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MANAGEMENT JOURNAL

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Andrew Smith, Wade Williams

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

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 Published by:**

Australian Golf Course
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Production:

Editor:

Brett Robinson Ph: (03) 9548 8600
 brett@agcsa.com.au

Art Direction & Design:

Jo Corne Ph: (03) 9548 8600
 jo@agcsa.com.au

Advertising:

Melissa Wallace Ph: (03) 9548 8600
 melissa@agcsa.com.au

AGCSA

Suite 1, Monash Corporate Centre
 752 Blackburn Road, Clayton, VIC 3168
 P: (03) 9548 8600
 F: (03) 9548 8622
 E: info@agcsa.com.au
 W: www.agcsa.com.au



AGCSA Board

President: Allan Devlin
Directors: John Odell
 Pat Pauli
 Bryce Strachan

General Manager

John Neylan
 john@agcsa.com.au

Events Manager

Simone Staples
 simone@agcsa.com.au

Business Relationship Manager

Melissa Wallace
 melissa@agcsa.com.au

Accounts

Philip Horsburgh
 philip@agcsa.com.au

AGCSATech

Andrew Peart and John Geary
 andrew@agcsa.com.au
 jgeary@agcsa.com.au

HR & Best Practice Manager

Daryl Sellar
 daryl@agcsa.com.au

Membership Coordinator

Lyndel Conway
 info@agcsa.com.au

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 Brunswick, VIC 3056

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COVER:
Kingston Heath
Golf Club: The par
3 19th at Kingston
Heath Golf Club,
which will be
played as the 11th
when it hosts the
2009 Australian
Masters from 12-15
November.

Photo:
Brett Robinson.



Kingston Heath prepares for coming of the Tiger

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This November's 2009 Australian Masters is set to be one of the biggest golfing spectacles this country will see. Around 80,000 spectators are expected to flock to Melbourne's iconic Kingston Heath Golf Club and they'll be there to see one man - world number one Tiger Woods. Such a throng is set to present some serious management challenges for course superintendent Martin Greenwood who together his crew is relishing the chance of showcasing the sand belt gem to the golfing world.



25th Australian Turfgrass Conference and Trade Exhibition Review

12-30

For the first time since 1978 Hobart played host to the Australian Turfgrass Conference in July. More than 280 delegates and 150 trade representatives enjoyed a week of networking with the education sessions carrying the theme 'Achieving Par'. ATM reviews a memorable week in Hobart and profiles the 2009 AGCSA Award recipients.

Tree management on golf courses

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Trees form an integral part of many golf courses and here tree pathologist Dr Paul Barber discusses factors that contribute to tree health disorders.

Being the best

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ATM asks delegates at the recent 25th Australian Turfgrass Conference to pinpoint some of the key things they took away from the week in Hobart.

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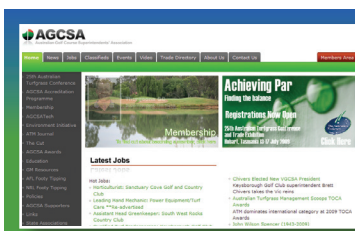
In May 2009 the Australian Golf Industry Council published a research report providing a snapshot of the Australian golf industry across all areas. The report provides reference summary of the key statistics from various industry and consumer research projects.

WATER MANAGEMENT

Kingswood investigates ASR scheme

46

Kingswood Golf Club in Melbourne is undertaking trials of an aquifer storage and recovery scheme with funding assistance from the Victorian Government's Smart Water Fund. The club ultimately hopes these trials will lead to a licensed operating system by mid-2011 and therefore secure the future water needs of the sandbelt club.



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ENVIRONMENTAL MANAGEMENT

A greener Catalina

48

Under the careful management of course superintendent Tony Fogarty, Catalina Country Club on the south coast of NSW can look forward to a very green future.

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Contributors to Australian Turfgrass Management Volume 11.5 (September-October 2009)

Andrew Arrah (Point Walter GC); Dean Bailey (Rosanna GC); Sue Bailey (TGAA VIC); Dr Paul Barber (Arbor Carbon); Andy Blacker (SAGCSA); Peter Boyd (NZGCSA); Brendan Brown (Horton Park GC); Ryan Buttel (Wentworth Leagues Club); Brett Chivers (VGCSA); Brendan Clark (Mt Gambier GC); Shaun Cross (Byron Bay GC); Robin Doodson (Sanctuary Cove); Danny Edmunds (City of Casey); Tony Fogarty (Catalina CC); Terry Ford (Kingswood GC); Peter Frewin (Globe Australia); John Geary (AGCSA); Martin Greenwood (Kingston Heath GC); Scott Harris (Gold Creek CC); Dr. Ross Higginson; Andy Hugill (Mona Vale GC); Richard Kirkby (Pennant Hills GC); Stephen Lewis (TGCSA); Mike Love (Royal Melbourne GC); Graeme Logan (STA NSW); Peter Lonergan (GCSAQ); Peter McMaugh; Tyrrell McGeever (Mount Martha Valley Estate); John Neylan (AGCSA); John Odell (Royal Sydney GC); Pat Pauli (Horton Park GC); Andrew Peart (AGCSA); Peter Ruscoe (TGAA WA); Norm Seaton (Kingswood GC); Daryl Sellar (AGCSA); Andrew Smith (Yamba GC); Simone Staples (AGCSA); Anthony Toogood (Commercial GC); Steve Tuckett (Chisholm TAFE); David Warwick (Avondale GC); Brock Weston (TGAA ACT); Wade Williams (Federal GC); Darren Wilson (GCSAWA); Craig Wright (NSWGCSA).

Awaiting the arrival of Tiger... and Steve

It's still my biggest claim to fame. As a young sports reporter back across the Ditch, in early 1999 the editor of the now defunct New Zealand Sports Monthly magazine called me up and asked whether I'd be interested in profiling Steve Williams. "Who?" I enquired. Most Kiwis hadn't even heard the name Steve Williams before but all that changed when it was announced shortly after the Doral Ryder Open that year that golfing sensation Tiger Woods had dumped his long-term caddy Mike 'Fluff' Cowan and had hand-picked a Kiwi to carry his bag.

Phoning Williams at his Oregon home from the squalid bedroom of my flatmate (we were that poor that we could only afford one phone connection in the house and it happened to be in his room), I sat entranced for over an hour as I listened to Williams recount his remarkable career as one of the game's top caddies. (In hindsight, I probably should have got him to call me back as that one phone call cost me about three weeks worth in rent!)

Already an established figure before linking up with Woods, Williams was one of only two foreign caddies on the US PGA Tour at the time and had previously carried the sticks for Raymond Floyd and Greg Norman. More fascinating, however, was how Williams got his break in the world of professional caddying which came largely thanks to Australia's very own Peter Thomson.

Having caddied as a youngster at his home club of Paraparaumu Beach (Wellington, NZ), Williams got the opportunity to caddy for Thomson at the 1976 New Zealand Open. The five-time Open champion was so impressed with the young Kiwi that at the end of the tournament, in which he finished third, he handed Williams \$150, his bag and a stack of golf balls. Williams would go on to carry Thomson's bag every time he played in New Zealand, and following trips to Melbourne and Sydney to caddy in tournaments, Williams met some US caddies who fuelled his desire to make a career of it. Three decades later, Williams is now right hand man to the world's biggest golfing phenomenon and can lay claim to being New Zealand's highest paid sportsperson.

A week after I interviewed Williams I was fortunate to go around to his mother's place, ironically just a few streets away from my flat, in order to get a photo of Williams pictured with Thomson at the 1976 NZ Open. I was privileged to be shown some of the incredible golfing memorabilia Williams had amassed during his time as a caddy and needless to say I was like a kid in a candy store – signed bags, flags and all manner of clubs used by Floyd and Norman. It truly was amazing. No doubt that room has now expanded ten-fold as Williams has tasted even greater success with Woods.

When Williams touches down with his boss come November for the 2009 Australian Masters, you can bet I'll among the many tens of thousands who are expected to descend on Kingston Heath Golf Club. Talk of whether Tiger's reported price tag of \$3 million is justified or not, his appearance at this year's event makes it the most anticipated tournament in years and I for one can't wait to battle with the expected 80,000 others to catch a glimpse.

While the golfing scene is all abuzz about Tiger's impending arrival, spare a thought for Kingston Heath superintendent Martin Greenwood and his crew. With massive crowds expected, traffic management is set to be a critical issue come tournament week and something that has the potential to cause a bit of damage. The course itself is the least of Greenwood's concerns and having visited there in mid-August the surfaces were looking in remarkable condition. This edition's cover story traces preparations for the upcoming Masters and also looks back at Greenwood's career which has now spanned nearly three decades.

With the hype surrounding the tournament, ATM wishes Martin and his crew all the best. My only hope is that my media accreditation will be approved in time so that I too can witness firsthand one of the game's most incredible talents and his Kiwi baggage handler! Enjoy the read.



Brett Robinson

Brett Robinson
Editor

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JOHN NEYLAN, AGCSA GENERAL MANAGER

Confronting challenges both on and off the course

As this issue of ATM is being prepared, it is hard to believe that it has been four weeks since the Hobart conference. The days are getting a little longer and the weather is getting a spring feel to it and the football seasons are reaching finals time. As I have said before, the great challenge in life is being able to stop for a minute's reflection on what has happened and what needs to happen.

From an AGCSA perspective the Australian Turfgrass Conference in Hobart was a great success and we would like to thank all those that attended and to the trade for their participation. At a time when budgets are tight we are pleased that our members and trade supporters could see the value in ongoing education and getting together with peers. The programme this year reflected the feedback from last year and there was no doubt that some of the topics were confronting.

Speaking to many people after the event there was little doubt that the challenges of life and wellbeing affect everyone in many different ways. It is how we deal with the challenges that affect not only ourselves but also family, friends and work mates that is the key to maintaining a life balance. The message that I got loud and clear was to talk to someone and seek help.

The AGCSA is a member of the Australian Golf Industry Council (AGIC) which has been busy on several fronts tackling the issues facing the future of golf. It was agreed at the AGIC meeting in July to form a constituted body so that the organisation has some teeth and the ability to operate in an organised and coordinated fashion. The AGIC consists of the AGCSA, Australian Ladies Professional Golf,



Australian Sporting Goods Association, Golf Australia, Golf Management Australia, PGA of Australia and Society of Australian Golf Course Architects, and will have a part-time secretariat.

The AGIC spent a productive day in June in Canberra, at Parliament House where it met with a range of Federal Ministers and senior officials to raise awareness of the significant economic, social and environmental benefits of the Australian golf industry.

It was an incredibly insightful day and I have no doubt that as an industry we created an impression – the AGIC was welcomed during question time in the midst of the 'ute-gate' debate! We were very fortunate to have as part of the group Dawn Fraser (patron of the ALPG) and Peter Thomson. These two legends had the politicians hanging on every word and it does emphasise the value of using well-respected people to promote our sport.

The AGIC also recently ran a two-day industry forum at Sanctuary Cove which was attended by 130 industry delegates from all over Australia, with NZ Golf and NZ PGA also in attendance. The forum addressed a range of issues currently facing the Australian industry, with the programme featuring panel sessions and presentations on a range of widespread issues relevant to golf. What the forum highlighted for me was the challenge golf faces in breaking down some of the

conventions associated with golf and golf clubs that can be contrary to the expectations of modern society. In particular is the challenge for golf to engage young people and families.

In June I was fortunate to attend the New Zealand Sports Turf conference and in particular to be part of the NZ golf course superintendents programme. The NZ superintendents have many things in common with us in Australia and despite the sledging over rugby there is a very strong camaraderie. Being our closest neighbour we are pleased to be able to forge stronger bonds with them and to be able to assist wherever possible.

The Hobart conference and the AGIC golf industry forum raised the critical issue of sustainability. How can we continue to produce high quality golf courses during economically and environmentally challenging times? Steven Isaac from The R&A will be with us in September to discuss the concept of sustainable golf and to provide us with an insight into what The R&A is doing in golf in general and the challenges golf and golf courses face in the future.

In Hobart we had a small number of golf club committee members in attendance and they expressed their enlightenment as they were presented with some of the challenges that a golf course superintendent faces. The seminars with Steven Isaac present the perfect opportunity to bring along your GM and committee members to hear about the challenge of maintaining a golf club that is economically, socially and environmentally sustainable. See you at one of the five seminars. 🌱



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After 30 years at Huntingdale Golf Club, this year's Australian Masters heads to Kingston Heath Golf Club for the first time. In a major coup for tournament organisers, Tiger Woods will be making just his fourth appearance Down Under since turning pro in 1996. His appearance will guarantee record crowd numbers with around 80,000 expected during tournament week

It has the potential to be the biggest golfing event this country has seen.

When Tiger Woods announced he would be teeing up at 2009 Australian Masters this November, it elevated the tournament to a whole new level. Tickets have nearly sold out months in advance – unheard of for an Australian golf tournament – and upwards of 80,000 are expected to flock to Kingston Heath Golf Club for the most anticipated tournament in years. For superintendent Martin Greenwood and his crew it is set to be the event of their lives and provides them the rare chance to showcase one of Australia's famed courses to the world.



Kingston Heath prepares for coming of the **Tiger**

Martin Greenwood is talking ownership. With the 2009 Australian Masters just a few months away, this is going to be Kingston Heath's tournament and a chance for him and his crew of 14 to demonstrate just how good the Melbourne sand belt icon can present and play.

Already pumped about the prospect of hosting this year's Masters, which was announced back in March, things were catapulted into a whole different stratosphere when it was revealed that world number one Tiger Woods would be gracing the fairways of Kingston Heath, in what happens to be the club's centenary year.

Now faced with the prospect of crowds numbering up to 80,000 for the week, coupled with unprecedented media coverage from Australia and around the world, the opportunity for the Kingston Heath course maintenance team to make a statement on the world stage is knocking very loudly.

Lured by a reported appearance fee of \$A3million and the chance to play one of Australasia's best courses, Woods makes his way Down Under for just the fourth time in his career and the first time in over a decade. Woods' last appearance came in 1998 for the President's Cup at Royal Melbourne Golf Club, and while already a household name back then, has only enhanced his reputation since as one of the game's most phenomenal talents.

Woods, who has been untouched as world number one since 12 June 2005, returns to Australia this November with 14 Majors to his name, just four shy of the all time record held by Jack Nicklaus. Provided his body holds out, the 33-year-old has a massive chance of surpassing that, as well as the record set by Sam Snead of 82 US PGA Tour titles (Woods currently has 70).

Such a rare chance for the Australian golfing public to glimpse the world's most talked about sportsman has seen ticket sales for this year's Masters explode. Within four weeks of tickets going on sale in early June, all daily passes for Friday's second round had been snapped up, while 90 per cent of final round general admission tickets were also sold out. The grandstands around the 18th will be at capacity for all four days, while tickets to the Pro-Am and practice rounds have become hot property as the potential of sell-out crowds during the actual tournament looms.

Organisers IMG have capped general admission tickets at 20,000 each day and if they sell out – and there's no reason why they shouldn't – then around 80,000 spectators could trample over Kingston Heath during the week.

Such numbers are a scary thought if you're a superintendent and all talk of the massive economic benefits and boosting the profile of the game aside, just what impact the tournament will have on one of this country's



most loved courses won't be fully known until the hordes disperse come Sunday.

Greenwood, who has been superintendent at Kingston Heath for the past 11 years, attests that crowd management is one of the club's biggest concerns in the lead-up to the tournament, especially if 10,000 out of the 20,000 expected each day decide to follow the tournament's main drawcard.

"This will possibly be the biggest golf event there has been in Australia as far as crowds and infrastructure go and that in itself is going to be a major challenge for us," says Greenwood.

"The problem we have is that Kingston Heath is a very compact course and there isn't much room. The amount of area between the fairway rope and the tea tree is going to be very small, but it's that lack of space and tightness which is what makes the course famous. It'll make for a tremendous atmosphere, but at the same time it could be detrimental to getting great throngs of people around the course.

"Over the past few months the club has, at considerable expense, undertaken a major audit of all trees on the course for crowd safety and insurance purposes given the numbers we are expecting. As a result of that we will be removing 30 trees which will free up some

space, but even with that I'm still at a loss to see how they're going to get everyone around.

"Where we don't want people to go we'll obviously rope off, but I think we are still waiting to see what's going to happen and how many people turn up. There could be a lot of damage if we are not careful and that's where we will rely on the promoters and their ability to micro-manage the crowd.

"In other tournaments, traffic can do a lot of good to certain areas such as bringing up sandy waste areas. We'll obviously have a programme to de-compact areas after the event, which you do for every tournament, but whether it will be different with all the extra people who knows.

"If it turns into an avalanche with everyone following Tiger Woods, then yes the potential for damage is very high. But if you look at the overall picture, I think from a spectacle point of view and for what this tournament can do for golf in this country, I think we'll be able to live with it."

To make things slightly easier, the routing of the course for the tournament has been altered. Unfortunately, that means the iconic par 3 10th has been overlooked with the 19th, constructed in 2003, coming into play.

The members 7th will become the tournament's opening hole, 8 and 9 become 2 and 3, while the members 11th will play as the tournament 4th. Holes 2-6 make up the remainder of the tournament front nine and the members 1st will become the tournament 10th. The 19th will play as the 11th hole before the routing returns to normal from holes 12-18.

The 10th is purely a victim of its location. Being almost in the centre of the property where a number of holes converge, the club found that during the Australian Women's Open in 2008 that having it out of play and the

19th in play meant the flow of spectators was more manageable. Whether that'll make much difference with the huge numbers expected for the Masters remains to be seen.

CAREER HIGHLIGHT

The 2009 Australian Masters is set to be the crowning glory in Greenwood's career which began nearly three decades ago at Sale Golf Club in Victoria's south east. Growing up on a farm just outside of Sale, Greenwood first got into the turf industry as a mechanic. A prodigious tinkerer and modifier of motorbikes, Greenwood had taken on an apprenticeship at a local Honda workshop, but after a few years went in search of something different.

Landing at Sale Golf Club as a mechanic/groundsman, Greenwood was then offered the opportunity to complete a turf management apprenticeship, one which he seized with both hands.

His time at Sale – he ended up taking over as superintendent in just the second year of his apprenticeship – proved to be a firm grounding for the young turf manager and with little in the way of money or equipment Greenwood learnt the art of being resourceful. Fortunately his mechanical mind came in handy and he continued to indulge his passion for modifying machinery and techniques.

From Sale, Greenwood's next move was to Melbourne where he joined John Sloan as assistant superintendent at Woodlands Golf Club, which Greenwood describes as like taking on a second apprenticeship.

Being a young raw greenkeeper from the country, Greenwood was able to refine and expand his knowledge under the guidance of Sloan, especially considering the club was undergoing a huge transformation from cool-season to warm-season fairways. ►



Kingston heath has been home to superintendent Martin Greenwood for the past 11 years



Leaving Woodlands in the late 1980s, Greenwood completed a brief stint at Kingston Heath for the 1989 Australian Open before heading to Queensland to take on the superintendent role at Gainsborough Greens Golf Club. It was while there that he met Doug Robinson who played a major role in setting up his next move which was to Thailand.

After five years in south east Asia – he also spent time in Malaysia – Greenwood returned to Victoria as a client representative for the Malaysian company backing the new Sanctuary Lakes development in Melbourne's west. Longing to get back on the tools, he then rejoined he crew at Kingston Heath under Graeme Grant. On staff for less than 12 months, Grant's reign came to an end and Greenwood was duly appointed as his replacement in 1998.

MAJOR CHANGES

Some 11 years later and Greenwood can look back on a tenure which has seen Kingston Heath maintain its status as one of the world's top courses. It has also been a time of change for the club, the most significant being the conversion of all greens from Egmont tenuous bentgrass to Penn A1 creeping bentgrass.

While the Egmont provided a pure putting surface, it was, as Greenwood describes, "extremely fickle" to work with. That, along with the significant development of creeping bents in the 1990s, proved to be the catalyst for the club to make the switch and in 2000 a test green was sown with A1.

Between 2001 and 2007 all remaining greens were converted in-house, with assistant Bob Simmonds heading up the construction crew. Simmonds has been at Kingston Heath for the best part of three decades now and Greenwood says the place wouldn't be the same were it not for Simmonds' expertise, particularly in fine shaping.

"I think it is an easier course to manage now than when I first started," reflects Greenwood. "Definitely having the creeping bentgrass has made things easier to manage, but it obviously still has its trials and tribulations. You still get

Poa and if anyone can invent a long range pre-emergent for bentgrass, I'll be the first to buy it.

"Thatch is manageable but we do groom virtually every day during the growing season. The A1's weak point is pitch mark recovery which at this time of year (winter) can be a problem. Apart from that it's not a bad grass. It doesn't get a lot of disease in this climate and with a little bit of work you can make it as fast or as slow as you want.

"I suppose the most difficult thing to manage at Kingston Heath is the standards you are expected to maintain at all times. It's fairly relentless, but I'm probably as guilty as anybody for putting that pressure on. As most superintendents know, it's the sort of job you live and getting the balance between work and family life is difficult, especially in summer.

"We have recently put on an office assistant (Prue Willingham) who looks after OH&S and our environmental management system (e-par) and that has been a huge advantage, probably more than what I initially thought it would be.

"I think the job gets easier as you get older and you gain more experience. You just don't worry about certain things. For instance with the Masters coming up you'd be tearing you hair out trying to get the rough up in November, but I've done enough tournaments now to know that it probably isn't that important because the crowds are going to be that enormous."

In the lead-up to November's tournament, Kingston Heath has undertaken a massive audit of all trees on the course



Kingston Heath's par 3 19th hole, constructed in 2005, will come into play for the Masters with the iconic 10th hole being sacrificed in order to help spectator movement

IDEAS MAN

One thing that hasn't changed during his time at Kingston Heath is Greenwood's innate sense of experimentation. Greenwood makes a concerted effort to keep up with the latest technologies, particularly spraying techniques, and you only have to look at the impressive GPS guided sprayer which resides in the Kingston Heath maintenance facility, which he designed and had built, to see that.

"I'm a bit of an ideas man," laughs Greenwood. "If I see something that doesn't work that well, rather than just accepting it I'll try and come up with a way of making it perform better. That applies to turf management as well. I've had 101 wacky ideas that haven't worked and the guys on the staff will attest to that. But sometimes you get one that does work and it makes the job a lot easier.

"I pay a lot of attention to the technical side of spray application. Top end agriculture is certainly leading the field in that regard and there's a lot of good information in other industry magazines and websites which I keep abreast of."

Applying that philosophy to the management of Kingston Heath's surfaces, one area which Greenwood has dabbled extensively in is the application of carbon. Having seen the results achieved by neighbouring Capital Golf Club superintendent Graeme Rodgers, for the past three seasons Greenwood has trialled its effectiveness at Kingston Heath. In the first two years Greenwood applied it to surrounds and tees and for the first time this winter has sprayed it on all fairways.

"From day one I think most people have thought that carbon works really well, but most have not considered it because it is so difficult to get out," says Greenwood. "It is terrible stuff to have to apply and is very hard on gear, but over the last two years I have tried different methods and come up with one that, while not perfect, I think isn't too bad.

"The results speak for themselves and have exceeded what I thought they would be, especially as far as disease suppression and colour goes. Couch has always been a good surface to play off during winter but it looks pretty ordinary and by using carbon it gives us that missing dimension.

"But it's not only about aesthetics. Sure we have green fairways which the members are very pleased about, but it is also about suppressing disease and having the fairways

ready for that green-up period come spring. During winter the Santa ana here will get a lot of patch diseases which can turn the fairways white. So if we can relieve that to a great extent, which the carbon seems to be doing so far, then we obviously have a better product.

"It is also very good at suppressing spring dead spot. While not eliminating it, the carbon does a great job of masking it. I've sprayed spring dead spot for a number of years, especially on some badly affected tees, and never had any great luck. This is the best and cheapest alternative treatment that I have come across."

PUSHING TOO HARD

While for the most part Greenwood's experimentations have come up trumps, in mid-2008 one of his ideas didn't quite go to plan.

Trialling various forms of *Poa* control on greens, an application of bensulide (pre-emergent) affected the A1 roots longer than Greenwood had anticipated and together with a combination of post-emergent herbicide, heavy traffic and a sudden cold snap, six greens (1, 2, 5, 6, 11 and 18) were left severely damaged. Unable to re-seed the greens due to the bensulide, around 2000m² of turf had to be ripped up and replaced.



