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MANAGEMENT JOURNAL

2014 Australian PGA Under the pump at RACV Royal Pines

2014 Emirates
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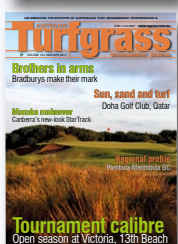
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COVER

Metropolitan Golf Club: Looking back up the 1st hole at Metropolitan Golf Club from behind the green during the 2014 BetEasy Masters. **Photo:** Brett Robinson



LEAD STORY: Brutal beauty: 2014 Emirates Australian Open

8

US wonder kid Jordan Spieth's final round 8-under 63 to secure the 2014 Emirates Australia Open proved to be the perfect end to a perfect week for The Australian Golf Club superintendent Phil Beal. While his fellow pros struggled with a tough but fair course set-up and challenging weather conditions, Spieth pulled off one of the greatest rounds in the event's history to etch his name on the Stonehaven Trophy for the first time. By contrast, it was the 18th time in The Australian's history that it hosted the nation's premier golf tournament and in typical fashion the recently redeveloped course again proved that it is one of the toughest championship layouts in the country. ATM editor Brett Robinson catches up with Beal to look back at how his turf surfaces have matured since the 2012/2013 redevelopment and reviews the tournament which had a few anxious moments in the lead-up to and during the event.

FEATURES

Meticulous Metro

18

After a near 14 year hiatus from the men's major tournament calendar, Melbourne's Metropolitan Golf Club re-entered the scene in spectacular fashion when it hosted the 2014 BetEasy Masters in November. In 2001 Metropolitan gained a reputation for providing some of the best turf surfaces Australia has witnessed when it hosted the World Match Play Championships, but as ATM editor Brett Robinson writes the same high standards were achieved yet again.



Wet 'n' Wild PGA

26

While the weather gods smiled on RACV Royal Pines during the redevelopment of its front nine holes for most of 2014, the same couldn't be said when it hosted its second Australian PGA Championship in mid-December. ATM editor Brett Robinson looks back at a wild week on the Gold Coast for course superintendent Lincoln Coombes and his crew.

Your course, their course?

44

There is a sense of pride in what superintendents do that can be a great asset to their careers, clubs and the courses they manage, however, at the end of the day it must be remembered the course belongs to the members. AGCSA HR and Best Practice manager Daryl Sellar discusses the fine line superintendents tread between course ownership and custodianship.



What makes a good shed?

48

There is no 'one-size-fits-all' model for golf course maintenance facilities, as they differ in size, available area, layout and location. However, successful modern facilities share many common attributes that can be incorporated into your maintenance facility. USGA senior agronomist Todd Lowe looks at some common principles golf clubs should adhere to when planning a new facility or upgrading an existing one.



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GRASS-ROOTS WITH JOHN NEYLAN The 'R-word' 38

ATM columnist John Neylan looks at herbicide resistance in weeds, in particular *Poa annua*, and discusses some strategies to prevent it from occurring.



Also in this edition...

Foreword Thinking	6
Regional Profile - Deniliquin GC, NSW	54
Around the Trade	60
Turf Producers	62
State Reports	64



Contributors to Australian Turfgrass Management Journal Volume 17.1 (January-February 2015)

Brendan Allen (NZGCSA); Phil Beal (The Australian GC); Barry Bryant (SAGCSA); Chris Chapman (STA NSW); Lincoln Coombes (RACV Royal Pines Resort); Peter Frewin (AGCSA); Charlie Giffard (GCSAQ); Tony Guy (STA WA); Martyn Hedley (STA Qld); Terry Howe (Deniliquin GC); Danny Hull (STA ACT); Steve Jacobsen (NSWGCSA); Todd Lowe (USGA); Chris Neal (Bonville Golf Resort); John Neylan (Neyturf); Kellie Rose (STANZ); Daryl Sellar (AGCSA); Richard Stephens (Turf Australia); Glenn Stuart (Metropolitan GC).

Behind the scenes heroes

The three big ticket tournaments on the Australian golf calendar were run and won in late November and mid-December and having been fortunate to attend all three there was certainly a huge number of positives for all sectors of the golf industry.

From a golf perspective the highlights reel was substantial. Nick Cullen's sublime shot from the greenside bunker on 18 at Metropolitan Golf Club that effectively sealed his first Golden Jacket; World No.1 Rory McIlroy's third round meltdown at The Australian Golf Club and Jordan Spieth's remarkable final round 8-under to secure the Australian Open; then to cap it off at RACV Royal Pines, Greg Chalmers, also shooting a final round 8-under to set up a three-way playoff, prevails over Adam Scott on the seventh extra hole! Golf in Australia has been riding a crest for a couple of years since the latter's win at Augusta, but it's epic finishes like these that help to bolster the appeal of our home-grown events.

The tournaments also proved fascinating viewing from a course management perspective. In Metropolitan you had one of this country's most venerable sandbelt layouts returning to the tournament spotlight and with it the lofty conditioning expectations from when it hosted the 2001 WGC-Accenture Match Play Championship. Stuart Appleby's comments in which he labelled Metro's pure couchgrass fairways as "the best in the world" left little in doubt that those standards had been met again. A week later in Sydney you had The Australian Golf Club, revamped and revitalised to the tune of \$5 million between June 2012 and March 2013, hosting its 18th Open. Jack Nicklaus's changes and the subsequent superb conditioning ensured the course provided a brutal but fair test.

And then came RACV Royal Pines, hosting the second of its five contracted Australian PGA Championships in mid-December. When it was announced that the Gold Coast resort course's championship 18 was to be completely redeveloped over two years in between tournaments, many thought it audacious. However, with a lot of luck in the form of some good weather (remarkably only four days were lost during the reconstruction) the playing surfaces on the new-look front nine were not only ready come tournament week but married almost seamlessly in with the existing back nine.

Getting a fully reconstructed, wholly-sodded nine holes grown-in and then to a level to host tournament golf, all the while maintaining 18 other holes for public and corporate play, was a monumental effort on behalf of the RACV Royal Pines crew. Add to that drought-like conditions during the grow-in, major irrigation issues three weeks out from the PGA and then Mother Nature taking the proverbial by dumping 170mm in the space of seven days, it was a testament to the resilience of the RACV Royal Pines crew that they pulled it off.

In this edition we look back at each tournament and the many challenges that superintendents Glenn Stuart (Metropolitan), Phil Beal (The Australian) and Lincoln Coombes (RACV Royal Pines) and their respective teams had in the months leading up to and during their events. While the spectators and television viewers see the finished product, what they don't see is the remarkable amount of work that goes on behind the scenes.

As AGCSA HR and Best Practice manager Daryl Sellar writes in this edition, greenkeeping can be demanding, frustrating and stressful, but there are many moments where it can be the most rewarding, inspiring and beautiful of professions. Tournaments give superintendents and their crews the chance to show their skills and the pride they have in their craft and for their patch of turf. Having been fortunate to see this work first hand, I am continually amazed by the standards that our practitioners achieve and the unstinting manner in which they go about it. Enjoy the read...



Brett Robinson

Brett Robinson, Editor



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Office purchase a significant milestone in AGCSA's history



The AGCSA recently purchased the existing office at 1/752 Blackburn Rd, Clayton in Melbourne

As I sit down and write this article every couple of months it is always difficult to write the opening paragraph without reflecting on the weather around the country or the great people that work within our industry. This time I will be a little more indulgent in matters closer to home.

Monday 15 December, 2014, will forever be marked as a significant day in the history of the AGCSA, Australian Turfgrass Management Journal (ATM) and AGCSATech. This was the day that settlement was finalised on the property that will be the home for these great institutions of the Australian turfgrass industry. Members of the AGCSA were advised this news some time ago, but now that the purchase has been finalised it is time to notify the wider turf industry.

The office purchased is the one that we have occupied via lease for about 14 years, with Suite 1, Monash Corporate Centre, 752 Blackburn Road, Vic 3168 to now be the 'official' home of the AGCSA. It has long been a desire for the association to put

down roots (excuse the pun) and it was certainly a great moment when current president **Peter Lonergan** (Coolangatta & Tweed Heads GC) and director **Brett Balloch** (Anglesea GC) signed the documents to make the purchase final. This would not have been possible without the support of all the membership and the wider turf industry and is a significant milestone in the associations' history.

While being indulgent, ATM has long been regarded as the premier turf journal not only in Australia but also the Asia Pacific region. The quality of the journal's editorial content and production was again highlighted at the recent Australian Golf Media Awards. The awards night was held during the recent 2014 Emirates Australian Open where I am pleased to advise readers that ATM took out the category award for best feature in a trade journal.

The winning feature this year was on AGCSA members Justin and Nathan Bradbury who are brothers and neighbouring course superintendents at Bonnie Doon and Eastlakes golf clubs in Sydney's



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eastern suburbs. ATM editor **Brett Robinson** has been a consistent winner in this section of the awards and his writing is acclaimed by the judges each year. Brett has twice been named the recipient of the Tom Ramsey Award for Excellence in Journalism, the highest distinction at the Australian Golf Media Awards.

The coming year will also mark a significant milestone for ATM as Volume 17.5 (September-October 2015) will be the 100th time the journal has gone to print. Planning is underway for what will be a significant volume of the journal as we look back at some of the major stories that have taken place over the past 15 years. The ATM team of Brett and art director **Jo Corne** are an asset to the industry and we look forward to more quality editorial and production in the coming editions.

TAFE VALIDATION MEETING

Prior to Christmas, I had the pleasure of attending the National Turf Teachers' Validation Meeting which was held at the Ryde Campus of TAFE NSW. The chance to address this group was a great opportunity to update them on where the AGCSA was placed regarding its investigation into the possibility of the organisation entering the training sector. The discussion was productive and at times robust but importantly was a great opportunity for those in attendance to get some clarity on the process that is being worked through.

As I stated on the day (and previously in writing in many publications) the passion of the individuals present at the gathering has never been questioned by myself or any of the AGCSA Board. The concern that is held by the AGCSA and many in the turf industry is where the industry will be in 3-5 years.

It is clear that in these times of economic uncertainty funding will become tighter and some of the passionate trainers may leave, or may be forced to leave, the industry. What is also a huge concern is the reality that private providers will enter this sector of training which could have a huge impact on the quality of training in the industry. This comment regarding private RTOs is general and while some of these companies may provide quality outcomes there is the possibility for others to take advantage of the situation with little consideration to the industry going forward.

