

AUSTRALIAN

ISSN 1442-2697 [www.agcsa.com.au](http://www.agcsa.com.au)

# Turfgrass



VOLUME 19.4 JUL-AUG 2017

MANAGEMENT JOURNAL



**2017 AGCSA Award winners**  
Phil Soegaard and Peter Watts

USGA

USGA

USGA

USGA

USGA

## Lineouts to burnouts

Forsyth Barr Stadium's concrete transformation

## Shanghai success

Taking the AFL to China

## 2017 ATC review

A taste of Twin Waters

## 117th US Open

Erin Hills embraces Aussies



# Out of this world fungicide rotation



VELISTA is a powerful broad spectrum fungicide that can be used all year round. VELISTA can be trusted to keep your turf in excellent condition especially when high temperatures and high humidity hit your facility.

 **Velista**<sup>®</sup>  
Turf fungicide

syngenta

For more information call the Syngenta Technical Product Advice Line on:  
Freecall 1800 067 108 or visit [www.greencast.com.au](http://www.greencast.com.au)

For more information ask your Syngenta Agent or go to [www.greencast.com.au](http://www.greencast.com.au)  
Syngenta Australia Pty Ltd, Level 1, 2-4 Lyonpark Road, Macquarie Park NSW 2113. ABN 33 002 933 717.  
©Registered trademark of a Syngenta Group Company. <sup>™</sup>Trademark of a Syngenta Group Company.  
©2017 Syngenta. All products written in uppercase are registered trademarks of a Syngenta Group Company. SB 17-134

I wish to apply for:  
**One year's subscription to Australian Turfgrass Management**  
*(Six editions per year)*

PLEASE TICK BOX

ONE COPY PER EDITION

\$70.00

O/S ONE COPY PER EDITION

\$110.00

Prices include GST.



**ORDERS CAN BE MADE SECURELY ONLINE THROUGH [www.agcsa.com.au](http://www.agcsa.com.au)**

Name: .....

Company: .....

Postal Address: .....

Town/Suburb: ..... State: ..... Postcode: .....

I enclose cheque for (amount): .....

Please charge my credit card:  MasterCard .....

Visa .....

Card Number: \_\_\_\_\_ Expiry Date: \_\_\_\_/\_\_\_\_

Cardholder Name: .....

Address: .....

..... Signature: .....

Funds have been paid by electronic transfer to Westpac BSB 033 380 Acc 385360

Please send me more information about becoming an AGCSA member

Forward to: **Australian Turfgrass Management**  
 Suite 1, Monash Corporate Centre, 752 Blackburn Road  
 Clayton, VIC 3168  
 FAX: (03) 9548 8622

**Australian Turfgrass Management Journal is published by the**  
 Australian Golf Course Superintendents' Association  
 ABN 96 053 205 888

**Editorial and Advertising**  
 Brett Robinson  
 Office: (03) 9548 8600  
 Mobile: 0434 144 779  
 Email: [brett@agcsa.com.au](mailto:brett@agcsa.com.au)

**Art Direction & Design**  
 Jo Corne  
 Office: (03) 9548 8600  
 Email: [jo@agcsa.com.au](mailto:jo@agcsa.com.au)



**AGCSA**  
 Suite 1, Monash Corporate Centre  
 752 Blackburn Road, Clayton, VIC 3168  
 P: (03) 9548 8600 F: (03) 9548 8622  
 E: [admin@agcsa.com.au](mailto:admin@agcsa.com.au)  
 W: [www.agcsa.com.au](http://www.agcsa.com.au)

- [www.facebook.com/our.agcsa](http://www.facebook.com/our.agcsa)
- [www.linkedin.com/in/agcsa-australia-289055127](http://www.linkedin.com/in/agcsa-australia-289055127)
- [www.instagram.com/ouragcsa/](http://www.instagram.com/ouragcsa/)
- @AGCSA2 and @AGCSACEO

**AGCSA Board**  
**President:** Brett Balloch  
**Directors:** Chris Burgess  
 Peter Lonergan  
 Stephen Lewis

**Events and Education Manager**  
 Simone Staples  
 E: [simone@agcsa.com.au](mailto:simone@agcsa.com.au)

**Membership Coordinator**  
 Allison Jenkins  
 E: [admin@agcsa.com.au](mailto:admin@agcsa.com.au)

**Accounts**  
 Philip Horsburgh  
 E: [philip@agcsa.com.au](mailto:philip@agcsa.com.au)

**AGCSATech**  
 Bruce Macphee (Environmental Agronomist)  
 E: [bruce@agcsa.com.au](mailto:bruce@agcsa.com.au)



**Printed By**  
 Southern Colour Pty Ltd  
 2 Southpark Close  
 Keysborough  
 Vic 3173

Copyright © 2017  
 The AGCSA believes that material sourced and produced for Australian Turfgrass Management is accurate, but gives no warranty in relation thereto, and disclaims liability for all claims against the AGCSA, its subsidiary companies, its employees, agents or any other person which may arise from any person acting on the materials contained within. No portion, in whole or part, may be reproduced without the written permission of the AGCSA.

**SUBSCRIBE NOW**



## COVER

**Erin Hills:** The par three 9th hole at Erin Hills, Wisconsin, USA which hosted the 117th US Open in June. **Photo:** Idris Evans, course superintendent The Western Australian Golf Club, WA.



## LEAD STORY: Aussies at home at Erin Hills - 2017 US Open review

6

There is nothing that quite compares to 'major' golf and in June five Australian golf course superintendents and greenkeepers ventured to Erin Hills, Wisconsin for the 117th staging of the US Open. Idris Evans, Mal Grundy, Dean Hardman, Jarryd King and Andrew Wright reflect on their week Stateside preparing the magnificent links style course for its US Open debut.

## FEATURES

### Shanghai success

14

ATM takes a behind-the-scenes look at the work that went into preparing Jianwang Stadium in Shanghai, China for the Round 8 AFL Premiership clash between Port Adelaide and Gold Coast in May.

### Surviving summer

18

With the warmer months not that far away again, USGA agronomists Elliott Dowling and Blake Meentemeyer look at some proven ways superintendents can mitigate summer stress on their greens.

### From lineouts to burnouts

24

Forsyth Barr Stadium in Dunedin, NZ underwent a dramatic transformation last December when it hosted the first event of drifting's D1NZ Motorsport Series. In what was a first for a Southern Hemisphere stadium, it involved the construction of a full concrete race track on top of the turf playing surface.



### Lakelands excellence

28

Lakelands Golf Club has been a labour of love for course superintendent Phil Soegaard for the past 11 years and that effort was duly recognised at the 33rd Australian Turfgrass Conference when he was bestowed the 2017 AGCSA Excellence in Golf Course Management Award.

### Watts powers green credentials

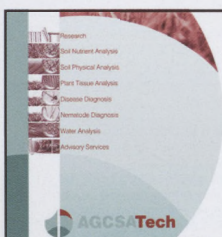
34

ATM takes a look at the environmental improvement works undertaken at Sydney's Muirfield Golf Club in recent years which saw course superintendent Peter Watts collect the coveted 2017 AGCSA Claude Crockford Environmental Award.

### A taste of Twin Waters

42

For the second time in four years the Australian Turfgrass Conference and Trade Exhibition returned to the popular Novotel Twin Waters Resort in June. ATM takes a look back at some of the highlights of the week on the Sunshine Coast.



**TIME FOR SOIL TESTING!**  
Let us provide you with a **truly independent** soil report

Send samples to **AGCSATech**  
Analytical, Diagnostic and Consultancy Services

Ph. 03 9548 8600  
Fax. 03 9548 8622  
Email. [bruce@agcsa.com.au](mailto:bruce@agcsa.com.au)

Suite 1, Monash Corporate Centre  
752 Blackburn Road  
Clayton 3168 Vic

Following on from the success of the inaugural programme in 2016, the AGCSA Future Turf Managers' Initiative returned for a second year at the 33rd Australian Turfgrass Conference and Trade Exhibition. ATM checks in with this year's successful candidates to see what they took away from it.



Also in this edition...

**Foreword Thinking** 4  
**AGCSATech Update – Perched water tables** 38  
**Regional Profile – Gladstone GC, Qld** 58  
**Around the Trade** 64  
**Association Reports** 68  
**Up the last...** 76



Contributors to Australian Turfgrass Management Journal Volume 19.4 (July-August 2017)

AGCSA FTMI candidates and mentors; Vicki Crowe (PGA of Australia); Elliott Dowling (USGA); Brendan Eathorne (Forsyth Barr Stadium, NZ); Idris Evans (The Western Australian GC); Chad Gilmour (Gladstone GC); Neil Graham (GCSAWA); Mal Grundy (Murray Bridge GC); Tony Guy (STA WA); Dean Hardman (The Australian GC); Steve Herzberg (NRG Solutions); Allison Jenkins (AGCSA); Jarryd King; Erik Kinlon (HG Sports Turf); Peter Lonergan (Coolangatta & Tweed Heads GC); Bruce Macphee (AGCSATech); Susanne Macphee; Blake Meentemeyer (USGA); Mat Poultney (VGCSA); Prof. Mike Richardson (University of Arkansas, USA); Phil Soegaard (Lakelands GC); STA Victoria; Simone Staples (AGCSA); Lee Strutt (Royal Automobile Club, UK); Ben Tilley (Headland GC); Peter Watts (Muirfield GC); Andrew Wright (Gisborne GC).

# Due recognition

Just as this edition of Australian Turfgrass Management was being put to bed, it was announced that Golf Victoria had inducted the venerable Claude Crockford (pictured) into the Victorian Golf Industry Hall of Fame. The former Royal Melbourne Golf Club course manager's elevation came at the 2017 Victorian Golf Industry Awards and, somewhat fittingly, there to accept the honour on Crockford's behalf was present day Royal Melbourne superintendent Richard Forsyth.



The decision by the state golfing body to acknowledge the indelible contribution of one of the most revered and celebrated course managers in Australia's history should be highly commended. Crockford's name now deservedly resides alongside many other legendary figures including Peter Thomson

(AO, MBE), the Hon. Michael Scott (winner of the very first Australian Open in 1904), Ivo Whitton, David Graham and Alex Russell. Crockford's predecessor at Royal Melbourne, Mick Morcom, who was head greenkeeper from 1905 to 1937, was also inducted last year.

Crockford's legacy is still as strong today as it was when he presided over Australia's most famed turf surfaces for 38 years between 1937 and 1975. Walk into the impressive new Royal Melbourne maintenance facility and Crockford's portrait, along with Morcom's, hangs proudly in the foyer. Indeed, as Forsyth attests, the principles which Crockford forged such a reputation with are still very much an inspiration to the maintenance of the courses today.

Crockford started his career as a qualified architect, but found the outdoor lifestyle of working on a golf course much more to his liking. He spent eight years at Yarra Bend public course where he worked developing the course with Morcom after it was built in 1928. Following this he worked at Royal Melbourne under Morcom and in 1935 was appointed his assistant, earning the princely wage of £5 a week. Morcom's health at the time was beginning to fail and when he eventually died in May 1937, Crockford succeeded him as head greenkeeper. Crockford's storied tenure came to an end in 1975, bringing to a close one of the most influential and pioneering careers in Australian turf management.

It's perhaps two other Hall of Fame inductees who have over the years most eloquently summed up Crockford's contribution to the sport. Renowned golfing journalist Don Lawrence called Crockford "a gold nugget – rare and precious" in the foreword of Crockford's book 'The Complete Golf Course – Turf and Design' which was published in 1993. Two years later, upon Crockford's death, Peter Thomson simply stated: "The Royal Melbourne turf is his Shrine of Remembrance – a tribute to an uncommon genius."

The AGCSA posthumously awarded Crockford its Distinguished Service Award in 2004 and struck the prized Claude Crockford Environmental Award in 1996. The award continues to celebrate excellence in golf course environmental stewardship which was a cornerstone of Crockford's work. ATM congratulates Golf Victoria on this additional recognition of Crockford, a man whose legacy was profound and whose greenkeeping principles continue to have great relevance in modern day turf management. Enjoy the read...



Brett Robinson, Editor

## AUSTRALASIAN TURFGRASS CONFERENCE & TRADE EXHIBITION WELLINGTON: 24TH-29TH JUNE 2018



Business Events  
**Wellington**  
 WellingtonNZ.com



**100% PURE  
 NEW ZEALAND**  
 newzealand.com

# Focus turns to inaugural 2018 Australasian Turfgrass Conference



It is with great pleasure that I pen this Foreword Thinking piece for this edition of the AGCSA's flagship publication. ATM has for many years been a standard-bearer for our industry and on a recent trip overseas it was great to see that it has an international presence.

I spent some time in Florida touring a number of golf clubs eager to pick up some tips on the TifEagle variety that has been recently planted at my club. It was heartening to see the latest copy of ATM on two of my host superintendents' desks; okay, so they were ex-pat Aussies, but it shows that the reach of the journal spreads to all parts of the globe and is a great advertisement for what the turf industry, and the golf course segment in particular, achieves in the land 'Down Under'.

My journey to the US unfortunately meant I missed the recent 33rd Australian Turfgrass Conference and Trade Exhibition on its return to Twin Waters, but from all reports I certainly wasn't needed to make the conference the outstanding success that it was. From **Troy Muir** and his crew's presentation of Pelican Waters Golf Club for the Toro AGCSA Golf Championship all the way to the excellent range of local and international speakers, not to mention the weather, the conference once again ticked all the boxes.

Such success isn't possible without the amazing backing of our trade partners with their unwavering support of the trade exhibition, AGCSA Awards, social functions and presenters adding to the week. Such support isn't taken lightly and their commitment to the industry is indeed most appreciated. Particular thanks goes to conference major sponsors **Amgrow, Jacobsen, John Deere, Nuturf, Toro** and **Syngenta** along with principal partner **Golf Australia**.

ATM editor Brett Robinson covers the conference in more detail later in this edition, but congratulations goes to Armidale Golf Club superintendent **Brett Woodward** on his maiden Toro Red Jacket (relegating AGCSA president Brett Balloch to second place yet again) and AGCSA Award winners **Phil Soegaard** (Excellence in Golf Course Management Award, sponsored by Rain Bird), **Peter Watts** (Claude Crockford Environmental Award, sponsored by Syngenta) and **Joel Manson** (Graduate of the Year, sponsored by Toro).

## BURGESS ON BOARD

The 2017 AGCSA Annual General Meeting was held during the conference and the AGCSA Board is pleased to welcome **Chris Burgess** who has been elected as AGCSA director for a two-year term. Chris, who hails from Yarrowonga Mulwala Golf Club Resort up on the Murray River, replaces Wembley Golf Complex's **Darren Wilson**.

It is great to see one of our younger superintendents put their hand up to join the board and I am sure that Chris will find his feet in no time and be a great asset to the AGCSA. Chris has had a diverse turf management career which started when he walked into the exclusive Capital Golf Club in Melbourne as a 16-year-old during its construction. He was duly put on by superintendent **Graeme Rogers** and went on to spend a total of 13 years there, rising to the role of foreman. During that time Chris, with the blessing of the club, spent an invaluable 15 months working on the construction of Kingsbarns Links in Scotland!

After his time at Capital had come to an end, Chris took on his first superintendent role at Lang Lang Golf Club east of Melbourne, before the lure of construction took him up to the Murray in 2008



**Turf Drain**  
Australia

**The leaders in sports field drainage & sports field construction using the latest machinery & technology.**

Staff with over 60 years combined golf course and sports field drainage, sports field construction & horticultural experience. Choose the specialists - 100% of our projects are either the drainage or construction of sports grass surfaces.

**Our Services include:**

- Slit drainage • Laser controlled trenching • Sand grooving • Turf wicket construction to international level
- Sports field design & construction • Bowling green construction • GPS guided and two-way laser controlled grading

**Proven methods. Proven results.**

PO Box 112, Mt Kuring-gai, NSW 2080 | Phone: (02) 8117 8100 Fax: (02) 8117 8101 | Email: info@turfdrain.com.au [www.turfdrain.com.au](http://www.turfdrain.com.au)

as the grow-in superintendent of the new Black Bull development. After some ups and downs there, in 2010 the position at the nearby Yarrowonga Mulwala Golf Club Resort became available and has been his home since then. Yarrowonga is an impressive facility and Chris oversees maintenance operations of the club's two 18-hole championship courses – the Lake and Murray courses – as well as the 'Executive' nine-hole course.

While we look forward to Chris bringing a fresh perspective to AGCSA matters, it is with some sadness that we bid farewell to his predecessor. Darren served the AGCSA for the past six years, which, as he penned in the last edition, was at times a somewhat tumultuous period for the association. Darren's commitment given the tyranny of distance from Western Australia, not to mention his own health concerns, is a testament to the character of the man affectionately known as 'Professor' in his home state. On behalf of the members Darren I would like to thank you for your outstanding contribution.

Speaking of tumultuous, the months leading into the Twin Waters conference weren't always plain sailing at the AGCSA's Clayton headquarters, but the staff pulled together magnificently to once again produce an outstanding event. I have only heard the utmost of compliments and it is a tribute to the AGCSA staff whose efficiency and good old hard work made the week what it was.

I would also like to take this opportunity to mention AGCSA president **Brett Balloch** for his efforts over the past year, as tough a year for an AGCSA president as there has ever been. From the almost weekly trips from his home base in Anglesea, Vic to either Clayton or the Melbourne suburban area on association business, to the countless hours spent on the phone, Brett has at all times represented the association with the highest level of professionalism. On behalf of the members Brett a very big thank you.

With the conference now over and membership renewals well underway for the coming year, it is back to business as usual for the staff and board of the AGCSA. The big focus now is preparing for our exciting joint venture with the NZGCSA in Wellington next year. The inaugural **Australasian Turfgrass Conference**, to be held from 24-29 June 2018, is set to be huge. Talks and preparations have been underway for several years with venues now locked in and the nitty gritty of the conference programme to be worked out in the coming months. It is hoped to have all literature pertaining to the conference available prior to Christmas to allow time for delegates to organise themselves.

Having heard feedback from both delegates and exhibitors at Twin Waters, there is plenty of interest in the New Zealand event and the AGCSA very much looks forward to working with the NZGCSA to deliver a turf conference of unrivalled quality. 🌱



Australian Golf Course Superintendents' Association

## PREMIUM PARTNERS

The AGCSA is indebted to the support of the following premium partner companies

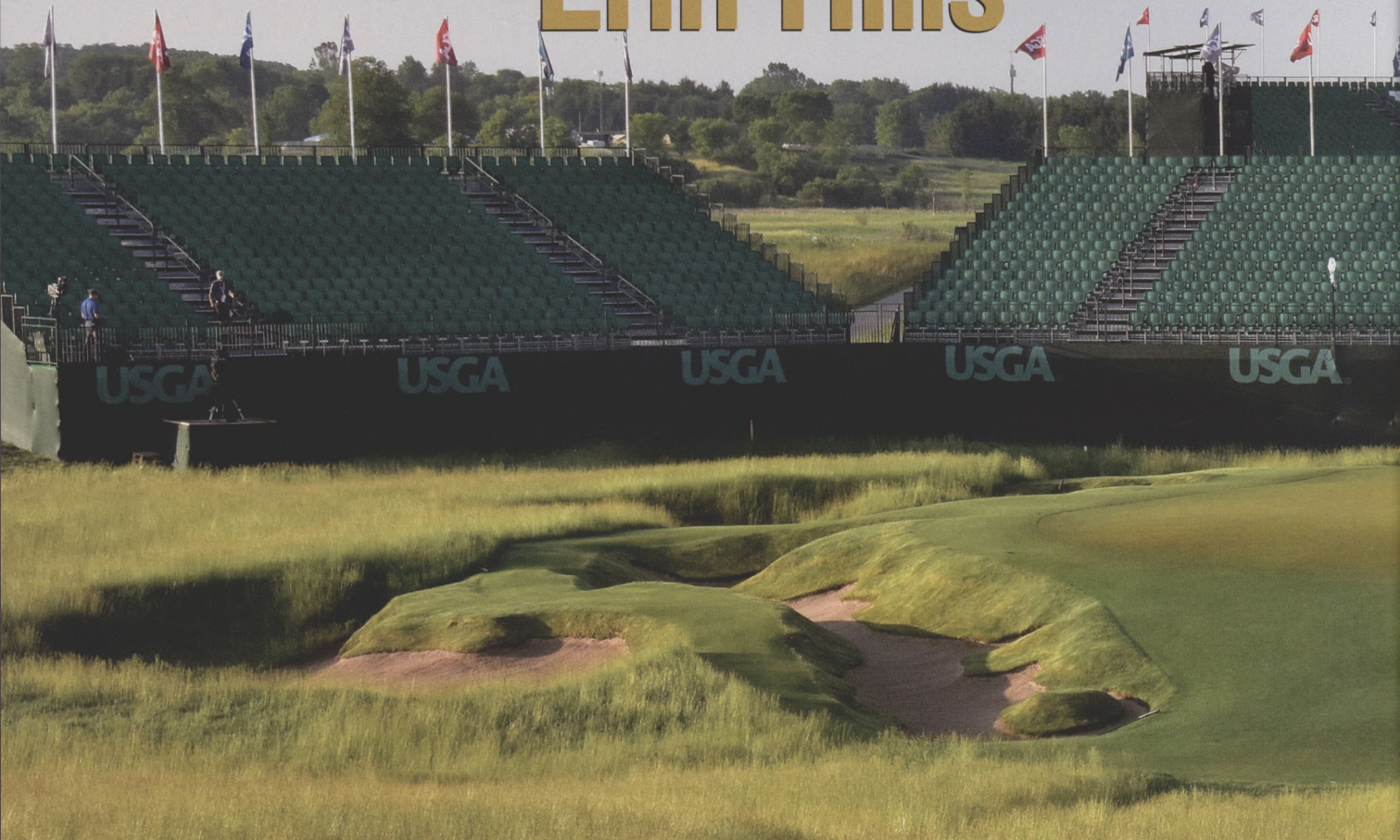


JOHN DEERE



The AGCSA encourages all members to support these companies who support your association

# Aussies at home at Erin Hills



**A**ustralian greenkeepers are renowned for making an impression wherever they go. Whether it's their finely-honed practical skills, exemplary work ethic, adaptability or just the innate ability to fit in with just about everyone, many Aussies have left their mark on course maintenance or construction crews overseas or played a significant role volunteering at a major event.

A great aspect of the turf industry is the many opportunities that are on offer to greenkeepers to enhance their skills, with one of the most rewarding and eye-opening being volunteering at tournaments. Regardless of how long you have been in the profession, volunteering to assist with course preparations not only gives you a taste of golf course management at the highest level, but on a personal level it can also be an extremely galvanising experience.

Take Mal Grundy, who has been course superintendent at Murray Bridge Golf Club in South Australia for more than two decades, as an example. A more passionate greenkeeper

you'll likely never meet, last year Grundy took annual leave and made the 1400km round trip to volunteer for two weeks at Kingston Heath Golf Club for the 2016 ISPS Handa World Cup of Golf. As he was quoted in ATM Volume 18.6, "If you ever want to reinvigorate your passion for the industry, come and do something like this... I should have done this 20 years ago!"

For Grundy, spending time on the Melbourne sandbelt sparked an awakening of sorts. It prompted him, along with good friend and Gisborne Golf Club superintendent Andrew Wright, to try his luck in applying to volunteer for a 'major' – in this case the 2017 US Open at Erin Hills. Sure enough, just a few weeks after the World Cup, Grundy received confirmation that both he and Wright had been successful.

They would be joining three other Australians who had also been successful in gaining placements – Idris Evans (course superintendent at The Western Australian Golf Club), Dean Hardman (3IC/spray technician at The Australian Golf Club, host of the 2017 Emirates Australian

The stunning par three 9th at Erin Hills with its spectacular bunkering



There's something very unique about 'major' golf and in June five Australian golf course superintendents and greenkeepers ventured to Erin Hills to assist with preparations for the 117th staging of the US Open. Idris Evans, Mal Grundy, Dean Hardman, Jarryd King and Andrew Wright reflect on their week in Wisconsin as the public access links-style course made its US Open debut.



Open this November) and Melbourne-based greenkeeper and former Ohio Program intern Jarryd King. For Evans, who would turn 50 while in the US, it was to be his second US Open, having volunteered at the controversial Chambers Bay in 2015.

The quintet was among 100 volunteers that would descend on the magnificent Erin Hills to assist superintendent Zach Reineking and his 50-strong crew prepare the sprawling links-style course for its US Open debut. Erin Hill is just the sixth public access facility to host the US Open alongside Pebble Beach, Pinehurst No.2, Bethpage Black, Torrey Pines and Chambers Bay.

Designed by Dana Fry, Mike Hurdzan and Ron Whitten, the course resides on a massive 263-hectare parcel of beautifully undulating land northwest of Milwaukee. Built very much on a minimalist philosophy (during construction they only moved dirt on four holes), it harnesses the topography of the land in a quite spectacular way and boasts bunkering and fescue roughs that can only be fully appreciated by being there.

Major golf is the pinnacle of golf course presentation and while some may lament the over-the-top manner in which some of these courses are presented and set up, there is little denying the tremendous effort and skill that goes into preparing a golf course to such an exacting level. And no more was that on display again than at Erin Hills for the 117th staging of the US Open.

As luck would have it, four of the Australian contingent – Evans, Grundy, Hardman and Wright – were teamed together on the crew mowing the back nine fairways, while King assisted the greens mowing crew. Arriving at the site on the Sunday before the tournament, the Aussies quickly ingratiated themselves with the crew and even hit the headlines when the fairway quartet starred in a GCSAA.TV segment.

Upon returning back to earth after their journey Stateside, ATM asked all five to reflect on their volunteering experience, some of the highlights of the week and what impressed them most about the course and 'major' tournament golf. Here's what they had to say...



The Aussie members of the back nine fairway mowing crew (from left) Mal Grundy, Andrew Wright, Idris Evans and Dean Hardman

**MAL GRUNDY  
MURRAY BRIDGE GC, SA**

“Being inside the ropes at one of the world’s greatest golf tournaments and playing a small but important role in preparing the course was yet another highlight in my career. It was mind-blowing!

While everything to do with the tournament was on a grand scale, I was surprised by the simplicity of the course. The site has plenty of movement which provides tremendous views of the course and the surrounding land. It was very picturesque and reminded me of Tony Cashmore’s The Dunes Golf Links (Vic) in many ways with its undulations, open vistas and lack of trees. The course is surrounded by woods and rolling Wisconsin farmland which was dotted with classic ‘red barns’.

The bunkering was quite something – unique, tight. Some had sandy ‘peninsulas’ feeding out from the ‘main’ part of bunker or islands within. Some of these peninsulas weren’t even as wide as a bunker rake head. I guess it screams unfair or wrong, but I guess ultimately that’s what makes Erin Hills so unique. I loved the grass faces on the bunkers and not only for the aesthetics but also for their function. We experienced 35mm of torrential rain on the Monday evening during the practice rounds and the next morning there were minimal wash outs. The bunkers drained amazingly too.



Erin Hills became the sixth public access facility to host the US Open

Two crews of 12 cut the front and back nine fescue fairways at 9.5mm



Tee complexes were that – small areas, some only less than 100m<sup>2</sup> or even 50m<sup>2</sup> or less – but there were plenty of options for course set up to give teeth to the way holes were played. Fairways were wide and generous but very strategic due to the bunkering.

The big talking point all week was Erin Hills’ signature fescue roughs which framed the course beautifully. From a club member perspective it probably would have seen even the most hardened golfer back in the clubhouse curled up in a foetal position, but with the expansive fairways and a field of the world’s best golfers, it was overplayed somewhat by the media. They ended up cutting sections of it back to appease some of the comments that had been forthcoming, but as I commented on a Facebook post a bag of cement and 150 teaspoons would have done the same trick!

The turf surfaces, as expected were amazing. Like everyone they were also fighting *Poa*. The steep slopes and tight bunkering meant careful attention to the operation of machinery was very important. The climate is made for fescue and bentgrass and I reckon by what I witnessed the irrigation system is really only a back-up to reliable summer rainfall. Superintendent Zach Reineking assured me that it does get dry – in the height of summer he said they can go up to three weeks without rain – yes, three weeks! But the fescue on this free draining site would dry out quickly as we witnessed on the Monday afternoon before the storm.

The unsung heroes of Open week were the workshop crew. They had literally hundreds of machines to keep sharp and in full working order and ready for action at 4am and again at 4pm as the entire course was cut both morning and afternoon!

What did I gain from my time at Erin Hills? It’s a hard question to answer, but I guess as with the experience I had at Kingston Heath, it again really opened my eyes up to what is out there in the industry. I followed up the Erin Hills visit with a further three-and-a-half weeks in Chicago, Toronto, Montreal, New York and San Francisco, so I guess I’m still absorbing the magnitude of it all.

Having volunteered at the World Cup, it prepared me somewhat as to what to expect at a top ranking course and the expectations on conditioning. However, no two clubs are the same, whether it’s to do with budgets, climate and resources etc so it’s dangerous ground to pick a favourite. The 13-day experience at Kingston Heath, working among a smaller, closer knit crew was invigorating.

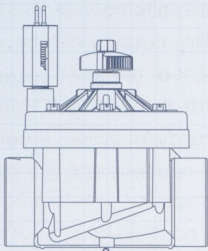
As a gift for volunteering at Erin Hills we all received a backpack filled with goodies. It had a big shamrock (the club’s emblem) emblazoned on it and many times on my further travels I was stopped and asked by people on the street about the Open and Erin Hills. It was instances like this that you appreciated that golf in the US is huge.