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WORKS INSIDE AND OUT



Thankfully for Greenwood an understanding committee stood by him during this difficult period and while describing it as the most stressful period of his turf management career to date, he has been able to draw a number of positives from the whole experience.

"I went in trying too hard I guess," ruminates Greenwood. "It happened over a period and I was pretty confident things were heading in the right direction for most of that time. But then it got to a certain point and I knew we were in trouble.

"Obviously the club was very disappointed, but their attitude was to concentrate not on why it happened but what we were going to do to fix it. I can't praise the committee highly enough for the way they handled the situation and the way they supported me, which I think stands Kingston Heath above a lot of clubs to work for.

"Once the decision was made to re-sod the greens the stress of the situation lifted, but I still walked around with a knot in my stomach for a long time afterwards. The whole incident made me reassess my internal audits on how I go about things and for a period there I was very reluctant to spray anything anywhere.

"I'm certainly more conscious now of my responsibility to the members and to the club and how a small mistake can have massive ramifications. Now when I hear of others in the industry that are going through a similar situation you really feel for them because you know what it's like and the emotions they are going through."

TOURNAMENT FOCUS

Having had a break over winter, which saw Greenwood and his family escape to Thailand

Kingston Heath's 7th will become the tournament's opening hole

for three weeks, the focus is now entirely on the run into November. Having put the course to bed in good condition over winter, Greenwood is now hoping for Mother Nature to come to the party with a decent spring break.

While getting the Santa Ana fairways back up will be the least of his worries, what might keep Greenwood awake at night closer to the tournament are the tees. Kingston Heath's teeing grounds are generally small and cop a hammering over winter and if good spring conditions fail to materialise and recovery is slow, then Greenwood's only solution may be to fire up the sod cutter.

Elsewhere, the course's majestic bunkers have also come under some close scrutiny. Over the past couple of months Simmonds has been responsible for revetting areas that have collapsed, building up others that have deteriorated and coming up with solutions to prevent erosion.

While the course is in good shape just a few months out, finishing touches are also being added to the major clubhouse refurbishment. Adding to the challenge, Greenwood and his crew will be required to completely landscape

For the first time this winter Greenwood has applied carbon to the fairways with excellent results both from an aesthetics and disease suppression point of view

the front of the clubhouse once it is handed back from the builders.

Part of that work includes extending the members 1st tee back 20 metres and to help out Ian Todd from Victoria Golf Club is supplying a few extra hands to lay turf that will be stripped from the end of Kingston Heath's practice fairway.

As for the immediate tournament build up, staff will go six days a week about a month out, and then seven days for the two weeks leading up to the event. During the week of the tournament a few experienced staff from other courses will come in to help with bunkers and fairway mowing and not surprisingly Greenwood has had no shortage of offers.

"We'll be putting the emphasis on presenting the course in a very natural way," says Greenwood. "There's obviously a lot of hype surrounding Tiger coming, but we'll be preparing the course to the best that the climatic conditions will allow us to.

"Tournaments like this are great for bringing everything into focus and for getting jobs done. When it was announced that Tiger was turning up, well it obviously took it to a totally different level, but I don't think they (the crew) will be overawed by it – they'll be too busy for a start!

"Gregg (Chapple, general manager) and I sat down with the crew when it was announced that we were to host the tournament and ran through how we wanted to go about it and what our expectations were. We want this to be Kingston Heath's tournament and really want the staff to own it.

"Everyone is definitely looking forward to it. They are aware that it is going to be a lot of hard work, but at the same time they are excited about showing everyone just what we can do." 🌳



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Apple Isle a sweet delight for turfies

Temperatures may have been in the single digits for most of the week, but the invigorating southern air and wealth of education and networking opportunities meant delegates at this year's 25th Australian Turfgrass Conference returned home armed with fresh ideas and renewed vigour to tackle their day-to-day management challenges. ATM editor Brett Robinson looks back on a memorable Hobart gathering which proved to be special for one particular home grown superintendent.

The regional conference format again proved to be a winner following the highly successful 25th Australian Turfgrass Conference and Trade Exhibition staged in Hobart from 13-17 July. The turf industry's most anticipated gathering of the year saw more than 280 delegates travel to Tasmania for the first time since 1992, with Hobart's iconic Wrest Point providing an ideal setting for the week's education sessions and trade exhibition.

Royal Hobart and Tasmania golf clubs provided stunning and challenging tests for this year's golf events, while the likes of the famous Cascade Brewery, Wrest Point Casino and Tattersalls Park racecourse provided unique and memorable locations for the many official functions which have become such an integral part of the conference.

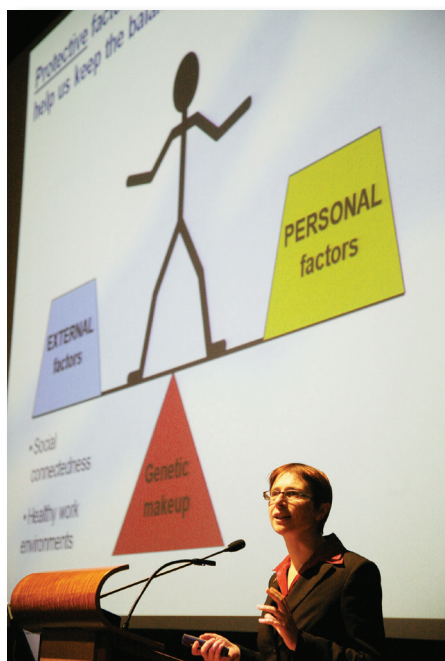
"The last time the national conference was held in Hobart was 1978," says AGCSA events manager Simone Staples. "After this year's event I don't think we'll be leaving it another 30 years to head back there. The 2009 conference was a great success and the professionalism of all the staff at Wrest Point was refreshing and went a long to contributing to the success of the event as a whole.

"Initial feedback we received from delegates towards the end of the week in Hobart was extremely positive and three weeks later that was still the feeling we got from the survey responses we received. Seventy-one per cent of delegates who went to Hobart completed the survey we sent out and the

overwhelming majority confirmed that the content and speakers were relevant for today's turf manager.

"The Beyond Blue session on recognising and managing depression in the workplace struck a chord with many delegates and the AGCSA will look at running articles and workshops to further educate the industry on this important health issue. We knew there was a need for this sort of session and I think many were surprised at how much of an issue it is and has become.

"The social functions again proved popular with attendees enjoying the casual style of the



regional conference. That was certainly the case with the Syngenta President's Dinner and we had one of our biggest turnouts in recent years. Delegates and sponsors were also happy to have the AGCSA Awards recipients announced earlier in the week which enabled the finalists and winners to get the recognition they deserved from their peers.

"Ironically, while the theme for the conference was Achieving Par, half the staff of the AGCSA were below par health-wise on arrival back to Melbourne so maybe we need a wellbeing session just for us staff next year."

Therese Fitzpatrick's two-hour workshop on managing depression in the workplace and how to cope with this debilitating illness generated a huge amount of discussion both during her presentation and for the remainder of the week. The interactive style of the workshop, like that of the bunker management and budget management workshops that followed later in the week, again proved a hit with delegates and the best of generating discussion and debate.

The bunker management workshop proved an eye-opener for one particular delegate – Tyrrell McGeever, chairman of facilities from Mount Martha Estate (Safety Beach Country Club) on Victoria's Mornington

The Beyond Blue workshop facilitated by Therese Fitzpatrick was one of this year's most talked about sessions, generating widespread discussion on depression in the workplace and how to address such issues if they arise



Golf icon Peter Toogood stepped back in time to give a fascinating account of Australia's dramatic 1958 Eisenhower Trophy victory at St Andrews

Barnbougle Dunes. A new initiative for this year's event, around 30 hardy souls braved wintry conditions to battle the Barnbougle beast, including Toro's Mariska Thynne who had the dubious honour of losing around 30 golf balls to the mountainous marram covered dunes.

While the golf provided a stern challenge, just getting to Barnbougle proved an ordeal in itself for WA-based quartet Des Russell, Doug Rowe, Simon Bourne and Callum Hitching. Booked on the Thursday night red-eye from Perth to Melbourne, the plane they were due to fly on was struck by lightning upon landing in Perth that afternoon. The flight was duly cancelled and only after some passengers kicked up a stink on local radio, that another flight was organised.

Missing their connecting flight to Launceston, the foursome eventually arrived at Barnbougle Dunes midnight Friday, some six hours after the rest of the tour party and more than 30 hours after leaving home!

The pre-conference tour also stopped off in the highlands town of Bothwell which is home to Australia's oldest operational golf course Ratho Golf Links. There Greg Ramsay, whose family own the property on which Ratho resides, and 'keeper of the green' Ross Baker took the group on a walk around the course before giving them the opportunity to play the course with hickory shafted clubs.

Ratho was also the final stop on this year's post conference tour, which included visits to Bellerive Oval (curator Marcus Pamplin) and StrathAyr's expansive Richmond facility just out of Hobart where managing director Frank Casimaty outlined the company's many and varied operations.

Peninsula. During the open session discussion at the conclusion of the workshop, McGeever took the floor and thanked the workshop facilitators John Neylan, Daryl Sellar and Richard Chamberlain and the audience for shedding some much-needed light on the costs associated with bunker maintenance, information he would now take back to his committee to enlighten them with.

McGeever's attendance alone was praised by many and raised the question of whether greens chairmen and committees be invited to attend future workshops, such as the one on bunker management, to get a much better understanding of the costs and effort involved with certain aspects of golf course maintenance operations.

AGCSA president Allan Devlin also drew a round of envious applause for his seeming

simplistic yet somewhat radical means of approaching bunker maintenance. For the past couple of years Devlin has taken to removing all rakes from bunkers at his Secret Harbour course in WA. While acknowledging such a system would be impractical at many clubs, according to him the new regime has worked a treat. The idea certainly pricked the attention of many and a number commented afterwards that they were looking at following Devlin's lead upon their return. **(See this edition's instalment of The Pulse, pg 38-39, for more feedback in relation to the conference and what delegates took out of this year's event).**

TOURS DE FORCE

For a few of this year's delegates, the conference started earlier than usual with the AGCSA organising a pre-conference tour to

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TOOGOOD MAKES IT THREE

Commercial Golf Club superintendent Anthony Toogood kicked off his conference week in true style by collecting his third Toro AGCSA Golf Championships at a damp Royal Hobart Golf Club. Toogood fired back-to-back 37s for a final two-over par 74, to beat home Andy Hugill (Mona Vale Golf Club) and Damien Murrell (Hawks Nest Golf Club) by a single shot. Toogood becomes the second superintendent behind South Australia's Daryl Sellar to win three Toro Red Jackets and adds to those won at Indooroopilly Golf Club in 1998 and Metropolitan in 2004.

Some practice rounds at Royal Hobart in the week leading up to the tournament

obviously paid dividends for the three-handicapper, but in his acceptance speech it became apparent it was his father Peter, a member of the triumphant Australian team to win the inaugural Eisenhower Trophy in 1958, who had played a major role in his success.

Toogood divulged that just months earlier he was struggling to even get the ball off the ground, but thanks to some advice and work on his swing courtesy of Peter, his game had come right. Fittingly, Peter was on hand at Royal Hobart to see his son collect the trophy.

What made this year's win even more special for Toogood was the substantial prize he picked up from tournament sponsors Toro. At the previous evening's Toro golf function

2009 Toro AGCSA Golf Champion Anthony Toogood with Toro's Richard Walne (left). At right is champion Tasmanian axeman David Foster who proved a larger than life guest speaker at the presentation lunch during which he demonstrated some of the talent which has seen him collect an incredible 183 world woodchopping titles

at Cascade Brewery, Toro's Richard Walne announced that the winner of this year's event would be flown to the US to take part in the GCSAA's Golf Championships which is played over three rounds.

With that incentive getting the competitive juices flowing, a full field teed up the following morning. Given the amount of rain the course had coped in the weeks and months leading up to the event, superintendent Stephen Lewis, Assistant superintendent Gareth Kelly and the crew had the course in superb condition.

After below average rainfall in previous winters, Royal Hobart had copped 185mm from the end of May to the middle of July (142mm of that fell in June, which was nearly double what the course had received for the first five months of 2009).

With a shallow water table, and a few extra millimetres precipitating on the night before the tournament just for good measure, a number of the course's bunkers resembled swimming pools and local rules were in force on seven holes. The damp conditions also meant little run on the fairways and it was no surprise that Toogood's winning score was a few over par.

Defending champion Steve Harris (Gold Creek Country Club), who was also gunning for this third Red Jacket, had shot par around Royal Hobart the day before, but that form eluded him when it counted and a five-over 41 on the front nine scuppered any chance of a three-peat, despite coming home in 36.

Former winners Trevor Ridge and Steve Jacobsen could only manage 79s, while Paul McLean from Royal Pines Resort was left rueing a front nine 43 after storming home with a one-under 35.

The 2009 stableford title headed back to Royal Sydney Golf Club after assistant superintendent Shane Bromfield, playing off a handicap of 15, posted an impressive 39 points. Bromfield was consistent on both nines, picking up 20 for the front and 19 on the back. Remarkably he had three wipes on 6, 11 and 16 but made up for those with birdies on 12 and 18, the latter giving him four points.

Bromfield finished ahead of 2007 stableford champion and Gold Creek assistant superintendent Scott Fogg who fired the best round of the day, a one-over par 73. Fogg, who plays off a 2 handicap and started on the 7th, began his round birdie-birdie (including a two

2009 TORO AGCSA GOLF CHAMPIONSHIPS – ROYAL HOBART GOLF CLUB

STROKE

- 74:** Anthony Toogood (Commercial GC)
- 75:** Andy Hugill (Mona Vale GC) and Damien Murrell (Hawks Nest GC);
- 77:** Scott Harris (Gold Creek GC)
- 78:** Paul McLean (Royal Pines Resort)
- 79:** Steve Jacobsen (Carnarvon GC); Jason Seis (Mudgee GC); Kenton Boyd (Magenta Shores); Trevor Ridge (Sawtell GC)

STABLEFORD

- 39:** Shane Bromfield (Royal Sydney GC)
- 37:** Scott Fogg (**best round of the day 73**); Darren Harvey (Corowa GC)
- 36:** Chris Neal (Bonville International)
- 35:** Shane McDonald (Oxley GC)

STATE TEAMS TITLE

- 148: NSW** (Shane Bromfield 39, Darren Harvey 37, Damien Murrell 36 and Andy Hugill 36)
- 140: QLD** (Robin Doodson 36, Shane McDonald 35, Brad Beetson 35 and Peter Smith 34)

137: ACT (Scott Fogg 37, Andy Heskett 34, Jason Ferry 34 and Scott Harris 32)

Nearest the pin: Duncan Lamont (.94cm)

Longest drive: David Hobday

TWOS

- 4th:** Simon Bourne, Andy Heskett
- 8th:** Steve Jacobsen, Mark Findlay, Scott Fogg, Bryce Strachan
- 11th** Justin Sheehan, Duncan Lamont, Shaun Probert
- 15th:** Robin Doodson

2009 TORO AGCSA SCRAMBLE – TASMANIA GOLF CLUB

- 1st:** Henry Young, Jon Penberthy, Darach Connolly and Andrew Peart: 58.75 (8.25)
- 2nd:** Tim Elligate, Chris Blagg, Adam Lewis and Daniel Docherty: 59.25 (7.75)
- 3rd:** Luke Kennedy, Terry Barr, Neil Taylor and Matt Roche: 59.875 (7.125)

Hole-in-one: Henry Young (18th)

Nearest the pin: Jon Penberthy

Longest drive: James Stewart

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on the par 3 8th) and finished his round at the 5th with another birdie. Unfortunately bogeys at 5, 14 and 15 cost him and he finished with 37 points for the day.

The state teams title predictably went to NSW, who wrestled the title back from last year's surprise victors Queensland. Anchored by Bromfield, Huggill, Murrell, Harvey, NSW finished eight points clear of Queensland and 11 ahead of third placed ACT.

HOLE-IN-ONE HEROICS

Talk of the day, however, came across at Tasmania Golf Club (superintendent Danny Gilligan) where 10 teams vied for the inaugural Toro AGCSA Scramble.

In a spectacular end to the event, which replaced the former AGCSA Corporate Cup, Secret Harbour irrigation technician Henry Young holed out on the uphill par 3 18th to hand his team a miraculous victory by half a point.



Young, who has one other hole-in-one to his name and plays off an 18 handicap, pulled out his driver on the 165m hole and smashed a low shot on to the green. Feeding off the tier, the ball rolled straight down into the cup.

The Toro AGCSA Scramble at Tasmania Golf Club proved to be a memorable one for Henry Young who nailed a hole-in-one on the 18th

Ironically, the group immediately in front, containing Chris Blagg, Adam Lewis, Tim Elligate and Daniel Docherty, witnessed the feat also and it proved to be the shot that snatched victory away from them. They finished with a nett 59.25, however, the hole-in-one meant Young and his team of Jon Penberthy (DEED), Darach Connolly and Andrew Peart (AGCSA) finished with a five-under back nine total of 32 to post a nett score of 58.75.

In a change from previous years, the Championship and Scramble fields combined for the presentation lunch at Royal Hobart which featured larger than life guest speaker David Foster. With 183 woodchopping world titles to his name, the highly entertaining Tasmanian recounted some of his successes before giving the enthralled gathering a taste of his precise and powerful axemanship. 🌿

Bringing it all **together** - Conference Planning 101

Organising and running the annual Australian Turfgrass Conference is a major undertaking. Here AGCSA events and education manager Simone Staples provides an insight into some of the key considerations when mapping out the turf industry's largest annual gathering.

"The planning for each Australian Turfgrass Conference starts at least 24 months prior to the scheduled event as destinations and venues need to be inspected and negotiated prior to booking.

The main criteria when choosing a conference destination is proximity to an airport, the regularity of flights from major centres and accommodation (ground) costs. Once we have established a number of destinations that fill these criteria, it is necessary to find a venue that suits our needs. This venue must have suitable rooms for conference education sessions as well as space in which to hold the trade show.

When an appropriate venue is found negotiations start in regards to cost. The AGCSA Board has determined that the education sessions should cover the expenses it raises and that a break-even position should be achieved. The AGCSA does not seek to profit from those who attend as a fully registered delegate and the registration fee for any given conference is set using this premise.

A draft budget is drawn up using costs from previous years as a guide, CPI increases



and venue costs. A per head amount is calculated and this becomes the online Early Bird rate. Taking advantage of this rate means that delegates can register for the conference at, or in some cases below, the actual conference cost price.

This is also the case with our social functions held during the week. The AGCSA Golf Championships, Welcome Reception and President's Dinner cost substantially more to host than the ticket price. Sponsorship is the only reason we can keep costs to a sustainable amount.

A huge amount of preparation goes into organising the annual Australian Turfgrass Conference with a number of criteria needing to be met to ensure the successful running of each event

Speakers' expenses also play a part in the overall cost of the conference and the need for international speakers is often raised. The AGCSA takes the view that while the Australian turf industry may have its own particular needs, it also requires diversity of ideas and innovations. The injection of the latest international techniques, research and observations create lively and animated discussion.

In the most recent conference survey results, two of the most popular sessions were the bunker management and Beyond Blue workshops. Both these were organised as a result of being the most requested subjects to be covered after last year's conference feedback was analysed.

Another area of note in this recent survey was the amount of suggestions to have a conference in the Northern Territory. This destination has been looked at, however, with limited flights from most capital cities, very high ground costs and a limited number of options for the golf events the destination has been put aside. In the present climate, holding a national turf conference in the desert does not fit into our strategic plan at this time."



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JOHN DEERE



Top: The 2009 Toro AGCSA Golf Championships and Scramble field numbered over 130

Above: Newcastle's Matthew Goodhun takes a punt at the Scotts gaming function

Above right: The Trebro goes through its paces at StrathAyr



Above: Sanctuary Cove's Robin Doodson blasts out of a Royal Hobart trap



Right: World champion axeman David Foster sharpens his act at the Toro AGCSA Golf Championships presentation lunch

Tassie a **treat** for the trade

Not since 1978 had a national turf conference set foot in Hobart and the Apple Isle didn't fail to impress. From host venue Wrest Point to Australia's oldest operational golf course Ratho Golf Links, the 2009 gathering exceeded all expectations and again set the benchmark for future regional conferences.



A copper and a few well-known convicts dress to impress at the Bayer Welcome Reception

Main photo: Royal Hobart Golf Club played host to a full field for the 2009 Toro AGCSA Golf Championships

Right: Royal Hobart superintendent Steve Lewis failed to disappoint at this year's Bayer Welcome Reception



Don't let the garb fool you. AGCSA events and education manager Simone Staples knows how to organise a good time



Australian amateur golf icon Peter Toogood was on hand at Royal Hobart to watch as son Anthony collected his third Toro AGCSA Golf Championships trophy

Main photo: StrathAyr's impressive Richmond farm was one of three stops on the post-conference turf tour

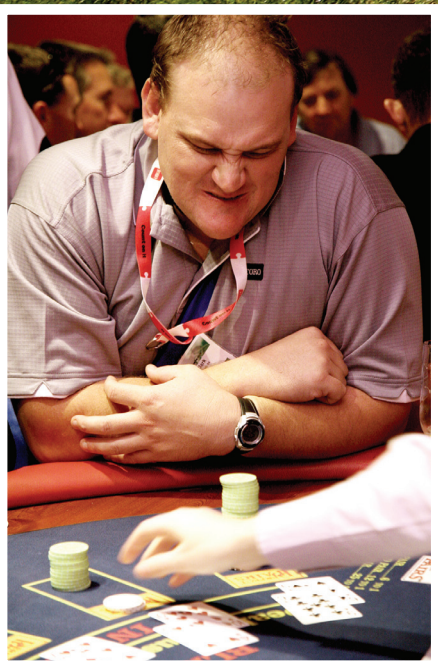


Top: Daryl Sellar again proved one of the conference's most popular presenters, in particular his insights during the bunker management workshop

Above: Jon Penberthy lines up a putt during the Toro AGCSA Scramble at Tasmania

Left: Greg Ramsey showcases Australia's oldest course Ratho during the post-conference tour

Far left: The cards fail to fall the way of Mount Gambier superintendent Brendan Clark at the Scotts function



Having a ball at the Bayer do



Hobart highlights

Achieving Par was the theme for this year's conference with a number of personal health and wellbeing sessions proving popular. After hours the range of social functions – from the convict themed Bayer Welcome Reception to the Scott's gaming night – were always well attended, while at Royal Hobart Golf Club Anthony Toogood triumphed in damp conditions to win his third Toro Red Jacket.



Above: Indoороopilly's HR man Jon Mathias proves that SEIS does matter

Right: Hobart's household name was the perfect setting for the Toro golf function





A distinguished career honoured

BY BRETT ROBINSON

The past six months have been pretty overwhelming for former AGCSA president Peter Frewin. Departing Barwon Heads Golf Club after 21 years as superintendent and taking on a new role within the trade, it has been a time of great change. To top it all off, at the recent 25th Australian Turfgrass Conference in Hobart he was bestowed the industry's highest honour – the 2009 AGCSA Distinguished Service Award.

Scotts



The tears said it all. As a humbled Peter Frewin tried to fight them back during his acceptance speech at the 2009 AGCSA Awards presentation ceremony, few in the room would have doubted what receiving this year's AGCSA Distinguished Service Award meant to one of the industry's most respected golf course superintendents.

The AGCSA's highest honour, the Distinguished Service Award capped off what has been an emotion-charged past half year for the 47-year-old. After nearly 21 years establishing Barwon Heads Golf Club as one of the country's premier golfing facilities, Frewin shocked many by leaving the club in June before embarking on a new career as a turf business consultant with Globe Australia. That decision brought to an end a career at the turf management coalface of nearly three decades, during which time he also played an

influential role in progressing the industry at both state and national levels.

Bestowed by the AGCSA Board, the Scotts-sponsored Distinguished Service Award recognises an individual who has left an indelible mark on the profession. Whether it's their turf management expertise, contribution to research and education, or tireless work with the state or national superintendent association executives, the award pays tribute to someone who has dedicated their time furthering a profession they are passionate about. Frewin unquestionably ticks all those boxes and in collecting the 2009 award he joins a who's who of the Australian turf management industry, becoming the fourth Victorian recipient since the award was inaugurated in 1997.