In closing I hope everyone had a Merry Christmas and that 2015 brings everything you hope for. As always, please feel free to contact me at any time if you have an issue or suggestion; any feedback is greatly appreciated. I hope the remaining summer treats you well and I look forward to catching up when our paths next cross. 🌱



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While 2014 Emirates Australian Open champion Jordan Spieth cemented his reputation as one of the hottest young talents in world golf, The Australian Golf Club too confirmed its status as this country's most challenging tournament layout. ATM editor Brett Robinson catches up with superintendent Phil Beal to reflect on the recent \$5 million course redevelopment and his preparations for the club's 18th Open appearance.

Brutal beauty

Standing adjacent to the 18th green at The Australian Golf Club, course superintendent Phil Beal could afford himself a contented smile as the 2014 Emirates Australian Open drew to an end. As American whizz kid Jordan Spieth came striding down the last with an unassailable lead, Beal, along with the thousands of spectators cramming the immediate surrounds, knew they were watching history.

Already 7-under on what had proven to be a brutal day for scoring, Spieth proceeded to drain his eighth birdie in a blemish-free closing round of 63 to claim the tournament by six shots from Rod Pamplung. While Sydney's fickle winds blew his rivals out of contention, Spieth's composure belied his youth as he crafted a round that was simply sublime and further cemented his reputation as a star of the future.

Shortly before Spieth was presented the coveted Stonehaven Trophy, Beal made a point of going up to the 21-year-old Texan, introducing himself and congratulating him on a breathtaking final round and tournament win. Spieth's comment back was simply, "Wow, what a golf course!" before thanking Beal and his crew for their efforts in preparing the course.

For Beal it was the perfect end to a perfect week, one in which The Australian confirmed its status as arguably this country's toughest tournament layouts (just eight players finished better than even par). Having undergone a \$5 million redevelopment over a nine month period between 2012 and 2013, it was a highly anticipated return to the tournament spotlight and as such the pressure on Beal and his team to produce the goods with a relatively

immature course was considerable. They more than delivered on that and in doing so capped off one of the most significant chapters in the club's history.

"It was remarkable to watch," recalls Beal on Spieth's final round masterclass. "From the first hole, to start hitting the greens the way he did and to give himself chances to make those putts, he just blew the other guys away."

"It was a perfect end to the tournament. Maybe without that round some people may have said the course was too tough, too unfair or too much on the edge, but for him to go out and shoot 63 in some very difficult conditions showed that the golf course was perfectly set up."

ROAD TO THE OPEN

The 2014 Open was the culmination of more than four years hard work, four years in which Beal, who arrived as superintendent from Twin Creeks Golf & Country Club in September 2010, played an instrumental role in orchestrating The Australian's renaissance.

As Beal wrote in May-June 2013 (*'The course that Jack rebuilt' – ATM Vol 15.3*), The Australian was at something of a crossroads when he came on board. The bentgrass greens were infested with *Poa annua* and weed control was an issue throughout the site. From a design and aesthetics perspective the course was also in need of a facelift. The tees were small and uneven, bunkers weren't visible from the tees or landing areas, trees were overgrown across the property and there were seven different types of cart path material.

Being a fiercely proud and well-resourced club, The Australian bit the bullet and after weighing up a number of recommendations put forward by Beal, the decision was made to undertake what turned out to be a full scale course redevelopment under the auspices of Jack Nicklaus Design. Following a 15-month broad acre war aimed at ridding the place of *Poa annua*, the reconstruction began in earnest in June 2012.

The 9th hole played as one of the hardest during the 2014 Emirates Australian Open

By the time the course reopened nine months later all greens complexes (the prime focus of the redevelopment) had been rebuilt to USGA specs and seeded with a mix of A1/A4 bentgrass, while holes 9 and 14 had been realigned and holes 7, 10 and 18 significantly altered. Initially earmarking the reconstruction of just three tee complexes, nearly all were eventually reworked, while a massive bunker complex was added to separate the 10th and 18th fairways. The fairway bunkers were also refurbished to bring them into line with the greenside ones, new cart paths were laid while the fairways underwent the renovation of their lives.

At the official re-opening of the course in March 2013, guest of honour Nicklaus announced that the new-look course would host the 2014 Emirates Australian Open. For Beal and his crew, who had expended a huge amount of effort during the reconstruction, it signalled the shift into a new phase of their operations, nurturing and honing the fledgling turf into the tough, tournament ready surfaces that The Australian has developed a reputation for providing over many years.

That was no easy task, however. Having played a makeshift 18 holes with temporary greens during the redevelopment, The Australian's eager members hammered the new course when it reopened. Heavy traffic combined with immature turf meant Beal struggled to produce the surfaces he wanted, but come spring he set about rectifying that.

As soon as temperatures started to warm up, the club's newly acquired Tycrop topdresser was put into action and Beal spread more than \$80,000 worth of sand (approximately 1600 tonnes) along with coring and scarifying the older parts of the fairways that hadn't been touched by the redevelopment. The new A1/A4 greens, which had

also taken a bashing, came in for some special treatment, renovating and dusting them in order to getting their trademark firmness back.

"One of the biggest difficulties I had in the months after the course reopened was keeping patient," reflects Beal. "I'm normally a pretty patient bloke, but when it comes to turf I'm not. Growing in a course where there are areas of new turf alongside areas of old turf is a lot more challenging than growing in an entirely new course.

"With a new course your inputs are relatively uniform across the board, but we had to be very mindful of what we put on and where. For instance on the 7th fairway, half of it was the existing turf and half way down it is the newer sprigged couch from the redevelopment. We had six holes like that. So when we were putting out a foliar feed we were doing different applications on the new turf compared to the existing turf, so it was quite a balancing act.

"Weed control, especially *Poa annua*, was and always will be a challenge and we are still ongoing with our pre-emergent programme in the broad acre sense. We still maintain that in order to keep *Poa* out of the greens you need to take an holistic approach to the course. The greens have tiny bits of *Poa* that have come through and every time you see a piece your heart jumps a little.

"We continually check the greens and every Monday afternoon we have three guys who have the job of going around all the greens and scouting for *Poa*. We pick it out by hand and will plug out if necessary. The putter has proved to be the most challenging and the issue there is that the members always come to it straight from the



Looking down the 10th from behind the clubhouse putter

PHOTOS: BRETT ROBINSON





◀ The par three 11th looking a picture ahead of the second round. Scott Gardiner aced it during the opening round

driving range which has a lot of Poa in it. The members get ever so carried away when they see a bit of Poa and I have to revisit old reports to assure them that things are in place.

"In terms of greens maturity I think they have come along really well and this summer will be the key to get a bit more density as well as some firmness in them. It's just playing around with them. Obviously we dust, but there is still a little bit of give which we would like to eliminate.

"But the members have been very happy with the greens, even if they are always on about pace. I probably run them slower than maybe I should, but the most important thing is that they are true. In the

morning they don't move and again in the afternoon they are still the same. That's what I focus on and what I am trying to achieve."

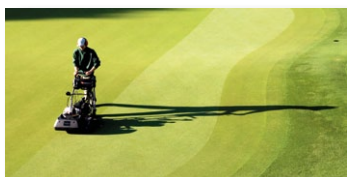
RAMPING UP

Heading into last autumn Beal was at the stage where he was significantly more comfortable with his maturing surfaces. Putting the surfaces to bed for winter in as healthy a condition as possible, the crew then set about fine-tuning them in the months immediately leading up to the Open.

In the third week of September the greens were cored with 12mm hollow tines, heavily topdressed and amendments added. From then up until three weeks out from the tournament they were dusted weekly and given a foliar feed every two weeks, the brew changing each time depending on their requirements (Primo was also used at this time). Fungicide applications went out every three weeks, while insecticide applications were made at regular intervals to ensure the likes of Argentine stem weevil were kept in check.

On the fairways, in the first week of September Beal put out a balanced, resin-coated mini-prill fertiliser which released on soil temperature rather than moisture. The idea was that he could use that mini-prill on tees, fairways and surrounds to get consistent growth. After leaving them for two weeks the Santa Ana fairways and surrounds were verti-cut every week for four weeks to fine the leaf out. After the fourth verti-cut, they were topdressed and then given foliar iron applications on an as needed basis right up to the Open (the last iron application was made the Thursday before the tournament).

While the greens, surrounds and fairways responded as planned, it was the tees which would provide Beal with his greatest headache. Twelve months earlier, in the weeks leading up to the



Australian crew member Vince Ryan (right) cuts the 1st green. The A1/A4 greens were maintained at 2.5mm for the tournament



2013 Open at Royal Sydney Golf Club, Beal went out on The Australian's championship tees and scalped them down before scarifying them twice, topdressing and feeding them. By the time Royal Sydney was hosting the Open, The Australian's tees were "absolutely pure" and with that success Beal replicated the process ahead of the 2014 Open. What happened, however, left him completely deflated.

"We started renovating them in early September but this time they totally fell over," recalls Beal with a pained expression. "As it turned out they were riddled with an ERI-type disease and when I scarified them there was no body to the turf and it just fell apart. We had chunks missing on the tees and they just wouldn't recover. For the tournament you could still see a few areas on some of the championship tees, the 9th in particular.

"I was just so keen to get the tees done and I kept going and going thinking they'd be fine. Then two weeks later I'm thinking to myself, 'I'm not so sure now'. Three weeks before the tournament they were appalling and at one stage I was almost contemplating getting the ryegrass out and oversowing them.

"It was a horrible feeling. In hindsight I should have just left them alone and topdressed. But I was after something else. I was after a better surface to the one I already had. I had the right intentions. It wasn't like I went out there and deliberately



stuffed it up. I did all the planning, all the ground work the year before and to see it turn out like that was so disheartening. That was the most disappointing aspect of the whole tournament from my perspective."