CONTINUED ON PAGE 10

# TRUSTED COMMERCIAL PRODUCTS



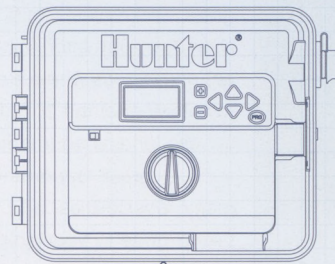
1 **MP Rotator®**  
and Pro-Spray® PRS40



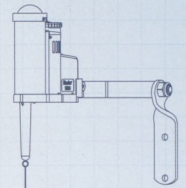
2 **ICV Valve**  
100% Water Tested



3 **I-25**  
Radius of 11.9 - 21.6 m



4 **I-Core®**  
6 - 42 Stations



5 **Solar Sync®**  
Smart Irrigation

Choose Hunter as your irrigation manufacturer for your most important projects. The Hunter family of products provides the highest quality backed by the industry's best support. We are proud of our reputation for outstanding customer service, comprehensive training, and timely technical support.

RESIDENTIAL & COMMERCIAL IRRIGATION | *Built on Innovation®*  
Learn more. Visit [hunterindustries.com](http://hunterindustries.com)

# Hunter®



National Free Call: 1 800 HUNTER  
Toll Free Fax: 1 800 651 680  
[www.hrproducts.com.au](http://www.hrproducts.com.au)  
[hrrsales@hrproducts.com.au](mailto:hrrsales@hrproducts.com.au)



Tel: 1 300 856 368  
Fax: 1 300 856 369  
[www.nelsonirrigation.com.au](http://www.nelsonirrigation.com.au)  
[info@nelsonirrigation.com.au](mailto:info@nelsonirrigation.com.au)

Suite 7, 202 Ferntree Gully Road, Notting Hill,  
Melbourne, Victoria, 3168, Australia  
Tel: 61 3 9562 9918  
Fax: 61 3 9558 6983



Erin Hills' unique and much-talked about bunkering



Try getting your shot out of these!



The tournament crew's chill out zone at the maintenance compound

## CONTINUED FROM PAGE 8

On one occasion I ended up talking to a group of blokes who I shared a table with in a busy café. They all spoke lovingly of their golf club and how it was such an important part of the social fabric and their way of life. In many situations that backpack was an ice-breaker in conversations throughout the rest of my trip which was quite profound."

### JARRYD KING MELBOURNE

"My journey to Erin Hills began back in 2015 while I was on The Ohio Program. Working at Card Sound Golf Club in Key Largo, Florida I lived with three great workmates Craig Smith, Jordan Harris and Nick Dolimpio. After one was offered an AIT position at Erin Hills, we made a pact that we would all put in to volunteer at the 2017 US Open.

Working a tournament like the US Open is such a great opportunity. It exposes you to so many possibilities and experiences, whether it's taking pride in your abilities and representing your course (or country), networking, travelling, seeing old friends or just to be there and experience what being part of a 'major' is like.

I was fortunate to be part of the greens team for the week, although I wasn't cutting. I was there as an assistant to aid with set up, quality control (scalping, spotting for lines etc...) and to move turning boards for the guys cutting greens. This gave me quality time on the putting surfaces which were absolutely impeccable. Due to the heavy rains that plagued us for a few days in the lead-up to the opening round, the firmness of the A4 bentgrass greens was still of a high standard; they were still so slick and true. The height of cut on the greens was .092 inches



(2.34mm) – well that's what we were told anyway! I was also able to spend some time on the collars and approaches which were just so tight and like carpet.

The tournament crew was amazing. With more than 100 on site it provided a great chance to connect with people from so many different courses and climates. For those who like to move around in this industry, it provided a fantastic opportunity to network with such a large group and open up further possibilities. The set up that was provided for the volunteers was second-to-none. There were two large marquee tents – one for meetings and meals and the other, a break room, which was filled with arcade games, TVs, lounges and a coffee stand.

From an agronomic standpoint, I can't put a finger on what I was most impressed with. The whole property, practices and presentation were just so remarkable. If I really did have to pick one thing, I would say the way the greens were able to handle the rain, still be exceptionally firm and hold their speed with all that water was, again, amazing.

Working the US Open gave me the chance to meet so many others in the industry, which was the big thing for me personally. Perhaps the biggest highlight was having the chance to see my old work colleagues again who have also become great friends. The US Open gave us the chance to catch up again, share some well-earned amber ales and to recreate a group photo that we had taken two years prior when we last saw each other in Florida.

Another special moment was after the final round on Sunday. To be able to stand on the 18th green with the other volunteers and crew members behind the dais and trophy presentation and get photos with winner Brooks Koepka, made all the early mornings and late nights worth it."

### IDRIS EVANS THE WESTERN AUSTRALIAN GC

"I was very fortunate that this was my second US Open, having been at the 2015 edition at Chambers Bay. I was very keen to see how Erin Hills compared not only layout wise, but how it was set up by the USGA. I think this being my second US Open, I appreciated the enormity of the week a bit more than the first. Some of the members asked me why would you take holidays and go and 'work' on a golf course halfway around the world? Even my wife Mardi thinks I'm a bit strange enjoying the early starts and very little sleep. But, it's the greatest show on grass and I love what I do.

There were 100 volunteers who joined the 50-strong Erin Hills grounds staff team for the week. Myself, Dean, Mal and Andrew were assigned to mow the back nine fairways on Toro 3550-Ds with catchers. There were 24 fairway mowers used in total with 12 for each nine and four spares. After being briefed by Zack Reineking upon arrival on the Sunday, we were assigned our team leader and machine. Each mower was labelled with our names and we used the same one each day for the week.

Our first cut was interesting to say the least. It was late Sunday afternoon, we were not able to see where we were cutting and everyone was trying to take in the golf course for the first time! But we were on our way and got the process sorted out quite quickly. The fescue was cut at 9.5mm and with a team of 12 we were able to get through the back nine fairways in about one hour and 20 minutes.

The course itself is laid out on about 120 hectares with 138 bunkers. The fairways were very wide and in most places over 50 metres. The fescue rough was long and thick and a big media taking point in the first few days, but given the width of the fairways I believe it was very fair considering the best golfers in the world were assembled.

The thing that stood out to me was how hard they worked the A4 greens which were being cut just above 2mm for the week. The greens would get double cut and double rolled before and after play each day. After a storm cell dropped over 2.5 inches of rain on Tuesday night, the greens lost their firmness so they began triple cutting and double rolling each green. Come Thursday greens were quad cut and quad rolled to increase speeds which were close to 14 feet by Sunday's final round.

Having seen what happened at the 2015 US Open at Chambers Bay as a result of the USGA drying the course out, I couldn't help but think this was going to happen again. However, the rain on Tuesday took the sting out of the course. I know the USGA are advocates for sustainability in golf course maintenance, but having seen how the golf courses are set up for these players in two US Opens now, I sometimes wonder how some of these pros would cope playing a course we would set up for our members on a Saturday competition.

There was great opportunity to network with the other volunteers and share knowledge. The one thing I have noticed is that universally throughout the world golf course maintenance practices are very similar; they are just performed on a mammoth scale for major events like a US Open. It was an honour and very exciting to have been part of such a great tournament and I would recommend to anyone to volunteer if the opportunity presents."

## ANDREW WRIGHT GISBORNE GC, VIC

"Last year I made the decision to experience more of what the industry has to offer and decided to put my hand up to volunteer at the 2016 Emirates Australian Open at Royal Sydney Golf Club. I also wanted to experience working in the US so applied for Erin Hills. Looking back, it was a trip I will never forget.

Before arriving at Erin Hills, I met up with fellow volunteer Mal Grundy in Chicago and took in some of the sights of the 'Windy City'. Before I left Australia I contacted Justin Spillman who is head groundskeeper at the famous Wrigley Field, home of the Chicago Cubs Major League Baseball team which last season won the World Series for the first



time in 108 years! We were lucky to experience a guided tour of the stadium with assistant head groundskeeper Rick Fuhs. Both Justin and Rick couldn't have been better hosts and it was surreal getting to walk out onto Wrigley Field and being able to touch the famous 'ivy wall'. After talking to so many Cubs supporters afterwards, we realised what an honour it was to be able to do so (people have been arrested in the past for stealing the leaves!).

After a few more sightseeing days in Chicago we made the train journey up to Milwaukee and then onto Carroll University in Waukesha where we would be residing for the tournament week. The next day we got to meet some of the volunteers and in the afternoon a fleet of buses arrived to take us out to Erin Hills which was about 45 minutes away. This gave everyone a good chance to introduce themselves and talk about the week ahead.

The first thing I noticed getting off the bus and going into the hospitality marquee was the amount of people. It was then that I really appreciated the scale of the operation in which we were to be involved in. It was fantastic to be assigned to the back nine fairway mowing crew, especially being grouped with Mal, Idris and Dean. Our team of 12 included two full-time members of the Erin Hills crew who were our team leaders for the week.

Having 12 Toro 3550-D mowers on the one fairway at a time had its challenges and it took us a couple of days to iron out the glitches, but by day three we were completing our task in about one-and-a-half hours. The fescue fairways were mowed twice a day at 9.5mm and mown tee to green. We

**Tournament staff cut back the fescue rough early in the week following criticism of its penal nature**



**Erin Hills' A4 bentgrass greens were cut at 2.34mm and on some days were quad cut and quad rolled**





A dramatic looking storm front approaches Erin Hills at the start of Open week, bringing with it 2.5 inches of rain



The Under Armour backpack filled with goodies that all course volunteers received

Erin Hills resides on a wonderfully undulating parcel of land in Wisconsin. Pictured is the 4th



also had catchers on each machine and with the assistance of a 'clip management team' all catches were emptied on a regular basis.

My first impression of the site was that it was a very natural looking golf course. Like many others who commented, the height of the rough was very severe and it really came into its own when the wind got up and you could see it flowing and swaying. As we started mowing the fairways you could see the widths were very generous and the pros were more than capable of hitting them.

My highlights for the week were simple – being involved in a major and doing it alongside some great Aussies who were doing their bit to present a course on the world stage. It was also interesting to witness how the whole event came together. Another highlight was networking with fellow volunteers and staff and seeing the vast support of the event by the people of Wisconsin and how proud they were to host a US Open (their first). The final day we walked around watching the golf and were fortunate to be a part of the trophy presentation ceremony on the 18th green. It was at this moment that I realised how much the tournament meant to the Erin Hills full-timers and the volunteers. To see the excitement and camaraderie at that moment was unforgettable."

### DEAN HARDMAN THE AUSTRALIAN GC, NSW

"I have worked at over 10 major tournaments in my career, but the US Open has to be the biggest and the most impressive. What stood out most was the level of professionalism and the sheer scale of the event itself. The way that (superintendent) Zach and his crew managed the whole event was a real credit to them and they treated all the volunteers very well.

The highlight was without a doubt just experiencing the scale of everything. From the moment we drove into the carpark in the bus and seeing how big the facility was - all the machines, equipment and the marquees - was very impressive. Then we walked inside and saw the Under Armour backpacks with our name engraved on a bag tag all laid out. Seeing what was inside the bags was a big surprise – uniforms, a hat, a drink bottle, a headlamp, a key finder and a pen – it was like Christmas! All of this 'wow factor' before even stepping foot on the golf course!

The course was even more impressive. What stood out for me was the style and aesthetics of the bunkering which was very unique. There were 136 bunkers in total and as with the rough there were a lot of critics complaining about how tough they were. You could certainly see why; some were that tough you would have to play away from the green just to get out of them! They were very well maintained and handled the 2.5 inches in the storm on the Monday night before the tournament extremely well.

Another highlight was seeing how hard the mechanics worked all week. Having 60 reels to check and adjust on the back nine fairway machines alone would have been enough, but they also had the front nine units not to mention the greens, tees and approaches mowers which all had to be prepped in readiness for the next day.

The long fescue rough was probably the most controversial part of this year's US Open. It wasn't just the height of the rough, but how close it was to the fairways. Some of the long rough was knee high and only five metres away from the edge of the fairway. Once again there was a lot of talk about this on social media questioning the length of the rough and whether it was fair. The course staff were ordered by the USGA to extend the width of the short rough during the first day of the tournament, but then were told to stop after getting complaints from the public – they couldn't win!

The biggest thing that I got from working at the US Open was just how much planning went into the event. From organising the volunteers, housing them all, scheduling the shuttles to and from the course, not to mention the amount of equipment Erin Hills brought in, makes you realise how big the golf course industry is in America. The Australian Open

is great to work at, but it has nothing compared to the scale of things at a US Open.

Having been involved in two Australian Opens at The Australian and soon a third, it was very interesting observing the US Open from a volunteer and preparation perspective. The staffing levels obviously were the big difference; we would be looking at 30 for the Australian Open, whereas at Erin Hills there were 100. Now that I am organising the volunteers for this year's Australian Open, it made me appreciate how much effort the Erin Hills staff had to put in to make things run smoothly. Organising and approving all the volunteers, sourcing accommodation and arranging transportation would have been a huge logistical exercise.

There were plenty of memorable moments both on and off the course during the week at Erin Hills. Mal teaching two Americans, Todd Mott and Matt Davis, how to speak Australian slang and what they meant was priceless ('flaming galahs' indeed!). Incidentally, Todd is volunteering at the Emirates Australian Open this year so I'll be testing him to see if he has remembered some of the phrases!

Those of us on the fairway crew also had our 15 minutes of fame when the GCSAA.TV crew approached us to be filmed about coming all the way from Australia to volunteer. It was pretty exciting given that I had never been interviewed before, but when it dawned on me how big the GCSAA.TV audience is, the nerves started kicking in.



The sunrises and sunsets at Erin Hills were, well, you be the judge...

We arranged to meet the GCSAA.TV crew on the first day of the tournament on the 18th fairway. We couldn't have picked a better time for it. It was after we had cut fairways in the morning with the sun rising behind us which made everything stand out. We were all made to sit on the mowers while getting interviewed which made us look like models posing!

When I saw the final video, I was amazed by how good we all sounded and it made me proud that we were representing the Australian golf course industry in the US. As Mal commented at the end of the video, 'How could you not forget anything like this', which pretty much sums up perfectly the experience working the US Open at Erin Hills." 🙏



Dean Hardman gets interviewed by the GCSAA.TV crew

# POGO®

Superior insight | Better decisions | Healthier turf

No other tool gives you this level of analysis and insight,  
(without even leaving the course)

Consultant-level, detailed analysis and reporting at your fingertips...for every important impact on turfgrass performance.



POGO  
Turf Pro APP

Integrated  
PRO-quality GPS



For more information contact your  
local Nuturf Territory Manager on  
**1800 631 008** or visit [www.nuturf.com.au](http://www.nuturf.com.au)

 **NUTURF®**  
SPECIALISTS PROVIDING SOLUTIONS

# Shanghai

## SUCCESS



May's historic AFL Premiership match in Shanghai between Port Adelaide and Gold Coast proved a great success, with HG Sports Turf and AGCSATech playing a major role in helping take the game to China.

It may have only taken Port Adelaide around 120 minutes to demolish the Gold Coast Suns in the first AFL Premiership game in China back in May, but in order for the two teams to take to Jiangwan Stadium in Shanghai took well over a year of planning and preparation.

The Round 8 clash saw China become just the second country to host an AFL Premiership match for points outside of Australia (the other being New Zealand). In front of an official crowd of 10,118, the Power, one of the primary drivers behind taking the game to China, easily dispatched the Suns by 72 points. Despite the one-sided nature of the game, afterwards the AFL hailed the match a success on a number of fronts, in particular the playing surface.

The road to taking an AFL Premiership match to China began as far back as March 2016 after the Port Adelaide Football Club inked a three-year deal with Chinese property developer Shanghai Cred. Shortly after that a Memorandum of Understanding between Port Adelaide, the AFL and Shanghai Cred was signed to play a Premiership game in China in 2017.

Around that time the AFL requested that AGCSATech, which for many years has undertaken all pre-season and Premiership match ground assessments for the organisation, be part of a delegation to Shanghai to assess a number of potential venues. The AFL had travelled to Shanghai once before back in 2010 when Melbourne and Brisbane played an exhibition game at Jiangwan Stadium, a multi-use public facility near the centre of the city.

While that venue was in the mix again, the much newer Shanghai Stadium was also being considered. Constructed in 1997, Shanghai Stadium hosted a number of soccer matches during the Beijing Olympics and is the home ground of Shanghai International Port Group Football Club which plays in the Chinese Super League.

While the perennial ryegrass soccer pitch was in excellent condition at the time of the AGCSATech inspection, the primary issue was the fact that the ground was configured only for soccer in addition to having an athletics track around its perimeter. The initial thought was that a ready-to-play turf surface





PHOTOS COURTESY OF HG SPORTS TURF

could be installed over the top of the running track, however, the logistics of such an exercise in a foreign country soon meant that it was ruled out.

Attention therefore turned back to Jiangwan Stadium and it was duly announced in late October 2016 that it would be hosting the first AFL Premiership game for points in China in 2017.

### EXPERTISE

Once Jiangwan Stadium had been selected, the AFL engaged HG Sports Turf (HGST) from November 2016 through until game day on 14 May 2017 to undertake the many improvements needed to get the playing surface up to AFL standard. HGST managed a local crew on the ground full-time

**Jiangwan Stadium, Shanghai looking a picture on game day for the Round 8 AFL Premiership clash between Port Adelaide and Gold Coast**

## AHC51016 Diploma of Sports Turf Management

Delivered on-campus or by correspondence - intakes any time of the year.

*Will Koopmans - Gordon Turf Student and AGCSA Apprentice Of The Year 2016*



**Real skills. Real experience. Real outcomes.**

[thegordon.edu.au](http://thegordon.edu.au) | **5225 0500** Government funding for eligible students. TAFE 3044.





**Jiangwan Stadium is a heavily utilised community facility in Shanghai which primarily hosts soccer and athletics**



**A lot of work was required to get the ground up to AFL standard due to the poor uniformity of the surface**

**This was the condition of the surface when HG Sports Turf staff arrived on site in late 2016 (Northern Hemisphere winter)**



following a strict programme for improvements and maintenance of the surface. Led by Nathan Humphreys, HGST attended the site on a regular basis to monitor the progress of the works and assess the field. They then sent an experienced crew to the venue for two weeks to execute the preparations for the game itself.

Significant work was required to improve the quality of the surface and get it to the exacting standards required by the AFL. Jiangwan Stadium, which was constructed back in 1934, is a heavily utilised community facility which primarily hosts soccer and athletics. When HGST first arrived on site, they found a ground that was set up with two full size and four half-size soccer fields. These were generally used on a pay-for-play basis after hours and on weekends, with their use unregulated and very intensive regardless of the weather conditions.

Due to such heavy use, the uniformity of the existing couchgrass surface was very poor. The existing onsite maintenance was also basic and included two groundsmen and two 20-inch rotary mowers with catchers, who mowed whatever grass was left at approximately 40mm.

To assist with preparations, HGST employed a local consultant to help manage/communicate with the local Chinese as the language barrier was certainly a challenge. HGST undertook all programming of works and took responsibility for the oversight of all works on the ground to ensure they were executed to the standard required.

All turf maintenance consumables and machinery were procured in China, albeit with some degree of difficulty with machinery availability and quality one of many challenges that needed to be overcome. HGST did, however, import a line-marker to undertake the field markings, as the locals normally used a conventional long-handled paint roller (one that you would use to paint a house with) to mark the field.

All paints for logos and lines were also sourced from Australia so as to be consistent with existing AFL venues. Goal posts were already in Shanghai from the previous game in 2010, although the post sockets needed to be re-set as the old ones had been removed during recent works at the venue.

As part of their preparations, HGST installed a 1000m<sup>2</sup> nursery of Eclipse Stabilised Turf to act as insurance against damage from the ground's unregulated use, just in case parts of the ground had to be replaced in the lead-up to the game. The nursery was installed at the southern end of the field in December 2016 and had to establish through the middle of the Northern Hemisphere winter. The couchgrass base was also oversown with perennial ryegrass at this time.

## CHALLENGES

In addition to the language barrier and heavy patronage of the facility, there were plenty of other challenges encountered by the HGST team. The irrigation system was particularly restrictive, with limited water supply and insufficient pressure. The holding tank for the system took about 45 minutes to refill, but would empty after only 10-12 minutes' application per station, meaning it took around eight hours to apply less than 1mm.

The irrigation infrastructure at the venue is all manual so there needed to be people on site to run it. As such, all watering was undertaken during daylight hours, with the exception of the week leading up to the game when HGST had staff at the venue through the night to ensure the surface had sufficient water.

Local authorities also requested just 24 hours prior to the game that the venue be shut down on game day for three hours! That threw game day preparations right out the window and meant that the HGST team worked through the night before the game to make sure it was ready.

Appropriate resources were also difficult to manage in China. Even the most basic tools were simply not used in China, so the HGST crew had to adapt a lot of local tools as well as improvise in other situations. Some of the lengths that the team went to included hand-watering out of a wheelbarrow, making tools out of construction materials on site and even cutting turf with a bread knife and a meat cleaver!

As with all other AFL Premiership venues, Jiangwan Stadium had to undergo rigorous performance testing in the weeks leading up to

the match to ensure it was suitable. On 29 March, just over six weeks out from the first bounce, then AGCSATech senior agronomist Andrew Peart travelled to Shanghai to conduct a range of tests and provide an assessment of the ground to AFL grounds operation manager Jennie Loughnan.

Peart reported that the entire playing surface was in very good to excellent condition and that it sat within the ideal range for surface hardness (between 55-75 gravities) and slightly above the preferred range for surface traction and stability. Given that traction was at the high end of the ideal range due to the dense coverage of the ryegrass, HGST undertook two light scarifyings to thin the turf cover and ensure traction readings were reduced to the middle of the required range (40-55Nm).

### HITTING THE MARK

Despite a number of pre-game concerns about the AFL's venture to China (air quality and logistics among them), the game was very well received with widespread praise of the playing surface. Speaking to media afterwards, AFL chief executive Gillon McLachlan commented: "It was obviously a really pleasing day for football, for Port Adelaide, for our game – a good crowd, the venue looked amazing and it came up well on broadcast."

Former Port Adelaide great Warren Tredrea in his column in The Advertiser also had this to say: "Take a bow Port Adelaide. Footy in Shanghai is



here to stay... Whilst Jiangwan Stadium doesn't compete with Adelaide Oval, its playing surface, that was supposed to be an issue, certainly does."

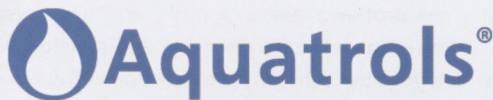
Such feedback was very pleasing for HGST general manager Erik Kinlon who says the company was extremely proud to have played such a significant role in taking AFL to China: "AFL officials were extremely happy with the results and the players even more so," says Kinlon.

"The players may have anticipated turning up to a less-than-ideal scenario for AFL, however, I think all were pleasantly surprised. Some players and officials even took the time to come and thank us individually afterwards! In our trade we generally only hear the criticisms from players or the media, so it was great to get that feedback." 🌱

**Jiangwan Stadium around six weeks out from the match. AGCSATech conducted a performance assessment of the ground on behalf of the AFL**



Suppliers of quality Turf Care products to the Sports Turf Industries celebrating our **20th Anniversary** with the support of our Loyal Suppliers



**TURFCARE AUSTRALIA**

www.turfcareaustralia.com.au Phone: 02 9684 6611 Fax: 02 9684 6633 turfcare@bigpond.com.au

Putting greens are the most important playing surfaces on a golf course and keeping them in good condition during stressful summer months can be a significant challenge

# Surviving summer



Golf course superintendents along the eastern seaboard of Australia won't forget last summer in a hurry. With the warmer months not that far away again, USGA agronomists Elliott Dowling and Blake Meentemeyer look at some proven ways superintendents can mitigate summer stress on their greens.

The playing condition of putting greens has a tremendous impact on the golf experience. Consequently, superintendents spend a great deal of time and resources trying to ensure that putting greens are healthy and playing their best. If putting greens are consistently smooth and true, golfers tend to overlook blemishes on other areas of a golf course. On the other hand, when putting greens are in poor condition golfers often form a negative impression of the entire golf experience, regardless of overall course conditions.

Putting green turf is subjected to many forms of stress. To achieve smooth and firm conditions, putting greens may be mowed daily at ultralow mowing heights, rolled multiple times per week, groomed, brushed, verticut and supplied with judicious amounts of water and nutrients. These practices help produce high-quality playing conditions, but they can also leave turf in a weakened state.

During periods of mild weather, superintendents can subject putting greens to high levels of stress while still maintaining adequate turfgrass health. However, the environmental stresses of summer can quickly change the equation, especially for cool-season putting greens. A combination of mechanical stress, heat stress and heavy rain can push turf over the edge, possibly culminating in damage ranging from thin turf to rapid decline. Even a modest increase in temperature or a small amount of rainfall at the wrong time can spell disaster if superintendents do not accordingly adjust putting green management.

In the event of turf damage, superintendents must quickly assess the situation, determine the causes of the decline, adjust maintenance practices and develop a recovery plan. Turf decline

is often caused by a combination of stresses, but understanding what triggered the decline will help guide recovery efforts and prevent similar issues in the future. The following programmes will help reduce summer stress and mitigate turf damage on putting greens during their most stressful time of year.

## PREVENTION

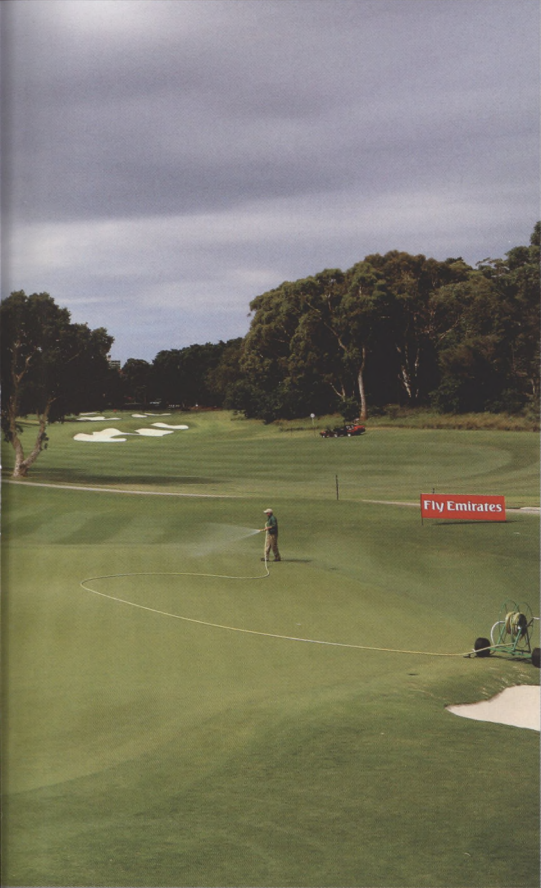
The importance of providing favourable growing environments for putting greens cannot be overstated. Without a good growing environment even well-constructed putting greens with the best management will struggle during stressful weather.

Providing a good growing environment is the best way to ensure healthy turf, especially during summer. Key practices that optimise turf health focus on providing ample sunlight and air movement, aerating and topdressing at appropriate intervals to maintain a healthy rootzone, providing adequate drainage to flush excess water and salts and the timely use of plant protectants to reduce pests.

### 1. HAND WATERING AND SYRINGING

Superintendents and their crews hand water and syringe to supplement irrigation systems. No irrigation system is perfect, so hand watering – especially when paired with portable moisture meters to identify areas that need water – provides supplemental soil moisture to dry areas. On the other hand, syringing applies only small amounts of water that settles on the leaf blades, cooling the turf canopy as the water evaporates.

During hot weather, superintendents and their teams often implement hand watering and syringing as part of a 'wilt patrol', whereby experienced staff



members constantly monitor every putting green for signs of heat and drought stress. Turf areas exhibiting symptoms of wilt are either hand watered or syringed as needed to mitigate stress throughout the day.

However, care must be taken because applying too much water can actually increase the surface temperature of putting greens, preventing the soil and roots from adequately cooling down. The overall irrigation plan should focus on applying just enough water to support healthy turf growth and ensure sufficient transpiration occurs to cool the plants throughout the day.

## 2. REMOVE TREES THAT BLOCK AIR MOVEMENT AND SUNLIGHT

Trees and underbrush that block prevailing winds put putting greens in jeopardy by creating a hotter, more humid microclimate. Air movement across a turf canopy is necessary to maintain the transpirational cooling that influences plant metabolism. Without transpiration, overheating could lead to the denaturation of proteins and cause plant death.

Although uncommon in Australia (with the exception of Avondale Golf Club in Sydney), many superintendents in the US employ fans to improve air movement and reduce the boundary layer of humid, stagnant air that is created near the surface of putting greens when water vapour exits turfgrass leaves and surrounds the turf. The factors that determine boundary layer thickness are transpiration rate, relative humidity, temperature and wind speed. A thick boundary layer, common in humid environments, can significantly limit transpirational cooling.

Turf fans, which generate turbulent air movement, help disrupt boundary layers and improve transpiration and evaporative cooling. Fans mix often drier surrounding air with stagnant, humid boundary layer air thereby reducing the humidity near turfgrass canopies. Research has also demonstrated that rootzone temperature, canopy temperature and rooting depth are strongly correlated to wind speed, which can be increased by using oscillating fans (McCall et al., 2014). Further data indicate that running fans for 24 hours can increase root length and weight while providing significantly cooler soil temperatures (Guertel and Han, 2009).

According to Dr. Bill Kreuser at the University of Nebraska-Lincoln, the thickness of a boundary layer will determine how effectively a fan can help cool turf. Fans have less of an impact in low-humidity environments because boundary layers are thin and have a minimal effect on transpirational cooling. It is important to note that when fans and syringing are used in combination, they are more effective at reducing heat stress on cool-season putting greens than either practice is on its own.