"When you start out in any line of work you don't think about these things and you certainly don't go about seeking them," says Frewin, who only in May was also bestowed life member status with the VGCSA. "I'm a pretty passionate person in whatever I do and

Frewin fights back the tears after receiving the Distinguished Service Award in Hobart

2009 AGCSA Distinguished Service Award winner Peter Frewin (centre) with AGCSA president Allan Devlin (left) and Scotts Australia's David Westall

I guess I have been through quite an emotional period of my life recently. A lot of people's midlife crisis is to grow their hair long and buy a Harley. Mine was to throw my job in after 21 years and start afresh!

"So to be recognised by your peers and the AGCSA, an organisation which holds a special place in my heart, was very special. It's also an honour to see your name up there with some of the household names of the Australian turf industry, and to be honest you don't think you deserve to be alongside them."

COUNTRY LAD AT HEART

Frewin's transition to his new role with Globe is yet another chapter in a highly diverse and influential career which started at Cheltenham Golf Club in February 1981. Born in Bendigo and growing up with a love for golf, Frewin came to Melbourne in his late teens and took on an apprenticeship at the small nine-hole public course, first under Rob Little then Colin Foster.

"As I tell everyone, I'm a pretty big bloke and as much as I would have loved to have

been a professional golfer, there was no guarantee of actually earning money to buy food, so that wasn't an option," laughs Frewin. "I had to find the next best thing so I applied for a job as an apprentice."

Cheltenham provided a solid grounding in turf management, particularly how to deal with wear and tear given the hammering the course received, and after finishing his apprenticeship Frewin headed back to the country. A six month stint at Maryborough Golf Club followed before a senior greenkeeping position came up at Rich River Golf Club.

There he worked under superintendent Phil Knight who at the time was overseeing the construction of the new East Course. Knight would eventually move on to The Lakes Golf Club and not long after Frewin followed suit when his former boss offered him the vacant assistant position.

Shacking up with three other greenkeepers – one from The Lakes and two from Bonnie Doon Golf Club – Frewin had a memorable two years in Sydney honing his turf management skills on one of the country's most exclusive courses. Highlight of his time there – apart from living with three other single, male turfies – was being involved in getting the course up in just three days for the 1987 PGA Championships.

The Lakes was called upon at the eleventh hour to host the tournament after Liverpool Golf Club suffered severe flooding.

Having cut his teeth at The Lakes, in 1988 Barwon Heads advertised for a superintendent and Frewin eagerly applied. Having spent his holidays at nearby Point Lonsdale as a kid and having played the course a few times, Barwon Heads had always appealed. Little did Frewin know then that it would end up becoming his second home for more than two decades.

"Barwon Heads has always been a golfer's golf course and being a golfing traditionalist it had always appealed to me," says Frewin. "It wasn't in great condition when I first arrived but it had so much potential. Around the same time I arrived there Martin Stolz (club professional) and Andrew Davis (manager) joined as well. We were all around the same age – late 20s – and we all had a very good vision of where we wanted to take the course in order to show its true potential."

"The course had been neglected and was overgrown in parts. We began to maintain it as a golf course to start with and embarked on a major tree removal programme. From there we fine-tuned the playing surfaces and did some reconstruction. Once the playing surfaces were to a standard we wanted them at we then




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Barwon Heads Golf Club was Frewin's home for nearly 21 years during which time he played a major role in transforming it into one of Australia's most respected courses

started on things like irrigation systems and maintenance sheds. Looking back, we took it from a little country course to one that is now well established and admired not only in Australia but the world over."

While the playing surfaces now rate among the best in Australia – the course ranked 29th in Australian Golf Digest's Top 100 Courses rankings in March 2008 and was 8th in the 2009 Top 100 Public Access Courses ratings) – Frewin's principal legacy comes in the pioneering work he and the club made in relation to water treatment and management.

The club invested significant amounts of money in developing the use of recycled water for irrigation and was part of a major five-year Horticulture Australia-funded AGCSA trial which examined the effects of recycled water use on *Poa* and bentgrass turf. Following on from that Frewin also oversaw the installation of a Reverse Osmosis plant and harnessed the club's ability to harvest stormwater.

"Our goal was to have the course set up so that we had three avenues of water at all times, effectively drought-proofing the place," says Frewin.

"It was very interesting to go through all the processes and very rewarding to see the positive outcomes for the course. We embarked on a couple of cutting edge projects at the time and they were a great learning curve not only for us but the industry as well."

LEADING THE WAY

As well as overseeing many improvements and innovations at Barwon Heads, Frewin also found time during his tenure to be a highly influential figure outside of his superintendent role. Over a 10-year period Frewin stamped his mark with both the VGCSA and AGCSA and for his efforts was awarded an Australian Sports Medal for services to administration of a sporting body in 2000.

Frewin's involvement at a state level began in 1992 when he joined the VGCSA committee. Following Darren Cribbes departure in 1993, Frewin took the reins as president, a role he held until stepping down in 1997. (During his time as president, Frewin was also a member of the TGAA committee, and between 1994 and 1998 was on the Victorian Golf Association's Turf Advisory Committee.)

Through his involvement with the VGCSA, Frewin attended regular state association meetings with the AGCSA and in 1997 put his hand up to join the national executive. Taking



over from Wayne Hinton as president, Frewin joined the AGCSA at what was an uncertain time for the association, but with a new-look committee comprising Mark Couchman, David Scaife, Craig New and later on Peter Schumacher, they set about turning the association around for the members.

Their first major decision was to start up the AGCSA's own publication Australian Turfgrass Management journal, severing ties with Golf and Sports Turf which up until then had been a joint effort between the association and Glenvale Publications. From there the board embarked upon setting up its own technical division, and after securing the services of John Neylan to head up the service, AGCSATech was born in 2000.

"It was a great learning experience and I got a good appreciation of the industry as a whole," says Frewin of his time on the AGCSA Board. "I certainly got more of an appreciation for the trade and in all honesty probably helped me to end up where I am now.

"Starting Australian Turfgrass Management was quite daunting and was a huge learning curve. We wanted to have something of our own and you only have to see where it is at now – it is the industry's premier turf magazine. Setting up AGCSATech was a major step and to be honest it would never have got off the ground if we hadn't got John Neylan. Regardless of whether it made a profit, we felt it was a good member service to provide.

"In hindsight some of the decisions we made during that time alienated a few people and fractured a few friendships, but we made those calls because we thought it would benefit the members, not just certain pockets of the industry."

While Frewin can look back at the times at Barwon Heads and AGCSA with plenty of pride and satisfaction, he is now looking firmly ahead to the new challenges which his new role with Globe will now present him. Although having no intention of heading into such a position when he resigned from Barwon Heads, Frewin says it has given him a new lease on life and a further appreciation of the turf industry.

"It was a terrible decision to make to leave Barwon Heads Golf Club, but in my own mind I knew it was the right one to make," says Frewin. "Being the age I was, if I left it any later it was going to be hard to break into something else. Even though I have a real passion for the industry, doing what I'm doing now, I can't see myself going back as a superintendent.

"The thing I have really enjoyed is being able to switch off at the end of the day. You're not the mentor for 12 staff any more and you don't have to worry about the many issues which are part of the job these days, particular those which we were never trained in. The job is far removed from turf management now and it's no longer just about maintaining surfaces.

"I'm very happy with the new role and the challenge that it presents. It's been like a renewal. I'm still speaking to the people that I enjoy speaking to and working in an industry that I love, but it's just seeing things from a whole different perspective. I'm enjoying going to different facilities – bowls clubs, councils, schools – and seeing what they do. And I'm learning so much. Having just gone through training with the likes of Syngenta and Bayer, I have picked up so many new ideas. Now when I think back to when I was at Barwon Heads there would certainly be things I would have done differently if I'd known what I do now." 🌱

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Hugill brings Mona Vale up to par

Andy Hugill admits he was your typical “cocky” kid back when he got his first taste of the turf management game in the UK. Taking on an apprenticeship at Whitby Golf Club in the county of Yorkshire, Hugill thought he knew everything, especially seeing he was handy with the sticks.

He soon met his match, however, in the form of Whitby’s sagacious head greenkeeper Ian Lavelle who quickly sorted the young Hugill out and taught him a few honest truths about what he would need to make it in the profession. Lavelle’s words and work ethic obviously resonated with Hugill and more than 20 years later he can now claim to have reached the top of his profession, albeit on the other side of the world.

Having completed his apprenticeship at Whitby, Hugill departed England’s shores as a fearless 19-year-old and went to work at the Colony Club Gutenhof in Vienna, Austria where he would stay for five years. It was then that Hugill decided to move to Australia and was fortunate to catch a break at one of the country’s elite courses – New South Wales Golf Club. After just eight months he was appointed assistant superintendent under Gary Dempsey and would remain there for five years before moving across to Eastlake to take up his first superintendent posting.

In 2003, Hugill applied for the top job at Mona Vale Golf Club and was duly appointed. Hugill knew he was in for a challenge and the Board of the day presented him with a single goal – “Within five years bring the quality of the golf course to a level where it is generally recognised as the best conditioned on the northern beaches of Sydney”. Over six years later and with the 2009 AGCSA Excellence in Golf Course Management Award as proof, it is fair to say that Hugill has met and exceeded those expectations.

Since arriving from the UK in 1996, Andy Hugill has progressively made his mark on the turf management industry Down Under. However, it has been during his tenure as superintendent at Sydney’s Mona Vale Golf Club that Hugill, who was bestowed the 2009 AGCSA Excellence in Golf Course Management Award, has shone.



JOHN DEERE

FINE-TUNING OPERATIONS

When Hugill arrived at Mona Vale he found a tired course, a membership that was unhappy with its conditioning and declining numbers of public green fee players. Over the years Hugill and his course maintenance team have undertaken major drainage works, enhanced the playability of the kikuyu fairways, improved the management and presentation of the greens, as well as instituted a tee resurfacing programme. On top of this a new irrigation has been installed and extensive rehabilitation of the course’s sensitive wetlands undertaken.

Hugill’s first major concern was drainage. Being in a low-lying area subject to flooding, several holes used to become unplayable during periods of wet weather. Balls plugged in the fairways and were frequently lost in the waterlogged rough, while cart usage was severely restricted. The kikuyu fairways suffered and where water pooled for prolonged periods turf loss was common. Even in mid-summer it was sometimes necessary to play preferred lies. Hugill and his team set about rectifying drainage issues on three of the worst holes and for the first time employed a verti-drain across all fairways which had the desired effect.

As a result of drainage issues, the general health of the kikuyu fairways was also poor with severe fungal outbreaks common in

summer which would leave large patches of fairway without cover. This was one of Hugill’s prime KPIs set by the Board and they expected the condition of the fairways to improve substantially, at least to a level comparable with neighbouring courses.

Academics from the University of Sydney were sceptical of achieving an improvement and recommended conversion to couchgrass as a permanent solution. The club considered the cost of such a conversion, and the disruption to play, were too much to contemplate. To remedy the club’s issues Hugill instituted a yearly programme of scarifying and verti-draining. In addition, he amended the fertiliser and irrigation routines to improve the health of the turf.

While the fairways were a major focus for Hugill the greens have also come under close attention. The greens had always been of a good standard before Hugill arrived, but they lacked in general presentation. There were no formal collars separating the green from the surrounds of the fairway and kikuyu encroachment was becoming an issue. Following Hugill’s recommendation, all greens now have a 1.5m collar of Santa ana couch to act as a barrier to the kikuyu which also adds to the presentation of the green complexes.

Prior to Hugill starting the club had started a programme of converting its kikuyu tees

Since arriving at Mona Vale Golf Club in 2003, Andy Hugill has overseen a raft of changes which have improved the management, presentation and sustainability of the course

to couch, however, they struggled to thrive. Hugill's solution was to resurface the tees already converted to couch with washed turf instead of solid turf. The programme was extended to all tees and just one complex is left to be converted.

Perhaps the biggest change, which has resulted in a much more sustainable course, was the installation of a new irrigation system. The existing system was becoming a drain on resources, so much so that one qualified member of staff was assigned to continually repair the system. Potable water was also used to irrigate all greens and tees, at a cost of around \$30,000 per annum.

Hugill supervised the installation of a new irrigation system in the winter of 2007, with the project completed on time and on budget. The club secured a Federal Government Community Water Grant of \$250,000 to help fund the replacement system and Hugill was an integral member of the team that put the application together. The grant also included extensive rehabilitation of the course's wetlands and as a result of this work the club no longer relies on potable water. The new system saves the club a total of \$80,000 per annum.

As evidence of the significant enhancements made by Hugill and his crew, the course was chosen by the NSW Golf Association to host the 2005 NSW Champion of Champions tournament and the 2007 NSW Amateur Championships, while in 2008 Golf Australia chose Mona Vale as venue for the



Australian Colts Teams Championships. Most recently it was selected to be one of the Sydney courses for the 2009 World Masters Games golf tournament to be held this October.

"The challenge we set Andy when he first joined Mona Vale was in the context of some well-established golf courses in the area which enjoy a reputation for high quality," says Mona Vale greens chairman Jim O'Ryan. "The directors of the Board considered the challenge a significant hurdle for Andy, one that privately we doubted he could achieve."

"Now, with six years behind us, we have reason to believe Andy has achieved that objective. The fairways are in the best playing condition in living memory and are now clearly the equal of any course on the northern beaches of Sydney.

"With the major tournaments we have held in recent times, the organisers have been very pleased with the selection of the course and at the completion of the events everyone has been lavish in their praise for the course and the efforts of Andy and his staff.

Mona Vale course staff and members during wetland system rehabilitation works

2009 AGCSA Excellence in Golf Course Management Award winner Andy Hugill (left) with his Mona Vale crew

"What makes Andy's accomplishments more meritorious is that he has been constrained when it comes to capital expenditure. Like many golf clubs, Mona Vale does not enjoy large cash reserves and rather than buying new machines he has had to make do with second hand units on occasions. Fortunately Andy is a canny negotiator when it comes to purchasing."

OFF COURSE CHANGES

While the course has been Hugill's prime focus since, the all important HR side of a superintendent's role has also been high on his agenda. With many practices non-existent when he arrived at Mona Vale, Hugill has been able to institute:

- Formal position descriptions for each groundstaff role;
- Formal half-yearly reviews of staff performance;
- A straightforward bonus system for all staff based on performance reviews; and
- A more refined KPI format for the senior staff.

Outside the club, Hugill has also been heavily involved with the NSW Golf Course Superintendents Association. The immediate past president of the association, a post he held for two years (2006-2008), Hugill served a total of six years on the NSWGCSA committee before stepping down. In among all this he somehow found the time to get married and have three children as well! 🌱

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It's easy being green

Winning the 2009 AGCSA Claude Crockford Environmental Award is just reward for Yamba Golf and Country Club course superintendent Andrew

Smith who over the past 18 years has proven you don't need a big budget in order to be proactive when it comes to effective golf course

syngenta environmental management.



Located at the mouth of the Clarence River in northern NSW, Yamba Golf and Country Club (YG&CC) is sited in a tea tree wetland between the ocean and sensitive river estuary. Home to course superintendent Andrew Smith for 20 years, the past 18 as superintendent, such a location has meant that management practices are focused on ensuring the optimum health of the local estuarine system as well as protecting and enhancing the course's native wetland.

YG&CC consists of 1.7 hectares of 328 greens and collars, 1ha of tees and 13ha of fairways, which are predominately Queensland Blue couch. Smith oversees six staff which includes assistant Mark Ryan, a turf technician, three apprentices and an indigenous trainee.

Due to a mediocre budget, long-term policies have been adopted to realise many of the club's goals and a number of environmental management strategies have or are being implemented to ensure the course has a minimal impact on the environment. The club's main environmental goals are:

- Not allow anything to run off into the river's estuarine system;
- Have nothing pollute the high ground water;
- Not allow any activity on the golf course to have an impact on the general community;

- To protect and enhance the native wetland of the course;
- Develop and implement the club's EMS (i.e.: e-par); and
- Reduce pesticide and fungicide usage.

GOING BIO

One of the major strategies that Smith has overseen is the implementation of a biological programme.

As Smith quips, in the past the club's 6th green made the cover of the now disbanded ATRI magazine for some of the worst spring dead spot seen in Australia. However, reverting to a biological programme and reducing fungicide applications to twice a year, the course's greens, and the 6th in particular, now have minimal evidence of the disease.

Progressing from a preventative to a biological programme has seen a reduction in fungicide application of around 85 per cent, as well as an estimated reduction in cost of around \$12,000 per hectare. Graham Scobie, while studying his Masters in Turf Management, also observed that as a result of the biological programme bacteria in the greens help to suppress dollar spot, fusarium, curvularia and rhizoctonia.

Other benefits of the YG&CC biological programme include:

- No spraying for parasitic nematodes for the past nine years;
- Water applications and volumes have been reduced;
- Wetting agent requirements have been reduced by two thirds;
- Through biological activity less grooming and de-thatching is required; and
- Fertiliser applications are reduced by 15 per cent.

"Not only does the biological programme significantly reduce the chances of polluting or having a negative effect on the environment, but also it reduces the cost of maintaining the greens and adds to the sustainability of our business," says Smith.

By researching and trialling adjuvants at different rates, Smith has also been able to halve the rate of herbicides to achieve a result equal to using the product at full rate. Growth regulators help to reduce the club's carbon emissions by not having to run mowers as often while less grass clippings means there is less chance of polluting waterways.

With a high water table, and numerous ponds and drains, only quality slow- or controlled-release fertilisers are used on tees, fairways and occasionally greens. Along with the regular foliar feeding of greens with small amounts of fertiliser, this stops and helps prevent run off and leaching.

GREEN SCENE

Since arriving at Yamba two decades ago, Smith has actively encouraged the development of wildlife corridors and regeneration areas through planting and establishing no-mow areas. Dead and dangerous trees are removed and replaced and a 'natives only' policy as been established for all new gardens. The gardens have helped to enhance the club's native bird and fauna population which includes kangaroos, nesting lorikeets, blue cranes, tawny frogmouths, ospreys and blue wrens. Other migratory birds include the majestic yellow crested cockatoo.

2009 AGCSA Claude Crockford Environmental Award winner Andrew Smith





Despite operating within some tight budgets, Yamba Golf and Country Club has implemented a number of environmental management strategies to ensure the course has a minimal impact on the environment.

standard aerators have been installed and microbes added to the pumping pond. An example of this is the use of barley straw in the pond which (assistant superintendent) Mark researched and installed.

"We are also in the process of upgrading the control system to a radio wave, solar powered satellite system. By going solar the club is further reducing its carbon footprint and with no need to trench in power cables there is no chance of digging up acid sulphate soils, disturbing native vegetation or in the future causing harm to someone or something through electrocution."

Over the past 11 years the club has worked with the National Parks Department to stage an annual cane toad round up each February. Between 1000 to 3000 toads are collected every year which not only helps to reduce the course's population but also educates the public on what a cane toad looks like, how to handle them and how to dispose of them. Around 350 people attended this year's event.

Following the Warringah Golf Club pesticide spill in Sydney in 2001, Smith undertook a plan of action to prevent any chemical and washdown residue from reaching the main drain that runs behind the club's maintenance facility and into the estuary. Due to budget restraints much of the work involved fine-tuning procedures and renovating the existing maintenance facility. At a reasonable cost YG&CC has been able to meet the required

With the assistance of federal government grants the club has been able to undertake major works to the course's irrigation system and pumps which has seen radical improvements in water management practices

regulations and was used as a venue for the NSW chemical spill training workshop conducted by the AGCSA in 2005.

LOOKING AHEAD

Some of Yamba's future projects include using recycled water to wash the club's golf carts and converting fairways to 100 per cent Queensland Blue couch because of its suitability to the region's climate. With its reduced fertiliser requirements and less need for weed and disease control, Smith says converting to such a variety is a more sustainable option for the club. Also, Smith is eyeing up a new CDA unit to replace the existing sprayer to further improve application efficiencies.

"It has been a very interesting challenge to change and improve the infrastructure and maintenance practices on the course to minimise the impact our operations have on the surrounding environment," says Smith. "This would not be possible without the hard work, collaborative teamwork and support of present and past staff, management and directors."

"I would like to thank the AGCSA for presenting the Claude Crockford Award and Syngenta for sponsoring it. Without sponsors like Syngenta the awards would not be possible and by using products such as Primo Maxx sensibly they help to minimise our impact on the environment. I would also encourage other superintendents to look at their cultural practises and apply for the awards as it has been a very rewarding experience." 🙌



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BY BRETT ROBINSON

From swinging spanners to **tending** turf

When Wade Williams applied for the job of mechanic at Federal Golf Club back in 2001, little did he know it would trigger the start of a new career path.

Having spent the previous 12 years as a mechanic at a local Canberra garage, it was time for a change. Federal was looking for a turf technician at the time and Williams thought it would be an ideal opportunity to apply his skill set in a different area. What he didn't count on was the opportunity it would provide to work out on the course and such was the appeal that Williams made the big call to pursue a new career in turf management.

It proved to be the right move and at the 25th Australian Turfgrass Conference in Hobart Williams beat home five other state representatives to win the 2009 AGCSA Graduate of the Year Award. In doing so Williams became the third recipient from the ACT in the award's 14-year history, claiming the honour ahead of James Stewart (Gisborne Golf Club, VIC), David Sutherland (Port Kembla Golf Club, NSW), Joshua Kelly (Pacific Harbour Golf and Country Club, QLD), Jeff Hull (The Vines of Reynella Golf Club, SA) and Daniel Zoccoli (Mt Lawley Golf Club, WA).

Federal Golf Club seemingly has a knack of producing top class graduate candidates and Williams is the third member of the club's course maintenance team to collect the national title. In 1999 Stephen Heskett became the first Federal representative to win, while Glenn Dawson followed suit in 2002.

"It was a real honour to win the award and to be honest I have been quite humbled by it all," says Williams. "It's certainly not something I expected or looked for when I took on a career in turf."

"It's hard to put my finger on exactly what it is about turf management that has made it the right thing for me. I sort of fell into being a mechanic when I left school but never really had a passion for it; it was just a job."

"I got to 12 years and was looking for a bit of a change but didn't just want to swing spanners at another workshop. When I came here and got the opportunity to work on the golf course I found I developed a real passion for it. I love the outdoors and liked preparing surfaces."

After four years as the club's turf tech, in 2005 Williams approached course superintendent Stephen Lording about getting some turf management qualifications, and with his and the club's blessings Williams started his studies in earnest through the Canberra Institute of Technology (CIT).



**2009 AGCSA Graduate of the Year winner
Wade Williams from Federal Golf Club in
Canberra**

involved in some big changes, from green reconstruction and bunker reshaping to converting the cool-season fairways to couch."

Williams completed his Cert III studies in 2008 and his impressive results meant he was duly named the TGAA ACT Living Turf Apprentice of the Year which qualified him for the national award. At the end of studies Williams was approached by CIT to teach the machinery maintenance class for Cert III and now finds himself balancing his part-time teaching role with his Cert IV studies.

"I've got a full plate at the moment, doing my studies at night as well as preparing classes, but it (teaching) is something that I do really enjoy," says Williams. "I was a bit apprehensive about taking it on at first because I have never really been comfortable in front of a big group, but it has helped me develop a lot so I'm getting just as much out of it."

Winning the state and ultimately the national award afforded Williams the opportunity to attend his first Australian Turfgrass Conference in Hobart. As well as meeting his fellow graduate finalists, he was also able to pick the brains of the profession's elite.

"The biggest thing I got out of it as a graduate was the chance to speak to a lot different superintendents about the industry, managing staff and how they approach dealing with boards, committees and members," reflects Williams.

"Whether it was speaking to John Odell about his operations at Royal Sydney or a superintendent from a small country course, a lot of their thoughts and ideas were very interesting and I took a lot away from those discussions. It made me realise that even though I'm 37, I'm still very young to the industry and have a lot more to learn."

That learning process will continue early next year when Williams heads to the US. As winner of the national award Williams walks away with a handsome education prize package courtesy of sponsor Toro and will attend the seven-week Annual Winter School for Turf Managers at the University of Massachusetts. As well as mixing with fellow turf managers from across the globe, Williams will also get the opportunity to visit Toro's golf course equipment manufacturing and parts distribution facilities, including the company's headquarters in Minneapolis. 🌱

After 12 years as a light vehicle mechanic, Wade Williams took on a job as a turf technician at Canberra's Federal Golf Club. Gaining a real passion for the turf management game, some eight years later the 37-year-old finds himself as the 2009 AGCSA Graduate of the Year.