PURE AND TRUE

Come the tournament, however, any of the lingering cosmetic blemishes on the tees were barely discernible and the playing surfaces which greeted the likes of World No.1 Rory McIlroy, World No.3 Adam Scott and eventual champion Spieth were

Afternoon preps on the 10th with the hole's spectacular new fairway bunker in the background

CONTINUED ON PAGE 13

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The 9th hole where World No.1 Rory McIlroy came unstuck during the third round of the 2014 Emirates Australian Open



IN THE THICK OF IT

It was probably the most stressed that course superintendent Phil Beal was the whole week of the 2014 Emirates Australian Open. Forget the quickly drying greens which were starting to footprint near the conclusion of the third round, for Beal ambulances were almost dispatched to The Australian Golf Club maintenance facility when World No.1 Rory McIlroy imploded in spectacular fashion on the 9th hole during his third round.

With back-to-back 69s in his opening two rounds, the defending champion stood on the 9th tee one over for the round and well in the hunt at 3-under for the tournament. Pulling out his driver on what was the hardest hole on the course all week, he pushed it right straight into an area that back in May had been planted out with native *Poa labillardieri*.

The plantings, which can be found down the entire length of the 9th, were part of The Australian's landscaping programme which has been in effect since the conclusion of the course redevelopment in March 2013. As is the case with these en-masse plantings, jute mat had been laid over the surface to stabilise the soil and assist the plants to establish.

Sitting in the maintenance facility watching the events unfold, Beal's heart rate started rising as McIlroy began bushwhacking his way through the wispy waist-high grass and deliberated with his caddy whether to play his second or head back to the tee and reload.

To Beal's disbelief the 25-year-old Northern Irishman chose the former and the rest, as they say, is history. McIlroy's prodigious power proceeded to bury the ball completely under the jute matting which he had rip apart in order to retrieve it. Forced to take a drop, he then sprayed his recovery before finally holing out for a triple bogey 7. Tournament gone.

For Beal the whole episode was the stuff of heart-attacks especially as just four days earlier he had been standing in the same spot as McIlroy along with tournament director Trevor Herden watching a group of professionals taking practice shots from off the jute. Beal takes up the story:

"We had been talking at length about those grassed areas as far as six months out from the tournament and what ruling to put in place for the jute mat that we had put down," explains Beal. "Up until the week before the tournament we were still talking about whether to make it GUR, out of bounds or just playing it as it was. So on the Tuesday we went out to that same area on the 9th and got some of the pros to hit off the jute who said it was fine.

"That was probably the last decision we made in terms of course set up and I remember making a comment at the time that it would probably only be a few of the back markers that would hit their ball into the area. So to then see the World No.1 four days later, in contention, smash it in there and attempt to play it, I couldn't believe it.

"I was so stressed out. I was so afraid he was going to break his wrist or injure himself. I'm watching the TV in the maintenance facility and in my head I'm yelling to myself, 'Don't hit it! Don't hit it!' And what does he do? He has a great big swipe at it and buries it; not pretty.

"The other concern I had was whether he would make a scene of it afterwards because he went on to make triple bogey and then followed that up with a double bogey on 10. But you could see at the time he wasn't the type of guy to get stressed about such a situation and to his credit he didn't make a comment about it which shows the calibre of the guy."



The Australian course superintendent Phil Beal

An example of the *Poa labillardieri* plantings, this area near The Australian's 12th tee



CONTINUED FROM PAGE 11

nothing short of pure. Richard Green certainly thought so and paid Beal and the crew the ultimate compliment ahead of the tournament: "The greens surface we're playing on this week... it doesn't get any better than this. It's so nice to see the ball just roll straight off the putter face where I'm aiming it every time."

To assist with definition, the club's board and management requested that Beal stripe up the fairways and from four weeks out the crew set about burning them before cutting every day at 10mm from two weeks out. Cutting regimes on greens ramped up on the Saturday before when they received their first double cut and roll and by the time the Pro-Am came around a single cut and roll produced an easy 12' on the stimp meter.

"I was very pleased with the way the course came up," reflects Beal. "During the build-up to the tournament I was constantly asked 'You must be happy, you must be happy' and up until round one my stock answer was always 'I have to be happy, don't I?'. But that morning of the first round I really thought the course shone. The way it came up on the TV coverage, even though it was overcast, exceeded my expectations. It was a nice feeling."

"We cut and rolled the greens for the Pro-Am and they stimped at 12 feet which Trevor (Herdin, tournament director) was a little unhappy with because he thought they were too quick and would



Volunteer Chris Allen cuts the 17th green ahead of the second round

stay quick for the opening round which was forecast to be windy. So we just single cut the Thursday morning and they stimped between 11'2" and 11'6" which was very pleasing.

"Our most challenging time during the tournament was Saturday. The greens dried out more during the day than I had anticipated and some of them, like 10, 14, 17 and 18, were looking very stressed and starting to footprint. Using the TDR moisture probe, some of them were as low as

CONTINUED ON PAGE 16

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Volunteer Brendan Hansard stimps the 1st green before the second round



UNITED NATIONS AT THE AUSTRALIAN



The name tags used by The Australian's tournament crew listed their place of birth

Originally from Poland, Martyna Synak had the honour of being the only female member of The Australian's Open tournament crew

The Australian tournament crew for the recent 2014 Emirates Australian Open certainly had a United Nations feel to it. Poles, Czechs, Germans and Kiwis were all part of a crew that numbered nearly 50 assisting course superintendent Phil Beal and assistant superintendent David Smith.

Due to the many nationalities present, the name badges worn by the tournament crew had, under their name, their city, town or suburb of birth. For example, Beal, who immigrated to Australia from the UK in 2005, originally hails from Newcastle, while his crew members Pavel Kriz and Daniel Hahn originally come from the Czech Republic and Germany. Volunteer Martyna Synak, the only female on the tournament crew, hails from Poland and up until the tournament had been working in New Zealand. A couple of Kiwis also made the journey across, among them Peppers Carrington Resort superintendent Will Harris.

"The name tags were a great initiative," says Beal. "We used to do it when I was with Troon and they provide a great conversation starter which was really good especially as we had a lot of volunteers coming in for the tournament. I don't know if it's my warped English sense of humour, but it was quite funny to see Martyna and Daniel – a Pole and a German – in the same cart together!"

Beal's crew of 22 (which included a number of summer casuals) was bolstered by around 25 volunteers for the week. Among those were fellow

superintendents Brendan Hansard, who worked as assistant under Beal when he was superintendent at Twin Creeks Golf & Country Club, Steve Harris (The Vintage) and former superintendent turned Nuturf rep Craig Paget.

Bringing together a team of volunteers and getting them to gel with the incumbent crew can always be challenging, however, Beal was extremely pleased with the way everyone fitted in. Having worked alongside Royal Sydney superintendent Steve Marsden at the 2013 Open, Beal was also able to glean some ideas on how to manage the volunteers during the rigours of tournament week.

"Working with Steve last year was very beneficial, especially from a staff and volunteer perspective," says Beal. "I thought Steve did a sensational job of organising the volunteers, fitting them out and making sure they felt like part of the crew. I actually pinched some of his paperwork to use! Looking at the way he set everything up and the way he moved people about was brilliant for me and without that experience I would have been all over the place."

"The crew we had for the Open were excellent and I really couldn't have asked more from them. They all turned up on the Saturday ready to go and were very enthusiastic which was very pleasing. Hopefully they all enjoyed the experience. I had Brendan staying with me for the week and it was great to have some good friends around you during the tournament because you know they are going to look out for you."

For one of the volunteers, Victoria Golf Club's Mark Harkness, just getting to the tournament proved an adventure in itself. A regular volunteer at tournaments over a number of years (including the 2014 PGA Championships at Valhalla – see his article 'Major taste' in ATM Volume 16.5), Harkness was part of the Royal Sydney crew at last year's Open and during that had arranged with Beal to work at The Australian in 2014.

Needing to be at the course by the Saturday before tournament week, Harkness jumped in his partner's Mazda Tribute and set off from Melbourne at 4.30am Friday. Everything was going well until half way through his journey when the car packed it in 10 minutes from the NSW township of Tarcutta. Waiting an hour for the car to be towed 40 minutes to Gundagai, he then had to wait a further four hours while RACV sorted out what to do.

Leaving the car with a mechanic in Gundagai, Harkness hired a car to get to Sydney Airport and from there picked up a second hire car to use for the week of the tournament. He ended up arriving at his Sydney accommodation at around 10pm Friday, some eight hours overdue. Once the tournament was over, he then had to return to Gundagai, collect the car (there had been an issue with the fuel pump) before returning to Melbourne. In all, the week cost Harkness more than \$700 but no doubt the Open experience more than made up for it, even if the back pocket suggested otherwise!



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TM



Looking back up the 7th at
The Australian



The tees caused Beal more than a few headaches in the lead-up to the tournament. Pictured cutting the 1st tee is Scott Cowell

CONTINUED FROM PAGE 13

5 per cent, but some hand-watering that evening and again on Sunday saw them bounce back beautifully.”

With the Open being his first major tournament experience, Beal felt he handled the extra pressure that comes with such events well and was particularly impressed with the manner in which his crew composed themselves and gelled with a strong corps of course volunteers.

“Looking back I think I coped okay,” admits Beal with a grin. “I did get a bit grumpy, but I’m naturally grumpy. I’m a Pom and I don’t hide it well – even when I’m happy I look grumpy! I felt as though we were doing the right things all the way through and going by the feedback from the players we did.

“Our guys did a fantastic job. I would get here at 3:45 each morning and find 6-7 guys already here setting up, not because they were told to be here at that time but because they wanted to. It was pretty cool to see that level of dedication. David Smith (assistant superintendent) and Peter Blain (3IC) marshalled everyone brilliantly. Everything from the cutting to the bunker work was top notch.

The bunkers were sensational and Jake Smith and Shaun Cox, who led the bunker crews for the tournament, deserve special mention as they worked on them for the best part of six months and really smashed them.

“If I did (the Open) again, I would try not to second guess myself so much. I was chasing shadows a bit and looking at everything over and over again. That’s just my nature and because of the tournament I wanted to make sure that everything was ready for the week. I was so very conscious of it and my mind was constantly thinking ‘what can we do here, what can we do there.’

“The whole week was so interesting, especially with the greens. I really thought about 10 days out that I was in trouble in terms of getting some pace into them. As it has turned out I didn’t need to worry. We were able to get 12’ out of them without too much of an issue. The most pleasing thing was that they were consistent; they might not have been the firmest greens in the world, but the ball roll was true, brilliantly true.” 🇺🇸



Above: The Australian's spray technician Dean Hardman shaves the surrounds on the 15th

Below: The Australian's 6th green and approach



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TM

After a near 14 year hiatus from the men's major tournament calendar, Metropolitan Golf Club re-entered the scene in spectacular fashion when it hosted the 2014 BetEasy Masters in November.