## 3. SPOON-FEED NUTRIENTS

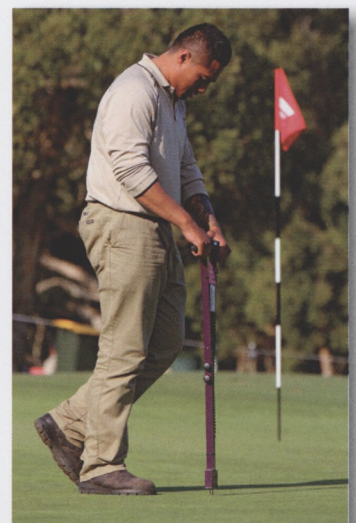
Applying light amounts of fertiliser (i.e., spoon feeding) is an effective way to manage growth, limit turf stress and stimulate the recovery of injured turf. Using products that have a high potential to burn turf should definitely be avoided during periods of summer stress.

The salt indices of common fertilisers are readily available and should be referenced when considering which products to use during periods of heat stress (Beard, 2002). A low salt index means a product has low burn potential. When making soluble fertiliser applications, a good rule of thumb is to keep per-application nitrogen rates below 0.15 pound per 1000 square feet (approx. 7.32kg/ha). Nitrate fertilisers should be avoided unless extremely low rates are used and water is immediately applied to minimise burn potential. Also, nitrogen from reclaimed water should be monitored to avoid excess growth and puffy turf conditions during summer.

“Appropriately timed management practices can improve playability and turf health; poor timing can lead to rapid turf decline. When turf is under stress, there is no question that less is more when it comes to surface management.”

– Dowling and Meentemeyer

Hand watering and syringing help prevent turf stress. These techniques are most effective when paired with a portable moisture meter



This checklist can be used as a reference to help prevent summer stress or to implement strategies that will help limit damage that has already occurred



In conjunction with low rates of nitrogen, several specialty products containing biostimulants and cytokinins have been used to improve the visual quality of creeping bentgrass during heat stress (Xu and Huang, 2010). When used throughout the growing season, the growth regulator trinexapac-ethyl also can improve surface quality by enhancing turf colour and density. Achieve optimal control of turfgrass growth by using light rates of growth regulators and consulting growing degree day models to determine the best frequency of application.

#### 4. OPTIMISE DRAINAGE AND OXYGEN EXCHANGE

Heat stress can cause serious turf problems when coupled with heavy rainfall and poor drainage. Water in saturated soils absorbs heat from the sun and triggers root dieback. The low oxygen levels in saturated soils also limit the ability of any remaining roots to absorb water, leading to wet wilt. Without sufficient water uptake and transpirational cooling, direct high temperature kill is possible.

Venting with 0.25-inch diameter solid tines improves gas exchange, helps increase oxygen in the root zone, accelerates surface drying and returns functionality to the root system. It is important to note that venting can cause additional stress and turf injury if performed during periods of high temperatures or severe drought stress. Defer venting treatments until temperatures moderate in the evening or early morning to reduce the risk of turf injury.

#### MINIMISE MECHANICAL STRESS

Even with an optimum growing environment and sound agronomic programmes in place, turf decline can be unavoidable during hot weather. Once decline starts, it is imperative to prevent further damage by focusing on plant health and survival rather than playability.

#### 5. RAISE HEIGHT OF CUT

One of the most effective ways to reduce stress on turf is to raise the height of cut (HOC). However, with the demand for fast green speeds, superintendents mow putting greens at extremely low heights that can lead to turf decline during stressful weather.

Regardless of the mowing height, cool-season turf quality and photosynthesis often significantly declines during January and February. If weather forecasts predict a stretch of hot weather, or if putting greens become stressed during summer months, immediately raise the HOC. During summer a slightly higher HOC can significantly improve creeping bentgrass physiology and playing quality; even 1/32 of an inch can make a difference (Huang et al., 2000).

#### 6. ALTERNATE BETWEEN MOWING AND ROLLING

Mowing is one of the most stressful practices performed on putting greens. Alternating between mowing and rolling reduces turf stress and can help maintain quality playing conditions during stressful weather.

In an interview, Dr. John Sorochan of the University of Tennessee indicated that two to three days per week without mowing reduces turf stress and hastens recovery by increasing the amount of photosynthetic surface area of turfgrass leaves. Monitoring clipping yields and overall turf health helps determine when to skip a mowing day. If clipping yields decrease, superintendents should consider skipping mowing because growth is slow.

When golfers hear that putting greens will not be mowed daily their immediate reaction is to assume that they will be slower and bumpier than normal. However, research indicates that alternating between mowing and rolling can produce ball roll distances equivalent to daily mowing (Nikolai, 2014). Ultimately, if the alternative is dead putting greens, choosing to alternate between mowing and rolling is the better option.

#### 7. SKIP CLEAN-UP PASSES

Arguably, the interface between a putting green and green surround receives the greatest concentration of mechanical and foot traffic on a golf course. The turning of mowers, rollers and other equipment in the collar and approach causes abrasion and compaction that weakens turf health.

Superintendents can reduce mechanical stress around the margins of putting greens by occasionally skipping clean-up passes, using a clean-up mower set at a higher HOC or doing all these. Increasing the amount of leaf area that can photosynthesise will help keep putting green turf healthy and tolerant of environmental stresses. Other options for protecting turf around the edges of putting greens include turning mowers on boards or mats and frequently emptying clipping baskets to reduce overall mower weight and the potential for scalping.

Excessive stress during the summer months can cause turf decline that can affect playing conditions. Prevention and proactive management help minimise stress and maximise playing quality



## 8. PROPER MOWER SET-UP

The importance of proper mower setup is often underestimated, but it can be the difference between living or dead turf. Using solid front rollers instead of grooved rollers is a longstanding method to reduce putting green stress. Grooved rollers are often used because they can improve the quality of cut of putting greens. Unfortunately, grooved rollers sink deeper into the turf canopy, effectively lowering HOC and adding stress to the turf.

A sharp reel with light reel-to-bedknife contact also is important for maintaining turf health and preventing further decline. Mowing with dull bedknives and reel blades makes turf more vulnerable to diseases and insects (Whitlark and Daniels, 2016).

## 9. DEFER AGGRESSIVE MANAGEMENT PRACTICES

One of the most difficult decisions a superintendent has to make is when to defer management practices such as brushing, grooming, verticutting, aerating and topdressing.

Core aeration is one of the most effective cultural practices for reducing thatch and alleviating soil compaction, but the process can be highly stressful to turf (Christians et al., 2016). Delaying an aeration event is a difficult decision, but it can be necessary when putting greens are under stress. If aeration is performed when temperatures are high



and humidity is low it can – and likely will – increase turf stress. The same can be true of topdressing. Applying sand and incorporating it into aeration holes is stressful and can lead to turf decline if poorly timed.

Appropriately timed management practices can improve playability and turf health; poor timing can lead to rapid turf decline. When turf is under stress, there is no question that less is more when it comes to surface management. Aggressive management practices should be accomplished proactively rather than reactively.

## 10. EFFECTIVE COMMUNICATION AND CREW AWARENESS

Finally, as with any aspect of course management,

**Mowing is one of the most stressful practices performed on putting greens. Alternating between mowing and rolling reduces turf stress and can help maintain quality playing conditions during stressful weather**

# Stealth S3

THE NEW STANDARD IN SPORTS AND RECREATION MOWING.

DESIGNED SPECIFICALLY FOR AUSTRALIAN CONDITIONS.

- > REVOLUTIONARY ROLLER RETENTION DESIGN
- > EASY, ACCURATE HEIGHT ADJUSTMENT
- > VERSATILE AND OPERATOR FRIENDLY
- > LOW MAINTENANCE
- > MANUFACTURED TO LOCAL SAFETY STANDARDS



WATCH THE VIDEO AT [TRIMAXMOWERS.COM.AU](http://TRIMAXMOWERS.COM.AU)



Arrange a demo on  
1800 874 629





Venting with solid tines improves gas exchange, helps increase oxygen in the root zone, accelerates surface drying and returns functionality to the root system. However, venting can cause additional stress and turf injury if performed during periods of high temperatures

Bottom right: Surface management practices such as verticutting are beneficial when performed at the right time

Below: If weather forecasts predict a stretch of hot weather, or if putting greens become stressed during summer months, immediately raise the height of cut



one of the most critical things a superintendent must ensure, especially during times of high turf stress, is effective and constant communication. As was highlighted in ATM's coverage of the trials and tribulations along Australia's eastern seaboard last summer, one of the overriding comments made by superintendents under the pump was that at all times they communicated what was going on out on course to members, committees and boards. Similarly, having a well-trained and observant crew was equally as critical.

As Royal Sydney Golf Club assistant superintendents Adam Marchant and Jake Gibbs were quoted in that article: "Collectively, we cannot remember a summer that has been as hot and humid as the one we have just been through. Throughout all of this it was important to be on the front foot with communication around the pressures the weather was placing on us and the impact this was having on the turf.

"The committee were very good at understanding the pressures we were under during this time. We were able to hand watering during competition play if required and we also asked for some additional (no play prior) slots in the tee times to allow us to apply added fungicide applications which they were supportive of. This summer also really confirmed for us the importance of a good reliable crew who were trained around moisture management."

## CONCLUSION

Putting greens are the most important playing surfaces on a golf course and keeping them in good condition during stressful summer months can be a significant challenge. Superintendents use many tools and techniques to help protect putting greens from mechanical and environmental stress.

The first key to success is creating the best possible growing environment. This is accomplished through proactive management strategies designed to maximise turf health. When turf is under stress, managing mechanical damage will help reduce the risk of injury and limit the extent of any resulting damage. However, Mother Nature has the upper hand and there will always be a risk of turf damage during extreme environmental conditions. Hopefully, the techniques highlighted in this article will help the putting greens at your facility survive summer heat and thrive throughout the year.

## REFERENCES

- Beard, James B. 2002.** "Appendix C: Fertilizer Characteristics." *Turf Management for Golf Courses*, 2nd ed., Ann Arbor Press, 2002, p. 741.
- Bevard, Darin. 2014.** "Collar Problems and How to Prevent Them." *USGA Green Section Record*, vol. 52, no. 17, 22 Aug. 2014, pp. 1-5.
- Christians, Nick E., et al. 2016.** "Thatch, Cultivation and Topdressing." *Fundamentals of Turfgrass Management*, 5th ed., John Wiley & Sons, p. 253.
- Guertal, E.A. and D.Y. Yan. 2009.** "Timing of Irrigation for Cooling Bentgrass Greens With and Without Fans." *USGA Turfgrass and Environmental Research Online*, vol. 8, no. 17, 2009, pp. 1-5.
- Huang, Bingru, et al. 2000.** "Burning the Candle at Both Ends: High Temperatures and Low Cutting Heights Lead to a Dead End." *USGA Green Section Record*, vol. 38, no. 3, May/June. 2000, pp. 15-16.
- McCall, David S., et al. 2014.** "Spatial Impact of Turf Fans on Creeping Bentgrass Putting Greens." *ASA, CSSA and SSSA Annual Meeting. 2014*, p. 89800.
- Nikolai, Thomas A. 2014.** "Ready to Roll." *Golf Course Management*, vol. 82, no. 4, 2014, pp. 44-46, 48, 50, 52.
- Whitlark, Brian and John Daniels. 2016.** "Managing Mower Setup to Achieve Quality Putting Surfaces." *USGA Green Section Record*, vol. 54, no. 3, 5 Feb. 2016, pp. 1-8.
- Xu, Yan, and Bingru Huang. 2010.** "Responses of Creeping Bentgrass to Trinexpac-ethyl and Biostimulants Under Summer Stress." *HortScience*, vol. 45, no. 1, 2010, pp. 125-131. 🌱





# DISEASE SUCCESS

Anthracnose  
(*Colletotrichum  
graminicola*),

Brown Patch  
(*Rhizoctonia solani*),

Dollar Spot  
(*Sclerotinia  
homoeocarpe*),

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

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

Fusarium  
(*Fusarium nivale*,  
*Microdochium nivale*),

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

Ectotrophic Root  
Infecting Fungi (ERI)  
[Autumn strategy]

Spring Dead Spot  
(*Ophiosphaerella  
narmari*),

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

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

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

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



## Ready to amp up disease control ?

**This year, turn up the dial on  
disease control and turf quality  
with Impala Fungicide.**

**Backed by preventative protection and curative results.  
Plus a new active ingredient for the Australian turf market.**

**Broad spectrum control of over 10 major turf diseases.**

**Active Constituents:** 96 g/L Azoxystrobin  
194 g/L Triticonazole

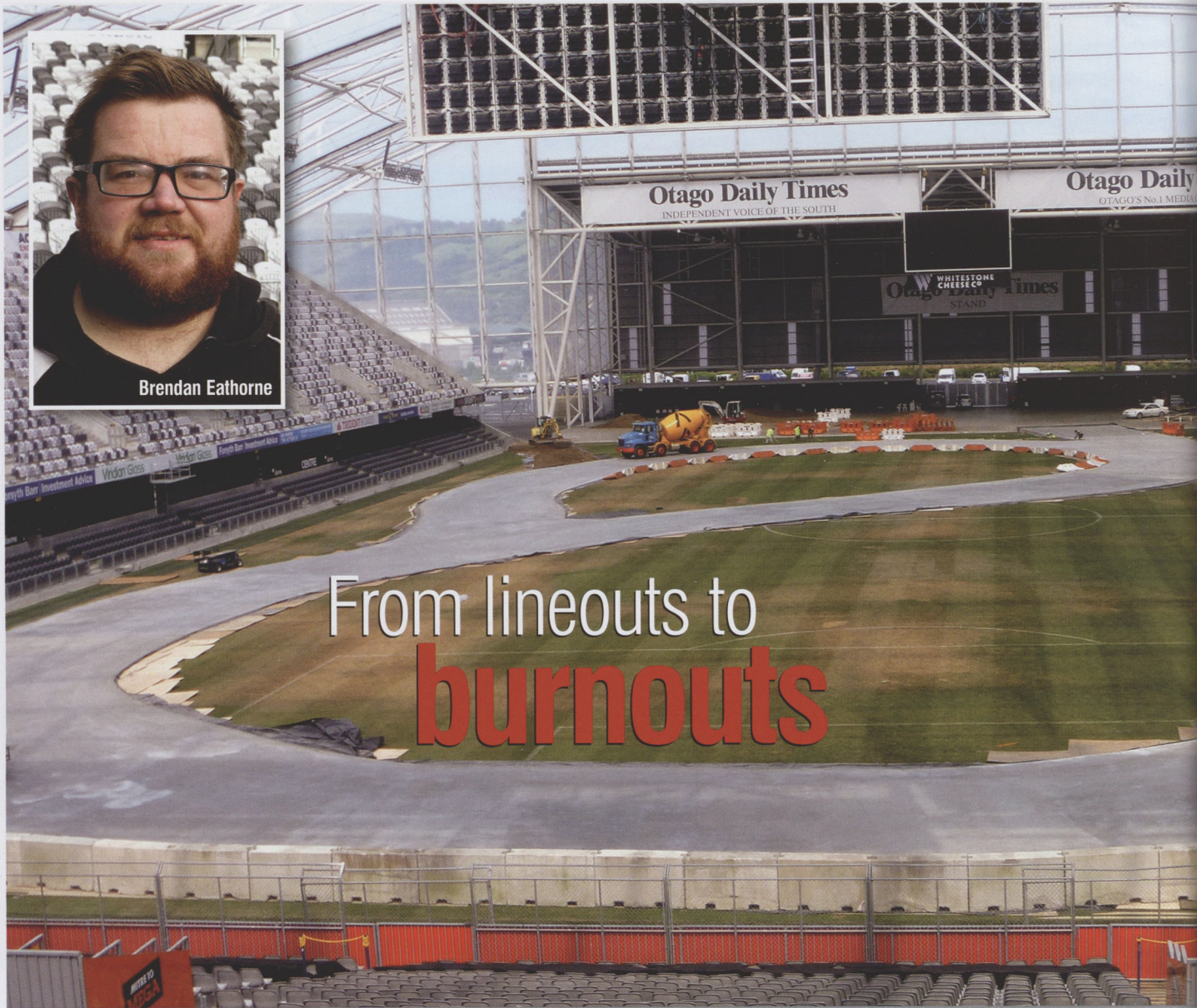
APVMA Product No.: 80146

**TURF**  
culture

**"Innovative & Professional Turf Products"**  
[www.turfculture.com.au](http://www.turfculture.com.au)



**Impala  
Fungicide**



Brendan Eathorne

# From lineouts to burnouts

Since opening its doors six years ago, New Zealand's Forsyth Barr Stadium, the world's first permanently closed roof stadium with a natural turf playing surface, has always pushed the envelope. Last December it hosted one of the more unique events in its short history.

Modern stadia have never been more versatile and in addition to hosting the likes of staple sports such as AFL, NRL, A-League soccer and cricket, are nowadays expected to host a plethora of other events. Many of these wouldn't have been considered in years gone by, but thanks to developments in arena management techniques and technology, along with the skill and expertise of those whose job it is to maintain these facilities, such events are becoming more and more commonplace.

Take two of Melbourne's premier sporting facilities Etihad Stadium and AAMI Park as an example. Over the past three years AAMI Park has been converted each October from one of the best NRL, Super Rugby and A-League grounds in the country into a playground for Monster Trucks. That involves covering the entire surface with rolls of geofabric and 19mm ply boards before 4700 tonnes of dirt is spread and shaped into various forms of ramps and jumps.

Similarly, the last two Octobers have seen Etihad Stadium host the final round of the Speedway Grand

Prix World Championships. As was featured in ATM Volume 18.6 (**On a fast track, pages 6-10**), hosting the event involves the construction of the largest temporary speedway track in the world, with 4300 tonnes of specially sourced speedway dirt spread and graded.

Motorsport events such as these place turf surfaces under some unique stresses, but one arena in New Zealand took things to a whole new level last December when it had a concrete track constructed over the top of its playing surface.

The sport of 'drifting' has become extremely popular worldwide over the last decade and what was once very much an underground variant of motorsport has developed a cult following. In New Zealand the D1NZ National Drifting Championships has been around since 2003 and for the 2016-2017 season organisers decided to step things up by holding the first of its five event series at Dunedin's Forsyth Barr Stadium.

Costing \$NZ198 million and opening back in August 2011, the 30,000 seat Forsyth Barr Stadium



perennial ryegrass cultivars in late January 2011 with the Desso GrassMaster system incorporated into the playing surface over an 18-day period in late April-early May. The GrassMaster system involved a 420mm length of artificial fibre folded in half and injected to a depth of 185mm on a 20mm x 20mm grid, leaving 20-25mm of artificial fibre exposed at the surface.

Notching up its fifth anniversary last August, Forsyth Barr Stadium has gone on to entertain more than 1.3 million spectators across a variety of events. Along with being the home ground of Super Rugby's Highlanders franchise and Otago rugby, it has also hosted All Black Test matches, rugby league internationals and NRL Premiership matches, A-League and FIFA U20 World Cup soccer, international rodeo as well as numerous concerts and other one-off events.

None of those however could rival the uniqueness of the opening round of the D1NZ National Drifting Championships which was held there from 2-3 December 2016. In an all-out first of its kind in the Southern Hemisphere, the playing surface of Forsyth Barr Stadium was transformed over the course of a week into a drifter's paradise, with a dedicated concrete track constructed specially for the event.

In the Winter 2017 edition of New Zealand Turf Management Journal, the New Zealand Sports Turf Institute (NZSTI) caught up with Forsyth Barr Stadium turf manager Brendan Eathorne to discuss the unique requirements of the event and how, from a turf management perspective, he and his team had to manage the surface in the lead-up to and after the event.

**NZSTI: What were your first thoughts about holding the drifting event in the stadium?**

**Brendan Eathorne:** "To be honest, when Coryn Huddy (Dunedin Venues' chief operating officer) showed me a YouTube clip about drifting I thought 'why would we do something like this?' But as this is a multi-purpose stadium, you just get whatever events you can. But this one was certainly different."

**NZSTI: What were the surface requirements?**

**BE:** "All we were told was to get the ground as dry as possible so the surface would be firm and wouldn't



**Main photo: In a first for a stadium in the Southern Hemisphere, Dunedin's Forsyth Barr Stadium had a concrete track constructed over its turf playing surface to host the opening round of the 2016-2017 D1NZ National Drifting Championships**



**Above: One of the biggest issues was managing the smoke haze created by the cars. Two frost fighting fans from orchards in Central Otago were brought in to help with air movement inside the stadium**

**Top: About 330m<sup>3</sup> of concrete (55 truckloads) was poured to make the track**

**Below: The Forsyth Barr Stadium track gets put through its paces**

is the world's first permanent closed roof stadium to boast a natural turf playing surface. As Dr Richard Gibbs (then of New Zealand's Sports Surface Design & Management) stated in his article in Volume 13.5 of Australian Turfgrass Management (**'Forsyth Barr Stadium – The undercover story', pages 6-12**), it was "a visionary project".

Stadium construction started in June 2009 and took just over two years to complete. Pitch construction started in September 2010 with its essential design components including:

- Pitch dimensions (including a 3m wide artificial turf boundary) – 132m x 81m.
  - A 300mm deep sand profile placed over a drained subgrade, with the top part of the profile being made up of a sand/soil/compost rootzone specially blended off-site;
  - A strategically located zeolite-amended sand rootzone layer and
  - Desso GrassMaster turf reinforcement, the first stadium in Australasia to use such a system.
- The pitch was sown with a blend of three



The morning after the event, two diggers with bucket attachments came in and started breaking up the concrete track



Arena staff used a turf rake and went over the surface multiple times in different directions to loosen up any dead grass and expose the Desso GrassMaster fibres

The playing surface exposed and reading for restoration



shift underneath the plywood. We were quite lucky that we'd had two events the previous weekend so the ground was relatively dry to start with. December was a good time of year for this type of event as we had time to do a renovation afterwards and had good growing conditions to ensure full recovery before going into the 2017 winter sports season."

**NZSTI: Did you have any concerns?**

BE: "Our main concern was what impact the event would have on our Desso GrassMaster fibres. Would the surface sink or badly indent when the concrete was laid or get damaged when it was removed after the event?"

**NZSTI: Did the event promoters give you any direction (apart from on firmness)?**

BE: "Yes, they did, but even for them this was a first on turf and under a permanent roof stadium. We were all on the same page so we worked together to come up with a plan to manage the risk factor around damaging the surface and the Desso fibres and stuck to it. The main objective was to have a hard pitch to avoid any indentations. With the roof overhead, we didn't have to worry about the weather conditions outside. As it was new to all of us, it was a bit of 'cross your fingers and hope it goes well'! This is where the benchmarking of the ground, both before and after the event, was very useful to provide some data."

**NZSTI: Why use concrete as the surface?**

BE: "Concrete was chosen due to price, ease of use and the timeframe. The contractors were able to lay the concrete so there'd be no spillage. It was also handy having the concrete supplier located just across the road from the stadium which limited the turnaround time for the trucks. Apparently with bitumen, the track would have had to be on the ground for a longer period of time, which could have caused more damage."

**NZSTI: How much concrete was required and how was the track laid?**

BE: "The racing track was approximately 3000m<sup>2</sup>, so approx. 330m<sup>3</sup> of concrete was poured – that is 55 truckloads! Fibres were added to the concrete mix to minimise any surface cracking. We had Southern United football playing one of their home games on the Friday night, the week prior to the event. As soon as that game had finished the track outline was marked out and at 10pm they commenced laying the track down ready for pouring the concrete the following morning.

"Twenty-one-millimetre thick plywood sheets were laid on the turf over the track markings and polythene placed over the top of the plywood and the sides boxed temporarily. They worked all through the night doing this and the first concrete was poured at 6am Saturday. They continued working throughout the weekend with the last concrete poured Sunday night. The concrete took about 12 hours in total to lay over the two days and was floated off as the track was progressively laid to get the final surface. The contractor wanted four days to achieve the required 'curing' so it wasn't until the following Thursday that the drivers were able to take a test spin."

**NZSTI: Were there any issues during the process?**

BE: "No. Both Michael (groundsman) and I were always there to make sure nothing got out of control. We monitored what they were doing and where they went. The concrete contractor was very good to work with and if we didn't like anything we saw we just said 'Sorry guys, you can't do that' and it was fine. Again, it was a learning experience for all."

**NZSTI: How did you manage the smoke and fumes inside the stadium?**

BE: "This was a big problem, especially for the stadium staff as they didn't want to trip the fire alarms. In the end, we opened up the stadium as much as we could by taking down the white plastic sheeting at either end of the ground to create as much draft as possible. We also got two large wind machines, which are normally used for fighting frosts in orchards, from Central Otago. These sat in the corners and kept the air inside the stadium moving. We were lucky that there was a gap of about five minutes between each race so any haze didn't settle."

**NZSTI: How was the track removed after the event?**

BE: "On the Saturday night after the final race had concluded, the contractor removed the shell of the track (the water barriers, advertising material, etc.). Then first thing Sunday morning two diggers with bucket attachments came in and started breaking up the concrete, which was put on trucks and taken away to Burnside (probably for recycling). Any small pieces of concrete remaining were swept up on the plastic barrier before it was removed and then finally the plywood was removed and stacked to expose the turf surface (which did smell for a while due to it being under cover for that length of time)."

**NZSTI: What did you do to restore the ground?**

BE: "First we checked for any debris or foreign material (e.g.: bottle caps) and removed them. On the Monday we used a turf rake and went over the surface multiple times in different directions to loosen up the dead grass and expose the Desso GrassMaster fibres. The surface was then swept and the field reseeded with approximately 500kg of seed and then the re-establishment phase began."

**NZSTI: How did everyone feel after the event?**

BE: "If one goes by the look on their faces, everyone involved was very happy with the whole weekend. It was a very successful event. On the turf side, there was no damage and, surprisingly, no indentations



whatsoever, so that was pleasing as well as a great relief."

The playing surface beautifully restored six weeks after the event. The ground was reseeded with approx. 500kg of seed

**ACKNOWLEDGEMENTS**

*This article has been adapted and reprinted with permission from New Zealand Turf Management Journal, the official publication of the New Zealand Sports Turf Institute. The original article – 'Lineouts or burnouts' appeared in the Winter 2017 edition (p11-13) of the New Zealand Turf Management Journal.*

# The GreensGroomer is now available to rent

Contact your local DINT rep to book it in.



**DINT**  
Golf Solutions

Lakelands Golf Club superintendent  
and 2017 AGCSA Excellence in Golf  
Course Management Award winner  
Phil Soegaard

# Lakelands excellence

Lakelands Golf Club has been a labour of love for course superintendent Phil Soegaard and that was duly recognised when he was bestowed the 2017 AGCSA Excellence in Golf Course Management Award at the 33rd Australian Turfgrass Conference.

It's hard not to be impressed by the level of dedication and engagement many superintendents have in their course and the industry as a whole. From the day-to-day agronomic decisions which need to be made in order to provide the best playing surfaces, through to peripheral aspects such as community engagement and association involvement, the level of investment a superintendent makes in their chosen profession is not only admirable but deserving of acknowledgement.

For many years now Lakelands Golf Club on the Gold Coast has developed a reputation throughout the industry as being one of the best presented courses in the country. It started back in the days of construction and grow-in superintendent Steve Marsden who together with Nicklaus Golf Design transformed what was a very ordinary track of land on a flood plain into a golf course that has won huge respect within the industry. Following on from Marsden, superintendent Darren Moore continued that reputation.

Walking into the Lakelands shed in 2002 during Moore's tenure was a young ambitious greenkeeper by the name of Phil Soegaard. Having just completed his apprenticeship at nearby Royal Pines Resort under Frank Paul, Soegaard was eager to prove his worth and within two years had risen to be Moore's assistant. A better role model Soegaard couldn't have had and when Moore moved to China in 2006 it was a natural progression that he assumed the superintendent role.

Since taking the reins, Soegaard has, in rugby league parlance, grabbed the ball and run. During the past 11 years, he and the crew have continued

to improve the course significantly despite having to overcome numerous challenges, whether through the fury of Mother Nature or having to contend with fiscal constraints that have seen resources stripped considerably.

Through all this Soegaard and his crew have continued to present exemplary turf surfaces day in day out over a sustained period. For those efforts, the club nominated Soegaard for the GCSAQ Superintendent Recognition Award at this year's Queensland Golf Industry Awards. Winning that, it qualified him for the AGCSA Excellence in Golf Course Management Award, presented in partnership with AGCSA Gold Partner Rain Bird, which he would also go on to receive at the recent 33rd Australian Turfgrass Conference.

Writing in his nomination of Soegaard for both awards, Lakelands director Hideya Fujimaki had nothing but praise for the efforts of his hard-working course superintendent and his crew: "As a director it is great to have such a loyal superintendent who I can count on day in, day out," says Fujimaki, who was present at the Sunshine Coast conference to see Soegaard collect the award. "His knowledge and expertise in all aspects of the role are second to none. Phil is well respected by the members and all the staff at Lakelands and is known for his enthusiasm, hard work, love of the golf course and the turf industry."

Superintendent colleague and immediate past president of the GCSAQ Ben Tilley was also rapt that one of the most dedicated members of the Queensland superintendent community was honoured: "Phil has been a member of the GCSAQ committee for a number of years and his





enthusiasm to promote our profession and improve our education stream is infectious,” says Tilley. “Phil continually strives to improve himself and is a fine example to the wider golf community of an accomplished, knowledgeable and professional golf course superintendent who promotes a positive image for our national association.”