"Stephen was very supportive right from when I first brought it up with him," says Williams. "I'm not sure if that was an indication of what he thought of my mechanical skills, but he was really helpful and I have been very lucky in that respect."

"I love the lifestyle and since being at Federal I've had the opportunity of being

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RANSOMES

In Volume 11.4 (July-August 2009) Australian Turfgrass Management published the first of a series of excerpts from the recent literature review undertaken by Dr. Ross Higginson and Peter McMaugh relating to golf courses and the environment. Having looked at the role golf courses play in carbon sequestration, in this instalment of AGCSATech Update the authors discuss sediment, nutrient and pesticide movement associated with golf courses.



Sediment, nutrient and pesticide **movement** on golf courses



Bayer Environmental Science



Peter Williams & Assoc



Golf courses are frequently identified by many people as users of fertilisers and pesticides and therefore, by inference, present a high potential for off-site pollution. As part of their literature review (HAL Project No. TU07034 – Environmental and Health Benefits of Golf Courses - A Literature Review) Dr. Ross Higginson and Peter McMaugh explored research data which generally suggests that through industry best practice the pollution potential associated with golf courses is very low. The following is taken from their study.

"A dense, vigorous sward of turf (often as a monoculture) is the key goal of turfgrass systems used in sport. To achieve this is a challenging task for turf managers, requiring the use of pesticides, fertilisers and water to provide aesthetic, safe and performance-acceptable venues.

To provide modern playing conditions, certain management practices such as mowing have been intensified to achieve the desired condition. For example, modern golf course greens are mowed at a height of 2-3mm and are designed to receive 50 per cent of the play even though the total green area makes up less than 3 per cent of the total playing area of a golf course. Even under intensive management, the goal of turf management is becoming more sustainable as scientists and managers have identified systems that are more efficient and require fewer inputs (Cisar, J.L., 2004).

Although there can be potential environmental risks associated with turfgrass management, the overall benefits of turfgrass should not be underestimated. Healthy turfgrass provides considerable benefit to land surfaces in urban environments by providing resistance to insect and weed infestation. Its dense root system also enables an efficient use of applied nutrients and water, which in turn limits the need for unnecessary irrigation, fertiliser and pesticide applications (Beard, J.B., 1989b). Furthermore, it has a major influence in minimising diffuse pollution by sediments, pesticides and nutrients in surface waters (Petrovic & Easton, 2005).

Research on various land use types compared with turfgrass indicates that sediment and nutrient losses from urban and turfgrass systems is considerably less than losses from agricultural and forest systems (Table 1). The same can be said for golf courses. Golf courses provide a large area of green space within a community that can be shown to have many environmental benefits.

An Australian study looked at irrigation and fertiliser regimes on nitrogen (N) leaching from couchgrass sod (*Cynodon dactylon*) in sandy soils of Western Australia (Barton, Wan and Colmer, 2006a and 2006b). This University of Western Australia study concluded that N leaching from couchgrass production on sandy soils will be low if irrigation regimes supply sufficient water for turfgrass growth without causing excess water to move beyond the rooting zone.

Under well-managed irrigation regimes (i.e.: 70 per cent replacement of pan evaporation), they expect N leaching to be low for all fertiliser types as long as N is applied at a rate and frequency that matches turfgrass requirements. The risk of N leaching is greatest during the establishment of turfgrass, especially if this coincides with high rainfall. Higher irrigation rates (i.e.: 140 per cent replacement of pan evaporation) can be detrimental by enabling N leaching, and by decreasing root growth of the couchgrass sod by up to 30 per cent.

TABLE 1: ESTIMATED ANNUAL CONTRIBUTIONS TO SURFACE WATERS FROM SELECTED NON-POINT OR DIFFUSE SOURCES (ADAPTED FROM KOEHLER ET AL., 1982) – AVERAGE LOAD IN MILLION TONS PER YEAR.

Source	Sediment	Nitrogen (N)	Phosphorus (P)
Cropland	1870	4.3	1.56
Pasture and rangeland	1220	2.5	1.08
Forest	256	0.4	0.09
Urban, including turfgrass	20	0.2	0.02

Run off and nutrient loss research from turf has generally been conducted in small scale field studies and, to a lesser extent, in watershed studies. The general conclusions of the small scale studies indicate that with well maintained turf, the amount of run off is small and concentrations of nutrients are often below levels of major concern

Although there is an obvious direct relevance of this research to the Western Australian turfgrass industry, the study has considerable relevance to a large part of the Australian turf industry because of the importance of couchgrass within the Australian context.

This is particularly so within urban areas, such as sports fields, bowling greens and golf greens where a similar sand-based growth medium to that of the standard USGA green (see Snyder & Cisar, 1997) is utilised. These sand-based growth media would be expected to perform similarly to Western Australia's natural sandy soils.

Cisar (2004) also reports on techniques being used within the USA to reduce nutrient leaching from sand-based soils. For modern sports play, turfgrass is often grown on coarse-textured soils such as sands that require routine application of nutrients from fertilisers, particularly nitrogen and phosphorus.

Strategies used to reduce N and P leaching include regulations that limit the amounts of N and P applied, management systems that minimise off-site losses and the use of slow or controlled release fertilisers. Other techniques used include applying lower rates of fertiliser frequently through the irrigation system (fertigation) and/or adjusting irrigation rates to replace only the amount of water used in evapotranspiration (ET) (Cisar, J.L., 2004).

Surface run off is important in transporting both dissolved chemicals and suspended sediment from turfgrass systems to surface waters. Although the volume of surface run off and sediment loss from turfgrass systems is relatively low compared to other management systems (see Table 2), the volume of run off from bare soil on turfgrass construction sites is considerably higher (19.2 vs <1 tonnes/ha per year of sediment) (Daniel T.C. et al., 1979).



These results clearly demonstrate the effectiveness of turfgrass in minimising sediment movement from catchments to adjacent waterways. As nitrogen, phosphorus and pesticides are transported primarily in association with eroded sediment (see Higginson & McMaugh, 2007), turfgrass is also highly effective in minimising their movement.

A study in the USA looked at nutrient and pesticide losses from a small hillside seeded to turfgrass (Easton, Z.M. et al., 2005). The aim was to examine the relationship between run off, hill slope hydraulics and turfgrass growth. The research was conducted on a 6 to 8 per cent hill slope on a sandy loam soil seeded to 80 per cent Kentucky bluegrass and 20 per cent perennial ryegrass. The results indicate that it is imperative to assess site suitability prior to applying nutrients and pesticides given that certain areas simply pose a higher risk to ground and surface water contamination.

In this study, upper slope areas produced less run off, and subsequently lower mass losses of nutrients and pesticides, when compared with lower slope areas which generally produced greater run off, and as a result greater mass losses of applied compounds. This was due to the compounding effects of lower soil infiltration and hydraulic conductivity on the lower slopes due to a finer textured soil, and higher average soil moisture content. The higher overall water content at the bottom of the slope, due to run off from the upper slope areas, decreased infiltration rates and therefore increased run off and leachate levels.

Periodic nutrient applications are an integral and essential part of establishing and maintaining high-quality turf on golf courses

The overall pesticide losses in this study were low with no compound having more than 0.5 per cent of the applied amount lost in run off. Nitrate and ammonium concentrations in the run off were also low but at levels that could possibly pose a threat to aquatic organisms in some circumstances. Phosphate levels in run off were lower than contaminant levels set by the EPA.

The above study clearly demonstrates that it is best to avoid nutrient and pesticide applications in areas close to water bodies, and/or at the bottom of slopes having a long expanse of upslope area to contribute to the overall run off volume.

In 1990, the United States Golf Association (USGA, 1994) began funding an environmental research programme to quantify and document the impact of turfgrass management on the environment. The major objective was to understand and quantify the degradation and fate of turfgrass pesticides and fertilisers so as to be able to accurately predict or simulate their environmental impacts.

Research programmes were established at 12 universities within the USA and the results of this massive undertaking were published (Clark & Kenna (Eds.), 2000) by the American Chemical Society in 2000.

This extensive publication is a key reference for readers interested in the degradation and environmental fate of turfgrass chemicals and in the development of alternative pest control strategies using biological and biotechnical approaches.

Results from the study (USGA, 1994) reported that for fertilisers there is a very strong trend between the rate of nitrogen application and leaching losses of nitrogen as nitrate. The relationship between soil type and subsurface loss of nitrogen agrees closely with previous research conducted on both turf and agricultural systems.

TABLE 2: AVERAGE ANNUAL SEDIMENT LOSSES FROM SELECTED SOILS AND SLOPES UNDER DIFFERENT MANAGEMENT CONDITIONS (ADAPTED FROM GROSS, C.M. ET AL., 1990) – ANNUAL SEDIMENT LOSS IN TONS PER ACRE.

Soil Texture/% Slope	Fallow	Cropping	Rotation	Turfgrass
Loam/4	41.6	19.7	2.7	0.3
Silt Loam/8	112.8	85.5	11.4	0.3
Silt Loam/16	151.9	84.1	25.3	<0.1
Fine Sandy Loam/8	20.3	28.1	5.5	<0.1
Sandy Clay Loam/10	64.7	25.8	10.8	<0.1



Regardless of the turf cover used, run off concentrations of applied nitrogen did not appear to be different for different species of turfgrass. Results reported are consistent with those of other researchers, namely that run off decreases with an increasing amount of soil vegetative cover.

Turfgrass, due to its dense surface vegetative cover, not only attenuates surface losses of water but reduces the potential for surface and subsurface losses of nitrogen as well because of its dense surface layer and its underlying dense thatch layer.

Phosphate concentrations in leachate never exceeded the irrigation water content of 1-2.5mg/L. This is not surprising given the high affinity of phosphate for soil particle surfaces, which effectively decreases leaching potential (USGA, 1994). Loss of phosphate in both agricultural and turfgrass systems usually occurs through sediment loss and transport during construction or turf establishment (Higginson & McMaugh, 2007; USGA, 2001).

Periodic nutrient applications are an integral and essential part of establishing and maintaining high-quality turf on golf courses. However, these applications increase the potential for nutrients to be transported off-site in surface run off or through subsurface drainage features.

Run off and nutrient loss research from turf has generally been conducted in small scale field studies and, to a lesser extent, in watershed studies. The general conclusions of the small scale studies indicate that with well maintained turf, the amount of run off is small, and the concentrations of nutrients in the surface run off are often below levels of major concern. However, while studies on a small scale are valuable, they may not represent the diversity and connectivity associated with a watershed-scale study (King K.W. & J.C. Balogh, 2006).

A US study (Miltner, E., 2007) conducted in Washington State measured nitrate – N and soluble P in soil solution at 36 sites strategically located around a golf course. The results indicate that even in fertilised fairways, soil solution concentrations of N and P were usually below water quality thresholds.

Grasses proved to be extremely efficient in scavenging nutrients from the soil due to their dense, fibrous root systems. As soil solution moved down-slope through the monitored areas, concentrations remained low. In the few cases where nutrient concentrations increased in buffers and wet cells, there was no evidence that these higher concentration waters continued to move down-slope or percolated deeper into the soil profile.

This indicates that as the soil solution moved through these areas, where the rate of flow was lower due to gentler slopes, nutrients were likely to be removed from the water through uptake by plants or soil micro-organisms, or immobilised by other soil processes (such as absorption onto clay or other particles). Nutrient concentrations in native wetlands and lakes on the course were not impacted by fertiliser practices.

When the potential movement of water and dissolved nutrients from a golf course to surrounding areas is a concern, grass buffers, bio-swales, wet cells and constructed wetlands can be useful tools in maintaining water quality. Increasing the residence time of the soil solution on the golf course is critical and can allow the grass root system, as well as other soil organisms, to effectively filter nutrients from the water before it leaves the golf course site (Miltner E., 2007).

A more recent study (Starrett, S., et al., 2009) investigated nutrient loading via surface water run-off from a new golf course in Kansas, USA, and compared this to the site's previous native prairie condition. The purpose of the study was to investigate the new golf course's impact on surface water quality during construction and during golf course operations.

The study began in 1998 and monitoring continued for nine years afterwards. Data analysis showed that the golf course construction phase had the greatest impacts on surface water quality, with average concentrations of 3.94mg/L, 0.93mg/L and 2.955mg/L for total N, total P and sediment (TSS) respectively. This compared with 1.18mg/L, 0.39mg/L and 477mg/L for the pre-construction period.

Golf courses are frequently identified as users of fertilisers and pesticides and therefore, by inference, present a high potential for off-site pollution. However, research data suggests that through industry best practice the pollution potential associated with golf courses is very low

During operation of the golf course, sediment concentration was lowered significantly to an average of 550mg/L, slightly higher than that of the native prairie condition. The average concentrations of total N and total P were 2.02mg/L and 0.49mg/L respectively, much lower than those during the construction phase, but still 70 per cent and 25 per cent higher than those in the native prairie condition.

Sources of nutrients in streams under native prairie condition and during construction are thought to be from the input of rainfall and sediment eroded from fertile topsoils. During golf course operation, fertiliser application is considered to be another source of nutrients in streams in addition to those mentioned above.

Further analysis has shown that there are direct connections between fertiliser application and concentrations of total N and total P in streams. There are cases that clearly indicate that the amount and timing of the fertiliser application are to be blamed. For example, when a large amount of fertiliser is applied over a large area and a significant rainfall event occurs shortly after the application (Starrett, S., et al., 2009).

Another major study (Snyder, G.H. and Cisar, G.L. 1997) looked at the mobility and persistence of turfgrass pesticides applied to a USGA-type green. Because water percolation can be much more appreciable in a coarse-textured man-made rooting media, leaching of pesticides from a USGA green is an obvious area for investigation.

In the above study, two commonly used herbicides were investigated, namely Dicamba and 2,4-D. The results indicate that although only 10 per cent as much Dicamba as 2,4-D was applied, nearly 65 per cent as much Dicamba was recovered in the percolate water over a two-month period following application. Clearly, Dicamba was much more mobile than 2,4-D in the USGA green.

Nevertheless, the average concentration of both herbicides in the percolate was well below maximum contaminant levels set by USA authorities (2.6 and 1.2 micrograms per litre compared to 70 micrograms per litre). Clearly, herbicide leaching from turfgrass grown on an ideal drainage media (such as that of a standard USGA green) indicates that herbicide leaching under normal turfgrass circumstances is not likely to be a major environmental problem." 🌱



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Understanding the role of root systems and their impact on plant health is at the very core of turfgrass management. In the first of a two part series AGCSATech agronomist John Geary examines the role of turfgrass root systems and the differences between cool- and warm-season varieties.



The root systems of most perennial turf varieties are largely annual in nature with soil temperature playing an important role in determining the amount of root growth

The root of healthy turf

With spring upon us, golf clubs across the country are embarking on renovation programmes or deep into the planning phase to carry out such practices. However, apart from the one or two weeks a year when renovations take place, how much time do superintendents and turf managers devote to interpreting and managing the rootzone, specifically the root system of turfgrasses grown in the top 300mm of the soil profile.

Understandably, many turf practitioners focus all their attention on surface preparation, however, it is important to have a core understanding of plant-soil relationships, particularly the role turf root systems play in the establishment and ongoing maintenance of high quality sports turf.

TURFGRASS ROOT SYSTEMS

The root systems of most perennial turf varieties are largely annual in nature with soil temperature playing an important role in determining the amount of root growth. During turf establishment a primary or seminal root system is developed which functions actively for up to eight weeks providing water and nutrient uptake for the seedlings. These roots

develop from the embryo and emerge directly from the germinating seed (Owens, 2000)

Shortly after the first leaf emerges an adventitious root system begins to form originating from:

- Basal nodes of the crown and ascending tillers near the ground in the case of bunch-type species (e.g.: ryegrass, Browntop bentgrass, Chewing's fescue, tall fescue);
- From the nodes of stolons and rhizomes of creeping perennial turfgrasses (e.g. creeping bentgrass, Kentucky bluegrass, red fescue, couchgrass, kikuyu); and
- From older roots in the form of branching. (Beard, 1986).

THE ROLE OF THE ROOT SYSTEM

A function of the turfgrass root system is the uptake of water and nutrients. This occurs when water is absorbed from the soil into the root system via the process of osmosis. Osmosis can be defined as the movement of a substance (water) from a low salt concentration to a higher salt concentration.

The larger more visible roots (greater than 0.075mm, or 75 microns, in size) act as transport conduits moving water, nutrients and plant hormones from the root tips to the

shoots of the plant. These larger roots, which can be seen in Figure 1, grow in the non-capillary pores of the rootzone, while the root hairs, which are only 0.01 mm (10 microns) in diameter, extract moisture held in the capillary pores of the rootzone soil.

Table 1 demonstrates the root tip diameter of a number of common turfgrasses. The majority of water absorption occurs around the root hair zone located a short distance behind the root apex (Beard, 1973).

As root hairs only live for a few weeks, an effective root system needs to continually replace the older root hairs that lose efficiency as they age (Ford, 2001). Turf roots are quite fibrous and multi-branched compared to many other species which can be helpful in understanding the way grasses are managed.

A good example is to examine the uptake of phosphorus. As phosphorus is relatively immobile in the soil, many plants with less extensive root systems require high applications of this element compared to what is needed on a mature turfgrass sward.

If we are to look at a typical fertiliser analysis used for turf (20-2-10) compared to what's commonly prescribed for many plant species with less extensive root systems (10-10-10) we can see that turf root systems are particularly efficient at extracting phosphorus from the soil (Christians, 2007).

Another function of turf roots is to provide anchorage to the soil. How much anchorage and grip depends on the plant species, the soil type, moisture content and the concentration and depth of the roots in the soil itself. Sports such as horse racing, football and even golf all subject turf surfaces to divoting forces and the selection of appropriate grass types is critical

TABLE 1. ROOT TIP DIAMETER OF SOME COMMON TURFGRASSES

Turfgrass	Root tip diameter (µm)
<i>Poa annua</i>	240 (0.24mm)
Browntop bent (<i>A. capillaris</i>)	145 (0.145mm)
Perennial ryegrass (<i>L. perenne</i>)	135 (0.135mm)
Bluegrass (<i>P. pratensis</i>)	130 (0.130mm)
Chewings fescue (<i>F. rubra</i>)	100 (0.100mm)
Root hairs	1-2mm long and 7µm in diameter (0.007 mm)

Pores > 0.200mm (200µm) will allow the relatively easy passage of most turf grass roots.

TABLE 2. GENERAL COMPARISON OF ROOTING CHARACTERISTICS BETWEEN COOL-SEASON AND WARM-SEASON TURFGRASSES.

Characteristic	Cool-season (C ₃) perennial grasses	Warm-season (C ₄) perennial grasses
Diameter	Very fine	Medium coarse
Functional depth	Upper 18-24in (46-61cm)	36-60in (91-152cm)
Longevity	Annual/perennial	Annual
New initiation	Crowns and nodes only	Crowns, nodes and root apex
Peak growth period	Spring 10-18°C	Summer 24-32°C
Period of root decline	Summer 24°C temperature	Spring shoot green-up soil 16-18°C soil temp
High nitrogen effect	Strongly negative	Some negative effect
Potassium effect	Some response	Large response
Close mowing effect	Strongly negative	Some negative effect

in maintaining acceptable playing standards (Ford, 2001). As a general rule C₄ grass roots provide greater anchorage than C₃ grasses due to the root diameters being much coarser and stronger.

Turf roots are also involved in the production of plant hormones such as cytokinins, gibberelins and abscissic acids and are transported to the shoots to regulate shoot growth. These hormones allow the plant to maintain control of its growth to maximise its chances of survival.

Turfgrass roots do not contain chlorophyll and as a result do not produce carbohydrates for their own growth and development. However, the root system of turfgrasses like many other plants can act as a 'carbohydrate sink' storing carbohydrates to be used by the rest of the plant when necessary.

TURFGRASS ROOT CYCLE AND CHARACTERISTICS

As outlined in Table 2, Dr. James Beard (1986) has identified that the characteristics of root growth and development can be divided into two groups depending on whether they are cool-season or warm-season grasses.

With regard to cool-season grasses it is worth noting that the root system reaches its optimum growth rate during spring when soil

temperatures reach 16-17°C. At this point, new roots are formed which replace most of the older roots which senesce. Depending on the grass type these new roots originate from the nodes or crown of the plant. Once the soil temperature rises above 17°C cool-season root growth will slow down until it completely ceases when soil temperatures reach 24-25°C.

While soil temperatures in Melbourne may not reach 24°C over the summer months, the soil temperatures in warmer climates such as Brisbane can for several months of the year. This explains why bentgrass greens in Brisbane struggle to survive as the high soil temperatures stop any root growth which results in the plant relying on older and less efficient roots, leading to plant heat stress.

With the onset of autumn, soil temperatures start to decline and root growth resumes. When cooler temperatures stop shoot growth, carbohydrates are moved into stems and the roots, providing for slow but continued growth until active growth resumes in spring.

Similar to cool-season grasses, perennial warm-season grasses have an annual root system with the major replacement period occurring in spring, just after breaking dormancy. The root replacement of C₄ grasses is more concentrated than C₃ grasses and occurs when soil temperatures reach 17-18°C.

At around 18°C a phenomenon called spring root decline occurs where the entire root system turns brown. Immediately after this the grass will start to produce new roots, but there is a period of several weeks (this varies depending on C₄ species) when the root system is severely restricted and susceptible to injury from traffic or other stresses.

It is important during this period to avoid management practices which could jeopardise the recovery of roots while also providing cultural practices that will enhance root growth. It is advisable to avoid applications of selective herbicides such as Dicamba and MCPA to

warm-season grasses, in particular hybrid couchgrasses as phototoxic effects can result.

It is also important to avoid the application of pre-emergent herbicides during this period as many have been known to damage and hinder root growth. Applications of pre-emergent herbicides used to control crabgrass (*Eleusine indica*) or summer grass (*Digitaria sanguinalis*) should be timed as close to the germination period of these weeds as possible. Alternatively, the use of the pre-emergent herbicide oxadiazon could be considered, as its use has shown no signs of root damage (Ford, 2001).

As soil temperatures increase during summer, root growth and recovery becomes stronger with the maximum rate of root growth occurring when soil temperatures reach 24-30°C. Throughout the winter months C₄ grasses retain some shoot and root activity provided the soil temperatures are above 10°C.

A HEALTHY ROOT SYSTEM

In conclusion, turf managers need to be aware that the root system of both cool-season and warm-season grasses are largely annual in nature and that the root system which is in place by November is what will carry the plant through summer. Cultural practices should be implemented with the aim of maximising root growth until November, while avoiding practices which set back growth there after.

Understanding the seasonal variations in root growth is particularly important, as cultural practices and environmental factors can have a dramatic effect on turfgrass root growth. The next issue of Tech Talk will examine in detail the cultural practices (e.g.: mowing height, fertilising and thatch accumulation) and environmental factors which influence turfgrass root growth.

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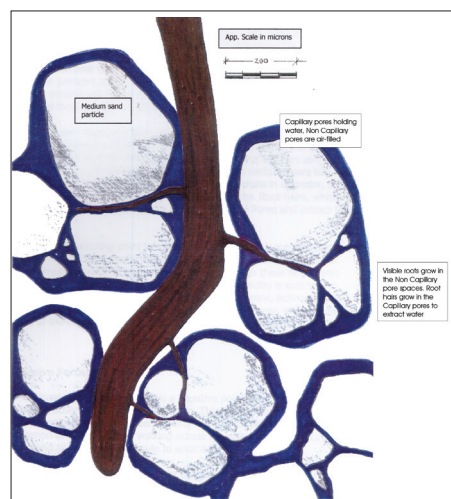


Figure 1: Root growth – capillary and non-capillary pore space



The Pulse

This year's 25th Australian Turfgrass Conference in Hobart sparked plenty of comment and debate with a few left of field topics finding a welcome place in the programme. While the annual gathering afforded delegates the chance to catch up with colleagues not seen since Melbourne, the education sessions and trade show provided plenty of food for thought for superintendents and turf managers to take back to their workplace. The Pulse asks this year's delegates to pinpoint one key aspect of the week in Hobart that resonated with them.

"If I had to point out a specific item from the week, it would have been Therese Fitzpatrick's (from Beyond Blue) 'Managing depression in the workplace', along with the other lectures that involved depression and stress in the workplace. I thought it was good that the conference stepped outside the square and didn't just focus on turfgrass management, the hands-on stuff. And, of course, you can't go past Martyn Black – a consummate entertainer!