Glenn Stuart can still vividly recall setting foot on the fairways of Metropolitan Golf Club in the first week of January 2001 and simply being blown away. At the time course superintendent of Woodlands Golf Club, Stuart, like many of his contemporaries around Melbourne, had made the trek to Metropolitan to catch a glimpse of the turf surfaces that incumbent superintendent Richard Forsyth had presented for one of the biggest tournaments to grace Australian shores, the 2001 WGC-Accenture Match Play Championship.

While much of the pre-tournament talk had centred around the lack of the big name players making the journey Down Under, no sooner did tournament week arrive than the golf course quickly took centre stage. Ernie Els, just hours after jetting in, remarked in an Associated Press article, "This is real golf. I think the guys are missing out, not only on this tournament, but the golf course", while another international golf scribe claimed "Metropolitan's fairways are as pure as Augusta National."

By the time American Steve Stricker had defeated Swede Pierre Fulke 2&1 in the 36-hole

final, what was already a much-loved and admired course had been further elevated in status, while for the golf course management profession it was widely accepted that what Forsyth and his crew produced that week established a new benchmark for course conditioning in this country.

Fast-forward nearly 14 years and Stuart finds himself sitting in the very office that Forsyth once called home and recalling that tournament as the first round of last November's 2014 BetEasy Masters is underway. Having taken over at Metropolitan when Forsyth moved to Royal Melbourne Golf Club in 2009, the Masters is not only Stuart's first major men's tournament in charge but also the club's first since the 2001 Match Play.

Not surprisingly, when it was announced that Metropolitan was making a highly anticipated return to the men's tournament scene, many pundits were quick to revisit the 2001 tournament and its sublime conditioning. For Stuart and his crew, having the weight of such expectation was palpable in the months leading up to the tournament, but rather than let it get to them they used it as motivation.

Metropolitan's 1st looking a picture just a few days out from the 2014 BetEasy Masters. The tournament was the first major men's tournament the club had hosted since the 2001 World Match Play

And just as Forsyth and his 2001 team did, Stuart and the 2014 incarnation of the Metropolitan crew delivered in style. If the comments by the players in the lead-up to and during the Masters were any indicator on just how good Metropolitan was (Stuart Appleby's quote below perfectly summed up the mood of the players), then Metropolitan's reputation as being one of the best conditioned courses in Australia was more than upheld.

"The fairways at Metropolitan have always had a strong reputation," states Stuart (46). "I clearly remember being here for the World Match Play and I still rate the fairways then as the best I have ever seen, as do many people within our industry. Full credit to Richard (Forsyth), his team and the club at that time because they did set new levels and the club's reputation really lifted as a result.

"As the superintendent at Metropolitan now there was a fair challenge in that and it was certainly in the back of my mind leading into the Masters. Did it put pressure on us

though? I don't think so. We didn't let it. Our main objective was purely to enhance the club's reputation within the golf and wider community and we actually used the 2001 Match Play as a bit of a motivator to reach those standards again.

"After what was a fairly long hiatus from the major men's tournament scene, the whole club was very excited to host the Masters and present the course in the best possible condition. Getting a course up for a November tournament in Melbourne can be tricky and we did have a few challenges along the way. But on this occasion the weather gods were



Metropolitan foreman Adam Chalker gives the 13th green a light hand water ahead of the opening round

Meticulous Metropolitan

“It's a pity we haven't played (Metropolitan) two or three times since we were here last. You know, the fairways are just magnificent. I said to my caddie on the last, they don't even make carpet as uniform and as smooth as this. Best fairways in the world, no doubt! I don't think anyone would deny that. I think you would be hard pushed to find anything better than this. The bunkering, the shaping, the greens are perfect.” — Stuart Appleby



Travis Cann happily goes about cutting the greens surround on 14

WORDS AND PHOTOS: BRETT ROBINSON

Metropolitan's pure couchgrass fairways were lauded by many during the tournament for their carpet-like appearance. Pictured is the 5th



Metro superintendent Glenn Stuart (centre) with Andrew Langford-Jones (left) and Russell Swanson

Members of the Metro crew blow off the 4th green during round one



kind to us and together with our meticulous planning and the hard work of the crew I think we achieved something very good and something our members were very proud of.

"I was particular pleased with the fine turf areas and it was great to hear the many positive comments afterwards, especially for the boys who put in a mountain of effort to get the course prepared."

FAIL TO PLAN, PLAN TO FAIL

In order to get Metropolitan to the high levels it reached for the Masters, you have to go back to the start of 2014 when the contract for the tournament was signed. Those who know Stuart can attest he is a very hands-on superintendent and lives by the mantra 'fail to plan, plan to fail', so as soon as the ink had dried he and assistant superintendent Brett Knight set about devising a thorough plan to get to November. The initial focus was positioning the turf surfaces and course environs in as strong a condition as possible heading into winter.

One thing that weighed heavily on Stuart's mind during that initial planning was the previous year's Masters held at Royal Melbourne Golf Club. The winter and spring leading into that tournament were wet and cool and he clearly recalled just how slow his surfaces were to fire up.

Stuart was adamant he needed to plan for such eventualities in the lead up to the 2014 Masters and as such approached Metropolitan's Course Committee with a number of requests and recommendations to ensure his preparations went as smoothly as possible. Fortunately for Stuart, the Course Committee was on the same page right from the get go and gave him the resources needed to ensure that focus went unhindered.

To guarantee the turf surfaces went into autumn as healthy as possible, Stuart undertook extensive renovations across all areas, employed specific nutritional programmes and went hard on preventative fungicide and insecticide programmes for the likes of spring dead spot, dreschlara, fairy ring, rhizoctonia, African black beetle and Argentine stem weevil. Likewise, the old enemy *Poa annua* was targeted on fairways through a rigorous pre-emergent programme, while there was plenty of handweeding and dabbing to keep the 1020/1019 bentgrass greens as clean as possible.

Specifically on the greens, Stuart renovated lightly in autumn, going out with 6mm solid tines and using kiln-dried sand as a filler and for dustings. He used compost teas for soil microbial support together with fish emulsions and seaweed solutions, with greens soil and leaf tissue tests guiding requirements for the application of trace elements.

With the turf positioned where he wanted it, Stuart's goal for the winter months was simply to

protect the fine turf as much as possible. Although the practice was already in place from the previous winter, Stuart requested that the policy of banning buggies from being pulled across greens remain in place, while having the luxury of a par three 19th hole Stuart was also able to rotate wear and tear on the par threes. The 2nd, 7th, 11th and 13th all had four weeks rest over the winter months and during that time Stuart took the opportunity to give them an additional core with 5mm hollow tines to ensure they were firm come the tournament.

On the fairways, Stuart wound back the clock and adopted an old school trick of applying vegetable oil to protect the couch from frost damage, which worked a treat. A range of protectants, turf colourants and other nutritional aids were also employed to make sure that the couch retained its colour through the cooler months.

With the surfaces responding as planned coming out of winter, in the last week of August all greens were renovated again, this time with 6mm hollow tines at 12mm spacings. The closer spacings meant Stuart was still pulling up the same amount, but the smaller tine size enabled a quicker recovery. Kiln-dried sand and soil amendments were applied via Scotts pedestrian spreaders and broomed in, continuing the theme of keeping as much heavy machinery off the greens as possible in the lead-up to the tournament. Ninja tines (4mm) were also used across some of the softer areas on selected greens.



At the same time as the greens were renovated, the tees (mainly Santa Ana couchgrass and a few cool-season mix tees in shaded areas) were cored with 12mm tines and the fairways Verti-drained with 12mm tines to a depth of 8 inches. Those surfaces were later given two combined applications (October and November) of Liquid N (42.0.0), XXIron (chelated iron) and Greenlinks turf colourant.

"I think the combination of setting up the turf in the autumn and the ability to protect the course through winter meant that the turf bounced back really well in spring," reflects Stuart. "We applied a balanced nutritional programme across all fine turf areas starting in March and April and at the

Metropolitan's 9th. Greens were kept at 2.5mm for the Masters

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◀ **Huw Williams and Riley Brennan cut the fairways at 8mm with Jacobsen LF 550 units sporting 5-inch reels, a change from the 7-inch reels the club had on its previous units**



Volunteer Craig Anthony cuts the 13th green. Metropolitan is unique in that the greens surfaces are cut right to the edges of the bunkers

same time we had a reasonably strong preventative fungicide programme which targeted diseases like dreschlara and spring dead spot which we knew if we had a poor winter could be an issue for us.

"In the previous 12 months there had also been a lot of African black beetle damage on the couch across a number of Melbourne clubs, so we were quite specific on that as well. We had a little bit of damage last summer so we didn't want that to hit us around the tournament.

"With the renovations we did in the last week of August, together with some favourable spring conditions, all the turf surfaces responded really well. This spring was certainly better than the previous one – we had a couple of reasonable downpours and there was a bit of heat and some wind – so Mother Nature was looking out for us."

THE WHOLE PACKAGE

In addition to ensuring the optimum health of the turf surfaces, the Metropolitan crew also devoted a huge amount of time and effort in a number of other areas. A new tournament tee, which added 50 metres of length to the par five opening hole, was constructed in May, while the club's collar replacement programme to remedy couch encroachment in the greens continued apace with a total of 13 greens

completed ahead of the Masters. Every drainage line across the property was pressure washed and cleaned out ahead of winter and then again in the lead-up to the tournament, so that if it did rain the course would drain quickly and freely.

Perhaps the biggest area targeted, however, was the course's 'plantation' or out of play areas. A project that has been ongoing ever since Stuart's arrival, the rejuvenation of the plantation areas has been of prime importance. To assist that, the club organised fortnightly working bees of between 10-15 members who came in and helped plant, weed and clean out these areas. Closer to the tournament two major working bees, which attracted more than 50 on each occasion, were also held which targeted divotting of fairways and again cleaning up the rough and plantation areas. Three of Stuart's crew also spent 11 weeks pruning trees for spectator safety and shot lines specifically for the tournament.