## ALL ROUND EXCELLENCE

Lakelands recently notched up its 20th year of operation and over the past five years in particular Soegaard has overseen a real focus to recondition the course by undertaking a variety of project work. During this time he and his crew have:

- Rebuilt four greens – the 14th, 11th, 5th and the East putting green – restoring them to their original size. With these new greens a detailed survey was undertaken prior to their reconstruction so that the contours of the original Nicklaus designed surfaces were not altered. Through this process it was discovered that the greens had lost nearly two metres all the way round because of encroachment from the surrounding couchgrass.
- Rebuilt three quarters of the course’s 101 bunkers, averaging about 12 per year. This has been all done in-house and involves removing all sand, cleaning out trenches, flushing outlets and installing new ag pipe and gravel.
- Stripped, levelled, re-grassed and/or extended eight tee tops;
- Rebuilt the club’s turf nursery; and
- Revamped and established many landscape areas and gardens, some of these in unsafe mowing areas.

“As the course is now over 20-years-old, we have a plan moving forward to rebuild a green per year, reconstruct select tee tops and rebuild poor performing bunkers,” explains Soegaard. “As the course is on a flood plain, drainage is critical so we are constantly clearing and flushing blocked pipes, adding extra drainage where needed and maintaining the drainage system at an optimum. All these tasks are generally performed in-house with little contractor assistance which helps to keep costs to a minimum.

“Weed control has always been a priority here at Lakelands. We don’t have the luxury of being built on an amazing site, so our reputation is built on quality surfaces. With the use of pre- and post-emergent herbicides and promoting strong healthy turfgrass we are proud to say we have one of the cleanest courses in the area. Being a sand-capped golf course, getting the rough to grow and achieve good definition can be challenging due to the low nutrition soils. This is something we have been passionate about in recent years and through improved fertility and biology the results have been sensational.”

In recent years through Soegaard’s persistence, Lakelands has moved yearly renovations, which are all conducted in-house, from December to September. This has done wonders for the Tifdwarf greens as Soegaard can ‘work’ them all through the growing months to produce healthy, smooth greens with less disease pressure. Soegaard is also a big advocate for using growing degree days in their management which has taken the quality and consistency of the putting surfaces to a new level, something that he and the club is extremely proud of.

“Growing degree days is based on the use of plant growth regulators (in my case Primo) on a programme that applications are made in relation to air temperatures,” explains Soegaard. “This past summer was very hot, so I was applying Primo to the greens at one stage every five days, which seems ridiculous, but the results were excellent.

“I used to apply Primo on a fortnightly basis, but I was suffering some mower scalping and inconsistent clipping yields – obviously getting

Lakelands has rebuilt four greens over the past couple of years as part of an ongoing course improvement works plan. Pictured is the 5th green during and after reconstruction





Some three quarters of Lakelands' 101 bunkers have been refurbished all in-house

a surge growth when the grass comes out of regulation. By applying the Primo in relation to the temperature, the result has been totally consistent clipping yields, consistent and improved surfaces day-to-day and real improvement during the growing/summer months."

Soegaard has also, through greater use of biological products, been able to cut his fertiliser and chemical inputs by 10-15 per cent over a more conventional programme: "I have consistently been using Petrik soil inoculants for seven years now and the cumulative benefits have been outstanding," says Soegaard. "I'm no scientist, but the basis is promoting humus creation, improving soil structure, and unlocking tied up nutrient by stimulating microbe activity. Worm activity and castings for a couple of days after application are evidence to me that things are fired up in the soil!"

"The benefits have been a 30 per cent reduction in nitrogen fertiliser usage, a 50 per cent reduction

in the amount of irrigation required (thus saving on electricity for the pumps and less poor quality recycled water being applied) and better water infiltration. We also have a more uniform growing media in our greens (they once suffered from layering and black layer) and have noticed a reduction in thatch production.

"A real test this summer was when our pumps went down for three weeks due to a lightning strike. Fairways and tee tops that would have dried out in a matter of days 10 years ago showed no great signs of moisture stress in three weeks of dry hot weather. The greens also only had a few hand waters from dam water we pumped into tankers. A reduction in wetting agents due to these benefits has also been a cost saving."

## BEING INVOLVED

In addition to course and agronomic improvements, community engagement, improving the skill set of his crew and championing the environment have also been high on Soegaard's agenda. Among some of the achievements in these areas have included:

- Being an active member of e-par and the Audubon International Cooperative Sanctuary programme. Over the years the club has transferred numerous fish into the course's dams, installed bird boxes, created dedicated habitat areas, introduced buffer zones around sensitive areas and established many native garden areas around the course to help attract diverse birdlife. Soegaard has also worked with a local bird watching group who visit the course.

Soegaard is a big advocate for using growing degree days in the management of Lakelands' Tifdwarf greens. Pictured is the reconstructed 14th green



CONTINUED ON PAGE 32



A CUT ABOVE PERFECTION

# BARONESS

**THE LM2700 FIVE-UNIT FAIRWAY MOWER.  
CUSTOMISE YOUR CUTTING PERFORMANCE.**

- Featuring Baroness Aggression Cutting Technology
- Selectable 2WD or 4WD on demand as standard
- Powerful and reliable Kubota diesel engine
- Nickel-chrome-molybdenum cutting reels
- 26 inch unit for optimum productivity
- Tungsten tipped bedknives keeps an edge up to 4 times longer than most other blades
- Rear roller power brushes for efficient grass dispersal
- Excellent wet weather performance



LM2700  
FAIRWAY  
MOWER

**B-ACT**  
BARONESS Aggression Cutting Technology

Find out more  
about B-ACT at  
[kubota.com.au](http://kubota.com.au)



LM315



RTV-X900



GM2800-B



L4240

FOR MORE INFORMATION ON THE KUBOTA BARONESS RANGE PLEASE CONTACT:  
**Trent Saunders on 0437 814 392 or [baroness@kubota.com.au](mailto:baroness@kubota.com.au)**

**For Earth, For Life**  
**Kubota**

Pictured with Excellence Award winner Soegaard (second from right) are (from left) AGCSA president Brett Balloch, Lakelands director Hideya Fujimaki and Rain Bird's Mac Ross



CONTINUED FROM PAGE 30

- Being involved in several tree-planting exercises as part of National Tree Day. In addition to this, Soegaard played a major role in planting out a garden at the neighbouring Merrimac Primary School. Soegaard raised sponsorship from nurseries, mulch suppliers and support from Hinterland Toyota and Sea FM.
- Winning a Climate Smart Business Program Award for water reduction around the course. This was achieved through the installation of a closed-loop wash bay, rainwater tanks, daily use of moisture probes on course, creation of drought-tolerant gardens, installation of low flow showers/urinals and the use of biological products to reduce irrigation requirements on fairways.
- Training two GCSAQ Apprentice of the Year winners with a further three nominated as award finalists. Soegaard has also overseen two staff members complete their Diploma in Sports Turf Management. Other staff upskilling has included spill, chainsaw, ACDC chemical licensing, Landscape Certificate III, recycled water use and fire training.
- Conducting on-site educational days for Kanagawa University (Japan), the PGA International Golf Institute and Wollongbar TAFE.

- Hosting the GCSAQ's Turf Industry Golf Day the last two years, the John Deere Trans-Tasman Teams Championship finals twice and turf industry days for companies such as Jacobsen, David Golf, KC Farm, Country Club and Graden.
- Forging positive relationships with Lakelands residents who surround many of the holes by offering advice, assisting with contractors, implementing a noise reduction strategy and attending committee meetings on behalf of the golf club.

What the above demonstrates is the multi-faceted skillset a successful modern day golf course superintendent must possess. What is even more impressive, however, is the fact that Soegaard has been able to achieve all this with fewer resources at his disposal. Due to some financial hardship over the years, Soegaard has had to manage the course on budgets as much as \$400,000 less than previous superintendents. He has also seen staffing numbers drop from 17 full-time in 2010 to a current level of 10.

Despite that Soegaard and his team continue to deliver the goods consistently and you only have to read the comments in Golf Australia magazine as part of last year's top 100 course rankings to confirm that: "Lakelands has been a Gold Coast must play course for nearly two decades and continues to set a benchmark when it comes to presentation and conditioning." 🌳



“His knowledge and expertise in all aspects of the role are second to none. Phil is well respected by the members and all the staff at Lakelands and is known for his enthusiasm, hard work, love of the golf course and the turf industry.”

Hideya Fujimaki,  
Lakelands director

Course works have also focused on stripping, levelling, re-grassing as well as extending eight tee tops



A  
NEW  
DIMENSION  
IN TOUGH  
TURF INSECT  
CONTROL



**Tempo<sup>®</sup>**  
**XTRA**

Now that **Tempo<sup>®</sup> XTRA** is here, things will never be the same. **Tempo<sup>®</sup> XTRA** is a unique dual mode of action insecticide designed to control tough pests in Turf and Ornamental situations. In Turf, **Tempo<sup>®</sup> XTRA** is registered to control 9 pests, including difficult insects to control such as Argentine Stem Weevil and Couch Mite. In Ornamentals, **Tempo<sup>®</sup> XTRA** is registered to control 12 pests, including economically important insects such as Aphids, Mealybug, Scale, Whitefly and Thrips. The dual mode of action and the HAS<sup>™</sup> formulation technology (Homogenised Active Solution) delivers outstanding results everytime. So get ready to enter a new dimension of fewer insects and improved plant quality.



Always use according to product label.

Bayer Environmental Science is a Business Operation of Bayer CropScience Pty. Ltd., 391-393 Tooronga Road, Hawthorn East, VIC, 3123. Technical Enquiries: 1800 804 479  
[environmentalscience.bayer.com.au](http://environmentalscience.bayer.com.au) [bayeramplifyturf.com.au](http://bayeramplifyturf.com.au) Temprid<sup>®</sup> XTRA is a Registered Trademark of Bayer © 2015



Muirfield Golf Club's Peter Watts joined a select group of course superintendents when he was named the recipient of the AGCSA's coveted Claude Crockford Environmental Award at the recent 33rd Australian Turfgrass Conference.

**Above; The improvements made at Sydney's Muirfield Golf Club in recent years have had widespread benefits not only for the members but the surrounding community and environment as well. Pictured is post-biodiversity works to Rifle Range Creek**

**syngenta®**

**G**olf courses are an intrinsic part of the environment and as recent research conducted in Australia shows they play a vital role in improving the biodiversity of urban landscapes.

Over the years the AGCSA Claude Crockford Environmental Award, presented in partnership with Syngenta, has honoured leading superintendents and their clubs for being proactive in the environmental management of their primary asset. In doing so these superintendents have not only ensured they are adhering to industry best practice, but are also providing a landscape that has significant benefits for the local flora and fauna as well as the members and surrounding community.

2017 AGCSA Claude Crockford Environmental Award recipient Peter Watts of Muirfield Golf Club is a shining example of that and since becoming superintendent of the Sydney-based course has championed actions to better its environmental credentials.

That commitment to excellence in environmental best practice, as an integral part of the course maintenance and development strategy at Muirfield, is best demonstrated by two distinct aspects of the club's operations. The first is an ongoing Environmental Maintenance Strategy which permeates the day-to-day work practices relating to the care and presentation of the course, while the second is a recently completed biodiversity project, the outcomes of which were entirely of an environmental nature.

The principles of Muirfield's Environmental Maintenance Strategy are two-fold – sustainable maintenance practices and consistent course aesthetics. The objectives of the strategy are:

- Improved environmental outcomes;
- Promotion of native flora;
- Improved wildlife habitat;
- Lower maintenance costs;
- Water harvesting and irrigation efficacy;
- Improvement to turf growing medium;
- Reduced chemical usage; and
- Increased stakeholder participation.

On starting at Muirfield, Watts acknowledged the contributions of his two immediate predecessors Mark Brown (relocation and building of a maintenance facility) and Mark Warwick (installation of a fully automated irrigation system and water harvesting) prior to initiating a general assessment of the course. This included an overview of all maintenance practices, playing surfaces, a comprehensive tree audit, a survey of animal habitats and a review of the local council vegetation map.

The course, which is in the Hills District of metropolitan Sydney, was identified as being characterised by stands of remnant Sydney Turpentine Ironbark Forest which is an endangered ecological community. Rifle Range Creek runs through the lower reaches of the property which then runs into the Bidjigal Reserve and on into the Parramatta River catchment. Greens at Muirfield are a mixture of bentgrass and *Poa annua*, with the fairways kikuyu and tees a kikuyu/ryegrass mix.

The course assessment identified a number of key areas of concern including:

- The prevalence of introduced plant species and also the presence of invasive species in bushland areas;
- The loss of aquatic connectivity in the creek due to manmade diversions and interruptions to the natural creek line;
- The presence of rubble and other tipped material at various points on the course; and
- The cumulative effects of some traditional course maintenance practices.

As a result, the lower reaches of the creek were subject to scouring during rain events affecting the aesthetics of the course and contributing to erosion on the creek banks. Areas of the rough under the larger stands of trees were covered by hard pan, stony surfaces supporting only thin grass contaminated with weeds. A mixture of turf species had been used for the creation of tee decks resulting in inconsistent surfaces and requiring higher levels of maintenance and chemical usage.

To address the issues in the rough, a policy of using composted mulch to create a 'forest floor' effect underneath the stands of established trees was implemented. Mulch was stockpiled and left to decompose for 6-12 months (negating the issue of nitrogen drawdown), killing off any foreign seeds and adding a composted material once spread. The benefits that have resulted from this practice are:

- Existing trees that were under stress are exhibiting a healthier canopy;
- Micro-organisms were instantly mobilised;
- Reduced terrain fatigue on course equipment;
- Improved operator health and safety, alleviating the necessity to operate machinery through hostile terrain under trees; and
- Improved visual aesthetics.

Tees were progressively converted from kikuyu/ryegrass to Santa Ana couchgrass throughout the course and teeing complexes were rationalised to reduce unnecessary tiering. Consolidated teeing platforms provided varied options for the golfer and reduced concentration of wear. Garden beds were re-contoured to curved edges allowing more efficient machinery operation and course signage and furniture was repositioned into garden or bush settings where possible. Introduced species were replaced with native species in garden and bushland areas. The benefits resulting are:

- Less machinery stress on small platform tee decks;
- Greater spread of player traffic;
- Lower water, chemical and fertiliser usage on recovering teeing areas;
- Greater use of labour-saving ride-on machinery on consolidated tee complexes and purpose contoured borders, around gardens and course furniture, results in more efficient deployment of labour, reduced machinery wear and tear and lower fuel usage; and



**Claude Crockford Environmental Award winner Peter Watts (centre) with Syngenta's Paul Jackson (left) and AGCSA president Brett Balloch**

- Improved visual impact from integrating signage and course furniture into the garden surroundings.

As part of the drainage and water collection plan, rubble and other tipped material was incorporated into course works wherever possible and covered with growing medium. Natural rock shelves were incorporated into drainage works connected by runs of natural sandstone from the local district, resulting in improved water collection and connectivity.

The progressive reintroduction of native tree species that are indigenous to the area, along with the use of natural stone, has contributed to a consistency of theme throughout the course and has harmonised course elements with the natural surroundings.

## IMPROVED IRRIGATION EFFICIENCY

A programme was established to remediate the hostile, stony growing media that was thirsty and did not sustain quality turf through weather extremes. Water harvesting was also compromised during moderate rainfall. In extended dry periods, the 25 megalitre capacity dam was unable to use the modest water storage for maximum benefit. A programme modelled on sand link drainage, was redesigned to both facilitate micro-drainage and also remediate a hostile growing medium.

Traditional sand link drainage design incorporates a 50m carry pipe linked to a parallel grid of sand links spaced at 2m intervals. The sand link remedial work designed for Muirfield Golf Club involved a carry pipe linking sand grids in excess of 100m. The sand grids were spaced at 1m intervals (each sand grid is 50mm wide and 300mm deep)

**To address the issues in the rough, a policy of using composted mulch to create a 'forest floor' effect underneath the stands of established trees was implemented**



**Improving existing water flow lines was integral to the Rifle Range Creek restoration project**



with the turf quality along the sand grids dramatically improved. The lengthened carry pipe regulated the flow of irrigation water during dry periods, while the sand links facilitated movement of water during rainfall (including collection for dam storage).

### TEERING OFF CARBON CONNECTIONS

In 2013 Muirfield Golf Club was selected to take part in the Teeing Off Carbon Connections Project, a programme to enhance Sydney's golf courses as open space and biodiverse carbon stores. The initial scope for Muirfield Golf Club was identifying a substantial area on and adjacent to Rifle Range Creek as an area of ecological significance but suffering from degraded vegetation and historical interference to the waterway.

The rehabilitation of this area would not affect the playing surfaces and so was unlikely to be a priority for funding from the club. Fortunately, access to funding by way of grants available through the Teeing Off Carbon Connections program meant that the club and the local community could participate in a project designed to address the environmental issues affecting this area. A proposal was developed which had as significant outcomes;

- The development of a Waterway Management Plan for Rifle Range Creek;
- The reinstatement of one reach of the water course to its original streambed;
- The elimination of invasive weed species to 2.78 hectares of land; and
- The establishment of 400 new plants to provide a native growth understory to the established Sydney Turpentine Ironbark Forest.

Watts was instrumental in briefing the civil engineers (Bonacci Group) in the scope of works for the creation of a new spillway connecting two ponds, the purpose of which was to provide connectivity between the upper reach and lower reach of the creek, as well as acting as a gross contaminants trap and to improve water quality.

He was also required to provide guidance and information to Dragonfly Environmental in the development of the Waterway Management Plan. Watts was the principal point of contact for local residents as the project progressed and managed the activities of a substantial group of volunteers whose participation in the project was critical.

As part of the development of the Environmental Plan, the club engaged with stakeholders at an information meeting held at the club. Representing the various stakeholders were club directors, members and staff, local residents and volunteer groups, Hills Shire Council, environmental consultants, the Hawkesbury Nepean Catchment Management Authority and the NSW Office of Water.

The project commenced with the engagement of Dragonfly Environmental to develop a Waterway Management Plan and Bonacci Group for a civil works plan. Following preparatory works to remove invasive species and considerable liaison with council and the Office of Water, the major construction phase creating a natural rock spillway connecting two existing ponds on Rifle Range Creek was completed. This was followed by extensive removal of invasive species, pre-treatment of planting sites with composted mulch and integrating drainage works with the natural water flows.

The final phase was a substantial planting programme introducing species having local provenance into the rehabilitated areas. Substantial use of volunteers was integral to the clearing, mulching and planting phases, including training sessions in environmental bush management provided by Greater Sydney Local Land Services.


As part of the Teeing Off project, Muirfield's birdlife was also studied by Dr Sabine Nooten of the University of Western Sydney. The results of this formed part of a final presentation of outcomes from the programme, with Watts' role in the project, along with other superintendents, publicly recognised.

Muirfield harbours a wide range of bird species, reflecting a diversity of habitats. Many species are typical of parklands and golf courses, such as the galah, welcome swallow and rainbow lorikeet. In addition, Muirfield's well-maintained water features were found to attract several waterbirds, including the white-faced heron, little black cormorant and the Australasian grebe. Other birds, such as the grey butcherbird, laughing kookaburra and crimson and eastern rosellas, were found in the course's bushland remnants and woody boundary vegetation. The presence of this range of species shows that a well-maintained golf course with a diverse range of vegetation types can provide refuge for wildlife with very different habitat requirements. 🌿

**Natural rock shelves were incorporated into drainage works connected by runs of natural sandstone from the local district, resulting in improved water collection and connectivity**



Visit [rainbird.com/DefendYourTurf](http://rainbird.com/DefendYourTurf) to watch a video about how top courses like The Club at Admirals Cove are getting more from their irrigation—and their turf.

Follow us @RainBirdGolf 



## Using real-time diagnostics to prevent real-big problems. That's intelligent.



### Rain Bird innovation gives The Club at Admirals Cove total control.

When The Club at Admirals Cove decided to renovate in 2015, they chose the Rain Bird® IC System™ for its real-time diagnostics and single-head control. From running instant pass/fail tests and voltage checks to quickly controlling individual rotors from anywhere, they have the power to defend their turf with Rain Bird.



Mac Ross • [mross@rainbird.com.au](mailto:mross@rainbird.com.au) • 0427 720 139 • NSW, Tasmania, South Australia, New Zealand  
Paul Woloszyn • [pwoloszyn@rainbird.com.au](mailto:pwoloszyn@rainbird.com.au) • 0409 115 000 • Victoria, Queensland, Western Australia

1800 RAIN BIRD (1800 724 624)

# RAIN BIRD®



# Understanding PWT'S

Continuing on from last edition's look at greens profile specifications and sand selection, AGCSATech environmental agronomist Bruce Macphee looks at perched water table constructions, amendments and the importance of testing.

Above: The purpose of a PWT is to have a rapidly draining profile that can provide ideal growing conditions to support healthy turf growth

In the last instalment of AGCSATech Update ('On spec' – ATM Volume 19.3, pages 36-38) we looked at aspects regarding greens profile specifications (the subgrade, drainage and gravel and intermediate layers) and the importance of sand selection. In this edition we will look further into the additional tests that should be completed before selecting an appropriate sand, amendment options and other points to consider when undertaking a greens construction project. First, let's look at the theory of perched water tables (PWT), often one of the most difficult concepts to understand.

## PERCHED WATER TABLES

The USGA's greens construction specification is based on a sand profile depth of 300mm. The purpose of a PWT is to have a rapidly draining profile that can still provide ideal growing conditions to support healthy turf growth. In a PWT construction, water is held in the rootzone layer due to the sharp change in porosity at the sand-gravel interface. There are a large number of pores in the sand that are not in contact with the gravel where the sand grains have formed bridges across the gaps created by the relatively larger gravel particles (Figure 1).

Water contained in the pores of the sand here are exposed to air in the gravel layer and form menisci, where water molecules are more attracted to each other than the surrounding air. The forces of adhesion and cohesion also come into play here. Water molecules are held in the small pore spaces, adhering to the large surface area of the sand particles seemingly against the forces of gravity. This causes a saturated zone, or PWT, to form at the bottom of the rootzone layer where, in theory,

turfgrass plants with a deep root system can access water while maintaining ideal playing conditions at the surface.

Water entering the rootzone from irrigation or significant rain events will work its way down through the profile, increasing the height of the saturated zone (or PWT) to where the head or weight of water built up in the rootzone can no longer be held against the forces of gravity. At this point excess water will move freely into the gravel drainage layer, flowing across the surfaces where sand particles and gravel particles are touching. The moisture content of the upper rootzone quickly returns to field capacity with a saturated layer remaining at the sand-gravel interface. This is, of course, a very simplified version of the processes involved.

Sands that conform to the USGA or conventional specification may have physical characteristics such as volumetric water at the higher end of the ideal range and consequently aeration porosity at the lower end of the desirable range. This would generally be the case if the particle size distribution had a higher percentage of fine and very fine sand particles.

In this situation the depth of the PWT or saturated zone may extend higher in the rootzone layer, whereas a sand with a higher portion of coarse and very coarse sand would have a shallow PWT. In real terms, it is the pore size distribution and how tightly the particles are packed together that will determine the height a PWT will form in a rootzone media. This can be determined in a laboratory using a moisture release curve test which provides information on the air entry point into the profile at varying rates of compaction to simulate real life scenarios.



## MOISTURE RELEASE CURVES

A moisture release curve test should be undertaken when assessing sand for use in a PWT construction. Simply put, this test will determine the depth a rootzone should be installed to provide the ideal mix of air and water in the rootzone region for growing turf. This is based on the height of the PWT and air entry point.

As can be seen in Figure 2, there is a saturated zone in the lower portion of the rootzone immediately above the gravel layer. The top of the saturated zone, or capillary fringe, is where large pores start to drain allowing air to enter the profile (known as the air entry point). As you move further up the profile away from the top of the capillary fringe, the percentage of water held within the profile reduces. These figures can be plotted to create a moisture release curve and calculate the ideal depth of a rootzone profile using that particular sand.

The height of a PWT, or capillary fringe, could vary between 120mm and 250mm deep using sand that conforms to the USGA specification, highlighting the importance of including a moisture release curve test when assessing a sand sample for use in a project.

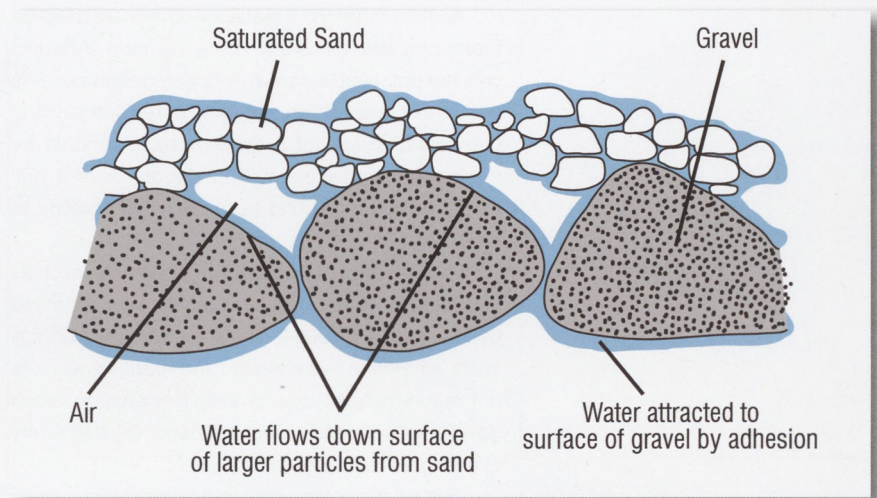
Theoretically, sand with a higher percentage of coarse particles would have a shallow PWT, meaning the rootzone could potentially be installed at a shallower depth. If the sand was to be installed at the USGA-recommended depth of 300mm, it may need to be amended with organic matter to increase the volumetric water content above 15 per cent in the upper portion of the rootzone.

Sand with a high percentage of fine particles would have a deeper PWT indicating the profile depth may need to be increased to avoid the potential of the water table extending up to near the surface, particularly during wet winters. This can have the effect of the rootzone becoming waterlogged, providing poor aeration and growing conditions and, in the case of sports fields, losing stability and the surface suffering severe damage if play is allowed during wet conditions. Unfortunately, this is something that is observed occasionally in sand-based sports fields where compromises have been made in order to save costs.

When determining the final height of a sand profile, the effect of suction from the gravel drainage layer is also taken into account. Typically, 100mm is added to the profile depth from the air entry point to allow for good rootzone aeration. Consequently, if a gravel layer is being used, then approximately 50mm is subtracted off the finished height for the suction effect of the gravel layer, reducing the ideal profile depth to 50mm above the air entry point.

## ORGANIC AND INORGANIC ROOTZONE AMENDMENTS

There are a range of products available on the market which have the potential to increase nutrient and water-holding capacity of a sand-



based profile. These may come in the form of inorganic amendments such as zeolite or organic amendments such as the once traditional sphagnum or peat moss.

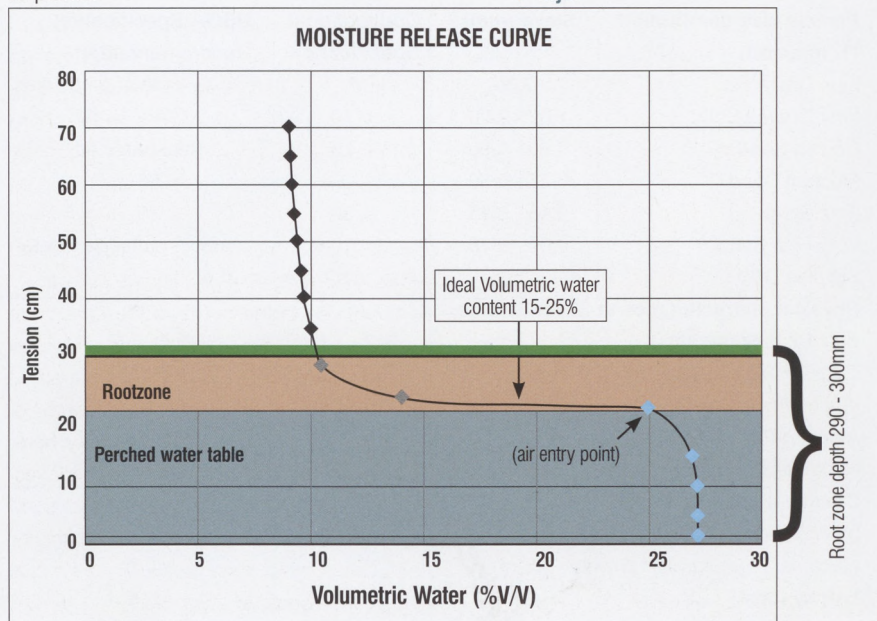
With the increasing scarcity of quality peat moss and awareness of choosing environmentally sustainable products, the use of coco peat has become increasingly popular as an organic amendment, due to it being relatively cheap, easily available and an infinite resource.

The USGA states organic components such as peat shall have a minimum organic matter content of 85 per cent determined by a loss on ignition test. This is a particularly important point to consider when looking at organic amendments and the potential of introducing increased levels of very fine sand, silt or clay, often making up this remaining percentage, particularly with the various peat sources available.

There are a wide range of other organic products available on the market and these should all be assessed individually to determine suitability for inclusion as an organic amendment. It is essential that any organic amendments considered have been fully composted and proven non-phytotoxic to plants.