Ryan Buttel, Wentworth Leagues Club

"I was surprised at the amount of questions generated by the Beyond Blue talks. Obviously there is an issue out there. I thought Allan Devlin's (Secret Harbour) idea not to have rakes in bunkers was a superb one. Maybe architects need to undertake some bunker maintenance, especially after a rain storm, to improve bunker design! And last but not least, Mr Sellar does look like the FA Cup."

David Warwick, Avondale Golf Club

"The main thing I came away with was a better understanding of the problems faced by my greens staff and I became aware of ways in which I can increase my support for the team to better perform their tasks within the budget imposed by the board of directors. In addition, I was very impressed by the open discussion during the sessions and I appreciated the time and valuable information shared with me by other delegates at the conference. My principle session of interest was the bunker management workshop. I believe we can more economically address our bunker maintenance as a percentage of our total budget."

Tyrrell McGeever, Chairman, Facilities, Mount Martha Valley Estate (Safety Beach GC)

"I was really surprised to hear about Darryl Sellar's past problems with depression. I thought it was great that he shared his story with all of us. I might add he was not the only one who opened up during the week and I had

at least three other supers who spoke to me about similar problems. I am sure it doesn't hurt to talk to other supers about some of the men's issues and work issues that we face."

Pat Pauli, Horton Park Golf Club

"Although it was the smaller, regional conference, I thought it was excellent in all areas. The two things that I got most out of the week was the talk about thatch removal and the data shown in relation to size of tines and frequency relating to the amount of material removed. The topic of composting as a soil conditioner was interesting. I think there is a long way to go with this concept but I look forward to future developments especially as it could play a role in future sustainability."

Andrew Arrah, Point Walter Golf Course

"For me it was seeing the ever-growing professionalism of our industry and fellow superintendents/turf managers, which was very evident through some of the presentations such as Kenton Boyd's. The open forum sessions were once again very informative.

"We also need to invite along club directors to gain a better understanding of our roles and learn what is actually involved, as per the bunker management workshop. It was great to see one club's director present who openly expressed how unaware he was of maintenance costs associated with bunkers and how the workshop had opened his eyes. We can really use these conferences to our advantage with such matters."

Shaun Cross, Byron Bay Golf Club

"I personally thought Mark Parker's talk on getting the point across to committees was excellent in that it was simple but very effective in its delivery. We have to be very good salesmen to our committees as well as being very good politicians. The talks around bunker management and design where also very informative and prompted me to have a



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good look at the amount of labour that goes into maintaining our hazards here at Pennant Hills – trimming and applications of Primo to edges, spraying undesirable weeds in faces, rotary hoeing and levelling floors monthly and blowing out debris prior to raking three times per week.” **Richard Kirkby, Pennant Hills Golf Club**

“As an ex-superintendent who went to many conferences over a 10-year period it was great to catch up with everybody. Now that I am a TAFE teacher working at Chisholm I am wearing a different hat. I got a few things out of the conference including an update of the latest products which you tend to miss out on when you are at TAFE. In particular, the bunker mat from Geofabrics impressed me and we are going to trial some here at Chisholm in one of our bunkers.” **Steve Tuckett, Chisholm TAFE**

“I got a great deal out of the Hobart conference, but two things stood out for me. We could run a national workshop series on bunkers and have club greens chairmen attend with their superintendents. As shown by the talks and symposium on bunkers they are the most talked about, time-consuming and costly aspects of course maintenance for most clubs. As well, men’s health issues were discussed and probably not before time. These topics are very important for us to be cognisant of for our health and well being and I think that future seminars would be well attended.” **John Odell, Royal Sydney Golf Club**

“I think we related to the talk by Therese Fitzpatrick from Beyond Blue. I think it got a lot of superintendents thinking about situations they have had to deal with over the years with staff problems, not just work related but personal life of staff members. It was a great topic to start the education seminars and I hope the topic can be expanded on at future conferences. Just a little suggestion for next

year – why don’t we send a whole squad of Australian golf superintendents to the US to take on the Yanks, maybe a team of 4-6.” **Scott Harris, Gold Creek Country Club**

“Key speakers for me were Jon Mathias with his ‘SEIS does matter’ presentation and Daryl Sellar. Both equipped me with some new techniques that I think will really help me in my position. Another good speaker was Mark Parker. What he said about selling what you want to your committee is so important. I’ve booked my ticket to the Gold Coast already!” **Brendan Clark, Mount Gambier Golf Club**

“The session I found the most useful was the Beyond Blue talk on awareness of depression in the workplace and how I can assist. I guess it is a topic that is not spoken about in the workplace. As a result I have already given a brief talk about depression to my staff rather than preaching to them about turf issues.” **Danny Edmunds, City of Casey**

“One thing I picked up on was that a lot of men in our industry may be suffering from some kind of stress and depression and don’t realise it. Budgets and committees can put an enormous amount of stress on superintendents and perhaps we need to work on this sort of thing on an industry basis through some kind of support network or referral system.” **Brendan Brown, Horton Park Golf Club**

“One of the most interesting seminars at this year’s conference was the bunker management workshop. It was very interesting to hear different perspectives on the level of presentation expected at different golf courses. The costs that Daryl Sellar attributed to bunker maintenance were quite staggering and certainly put things in perspective. On my return my 2IC and I discussed our bunker maintenance and decided on a different and more efficient method. We decided to

stop facing the bunkers with brooms which was extremely time consuming and caused significant problems with algae. We have now purchased new leaf rake attachments for our mechanical bunker rakes which we use to rake the full bunker. We then manually rake the bunker edges with a leaf rake. We have saved about two hours a day on raking bunkers and feedback from members has been extremely positive.” **Robin Doodson, Sanctuary Cove**

“I make a point of going to the conference every year as you only need to pick up on one thing to make it worthwhile. This year I had a lengthy talk to Martyn Black about his kikuyu management and the chemicals he uses. Also during the trade show I learned more about nozzle technology and how this affects droplet characteristics.” **Anthony Toogood, Commercial Golf Club, Albury**

“I had two major bring back items. The first was the Phantom Corer, an aeration machine that cores and removes thatch leaving the turf as clean as before it started. It’s great to see two local turfies design, construct and market what looks like a great product. The other was bunker maintenance; the expectations around the country differ so dramatically. It leaves me to wonder why we bother maintaining them. Something definitely worth considering and seeing what the response would be!” – **Darren Wilson, Wembley Golf Complex**

“The pre-conference tour was a great innovation. To see the maturing of Barnbouggle Dunes and gain an insight to the new Lost Farm course was inspirational. Ratho was equally inspiring to see history not only being retained and treasured, but brought to life through the clubmaking and playing with hickory shafted clubs. As for the conference, we have some great speakers and the programme did not suffer for the lack of an international speaker.” **Mike Love, Royal Melbourne Golf Club**

superintendents and clubs golf course maintenance practices

In May 2009 the Australian Golf Industry Council published a research report providing a snapshot of the Australian golf industry across all areas. The report provides a quick reference summary of the key statistics from various industry and consumer research projects which have been released in recent years.



Rub of the green - Research snapshot of the Australian golf industry

In 2006 the PGA of Australia commissioned Ernst & Young to prepare a report on the economic value of the Australian golf industry. The report, based on data for 2004, found that the Australian golf industry:

- Has an annual economic value to the Australian GDP of \$2.7 billion and is by far the greatest sport industry contributor to the Australian economy; and
- Directly employs over 23,000 people with many thousands more employed in industries that have an association with golf.

There are currently 1,530 golf courses in Australia, with 81 per cent of these courses located in regional areas. Numbers by state are summarised in the Table 1 below. Of the 1530 courses, there are 1,473 that have been affiliated (officially recognised and rated) by Golf Australia. Nine-hole courses account for about 31 per cent of all golf courses nationally.

Ninety-six per cent of all courses around Australia are accessible at certain times to all golfers, with 66 per cent of courses having a regular mix of member and non member play.

NEW GOLF COURSES

A number of new golf courses have opened in recent years, adding to the supply pool generally available to the golfing public, with 36 new course openings reported since 2000. Seventy-five per cent of these courses are classified as either public or resort courses, with almost all courses being part of a wider development that includes either residential and/or resort facilities.

HOW MANY PEOPLE PLAY GOLF IN AUSTRALIA?

The Australian Sports Commission (ASC), via its annual Exercise, Recreation and Sport Survey (ERASS), involves over 13,000 respondents and tracks national participation

for sports across Australia for persons aged 15 years and over. First conducted in 2001 ERASS has provided substantial statistical information regarding golf participation. Key recent statistics are noted below:

- In 2007 golf remained second on the ERASS Top Ten organised sport activities list, behind only aerobics/fitness and ahead of netball, tennis, all football codes, cricket, basketball and lawn bowls. 513,000 people reported playing golf as an organised sporting activity.
- In total 915,000 Australians played golf during 2007 – the last reported data year. This is nearly 6 per cent of the total population aged over 15 years. Although showing a downward participation trend between 2001 and 2007 golf has remained a very popular activity played by around a million people of both genders and all age groups each year in Australia (average participation between 2001-2007 was 1.185 million).
- The national male/female ratio is reasonably consistent across all states with a national ratio approximately 80 per cent men / 20 per cent women. In 2007 9.1 per cent of the total male population aged over 15 years and 2.2 per cent of the female population base played golf.

TABLE 1. NUMBER AND LOCATION OF AUSTRALIAN GOLF COURSES

STATE	METROPOLITAN	COUNTRY	TOTAL	%
NSW	96	317	413	27%
VIC	85	293	378	25%
QLD	20	236	256	16%
SA	23	131	154	10%
WA	42	189	231	15%
TAS	5	70	75	5%
ACT	10	0	10	1%
NT	3	10	13	1%
TOTAL	284	1,246	1,530	100%
PERCENTAGE	19%	81%	100%	

Source: Golf Australia



The May 2009 golf industry research snapshot contains some interesting statistics relating to the wider golf industry



Participation in golf is substantially greater at an older age. The most participatory age group is that from 55 years to 64 years, with over 10 per cent of the national population in that age group playing golf. The least participatory age group is that aged 15 years to 24 years, with less than 4 per cent of the population in that group playing golf.

HOW MANY GOLFERS ARE MEMBERS OF A CLUB?

In 2007 Golf Australia reported that 350,745 men and 94,606 women (total 445,351) were members of an affiliated golf club, 49 per cent of the total golf population. Analysis of the Golf Australia data on club membership between 2001-2007 shows the following:

- Club membership numbers have fallen by about 8 per cent.
- Declines in numbers have been reasonably consistent across both genders however different patterns do appear when assessed on a state-by-state basis.

SOCIAL GOLF

Based on an analysis of the ERASS participation data and Golf Australia membership data for 2007, the size of the social golf market (i.e. golfers who are not members of a golf club) is

estimated to be approximately 470,000 or 51 per cent of the total golf population.

The social golf market, as a percentage of the total golf market, is largest in the states of Western Australia and Victoria with 67 per cent and 57 per cent of these markets respectively being social golfers. Tasmania and NSW have the highest proportion of club based golfers.

HOW MANY ROUNDS ARE PLAYED IN AUSTRALIA EACH YEAR?

The combination of the annual ERASS data and club rounds and survey data from Golf Australia enables an estimate of annual rounds played to be made. Tables 2 and 3 (page 42) summarise total rounds played since 2001, with the subsequent average per golfer also identified. The annual round count shows a reasonably consistent annual result when compared on a per golfer basis.

- It is reported that 65 per cent of golfers play more than once a month, and 26 per cent play more than once a week. Twenty-one per cent of golfers indicate they only play a few times each year;
- Analysis of the percentage size of each of these demand segments over the period measured shows that the segments have remained reasonably consistent in size.

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Mark Bannantyne, Equipment Mechanic, Muirfield Golf Club, NSW.



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TABLE 2. TOTAL ROUNDS PLAYED

Year	Total Rounds	Ave Per Golfer
2001	30,572,000	27.0
2002	34,359,800	30.4
2003	34,164,600	30.2
2004	32,169,900	28.4
2005	29,738,500	26.3
2006	30,185,700	26.7
2007	29,225,000	31.9
Average	31,487,954	28.7

Source: Based on an analysis of ERASS and Golf Australia data

TABLE 3. ROUNDS PLAYED BY FREQUENCY (ROUNDS PER YEAR)

Descriptor	Frequency	% of Golfers
Infrequent	1-6 times	21%
Occasional	7-12 times	14%
Core	13-26 times	15%
Keen	27-52 times	24%
Avid	53-104 times	19%
Avid	104+ times	7%
Total		100%

Source: Based on an analysis of ERASS and Golf Australia data

Having estimated total rounds, the inclusion of rounds data sourced from club surveys conducted by Golf Australia allows golf club members and social golfers market share estimates to be made. These are summarised Table 4. Key data identified above includes:

- According to 2007 data, golf club golfers account for 49 per cent of the total participation market but 55 per cent of the total rounds market, indicating a higher level of annual frequency than social golfers;
- The total estimated number of rounds played by Australian golf club members during 2007 was approximately 16.2 million;
- Over the past four years golf club members have averaged about 31 rounds each per annum; and
- Social golfers, accounting for about 45 per cent of the total rounds played nationally, have a slightly lower level of annual frequency than golf club members, and over the past four years have averaged 23 rounds per year.

WHOLESALE EQUIPMENT SALES

Golf wholesale equipment sales is a key indicator as to consumer behaviour and demand for golf equipment at the retail level. This information is collected quarterly by the Australian Sporting Goods Association

TABLE 4. TOTAL OF MARKET SHARE

2007	Golfers	Share of Market	Rounds Estimate	Share of Market
Club	445,351	49%	16,197,000	55%
Social	469,649	51%	13,028,000	45%
Total	915,000	100%	29,225,000	100%

Source: Based on an analysis of ERASS and Golf Australia data

(ASGA), formed in 1981 to act as the peak body representing a broad spectrum of sporting goods and active lifestyle industry participants including golf equipment manufacturers. Current membership of ASGA is held by 90 per cent of all golf equipment manufacturers

ASGA reports on two key variables within the sector, these being units sold and their equivalent dollar value. Categories tracked are woods, irons, wedges, putters, bags, buggies, gloves, apparel, balls, and shoes.

Data for the period 2001 to 2007 reveals that total equipment unit sales have grown by an average of 2 per cent per year to reach 4.5 million units at the end of 2007. For the same period in terms of their dollar value, sales also increased by the same annual amount to reach about \$154 million.

AUSTRALIAN GOLFERS IN WORLD RANKINGS

Australia currently has around 100 male PGA professional's playing on international golf circuits, including 24 on the US PGA Tour. In May 2009 11 men were ranked in the Top 100 Official World Golf Rankings.

Australia currently has around 30 female professionals playing on international circuits, including four in the Top 100 and 10 in the Top 200 Rolex Rankings.

With regard to amateur players, six players were in the Top 100 R&A rankings as at May 2009 with 13 in the Top 200.

THE HEALTH BENEFITS OF GOLF

The benefits of leisure-time physical activities in terms of reduced risks of cardiovascular disease are well established through a number of epidemiological studies. A graphic example of the health benefits of golf is a 2008 study conducted by the Karolinska Institutet in Sweden (published in the Scandinavian Journal of Medicine & Science in Sports).

The study found that the death rate amongst golfers is 40 per cent lower than the rest of the population, which equates to an increased life expectancy of five years.

The study is based on data from 300,000 Swedish golfers and shows that golf has beneficial health effects regardless of sex, age and social group, with the effect even greater for golfers from blue-collar professions than for those from white-collar professions.

ENVIRONMENTAL BENEFITS

The environmental benefits of golf courses are increasingly being acknowledged by research. Courses often occupy significant tracts of urban land that may be in ecologically sensitive areas and their "green space" provides a number of benefits to the environment including wildlife refuges and corridors, remnant vegetation and indigenous flora reserves.

A preliminary study by the Australian Golf Course Superintendents Association (AGCSA), examining the likely carbon footprint of Australian courses, indicated that an average 18 hole course is likely to sequester around 80 tonnes of carbon per year. Although the study is limited in its size and nature the preliminary findings are positive. Further research in this area is currently being progressed.

The golf industry in Australia is also becoming a world leader in environmental management with close to 200 golf courses across Australia among the first in the world to adopt the AGCSA promoted environmental management system, called e-par, that achieves an ISO 14001 Standard. The industry is also proactively addressing water management issues.

FUTURE RESEARCH

The AGIC is committed to assisting in a co-ordinated approach to research across the Australian golf industry into the future. This will entail the co-ordination of discussions and agreements between the various industry groups conducting research to ensure targeted research that is complementary.

While the majority of research will be conducted by individual agencies, the AGIC may at times seek to commission research on behalf of the entire industry. Individual agencies will be requested to provide summary reports from their research to be included in future AGIC research summary reports.

ACKNOWLEDGEMENTS

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Trees are a huge asset to any golf club and are integral in defining the character and aesthetics of a course layout

The decline in health of trees on golf courses throughout Australia is alarming. In this article, WA-based tree pathologist Dr Paul Barber discusses some of the factors that contribute to tree health disorders and the importance of correct diagnosis and management.

Golf courses are extremely valuable open spaces often located in urban areas and provide a very important refuge for many native Australian plant and animal species, enhancing the biodiversity of the local area.

While the importance of playing surfaces on a golf course is undisputed, trees are just as an important asset. They provide character, challenge the golfer, improve visibility of the ball, give a sense of distance, privacy and comfort, protection from noise, wind and pollution and afford a huge aesthetic value.

Unfortunately, in many cases, managing turf and trees together can be a challenge as the conditions that are favourable for turf are often not for trees, particularly Australian natives. In this article we outline some of the most common causes of tree decline on golf courses in Australia and discuss the importance of correct diagnosis and management.

Trees on golf courses can be adversely affected by a wide range of factors, including soil compaction of the rootzone from golfers and carts. Damage to the roots and trunks can occur from the construction of pathways and installation of underground services or from whipper snippers and lawnmowers, which can enable the entry of pests and pathogens leading to the onset of various health disorders.

Watering and nutrients are required to maintain high quality turfgrass, but unfortunately both can be detrimental to many of our native plant species which have adapted to soils low in nutrients. Excess watering can also greatly increase the spread and impact of root and stem diseases such as the Honey Fungus (*Armillaria*) and *Phytophthora* dieback (*Phytophthora*).

Phytophthora is a genus of water-mould very closely related to *Pythium* which will be



Tree health management on golf courses

well known by golf course superintendents as a disease which can affect turfgrass. All these factors can result in declining tree health and eventually death and lead to very expensive and avoidable annual pruning and tree removal.

MAPPING AND MONITORING TREE HEALTH

The large expanse of many golf courses and sheer number of trees can become overwhelming when considering how to monitor and manage tree health, not to mention the expense of constant pruning for safety and aesthetic purposes and their removal as a result of decline and death.

In order to accurately acquire a database of the health of trees throughout a course, we utilise a combination of remote sensing and ground based techniques to capture and map trees throughout the course. These techniques when used by highly qualified personnel can accurately detect variations and change in tree vigour very early to allow a pro-active approach to tree health management.

COMMON TREE HEALTH DISORDERS

There are many disorders that can cause decline of trees and their eventual death. The symptoms produced by a pathogen, pest or nutrient deficiency/toxicity can often be the

same. This creates a challenge when trying to correctly diagnose the disorder and it is for this reason that a highly qualified tree pathologist should be used. Incorrect diagnosis can lead to expensive and unsuccessful management of the trees and result in continual decline and premature death.

Some typical symptoms of decline can start with the 'flagging' of branches in the crown of a tree. Flagging is when leaves on a branch or branches die suddenly. This symptom can be widespread in many native trees including marri (*Corymbia calophylla*), red flowering gum (*Corymbia calophylla*), river red gum (*Eucalyptus camaldulensis*) and jarrah (*E. marginata*) and can be caused by a range of fungal pathogens and insect pests. These pathogens and insects girdle the stems and if allowed to continue over time can eventually lead to death of the tree.

Many but not all of these pests and pathogens attack/invade trees that are stressed in some way, such as lack of water, too much water, mechanical damage, compaction, nutrient deficiencies or toxicities, and herbicides. Therefore, the flagging can be a result of these pests and pathogens being opportunistic and if we manage our horticultural practices to optimise tree health many fungal and pest problems can be avoided. This type of response is analogous to humans falling sick when they are run-down.



SUDDEN TREE COLLAPSE

Many trees can collapse and die suddenly as a result of drought, *Phytophthora cinnamomi* or *Armillaria luteobubalina*. These pathogens are widespread throughout Australia and have large host ranges.

They can both be confused with death from drought. They cause root and collar rots of the tree and effectively starve the tree of water and nutrients. Some early symptoms include yellowing of the foliage and gradual dieback of branches before sudden collapse and tree death.



Both pathogens are difficult to control once present but prophylactic treatment of trees before they become infected with *Phytophthora* has the greatest success. These pathogens can spread rapidly through the soil or via root-to-root contact. *Phytophthora cinnamomi* is introduced into Australia. *Armillaria luteobubalina* is native to Australia.

NUTRIENT DEFICIENCIES AND TOXICITIES

Many of our native tree species are adapted to growing on nutrient deficient soils and do not respond well to the addition of high rates of nutrients, particularly phosphate. The application of nutrients for turf management, and high levels of water, can result in altered soil conditions leading to nutrient deficiencies or toxicities.

These nutrient deficiencies/toxicities, if not managed, can lead to increased susceptibility of the trees to pathogens and pests and increase the risk of their decline and death. These nutrient deficiencies/toxicities can be expressed as symptoms in the foliage. The diagnosis of these disorders is, however, not always straight forward. Pathogens and pests can cause a restriction of the supply of nutrients and therefore can cause the same foliar symptoms as some nutrient deficiencies. A correct diagnosis is therefore critical to ensure appropriate management procedures are adopted and health of the tree restored.

MANAGEMENT AND PREVENTION

Good hygiene is critical and it is important when buying plants to source them from accredited nurseries. This will help avoid bringing pathogens like *Phytophthora* into your golf course. If *Phytophthora* dieback is present on your course then it is important to restrict movement of soils and plant materials around the course to prevent spread, or alternatively have your sources of soil and plant material tested to ensure they are dieback free.

Trees infected with *Phytophthora* and those adjacent can be effectively treated to prevent death and further decline. *Phytophthora* and the Honey Fungus (*Armillaria*) can colonise up the trunk of trees for many metres and if trees that have been removed are mulched and not adequately treated (usually effective composting), then they can be easily spread to new areas in the infested mulch. So it is

Declining crown health can lead to extensive and expensive pruning and a reduction in aesthetic value of once magnificent natives

Years of infection from pathogenic fungi can cause extensive scarring and eventual death

critical to ensure you do not use plant material from trees suspected of dying from these pathogens unless it has been properly treated. If bringing in mulch then it should be sourced from an accredited supplier.

Most trees have shallow absorptive roots in the top 30cm of soil. Consequently, this makes them very vulnerable to damage from compaction, digging for installation of paths, irrigation systems, amenities and building pads. The trunk base or root crown is very vulnerable to damage from whipper snippers and ride-on mowers in golf courses where the turfgrass grows to the edge of the trunk. Any root or trunk damage can eventually result in the decline and death of trees, and is often overlooked or discounted when diagnosing.

Turfgrass competes aggressively for nutrients and water with tree roots. Removal of grass, where possible, from beneath the tree crown and the addition of a thick mulch layer will reduce the risk of mechanical damage, competition from the turfgrass, keep the soil cool and hold moisture.

In addition to reducing the risks described above, the correct diagnosis of tree health disorders will ensure appropriate management techniques are followed. Once these procedures are adopted, in many cases tree decline and death can be prevented.

ACKNOWLEDGEMENTS

Paul Barber is a tree pathologist with Arbor Carbon and has more than 15 years' experience researching, diagnosing and managing tree health disorders. He can be contacted by email at p.barber@arborcarbon.com.au. For further reading about diagnosis and management of tree health disorders visit www.arborcarbon.com.au. This article originally appeared in the GCSAWA Divots newsletter (Winter 2009 edition). 🌳



With Melbourne experiencing one of its most prolonged periods of drought, golf clubs across the sandbelt and wider metropolitan area are being forced to secure their future water needs. During 2009, Kingswood Golf Club, located in Melbourne's sandbelt, has progressed its investigations of an aquifer storage and recovery (ASR) scheme and has had success with a new bore penetrating an aquifer 109m below the ground.