"One of key objectives for the tournament was to further enhance Metro's reputation in the golfing community," states Stuart. "When I look at the golf course it's about creating an atmosphere, creating an experience not only for the professionals but also the public who come out to watch. It's the whole package. It's not just about producing really good fine turf surfaces, it's just as important that the likes of our plantations mirror the quality of what the fine turf is doing. That has been a big goal for quite a while now and we have done a mountain of work in those areas to bring them up."

The careful planning also went right down to getting the crew prepared for the rigours of tournament week. With a number of tournament first-timers, it was critical they knew what was expected of them, whether it was timing runs through to ensuring all the little jobs were taken care of.

"We're quite a focused group," says Stuart of his crew. "We work together as a group and are really unified in our thinking. We communicate strongly. The key objective for us for the tournament was to keep things simple. We didn't want to make errors and by keeping things simplistic we knew that things would run smoothly. And they did."

"We ran drills for a number of months leading up to the tournament and talking with the guys about how things would unfold and what to expect as a number hadn't experienced a tournament before. As we got closer we began timing our runs for the greens, tees and fairways, nominating people to the jobs and training them up. I'm a real stickler for the one-percenters and covering them off really well and our meticulous planning certainly helped that."

BEST IN THE WORLD

All that planning, the hours spent formulating and executing all the above, paid off handsomely when the first players teed off on Thursday. In its debut

Metropolitan's superb conditioning was in no small part due to the meticulous machinery set-up by turf technician Euan Muir



hosting the Australian Masters, Metropolitan simply shone and the players were quick to laud the course again for its presentation.

Despite later missing the cut, Stuart Appleby trumpeted that Metropolitan's fairways were so good that "they don't even make carpet as uniform and as smooth as this" before going on to claim they were the "Best fairways in the world, no doubt!" Jarrod Lyle labelled the course "one of the rare jewels of golf" and that "you won't find a better golf course in the world at the moment." Geoff Ogilvy praised the "immaculate" surfaces before adding, "Metropolitan has always been kind of the benchmark for conditioning of golf courses in Melbourne and that's no different this time around."

Such comments were a huge fillip for Stuart and his crew. "I did hear those comments, Stuart's in particular, and we were very grateful that they came forward and said those," says Stuart. "We certainly shared those comments among the team and used them as a bit of motivation, as well as recognition for the hard work that they had put in. The guys, with the support of the whole club, worked feverishly over many months to get the course to where it was at and it was very pleasing for them to get that sort of feedback from the players."

As Appleby alluded to, the predominantly Wintergreen fairways (Metro also has four Santa Ana fairways) were simply faultless. Cut at 8mm, they did indeed resemble carpet and that can be attributed



not only to Stuart's fastidious management of them but also the equipment used and their set up.

In the lead-up to the tournament Stuart introduced new Jacobsen LF 550 fairway units to the fleet sporting 5-inch reels, a change from the 7-inch reels that had been used on the previous fairway units. In the 12 weeks before the tournament the fairways were cut on every angle imaginable to ensure there was no grain in them. Together with the use of grooming reels to fine the couch leaf up, the density achieved had to be seen to be believed.

"We wanted to go back a step with the fairway mowers," explains Stuart. "We had the 7-inch reels

Metropolitan's Leigh Woods makes a pass up the 4th. The fairway blowers were in action most mornings and afternoons

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Patterson River's Marc Raymond, cutting the 15th tee at 6mm, was one of a number of volunteers from nearby Melbourne courses

before but we wanted to have a much softer footprint across the ground, especially in some of the shaded surrounds areas. We thought the 5-inch reels were the best thing for our conditions and I think they were pivotal to the way the fairways presented."

Elsewhere, the greens were double cut each morning with a fleet of recently acquired Toro Flex 2100 Greensmaster walk-behinds at 2.5mm, while the tees were also walk-mowed with Flex 2100s at 6mm. Green speeds were around the 12' mark across all four rounds.

Melbourne's fickle weather caused a few minor dramas during the opening round and despite forecasts for northerly winds between 25-40kph, the course copped gusts up to 60kph. That made for some challenging conditions for the morning field (which included Adam Scott) and meant some extra work for seven members of the crew who stayed back after their morning duties to blow off greens 1, 2, 4, 8 and 10 which had become strewn with leaf litter. Aside from that, the tournament passed by without drama and Nick Cullen's winning four round total of 9-under certainly put paid to any fears that the course would be ripped apart.

"The way we wanted to present the course for the week was to have no lines, no patterns, no shading anywhere – just that classic Australian sandbelt golf course look which I think we achieved," says Stuart. "We were particularly pleased with all the fine turf areas and I think we were able to achieve some real good quality in the fairways which was extremely satisfying.

"Two weeks out from the tournament we had some assistance from a number of other sandbelt clubs and it was great to have them part of the experience. For my guys it was the first tournament for a lot of them. They were all challenged along the way, but their excitement and enthusiasm shone through. They had been looking forward to it for a long time and to be honest they were thrilled to be involved.

"It was actually very hard to come down off such a high and settle into our normal routines after the tournament. It was such a huge success on many levels and we continue to receive very high praise for the condition of the course which has been a real positive for our team, the members and the club in general." 🙌

VANDALISM, IRRIGATION ISSUES ADD TO TOURNAMENT CHALLENGES



A spate of vandalism on the 7th green in the weeks leading up to the Masters proved an unwanted distraction for the Metro crew

Superintendents are used to the odd spot of course vandalism, but for Metropolitan Golf Club's Glenn Stuart a hefty spate of it caused more than a few anxious moments in the month leading up to last November's 2014 BetEasy Masters.

What started out as the occasional flag or tee marker going missing, the 15 months leading up to the tournament saw the vandals escalate their efforts considerably, with Metro staff turning up to work some mornings to find holes defecated in and greens smeared with excrement. If that wasn't enough to satisfy the idiots, they then started ripping up greens with flagsticks and bunker rakes

and on one occasion painted a green with black paint.

The par three 7th green bore the brunt of much of the attention and as late as three weeks out from the Masters Stuart and his crew were forced to plug sections of greens from the 19th hole to repair the damage.

Such was the concern that similar acts would be undertaken during the tournament, five weeks out the club, at significant expense, hired security guards to roam the course in the evenings. Thankfully no further vandalism occurred, but needless to say it proved to be a worrisome and unwanted distraction in the club's tournament preparations.

"It started off just as random incidents, but over the past 12-15 months they have caused damage to eight greens throughout the course, anything from a couple of hole changers through to a trestle table in size," explains Stuart. "It was a massive challenge and a real distraction. We had to take staff off other duties to plug and patch the greens; we had to repair the 7th three times in a four week period."

Along with vandalism, irrigation issues also caused a few headaches. Metropolitan's block system is more than 35-years old and is set to be replaced in the coming years. Due to its age, poor distribution uniformity and erratic performance, the Metropolitan crew was regularly out hand-watering the edges of fairways and spots where the sprinklers couldn't cover. Melbourne's very dry spring also didn't assist and many man hours were spent ensuring the fairways got to the level they were at for the tournament.

Also taking up a considerable amount of time in the months before the tournament were the 102 bunkers. One of Metropolitan's unique features is that the greens are cut all the way to the bunker edges, so for 11 weeks crew members went through every greenside bunker and stabilised the edges, along with compacting the floors and pushing the native sand up the faces across all of them. Bunker tongues were also oversown with fine fescue to add some polish to their appearance.

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Wet 'n' Wild Royal Pines

While the weather gods smiled on RACV Royal Pines during the redevelopment of its front nine holes, the same couldn't be said when it hosted the 2014 Australian PGA Championship in mid-December. ATM editor Brett Robinson looks back at the front nine works and the wild week for the tournament crew leading up to the event.

It's 4.30am on the Friday of the 2014 Australian PGA Championship and the unmistakable drone of bunker pumps resonate around RACV Royal Pines Resort. For course superintendent Lincoln Coombes and his crew, who clocked on two hours earlier, it's a bit like Groundhog Day. Host a tournament at the Gold Coast-based resort course and you can guarantee that the weather will intervene and for the crew that means breaking out the bunker pumps.

Since the previous Saturday it had become part of an all too familiar routine – cut, roll greens, pump bunkers; cut, roll greens, pump bunkers. In his four years on the Gold Coast, Coombes has more than got the practice down to a fine art and so it proved again in the week leading up to the 2014 PGA, the second of the resort's five contracted events.

This year, however, there was a slight difference. In between the 2013 and 2014 tournaments, the front nine holes had undergone a dramatic transformation at the hands of Graham Marsh Golf Design, the first of a two stage project to breathe new life into the championship course and strengthen its strategic elements for tournament golf. The changes saw 10 new fully-USGA spec greens (practice putter included), new tee complexes, fairways and surrounds along with a vastly improved drainage network and new irrigation system. Of most significance for the Coombes and his crew,

however, were the 45 new, freshly-lined bunkers complete with pristine sand – greenkeeping heaven!

So when 170 millimetres of rain smashed the course over seven days leading up to last December's tournament, as the old back nine bunkers quickly resembled swimming pools, the new front nine bunkers drained flawlessly and required just a quick rake to get ready for play. Needless to say when work on the back nine kicks off in earnest following the 2015 RACV Ladies Masters in mid-February, the crew will be looking forward to the 2015 PGA and finally consigning the bunker pumps to the farthest reaches of the maintenance facility.

FROM DROUGHT...

As Coombes has come to fully appreciate during his tenure at the 27-hole complex, the weather can be your best friend or worst enemy. For the most part of 2014 it was the former which allowed construction company Ertech to consistently meet their targets and hand over the new-look holes on time for Coombes and his team to manage during the grow-in phase.

Queensland essentially suffered a mini drought during the construction. Despite recording decent rainfall for March (260mm, of which 152mm fell in one hit), the start of April to the end of July yielded just 108mm. Two falls of 51mm and 65mm in August

The front nine holes at RACV Royal Pines (pictured is the 2nd green with the 9th in the background) were completely reconstructed between the 2013 and 2014 PGAs. The last green was sodded with TifEagle couchgrass in mid-August



helped to boost the annual total briefly, but from the start of September through to the end of November drought-like conditions returned with just 75mm recorded.