**Above: Figure 1. In a perched water table construction, water is held in the rootzone layer due to the sharp change in porosity at the sand-gravel interface (Figure adapted from 'Drainage for Sports Turf and Horticulture' by Keith McIntyre and Bent Jakobsen, 1998)**

**Below: Figure 2. In this moisture release curve, the air entry point to the soil profile is at 250mm. Below this point is a saturated layer. The addition of 100mm of sand depth will provide good aeration in the rootzone. Where a gravel layer is to be included, 50mm of profile depth is subtracted from the total height to allow for the suction of the gravel layer**



Any amendment, organic or otherwise, must be thoroughly tested in a lab before it is used. Products with the potential to contain silt, clay or components which may break down, clogging pores or restricting the infiltration rate of a sand rootzone, should be discounted immediately. 'If in doubt, leave it out' would be a good motto to go by when looking at amendments.

The inclusion of inorganic amendments, such as calcined (kiln fired) clays and zeolite, was approved by the USGA in 2004. The inclusion of products such as Perlite, vermiculite and pumice are still not recommended due to their tendency to break down and potentially clog pore spaces, negatively affecting infiltration rates.

Australian zeolite sources are considered some of the best in the world for their hardness and high cation exchange capacity (CEC). Zeolites have been used as an amendment with mixed success. Amendments such as these are often used for their ability to increase CEC rather than increase moisture holding capacity (which is often minimal).

If an inorganic amendment is being considered, it is essential to ensure it fits in with the particle size and performance specification of the rootzone mix. The high cost of these products and their relative short-term benefits (their effectiveness reduces as organic content of the profile increases), need to be taken into account when compared to the cost of utilising a slow-release fertiliser or increasing the frequency of fertiliser applications.

If it is determined that an amendment is required to increase the nutrient or water-holding capacity of a sand, it is essential that all tests be conducted both with and without the organic amendment included in the rootzone mix. This may take several rounds of testing to determine the exact amount of product to be included by volume.

If an amendment is to be included in a rootzone mix, it is acceptable for an organic amendment to

be included in only the top 150mm of the profile. Inorganic amendments are specified by the USGA to be mixed through the entire rootzone depth.

When mixing amendments, this process should be conducted off site to ensure a fully homogenous blend is achieved before installation of the profile. For the minimal cost of mixing amendments at the quarry, there is no acceptable reason to mix an organic amendment into a profile in situ as a homogeneous blend simply cannot be achieved.

### SAND AND GRAVEL COMPATIBILITY TESTING

Both the sand and gravel should be tested together in the lab for compatibility to ensure the gravel will support the sand layer above, preventing migration of sand particles into the gravel layer below, yet still allowing water to flow freely.

There are several equations that can be calculated from lab results to determine if a sand and gravel are compatible:

- **Bridging:** The bridging factor is based on an engineering principle which relies on the largest 15 per cent of the root zone particles 'bridging' across the smallest 15 per cent of the gravel particles. The smaller voids produced in the 15 per cent of the gravel allow the sand to bridge these voids, preventing migration of rootzone particles into the gravel yet still maintaining adequate permeability. These bridges also allow the creation of menisci at the sand-gravel interface effectively creating the PWT. The equation for this test is expressed as  $D_{15}(\text{gravel})$  less than or equal to  $8 \times D_{85}$  of the rootzone.
- **Permeability:** The equation for permeability across the sand-gravel interface is the  $D_{15}(\text{gravel})$  shall be greater than or equal to  $5 \times D_{15}(\text{rootzone})$ . This will create adequate levels of contact points for water to flow from the sand rootzone into the gravel layer.

TABLE 1. SOIL PHYSICAL ANALYSIS - THREE DIFFERENT SAND SAMPLES

| Particle size distribution (% retained)         | Sieve (mm)  | Conventional Specification | USGA Specification Recommendation | Sand 1 | Sand 2 | Sand 3 |
|---|-------------|----------------------------|-----------------------------------|--------|--------|--------|
| Fine Gravel                                     | >2.00       | 0                          | < 3   total particles             | 0      | 1      | 0      |
| Very Coarse Sand                                | 1.00 - 2.00 | < 10                       | < 10                              | 5      | 1      | 1      |
| Coarse Sand                                     | 0.50 - 1.00 | < 20                       | total particles                   | 23     | 15     | 13     |
| Medium Sand                                     | 0.25 - 0.50 | 40 - 60                    | > 60                              | 48     | 54     | 46     |
| Fine Sand                                       | 0.15 - 0.25 | < 30                       | < 20                              | 16     | 20     | 32     |
| Very Fine Sand                                  | 0.05 - 0.15 | < 10                       | < 5   total particles             | 7      | 7      | 5      |
| Silt plus Clay                                  | <0.05       | < 5                        | < 5   < 10                        | 1      | 2      | 4      |
| <b>Physical characteristics at 30cm tension</b> |             |                            |                                   |        |        |        |
| Bulk Density (g/cm <sup>3</sup> )               |             | 1.2 - 1.6                  | 1.2 - 1.6                         | 1.6    | 1.6    | 1.8    |
| Total Porosity (%V/V)                           |             | 35 - 55                    | 35 - 55                           | 40.1   | 37.0   | 40.2   |
| Volumetric Water (%V/V)                         |             | 15 - 25                    | 15 - 25                           | 12.9   | 15.9   | 24.2   |
| Aeration Porosity (%V/V)                        |             | 15 - 30                    | 15 - 30                           | 27.2   | 21     | 16     |
| Hydraulic conductivity (mm/hr)                  |             | > 150                      | > 150                             | 590    | 320    | 70     |
| <b>Chemical characteristics</b>                 |             |                            |                                   |        |        |        |
| pH-1:5 water                                    |             |                            | 5 - 7                             | 6.1    | 6      | 5.2    |
| Electrical conductivity-1:5 water (dS/m)        |             |                            | <0.2                              | 0.04   | 0.03   | 0.03   |
| Salinity (ppm)                                  |             |                            | <600                              | 120    | 90     | 90     |

- **Uniformity:** To ensure there is consistency in the particle size of the gravel selected, a coefficient of uniformity calculation should be conducted. This is calculated as  $D_{90}(\text{gravel})/D_{15}(\text{gravel})$  is less than or equal to 3.0.

As can be seen in Table 1, sands can be very similar or close to specification and have very different physical characteristics. In this example:

- Sand 1 conforms to both specifications but is slightly outside the conventional specification in the coarse sand fraction (this shows up as low volumetric water content in the physical characteristics). The volumetric water content could be potentially increased with the addition of 5% V/V coco peat or peat moss.
- Sand 2 conforms to both the USGA and conventional specification and would be most suitable for construction purposes.
- The particle size distribution of Sand 3 is very close to conforming to the conventional specification, however, it is let down by the higher bulk density and reduced hydraulic conductivity. With volumetric water near the upper limit, the sand would tend to hold a lot of moisture and have poor aeration.

There are a multitude of tests that should be conducted to determine if a sand is suitable for use in a PWT construction. Equally as important is selecting a reputable quarry with a consistent supply of quality material, as well as a NATA-accredited soils laboratory to conduct the testing.

Correct selection and competent construction, however, is just the start. Equally as important, and something that is often overlooked, is the ongoing management of the surface once construction has finished. The overall cost of undertaking a maintenance programme must be taken into account as part of assessing a new greens construction project. This can be a significant cost, but it has a major bearing on the successful performance and lifespan of the surface.

Long-term health and performance of a surface is often determined by the top 50mm of the profile. Managing organic matter accumulation with the aim of preventing the development of layers within the surface, maintenance programmes should be planned and implemented from the day construction starts, with regular dusting of the surface during establishment to assist in creating a smooth surface and dilute thatch accumulation.

We have really only just touched the surface in this article, but hopefully it highlights the importance of doing your homework and getting thorough independent testing completed for your next construction project. 🙏



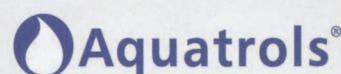
**Both the sand and gravel should be tested together in the lab for compatibility to ensure the gravel will support the sand layer above**

## CONCLUSION

Following the points highlighted in this two-part article will help assist turf managers to select the right construction materials to suit their project.

# TURFCARE AUSTRALIA

is proud to announce that it has been awarded the sole National Distributorship for the excellent range of **AQUATROLS®** Products.



For over 60 years, Aquatrols has built a global reputation for innovation, reliability and value by delivering the results you need to achieve success.

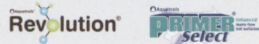
Now, more than ever, making the best use of water and other resources is essential – and Aquatrols is leading the way. Our team of scientists and technical professionals are continually seeking more effective solutions to address the unique challenges of both the industry and your course.

Trust Aquatrols® to improve your turf conditions.

### Surfactant Products

Golf course superintendents worldwide rely on Aquatrols® surfactants to optimize soil/water/plant interactions, improve irrigation efficiency, and save water and energy. Find the product below that best suits your needs.

#### Greens & Tees



#### Fairways



#### Coursewide Injection



#### Stressed Areas



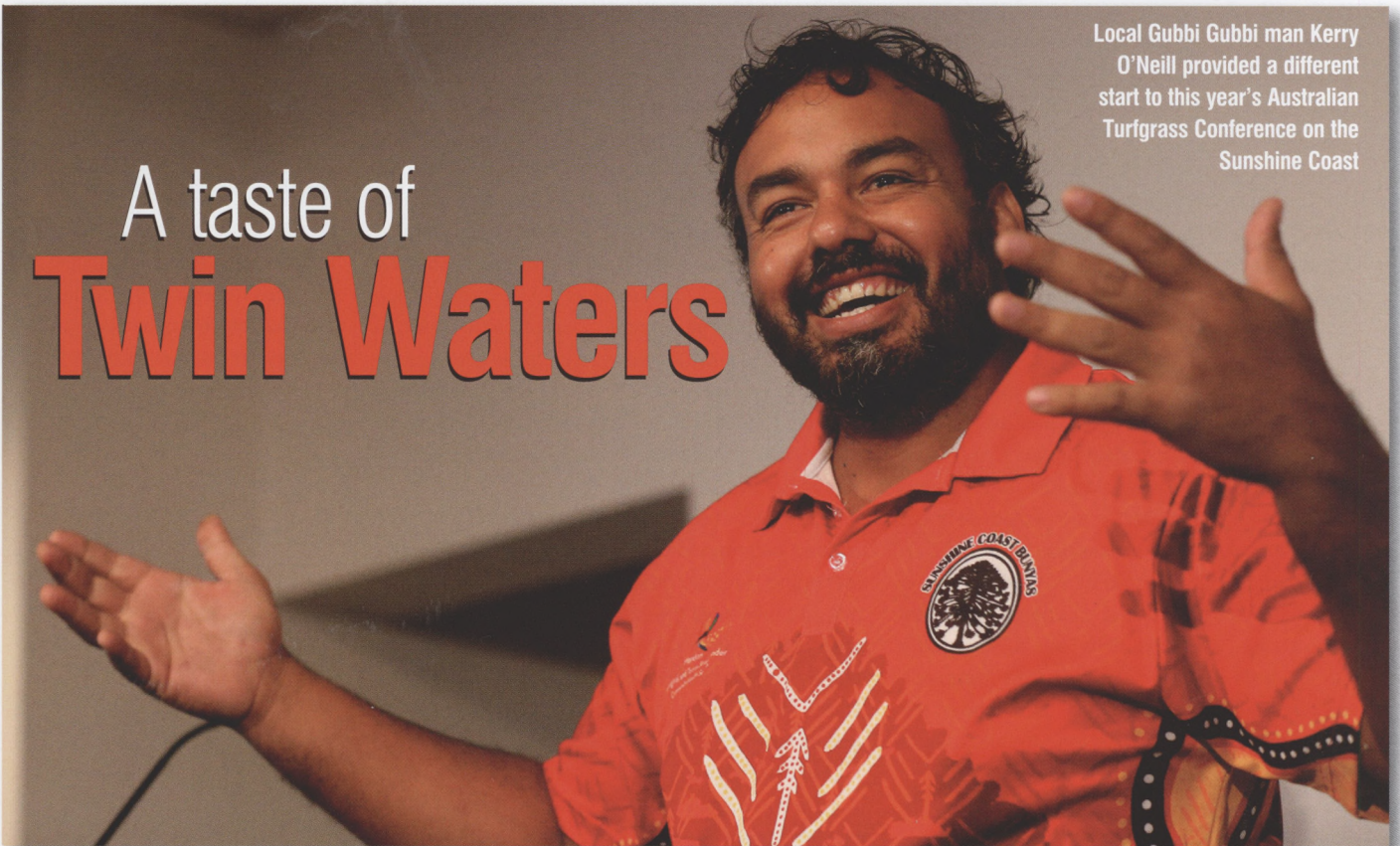
**For all future sales or potential distribution opportunities please contact TURFCARE AUSTRALIA**

Office: 02 9684 6611 Fax: 02 9684 6633  
Email: [turfcare@bigpond.com.au](mailto:turfcare@bigpond.com.au)  
Web: [www.turfcareaustralia.com.au](http://www.turfcareaustralia.com.au)



# A taste of Twin Waters

Local Gubbi Gubbi man Kerry O'Neill provided a different start to this year's Australian Turfgrass Conference on the Sunshine Coast



For the second time in four years, the Australian Turfgrass Conference ventured to Novotel Twin Waters Resort. ATM reviews the week that was on the Sunshine Coast.

It's no big secret that one of the most challenging aspects golf course superintendents and turf practitioners have to manage daily is something they have never had any formal training in. While agronomics and turf management practices have always been a mainstay of past Australian Turfgrass Conferences, looking at the programmes in recent years there has been a definite shift in the number of talks relating to staff and HR management, health and wellbeing and financial management.

Being up to speed and managing these 'behind-the-scenes' areas effectively and efficiently has become just as important, if not more so, than what happens out on the golf course. And as some turf managers have found to their detriment, getting these aspects wrong, or failing to devote the required time to them, can have dire consequences.

It was with this in mind that the education programme at the recent 33rd Australian Turfgrass Conference and Trade Exhibition deliberately boasted a strong underlying HR theme. During this year's conference, which returned to Novotel Twin Waters on the Sunshine Coast for the second time in four years, delegates were presented with a range of topics designed to make them think more about their off course operations.

Presentations and workshops discussed effective leadership techniques and the key traits of successful and high performing teams, managing the performance of staff and the rights and obligations surrounding workplace termination. These were complemented by sessions which looked at how to present with greater confidence (whether to boards of management or staff), developing and managing course budgets and using tools such as Excel in a more effective way.

Among the most popular sessions for the week were Steve Herzberg's two half day workshops – 'Presenting with Confidence' and 'High Performing Teams' (see page 46 for more on the latter). Both topped the list of favourite sessions in the post-conference survey with some of the feedback noting they were "inspiring", "outstanding" and, for one delegate, "some of the best interactive sessions I have been involved in at a conference."

Also ranking extremely high were the two Plenary sessions conducted by Vicki Crowe and Susanne Macphee. Crowe, who works for the PGA of Australia and is the AGCSA's HR representative, talked delegates through the minefield that is workplace



Comedian/magician Peter Booth has some fun at the expense of AGCSA Board member Darren Wilson

termination. She explored the rights and obligations relating to workplace termination and examined the various forms of termination prescribed under the Fair Work Commission framework.

During her presentation Crowe stressed a number of key points that superintendents and their staff needed to be across, regardless of which side of the table they sat when it came to workplace termination. They included:

- Don't leave issues unaddressed. Manage at the time using a Performance Improvement Plan for performance issues or verbal and written warnings for poor conduct or behaviour;
- Always take notes on the reasons before making the decision to terminate employment;
- Protect the business from an unfair dismissal claim by thoroughly checking you had a valid reason prior to dismissing relating to the employee's capacity or conduct;
- Check the dismissal isn't unlawful under Fair Works General Protections to avoid an Adverse Action claim; and
- In regards to medical dismissals, don't make assumptions about medical conditions, seek advice from a medical professional and consult with the employee before making reasonable adjustments.

Macphee presented a number of HR-related talks during the week. However, it was her Plenary session address on leadership and team building that hit home to many delegates. Some of the key take home points from this session included:

- Be visible – there is no example to set if people don't get a chance to see it;
- Be reflective – ask yourself "Would you be happy being led by someone like you?"
- Be proactive – do something about it. Enhance your self-awareness and ask your employees for feedback on your leadership style;
- Build trusting relationships and be more present and engaged to your team;
- Be consistent. Avoid being the leader who says "do as I say, not as I do";
- Recognise the talent within your team and maximise it. Make your job easier by trusting your team and sharing responsibility; and
- Support succession planning – your best employees will be devoted by it.

While HR issues were to the fore, by no means did agronomic and course management topics take a back seat. Judging by the full house in both the herbicide resistance and *Poa annua* management



Conference keynote Lee Strutt presented on developing course maintenance budgets and his Ryder Cup experiences

workshops on Wednesday, it confirmed how significant these issues are in the industry, with delegates able to hear from three of the industry's foremost experts in these areas.

The herbicide resistance workshop saw Dr Peter Boutsalis present for the first time on his recent herbicide tolerance trials, while the collective brains of Jyri Kaapro and John Neylan helped to put everything into context and how it related to the issues that superintendents and turf managers were facing on the ground. As an aside, upcoming editions of Australian Turfgrass Management Journal will include more on the discussions that were forthcoming during these sessions.

"The Australian golf industry should be very proud of the talented people that care for their courses."  
– Conference keynote speaker Professor Mike Richardson



Golf Course  
Construction,  
Maintenance &  
Renovation

Exclusive  
Australian  
distributor  
of Capillary  
Concrete

Global Turf provides innovative and tailored solutions to meet your golf course turf needs. Call us today to speak to a leading turf expert!

Garry Collins 0418 127 216  
garry@globalturf.com.au  
www.globalturf.com.au



GLOBAL TURF



**The STA and AGCSA Graduate of the Year candidates had a memorable week on the Sunshine Coast**



**Susanne Macphee discussed characteristics of good leadership and was also a key presenter during the two-day AGCSA Future Turf Managers' Initiative**

The warm-season grasses forum on the pluses and minuses of couchgrass and zoysiagrass also rated highly with one delegate commenting that it provided unbiased technical information at a brilliant level for turf managers to take back and apply to their situation.

Another impressive presentation came from Rob Savedra who, for the past 25 years, has been grounds supervisor at Wesley College's Glen Waverley Campus in Melbourne. Savedra recounted with great emotion the fire which in 2016 ripped through the junior school taking out 10 classrooms and the atrium. Savedra, who lives over the back fence of the campus, was the first staff member on the scene and his talk looked at dealing with adversity during and after such a catastrophic event and some of the lessons learned.

### INTERNATIONAL FLAVOUR

The AGCSA was delighted to host two major keynote presenters at Twin Waters with Lee Strutt (Royal Automobile Club, UK) and Professor Mike Richardson (University of Arkansas, US) coming from half a world away to impart their wisdom and knowledge.

Strutt presented a number of fascinating talks, including the full-day course management budget building workshop on Monday sponsored by Jacobsen. He also presented on his experiences working at a number of Ryder Cups and was also involved in the two-day AGCSA Future Turf Managers' Initiative which ran concurrently with the conference (see more on the FTMI, page 52). Attending what was his first Australian Turfgrass Conference and Trade Exhibition, Strutt was effusive in his praise of the event and the engagement of the delegates.

"The warmth and welcome from the AGCSA staff, board, the delegates and the trade members made us feel very proud and honoured to be invited as guests," says Strutt, who was joined by wife Sami, the head of member development for the British and International Golf Greenkeepers Association (BIGGA). "We felt a genuine welcome and inclusion into everything which makes a huge difference when travelling overseas.

"Education is and will always be the cornerstone of our industry. The positive and negative issues that AGCSA members and delegates addressed are identical to the ones we have in the UK and around the world. This helped us to bond together as we had so much in common. It was also great to see different speakers covering various subjects and, even better, seeing superintendents stepping up to tell their own story.

"Without doubt there is an amazing opportunity for our associations to work a lot closer than ever before. The industry is evolving and becoming very technical and more business orientated. I would be the first to strongly recommend stronger ties between association staff and its members. We are definitely forward-thinking associations and this brings great strength and greater opportunity for all concerned. Greenkeepers are renowned for problem-solving but also sharing their knowledge for the benefit of their friends and peers and this should be encouraged further.

"If the 33rd annual show is anything to go by, then it should be embraced as a total success. Many doubters around the world are quick to point out the weaknesses of any annual show. But these are so important to the industry, from the trade to our peers. Putting together these shows are extremely labour intensive and we rely on our association staff to put these together on our behalf. So, for me it's important that we ensure that we have consistency in our excellence and have the necessary resources to do so."

Richardson also rated the conference very highly as well as the calibre of the turf professionals he met during the week. Richardson conducted the second Jacobsen sponsored Monday workshop on understanding the effects of shade and light management and also talked on foliar fertilisation.



**The turf flies as Bonville's Chris Neal drills one off the tee at Pelican Waters**

CONTINUED ON PAGE 47

# FOR THE FINEST FINISH

"Using the Eclipse®322 has saved us time and money. We are able to cut our greens for a whole week on one tank of fuel; it is the most economical machine that I have ever come across.

I am able to electronically programme the frequency of cut and mow speed so I know that every hole is being cut to the same high standards, regardless of who is sat on the machine. Precision is key in this industry, and Jacobsen makes this possible."

**Russell Fletcher,**  
Course Superintendent, St. Michael's Golf Club



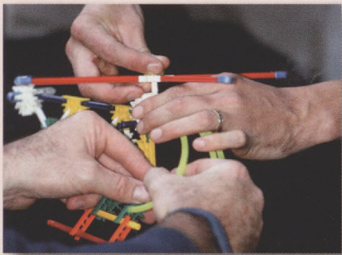
OFFICIAL SUPPLIER  
2018 RYDER CUP

Call **1800 465 226** or visit  
[www.jacobsen.com](http://www.jacobsen.com) to find your local dealer.

[www.jacobsen.com](http://www.jacobsen.com)



**JACOBSEN**



People in a high performing team understand what they are working towards and why are they working towards it



Steve Herzberg was at pains to get his message across to delegates about the key components that teams need in order to be successful

## DOES YOUR TEAM GEL, OR DOES IT SMELL?

**B**usiness coach and trainer Steve Herzberg made a welcome return to the 33rd Australian Turfgrass Conference and Trade Exhibition on the Sunshine Coast. In addition to kicking the conference off on the Tuesday's opening Plenary session, he also conducted two half day workshops – 'Presenting with Confidence' and 'High Performing Teams'.

With staff and HR management such a critical aspect of a superintendent and turf manager's role these days, the High Performing Teams workshop was particularly well received. As part of this, Herzberg, who has worked closely with many corporate leaders and their teams over the past 17 years through his consultancy business NRG Solutions, outlined what he sees as seven key attributes that high performing teams (HPTs) have in common.

### 1. CLARITY ON THEIR GOALS

Crystal clear! Everyone understands what they are working towards and why are they working towards it. Never under estimate the 'why'. People in a high performing team all have buy-in to the goals of the team. The goals are 'SMART' ('Specific', 'Measurable', 'Assignable', 'Realistic' and 'Time-related'). The team refers to the goals consistently. Goals could be linked to revenue, market share, sales, growth, turnover, employee engagement. All team members see the point of the goals and are involved in deciding how they should be set.

### 2. COMFORTABLE WITH CONFLICT

If there is no tension or conflict in your team you could be heading for trouble. Team members need to have the confidence to voice their opinions and disapproval of the team's direction when needed. They should not fear repercussions. A degree of conflict or tension within a team is critical. It indicates that the members of the team are concerned about their own needs as well as the success of the team.

### 3. CLEAR COMMUNICATION

The message sent is rarely the same as the message received. High performing teams communicate consistently. They avoid confusion by having things in writing. Excellent non-verbal communication is very important. Being able to read other people's body language and being aware of the impact of your own body language makes an enormous difference to the success of the team. Most of the issues in teams relate to poor communication and false assumptions. If the team communicates consistently and in a language that everyone understands, a lot of potential conflict could be avoided.

### 4. INDIVIDUAL ACCOUNTABILITY

HPTs recruit wisely and are made up of individuals who thrive on accountability. These people enjoy the challenge that comes with being accountable. They appreciate that with accountability comes a degree of pressure to perform. They thrive on this. If they are

unsuccessful they own it. It takes a high level of maturity and emotional intelligence to consistently want to be accountable.

### 5. MEASURE AND CELEBRATE SUCCESS

HPTs are clear on how they will assess their performance. When a HPT is successful they celebrate; when they are not they assess why and make suitable adjustments. Celebrating regularly is a great way to maintain motivation, keep communication up and remind people of why they want to be part of this team.

### 6. A HUNGER TO IMPROVE

This is inherent in all HPTs. There is a mindset that says we are doing well now, but how can we do it better? This improvement should be driven by excellent and empowering coaching and leadership. Recruiting fresh people with different ideas will assist. HPTs realise that just because they have always operated in a certain way, that doesn't mean that they will continue to always do things that way.

### 7. STRONG LEADERSHIP

Strong leadership sets the tone and the direction for the team. Great leaders know the importance of being soft on people yet firm on outcomes. They realise the word 'relationships' always appears before 'results' in the dictionary. The best leaders are driven, have high emotional intelligence, are excellent communicators and surround themselves with a diverse range of motivated people.





## CONTINUED FROM PAGE 44

"I was very impressed with the knowledge level of the delegates," says Richardson, who prior to the conference toured some of Melbourne's premier turf facilities including the MCG, Kooyong Lawn Tennis Club and Royal Melbourne Golf Club. "I wondered if some of the material I was presenting might be too technical, but I was pleasantly surprised by the depth of questions and discussions both during and after the seminars. Having given many seminars in other countries, I can tell you this is not always the case and the Australian golf industry should be very proud of the talented people that care for their courses.

"What I really loved about the conference was the emphasis that was placed on the young turfgrass professionals that attended. They were very engaging and energetic and I really enjoyed seeing them recognised so often at the event. The overall vibe of the event was very welcoming and open, which is so valuable to enhance learning.

"I really appreciated all the delegates that talked to me during the breaks, at the trade show or over a beer in the afternoon; it made me feel very welcome and I am sure it makes everyone involved happy to participate in the event. Overall, the event was very well-organised and presented a nice range of topics. I thoroughly enjoyed several of the sessions that I was able to sit in on and learned something from every speaker I heard."

## WOODWARD PREVAILS AT PELICAN WATERS

The Toro AGCSA Golf Championship, which again kicked off the conference week, has always been a closely fought contest and looking back on past results the race for the title has mostly been decided by only one or two shots. While some



superintendents have gone on to collect multiple Red Jackets, for others it has been a case of so close yet so far and on more than just a few occasions too.

For the past four years Armidale Golf Club's Brett Woodward had been one of those superintendents. In the 2013 tournament, held at Twin Waters Golf Club, an even par 72 saw him finish second to a very hot Michael Dennis (Royal Perth GC) whose four-under 68 is believed to be the lowest winning score in the tournament's history. A year later at Sanctuary Cove, Woodward would again finish four shots behind Dennis, but this time in fourth.

Teeing up at Newcastle Golf Club in 2015, effectively home territory for Woodward, he fell short by a single shot to Chris Burgess (Yarrowonga Mulwala Golf Resort), a double bogey on the 17th hole ultimately costing him. And then in 2016, in the fading light at Barwon Heads Golf Club, Woodward finished one shot behind winner Brent Hull (Moruya GC) who collected the title on a countback from fellow multiple Red Jacket holder Anthony Toogood (then Commercial Club Albany).

It was the sort of record that Woodward knew about only too well as he entered this year's event staged at Pelican Waters Golf Club in Caloundra (host superintendent Troy Muir). So this year he decided to approach things a little differently. In years past he had never bothered with a practice round at the tournament venue, like many of his counterparts do, so this year he teed up a Saturday round with good friend and Toro rep Matt Coles.

**Far left: Armidale GC superintendent Brett Woodward broke through for his first Toro Red Jacket at Pelican Waters Golf Club**

**Above: Delegates get to grips with course maintenance budgets during Lee Strutt's Jacobsen-sponsored Monday workshop**

**Around 50 companies exhibited at the two-day trade show which gave delegates the chance to view some of the latest products and technologies on the market**





◀ Darren Balfour (left, formerly of The National) and Dave Mason (Metropolitan GC) during the course budget workshop



Damien Murrell winds up on the 3rd

Hawthorn tragic Rob Savedra (Wesley College) with Hawks legend and Toro golf function guest speaker Dermott Brereton



The herbicide resistance workshop featuring Dr Peter Boutsalis was one of the most discussed sessions of conference week

Firing a two-under 70 around the Greg Norman signature course, it may well have proven the difference as a little over 24 hours later Woodward found himself slipping into the coveted Toro Red Jacket for the first time.

By his own admission, Woodward entered the tournament in pretty good touch – a handicap of +3 certainly suggested that – but an early bogey on the par four 2nd wasn't quite the start he had counted on. He quickly rectified things on the 465m par five 3rd. Stepping up and taking driver for the first and last time that day, Woodward monstered his tee shot before flushing a five-iron to within 12 feet.

It was deja-vu for Woodward who had struck almost two identical shots the day before during the practice round. Having missed his eagle putt from effectively the same spot that day, Woodward wasn't going to make the same mistake again and guided the left-to-right putt in for a three to take him to one-under. Moments later, however, he was back down to earth after a wayward tee shot and bad lie saw him drop a shot on the par three 4th. Quite the opening four holes!

A birdie on 7 brought Woodward back under the card and after a solid stretch of seven pars he birdied the par four 15th to be two-under and seemingly well on his way to securing a long-awaited and well-deserved Red Jacket. The nerves, however, would

kick in coming up the last, the hardest hole on the course. Although nicely placed off the tee with a three-wood, he pulled his approach shot left and short. An average chip was followed up with a poor first putt and he needed a further two putts to card a double bogey six. That finish, which saw him sign for an even par 72, made for an agonising wait back in the clubhouse.