An initial test injected 1.9 megalitres of stormwater from the course's storage dam into the aquifer over three days and recovered the same volume in two days of pumping a few days later. Experienced ASR group Australian Groundwater Technologies (AGT) planned and supervised the trial and concluded that an ASR scheme was feasible.

AGT has recommended a season of injection and recovery to demonstrate that the system could meet Kingswood's performance criteria for injection rate and storage capacity. Preparations for this longer term trial are underway and with funding assistance from the Victorian Government's Smart Water Fund the club ultimately hopes these trials will lead to a licensed operating system by mid-2011.

DWINDLING RESOURCE

Kingswood's annual supply of irrigation water is usually about 45ML of stormwater and 15ML of groundwater. Until recent years this supply was adequate to maintain the course in excellent condition through most summers. In 2005 course superintendent Terry Ford made the club aware that an increased supply of irrigation water had become his primary concern. The two main options at the time seemed to be to join a proposed recycled effluent scheme or to provide more dam storage for stormwater.

Kingswood is licensed to collect stormwater from an adjoining Melbourne Water retardation basin which is then stored in a 23ML dam. At the start of summer this dam is usually full and the retardation basin holds up to 20ML of accessible water. When irrigation starts in earnest, groundwater containing about 1450ppm TDS, as well as stormwater, is used to top up the dam.

Once the stock of stormwater is used, in the absence of rainfall, the salt content of the dam water rises to the point where the condition of the *Poa/bentgrass* greens is at risk. The bore is stopped when the TDS reaches about 650ppm (about 1100 EC). The remaining dam water is conserved by reducing supply to the Santa Ana couch fairways.

OPTIONS STUDY

A study was undertaken to establish how



ASR scheme aims to keep Kingswood green

Following the lead of a number of South Australian golf clubs, Melbourne based Kingswood Golf Club, with the assistance of government funding, is undertaking trials on an aquifer storage and recovery scheme. Course superintendent Terry Ford and Kingswood member and project manager Norm Seaton provide ATM with an insight into the \$300,000 project which could go a long way to securing the club's future water needs and provide a working example for others to follow.



PRINCIPAL PARTNERS

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much additional water is needed, consider the options available and recommend the most suitable option. A water budget approach using 50 years of monthly rainfall and evaporation data was used to estimate that an additional 30ML of supply volume was needed to water fairways throughout the summer.

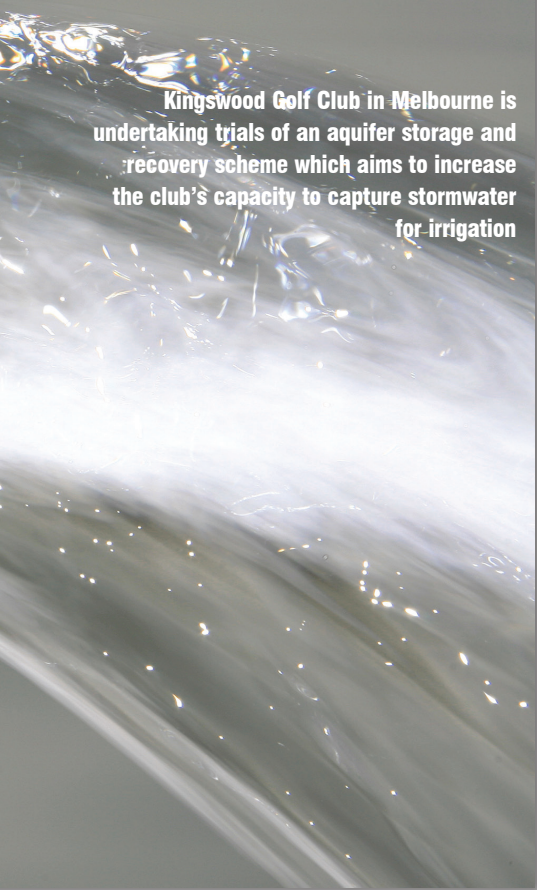
A key element of the study was to estimate the amount of potentially available stormwater. A number of measurements showed the basin collected about 2.2ML of stormwater for each 10mm of local rainfall, giving about 140ML of run-off through the retardation basin in an average year.

By 2006 the recycled water pipeline option was virtually shelved as the projected cost of more than \$2000/ML was too costly for most potential customers. The 'take or pay' requirement was also a negative as it seemed that Kingswood would not need to take its full 30ML allocation in most years.

The modelling indicated that a 35-40ML dam was needed to supply an extra 30ML in a dry summer. No single dam site was available to supply this extra capacity so the cost of additional storage would be high.

Golf clubs which have installed desalination plants need to obtain a low salinity water supply either to mix with higher salt streams or to apply to greens only. Thanks are due to Peter Frewin (ex-Barwon Heads Golf Club), Richard Forsyth (ex-Metropolitan Golf Club) and Michael Freeman (Huntingdale Golf Club) for showing us their plants and discussing their operations. Desalination works well, but costs are relatively high and disposal of the brine solution may be problematic.

As a result, ASR was identified as the lowest cost option for Kingswood, injecting 'surplus' stormwater to an aquifer in the winter months and recovering water in the summer months using a single new bore.



Kingswood Golf Club in Melbourne is undertaking trials of an aquifer storage and recovery scheme which aims to increase the club's capacity to capture stormwater for irrigation

DIGGING DEEP

While offering the lowest cost solution, the ASR option carries three main areas of risk:

- **Technical risk:** The aquifer may not accept the injected water at the required rate, may not have the required storage capacity, and may return a mixture of injected water and native ground water which is too salty;
- **Regulatory risk:** The operating and monitoring conditions imposed by the licence to protect the aquifer from contamination or damage may be too expensive or too time consuming; and
- **Delivery time risk:** The time taken to resolve the technical and regulatory issues may delay the delivery of the extra water.

Recognising that ASR schemes are new to Victoria, in 2005 the Smart Water Fund (SWF) supported CSIRO Division of Land and Water in the production of a report titled 'Technical Guidance for ASR'. This report included the information and process needed to undertake evaluation and establishment of ASR schemes in Victoria.

This report, and discussions with Dr Peter Dillon, one of its authors, allowed Kingswood

to decide that the necessary components of a successful ASR scheme were potentially present and that there appeared to be no high risk environmental factors. A desktop study by AGT confirmed this view and proposed a staged technical assessment. An extension to the CSIRO project involved an ASR pilot project at the nearby Rosedale Golf Club and several informative visits were made to talk to Rosedale superintendent Paul Kortholt about the progress of this work.

A site for a new bore at Kingswood was proposed by AGT and under their supervision Borewell drilled a 150mm pilot hole through the Tertiary sediments and weathered siltstones to the unweathered siltstone bedrock at 114m below surface. The drill cuttings were evaluated visually by AGT and the hole geophysically logged by a specialist unit from the SA Dept of Water, Land and Biodiversity Conservation.

The coarse sand and gravel layer at the base of the sediments was considered to be less than ideal for ASR being only a few metres thick and having a significant clay content. The recommendation was to target the fresh Silurian bedrock, looking for a fractured rock aquifer.

The pilot hole was reamed out to 235mm to a 109m depth and 177mm OD PVC casing grouted in. Redrilling the hole to 114m yielded a strong flow of water which was air lifted to the surface. The flow was estimated to be more than 10 litres per second and indicated the likelihood of establishing a viable ASR scheme.

STAGE ONE COMPLETE

The first stage of field investigations approved by Southern Rural Water (SRW) has now been completed. It comprised a three-step pumping test followed by injection of 1.9ML over three days, a rest period of three days and extraction of 1.9M over two days. Contractor Agmek of Ballarat supplied equipment and personnel under the supervision of AGT. The outcomes of the investigations were:

- The testing confirmed the feasibility of undertaking ASR within a fractured Silurian siltstone aquifer;
- Fresher water injected into the aquifer mixes with the native groundwater, is stored in a single water body, and can be recovered.
- At a target salinity of 1100 EC, recovery efficiency could initially be expected to be 30 per cent, but is likely to increase to 50-80 per cent in subsequent injection seasons;

Kingswood is licensed to collect stormwater from an adjoining retardation basin which is then stored in a 23ML dam

- The recommended injection rate is 5l/s with pressures limited to 60m above ground level (a surface pressure of 600kPa). Rest periods will be needed between injection periods;
- Initial estimates of volumes that could be injected and stored over a typical injection season are 25-30ML;
- Maximum extraction rate is estimated to be 6l/s with pump operation equivalent to one day on and one day off;
- Source water quality mostly meets potable standards and is unlikely to cause any detrimental effects to the beneficial uses of the aquifer;
- The compartmentalised nature of the aquifer will largely maintain injected water within a confined storage and limit the impact of injection on outside users; and
- The potential for clogging the aquifer is not considered to be high. Management practices to minimise clogging are nominated.

LOOKING AHEAD

The recommendations arising from the first programme were:

- The nature of the fractured rock aquifer requires further trials over a complete injection and extraction season to confirm viability;
- Use of golf course irrigation pumps and filters to inject dam water to the new well means that an operating scheme can be developed at relatively low cost; and
- Kingswood can undertake the trial programme, subject to SRW approval. AGT will design the programme, prepare a monitoring plan and provide data review and advisory services.

Kingswood reviewed the outcomes of this investigation and reconsidered the other options available to increase its supply of irrigation water. Very useful visits were made to South Australian based superintendents Ivan Swinstead (Tea Tree Gully Golf Club), Richard James (The Grange Golf Club) and Graham Stevens (Glenelg Golf Club) to discuss their experiences with ASR.

The Kingswood board resolved to continue to develop an ASR project and this was complemented with a decision to install 700 kilolitres of tank storage to allow separate distribution of higher salinity water to fairways. This will provide some insurance against a continuation of below average winter rain and the likelihood that the initial recovery efficiency of the ASR system will be low. Injection trials will be undertaken over the winter months and it is hoped that they will prove the viability of this project. 🌱



Situated in beautiful Bateman's Bay on the NSW south coast, the 27-hole Catalina Country Club has always been mindful of its impact on the local environment. Long-serving course superintendent Tony Fogarty outlines the concerted efforts the club has instituted to improve the sustainability of its operations.



A greener Catalina



Having been the superintendent at Catalina Country Club for over 25 years, I can say that we have always been closely aware of the environment in which we work and operate, and have tried to maintain the appropriate balance in course maintenance.

I am sure most golf courses have the best intentions as we always have, but inadvertently, without a doubt underachieved in a number of areas in relation to today's modern standards and regulations, partly through lack of knowledge and a lot through lack of resources, including dollars.

It was with that in mind that the club engaged the services of Environmental Business Solutions in 2004 to carry out a complete audit of the golf course and the turf maintenance facility, with the view to ascertaining where the club was not fully meeting its obligations. While being a very positive experience for the club and course staff, it was a huge eye opener for all concerned to the amount of regulation and legislation our daily operations was exposed too.

To the club's credit it has not shied away from its responsibilities in dealing with those areas where we were underachieving or non-compliant, and to this day we are still striving to improve at all times and are consistently assessing what areas we can improve in, not only on the course but the club as well.

SETTING A STANDARD

It is fair to say that the course has historically led the way in the terms of environmental initiatives and work will continue in that regard. Efforts to conserve water and electricity in our energy-consuming clubhouse have been minimal and many opportunities exist to make inroads into our utilities overheads.

The club values and embraces innovation by our staff and challenge them at the annual business planning workshops to come up with ideas in reducing our carbon footprint by the reduction of power consumption, water and waste in all sectors of the club and course.

This is no more evident, than with the club in the past 18 months signing up for the Business Treading Lightly (BTL) programme which assists organisations in the Illawarra and NSW south coast areas in coming up with sustainable management solutions. The club is already obtaining significant reduction in power savings by way of changing to low kilowatt light globes through various sections of the club.

In addition, BTL has assisted in the club's applications for Federal Government grants to carry out such work as water harvesting of the course maintenance facility which has the potential to reduce our potable water use by up to 75 per cent. This will be a major cost saving as we all know that the cost of water is only going to increase.

Another step in meeting our requirements in environmental management is that we are currently carrying out costing to upgrade the turf maintenance facility's fuel storage and dispensing area, wash down facility and chemical preparation and storage, and an area for the club's and members carts to be washed and maintained, all meeting the required Australian standards and OH&S policies that are required of our organisation policy. This will be a big financial commitment by the club, but a very necessary one to ensure we are compliant in all areas.

ON COURSE INITIATIVES

As far as course maintenance is concerned we have implemented a number of initiatives in

various sectors. These include the installation of a complete new irrigation pumping station in January 2008, which not only replaces the old antiquated pumps, but is allowing for more uniform irrigation of the course in less time, which has reduced the cost of power to run the pumps. In time the system will actually pay for itself.

A reduction in maintenance on the course has been achieved by the introduction of regeneration areas in various sectors that are generally 'no play' areas. A perfect example of this is the area between the 2nd and 5th greens, which also has a toilet block located in the middle of it. A large area of kikuyu rough, which was constantly maintained for no real benefit, has been regenerated and is attractive and now essentially maintenance free.

In this instance, course staff took up the challenge, along with volunteer members, to return the site back to a more natural area. We initially treated the kikuyu with four applications of Round-up Bioactive over a two-month period and then we spread mulch over the entire area to a depth of 100mm. We then transplanted a number of *Lomandra longifolia* from various other native gardens on the course, coupled with plants donated by the local botanic gardens as a gesture of support.

The great thing here was that two members from the Eurobodalla Shire Council's environment team, who organised to carry out an inspection of the course with me in relation to noxious weeds that may be invading the area, were so impressed with our idea and strategies of implementing the regeneration areas that they organised the plants from their botanic gardens. In fact, they recently organised another 300 *Lomandra longifolia* to be used in another regeneration area between the 20th and 23rd holes. It has been a positive

Catalina Country Club has always been proactive in its quest for more sustainable course management practices and a range of initiatives have been implemented over the years. A 2004 environmental audit provided the impetus for more changes both on and off the course which has paid major dividends for the club and its members

partnership and we look forward to working in the future with these various groups.

The council staff took photos of the site and staff planting the native grasses and shrubs and ran an article in the local newspaper to highlight the club's commitment to removing noxious weeds and planting native species throughout the course, great exposure for both parties. Overall we have introduced four major regeneration areas and have received nothing but positive comments from members and visitors alike - a great result.

While these areas are extremely new and the plants yet to reach their potential, it has set the platform for the future in the way in which we view the management of the course and these non-playing areas. Although there is some maintenance required in these areas, it is far less than that of the past. This can then lead to utilising course staff in other areas of maintenance.

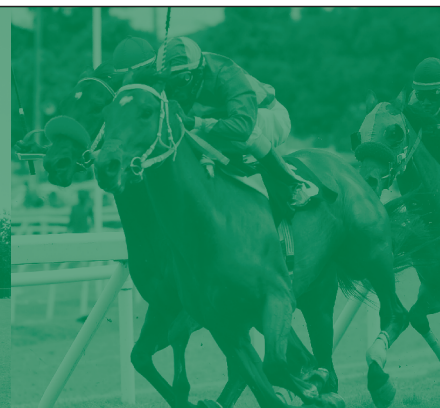


Under the club's recycled water use agreement with the local shire council, its has constructed a wetland as a nutrient stripping area to accommodate overflow from the main dam in times of heavy rainfall

Under the club's recycled water use agreement with the local shire council, we have constructed an overflow wetland as a nutrient stripping area to accommodate the overflow of the main dam in times of heavy rainfall. Although we use floating reed beds in the main dam in conjunction with a permeable reactive barrier around the inlet pipe to strip nitrates and phosphates (see 'Improving reclaimed water quality' ATM Vol 9.5, September-October 2007), the wetland is another part of the strategy to improve quality of the water.

As mentioned, we will continue to audit our practices and maintenance strategies regularly to ensure we reduce our environmental impact. While we do not consider ourselves alone in our quest for best environmental practice, our business plans nevertheless strive to achieve winning industry awards for our endeavours. This is not about winning awards, though; it is about self-compliance and goal setting necessary to achieve best environmental practice. Earning recognition among our peers would just be an additional bonus. 🌱

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In 2007 the AGCSA launched its Best Practice and HR Service to assist superintendents and golf clubs in all facets of operation. Highly respected superintendent Daryl Sellar was seconded by the AGCSA to head up this service and here he examines some case studies to show how the service has benefited a number of clubs.



Being the best

Best practice can be referred to as “a technique or methodology that, through experience and research, has proven to reliably lead to a desired result.” The aim of best practice management for golf courses is to produce a sustainable golf course, taking into account economic, environmental and social impacts.

By nature, golf courses are extremely complex to manage with all aspects of golf course management having the potential to impact on each other to varying degrees. Therefore, best practice management for golf courses is equally complex and needs to be viewed according to key management areas.

Golf course management is infinitely more complex today than it was 15-20 years ago and the challenge to keep up with and meet these modern management requirements has proved very difficult for many golf clubs. Often confusion exists when there is not a clear understanding of the expectations for the course, the costs associated with those expectations, the time required to achieve them and some of the new demands for a course superintendent's time.

Recognising the challenges facing the game of golf, and golf clubs, and hence the need for prudent management of golf courses into the future, in 2007 the AGCSA set up a Best Practice Service (BPS). The aim of the service is to support superintendents and their clubs in achieving sustainable course management goals and standards by taking into account all aspects of course management.

By providing independent assistance in defining course management requirements the service can provide a conduit between committees, management and staff to ensure all parties share informed common goals that will lead to consistent decision making for the

future. A number of courses have benefited from the service and what follows is a summary of some issues that have arisen.

CASE STUDY 1

Club A was experiencing significant communication problems between the committee, superintendent and course staff. Friction resulted as expectations and operational issues were not communicated effectively and different parties seemed to have their own objectives. Thankfully the club identified it had a problem and sought some help.

Some time spent with the committee revealed there was a lack of clarity over roles and responsibilities. There was a 'structure' but it was confusing and had been muddled over time by well-intentioned committee members crossing boundaries 'just to help out'. Not only was there a level of frustration with the superintendent, there was frustration among themselves. As a result, people would bypass the committee system and go out and do their own thing.

Further discussion revealed there was a genuine lack of understanding of what the superintendent and his staff actually spent their time doing. Not surprisingly, some time spent with the superintendent revealed a pretty frustrated individual who felt as though the knives were out for him and didn't know what more he could do to keep the club happy.

As we drove around the course, we were able to talk about the specific conditions that influenced course management – staff numbers and experience, turf types, soils, budgets, water quality and quantity etc... As the profile of the course began to take shape, it became increasingly clear the course was not only well presented but also well managed.

The superintendent knew the limitations of his site and conditions and how to get the best out of it. He knew what needed to be done six months ahead to minimise problems at a later date.

It was also clear he had in his own mind how to utilise his staff time well but was being hindered by 'spontaneous priorities' that would increase the workload without warning. Communication had become a huge problem and was usually based on emotion rather than facts with little in the way of a game plan to follow.

We spent some time documenting where and how his available time was spent, covering all the unseen aspects of the job. This exercise immediately highlighted there was no spare time and any new projects would clearly impact on routine aspects of course maintenance.

With this information as a starting point, and working with the superintendent and the committee, a strategy to improve communication frequency and quality was put in place, as was a way of developing clear roles for committee and staff members alike.

CASE STUDY 2

Club B had a wonderfully presented golf course for most of the year, but summers were becoming increasingly difficult to maintain playing surface standards and presentation. By developing a programme to assist the transition of playing surfaces to turf species better suited to the local climate, as well as maintaining their health, the challenges associated with summer maintenance have reduced significantly.

Importantly, the documentation of the goals of this programme allowed the key objectives to be measured, so that its success could be reported on factually. It also

Golf course management is infinitely more complex today than it was 15-20 years ago and achieving sustainable course management goals and standards is a challenge for every club

allowed sustainable standards to be set and consistency of decision making to continue into the future.

CASE STUDY 3

Club C had a lot going for its course but was in danger of suffering an identity crisis due to ad-hoc decisions regarding course development and maintenance. The adoption of a clear, documented vision for the course allowed some plans to be put in place that has resulted in every decision now working towards a common goal.

This has allowed greater consistency of decision making, more detailed accurate planning and budgeting, clearer understanding of the expectations for the course and better management of the course as an asset.

CASE STUDY 4

Club D was suffering enormous time management problems. With many of the basic turf and course management tasks not being undertaken, the course was beginning to

AGCSA DRAFTS AWARD SUBMISSION

The Australian Golf Course Superintendents' Association has submitted a draft Golf Course Greenkeepers Award as part of the Federal Government's Award modernisation process.

The AGCSA saw the opportunity to make a submission as valuable, as it is understood the golf industry has not previously had any input to the Greenkeepers Award. Currently, greenkeepers will be covered under three different awards as of January 1, 2010;

- Gardening Services Award
- Licensed and Registered Clubs Award
- Amusement, Events and Recreation Award

The objectives of the submission were to update the Award to more accurately represent the skills required of the modern greenkeeper and superintendent, have a single stand alone Award and to see minimum pay rates consistent with comparable trades.

Following a hearing at Fairwork Australia on 6 August, 2009 the AGCSA was advised it was highly unlikely that an independent Golf Course Greenkeepers Award would be approved, and that the most suitable Award should be selected and the draft award be submitted for inclusion. The AGCSA board has approved work to continue on this submission. – **Daryl Sellar**

deteriorate. Sections of course redevelopment and subsequent maturity had seen a change in maintenance demands that had not been identified.

Support was provided to the superintendent and course owners to assess where time was currently being spent and to develop some basic priority tasks for the future. Enormous hours were being lost in the maintenance of areas that had no bearing on the game of golf itself, as well as bunkering that was more artistic than strategic or functional.

Having identified where time was being spent, it was much easier to identify where management practices needed to change (which potentially changed the appearance of the course) and to work with the course architect on making alterations to the bunkering that would free up valuable maintenance hours for more important tasks.

For more information about the AGCSA Best Practice Service contact Daryl Sellar on 0408 322 397 or email daryl@agcsa.com.au



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Dean Bailey

– The Rosanna Golf Club

Full Name: Dean Anthony Bailey.

Nickname: Bails.

Age: 35.

Family: Wife Ally and two girls Megan (6), Chloe (5).

Period as a superintendent: Seven months.

Years as an AGCSA member: Five.

Previous clubs: Portland Golf Club (apprentice then superintendent, 6 years); Lakelands Golf Club (greenkeeper, 2 years); London Golf Club, UK (casual, 6 months); Hanbury Manor Golf and Country Club, UK (senior assistant, 1 year); Sea Island Golf Club, USA (intern, assistant superintendent, 6 months); Oak Hill Golf Club, USA (intern, 6 months); Metropolitan Golf Club (casual, 3 months); The Victoria Golf Club (assistant superintendent 7.5 years).

Current club: The Rosanna Golf Club (7 months).

Staff: Eight full-time, three part-time.

Course specs: 18 holes, 6140m; New greens A1, old greens bentgrass (1019, Pennlinks) and *Poa annua*. Santa ana and fine fescue tees. Legend and fine fescue fairways.

Turf management qualifications: Diploma in Turf Management.

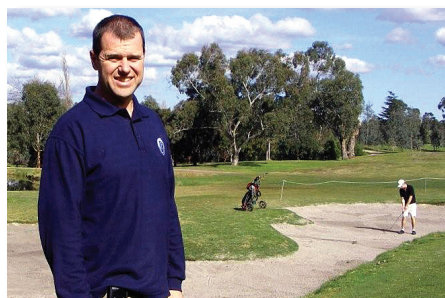
Congratulations on your recent appointment as superintendent at The Rosanna Golf Club. Tell us a bit about your background in turf management and how you ended up there.

I began my apprenticeship at Portland Golf Club and became the superintendent

towards the end of my apprenticeship. After a couple of years in this role I headed north in search of some warmer weather and was fortunate enough to be offered a position as a greenkeeper at Lakelands Golf Club in Queensland before its opening. It was a great learning curve from working with a staff of two to joining a staff of 22!

After two years at Lakelands I was looking for a new challenge so I travelled to the UK to work at the London Golf Club and then Hanbury Manor for the English Open in 1999. Wanting to see what the USA had to offer I headed off on the Ohio State Program and while there I worked at Sea Island Golf Club in Georgia and then Oak Hill in Rochester, NY.

Oak Hill was preparing for the 2003 PGA Championships so there was plenty of major work to be involved with. The bunkers were undergoing a major change to take them back to the original Donald Ross design with grass faces, and major irrigation and drainage works were being undertaken throughout the course.