Having factored in the possibility of losing up to 40 days due to bad weather, somewhat remarkably Ertech lost just four, which would go close to some kind of golf course construction record, for Queensland at least. As Coombes admits they had a blessed run and the only real challenge which cropped up was dealing with pockets of acid sulphate soils, the 8th hole requiring the most treatment.

Despite a slow start, once Ertech and the Graham Marsh Golf Design team found their groove and made a few running adjustments, the construction flew along. Work started on the 7th with that green laid in the last week of April. Ertech worked on three holes at once, completing the tees, fairways and greens in that order.

Due to the narrow construction window, the last two holes, 1 and 2, were the 'get out' holes. If works on the preceding holes (3 and 9) weren't progressing to plan, Ertech could pull up stumps and hold over works until the following year. That didn't eventuate, however, and holes 1 and 2 were finished right on time, with the last green – the practice putter adjacent to the 1st tee – laid on 15 August, 16 weeks out from the PGA.

The most unique aspect of the reconstruction was the solid-turfing of all playing surfaces, fairways included, which was done to simply meet the tournament deadline. TifEagle couchgrass, grown and laid by Twin View Turf, was used on the greens, while the Wintergreen couchgrass used for the fairways, tees and surrounds eventually came from Allenvue Turf after initial grower Turf Force went into receivership.

As well as adding significant expense to the project, solid turfing also created some challenges during the grow-in from both a turf management and logistics perspective.

"We were lucky – there's no doubt about that," admits Coombes of the construction phase. "We were all amazed at how dry it was, but very thankful at the same time. The whole construction job from Ertech was top notch; they hit their marks all the time, did a really good job and left the place clean.

"We took over the holes from Ertech as soon as the turf went down. There was a fair bit of pressure because it was then solely up to us to get them up which we had to do while also maintaining the other 18 holes as well. It was quite a balancing act and there were a couple of times when I thought 'What have I got myself into?' But I wanted to take the turf over as soon as possible so we could start our programmes, especially knowing we had a couple of short timeframes with some of the greens.



Course designer Graham Marsh was a very keen spectator during the PGA



Glen Edwards rolls the 3rd green early on the Friday morning



Storm clouds loom large over the 4th green at RACV Royal Pines. Lightning forced the suspension of play twice during the opening round

“As soon as the turf was down we watered and rolled all surfaces constantly. Because it was so dry we had to water heavily and on two occasions one idiot – me – got bogged twice on the fairways, so you can imagine the stick I copped for that!

“We fertilised on a weekly basis with a programme mainly based around root stimulants to ensure the turf would anchor as quick as possible. We were constantly taking plugs to check root growth (they were down 5-6 inches come the tournament) and we were fortunate to have John Neylan in a consultancy capacity to help guide us through this time. It was great having his recommendations and experience to call upon.”

To move the greens along quicker, Coombes placed Evergreen turf covers on them to retain some heat, although he quickly learnt there was a limit to how long he could keep them down after returning one weekend to find an outbreak of helminthosporium on the 7th green. The TifEagle came in at 5mm and Coombes gradually brought down the height of cut until they scalped before rolling again and eventually getting them down to the desired 3mm.

Every two weeks for about three months out from the PGA the verticutting units took to the greens at -2mm to remove as much thatch as possible and blend in the edges of the sods. As soon as the dethatching started the greens really jumped and together with some 5/8" hollow tines and a light dust eight weeks out, Coombes could finally see things coming together.

At the same time as managing the new holes, Coombes was also conscious of keeping a decent surface on the back nine 328 greens. Due to be ripped up during the second stage of the redevelopment, Coombes didn't commit to a full renovation, instead going out with 8mm solid tines as well as regularly dethatching and dusting and putting out fungicide applications. Then it was all about marrying the old and the new greens together for the tournament.

“At the end of the day we were really happy with how the new surfaces come together,” reflects Coombes. “We probably pushed a few of them a little bit hard by putting the dethatching reels on them sooner than we should, but they came up well.

“Probably the greens on 1 and 8 were not quite there for the tournament and needed a bit more time to settle in. On 8 there's a ridge on the top right hand corner which hasn't quite settled in and flow nicely yet, but more dusting and renovations will help that. No.1 was another we pushed pretty hard because it was the last green on the actual course to be laid. Along with the putter they were a little bit behind the rest, but only marginally.

“The big thing was getting consistency between the front and the back nines. It didn't matter what the speed was as long as the roll was consistent and I think we achieved that. We purchased a TruFirm meter and were constantly taking readings to ensure

they were as close as they could be. And the data suggested there was only a .02 inch difference between them. If you can feel that under foot you're doing well.

"I would have liked a little bit more speed in the greens and that was certainly the hardest thing to achieve. But then again if we had have shaved the new greens down any lower than the 3mm they were at we would have had a lot more bare spots. We rolled and rolled and rolled but there's only so much you can roll. In the mornings the greens looked good, but by the afternoon they started to look a little puffy and the humidity we had during tournament week didn't help either.

"We double dethatched Monday a week before the tournament and they were rolling nicely a few days later and in hindsight I probably should have done the same the week of the tournament. We might look at doing that for the next tournament. Speed was always going to be an issue with sodded greens, but over the next 12 months we'll get that bit of sponginess out with a lot more dusting and renovations."

...TO FLOODING RAINS

While Mother Nature had shined on the construction phase, come the tournament she more than made up for her absence. Up until the end of November RACV Royal Pines had recorded just 668mm for the year, half its annual average. So dry was it that



Assistant superintendent Greg Jager mans a pump on the 12th as the crew scrambled to remove as much water from the back nine bunkers following Thursday evening's 41mm



three weeks before the PGA Coombes was using an 8000-litre water tanker, borrowed from a resident neighbouring the course, to cart water from his lakes to kick start growth in the non-existent roughs.

That quickly changed the Friday before the tournament. Rain and storms set in through until Tuesday with consecutive daily totals of 19mm,

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◀ **The new-look 7th hole. Graham Marsh's design changes have brought new life to the resort course, with plenty of positive feedback from players and pundits alike**

22mm, 22mm, 19mm and 47mm throwing tournament preparations into chaos. As well as compounding an already waterlogged course, Tuesday's dump also caused a mad flurry of activity inside the maintenance facility as staff rushed to cover computer equipment with tarps after the shed sprung a leak.

Although the weather held for the Wednesday Pro-Am, it set in again midway through the first round, with a spectacular lightning storm forcing the suspension of play at 1.30pm. Play resumed at 4.30pm for about an hour before play was again suspended with more storms descending. That night a further 41mm fell and with play resuming at 5.30am in order for the previous afternoon's groups to complete their first round, Coombes and his crew were in preparing the course at 2.30am!

"It was pretty heartbreaking because up until then we had been so dry," says Coombes of the 170mm that fell over that seven day period. "I don't think I just walked past a black cat, I must have given it a bloody good kick too! It's a shame that the weather had such an impact, but given what we had the place came up very well. It was a hard slog, but the guys did a great job.

"Five weeks out a few people were a bit concerned, mainly because it had been so dry. The

course was a bit like the wife getting ready to go out for the night – with five minutes to go the hair rollers were still in, the make-up wasn't done and the shoes weren't on! But we knew where we were at with the course and were comfortable with that.

"We didn't want to push it too hard too early and put any more stress on the new greens than we already had. You could see some of the higher ridges on greens where the turf had struggled but with a bit of time they'll settle down. Come next year they will be a lot better and it will be great to have all new greens to work with."

NINE DOWN, NINE TO GO

With a brief respite in between the PGA and the RACV Ladies Masters, no sooner do the women leave than Coombes will be on tenterhooks again as the Ertech excavators move in to tackle the back nine holes from 17 February.

By no means will the construction works be a carbon copy of the front nine, with holes 10-18 throwing up a few more logistical challenges. For a start the holes are further into the course, some of the greens will have more undulations in them, while substantial earthworks are required on the 16th.

Marsh's design will see this par three transformed into a genuine water hole, with the existing water body extended right up to the green which will wrap around it. Due to the amount of earthworks required, substantial mounding will be incorporated around the green, with Marsh's vision to make it into a show hole, a place where spectators can gather, much like the 16th at Augusta.

The big unknown of course, as it was for the front nine, is the weather and Coombes is under no illusions as to the potential threat it holds. The long range forecast is for a dry summer (normally Queensland's wettest months) but will that mean the rains will come in winter? Who knows...

"That's the scariest thing," admits Coombes. "They had such a good run last year, is it going to be the same this year? During the first nine works we had one fall of 30mm on bare ground and Ertech couldn't get machinery back onto the site for a day. Luckily the wind got up and it dried off, but if we get

Clancy Hyde cuts the 4th green. Greens were kept at 3mm



100mm over 3-4 days, which this region is easily capable of, then who knows how long they'll be delayed.

"The first nine has certainly been a learning curve and from a grow-in perspective there were a few things I'd do differently. I'd put out a bit more pre-emergent herbicide and ensure the timing of those applications were better too. We went out when we could, but we were dictated a little by budgets and also having to keep maintaining the other 18 holes.

"Overall though I'll stick pretty close to the programmes we did the first time around. I would probably dethatch the greens a little bit earlier but also maybe let them settle in a bit more before ripping into them. Kelpac was my friend and it seemed to really work and we have a really good root system to work with now.

"The one thing I won't do again is keep the existing green sand. As Ertech stripped the old greens they stockpiled it which we used for topdressing and dusting, mainly up and around the greens and run off areas. While it seemed okay when it was stripped, we only discovered when we spread it that there were pockets of blue metal which had migrated through the sand. In hindsight we probably should have screened it first."

As for the front nine, the real test will be how it handles the traffic expected now that it is open for public play. Given the exposure generated by



the PGA and the soon-to-be-held Ladies Masters, punters will want to experience it first-hand and for Coombes that means implementing some careful strategies to combat the wear and tear the new surfaces will likely receive.

"We'll just manage them as we see it," says Coombes. "The key thing will be making sure the plant is healthy. One thing that we will have to do, which we haven't in the past, is more preventative programmes for fairways and tees. When you invest the money in solid turfing you want to make sure you look after them.