"I've come close a number of times over the years and to think that doubly bogey on the last might have cost me meant it was a very long and nervous wait," reflects Woodward. "I was pretty angry at myself. Up until that point I had had a really good day on the course. I hadn't missed a fairway all day, which is unusual for me, and coming to the last at two under I thought I was in with a chance. So to hear my name eventually called out despite that hiccup on the last hole was a huge relief."

The hard-luck story of the day, however, was AGCSA president Brett Balloch who experienced a round of fluctuating fortunes. Like Woodward another perennial runner-up over the years, Balloch stepped onto the 6th tee at five-over par and effectively staring at another opportunity lost. Bogeys on 2 and 4 were followed by a horrid triple bogey on the par four 5th. Despite a perfectly placed tee shot, Balloch chunked his second into the water before firing his next shot over the back of the green.

Despite the nightmare start, Balloch recovered remarkably and played the next nine holes in four-under thanks to birdies on 7 and 9 and back-to-back birdies on 13 and 14. However, that rally didn't quite last all the way to the finishing hole and like Woodward he faltered on 18, albeit with a bogey, to finish with a two-over 74, two shots adrift. Balloch would end up finishing tied with Dennis who shot back-to-back 37s. It was then daylight back to Jason Bushell (Rowes Bay GC) and David Hobday (South West Rocks CC) who posted 80s, while defending champion Brent Hull finished a shot further back.

Woodward had double reason to celebrate as he joined Chris Neal (Bonville Golf Resort), Damien Murrell (Easts Leisure and Golf) and David Hobday to secure the state team event yet again for NSW. NSW amassed a total of 98 points to finish eight

CONTINUED ON PAGE 50

# Same Quality. More Capacity.



OFFICIAL  
GOLF COURSE  
EQUIPMENT  
SUPPLIER

The new 8900A PrecisionCut™ Fairway Mower from John Deere meets the challenge of doing more with less.

Extra-large cutting units give an impressive mowing width of up to 330 cm (130 in.). Driven by larger reel motors and a 12.8km/h mowing speed, performance and productivity is yours for the taking.

Plus, of course, all the benefits you've come to expect from our fairway mowers including the TechControl operating system and Speed Link™ for easy unit adjustment.

Find out more from your local John Deere Golf dealer today.

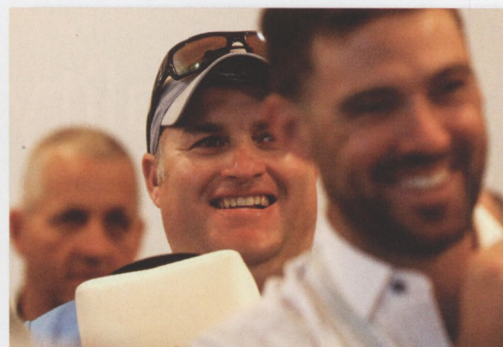


**JOHN DEERE**  
GOLF

Trusted by the Best.



**Above right: David Hobday (South West Rocks CC) shares a light-hearted moment during Steve Herzberg's opening session**



**Above: Roseville's Mark O'Sullivan poses a question during one of the Plenary session talks**

**CONTINUED FROM PAGE 48**

points ahead of the Victorian team which comprised Andrew Maggs (Maryborough GC), David Warnaar (Warrnambool GC), Colin Foster (Barwon Valley GC) and Chris Burgess.

The stableford trophy went down to the wire with The Lakes Golf Club's Simon Blagg pipping fellow assistant superintendent Chris Rogers (Portsea GC) by a point. The native Englishman recorded just two wiper on his way to 35 points, with a four-pointer on the short par four 12th ultimately proving the difference. Despite finishing runner-up, Balloch didn't leave Pelican Waters empty handed after collecting the nearest the pin prize. His two on the 14th was one of four on the day (Rogers, Warnaar and Marty Formosa also carding twos), while Bobby Lee (Hawks Nest Golf Club) belted the longest drive on the 10th.

**WELLINGTON 2018**

With Twin Waters 2017 now but a pleasant memory, the focus shifts to 2018 which is set to see one of the largest industry gatherings for many a year. At Twin Waters it was officially announced that the inaugural Australasian Turfgrass Conference, a joint venture

between the AGCSA and the New Zealand Golf Course Superintendents Association (NZGCSA), will be held in Wellington, NZ, from 25-29 June 2018.

AGCSA events and education manager Simone Staples, along with members of the AGCSA Board, travelled to New Zealand in mid-August to meet with their NZGCSA counterparts and conference planners to get the ball rolling. Royal Wellington Golf Club (superintendent John Spraggs) has been confirmed as host of the 2018 Top AGCSA Golf Championships and other details pertaining to the event will be released in the coming months.

"I really hope that everyone had a fantastic week on the Sunshine Coast," sums up AGCSA events and education manager Simone Staples. "The vibe seemed to be very positive and the feedback suggests that there was something in the programme for everyone. I really appreciated the extra effort put in by all the AGCSA board and staff over the week; we were short-handed but pulled together to deliver an event that, from the feedback so far, was informative, interesting and well received.

"We now turn our attention to the inaugural Australasian Turfgrass Conference next June. Wellington is a fantastic destination and with the support of our New Zealand counterparts I know that this event will be a success. We have received a lot of positive feedback from AGCSA members about the joint conference venture and I think that with some of the ideas we have in the pipeline it will be an extremely memorable week." 🍷

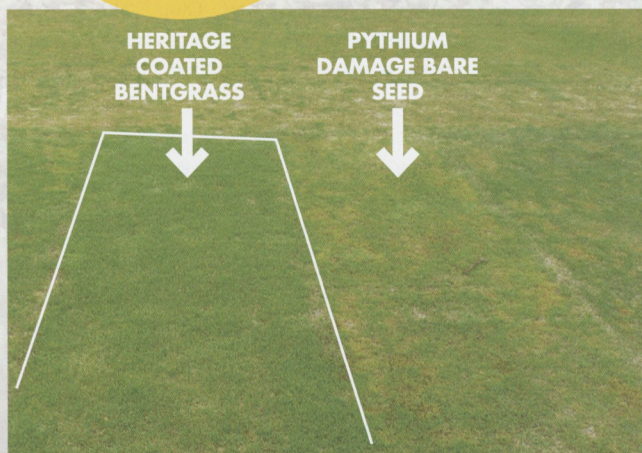
**AGCSA Platinum Partner Toro was once again front and centre during conference week**



# THE BENTGRASS PROFESSIONALS

ENHANCED  
SEED WITH  
**AgriCote®**

EXCLUSIVE DISTRIBUTORS OF AGRICOTE:  
PURE DISTINCTION, CRYSTAL BLUE LINKS,  
PENN A1, PENN A4, PENCROSS.



AgriCote enhanced seed provides:

- **Fungicide Protection**
- **Insecticide Protection**
- **Wetting Agent**
- **Trace Elements.**

Providing you with;

- Better water use efficiency
- Improved establishment
- Uniform seeding and better overall turf quality
- Reduced pest damage
- Fungicide for additional pythium protection

Improve your greens with Heritage Seeds  
AgriCote bentgrass

"I would strongly recommend to seed with the AgriCote protection, in our experience we have the benefit of three weeks of fungal control using AgriCote, especially Pythium. Typically the seed germinates in six days and we are nearly playable after 10 -12 weeks of grow-in when seeded in ideal conditions!"

*Glenn Stuart, Director Of Courses - Peninsula Kingswood*

**ASK NUTURF  
ABOUT OUR  
SPRING DEAL  
AND SAVE!**

Deal ends 31/11/2017

**NOW IN HANDY 10 KG BUCKETS**

For further information contact

**Matt Merrick on +61 413 442 811 or  
your local Nuturf representative on 1800 631 008**

**[www.heritageseeds.com.au](http://www.heritageseeds.com.au)**

 **NUTURF®**  
SPECIALISTS' PROVIDING SOLUTIONS

The 2017 AGCSA Future Turf Managers' Initiative comprised 20 aspiring superintendents from Australia and New Zealand

# Future proof

ATM looks back at the second AGCSA Future Turf Managers' Initiative, presented in partnership with Jacobsen, which was held during the recent 33rd Australian Turfgrass Conference and Trade Exhibition.

**JACOBSEN**  
A Textron Company

Following on from the success of the inaugural programme in 2016, the AGCSA's Future Turf Managers' Initiative returned for a second year at the 33rd Australian Turfgrass Conference and Trade Exhibition held in June on the Sunshine Coast. Founded originally in the UK five years ago by AGCSA Gold Partner Jacobsen, the FTMI is aimed at up-and-coming golf course maintenance staff who are focused on making the career leap to superintendent or course manager. To date, more than 160 greenkeepers from around the globe have passed through the programme with a further 20 from Australia and New Zealand joining them following the Twin Waters conference.

Last year in Melbourne 13 candidates went through the inaugural programme and after being overwhelmed by the high calibre of applications in 2017, the AGCSA and Jacobsen decided to increase the number of successful candidates to 15. In addition, with the conference heading across to New Zealand in 2018, five New Zealand-based FTMI

candidates were also flown across to take part in the two-day programme.

The AGCSA FTMI Class of 2017 comprised: **Luke Nowlan** (Ipswich Golf Club, Qld), **Mathew Soles** (Roseville Golf Club, NSW), **Thomas Bickerdike** (Commonwealth Golf Club, Vic), **Brittney Goldsworthy** (Sea View Golf Club, WA), **Ryan Pantic** (RACV Royal Pines Resort, Qld), **Brenton Clarke** (Box Hill GC), **Tim Hoskinson** (Paradise Palms Country Club, Qld), **Simon Work** (Mt Osmond Golf Club, SA), **Jason Berkhout** (Thurgoona Country Club Resort, NSW), **Jacob Burridge** (Peninsula Kingswood Country Golf Club, Vic), **Rob Arestia** (Spring Valley Golf Club, Vic), **Matt Pollock** (The Dunes, Vic), **Danny Adams** (Riversdale Golf Club, Vic), **Nick Launer** (Metropolitan Golf Club, Vic), **Garry Kunz** (Byron Bay Golf Club, NSW), **George Flynn** (Pukekohe Golf Club, NZ), **Alex Yates** (Royal Wellington Golf Club, NZ), **Connor Scott** (Titirangi Golf Club, NZ), **Kiel Stechman** (Manawatu Golf Club, NZ) and **Lance Morrin** (Pakuranga Golf Club, NZ).

Focusing on personal and professional development, the FTMI uses the expertise of respected course managers, cross-industry training specialists and industry experts to mentor and educate the next generation of industry leaders. This year's event involved presentations on budgeting, an insight into the Australian job market, resume and cover letter writing and interview techniques. Speakers included Stewart Fenton (chief executive of Royal South Yarra Tennis Club and president of Golf Management Australia), Lee Strutt (course manager Royal Automobile Club, UK), Jeff Blunden (Golf Business Advisory Services) and HR management professional Susanne Macphee.

The FTMI candidates also had the support of four superintendent mentors. Mentoring at FTMI for the first time were Leon Hennessey (Cromer



The FTMI Class of 2017. This was the second year the AGCSA has conducted the FTMI and the first that included candidates from the NZGCSA

GC, NSW) and Travis Scott (Riversdale GC, Vic), while Headland GC superintendent Ben Tilley and Royal Wellington GC superintendent John Spraggs returned for their second and fourth times respectively (the FTMI programme has been running in New Zealand for the past four years).

For Scott, who has been superintendent at Melbourne-based Riversdale Golf Club since September 2015, the FTMI not only gave him the chance to impart some wisdom from his experiences in the industry, but it also helped him to improve his own skills.

"The FTMI is a fantastic initiative from Jacobsen and the AGCSA and it's great to see them giving back to the industry via education," says Scott. "To be asked to be involved in such a programme is something I'm extremely proud of and I look forward to working with future candidates over the next two years. The quality of the candidates from Australia and New Zealand was exceptional. The passion, drive and willingness to be educated that the candidates showed was first class. I have no doubt that we will see progression in the industry from the group in the future.

"It was not only great to be able to share my experiences with the FTMI candidates, but it was also a great opportunity for my own personal development. To be able to present, discuss and be educated by quality speakers and fellow mentors was excellent. The discussions regarding staff management were enlightening and I have taken some of those things discussed back to my own workplace. To be able to network with like-minded individuals on a variety of topics was invaluable."

Spraggs, one of New Zealand's most experienced course superintendents, echoed Scott's sentiments: "I have enjoyed my four years of mentoring as part of the FTMI," says Spraggs. "It is incredibly satisfying working with other mentors and meeting and assisting the up and comers of our profession. The FTMI programme has evolved over the years with core presentations ranging from mind mapping, conflict resolution skills, financial management and interviewing techniques which are all so relevant to what we do. Personally I have gained as much from the sessions as the candidates and am always open to new ideas; they say you are never too old to learn and that is certainly true with this programme."

So what did the Class of 2017 get out of this year's programme? ATM canvassed them in the weeks following the conference to get their impressions and some of the take home messages that resonated with them.

## JASON BERKHOUT

**Thurgoona Country Golf Resort, NSW**

"The FTMI is great for up and coming turf managers to get a glimpse behind the scenes of some of the tasks usually overlooked as an assistant. It gives you some very useful tools to enable you to take



**Riversdale Golf Club's Travis Scott was one of four superintendent mentors who assisted the FTMI delegates throughout the programme**

the next step in your turf management career. Being part of the FTMI made me realise that we truly are in a great industry where superintendents and mentors willingly take the time to pass on as much knowledge as they can to help you out.

"What I really picked up on was how the management of your staff can be the difference between failing and succeeding and that good communication needs to be both up and down the chain, right from the apprentices up to the chief executive. The programme has given me confidence in my abilities as a manager which I was lacking, as well as the tools to help me prepare for future leadership roles. Since attending I have decided I need to be a lot more proactive in the decisions that affect the golf course and our staff instead of just relying on my super for all of the organisation and answers."

## LANCE MORRIN

**Pakuranga CC, NZ**

"The FTMI experience exceeded my expectations in many different ways. It helped me to set some goals as to what I need to achieve to take the next step in my career. It was great to network and connect with people not only from my home country but also Australia and the time and advice shared by the mentors was second-to-none. The session on interviewing techniques was of great value and really opened my eyes to all the different techniques and things you need to consider.

"Overall, the FTMI has helped me with my own confidence and the weaknesses I saw myself having. As a result I have decided to become more active in the industry and take advantage of as many different opportunities that come my way."

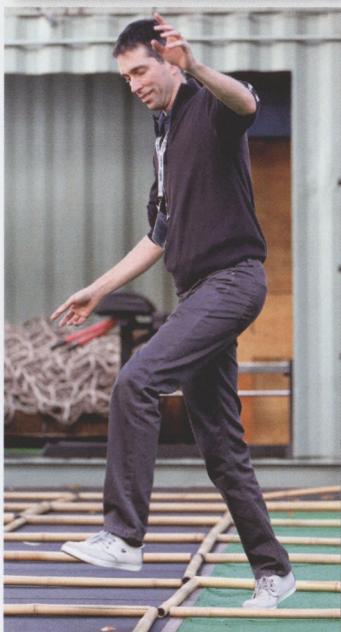
## LUKE NOWLAN

**Ipswich GC, Qld**

"The FTMI was very well run and an excellent opportunity to learn from experts and peers. The three things I took away from the programme were:

**"The FTMI was a real eye-opener to the calibre of young future leaders coming through our industry" – Brenton Clark (Box Hill GC)**





**Garry Kunz (Byron Bay GC, top) takes aim, while Thomas Bickerdike (Commonwealth GC, above) navigates his way during the FTMI's opening night team building session**

**"The FTMI experience exceeded my expectations in many different ways." – Lance Morrin (Pakuranga CC, NZ)**



- The importance of being across and understanding all financial aspects concerning your course;
- The knowledge gleaned from mentors that can potentially save you from learning by mistake; and
- The forming of a bigger, more varied group of peers in the industry.

"Being part of the FTMI has helped to increase self-confidence in communication techniques which have enabled me to be a better leader. It has increased my worth to my employers – a shift has been noticed and appreciated by management. Overall it has made me more confident to lead from the front and to stay on top of work by planning and being more proactive."

**DANNY ADAMS**  
Riversdale GC, Vic

"The FTMI was great and I took a lot from the sessions – the mock interview demo involving mentor Ben Tilley was a personal stand out – but I got the most from the individual/group discussions with the mentors and fellow candidates. To be in a group of your peers bouncing ideas around was inspiring. For example, during a table discussion I picked up some great advice from one of the lads regarding switching off when you get home from work – "Pretend there's a hat stand at your front door; as soon as you get home take off your 'work hat' and put your 'family hat' on and walk through the door."

"On returning to work I had a few weeks as stand-in superintendent while Travis (Scott) was on annual leave. I used this time wisely to improve my leadership skills. To balance my normal duties running the day-to-day operations, plus all the rest of the challenges which face superintendents, presented me with a chance to test new philosophies and techniques which I picked up during the FTMI. It wasn't about trying to reinvent the wheel, rather minor tweaks which have certainly improved my organisational and communication skills.

"The FTMI gave me the tools to hopefully one day achieve the goal of becoming a superintendent. Great accomplishments take time but I look forward

to the journey and whatever the outcome I'm sure I will enjoy the ride working in one of the best professions in the world."

**TIM HOSKINSON**  
Paradise Palms CC, Qld

"I found the FTMI an excellent programme and thoroughly enjoyed myself. The programme was both fun and informative, with plenty of opportunity to network and socialise. I found the content particularly relevant and it was nice to be able to attend a course that wasn't solely based on agronomy.

"Stewart Fenton's session regrading course budgets was particularly useful. I was fortunate to be able to attend the entire conference and this was probably the most discussed topic regarding staff shortages/financial difficulties for course supers and assistants. This made Stewart's talk very relevant. It was also great to be able to discuss with not only my mentor Leon (Hennessey) but the other mentors regarding how they obtained their superintendent roles. As this is my next goal, it was great to be able to pick their brains on this topic.

"Upon completing the programme, I have two things that I really want to focus on. I want to become more involved with budgets so as to help play a role in helping the club achieve its revenue targets. I also took away the importance and power of networking and this is something that I will be increasingly focusing on going forward."

**BRENTON CLARKE**  
Box Hill GC, Vic

"The FTMI was a real eye-opener to the calibre of young future leaders coming through our industry. As Lee Strutt commented, this programme is acknowledging the big steps we are yet to make and it was great to hear from Lee, the other speakers and the mentors who were able to impart their experiences and show us what to expect when we do take that next step. I believe this experience will develop my career in the future and would encourage anyone with high ambitions within the turf industry to apply.

"Listening to Stewart Fenton talk about the relationship between manager and superintendent was good to hear and also the importance of being transparent. Lee Strutt also rammed home the point that when you become a superintendent you're all alone; the choices come from you, so it's important to get as much experience, especially with aspects like budgeting, before making the move up the ladder. Susanne Macphee's talk hit on many key points about interviews, but it was my mentor Ben Tilley who made the very pertinent point that when you are being interviewed you are also interviewing the club to see whether it fits in with your career and ambitions.

"Dealing with large budgets hasn't been part of my previous jobs, but now moving forward into



the new role I have at Box Hill I'll be dealing more with capital works. Getting that understanding from Lee and Stewart has made me feel more confident in that aspect. I also took away the importance of being able to adapt and the different roles a modern day superintendent needs to fill on a day-to-day basis."

## NICK LAUNER

**Metropolitan GC, Vic**

"For me, undertaking such an intensive and thorough workshop conducted by industry leaders and proven professionals has allowed me to develop and enhance the skill set required to take the next step. The FTMI provided delegates information and strategies that will be invaluable to our career aspirations.

"I think most of us were deficient in budgeting, club politics and aspects of effective communication and the FTMI covered all three. The take home messages for me were:

- It's your budget, you are responsible for its entirety.
- Don't be fooled by the bottom line!
- Always keep eye contact and be confident when talking to anyone, regardless of their role, interest or profession in a club politics sense. Be professional and humble.
- Show your knowledge and worth; you have deserved your role! Be the expert and always back yourself."

## MATHEW SOLES

**Roseville GC, NSW**

"The FTMI was a great success, not only with the content that was provided but with the calibre of the participants. The content was excellent, from budget building (which most of the participants had little or no experience in) through to talks on communication and interviewing.

"One of the best aspects of the programme was having the opportunity to pick the participants' brains and see how other courses around the country operate. From that I was able to take away some ideas that could improve things at Roseville and also share some of the things that we do well.

"The most important take home message for me was to be clear and concise in delivering any message, direction or communicating in the workplace. A work force that understands one another and is on the same page is an effective work force. Also, I have been placed in my position for a reason – speak up and be heard."

## BRITTNEY GOLDSWORTHY

**Sea View GC, WA**

"The FTMI is a great programme and was well worth the experience. Not only were we given the chance to network with and meet others within the industry, we were also reminded it is the little things that count the most when dealing with people.



"Always remember to be yourself, but don't forget to change with the times and that if you can repair your company's culture, other policies and procedures will naturally fall into place. When working within an organisation which will not invest in its employees, always remember there are other organisations who may be able to help.

"In addressing my own weaknesses, the FTMI enabled me to realise I am not doing anything drastically wrong, which is sometimes what I tend to think. Rather, I only need to make some fine adjustments that will help propel me to be the person and leader I strive to be. As a result of the FTMI I have gone back and reviewed all of the finer points related to leadership and management and am now incorporating them into daily interactions. It is all of these small points that are sometimes forgotten that can really enhance the overall picture."

## SIMON WORK

**Mt Osmond GC, SA**

"Being involved in the FTMI took me out of my comfort zone and gave me a great opportunity to meet new people in the industry and build relationships with fellow assistants from around Australia and New Zealand. The sessions were very informative and relevant to my current role at Mt Osmond and they have certainly given me the confidence to take the next step in my turf management career.

**HR expert Susanne Macphee delivered sessions on creating CV's and cover letters, effective communication strategies and proper interviewing techniques**

**"Attending the FTMI has allowed me to work on the weaknesses I believe I had... The challenge for me now is to use what I have learnt and improve myself..." – Kiel Stechman, pictured middle (Manawatu GC, NZ)**





◀ **Headland Golf Club superintendent Ben Tilley returned for a second year as mentor**



**Conference keynote presenter Lee Strutt talked about the connection between finances and how it influences the success of the business and management of the golf course**

**Since attending the FTMI, New Zealand candidate George Flynn has been promoted to course manager at Pukekohe Golf Club**



“Stewart Fenton’s session on budgets was invaluable and the insight he gave into the day-to-day running of a club was great. A key message I took away was the importance he placed on the course maintenance budget as part of the club’s budget. Through this session I was able to get a much better understanding of my club’s budget (profit, loss and cash flow etc...) which will benefit my future management in this area. Stewart also reinforced that having a good relationship with your manager was a big key to a successful organisation.

“A major theme from the programme was ‘communication is the key’. It highlighted to me how crucial communication is in managing a successful team and creating a good relationship with the manager and board. Susanne Macphee’s session on effective interview techniques was also very informative and she emphasised the importance of building confidence in your own abilities as a key factor in being successful in interviews.”

### KIEL STECHMAN

**Manawatu Golf Club, NZ**

“The FTMI programme is amazing. The opportunity to learn from people at the peak of their fields who have been in and around the industry is hard to come by, let alone having them all in the same place at the same time. It was a fantastic networking experience and throughout the two-and-a-half days I made new friends and learnt plenty which I am sure will help me achieve my goals. Three things that I took away from the FTMI were:

- Communication – within the workplace, GM through to the superintendent and the assistant, if not the team;
- Team building/buy in – learn about the individual, what is or isn’t going on in their life outside of work; give your staff goals/incentives; and
- Budgeting – being shown how to use Excel, from starting a budget to the end result using formulas and breaking into sections.

“Attending the FTMI has allowed me to work on the weaknesses I believe I had. The challenge for me now is to use what I have learnt and improve myself, whether it’s being more confident in my

choices, setting myself goals, managing my team in the best way possible or understanding the individual better. Above all, I now know I need to push myself to harness the passion I have and maximise my potential.”

### GEORGE FLYNN

**Pukekohe GC, NZ**

“The FTMI is a programme designed by turf managers for turf managers. Every topic covered by the speakers was relevant to what we need to improve on to make the next step in our careers. Shortly after attending I was promoted to course manager at Pukekohe Golf Club and the skills and techniques that I picked up as part of the FTMI are already playing a huge part in the way I manage the course and my staff.

“A couple of key points I took away from the two days were the importance of being confident, how essential networking is and what a good revenue cycle is (i.e.: putting more money into the course results in more revenue). I also picked up some invaluable tips on how to deal with difficult staff.”

### THOMAS BICKERDIKE

**Commonwealth GC, Vic**

“The FTMI provided a great insight into honing your skills for career development. It has helped me find better ways of selling myself and my career experiences, both on paper and in an interview situation and the importance of keeping myself relevant and up to date in ways that will help to boost my career prospects. Some of the take home points for me were:

- Interviewing and resume writing: You must also interview the prospective employer to see if they have the same values and direction for the course;
- Do your research into the people and club interviewing you; know as much background information as possible; and
- Use your body language to sell your knowledge and passion for the role.”

### ALEX YATES

**Royal Wellington GC, NZ**

“My overall impression was that the FTMI is a great programme for people to learn new skills that might not otherwise be offered in the workplace every day. It was a great way to meet and chat to other people in the industry and talk about how they do things at their club. As a result of attending the FTMI my approach to my job is to take on more of a leadership role within the team.

“The FTMI has helped me to look at course budgets in a more simplified way and highlighting the importance of diplomacy. The session on interview techniques was very interesting and stressed the importance of doing your homework and being confident. Even if you don’t feel confident in an interview situation ‘fake it until you make it’.” 🙌



# AUSTRALASIAN TURFGRASS CONFERENCE & TRADE EXHIBITION

WELLINGTON: 24TH-29TH JUNE 2018



**Business  
Events  
Wellington**  
WellingtonNZ.com



**100% PURE  
NEW ZEALAND**  
newzealand.com



WELLINGTON CABLE CAR - IAN TRAFFORD



WELLINGTON HARBOUR - JULIAN APSE

Gladstone Golf Club in central Queensland has been home to former Sydneysider Chad Gilmour for the past six years

# Gladstone Golf Club, QLD

His beloved NSW might not be kicking goals in State of Origin, but Chad Gilmour certainly is as course superintendent of Gladstone Golf Club in central Queensland.

The Gladstone crew (from left) Steve Strathdee, Matthew Walker, Neil Perkins, Ronald De Vera, Freddy Rodriguez and Chad Gilmour



**Superintendent:** Chad Gilmour (32).

**Nickname:** Happy.

**Family:** Wife Sheena, two dogs (Pumba and Malibu) and cat Narla.

**Social media:** Facebook ([www.facebook.com/chad.gilmour.7](http://www.facebook.com/chad.gilmour.7)).

**Years as a superintendent:** Seven.

**Association involvement:** AGCSA member seven years, GCSAQ.

**Career:** Bardwell Valley Golf Club, NSW (apprentice and then assistant superintendent); Canterbury Golf Course, NSW (superintendent); Gladstone Golf Club, Qld (superintendent, six years).

**Qualifications:** Certificate III Horticulture (Turf), Certificate IV in Sports Turf Management.

**Major hobbies/pastimes:** Cricket rep – Queensland Country, North Queensland Cricket, Central Queensland Seamers and Sutherland Districts 1st Grade; also play rugby league, touch and golf.

**Where in Australia is Gladstone GC and what is the club/township known for?** Gladstone is

located in Central Queensland, six hours north of Brisbane. It is home to the state's largest multi-commodity shipping port along with one of the largest coal export terminals. It is an industrial town with the recent completion of three LNG (liquefied natural gas) plants to go along with the Alumina refinery, smelter, cement, cyanide and ammonium nitrate plants. Gladstone also forms part of the Great Barrier Reef and is well known for its excellent fishing spots.

**Tell us a bit about your background and how you came to be a superintendent.** My uncle Barry Sullivan is the superintendent at Hurstville Golf Course. As a teenager I used to go in and help him on the weekends before we would go and play cricket together. During school we had to do work experience and I decided to do it at the local golf courses and that's when I thought this was the job for me. I enjoyed all the hands-on work and being out in the open during the day.

I applied for an apprenticeship at Bardwell Valley Golf Club and ended up completing it there before going on to be appointed assistant superintendent. A job opportunity then arose as superintendent at Canterbury Golf Course where I was managing a three-man crew on a nine-hole course.

It was during my time at Canterbury that a rep informed me of a job that was possibly coming up at Gladstone Golf Club as an assistant. I was excited to hear about this opportunity as we had some family living and working up there and a move to sunny Queensland sounded like a great opportunity for us. I was flown up to Gladstone for an interview and walk-through of the course and facilities and was

offered the job on the spot. After much discussion with my wife and our families, it was decided that I would go up for six months to ensure that it was the right move for us and that I enjoyed the workplace and lifestyle.

Two weeks into the new role the then superintendent informed me that he was going to be leaving and moving back to his home town. I was then advised by management that I would be the new superintendent! So after one month I told my wife to start packing up our house and get ready to move up as the work-life balance in Gladstone was much better than what I expected it to be. I flew back down and we packed up our life in Sydney and both moved to Gladstone where we are still residing six years later!

**Who were some of your early mentors and what did your former jobs teach you about the industry and turf management?** My first boss Terry Mayo during my apprenticeship was an awesome mentor. He taught me a lot about the industry, the finesse required for the job, the attention to detail needed and the importance of taking pride in your work. This taught me to have a great work ethic and I now use the same techniques he instilled in me with my own staff.