Dean Bailey

The Rosanna Golf Club is now home to superintendent Dean Bailey who is settling in after more than seven years at Victoria Golf Club. Pictured is Rosanna's 3rd hole

The spate of movement within the Victorian superintendent ranks over the past year has opened up a number of opportunities for aspiring assistants to make their move. One to do just that was Dean Bailey, who after seven-and-a-half years at Victoria Golf Club is now the new superintendent at The Rosanna Golf Club.

On returning to Australia I started the Diploma in Turf Management course and was able to find a casual position at The Metropolitan Golf Club before a position at The Victoria Golf Club came up. I spent 7.5 years under Ian Todd and worked my way up to assistant superintendent. During my time there Ian passed on much of his knowledge and philosophies on golf course management which enabled me to take the next step – The Rosanna Golf Club.

What have been some of the biggest adjustments you have had to make in moving up to a superintendent position?

Dealing with the politics of a golf club would be the main adjustment, as well as being more involved with the financial side of the job. I have been lucky to have an assistant who knows the course well and can take control of the day-to-day issues. The key to settling in is having time to get to know staff and learn as much as you can about the golf course as quick as you can. Because of my hectic start to this position I still feel I have some settling to do.

You had an interesting start to your tenure there, with a fire break out on the course on Black Saturday (7 February). Was there much damage to the course and did you fear the worst given the conditions that day?

The day was a shocker. I was hand watering greens with another member of staff when

No sooner had Bailey arrived at Rosanna than a fire broke out on the course on Black Saturday. Fortunately damage was mainly contained to the rough and out of play areas

I saw the smoke and at first I probably underestimated its ability to spread so quickly. The fire brigade did a fantastic job to contain the blaze and we got away with minimal damage.

The damage was mainly contained to the rough and out of play areas which we are cleaning up at the moment. We have replaced the damaged fences and are working through the rear of the 3rd green spraying the weeds and removing dead trees before we begin the revegetation process. We were lucky it was very minor compared to what some people, and other golf clubs, went through on that day.

What do you hope to achieve during your time as superintendent at Rosanna?

My aim is to consistently provide a high standard of presentation and playability. To help achieve this we are continuing with an upgrade of the fairway irrigation system, improving design and playability of bunkers, promoting rough and introducing indigenous vegetation to help frame holes, add some more character and increase the environmental aspects of the course.

What are some of the major turf management issues there and how are you and the club planning to meet those challenges?

The Rosanna Golf Club receives a lot of play, so managing traffic, especially through the winter months, is critical. We will be doing some drainage work to help wet areas cope better with traffic. Some of our new greens are quite poor during winter. They are very soft and don't cope well with traffic. We will be increasing the amount of verti-draining and dusting as well as dealing with shade issues around some of these greens.

Are there any major course construction/reconstruction plans in the pipeline or that have been recently completed?

We have reconstructed two bunkers on the 17th which held water and were visually pretty ordinary. There are a number of bunkers which require similar attention and we plan to work through these over the next couple of years. Our 13th hole is currently undergoing reconstruction to improve what is considered our weakest hole. This hole should be open around March next year.

Water is obviously a critical issue around the country at present. How is Rosanna



far in the water management stakes and what future plans, if any, are in the pipeline?

At the moment we are in a reasonable position with access to the Yarra River, however, Melbourne Water is reviewing our entitlements so we may not be so comfortable soon. We are exploring the possibility of a second dam in the event of strict water rights.

If you could change one thing about your job what would it be?

Improved wages and conditions for staff.

Best part about being a superintendent?

Being more in control of the decision making.

What's the best part of being involved in the turf industry?

The friends you can make and the willingness of people in the trade to help others.

Favourite spot on your course?

9th tee across the river up to the clubhouse.

Favourite piece of machinery?

Dakota topdresser (haven't got one yet!)

Funniest moment you have seen on course?

Seeing a workmate waltz up to a senior female member and plant a kiss.

Career highlight?

Becoming superintendent at Rosanna and my experiences working overseas.

Overseas course you'd most like to visit?

Pine Valley.

Rosanna's 11th green from the 9th fairway



OFF THE COURSE

Favourite movie?

Young Guns.

Name 3 CDs you could not live without.

Cut (Hunters & Collectors); Vulture Street (Powder Finger); and Only by the Night (Kings of Leon).

If you could be any musician, who would you be?

Bono.

Food you could not live without?

Weet-bix and Dale's souvlaki.

Favourite sporting team?

Collingwood.

Sporting team you like to dislike?

Carlton.

Dream car?

Porsche 911.

Irritations?

Negative people.

What book are you reading now?

The Cat in the Hat, by Dr Seuss (bedtime story for Megan and Chloe).

Favourite golfer?

Tiger Woods.

Golf handicap?

17.

What do you do to get away from it all?

Jump on the bikes and go for a ride with the family.

GREEN WITH ENVY

Dear Editor,

I have worked on bowling greens for 46 years and being a turf tragic have always been interested in looking outside the square. My son Adam worked with Greg Burgess, current superintendent at New Kuta in Bali, (20 Questions, ATM Vol 11.4 July-August 2009) when he was at Mona Vale Golf Club. On a recent trip to Bali I decided (at my son's insistence) to make a call on Greg as I had always been envious of superintendents' opportunities to work on turf in an exotic country.

Greg made my wife and I very welcome, interrupting his very busy day with 5-star treatment and a tour of his golf course. I give Greg full marks for his tenacity and commitment to his course. Let me tell you it is not all Bintang beer and nasi goreng! The seashore paspalum fairways and tees,

while looking great, are obviously a high maintenance item. We saw a group of workers scarifying tees and it was amazing the amount of thatch removed without any obvious visual difference.

Greg explained the difficulties he encounters on a daily basis which range from a water supply of dubious quality and sourcing basic products such as fertilisers and chemicals. A volcanic soil is the only topdressing medium available (with a texture like coarse crusher dust) which needs to be manually sieved through a fine screen. Cultural differences between Greg's good old Aussie work ethic, his OH&S awareness and the Balinese casual approach must mean some frustrating times also.

Through all these obstacles Greg's achievements in bringing a new course up to European Tour specifications is a tribute

to his skills and tenacity. Greg, who had never been out of Australia before, got out of his comfort zone – good on you mate! As for me, well I'm back on the Sunshine Coast tending to my bowling greens where I'm in my comfort zone."

ROSS WARD,
NOOSA HEADS, QLD



TAKING A STIMP BACK IN TIME

Dear Editor,

The article on green speed and stimpeters (The Pulse – ATM Vol 11.3, May-June 2009) caught my eye. My own view is the consensus of the views held by the contributing superintendents. As a tool for comparing green speeds – excellent; as a means of helping to produce the best green surface at your course – of little or no value.

Around the early 1970s I purchased a stimpeter from America. It seemed they could play a role in future green design and assessment and as far as I knew there were very few, if any, in the country at that time. I might add they weren't that cheap either and I soon found that a similar tool could easily and inexpensively be put together out of angle iron or aluminium to give identical results.

Residing in Newcastle at the time I was seeing quite a number of courses along

the NSW eastern seaboard. I wrote to 110 clubs inviting them to borrow the stimpeter, and advising that I could gladly supply the dimensions of an 'Australiana unit', if they wanted a 'Woolworths' version. My letters were addressed to the secretary manager of the club, for the attention of the superintendent and chairman of greens. This service, by the way, was at no cost to the clubs, other than they might cover the cost of the return postage of the stimpeter when they finished!

I have to say that I was somewhat surprised that out of the 110 clubs written to, not one replied to my letter! This could be interpreted as meaning that golfing people as early as 1970 had dismissed stimpeters as impractical. Not the correct answer though, I think – more it seems as a determination on an incorrect methodology of communication on my part.

MIKE COOPER,
MIKE COOPER GOLF DESIGN,
MOLE CREEK, TAS

MEMBERS THE FOCUS

Dear Editor,

It was with great disappointment that the club received your recent publication (ATM Volume 11.3 May-June 2009) where staff and directors were confronted with a letter to the editor from our immediate past superintendent effectively attempting to justify the condition of our course leading up to his departure (Giving credit where credit should be due, pg 54).

Unfortunately it appears he was more interested in detailing the political spin rather than the facts and processes required of professional staff in managing the delivery of healthy turf and producing the best surface conditions for the specific purpose of playing golf that is commensurate with the budget expended during his tenure.

We have had and continue to have one of the biggest budgets in the region for maintenance of our golf course turf and therefore it would be reasonable for the members and board to expect that we should have one of the region's healthiest turf, producing consistently the best surface playing conditions.

Sadly this has not been the case and therefore the members have been prepared to empower the board recently to make the necessary operational changes to rectify the inefficiencies in the management team.

I would like to emphasise to you and particularly your members/readers that the new board is dedicated to empowering the professional managers it employs to deliver the highest standards possible with the resources and budgets we provide. High standards are primarily achieved by the attitude of the personnel towards the responsibility of the duties their role entails within the organisation they choose to join.

Gold Coast Burleigh Golf Club now has a renewed management team that is working proactively with the board to deliver advanced professional management systems to improve service levels to our customers – the members.

PHILLIP MCBRIDE,
PRESIDENT, GOLD COAST
BURLEIGH GOLF CLUB, QLD

HAVE YOUR SAY

Australian Turfgrass Management welcomes letters to the editor. Please send your letters to editor Brett Robinson, c/o AGCSA, Suite 1, 752 Blackburn Rd, Clayton, VIC 3168 or email brett@agcsa.com.au

ON THE MOVE

2006 AGCSA Graduate of the Year winner **Sean Kinsley** has been around the traps since collecting his award at the Brisbane conference. After leaving his home course of Yamba and attending the Winter School for Turf Managers at the University of Massachusetts in the US, he returned Down Under to take a position at the Troon Golf-managed Settlers Run development in south east Melbourne.

Kinsley has again packed the bags and now finds himself in the outskirts of Moscow, Russia of all places where he has taken up an assistant superintendent position with Troon Europe at Agalarov Golf and Country Club. When ATM last spoke with Kinsley the course was midway through construction and he was looking forward to experiencing the country's 'fifth' season – 'Russian' winter.

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The superintendent/assistant superintendent merry-go-round continues in Melbourne. After Glenn Stuart vacated the seat at Woodlands to take the plum job at Metropolitan, the club has appointed former Cranbourne Golf Club superintendent **Rod Tatt**. That has opened the door for Huntingdale Golf Club's Scottish assistant **Barry Procter** who moved south to Cranbourne in mid-August.

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After a short stint as assistant superintendent at South West Rocks Golf Club on the mid-north coast of NSW, AGCSA immediate past president **Jeff Gambin** has headed back to