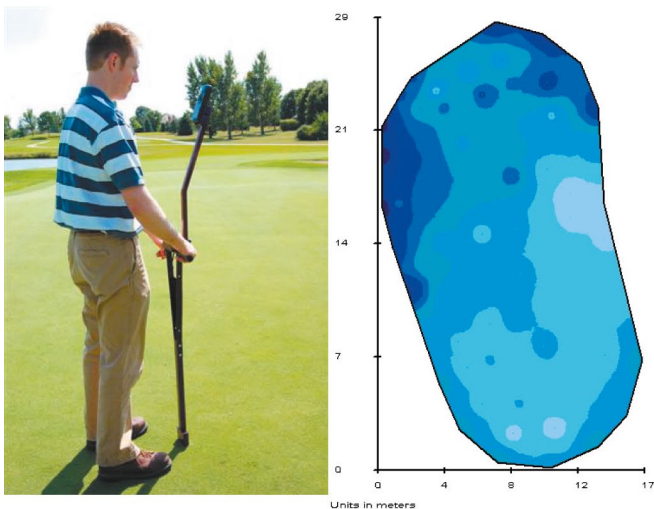
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The par three 5th

"From a man-hours perspective the new nine takes longer to cut. Even though the greens are smaller they have a lot more undulations in them. But the new bunkers have performed really well and they will save us a huge amount of maintenance hours and resources in the long run, so we can't wait for the bulldozers to start ripping into the ones on the back nine.

"We're really looking forward to the back nine works starting. It's exciting for the Gold Coast and it's exciting for the resort. The new nine holes have

really grown on me and now we are regularly cutting and maintaining them you can really appreciate all the shapes and subtleties of Graham Marsh's design.

"I have loved every minute of the project so far and everyone has done a great job to get it to this point. We were pretty confident that we could get the job done and were very happy with the way it presented for the 2014 PGA. But we are only half way through the job, so we can't start slapping ourselves on the back just yet." 🌴

IRRIGATION ISSUES PUT PGA PREPARATIONS UNDER THE PUMP

If growing in a new, wholly sodded front nine holes wasn't enough of a challenge, RACV Royal Pines Resort course superintendent Lincoln Coombes also had to contend with some untimely irrigation issues in the immediate weeks leading up to the 2014 Australian PGA Championship.

While the 170mm of rain the week of the tournament caused its own dramas, just three weeks earlier and after one of the driest springs in Queensland on record, Coombes had two major breaks within days of each other which ruined plans of a smooth lead-in.

The first incident saw the mainline to the 18th green ruptured by contractors erecting the corporate marquee. One corner of the marquee sat right above the 200mm mainline which came in underneath at a 45 degree angle. Due to the structure being two storeys high, engineers had determined that its concrete weights needed to be braced. Angling a frame around them, one contractor then proceeded to drive a stake into the ground and straight through the pipe.

Occurring on a Saturday, crew members rushed in to isolate the break which closed the green down as they set about cutting and capping the line. With no water available to the green Coombes had to run a 100 metre hose with an old impact sprinkler off the 1st tee to get water to the green that weekend.

No sooner had the 18th come back online, a more serious issue arose when a motor on the second of RACV Royal Pines'



Course superintendent Lincoln Coombes

five pumps burnt out. Having a spare motor, a quick call to the electrician along with some assistance from the contractor who ruptured the mainline on 18 (his Manitou lift came in handy – "We were 1-all after that," Coombes quips), the new motor was dropped in. However, the pump quickly overheated and started making noises before shutting down altogether.

Just two weeks out from the tournament, Coombes called David Hanby (Hydro Pumping & Controls) who ordered a pump from Adelaide to be there within a day. However, Coombes received a call telling him it had been placed on road freight!

Fortunately for Coombes they were able to build another one which was flown to Brisbane overnight. Coombes picked it up from the airport 5am Saturday before driving it to Grundfos techs on the Gold Coast who attached the motor to the pump. By the time it was ready, however, the electrician was unavailable to wire it up on account of having his work Christmas party, while the contractor with the Manitou was in Brisbane! The pump was eventually put in the following day and mercifully performed up to and through the tournament.

"There were two days where we couldn't get any water out," explains Coombes. "We have five pumps, but the problem was we couldn't bypass. If No.1 goes we can get Nos. 2-5 to go as long as we keep pressure. But when No.2 blew, No.1 would start up and when it reached capacity it would not bypass No.2 and end up shutting down. Our electrician was able to bypass Nos. 1 and 2 and start with No.3 but what we had to do was keep programmes running and keep the pressure regulated 24 hours a day for three days so that it didn't drop below a certain point. I should have realised then that the next three weeks were going to be a slog!"



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Australia is known as the 'lucky country' and from a golfing perspective nothing could be truer. Whether it's the unique sandbelt giants of Melbourne, Adelaide and Perth, the historic parkland courses of Sydney through to the many links gems dotted along the coastline, Australian golfers are blessed with some of the world's best courses and playing conditions.

Australia is also home to a stunning collection of resort courses and perennially ranked at the top of a highly competitive list is Bonville Golf Resort. Nestled at the foothills of the Dorrigo National Park just 10 minutes south of Coffs Harbour, NSW, Bonville's dramatic golfing landscape is simply special. Routed through a spectacular forest of monstrous flooded gums, its stunning environs have drawn comparisons to Augusta and since its opening in 1992 it has won a string of accolades for its impressive course and clubhouse facilities.

Somewhat enviably, Bonville has been home to course superintendent Chris Neal for the past 15 years. A proud New South Welshman, Neal arrived at Bonville in 1999 after 12 years cutting his teeth at Newcastle's Belmont Golf Club. Within two years he was elevated to assistant under then superintendent David Scutts before taking over the top job in 2006.

If anyone can fully appreciate Bonville's unique charm it's Neal, but as he is quick to

tell you the course's beauty belies some quite significant management challenges which keeps his full-time crew of 18 constantly on their toes. With 50 metres of elevation change across more than 200 hectares, it's a unique site not only for the golfer but for a superintendent as well. Throw in shade issues, numerous microclimates and an average of 2.5m annual rainfall over the past five years and the Bonville maintenance team does a remarkable job to uphold the very exacting conditioning standard required of them.

Not surprisingly, assisting Neal achieve this is a company which he has developed a long-held respect for during his career – Toro. While predominantly a red shed when he arrived, Neal had little hesitation in taking that relationship to a new level by signing a preferred supplier partnership agreement. That means every new piece of equipment that now rolls through the Bonville gates is red, something which provides huge assurance for Neal.

"We have had a fantastic relationship with Toro for more than a decade now," says Neal. "Bonville is a very challenging site to maintain, but thanks to our Toro machinery and irrigation system we can overcome those issues and present a golf course we are very proud of."

MEETING THE CHALLENGE

While the inventory list opposite shows that Bonville doesn't want for much, Neal will tell you that every single one of the 40-plus Toro machines he has more than earns its



With 40 hectares of light rough to maintain, the Groundsmaster 4700-D gets a real workout around the sweeping terrain of Bonville Golf Resort

keep. Bonville's environment is a real proving ground for Toro's cutting units, but their legendary reliability and quality of cut always means Bonville's couchgrass surfaces are in immaculate nick. The Reelmaster® 5610s ensure that 14 hectares of Greenlees Park and Wintergreen fairways are striped to perfection at 8mm, while a fleet of recently acquired Greensmaster® Flex 2100s, together with the Greensmaster® 3250-Ds, keep the 328 hybrid couch greens at a constant 3mm year-round.

However, it's the rough mowers which are the true workhorses around Bonville. When you have 100ha of heavy rough (>70mm height of cut) and 40ha of light rough (40mm) it takes some heavy-duty machinery to tackle a task which can take up to four days to complete. Fortunately Neal has three machines in his Toro arsenal which handle the job with aplomb.

"One of the major maintenance challenges we have is the rough," explains Neal. "Being heavily tree-lined and undulating, Bonville



Bonville superintendent Chris Neal has become a devotee of the ProCore 648 aerator

Course: Bonville Golf Resort, NSW **Superintendent:** Chris Neal



is tough on rough mowing equipment. We use the Groundsmaster® 4000-D and Groundsmaster® 360 Quad-Steer™ to maintain our heavy rough areas and in the steep terrain and wet conditions we get these two machines serve us really well. Before we had them we had a lot of downtime with other machines and with such a large area to maintain we simply can't afford that. The 4000-D and 360 have been a godsend, the 360 in particular because of its manoeuvrability and traction which is crucial for this site.

"As for the light rough, well, the fact that we have just purchased our fourth Groundsmaster® 4700-D in 10 years shows you just how good a machine it is. Prior to using it we wrestled with reel mowers

at 40mm but they left a bad finish. So we upgraded to the 4700-D and have never looked back. The contour rotary decks provide such a great finish on the couchgrass and there is no scalping despite it being undulating. The productivity of this machine is enormous and the amount of ground we can cover in a short period is certainly a winner for us."

Also saving a huge amount of time in a very different way is another innovation from Toro. Due to the demands Bonville places on cutting equipment, it is critical that Neal and his two full-time mechanics can quickly and accurately keep a track of maintenance requirements on each piece of machinery. To that end Bonville utilises Toro's MyTurf wireless fleet management system which

BONVILLE'S RED SHED

- 6 x Greensmaster Flex 2100 and 2 x Greensmaster 1000 walk-behinds
- 3 x Reelmaster 5610 fairway mowers and Reelmaster 6500-D (used as a scarifier)
- 4 x Greensmaster 3250-D triplexes (greens and tees)
- 2 x Reelmaster 3100-D with Sidewinder
- Groundsmaster 4000-D and Groundsmaster 360 rough mowers
- Groundsmaster 4700-D and Groundsmaster 3500 light rough mowers
- 6 x MDX Workman utilities and 2 x HDX Workman utilities
- 2 x GreensPro 1240 rollers
- 2 x Sand Pro 5040 bunker rakes
- Hydroject 3010
- ProCore 648 and 1298
- Multi Pro 5800 spray unit
- STX-26 Stump Grinder
- Pro Force Debris Blower
- Rake-o-Vac

automatically communicates machine hours and issues alerts when maintenance is due.

"We've had MyTurf for about five years but recently upgraded to the wireless monitoring system," explains Neal. "It's such a huge time-saver for the mechanics."

Cutting equipment aside, Bonville also relies on Toro's innovative and feature-laden irrigation control systems, satellites and sprinklers to manage its most precious resource – water. Bonville's irrigation system is all Toro and this summer Neal has upgraded from the tried and true Site Pro control system to Toro's flagship Lynx system.