During the last two years of my apprenticeship superintendent Shane Herring taught me a lot about diseases, grass types and installation of a new irrigation system that we worked on together. He taught me the values of leading the way by example and how the way you work is the way you want your staff to work. We are still in contact and catch up at conferences and through social media.

**What do you like most about being Gladstone GC superintendent?** We have a good crew who all get along together and don't mind hard work which helps a lot. It is the perfect climate to grow turf up here as we have a very mild winter. I have a great relationship with the current captain and we work together on improvements, redesign and ideas for the course and its members. I just enjoy my job and getting out there and seeing the improvements and receiving compliments from members and the general public.

**Give us an overview of Gladstone GC and some of its unique course characteristics.** Gladstone GC is an 18-hole course, par 70 with three par 5s, five par 3s and 10 par 4s. We have 39 bunkers on the course and have now just completed a project transforming two of these into grass bunkers due to the risk of yearly floods which completely wash these out. We have two creek crossings throughout the course with a creek running parallel to the 14th. The 16th, the hardest hole on the course, interestingly has a large pineapple palm about 10 metres in front of the green which makes it quite a tricky prospect.



**Is it an easy/hard facility to manage? What's the most challenging aspect?** It can be hard at times with the climate during summer as this when we receive the majority of our rainfall. It results in high humidity which contributes to disease if not managed properly. One of the most challenging aspects, as is with most golf courses, is members and board members.

**Take us through your turf management operations there. What changes have you implemented in terms of managing the course during your tenure as superintendent?** During the winter months we focus on gardens, trees, levelling of tees, surrounds work around the course and clubhouse, painting etc. During the growing months our major works include two renovations (March and Sept/Oct), grooming twice a month, light dusting fortnightly and ongoing irrigation maintenance due to temperatures.

During my time here I have changed renovation practices to include heavier dethatching, regular fertilising of tees and divotting tees Monday mornings. I have implemented a new fungicide programme for the greens along with a spray programme for the fairways to get rid of foreign grasses, with the goal to have 100 per cent Wintergreen couch fairways.

**What other maintenance changes are you planning on introducing?** We are looking at hooking up a dosing pump to inject wetting agent into our irrigation system. We have harsh, hardened

Gladstone recently purchased a complete Jacobsen fleet which has enabled the crew to improve the presentation of the course

One of the major changes Gilmour has implemented during his time is a far more intensive greens renovation programme which has paid big dividends in relation to the health of the couchgrass surfaces





**Gladstone copped 690mm in eight days from the tail end of Cyclone Debbie earlier this year, resulting in flash flooding across many holes**



**Gilmour has started a programme to eradicate foreign grasses from the fairways, with the aim of getting a 100 per cent cover of Wintergreen couchgrass**



soils and having a dosing unit will solve the surface tension problems we currently have. I would also like to cross over to a more organic/biological fungicide programme. We are also planning on replacing about 15 sand bunkers with grass mounding and grass bunkers.

**What are some of the major challenges facing Gladstone GC both from a turf and club management perspective?** Social golf numbers have dropped dramatically over the past two years due to the downturn in the industry as construction of most major projects has been completed and workers have left the town to find work elsewhere. We hold a lot more corporate golf days at the course as well as charity events which bring more golfers in.

Water is a major challenge at present as we have to constantly monitor our usage while at the same time make sure the course stays up to standard. We are trying to combat this with the installation of a dosing pump to apply wetting agent out onto the course which should bring our water usage and requirements down.

**Outline any major course improvement works recently completed and/or highlight any ongoing or future works that the club is undertaking.** We are currently redesigning the 2nd hole as balls are going over the boundary line into the adjoining super centre, hitting cars and businesses (solar

panels, windows etc). We are redesigning and reshaping two fairways to direct play 60m away from the boundary line which will hopefully solve any ball encroachment issues. Members initially challenged the redesign stating that the course was there first so they shouldn't have to change it! As mentioned we are also filling in, mounding and reshaping some bunkers, turning them from sand to grass to assist with maintenance costs and to reduce the possibility of damage when floodwaters inundate the course.

One of the big projects recently completed was the installation of a Toro Lynx communication system for the course irrigation. This was a major project all done in-house. We had to map out and dig trenches throughout the course, installing solenoids and running wires to the two station decoders. We were on a very tight timeframe and budget and were met with challenges from members complaining about the trenches and closure of holes. We kept reminding them it was a case of short-term pain, long-term gain.

**Water is obviously a critical issue for any golf course. How is Gladstone GC faring in the water management stakes?** Our course is fairly dry. We pump out of a fresh water creek and are only allocated 100 megalitres a year to maintain the course. During the dry season (winter) we rely heavily on the creeks. When the creeks are running low we make sure we test regularly as the water can become quite salty. If this is the case, we revert to town water which becomes an expensive exercise.

**The weather and climate is always a great leveller. How has Mother Nature treated the course in recent times?** Since arriving at Gladstone I have experienced a few major weather events which have impacted the course. This March we received 690mm in eight days from the tail end of Cyclone Debbie. This resulted in flash flooding across the course along with strong gusty winds. After the flood waters receded the course was left covered in debris – branches, logs, rocks, general rubbish and even some live fish in our bunkers!

The previous February, Cyclone Marcia pulled down large trees throughout the course and caused flash flooding which resulted in the closure of the course for a few days as the massive clean-up progressed. In January 2013 Cyclone Oswald left the town completely cut off in both directions (north and south) with no supplies able to come in. Airports were closed for a few days and roads were closed for weeks due to flooding and foundation movements on the roads and bridges. The course was closed for a week after being flooded and littered with debris. Luckily we had enough supplies in our shed to get us through the period.

**To reduce damage from extreme weather events and reduce maintenance costs, a number of bunkers are being filled in and replaced with turf**

**The one product I couldn't manage my course without is...** fungicides. In our climate if we didn't have fungicides we would lose all of our greens!

**What are some pros and cons of being a regional-based superintendent?** Pros include minimal unannounced visits from reps, the great lifestyle and a more laid back atmosphere. Being a smaller town enables you to become more familiar with the members and the local community. The cons are, not surprisingly, being a long distance from most suppliers which means deliveries take at least 2-3 days to get to you and stock is harder to source.

**Are expectations of course presentation and conditioning any less than that placed on your metropolitan counterparts?** No, if anything we feel more obligated to ensure it is well presented and to its best condition as you have such a close relationship with the members and the local community.

**Do you have to be more resourceful as a regional-based superintendent?** Yes, you have to pre-plan and try and order double the resources at a time to ensure you don't run yourself short. When we have floods we may be cut off from suppliers for up to a few weeks. You need to be able to network with other supers and reps in the area and work with each other to achieve best results.



**If you could change one thing about your job as a regional superintendent what would it be and why?** I would like to have a bigger budget so I could do further course improvements and employ more staff.

**How important are the relationships you have with other superintendents/trade reps?** Very important as we bounce ideas off each other as golf courses in my area deal with the same climate and issues. We are also able to assist each other with equipment such as machinery, chemicals etc... if needed.

**One of the big projects recently completed in-house was the installation of a Toro Lynx communication system for the course irrigation**

The renewable way  
to reduce bicarbonates.

**Terreplex<sup>®</sup>**

*From the trees back to the turf.*



**oasis turf**

14 Sonia Street  
Carrum Downs  
VIC 3201

(03) 9708 2911

[www.oasisturf.com.au](http://www.oasisturf.com.au)

◀ The Gladstone greens are renovated in March and again in September/October



**What are some of the more unusual requests/things you have had to do as a superintendent of a regional course?** Unclogging toilets, rubbish removal from the clubhouse and line painting the car park!

**What have you got in your shed?** We recently purchased a complete Jacobsen fleet. Some of the major items include a GP400 greens mower, Turfcut rough mower, Tri-King tees mower, LF510 fairway mower, Groom master bunker bike, R311 large rough mower, Toro spray unit and Toro Workman. The Jacobsen GP400 greens mower is certainly a favourite of mine – the cut is pure every time and it is such a reliable machine. Our next major purchase will be a new sod cutter as the one we currently have is over 30 years old, is unreliable and breaks down when you have jobs in line for it. On the wish list is a brand new spray unit.

**Do you have any interesting pieces of machinery/kit in the shed?** We had a large hole changer and cup (it would be approximately 400mm wide) manufactured locally for a charity golf day that was held at the course. We also have an old truck that we keep alive for dumping large loads of soil, branches etc.

**Do you think regional/country superintendents have a better work-life balance than their metro counterparts?** Yes, having worked and lived in both regions I would definitely say the work-life balance is much better in regional areas.

**Favourite spot on your course?** The 8th fairway – it's green all year round, stripes up well and always looks great.

**Best advice you have received about being a course superintendent/greenkeeper and who gave it to you.** My first superintendent told me to always mix your jobs up with your staff so that they don't get bored, stale and lose interest in their work.

**What do you think is the most challenging aspect of a superintendent's role today?** You're not just a superintendent – you are also a role model, confidante and someone that your crew comes to with problems both inside and outside of work.

**What gives you the most job satisfaction?** When people give you compliments on the course and when you hear how much the course has improved in the last couple of years. Completing a task and then looking back at it and reflecting on the great job that you and your team have achieved.

**Most pleasing/rewarding moment during your time as Gladstone GC superintendent?** During this year's Club Championships the winners from each division complimented us on how good the greens were and that they were the best they had been in years. They were very happy with the way the course was presented which was very satisfying to hear. 🌿

"If anything, we feel more obligated to ensure the course is well presented and to its best condition as you have such a close relationship with the members and the local community."

– Chad Gilmour



## AT A GLANCE – GLADSTONE GOLF CLUB, QLD

**Course specs:** Greens – one hectare 328/ Tifdwarf with three TifEagle; tees – 2ha Queensland blue couch and Wintergreen couch; fairways – 13ha, mixture of Queensland blue couch, Wintergreen couch and carpetgrass (currently spraying fairways out to have 100 per cent Wintergreen).

**Members/rounds:** Approx. 470/35,000 (a mix of nine- and 18-hole rounds).

**Major tournaments:** Club championships, Men's Open, Ladies Open, Holden Scramble, Junior Open, Junior Club Championships, Captain's Challenge.

**Annual course budget:** \$75K.

**Staff structure:** Chad Gilmour (superintendent), Neil Perkins (assistant superintendent), Steven Strathdee, Matthew Walker and Ronald De Vera (turf tradesmen) and Freddy Rodriguez (3rd year apprentice).

**Soil types:** High clay content.

**Climate/rainfall:** Tropical climate with average rainfall of 813mm.

**Water sources:** Fresh water creek, town water for emergencies.

**Irrigation system:** Toro Lynx – two station decoder system. Mixture of PVC and poly.

**Cutting heights/regimes:** Greens are cut at 3mm three times a week in winter and daily during summer. Fairways are cut at 16mm every Tuesday and Thursday all year round. Tees are cut at 12mm every Tuesday and Thursday all year round. Rough is cut at 22mm when required.

**Renovations:** Renovations are conducted twice a year in March and September/October. Greens are cored with a 5/8" hollow tines followed by heavy dethatching. They are then fertilised and watered in. The following morning greens are topdressed and rubbed in once dry. A month after renovations,

greens are lightly dusted to help fill in any holes that may have appeared after. During the growing season we verticut twice a month and dust three times a month.

**Major disease pressures and how you combat them:** Due to the tropical climate our course is at a high risk of developing a range of diseases such as pythium, dollar spot, ERI, brown patch and helmo. We run a strict fungicide programme yearly on the greens in order to combat this. To date we have been successful with minimal disease present.

**Nutrition management:** Our nutrient programme consists of foliar fertilisers and granular fertilisers. Low nitrogen fertilisers are used on our greens to minimise thatching and disease. Seaweeds, wetters, fish and liquid humic acid are all used on our greens in order to assist with the harsh soils that are present.



# ARE YOU PLAYING YOUR **BEST** HAND?



**Simplot Partners introduces their latest aces in the nitrogen management deck.**

**BEST NitreX 20-0-2 with 5% Iron**

- Contains 5% iron for deep green all season colour.
- A combination of two homogeneous pellets featuring 4.5 units nitrate nitrogen.
- Utilizes sulfate of potash to reduce burn potential and no chlorides.

**BEST N-FLEXX 22-1.74-8.30 with UFLEXX & 5.8% Iron**

- UFLEXX stabilized nitrogen provides longer lasting - slower growing turf response.
- 79% of the total nitrogen is stabilized.
- 5.8% iron provides deep green colour.

**FUSN Fused Safe Nitrogen**

- A safe and effective ammonium nitrate-based fertilizer
- Homogenous combination of nitrogen and sulfur
- Safe for use with other fertilizers

[simplotpartners.com.au](http://simplotpartners.com.au)

**Simplot**  
PARTNERS

## TORO AUSTRALIA ROLLS OUT GREENSPRO 1260, STAND-ON SPREADER SPRAYER



Above: The Toro stand-on spreader sprayer boasts a large 79.4kg hopper and 75.7l spray tank

Top: The new GreensPro 1260 builds on the trusted 1240 platform but has a number of new features to improve productivity and reliability

**A** GCSA Platinum Partner Toro Australia has launched the new GreensPro 1260 greens roller onto the Australian market following the recent 33rd Australian Turfgrass Conference on the Sunshine Coast. Offering a number of enhanced features focused on productivity, reliability and reduced maintenance, the GreensPro 1260 builds on the trusted GreensPro 1240 platform with Toro saying it is the perfect tool for getting the best out of fine sports turf such as golf greens, bowling greens and tennis courts.

One of the key new features on the GreensPro 1260 is the split stainless steel smooth rollers, which reduce the risk of scuffing during turns, and overlapping heads which deliver a consistently smooth surface with each pass. It also has a new QuickLatch coupler with a 60-degree pivot handle which makes transporting from green to green quick and simple.

Toro Australia equipment product manager Brian Goodridge says the GreensPro 1260 delivers exceptionally smooth and fast greens with a superior operator platform. "A number of ergonomic benefits to the operator have been included, such as a new bi-directional seat adjustment lever to easily adjust operating position, standard armrests for increased comfort, and a rubber isolation mount to help minimise vibrations to the operator," says Goodridge.

"Simplifying routine maintenance efforts was a primary driver in the development of the new GreensPro 1260. In addition to reducing the number of grease points from four on the GreensPro 1240 to one on the 1260, the new model provides easy access to all vital components of the machine.

"The drain for the hydraulic oil, for example, is now located on the bottom of the machine to simplify fluid changes. Additionally, the drive system on the new model features a hydraulic drive motor that powers the traction roller. This

significantly reduces maintenance associated with traditional chain and sprocket drive systems. All of these factors contribute to simplified maintenance efforts to help increase overall course productivity." **To watch the GreensPro 1260 in action, visit the Toro Australia YouTube channel [www.youtube.com/user/ToroAustralia](http://www.youtube.com/user/ToroAustralia), visit the Toro Australia website [www.toro.com.au](http://www.toro.com.au) or call 1800 356 372.**

### STAND AND DELIVER

Toro has also unveiled its versatile two-in-one stand-on spreader sprayer which was featured on the stand at the Twin Waters conference trade exhibition. The new addition to Toro's turf renovation machinery line-up is the industry's most innovative product of its kind, offering 'lean to steer' technology, easy-to-use controls and large capacity in a compact design.

"The machine is very versatile," says Goodridge. "You can feed and treat all types of turf and property sizes with the same machine. You can spread, spray or even do both at the same time as a hand-held spray wand is easy to grab while driving and is perfect for precise spot spraying.

"The 'lean to steer' technology is an innovative steering system. It lets you control forward/reverse and left/right steering with one hand, leaving your other hand free at all times so you can make adjustments to the spreader or sprayer on the go."

The spreader sprayer boasts fast forward speeds of up to 8.8kph and a large 79.4kg hopper and 75.7l spray tank. The compact design of the stand-on spreader sprayer makes it easy to manoeuvre, even in tight spaces, so spraying and spreading is possible in any area. The stainless steel operator platform, isolation mounts and the ergonomic padded knee bolster allow for a more comfortable ride and reduced operator fatigue.

**For more information on the stand-on spreader sprayer, visit [www.toro.com.au](http://www.toro.com.au).**

## NEW BAYER ES WEB HOME PAGE

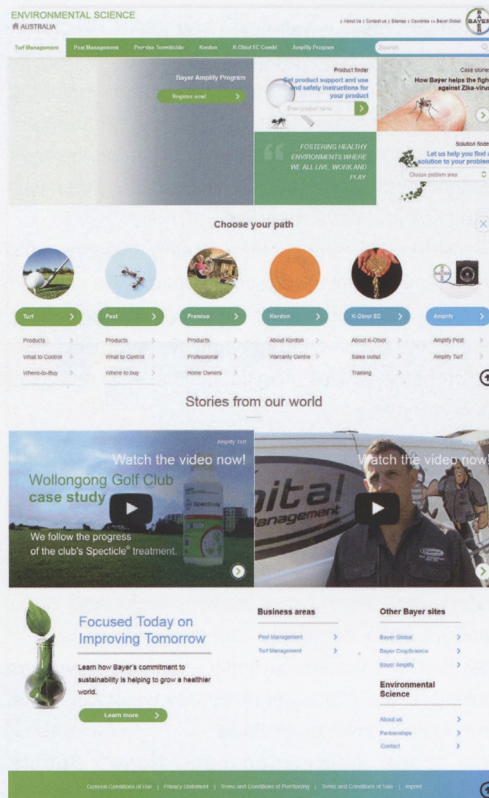
AGCSA Silver Partner Bayer's Environmental Science Division (ES) launched a new home page on its website [www.environmentalscience.bayer.com.au](http://www.environmentalscience.bayer.com.au) in the weeks leading up to the recent Australian Turfgrass Conference. Division general manager Martin Ball says the decision to renew the home page was made to improve customers' on-line experience and to create a more engaging and interesting space.

"ES Australia was chosen as the pilot country by Bayer's global digital marketing team, and we're very pleased with the result," says Ball. "This new-look home page will now be rolled-out to all other ES countries around the world, so we're delighted to be leading the way.

"Visitors to our website can now enjoy a more modernised and user-friendly interface with a lot more information and choice available to them. They can watch videos of real-life customer situations, read case studies, search for a product on the new Product Finder or search for a solution using the new Solution Finder. Each product category (turf management, pest management, Premise, K-Obiol, Kordon and Amplify) is represented by a 'home page tile' with a drop-down menu for quick and easy navigation, enabling customers to choose their path.

## NANO BUBBLE TECHNOLOGIES SPARKS INTEREST AT CONFERENCE

One of the most visited stands at the recent 33rd Australian Turfgrass Conference trade exhibition on the Sunshine Coast was Nano Bubble Technologies, with company representatives Kevin Finn (co-founder) and Sanjay Bhatnagar (general manager) taking a number of enquiries from interested delegates.



Melbourne-based Nano Bubble Technologies has developed a patent-pending nano-bubble generator that permits the infusion of various gases such as oxygen, ozone, air etc as nano bubbles into liquid at extremely high concentrations. Nano bubbles are essentially nano-scopic gas filled cavities in aqueous solution, providing super-saturated oxygenated water which has a range of applications across various industries. Around 250 million nano bubbles can be injected into every millilitre of liquid per single pass through the company's injection system.

The new Bayer ES website home page

## INDUSTRY APPOINTMENTS



### RYDER TO NUTURF

AGCSA Gold Partner Nuturf Australia has appointed **Wayne Ryder** (pictured) to the position of territory manager, Queensland. Ryder, who started the new role on 10 July, comes with a wealth of experience in the turf industry having worked in the sports turf sector for many years and as a technical sales consultant in the southeast Queensland market.

"We are excited about Wayne's decision to join the Nuturf sales force and we know he will be a great addition to our team and to the Queensland market," says Nuturf business manager **Peter Schumacher**. "Wayne's previous roles saw him quickly become a valuable asset to turf practitioners by offering sound agronomic and turf management advice, along with a relentless pursuit of

putting the interests of the customer first." Ryder can be contacted on 0408 431 688 or email [wayne.ryder@nuturf.com.au](mailto:wayne.ryder@nuturf.com.au)

### RAIN BIRD APPOINTS NADEBAUM

AGCSA Silver Partner Rain Bird has appointed **Rob Nadebaum** as general manager for its Australia and New Zealand operations. Nadebaum joins Rain Bird after seven years with Reece Australia where he was national business manager – irrigation and civil.



### EVANS JOINS LIVING TURF'S QLD TEAM

Living Turf has appointed **Brett Evans** (pictured) to its Queensland sales team effective from July 2017. According to Living Turf managing director **Rob Cooper**, the appointment is a result of a

long-standing relationship Evans has with **Ashley Neuendorf** (Living Turf national sales manager) and **Max Whatman** (Queensland state manager) both as a practitioner and as a sales colleague in the Queensland market.

Evans joins Living Turf with more than 20 years' experience in turf management starting as a bowling greenkeeper in late 1990s where he worked for about 10 years. During this time he was a high level bowler representing Queensland on numerous occasions.

After leaving the bowls industry, Evans worked as the turf and facility manager for the Brisbane Lions AFL training base. More recently he has worked as a territory sales representative, where he has developed a significant sales portfolio. Evans can be contacted on 0409 700 100 or email [bevans@livingturf.com.au](mailto:bevans@livingturf.com.au).



The Nano Bubble Technologies stand at Twin Waters attracted plenty of interest during the recent Australian Turfgrass Conference

Since producing its first commercial injector in October 2016, the company has been trialling its technology in a wide range of industries including waste water treatment, food and equipment sanitisation and horticulture, with Finn saying their technology can dramatically increase oxygen levels in the soil and plant rootzone.

During his presentation during Wednesday's Agronomy stream at the conference, Finn outlined the new technology and some of the promising results they have had recently in hydroponically grown herbs as well as initial trials at Avondale Golf Club in Sydney.

Course superintendent David Warwick has conducted small scale trials using nano bubble water to determine its impact on bentgrass root growth and also on a nematode infected bentgrass plug. The plug was watered with nano bubble water every second day for two weeks and upon analysis, spiral nematode counts went from 1220 to 332. Further trials are currently underway as well as looking at the effects nano bubble water can have on breaking down black layer.

**For more information on Nano Bubble Technologies and its potential application on turf, visit [www.nanobubble.com.au](http://www.nanobubble.com.au) or contact general manager Sanjay Bhatnagar on 0401 719 364.**



## TURFCARE AUSTRALIA NEW SOLE AQUATROLS DISTRIBUTOR

Turfcare Australia, which is celebrating its 20th year servicing the Australian turf market in 2017, is now the new sole distributor of Aquatrols products in Australia. The announcement came in mid-June after AGCSA Silver Partner Bayer announced that its relationship with Aquatrols had ceased.

As of 19 June Turfcare Australia took over as the new supplier of the Aquatrols range of turf management products after agreeing to purchase all remaining stock that Bayer had on-hand. Aquatrols manufactures a range of soil surfactants including Revolution and Primer Select (for greens and tees), Dispatch sprayable (for fairways), Dispatch injectable (for irrigation injection) and Aqueduct (for stressed areas).

Turfcare Australia is a wholly Australian owned and operated company that has been continuously trading since 1997. According to managing director Shane Summerhayes, the business was conceived with the purpose of servicing the commercial turf and horticultural industry with a range of quality products and services designed to meet the needs of the turf care professional. Its product range encompasses

## INDUSTRY APPOINTMENTS



### CHANGES, NEW FACES AT GLOBE GROWING SOLUTIONS

AGCSA Silver partner Globe Growing Solutions recently announced a number of changes to its personnel. **Peter Frewin**, who was appointed as business manager back in March, has been elevated to the position of business manager of Globe Australia where he will oversee the Equipment Solutions, Globe Growing Solutions and Globe Pest Solutions businesses. Frewin can be contacted on 0418 593 072 or email [peter.frewin@globeaus.com.au](mailto:peter.frewin@globeaus.com.au).

Long-serving Newcastle territory manager **Jeff Bowtell** (pictured top left) has been appointed to the newly created role of national operations and sales manager. Bowtell retains a small territory to manage as part of the restructure which will include areas in the Hunter Valley and northern NSW. Bowtell can be contacted on 0438 011 045 or email [jeff.bowtell@globeaus.com.au](mailto:jeff.bowtell@globeaus.com.au)

Two new territory managers have also been appointed in Victoria. **Dean Kohlman** (pictured top right) and **Neville Treadwell**, both well-known members of the Victorian turf sales fraternity, have joined the Globe Growing Solutions team based in Tullamarine. Both arrive at Globe with excellent credentials and will be a great asset to the company's Victorian business.

Treadwell's career in turf started in 1987 at the MCG where he was an apprentice under Peter Semos and Tony Ware. After eight years working on the MCG, he then spent the next seven years as head curator at the Junction Oval where he prepared the Victorian state team training wickets and premier cricket wickets for St Kilda Cricket Club. At this time the Melbourne Football Club also used the Junction Oval as a training venue.

Treadwell then moved to take the position as senior curator at Carlton Football and Cricket Club where he was responsible for preparing Optus Oval for AFL football and wickets for Victorian Premier Cricket. He remained there for four years before accepting a sales role in the turf industry and after 14 years in that role moves to Globe Growing Solutions. Treadwell can be contacted on 0419 247 103 or email [neville.treadwell@globeaus.com.au](mailto:neville.treadwell@globeaus.com.au).

Kohlman has been involved in the turf industry for over 35 years. He started his career in the parks and gardens department of a Melbourne council in 1981. Following this he moved into the private school system and then to Epping Soccer Club as head curator. From there Kohlman worked as assistant curator at the Carlton Football Club. Following his stint at Carlton, Kohlman spent the next 17 years as a turf sales representative. Kohlman can be contacted on 0417 689 131 or email [dean.kohlman@globeaus.com.au](mailto:dean.kohlman@globeaus.com.au).

turf seed, specialist fertilisers, chemicals, analytical services and consultation and aligns with leading brands including Floratine, Bayer Crop Science, Syngenta, ICL, Aquatrols, Toro irrigation, Maredo turf machinery plus many more.

"As an organisation we are committed to a practical research and development programme," says Summerhayes. "The programme is industry-driven and is the result of ongoing consultation with important turf professionals throughout Australasia. Our customers are serviced directly by Turfcare Australia trained territory managers, all of who are industry orientated, participating in ongoing technical training supplied by multi-national fertiliser and chemical companies, as well as being committed to a high level of customer satisfaction. We would like to thank our loyal customer base and are very happy to be celebrating our 20 year anniversary in the Australian turf industry."

**For more information about Turfcare Australia visit [www.turfcareaustralia.com.au](http://www.turfcareaustralia.com.au) or email [turfcare@bigpond.com.au](mailto:turfcare@bigpond.com.au)**

## PURTELL TO PULL UP STUMPS

Well known turf industry stalwart John Purtell announced his retirement from Jacobsen distributor JT Turf shortly before this year's Australian Turfgrass Conference. In a post on the JT Turf Facebook page on 23 June, Purtell stated: "It is with great sadness that I advise that I have chosen to retire from JT Turf

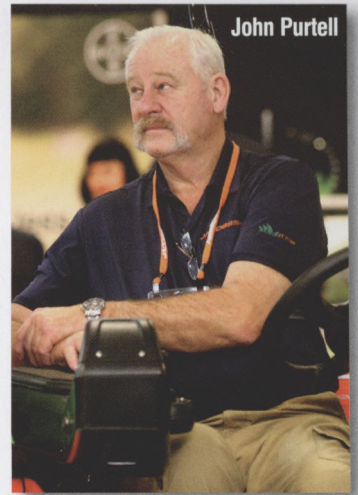
P/L at the end of the 2017. I have loved this industry that I have been privileged to work in for such a long time and this decision has weighed heavily on me over the last few months.

"I am in good health and after my health scare two years ago I have a better understanding of what I need to do personally to ensure that I can enjoy for many years my loving family, my grandchildren, friends and my [beloved] Wests Tigers.

"I may be retiring from JT Turf, but I won't be too far away. After spending such a lengthy time in the turf industry I have been lucky enough to create and sustain long-term friendships and I look forward to maintaining those relationships in the future. I want to thank you all for making my business life an enjoyable one and hope to see you around the traps after my retirement."

"JP has been a stalwart of the industry in NSW and Australia for so long and an absolute rock for our small business for the last two years," added JT Turf managing director John Woodham. "We want to thank JP for his service to our great industry and JT Turf and look forward to many more yarns and laughs with the big fella."

During the Twin Waters conference, Ransomes Jacobsen managing director Alan Prickett presented Purtell with a watch as a small token of appreciation for his long service and support to Ransomes turf equipment and Jacobsen. ATM wishes John all the best for his retirement. 🙏



John Purtell





SPRAYER GIVEAWAY!

Exclusive to 

**BACKPACK SPRAYER**

**BUY 1, GET 2 SPECIALTY SPRAYERS FREE!**

Code: FG-190461

Deluxe shoulder harness with storage area for nozzles and cushion back and adjustable lumbar support.

**SPECIALTY SPRAYER**

Code: FG-190439

**COMPRESSION SPRAYER**

**BUY 1, GET 1 SPECIALTY SPRAYER FREE!**

Code: FG-190462



15 Litre no-leak backpack sprayer



7.5 Litre capacity compression  
Includes nylon shoulder strap  
Pressure relief valve

Industrial Strength - Easily changable seals & pumps - Stainless Steel Wands  
Ambidextrous Design - Chemical Resistant Poly Hose - Viton Synthetic Rubber Seals

Offer ends August 30, 2017 | MENTION OUR PROMOTION CODE TO RECIEVE THIS SPECIAL OFFER  
Backpack Sprayer Offer Code: AGCSA-BACKPACK | Compression Sprayer Offer Code: AGCSA-COMPRESSION

Visit our website or contact your David Golf Rep for more info    1300 790 890    |    [www.davidgolf.com.au](http://www.davidgolf.com.au)

## What a difference a few months makes – Riverlakes Golf Course before and after the recent flooding in the wake of Cyclone Debbie



Queensland Golf Club and long-term staff member **Mick Todd** who replaces Adam as assistant superintendent. Elsewhere, long-term journeyman, punter and tragic Richmond supporter **Dave Morrison** is now living the dream as manager at Clifford Park, home of the Toowoomba Turf Club, and **Andy Boswell**, formerly assistant at Mt Cooloom, is kicking goals as the new superintendent at Nambour Golf Club.

