and introduced this year's winner **Nathan Andrews** who was honoured at the Asia Pacific Turfgrass Conference in Brisbane. Well done to both graduates.
- Integrated wellbeing specialist **Rae Bonney** talked about the issues faced by the turf industry, in particular, the increasing pressures being placed on sports turf managers to produce the best possible surfaces. She said the industry is full of passionate, dedicated turf managers who often work in isolation and take on great responsibility which can take its toll. She discussed how environments can be created that support how people are feeling within the industry.
- The 'Turf Corner' panel forum saw **Mark Doyle** (Hume City Council), **Michael Beck** (City of Greater Dandenong), **Matt Richardson** (Melbourne Grammar School) and **Justin Lang** (AAMI Park) field questions from Jason Hodges regarding the challenges of managing sports grounds and wickets.

The STA Victoria AGM was also held with the new committee elected for 2019-2020. We say thank you to Matt Richardson for his input over the last two years and hope we are able to continue to tap into his knowledge and expertise in the future. We welcome **Hugh Gardner** (Hume City Council) into the fold and look forward to working with him.

The next association event is the hands-on Pitch Preparation Day on 10 September 2019 at Melbourne Grammar School (Flack Park, Port Melbourne).

## COMMITTEE, STA VICTORIA



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**W**inter is always a great time in Queensland with near perfect conditions most of the time. This year has been a little different with unseasonal rain falling across the state, with areas recording up to 200mm in a two-week period in June-July.

On the horizon we are looking forward to our next event which is the Northern Rivers Golf Day to be held on 16 August at Teven Valley Golf Course. This day is just \$5 for GCSAQ members and includes a BBQ on arrival sponsored by Ventrac and cold beverages sponsored by Lawn Solutions. Members will compete for the 'Supers Cup' in a nine-hole, four-person Ambrose. To book to play in this event, please phone Shane on 0417 225 135.

One of the absolute stalwarts of the Queensland golf course superintendent community **Gary Topp** hung up the hole changer for the very last time in July. After a total of 42 years in the industry, Gary signalled the end of a superb 24 years in charge at Twin Waters Golf Club on the Sunshine Coast.

Gary began his career in turf back on the south side of the Maroochy River at Headland Golf Club in 1977. Shortly after gaining his ticket, he was elevated to superintendent there and in a 10-year stint helped to oversee the conversion of greens from blue couch to 328. In 1990 he headed north of the river to



*Coral Cove assistant superintendent **Matty Walker** snapped this winter sunrise stunner*

the much-heralded new Thomson-Wolveridge designed Twin Waters development, joining **Wayne Miller** as assistant during the construction. Five years later he was promoted to superintendent, a role which he held up until retirement.

In recognition of his achievements over a long period of time, the GCSAQ bestowed Gary its highest honour at the 2019 Queensland Golf Industry Awards in March – the Industry Recognition Award. Gary's retirement comes just a few months after that of another Sunshine Coast legend **Pat Pauli** who bid farewell to Maroochy River Golf Club. Congratulations to both Gary and Pat who are both true gentlemen of our profession.

Thank you to everyone who entered our Winter Giveaway with Greenway Turf Solutions. The winner will be announced

early August and they will receive a beer and Bunnings Warehouse voucher. There have been some amazing photos submitted for this competition (like the one from Coral Cove assistant superintendent **Matty Walker** pictured above) which can be viewed on our Facebook page.

The GCSAQ has also recently introduced a section on our website for members who are looking to fill positions. Should you wish to advertise here, simply email [info@gcsaq.com.au](mailto:info@gcsaq.com.au). This service is available at no charge to current members. The GCSAQ AGM will be held on 19 August at North Lakes Golf Course – full details regarding this event can be found on our website.

**PAUL MCLEAN**  
PRESIDENT, GCSAQ

**T**he past month was supposed to have heralded the onset of our NZ winter, typically a wet and stormy season for much of the country. To-date rainfall has been significantly below historical averages and in particular the eastern Hawkes Bay region is facing a possible drought. By the end of June just 21mm of rain had been recorded for the region for the month, less than half that for the first nine days of June the previous year (Source: NIWA).

The main issue regarding our sports facilities (in particular many of our golf courses) will be not having had the anticipated winter rainfall to increase soil moisture percentages and facilitate some early spring growth and recovery from winter wear. This situation leaves local authorities and turf managers with many challenges.

Aside from the unseasonably dry and mild weather, the industry recently held its Fine Turf



Seminar at the Taupo Events Centre (Central North Island). The event was organised by the Central North Island Turf Managers Association (CNITMA) and was attended by over 200 delegates from around the country.

The theme of the event was sustainability and there were some excellent presentations that focussed upon our responsibilities within the turf sector to safeguard our environment and act as stewards of our unique New Zealand biodiversity.

The two days were a great success with an interesting and varied line up of speakers, as well as some great field trips to Wairakei Golf Club and also a look at the touring 'SIS Grass' machine which was kindly demonstrated to delegates by Mexteds Performance Sports Turf. Many of the New Zealand delegates attending the two days in Taupo were already booked in to attend the AGCSA conference in Brisbane the following week. I am sure the learning continued at what is always a fantastic event in Australia.

**WILL BOWDEN**  
COMMITTEE, STANZ







## GCSAWA

On behalf of the GCSAWA committee and members, I would like to congratulate **Jon Carter** on winning the 2019 AGCSA Excellence in Golf Course Management Award at the national conference recently held in Brisbane. This award recognises the hard work and dedication to over 30 years in the industry and at Wanneroo Golf Club and follows on from the GCSAWA Award he received in March.