New Woodlands superintendent Rod Tatt

from Corowa Golf Club who replaces **Gary Bushby** who has moved out of the industry to a position with Murray Goulburn Water.

~~~~

If you were wondering why The Sands, Torquay superintendent Nathan Bennett was looking a little stressed during the Australian Turfgrass Conference it probably had something to do with a few last minute staffing issues. In the week before the conference one crew member left and no sooner had he landed in Hobart than his assistant also pulled up stumps.

After a great response to his ad on the AGCSA website, Bennett has appointed **Justin Rankin** as his new 2IC. Rankin served his apprenticeship at Kew Golf Club before heading to the US to take part in the Ohio State Program. Rankin worked alongside Bennett when he was part of the crew for the 2005 Australian Open at Moonah Links and will take up his new position having spent the last three years working at the spectacular Kauri Cliffs course in New Zealand.

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Across at Thirteenth Beach Golf Links superintendent Steve Hewitt has also appointed a couple of new lieutenants. Following the departure of former assistant James Dalton to a nearby horse training facility, Hewitt has promoted **Rodger Harkin** and **Simon Willert** as joint assistant superintendents of the 36-hole facility.

the Gold Coast and landed an interesting job out in the Currumbin hinterland. The former Gold Coast Burleigh Golf Club superintendent is now property manager of an estate which is owned by a Brisbane-based businessman. Back down the coast at South West Rocks, superintendent Wayne Hensley has welcomed back **Lance Laws** as his new assistant. Laws, who started his new post in early July, initially completed his apprenticeship at the club before spending some time out of the industry.

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As well as undertaking some major works to the club's river pumps, Tocumwal Golf Club superintendent Matt McLeod has been on the hunt for a new assistant over winter. McLeod has managed to lure **Ben Lucas** across

## AGCSA LAUNCHES ONLINE WATER MANAGEMENT REVIEW

In 2007, the AGCSA in conjunction with the Australian Golf Industry Council (AGIC), conducted research into how the current drought and subsequent water restrictions have impacted on Australian golf courses.

The results of the survey indicated that golf courses affected are currently pursuing a number of short-term practices to minimise water use with only 40 per cent of Australian golf courses having a formal water management plan in place. In light of such findings, the AGCSA has embarked on an ambitious scheme to develop a free interactive online water management review service.

The AGCSA's Online Water Management Review was officially launched at the 25th Australian Turfgrass Conference held in Hobart and is aimed at providing superintendents with an easy to use template which comprises a detailed online questionnaire which when completed will generate a comprehensive report outlining their club's current water

status. The management review will also identify and outline where efficiencies can be made and provide a range of action and implementation plans.

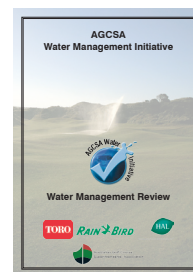
The review aims to identify the works and practices that will improve irrigation management and water use efficiency at golf courses. The purpose of the water management review is to;

- Assess current water management practices;
- Secure future water availability through sustainable practices;
- Demonstrate environmental responsibility and stewardship;
- Comply with regulations;
- Communicate to club members and community regarding the club's best management practices with respect to water use and conservation;
- Be an integral part of the business strategy;
- Identify additional water sources.

The Australian golf industry recognises golf courses need to aim for best practice in managing our water resources as it plays such a vital role when

it comes to the production of high quality playing surfaces. With this in mind the AGCSA is striving to have 400 clubs over the next two years complete the Online Water Management Review. To help superintendents, assistance will also be provided by AGCSA representatives John Geary and Daryl Sellar

The Online Water Management Review, which has received part funding from Horticulture Australia Limited (Project TU08013), can be accessed directly at [water.agcsa.com.au/water-management-review](http://water.agcsa.com.au/water-management-review). For more information contact John Geary at the AGCSA on (03) 9548 8600 or email [jgeary@agcsa.com.au](mailto:jgeary@agcsa.com.au)





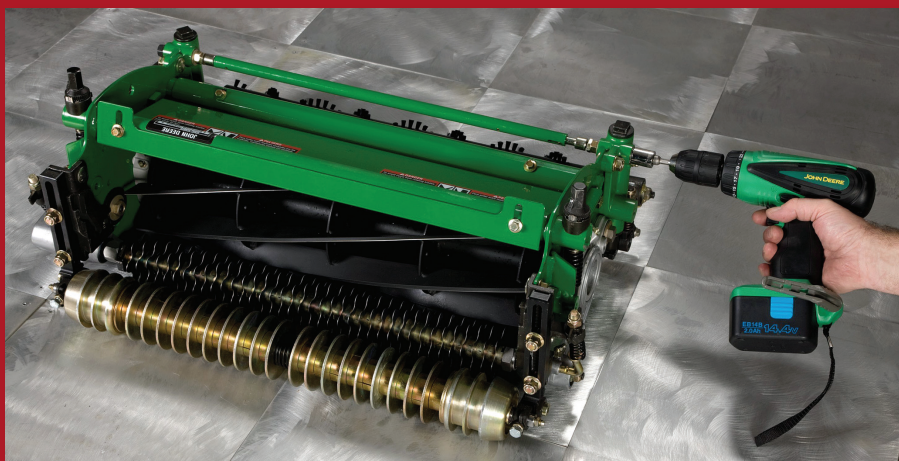
## JOHN DEERE QUICK TO ADJUST

Adjusting the height of cut on reel mowers has become a lot quicker with the introduction of John Deere Quick Adjust Cutting Units featuring the patented Speed Link system.

Previously unseen in the golf industry, these units can be instantly adjusted in a few seconds from one point on the cutting unit. The new technology allows one-thousandth-of-an-inch adjustments to be made to both sides of the roller simultaneously with only a power drill required to make the change.

Available in five- and seven-inch diameters, the Quick Adjust 5 (QA5) replaces the 22M cutting units and is available in 18- or 22-inch widths. Replacing all ESP cutting units is the Quick Adjust 7 (QA7), available in widths of 22, 26 or 30 inches. Height-of-cut adjustments can be made with a 16-millimeter or 5/8-inch wrench or socket.

Innovation comes in the form of a patented Speed Link system that connects both sides of the rear roller with worm gears located on each side of the roller housings. While enabling faster adjustments than previously possible, the worm gear ensures the adjustment remains in place. Now attached with clips for easier removal and greater stability, the grass catchers transfer the weight of clippings to the lift arms of the traction units so cutting height remains unaffected during mowing.



QA5 units offer an additional feature to extend the use of a worn reel – a reel eccentric on the bedknife shoe repositions the bedknife to the reel and increases the clearance at the rear of the bedknife. A notch system also allows for quick adjustment of the reel or bedknife. For quick and simple height or cut range adjustments, the front rollers also utilise a notch system that ensures the rollers are locked into place regardless of mowing conditions.

The cutting units also offer optional Greens Tender Conditioner (GTC) or the Fairway Tender Conditioner (FTC). The conditioner blades rotate in the opposite direction of the reel to stand up the grass

**John Deere's Quick Adjust Cutting Units enable technicians to make one-thousandth-of-an-inch adjustments to both sides of the roller simultaneously with the use of a power drill**

prior to cutting and can also be turned off when not in use. The conditioners also feature 'T' handles on each side of the cutting units to lower the blades for grooming or raise the blades to help with clipping dispersal. Conditioners are available for the 18- and 22-inch QA5 units and 22- and 26-inch QA7 units.

**For more information, contact your local John Deere Golf dealer or visit [www.JohnDeere.com.au](http://www.JohnDeere.com.au)**

## GLOBE AND ETP SCOOP CREAM OF THE CROP



**Peter Frewin**



**Jim Porter**



**Jeff Lane**

Three of the Australian's most prominent superintendents have taken up positions within the trade over the winter months. After shocking the industry with their retirements within a few weeks of each other earlier in the year, Victorians Peter Frewin (ex-Barwon Heads Golf Club) and Jim Porter (ex-Royal Melbourne Golf Club) have been eagerly recruited by Globe and Endeavour Turf Products (ETP) respectively, while highly respected Western Australian superintendent Jeff Lane also switched camps, returning from a brief stint in far north Queensland to Globe's operations in WA.

To increase its service and support to the Victorian turf community, Globe Australia

appointed Frewin to its turf team within weeks of him leaving Barwon Heads Golf Club at the start of June. Frewin, who was honoured at this year's 25th Australian Turfgrass Conference with the AGCSA's highest honour – the Distinguished Service Award – is well known throughout the industry in his management roles at Barwon Heads Golf Club and in his term as president of both the AGCSA and VGCSA.

"This background and expertise as a hands-on turf manager and understanding of the difficulties faced by turf managers will be valuable in Peter's new career at Globe," says Globe general manager Ted Baker. **Peter's new contact details are 0418 593 072 or email [pfrewin@globeaustralia.com.au](mailto:pfrewin@globeaustralia.com.au).**

Shortly after Frewin's appointment, Globe then announced it had recruited another high profile turf and golf specialist in the form of Jeff Lane. Lane has been responsible for the turf management at several of Western Australia's higher profile golf courses Sun City, Gosnells and Joondalup but most recently was superintendent at Paradise Palms Golf Resort in Cairns.

Like Frewin, Lane has been an active member of the state and national superintendent associations, serving time as president of the GCSAWA and vice-president of the AGCSA and when he left WA to take up the job at Paradise Palms was made a life member of the GCSAWA.

Lane started his new post in early July and will assist Danny Hambleton in servicing customers in Western Australia and will also contribute nationally to Globe's golf business.

**Lane's new phone number is 0408 238 287.**

Not to be outdone, Victorian-based ETP also announced shortly after the Australian Turfgrass Conference in Hobart it had secured one of the industry's most respected identities in the form of former Royal Melbourne superintendent Jim Porter. Porter joins Grant Greenway and Jerry Spencer in the newly created role of turf consultant.

As a highly regarded member of the Australian turf industry, Porter has built up 27 years of practical and technical experience in all aspects of turf management. The majority of that experience was attained during 20 years managing The Royal Melbourne.



"Jim has strong communication, rapport building skills and formal qualifications in Agricultural Science from Melbourne University that will enable and help him to develop excellent relationships with all our customers," says Greenway. **Porter can be contacted on 0427 065 956 or email [jim.porter@etpturf.com.au](mailto:jim.porter@etpturf.com.au)**

## NEW USE FOR INITIATOR

Bayer Environmental Science's Initiator product has a new use. A combination of the systemic insecticide, imidacloprid, with a controlled release fertiliser in a convenient, easy-to-handle tablet, Initiator can now be used on ornamental plants as well as trees.

Initiator is designed to either be placed in the planting hole during transplanting of seedlings, so that the growing plant can take up the fertiliser and insecticide, or alternatively, to be placed in the soil adjacent to existing plants.

**For more information on Initiator visit [www.bayeres.com.au](http://www.bayeres.com.au)**

## KEEP ROLLING WITH CARLISLE

New Carlisle radial turf and garden tyres are now available through Australian distributor Bearcat Tyres. US-based Carlisle Tire & Wheel manufactures specialist tyres for the landscape



## Carlisle radial turf and garden tyres are now available through Bearcat Tyres

and golf markets with Bearcat stocking a wide range of ride-on mower and turf maintenance vehicle tyres, including the Carlisle Multi Trac, Turf Trac, Turf Guide and Turf Saver. The Carlisle Multi-Trac boasts broad-shouldered design and provides excellent traction on lawn and turf with minimal wear.

The introduction of new Carlisle radial tyres will enable superintendents, operators and technicians to get more out of their tyres

and equipment. Poor tyre selection can quickly cause major issues and disruptions, but the new Carlisle 2 and 3 star radial tyres give better stability for machine handling and traction by producing a footprint that provides more net-to-gross.

**For more information about the Carlisle range, including lists of patterns and sizes, visit the Bearcat Tyres website [www.bearcat.com.au](http://www.bearcat.com.au)**

## SCOTTS' FRENCH CONNECTION



Frenchman Guilhem Pinault has been appointed as vice-president and general manager, Australia and Asia Pacific, for the Scotts Company. Pinault will be responsible for both consumer and professional operations for Scotts Australia and will be based in Sydney. His responsibilities will also include the expansion of Scotts within the Asia Pacific region.

After nine years building the Scotts business in France, Pinault's emphasis on customer collaboration and category management lead Scotts to become supplier of the year in the French horticultural industry. Pinault started his new post in mid-August. 🇫🇷



**Description:** Grand Prix is best suited to installations on Sports Fields, Parks, Golf Courses and School Ovals.

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- Skilled Park – Gold Coast, QLD
- Sydney Stadium – Randwick, NSW
- Eastern Golf Course – Melbourne, VIC

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Please note: All prices include GST - Prices are subject to change without notice

The AGCSA has an extensive range of books that can ordered through the AGCSA website, and also through the accompanying order form.

Postage: \$9.90 for first book and \$1.10 for every book after.



# Bunkers, Pits and Other Hazards: A Guide to the Design, Maintenance and Preservation of Golf's Essential Elements

By Forrest L. Richardson and Mark K. Fine

Wiley 2006

The game of golf would not be the unique creature it is were it not for the many and varied hazards which present themselves during a stroll around the links. Whether natural or man made, as any hacker knows they will at some stage 'conspire' to ruin what was up until that point a 'perfect' round. Hazards are such an essential element of the game and without them golf would be mundane, characterless and without doubt a lot less humorous, especially if your playing partner is the one flailing despondently in the base of a massive trap.

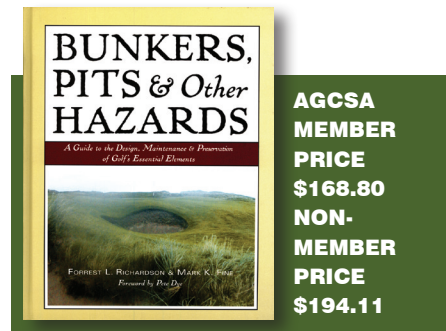
Given that hazards are there to make the game harder one would suspect they would be the last thing you'd want to read about. On the contrary, hazards – bunkers in particular – are often the most discussed part of the game and you only have to ask any course superintendent who will concur. Whether it's debate about the penal nature of a certain hazard or its appearance and maintenance, there wouldn't be a superintendent around the world who hasn't had a heated discussion or 10 with a member.

Superintendents therefore may like to add this edition's featured book to their library or slip a copy across the board room table come

their next committee meeting. Titled Bunkers, Pits and Other Hazards, this superb 300-plus page hardcover text by Forrest Richardson and Mark Fine provides a comprehensive reference which traces the history, planning, psychology, design, construction and maintenance associated with all forms of golf course hazards and does so with a sense of authority and humour.

As the authors so eloquently observe in their opening address, "You are holding a book about inconveniences. But, unlike those unpleasant interruptions in life when we bite into a sour strawberry or encounter a pothole that costs us an expensive new tyre, the interruptions covered here lead a dual life. While they are inconvenient on the surface, they are essential to the core..."

The opening chapters trace the evolution of hazards and examine the form, function and purpose of all forms of hazards whether natural or artificial, formal or informal, bunkers, water hazards or integral obstructions. After classifying what hazards are the authors then handpick 20 of the game's most famous hazards. Making their exulted list are the likes of Augusta National's Rae's Creek, the Old Course's Road Hole bunker (17th), Hell bunker



(14th) and the Principal's Nose (16th), the Church Pews at Oakmont and the aptly named Himalayas of St Enodoc.

The final three chapters provide the most practical information for superintendents looking at issues from hazard placement, size and shape, aesthetics, severity and the concept of fairness through to construction, restoration and maintenance.

Superintendents will certainly take heart from the section titled 'Hazard Education' and the terrific anecdote the authors use to conclude: "Is there too much opinion involved in setting up and maintaining our courses?" the authors quiz. "Are hazards becoming maintained to a degree that is crossing a line. John Philip, head greenkeeper at Carnoustie, may have a good solution to the opinionated golfer. He recently placed a small suggestion box on the course and notified members that he would check it regularly. Oh yes, did we mention that the suggestion box rests on top of a metal pole? Or that the pole was installed in the middle of the water hazard at Carnoustie's famous Long Hole, the 6th?" 🌿

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## TGAA ACT

With an unusually mild winter almost behind us, the smell of spring is in the air. Frost days were well down on average as was rainfall over the winter period with Canberra Airport recording 50 per cent of its average winter rainfall to date (about 70mm).

The TGAA ACT annual seminar has come and gone for another year and although numbers were down slightly members enjoyed the broad range of material presented by all speakers under the 'Diversity in Turf Management' banner.

Some great feedback was received by the TGAA ACT committee that will aid us in providing a bigger and better seminar for all members next year. There was overwhelming

positive feedback on the pre-seminar workshop that was held on the Tuesday. The disease identification and irrigation workshops were well attended with attendees enjoying the roast lunch provided. Thanks to all speakers, sponsors and members involved in another successful seminar.

The TGAA ACT AGM was held at Federal Golf Club on Wednesday 28 August and a full report will be included in the next report. Former NRL hard-man Mark Geyer was guest speaker and entertained with stories of his colourful career.

Well done to Federal Golf Club's Wade Williams. After winning the TGAA ACT Turf Apprentice of the Year Award, Wade took on graduates from around the country and

managed to win the AGCSA Graduate of the Year award in Hobart. Wade will now head to the USA to attend a seven-week full-time 'Winter School' at the University of Massachusetts. Congratulations Wade!

Well, that's it from the nation's capital. Good luck to all my fellow turfies participating in winter sports finals in the coming weeks. Good luck also to all those diehard St Kilda supporters out there (Brett Robinson) nervously waiting for your team's first loss. Don't worry, you wouldn't be the first team to go through undefeated only to lose on the last Saturday in September!

**BROCK WESTON**  
COMMITTEE, TGAA ACT

## TGAA VIC

Thank you to the staff of AGCSA for holding the successful 25th Australian Turfgrass Conference in beautiful Hobart. I'm sure we all look forward to next year's conference on the Gold Coast.

Our AGM and occupational health and safety meeting was held on 2 September at the Packer Park Hall in Carnegie. We had several speakers talking on the important OH&S theme including Scott Whittaker (Enware), John Caust (Oz Safe), Niall Martin (NMIT), Michael Sutton (Agsafe) and long-standing TGAA Victoria member, Ted Boltong (Active Safety).

TGAA Victoria's annual Summer Seminar will be held during November 2009, while the next Regional Seminar will be held in western Victoria (Colac area) during March 2010. Venues and dates for these days are yet to be confirmed but keep an eye on the website [www.tgaa.asn.au/States/VIC](http://www.tgaa.asn.au/States/VIC).

TGAA Victoria is moving forward with its Accreditation Program and encourages members to jump on board and be recognised for their professionalism and experience in the turf industry. Information and application forms are available from the office or can be downloaded from the website.

We also encourage any constructive feedback on recent seminars and will always take members' opinions into consideration. Have you forgotten to renew your membership? Would you like to become a member? TGAA Victoria membership and feedback forms can also be downloaded from the website, or contact the office on 03 9791 6900 or email [admin@tgaa.asn.au](mailto:admin@tgaa.asn.au).

**SUE BAILEY**  
TGAA VICTORIA

## SAGCSA

Glenelg Golf Club played host to the SAGCSA Annual General Meeting on 18 June. The weather gods smiled upon us and provided a beautiful sunny winter's day. Around 40 members and sponsors witnessed a really enjoyable presentation from Jim Porter (ex-Royal Melbourne) who was interviewed by Daryl Sellar who gave a Gold Logie-deserving Andrew Denton-like performance as our chat show host.

Jim gave us a wonderful insight into his career and some great advice on how to deal with the day-to-day stresses we face as turf managers and we thank him for coming over and sharing his experiences with us. Daryl took us on a tour of the ASR project at Glenelg and I am sure we all were impressed with the works that have evolved as part of this project and by the general condition of the course.

The newly elected SAGCSA committee is as follows:

**President:** Andrew Blacker (Adelaide Shores)  
**Vice-president:** Stuart Gillespie (Riverside GC)  
**Secretary/Treasurer:** Sam Sherriff (Mt Barker-Hahndorf GC)

**Committee:** Mal Grundy (Murray Bridge GC) and Brendan Clark (Mt Gambier GC)

Thanks to Gary Day (Flagstaff Hill Golf Club) who stepped down after a long stint on committee and we welcome Brendan Clark who joins the executive for the first time.

Upcoming meetings include a joint Mt Osmond Golf Club-Mt Lofty Golf Club event on 5 November which will have an arboriculture/native vegetation theme and a February meeting at the Mount Barker-Hahndorf Golf Club which will have renovating old greens as the theme.

Make sure you all put the AGCSA Spring Workshop in your diaries. The workshop features Steve Isaac from The R&A who will be presenting on golf sustainability issues. This workshop will be held at The Grange Golf Club on 17 September and will provide a fascinating insight into the role of The R&A and the challenge of sustainable golf course management. One not to miss!

After a reasonable period of rainfall through June and July things have started to dry out. Let's hope we can buck the current trend and get some decent rain during spring. Thanks for your attendance at our meetings throughout 2008-09 and we continue to look forward to your support over the next 12 months.

**ANDREW BLACKER**  
PRESIDENT, SAGCSA



The TGCSA hopes that everyone who attended the 25th Australian Turfgrass Conference in Hobart had a great time and took back some valuable information to use in their own workplace. The AGCSA should be congratulated for putting on such a great event and taking the conference to regional areas such as Hobart.

The TGCSA AGM was conducted a few weeks after the conference on 4-5 August at Barnbougle Dunes. This was a two-day meeting sponsored by Toro and Pellows Mowers and started with a round at Barnbougle for the coveted Reg Roberts Memorial Trophy. Adam Pierce from Ulverstone Golf Club collected the silverware with Devonport Golf Club's Kane McDonald runner-up. Trade winner was Doug Ollington (Tas Turf Solutions) from Scott Warren (Huonville Council). The amount of golf balls lost in the blustery conditions amounted to well over 50 but as host superintendent Phil Hill quipped, "It was just a gentle breeze!"

The AGM was conducted before dinner and the following committee elected:

**President:** Stephen Lewis (Royal Hobart GC)

**Vice-president:** Tony Smith (Launceston GC)

**Treasurer:** Adrian Box (Kingston Beach GC)

**Secretary:** Danny Gilligan (Tasmania GC)

**Committee:** Kane McDonald (Devonport GC), Mark Johnson (Ulverstone GC), Scott Williams (Bicheno GC) and Mal Godfrey (North West Bay GC)

The TGCSA welcomes Adrian Box as treasurer and new committee members Mark Johnson, Scott Williams and Mal Godfrey. I would like to thank Barrie Brtevnik for the great job keeping the accounts in order and leaving the TGCSA in a sound financial position. A big thank you must go to Doug Ollington for his input over the last two years and also to Tom Crawford and Ricky Barr for their input over the last 12 months.

Day two of the AGM meeting began with a hearty breakfast which was burnt off pretty quickly with a tour of the new Lost Farm course. The course has been designed by Bill Coore and Ben Crenshaw and is currently under construction about 2km down the road from Barnbougle Dunes along the same strip of coastline. A big thank you goes to Phil for organising the course tour for 35 very interested attendees, although I don't think

most realised that he was going to take us on an 8km bushwalk up and down massive sand dunes!

Phil and his 2IC Drew Ponting showed us the full course including the 12 holes that have been shaped and sown and the other eight which are in various stages of construction. This was a great opportunity for everyone to see the irrigation, earthworks, final finishing and hydroseeding all happening. The clubhouse and accommodation, including a day spa area, will be constructed on the highest point of the course with great views overlooking the coast and back over to the Barnbougle Dunes course. It will certainly be something special once it opens in 2010.

The TGCSA wishes to thank Phil, Drew and also Richard Sattler for allowing us to trek across this beautiful part of Tasmania and to the clubhouse staff. Thank you also to Paul Woloszyn from Toro and Neville Coulson from Pellows Saws and Mowers. Without the help from these companies the meeting would not have been possible.

**STEPHEN LEWIS**  
**PRESIDENT, TGCSA**



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# NZGCSA



**K**ia ora, and on behalf of the NZGCSA we would like to thank the AGCSA for the opportunity to contribute to ATM. Like our Australian counterparts we have recently held our national turf conference. This biennial event brings all sectors of our turf industry together under one umbrella with each sector having its own programme along with some combined sessions.

The event this year was staged in Auckland at the start of July and despite all the doom and gloom that seems to be floating around about the economy, attendance was on a par with previous years and a great and rewarding week was had by all.

We were fortunate to have the AGCSA's John Neylan and Daryl Sellar as two of our key speakers. Their presentations and presence was enjoyed by all and the feedback from those who attended has been brilliant. The NZGCSA would like to thank John and Daryl for their time and efforts during the week and special thanks to all at the AGCSA who made this possible for us and our members to enjoy and learn from these gentlemen.

It was with immense pride at our AGM held during the conference that Bob Bradley was made a life member of the NZGCSA. Bob is a well known figure on both sides of the

Tasman and has been a leader and pioneer in the New Zealand turf industry. Never scared to say what he thinks and always prepared to listen, Bob has helped shape the careers of many of today's superintendents throughout the country.

Bob's contribution to the national association through the many roles he filled over the years, along with his undivided support of his local association, is testament to the regard he is held in and the honour of life membership could not fall to a more deserving gentleman.

This year's AGM also saw a changing of the guard with John Spraggs standing down from the board after nearly 20 years. John's input, advice and history will be missed as his passion for our industry and association is second to none. We wish him all the best.

Sadly due to failing health Grant Wilson also stood down from the NZGCSA board. Grant was on his 'second cycle' having rejoined the board three years ago. A former president of the NZGCSA, the fresh face and ideas of Grant will be sorely missed and our thoughts are with Grant and his family as they battle through this horrific time.

Greg Swafford from The Mount Maunganui Golf Club is the new board member elect. Greg

is the current president of the CNITMA, and has served on the regional representatives committee for a number of years. Greg joins current board members Grant Bunting, Ian Douglas and Ian Carruthers.

It's fair to say as an association the NZGCSA is at somewhat of a crossroads on where we head and what we should be trying to achieve. This will bring some interesting discussion to the board room and we will be seeking some independent advice and direction from both within and outside the industry.

**PETER BOYD**  
PRESIDENT, NZGCSA

**Editor's Note:** Grant Wilson sadly passed away on 16 August. A truly wonderful and inspirational leader within our industry, Grant's contributions to the New Zealand turf industry through his many roles will be sadly missed. His larger than life presence, wonderful sense of humour and passion for life has been an inspiration to all. RIP 'Willy' – Peter Boyd.

# NSWGCSA



**T**he lovely Pennant Hills Golf Club played host to our Annual General Meeting on 25 August with special thanks to Toro for their continued sponsorship of this event. This was an election year for 2009-2012 which saw Matthew Goodbun (Newcastle Golf Club), Malcolm Harris (Northbridge Golf Club) and Martin O'Malley (Linwood Country Club) become board members for the first time.

The new-look NSWGCSA board is:

**President:** Craig Wright (Cabramatta GC)

**Vice-president/Treasurer:** Craig Molloy (Shortland Waters GC)

**Secretary:** Ryan Fury (Killara GC)

**Committee:** Stuart Hall (Asquith GC), Mark O'Sullivan (Roseville GC), Steve Jacobsen (Carnarvon GC), Matthew Goodbun (Newcastle GC), Malcolm Harris (Northbridge GC) and Martin O'Malley (Linwood CC).

Justin Sheehan, Nathan Elder and Shaun Probert all stepped down this year and on behalf of all members I would like to thank them for their valuable contributions. Justin has been on the board for four years and was responsible for the production of our

great newsletter. Nathan held the environment portfolio for three years assisting in finding relevant articles for the newsletter and has just begun tackling the issue of drum recycling and chemical collection for clubs in Sydney.

Shaun was with the association for four years and held the education portfolio. Shaun has represented the NSWGCSA very professionally with the TAFE facilities and helped to coordinate the NSWGCSA Apprentice of the Year Award.

Unfortunately Kenton Boyd has also had to resign as a director after he was made redundant from Magenta Shores, which has recently been placed under contract maintenance. We wish Kenton and his family all the best during this tough time.

I would also like to also congratulate Bill Hopkinson, former superintendent at Killara Golf Club, board member and president of the NSWGCSA, on his induction as a life member of the association – a truly deserving recipient.

**CRAIG WRIGHT**  
PRESIDENT, NSWGCSA

# STA NSW



**S**TA NSW held its annual Regional Seminar at Kurri Kurri TAFE Campus in the NSW Hunter Valley Region on 18 August. The day was very successful with over 170 people attending. Topics on the day included a presentation by Adam Ayre, the inaugural winner of the Steriline Racing and Australian Racecourse Managers Scholarship. Adam talked about his experiences at the Hong Kong Race Course where he spent two weeks as part of the scholarship.

The water management programme at Kurri Kurri TAFE was also discussed with Paul Park from Soil Conservation Service reviewing the programme and Alan England of SAS Solutions talking about the new washdown bay. I was also pleased to do a presentation on the new grow lights at ANZ Stadium. Many thanks to all our sponsors and to the delegates who travelled far and wide to attend. Also a special thanks to the staff at Kurri Kurri TAFE who put a lot of work into this event.

**GRAEME LOGAN**  
PRESIDENT, STA NSW



The VGCSA recently held its Education Meeting at Medway Golf Club hosted by VGCSA life member Colin Winterton. It was great to see so many members turn out for the informal panel discussion by VGCSA life members which gave many younger members a chance to listen how things were done back in the day and how the industry has progressed over time. Thank you to the life members for sharing their experiences, as well as sponsors Active Safety Supplies and Independent Turf Services.

The next VGCSA meeting is the Turf Research Day at Commonwealth Golf Club (host superintendent Mark Prosser) on 12 October. This day helps the association raise funds that are funnelled into projects and research, with previous monies used to develop and produce the Occupational Health and Safety DVD.

The Australian Turfgrass Conference has come and gone and it was well attended by Victorian superintendents. One of our own – Mark Jennings (Box Hill Golf Club) – was among the speakers and should be commended on his professional presentation.

It was great to catch up with peers from all over the country and discuss the many different problems we all encounter. Congratulations to the AGCSA staff and board on a great week.

There has certainly been some industry movement in the past couple of months. A number of superintendents have moved positions and this has opened up some opportunities for a couple of assistants to move up. Adam Lamb (ex-Metropolitan) is now at Barwon Heads, while Barry Proctor (ex-Huntingdale) has filled the vacant seat at Cranbourne. My assistant Rodney Ferry has also moved on and has joined Michael Freeman at Huntingdale. Congratulations and good luck to all these members.

It has now been six months since the disastrous Black Saturday bushfires and golf clubs like Horsham and Marysville are slowly returning to normal. Marysville opened nine holes some time back and is busy preparing the back nine for opening. Currently they are sourcing material to finish the bridge construction to gain full access to the back nine. The official opening day will be 16. Thanks must go out to all the golf clubs,

companies and members who offered support and products to these clubs after the fires. It was also great to see both Rob Christie (Marysville) and Tim Warren (Horsham) at the AGCSA conference in Hobart.

You should have received an email from our administration manager by now with a link to a survey. The committee has developed this survey to find out how the association is performing in the eyes of the members. It should only take five minutes to complete but will give the committee an idea of your thoughts and ideas. The information will be invaluable to formulating the direction of the association and finding out what our strengths and weaknesses are.

To our trade members, a sponsorship letter will be going out in September in regards to 2010 sponsorship. I suggest you reply ASAP as sponsorship is in high demand for the calendar, all meetings and newsletter advertising. Once again thank you to all of our generous 2009 sponsors for their support.

**BRETT CHIVERS**  
PRESIDENT, VGCSA

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Well, what a difference a couple of months make on the weather front with things drying out here at long last. No rain yet in August as I write and only 22mm in July at my course and 3mm in Brisbane. It was quite interesting learning how to operate the irrigation system again and hoping that the supply line from the effluent plant was still intact!

Unfortunately our annual bus tour coincided with the last week of rain and we were all but washed out, but somehow we seemed to still enjoy ourselves. As we arrived at Lismore Golf Club it was quickly evident that it was going to be a wet day but the skies cleared and we ventured out only to be drowned by another downpour after a couple of holes. Perhaps we should have known we were in for a wet one when Lismore super Chris Haselden pulled out at the last minute!

The lure of the clubhouse was too great for some after nine holes and only a handful of us brave souls completed 18 holes with Glenn Beauclerc from Robina Woods winning the coveted Jacobsen Orange Jacket. Unfortunately at the other end of the scale, recently appointed Jacobsen dealer Brian Taylor won the Bradman award with an unmentionable score.

Skirmish was to be played on Sunday but perhaps fortunately the bus broke down (well, after being jump started on two separate occasions the bus driver turned the ignition off which was the cause of the breakdown!) We headed to Wayne Tickle's Ballina Golf Club for lunch and it was quite entertaining trying to watch through the torrential rain as the last few pennant groups finished their rounds.

After our host Wayne jump started the bus again (for the third time in six hours) we were off to Byron Bay. In excess of 100mm overnight meant golf was off the agenda but we enjoyed a great breakfast overlooking the lake the course had become while listening to Shaun Cross give an informative talk about his operations.

Unfortunately the rain spoiled our outdoor activities, which was a great shame as our three host supers – Chris, Wayne and Shaun – had obviously gone to a lot of trouble to showcase their courses. However, the great camaraderie was still there and we plan to retrace the tour in a couple of years' time. Obviously a tour such as this can't be done without the generous help from our sponsors Jacobsen, Tru Turf, Country Club International, Simplot, Rain Bird and Syngenta.

The Hobart conference was next on the agenda and a healthy sized group of Queenslanders made the trip south. It was interesting to go to a turf conference and think "Gee, that sounds like one of my staff" rather than "That sounds like the disease I have in the 4th green".

Our annual Northern Rivers Groundstaff Golf Day is a great event run by our vice-president Brian Cox in conjunction with our sponsors. After being washed out earlier in the year the day finally went ahead at Yamba GC on 31 July with over 50 playing a nine-hole, two-man Ambrose competition. John Nelson and his staff from Grafton GC were the winners. Andrew "Claude" Smith showed us why he was a worthy winner of the AGCSA's Claude Crockford Environmental Award with a well presented golf course.

Even while he is playing golf Andrew seems to spend most of the time in the trees and dams 'monitoring the environment'.

Our Annual General Meeting was then held at The Glades and the lure of playing on Ben Baumann's bentgrass greens obviously proved to be a great attraction as 60 players teed it up and nearly 70 attended lunch. Paul McLean from Royal Pines Resort played some wonderful golf to win the GCSAQ Toro Championship with Bonville's Chris Neal making the trip up worthwhile by picking up B Grade. Col Caulfield snared C Grade and Silver GCSAQ sponsor Dave Hanby picked up the Trade trophy.

Perhaps the golfing highlight of the day was Gympie Pines superintendent Kevin Pringle having an albatross on the 11th! Sponsors Toro Australia once again came up trumps with a great day and fantastic trophies and an informative talk on finance options from Robert Rein.

The GCSAQ committee remains unchanged and is as follows:

**President:** Peter Lonergan (Coolangatta and Tweed Heads GC)

**Vice-president:** Brian Cox (Murwillumbah GC)

**Treasurer:** Dave Morrison (Windaroo Lakes GC)

**Secretary:** Mark Hauff (Colonial GC)

**Committee:** Charlie Giffard (Indooroopilly GC), Brent Robinson (Pacific Golf Operations), Peter Smith (Tewantin Noosa GC), Ben Tilley (Headland GC) and Ben Cavanagh (Brisbane GC).

PETER LONERGAN  
PRESIDENT, GCSAQ

## TGAA WA

The TGAA WA hosted the annual turf industry awards dinner at the WACA in May to recognise the graduation of turf apprentices, certificate and diploma course students from Challenger TAFE. Congratulations to the following award winners.

**Best Apprentice Award (sponsored by Bayer):** Daniel Zoccoli, Mt Lawley Golf Club

**Best Fulltime Student Award (sponsored by Baileys Fertilisers):** Jeff Vaughan, Lakelands Golf Club

**Best Apprentice Bowling Greenkeeper (Murray James Perpetual Trophy sponsored by WABGA):** Vasco Aguiar, Hilton Park BC  
**Lecturer's Award (sponsored by Lawn Doctor):** Steve Turner, CALM

The event was well supported by industry sponsors and associations. Patron of our association, Geoff Marsh, was guest speaker and everyone enjoyed his insights into playing and coaching cricket, as well as his experiences with different curators and cricket grounds around the world.

The Western Australian Turf Research Seminar held in August was a tremendous success, with over 150 people attending. There was a high quality line up of speakers from around Australia covering a range of topics. These included Kevin Handreck on soil and water management, Dr. Graham Stirling on Sting nematodes, Alan Duff on the QDPIF turf research programme, and Dr. Tim Colmer

and Dr. Louise Barton on the University of Western Australia turf research projects.

This will be my last report as president of the TGAA WA. I decided not to renominate for the position at the AGM in August, ending my eight-year stint on the committee and six years as president. I have thoroughly enjoyed serving the association and it has been a very rewarding time.

I will continue to be an active member and a strong supporter of the association and I wish the new president and committee all the very best in the future.

PETER RUSCOE  
OUTGOING PRESIDENT, TGAA WA



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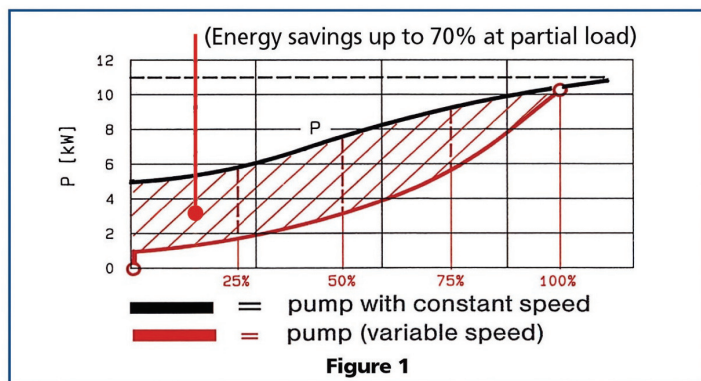
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**Brendan Graham, A&M Watering**

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