**W**ith a cracking start to winter most of us are enjoying great conditions to grow grass in. Those clubs that suffered from the flooding of Cyclone Debbie are in various states of recovery, with **Brian “it’s just another flood” Cox** at Murwillumbah Golf Club oversowing his greens and waiting on a good summer to bring the lower river parts of his course back. **Josh Straub** at Lismore is close to being back to full recovery with some residual scarring in various areas waiting to heal when the sun is higher in the sky.

At the other end of the scale, **Glenn Beauclerc** at Logan City has suffered significant weed infestations and is still dealing with heavy silt deposits in his surrounds influencing his turf growth, while **Jason Lavender** at Riverlakes is also dealing with major silt deposits and repair work that has set them back six months. We can’t say we aren’t challenged in the business of golf course maintenance but true to form the boys are getting stuck in and persevering.

Congratulations to **Phil Soegaard** on receiving the 2017 AGCSA Excellence in Golf Course Management Award, presented in partnership with Rain Bird, at the Australian Turfgrass Conference in June. It is due recognition for his management and presentation of Lakelands Golf Club over many years and we all know how much ‘bling’ Phil adds to the course when he prepares it for the GCSAQ Turf Industry Day.

I would also like to congratulate **Adam Mills** who has been elevated to superintendent at Royal

Major works continue on a few courses with **Peter Lonergan** at Coolangatta Tweed set to start the second stage of the greens conversion to TifEagle on the remaining nine West course greens. The proposed start date is 2 October and Peter has given himself a timeline of 11 weeks for completion. Peter is extremely happy with the performance of the TifEagle to date and will be enjoying his weekends again when the last of the bent is gone. Here at Headland Golf Club we have completed another two kilometres of cart paths and are now focussing on haul road repair. I almost forgot that concrete trucks and grass aren’t a good combination!

As the GCSAQ AGM will have been and gone by the time this edition of ATM goes to print, I would like to thank the 2016/17 GCSAQ committee for all their input and work in running the association for the last 12 months. It has been fun and our association is the better for it. I have been relieved of my presidential duties by **Shaun Cross** (Byron Bay Golf Club) and after 17 years will not be continuing on the committee. I have really enjoyed the experience and would like to thank all the people that have helped me along the way and I would especially like to thank the committee from the last two years who have been excellent to work with.

I wish all our members the best for the upcoming spring and hope the sun continues to shine on us all.

**BEN TILLEY**  
PRESIDENT, GCSAQ

## Making tracks at Headland Golf Club



Well below average rainfall has been experienced in many areas across the state so far this winter period although with the drier, clearer weather there have been more frosty mornings than in seasons past.

Early June saw the VGCSA's 2IC/groundstaff education meeting held at Huntingdale Golf Club which was sponsored by epar and Colin Campbell Chemicals. Both sponsors gave informative and educational presentations and the 90+ attendees were also treated to presentations from superintendents **Michael Freeman** (Huntingdale GC) and **Travis Scott** (Riversdale GC).

Michael discussed and demonstrated examples of communication/report writing for board/course committee meetings, while Travis presented on the required processes in applying for superintendent positions. Both also devised a short workshop covering the above topics from which attendees gained practical techniques.

Our association is privileged that members, such as Michael and Travis, are open to donating their time and expertise. Sharing their knowledge and experiences ensures that the future turf managers of Victoria have the necessary tools when they advance in the trade. It was also great to see that Travis was selected to be one of the mentors for the AGCSA's Future Turf Managers' Initiative, presented in partnership with Jacobsen, at the recent Australian Turfgrass Conference on the Sunshine Coast.

As this edition of ATM was going to print we were about to embark on the annual Superintendent/2IC Country Meeting to be held at Tocumwal GC (host superintendent **Ben Lucas**). The programme included a full two days of golf and education, with plenty of opportunities to exchange our own trials and tribulations with turf over the past 12 months.

Many thanks to our sponsors of the event: ADE Equipment, Anco Seed & Turf, BASF, Bayer, Colin Campbell Chemicals, Independent Turf Services, Kubota, Lawn and Turf Maintenance, Pacific Coast Design, Rain Bird, Toro Australia and Turf Culture.



Guest speakers included **David Meagher**, who gave two presentations, and **John Neylan**. An open forum tackled issues across the industry, while a thorough course walk saw Ben discuss many areas of the recent works being undertaken by the club.

Early September will see our final education meeting for the year conducted at Medway Golf Club where superintendent and VGCSA life member **Colin Winterton** will ensure a warm welcome and hopefully not release his bee colonies upon us! The Open Golf Day will round out the year in November at Riversdale Golf Club where I am sure Travis Scott will produce conditions worthy of a tournament for our benefit.

Tocumwal Golf Club (pictured top is the 2nd hole on the Captain's course and above the 4th hole on the President's course) played host to the 2017 VGCSA Superintendent/2IC Country Meet at the start of August

MATHEW POULTNEY  
PRESIDENT, VGCSA



**SECURE AND ATTRACTIVE FENCING SOLUTIONS**

- Boundary
- Enclosures & Partitions
- Parking

p. (03) 9457 1704 | e. sales@melchain.com.au

[www.melchain.com.au/golf](http://www.melchain.com.au/golf)

## GOLF COURSE FENCING SPECIALISTS

Brush Panel | Chain Link | Shade Cloth | Timber Bollard | Tubular Steel





Delegates at the STA WA's biennial WA Turf Seminar held at the end of May

The last day of May this year began cool and clear and blissfully continued towards a warm brilliance as the day went on. It was Wednesday the 31st, the day we had selected many months earlier on which to host our biennial WA Turf Seminar. An awful lot of planning, organising and man-hours go into putting these types of events together. You try to think of and prepare for anything and everything, but the weather is always that one thing that cannot be ruled or promised, so when the whims of nature are aligned with your personal endeavours it's hard not but take the credit.

Although this is where I feel my own humility pinching my ear tip, reminding me that I must admit my comment about 'man-hours' should more correctly read 'woman-hours'. Quite a few of us played our part putting this year's WA Turf Seminar & Trade Expo together, but the undeniable fact is the MVP trophy behind so many phone calls, emails and whip cracking belongs to our beloved **Eva Ricci** (WA turf executive).

Now although I don't always tell her, I am, as you can gather, an unashamed fan of Eva's work and am quick to remind any that the WA turf industry is very well championed by her passion for a green and proud turf industry in this state. However when **Mike Rowe**, director general of the Department of Water opened the day with a speech that announced Eva as our own 'national living treasure', it had an absolutely immediate narcotic effect and since then she has been searching for new ways to incorporate the honorific into her job title, or at the very least have it branded onto a T-shirt or flag for the world to see.

Once the final tally of delegates, sponsors and their trade booth helpers, plus our own cadre

of faithful volunteers of both associations were counted, we can safely say that we had 190 people attending the event. We (the organising committee) are very proud of this number, not because of a record-breaking or beyond expectations type hoo-hah, but for vindication of faith it proclaims regarding the commitment that our relatively small turf industry in Western Australia has towards its own professional destiny.

Following Mike Rowe's opening speech the day got underway with presentations from **Dr Stewart Dallas, Don Woodcock, Tony Hemming, Dr Phil Ford, Peter Ruscoe, Peter Briscoe, Darren Kirkwood, Dr Pieter Poot, John Forrest** and a panel presentation from members of the Green Space Alliance WA committee.

Thank you to our major sponsors for the seminar, Village Green Turf and Turf Care WA and minor sponsors Bayer, epar and the Water Corporation for their steadfast and unwavering support of the WA turf industry. Joining them were our exterior exhibitors Beacon Equipment, Mowmaster, State Wide Turf Services, T-Quip and Wattleup Tractors and interior trade exhibitors Baileys Fertilisers, Eco Edge Retic Supplies, Grasshopper Turf, Greenacres Turf Group, Growise, Hunter, Intuit Earth, Lawn Doctor, Nuturf, Organic 2000, PGG Wrightson Turf, SERCUL (South East Regional Centre for Urban Landcare) and SWAN Systems. The WA Turf Industry is indebted to these 21 trade exhibitors for their support, the extra sponsorships, donations, raffle prizes and, most importantly, for presenting such a wonderful array of exhibits.

We received a lot of feedback commenting that this seminar as being our best yet, and look forward to doing even better next time around. It is days like this that reinforce how incredibly fortunate we are to be working in this industry. Thank you to all who attended, your support is greatly appreciated.

Over the next few months, WA will be hosting a number of events. This will include our AGM to be held at the State Tennis Centre on 16 August, followed by an equipment demonstration and expo day for T-Quip on 6 September (venue TBC). The annual STA WA Golf Challenge on 11 October returns to Hartfield Golf Club (host superintendent **Nick Kinley**) which this year will be supported by Jacobsen and McIntosh & Sons.

Later on 8 November and in partnership with Toro Australia, we are excited to be hosting our inaugural Regional Sportsfield and Grounds Forum at the Lark Hill Sports Complex in Rockingham. The year will then be capped off with our annual celebratory dinner and presentation for the WA Turf Industry Awards night.

**TONY GUY**  
PRESIDENT, STA WA

## ON THE MOVE

**DARREN BALFOUR:** From superintendent The National Golf Club (Ocean & Moonah Courses), Vic to grounds manager Point Leo Estate, Vic.

**SHANE BROMFIELD:** Started as superintendent Claremont Golf Club, Tas in April.

**GARY FOSTER:** Retired from Wauchope Country Club, NSW.



**MATTHEW GOODBUN:** Now with Fernland Agencies after resigning as superintendent Newcastle Golf Club, NSW.

**RICHARD JAMES:** From superintendent The Grange Golf Club, SA to superintendent Koyoonga Golf Club, SA.



*Achieve strong, healthy and disease resistant turf with ProTurf.*



## ProTurf

New high impact fertilisers designed for use on tees, surrounds, fairways, sports fields and lawns. ProTurf contains a combination of Poly-S controlled release fertiliser technology, readily available urea Nitrogen and a unique multi-nutrient compound fertiliser-Polyhalite\*.

\*Unique to ProTurf, Polyhalite is a naturally occurring mineral composed of Potassium, Magnesium, Calcium and Sulphur.

**Rely on the ICL range of specialty turf fertilisers for superb turf colour and vigour.**

**Sierrablen® ProTurf® Sportsmaster®**

Fernland Agencies

**globe**  
GROWING SOLUTIONS  
WA only

**K&B**  
ADAMS PTY LTD



**Tas Turf Solutions**



## STA VIC



AFLW players (from left) Brooke Lochland, Deanna Berry and Kaitlyn Ashmore were among the guest speakers at the recent STA Vic Sports Turf Seminar held at AAMI Park



The STA Victoria Sports Turf Seminar was held on 19 July 2017 at AAMI Park with the day flowing smoothly thanks to Master of Ceremonies **Darren James**. With a mix of speakers covering the primary issues of optimisation of ground use and versatility, the appearance of an AFL legend as well as the presence of three players from the inaugural AFL Women's league, the event was both informative and entertaining.

Bayer's turf market manager **James Royal** was first speaker of the day and presented on trends in plant protection research and the significant challenges in bringing out a product that meets the multiple needs of end users and regulatory controls. AFL facilities manager **Shayne Ward** then outlined the AFL Victoria's Football Facilities Development Strategy. One amazing fact he divulged was that in 2010 there were just 58 female AFL teams; by 2017 there were 682 teams with 347 of those starting up in the last year!

And it isn't just AFL that is experiencing accelerated development. **Daniel Lancefield**, of Football Federation Victoria, highlighted the growth of soccer facility requirements in Victoria. Out of Daniel's presentation came some interesting

statistics which highlight there is a great deal of work in the future for soccer pitches. There are 1177 pitches in Victoria of which;

- 288 are grass pitches that are not high wear tolerant;
- 351 pitches are constructed on poor irrigating soils; and
- 412 pitches have no drainage.

And cricket, the national summer sport, occupies 7700 grounds in Victoria according to **Jake McMinn**, national community facilities manager of Cricket Victoria.

**Grant Greenway**, research committee convenor of STA Victoria, then delivered the first report from **John Neylan** on the project financed by the association titled 'Compare possible hours of use for different sports field construction types and maintenance inputs.' Additional technical issues on stadium development and construction came from **Erik Kinlon** of HG Sports Turf. Not alone in the construction sphere, **Jarrod Hill** from Sporteng enlightened delegates with information related to the new Perth Stadium development and the new flagship for Cricket Victoria at Junction Oval.

Events took a different angle when **Rob Savedra** explained the night a fire took hold at Wesley College's Glen Waverley Campus and how the school, students, staff and friends dealt with the aftermath in 2016.

**Jim Porter** announced the winner of the STA Australia Graduate of the Year Award for 2016 – **Joe Bolton** from Wodonga & District Turf Club. Joe was presented with a trophy and thanked all those involved. Jim also announced STA (Vic)'s Scholarship winner – **Thomas McGovan** (Geelong Racing Club).

The day was not a totally male affair with our panel of AFLW footballers **Kaitlyn Ashmore** (Brisbane Lions), **Deanna Berry** and **Brooke Lochland** (both Western Bulldogs) proving a real hit. They gave a fascinating insight into their early years that fostered their interest in football, what it is

## ON THE MOVE

**BOBBY LEE:** Will finish up as superintendent at Hawks Nest Golf Club, NSW on 1 September before moving to Port Macquarie.

**GLENN MCCORMICK:** From foreman Club Mandalay, Vic to superintendent Kilmore Golf Club, Vic.

**ADAM MILLS:** From assistant superintendent to superintendent Royal Queensland Golf Club, Qld.

**STEVEN NEWELL:** From superintendent Kooyonga Golf Club, SA to superintendent Victoria Golf Club, Vic.

**SAM NEYLON:** From assistant

superintendent to superintendent Mona Vale Golf Club, NSW.

**GEOFFREY PARKER:** Resigned as superintendent Rosebud Country Club, Vic after more than 30 years.

**LUKE PARTRIDGE:** From assistant superintendent Doha Golf Club, UAE to superintendent Manly Golf Club, NSW.

**JUSTIN RANKIN:** From superintendent The Sands, Torquay, Vic to superintendent Kooindah Waters, NSW.

**CAMERON SMITH:** From assistant superintendent to golf course manager Bonnie Doon Golf Club, NSW.

**AARON WALSH:** Appointed superintendent Woodford Golf Club, Qld.





like playing on the various grounds and injuries. You could have heard a pin drop in the room for that 30 minute session!

Continuing with the AFL them, the audience then enjoyed an hour with **Brent Harvey** – North Melbourne and AFL games record holder with 432 games and one of the AFL's stars of the 21st Century. Brent was the perfect guest to finish off what was a terrific day! STA Victoria wishes to thank major sponsor Jacobsen for their support on the day, as well as STA Victoria sponsors and speakers.

Upcoming events include the STA Victoria AGM to be held on 24 August 2017 at Rosstown Hotel, Carnegie at 4pm. Details and information will be sent to members shortly. A Pitch Preparation Day will be held at Melbourne Grammar School, Flack Park, Port Melbourne on 12 September 2017. For registration forms please contact **Jan Fenton** on 0439 089 005 or email vic@sportsturf.asn.au.

STA VICTORIA COMMITTEE



Above: Sporteng's Jarrod Hill discussed the Perth Stadium development and Junction Oval redevelopment

Above left: AFL legend Brent Harvey is put under the microscope by MC Darren James

**PROUDLY AUSTRALIAN, PROUDLY INDEPENDENT**



"The Australian turf industry's leading provider of agronomic services."

- EXPERT AGRONOMIC ADVICE
- CONSTRUCTION SPECIFICATIONS
- SOIL, PLANT AND WATER ANALYSIS. DISEASE DIAGNOSIS
- ENVIRONMENTAL AND WATER MANAGEMENT PLANS

**CONTACT AGCSATECH TODAY ON (03) 9548 8600**



Environmental agronomist - Bruce Macphee  
 bruce@agcsa.com.au 0409 183 710

**W**eather conditions over the last month has seen a good amount of rainfall along with cool temperatures. It has been a time for most superintendents to catch up with holidays or take the opportunity to carry out construction and irrigation upgrades.

By the time this edition of ATM goes to print the GCSAWA would have conducted its biennial Margaret River Conference in August. The GCSAWA committee worked extremely hard in organising this event and we had over 70 delegates attending, including a contingent from South Australia.

The programme included a wide range of speakers from the golf and turf industry. Keynote speakers included **Richard Forsyth** (Royal Melbourne GC), **Andy Wood** (Kauri Cliffs, NZ) and **Nathan Bennett** (Royal Adelaide GC). The Annual General Meeting was held on the Monday afternoon with the Toro Cup played at Margaret River Golf Club on Tuesday afternoon.

Many thanks must go out to the hard-working committee for organising this event with a special mention to new members **Nick Kinley** (Hartfield CC) and **Shane Baker** (Mosman Park).

On 12 June the GCSAWA also conducted its annual Management Challenge which was held at Sun City Country Club. Host superintendent **Brad Anderson** and his staff had the course in excellent condition with many interested in playing there after the changes made. Seven teams competed with only two points separating all, but it was Mosman Park that prevailed narrowly over Royal Fremantle.

A month later the Trade Challenge was held at Secret Harbour on 11 July. A couple of short showers didn't stop a great day and a big thanks goes to all the trade for supporting the day and organising their teams. Congratulations to Baileys fertiliser on their win consisting of **Shannon White** (Baileys Fertiliser), **Nick Price** (The Cut), **Wayne Greenwood** and **John Campion** (both from Programmed Maintenance).

Finally, at this year's AGM, I stood down from the role as GCSAWA president. I've enjoyed my time on the GCSAWA Board and I'm glad that I could contribute back to an industry that has given me so much pleasure over many years.

**NEIL GRAHAM**  
PAST PRESIDENT, GCSAWA

## CORRECTIONS AND CLARIFICATIONS

**A**ustralian Turfgrass Management and the Australian Golf Course Superintendents' Association wish to highlight a few errors and clarifications following the publication of the May-June 2017 edition of Australian Turfgrass Management Journal (Volume 19.3).


- **Page 15:** In the feature 'FTMI Class of 2017' (pages 12-18) under candidate Brenton Clarke's profile on page 15, Box Hill Golf Club course superintendent Josh Leyland was incorrectly named as Josh Lewis. ATM apologises to Josh and Box Hill Golf Club for any confusion caused.
- **Page 33:** The AGCSA and ATM wish to convey their sincere apologies to Bronze Partner Hunter Industries for the error made with the reproduction of their display ad. A text box was placed over the bottom left hand corner of the advertisement during the design phase which wasn't removed prior to the file being sent to the printer. Subsequently, this section of the ad was obscured which included a description of Hunter's MP Rotator sprinkler nozzle, the Hunter Industries website address as well as the contact details and logo of Hunter distributor HR Products.

- The description should have read: *"The MP Rotator is the most efficient sprinkler nozzle available on the market today. The slow application rate allows water to gently soak into the soil, with an even distribution of water throughout the irrigated area. This results in 30% less water use when compared to traditional sprays. With only one moving part and made with the highest quality materials, the MP Rotator is built for durability in even the harshest conditions."*
- The Hunter Industries website is [www.hunterindustries.com](http://www.hunterindustries.com).
- HR Products' contact details are: National Free Call 1800 HUNTER, toll free fax 1800 651 680, [www.hrproducts.com.au](http://www.hrproducts.com.au) and email [hrrsales@hrproducts.com.au](mailto:hrrsales@hrproducts.com.au).
- **Page 51:** In John Neylan's 'Grass-roots' column ('The power of Poa' – pages 50-54), the application rate of one of the products used as part of Dr Peter Boutsalis's herbicide resistance trials was incorrect. In Table 1 (presented on page 51), it was stated that Syngenta's Monument product (listed as Trifloxysulfuron 100g/L) was sprayed at a rate of 15g/ha. After further correspondence between Syngenta and



Dr Boutsalis, it has been confirmed that this rate was incorrect and it has been agreed by both that any reference to it be removed from future publication of results relating to these trials.

- **Page 70:** The image for Toro's Stealth Series Kit for its Infinity Series sprinklers was incorrect. The image shown was a TS90 sprinkler with Turf Cup which is not available in Australia. ATM apologises to Toro for any confusion caused.



# Season long pre-emergent weed and grub control

The timing of pre-emergent herbicides in early spring coincides with the application timing of preventative grub control. Save time by combining the power of BARRICADE Herbicide against pre-emergent weeds with the long lasting grub control of ACELEPRYN Turf Insecticide.

You can rely on season long control of grassy weeds and insects including Crab Grass, Crowsfoot Grass, Summer Grass, African Black Beetle larvae, Billbug larvae and caterpillars.



**syngenta®**

For more information ask your Syngenta Agent or go to [www.greencast.com.au](http://www.greencast.com.au)

Syngenta Australia Pty Ltd, Level 1, 2-4 Lyonpark Road, Macquarie Park NSW 2113. ABN 33 002 933 717.

®Registered trademark of Syngenta Group Company. ™Trademark of a Syngenta Group Company. © Syngenta 2017

All products written in uppercase are registered trademarks of a Syngenta Group Company. AD 17-239

®

Having been interested in historic motor racing all his life, in 2014 Matt Scott decided it was time to get behind the wheel and start racing historic Formula Vees

Matt Scott, general manager of AGCSA Bronze Partner Simplot Partners, likes to live life in the fast lane.



Scott's first competitive race was at the Winton Festival of Speed in 2015



I have always had a passion for vintage and classic cars, especially English cars, and started collecting and restoring them at a young age. My first car was a 1966 MGB which I bought when I was just 17. I thought I was pretty cool at the time, that was until I blew up the engine a week before I got my licence! At the time I was doing up a Mini Cooper to race, although plans quickly changed when I needed a car, so I got it road registered and reluctantly put my budding racing career on hold (from memory the rego cost more than the car was worth!)

Fast forward a number of years and by now I was a regular attendee at the Phillip Island Classic (an historic car racing event). I would take one of my classic cars down to display trackside and watch all the action. I was always a big fan of open wheel racing, especially the likes of drivers Jim Clark and Bruce McLaren in the early and mid-1960s Formula One cars as well as the late 1980s/early 1990s, in particular Ayrton Senna.

It was at the Phillip Island Classic in 2014 that I met a driver who raced historic Formula Vee and, well, let's just say it didn't take much to be talked into it. Contacting the president of the Historic Formula Vee Association in NSW, he knew a good car that was for sale. I didn't know much about them then so took his advice and bought it, as you do.

The car was a 1984 Elfin NG Formula Vee with racing history and had been slightly modified for hill climbs and sprint events. Historic racing requires all cars to have racing 'history' in the period (pre-1985 for this category) and to be represented as they were raced in the day. Historic Formula Vee also requires a sealed engine and sealed gear box as well as control tyres, so it's very close racing and all up to driver skill (or lack of in some cases).

I got the car back home to Melbourne and had to strip it down and rebuild to original specs. Once

that was complete it was time to get a CAMS (the Confederation of Australian Motor Sport) Certificate of Description. All historic race cars are required to provide evidence that they were indeed raced in the period they claim to have, with CAMS issuing you a certificate indicating this. All up it took about six months to get together the necessary documentation which included getting photos and race programmes from 1984 off the original owner in Queensland who was very helpful.

My first event was Historic Sandown back in 2014. The first few track meetings I took part in were called 'regularity'. This isn't racing against other cars, rather you are on the track together with all types of cars. You nominate a time which you can do fairly consistently and try to keep as close to this time as possible. Of course I just tried to go as fast as possible...

My first proper race was at the Winton Festival of Speed in 2015 where I started and finished at the back of the field. There were four other Formula Vees on the track and I started around six seconds off the pace but ended up around three seconds off by the end. It was a memorable day all round and I had my father Denis and son Jonathan as part of my pit crew. Since then I have raced at Phillip Island, Sandown, Winton, Sydney Motorsport Park, Wakefield Park (NSW) and Mallala (SA). I have come a long way since those early forays and came second in class at Mallala this year and was coming first at Sandown before I hit the car in front of me on the last corner and put us both into the tyre wall!

To say that I'm having a lot of fun in Historic Formula Vee would be an understatement. It is a great class to compete in with wheel-to-wheel racing against a great group of people. If anyone is interested, I have a YouTube channel and post most of my race videos on that – simply search for 'Matt Scott historic Formula Vee'. 🏎️

# GREENSPRO® 1260

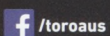


**DELIVERING  
FAST, SMOOTH  
GREENS. EASILY.**

The new GreensPro® 1260 is in a league of its own, delivering exceptionally smooth and fast greens with a superior operator platform. The split, overlapping, contour-following smoothing rollers perfectly follow undulations delivering exceptionally smooth putting surfaces.

For more information, call 1800 356 372 or contact your Toro Golf Area Sales Manager.

[toro.com.au](http://toro.com.au)



/toroaus



/toroaus



You Tube /toroaustralia

**TORO.**

# Irrigation Water Systems featuring HYDROVAR®

Create a variable speed booster station to your technical specifications.

By utilising the well proven Lowara e-SV™ multistage pump and Hydrovar variable speed drives, you gain an efficient and robust system. You can create a booster set with up to eight vertical multistage pumps that are all controlled by Hydrovar frequency drives fixed directly on the electric motor of each pump. These systems can maintain constant pressure and optimized pumping efficiencies over wide flow ranges .

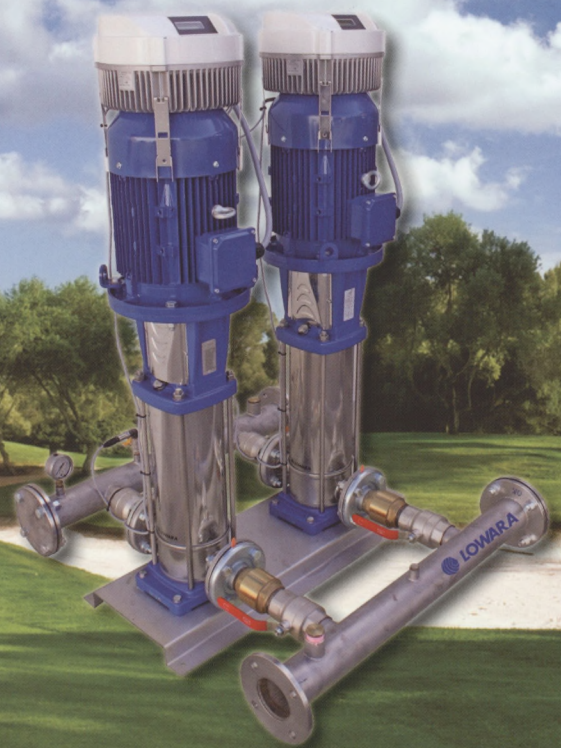
A selection of golf courses that have installed pumping systems with HYDROVAR®:

## Australia

- Ballarat
- Bannockburn
- Barwon Heads
- Bermagui
- Bowral
- Box Hill
- Brookwater
- Cape Schanck
- Charlestown
- Clifton Springs
- Criagieburn
- Curlewis
- Dorsel
- Drovin
- Druin
- Elcho Park
- Emerald Lakes
- Eynesbury
- Garfield
- Goondiwindi
- Hidden Valley
- Kingston Heath
- Koohindah Waters
- Latrobe
- Marysville
- McLeod
- Melton
- Metropolitan
- Monash
- Montuna
- Morebank
- Moss Vale
- Muirfield
- Ocean Grove
- Ocean Shores
- Pacific Dunes
- Perigian Springs
- Rich River
- Richmond
- Ringwood
- Riverside
- Rockhampton
- Royal Melbourne
- Rosebud
- Rosedale
- Settlers Run
- Shell Cove
- Shell Harbour
- Shoal Bay
- Shoalhaven Heads
- The Goowa
- Tirhatuan Park
- Trafalgar
- Tuggerah Lakes
- Virginia
- Wyong

## New Zealand

- Akarana
- Auckland
- Cape Kidnappers
- Carrington
- Clarke's Beach
- Formosa
- Grange
- Hamilton
- Howick
- Huapai
- Jacks Point
- Kaitaia
- Karori
- Kauri Cliffs
- La Pointe
- Mangawhai
- Matarangi
- Muriwai
- Napier
- New Plymouth
- Omaha Beach
- Omokoroa
- Onewai
- Pauanua Lakes
- Russley
- Sherwook
- Taupo
- Te Awaha
- Te Puke
- The Hills
- Titirangi
- Waikanae
- Waipa
- Wanganui
- Wellington
- Western Bay
- Whangarei



Lowara's extensive pump range together with Hydrovar, can offer a complete line of booster systems ideally suited for the diverse requirements of the turf and landscape markets and for golf courses in Australia and New Zealand.



**Brown Brothers  
Engineers  
Australia Pty Ltd**

**Australia:** 1300 4 BBENG [www.brownbros.com.au](http://www.brownbros.com.au)

**New Zealand:** Christchurch (03) 365 0279 Auckland (09) 525 8282  
[www.brownbros.co.nz](http://www.brownbros.co.nz)

**DELIVERING PUMPING SOLUTIONS**