The West also tasted success at the 2019 AGCSA Golf Championships held at Brisbane Golf Club. Nedlands Golf Club superintendent **Tony McFadyean** won his second Toro Red Jacket by four shots and helped to anchor the WA team for its second consecutive state teams title. Fads combined with **Michael**

**Dennis** (Royal Perth GC), **Idris Evans** (The Western Australia GC) and **Darren Wilson** (Wembley Golf Complex) to finish five points ahead of host team Queensland.

Everything is now organised for our upcoming GCSAWA State Conference which will be held in Margaret River from 11-14 August. We have a great line up of local and interstate speakers, led by Metropolitan Golf Club's World Cup hosting superintendent **Dave Mason** and recently retired NSW Golf Club superintendent **Gary Dempsey**.

**Nadeem Zreikat** will be talking on social media and the pros and cons of using it, while **Richard Chamberlain** will be talking about golf course design. And for the first time at our conference we have a general manager **Gary Shortland** (Mandurah Country



AGCSA Excellence in Golf Course Management Award winner, Wanneroo Golf Club's Jon Carter

Club) who will talk about the importance of the relationship between superintendent and general manager.

One session not to be missed will be the presentation and Q&A session from the Department of Water and **John Forrest** about water use and our Waterwise Program. Our association and John have been trying to get the Waterwise Golf Course Program up and running for quite a while now and we have recently been able to gain two government grants to finally do so, which includes a new online program. The online program will be launched at the conference along with our new GCSAWA website.

**SIMON BOURNE**  
PRESIDENT, GCSAWA



The victorious WA team at the 2019 AGCSA Golf Championships

## VGCSA

I'm going to kick off by congratulating **Mark Unwin** and the team at the AGCSA for hosting a great conference this year. The general feel of the conference was relaxed yet very informative with some terrific keynote speakers and a superb conference venue. Brisbane itself was fantastic, even if the weather was average.

A few take homes from the conference that I picked up were;

- It was notable to hear that Australia is at the forefront of herbicide resistance management and research. Unfortunately though, we still have no definitive answers for *Poa annua* control in our playing surfaces.
- It was concerning to learn just how many active ingredients are being taken off the market in Europe. This has forced a

lot of course managers and committees to rethink their management of not only pest and diseases but also their turf management practices in relation to expectation levels and performance from those surfaces moving forward.

- Staff, as always, is a major talking point among the entire industry – not just in Australia but on a global scale – as we all try to retain, attract and to some extent become salespersons as we promote and sell our trade to others.

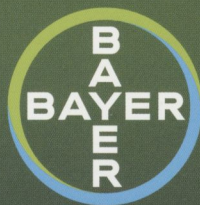
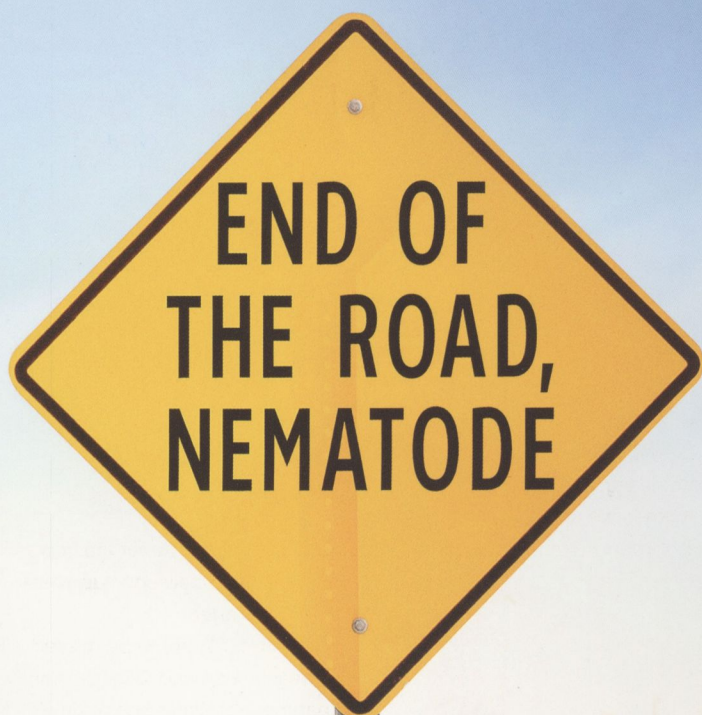
The VGCSA Superintendent/2IC Country Meeting at Yarrowonga Mulwala Golf Club will have been and gone by the time this edition goes to print. With over 100 registered for the meeting again this year, I am sure it will be another great couple of days of education and workshopping ideas among peers.

The focus this year was staff management and engagement, with **Mark Carter** as our keynote speaker, along with updates from **John Neylan** on the VGCSA 2018-19 trial work. The meeting also featured an educational course walk with host superintendent **Chris Burgess**, plus a range of presentations from all our event sponsors.

Remaining VGCSA events for the year include the education meeting at Rosanna Golf Club (superintendent **Dean Bailey**) on 17 September (bookings open in August) and the VGCSA Open Golf Day to be played at the spectacular Dunes Golf Links (superintendent **Simon Muller**) on 19 November (bookings open October).

**BARRY PROCTOR**  
PRESIDENT, VGCSA





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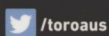
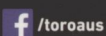


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