This is the second major irrigation infrastructure upgrade at Bonville in recent times, the last coming five years ago when Neal switched across to 12 Network VP satellites from the old Network LTC Plus system. As the course sits on top of a massive iron ore ridge, lightning strikes are common and by upgrading to the VP satellites Neal now has greater protection against outages.

Toro Turf Tour **TORO**

Course: Bonville Golf Resort, NSW **Superintendent:** Chris Neal

The Reelmaster 5610
is right at home on
Bonville's immaculate
couchgrass fairways

The more recent decision to upgrade to the Lynx system has been all about giving Neal greater control. With so many microclimates present around the Bonville layout, the Lynx system enables Neal to precisely manage moisture levels on each green and fairway via more than 800 of the 835 Series golf rotors. While still only new, Neal plans to integrate a weather satellite and moisture sensors into the Lynx system so that conditions on course can be monitored and addressed in the office with the simple click of a button.

FIRM FAVOURITES

Given the challenges that Bonville presents, Neal has come to rely on the unique features of each piece of Toro machinery at his disposal. As a whole they ensure that the course is in optimum shape for the 30,000 rounds it entertains each year, but ask him to pinpoint which have made the biggest difference and there are two standouts in Neal's mind.



The Greensmaster Flex 2100
walk-behinds provide
a perfect cut on Bonville's
undulating greens

"You can't go past the Multi Pro® 5800 spray unit," offers Neal. "We've had it for about three years now and it has been a real godsend for us. It gives you the utmost confidence you need when putting out product and the innovations on it – like the six diaphragm pump and the sensor arms – make it such a great machine for our site."

Running a very close second is one machine that has really enabled Neal to manage some problem areas on his course – the ProCore® 648. While initially sceptical that a pedestrian aerator was quicker and more efficient than a tractor-drawn one, no sooner did he see the ProCore in action then he put in a request to purchase one.

"We had a tractor-drawn corer and I would have arguments with our rep Mark Johnson who was always at me to try the ProCore®," says Neal. "There was no way that he was going to convince me that a pedestrian corer was better, but when we demoed it I couldn't believe it!"



The ProCore 1298

"With the rainfall we get we try and solid tine once every three to four weeks. With the ProCore® 648 a job that once took up to 20-24 hours to complete is now done in just nine hours! It also enables us to micromanage our surfaces and improve those areas which are impacted by shade or traffic."

"For instance, our 1st, 2nd, 3rd and 6th greens get limited sun and have always been challenging to manage. But in the past 12 months the surface on these greens has improved significantly just by being able to run 6mm hollow tines on the ProCore® over them four times a year. With its 122cm (48") coring swath, the ProCore® is that quick we can do those greens in one afternoon with minimal disruption to play."

THE COMPLETE PACKAGE

Add to all the above Toro's legendary after sales service and back up, which the company prides itself on, and it is easy to see why Neal is just one of many course superintendents around Australia who have come to rely on Toro. For Neal, however, there is one other very important attribute about the company which will see him stay true to Toro for as long as he is in charge at Bonville.

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The 'R-word'



With a limited
number of
registered

herbicides available in
Australia, turf managers
need to be very mindful of
the potential for resistance
to develop when controlling
weed populations at their
facilities. ATM columnist
John Neylan looks at
herbicide resistance and
some potential strategies to
proactively delay its onset.

At the International Horticultural Congress held in Brisbane in August last year, there was a very interesting paper presented by Dr Scott McElroy on the growing problem of herbicide-resistant weeds in turfgrass in the US. Dr. McElroy is a turf scientist from Auburn University specialising in weed biology and spoke in particular about the issues golf courses and sports fields are having with herbicide-resistant *Poa annua* and *Eleusine indica*.

In the US, the challenge with *Poa annua* is that it has developed resistance to almost all major modes of action of herbicides which leaves few options for control. Although not to the same extent, *Eleusine indica* has developed resistance to pendimethalin and diclofop which is leaving few control options.

Dr McElroy's paper was particularly timely given some recent field observations made by myself and other colleagues. As I get around golf courses and sportsfields the discussion often turns to weed control and in particular the control of *Poa annua* and how it relates to its control in warm-season grasses. We have had numerous discussions and meetings about the control of *Poa annua* in creeping bentgrass, however, most recently it has been more about the persistence of this ubiquitous weed in warm-season grass fairways and sportsfields.

With the wider introduction of couchgrass and kikuyu into sportsturf areas in the southern part of Australia, the expectations were that among the benefits of lower water use and resistance to wear it would also be easier to control weeds, especially annual wintergrass. The philosophy of weed control in sports fields and golf courses is quite different in many circumstances and this is often reflected in the weed control strategy.

Poa annua treated with a sulfonylurea herbicide with poor result. Of the 19 cases globally of recorded herbicide-resistant weeds in turfgrasses, *Poa annua* makes up 11 of these, with one documented case from Victoria, Australia of resistance to endothal

On golf courses there has been an increasing trend towards maintaining weed-free surfaces with a programme of using both pre- and post-emergent herbicides. This has been somewhat of a turnaround, as for a number of years there was a two grass policy at many golf courses where the wintergrass was transitioned out in the spring, either through the use of herbicides or by droughting it out.

Allowing the wintergrass to establish over the winter months often resulted in bare and thin areas that could take several weeks, if not months, to recover. This transition was acknowledged as an impediment to maintaining high quality fairways and consequently there was an increasing use of pre-emergent herbicides and post-emergent control of seedling wintergrass.

The other factor that has seen the move to keeping couch clean of wintergrass has been part of its control strategy used for bentgrass greens. As most superintendents would attest, allowing wintergrass to remain anywhere on the golf course provides a source of seed and infestation for greens.

On sportsfields there is often an approach of allowing the wintergrass to invade the turf over the winter months and to control it in the spring. The reasons are varied, however, it is often due to a reluctance to commit to a pre-emergent programme or budget constraints. In some circumstances it is used to provide some 'winter colour' on high wear sportsfields. The long-time notion that wintergrass is the sportsground curator's friend obviously still rings a bell with some!

With sportsfields the spring transition is often a 'pot luck' approach with some fields using post-emergent herbicides and others relying on Mother Nature to do the work. It has been on sportsfields in particular where poor herbicide control has been most noticeable and is likely to be due to several factors including poor timing (when it is too cool), inadequate herbicide coverage, failure to follow up and resistance.

HERBICIDE RESISTANCE

As we inspect golf courses and sportsfields, without exception there will be wintergrass plants that are very persistent to herbicide applications. Walking across the turf that has been sprayed with the latest herbicide, the perennial question is 'Why has THAT plant survived while others around it are dead?'

There is the normal forensic analysis of what herbicide was used, when it was applied, what was the rate of application, the weather conditions at the time of spraying and follow-up application, equipment set-up etc. Inevitably the conversation turns to resistance and loss of efficacy.

Herbicide resistance is a natural process. Herbicide-resistant individuals or biotypes are always present within the weed population, usually at relatively low numbers. These individuals have a herbicide resistance mechanism that allows them to survive the application of a herbicide.

In the very first herbicide trial that I conducted (1984-85) I was looking at various herbicides for the control of *Poa annua* in Santa Ana couch. At that time atrazine could be used and it was quite remarkable that between years 1 and 2 of the trial that the effective minimum application rate doubled in that 12 month period. In just one season the susceptible types at the low rate were eliminated and left the more tolerant types.

Herbicide resistance has been defined as the inherited ability of a plant to survive and reproduce following exposure to a dose of herbicide normally lethal to the wild type (Vencill et al. 2012). Herbicide resistance normally occurs following the intensive use of herbicides for weed control. In any weed population there is likely to be individuals that are naturally resistant to herbicides due to genetic diversity. As these resistant plants survive and set seed the resistant population increases particularly as the same herbicide group is used.

Powles and Qin Yu (2010) reviewed the evolution of herbicide resistance in plants and defined it as an evolutionary process and its dynamics and impact being dependent upon several factors (see Table 1). Key aspects taken from this that are noted in managing turf weeds include:

- The biology of the weed;
- The intensity of the selection pressure; and
- The frequency and mode of action of the herbicides used.

Weed species such as *Poa annua* that produce a large amount of seed and have a short seed bank life are more likely to develop resistant types. Weeds that have a greater genetic diversity are also more likely to have resistant individuals that can propagate and become more prevalent over time.

Poa annua is a polyploid which means that it has more than two sets of chromosomes. This comes about from the hybridisation between *Poa*

TABLE 1: FACTORS INFLUENCING HERBICIDE RESISTANCE EVOLUTION IN WEEDS

GENETIC
1. Frequency of resistance genes
2. Number of resistance genes
3. Dominance of resistance genes
4. Fitness cost of resistance genes
BIOLOGY OF WEED SPECIES
1. Cross-pollination versus self-pollination
2. Seed production capacity
3. Seed longevity in soil seedbank
4. Seed/pollen movement capacity
HERBICIDE
1. Chemical structure
2. Site of action
3. Residual activity
OPERATIONAL
1. Herbicide dose
2. Skills of the operator (treatment machinery, timing, conditions etc...)
3. Agro-ecosystem factors (non-herbicide weed control practices, crop rotation, agronomy, etc...)

infirm and *Poa supine* which has resulted in *Poa annua* being a tetraploid (i.e.: has four sets of chromosomes). In very simple terms this polyploidy provides greater opportunity for gene mutations to occur without compromising the fitness of the plant.

The selection pressure for the more resistant types often comes from the frequent use of the same herbicide or the use of herbicides from the same family (mode of action). In addition, the failure to control weeds adequately through poor application techniques and lower rates of the active increases the weed population and places pressure on all herbicides used.

The main reason stated in the literature for why resistance has developed is because of the repeated use of herbicides with the same mode of action. CropLife Australia (2014) states that the selection of resistant strains can occur in as little as 3-4 years if there is no programme of resistance management.



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◀ ***Poa annua* in sportsfield starts as a few plants and can quickly spread**

According to CropLife Australia, herbicide resistance has been well documented in Australian agriculture since 1982 when it was reported in annual ryegrass. In Australia, resistance has been confirmed in 37 grass and broadleaf species with resistance having developed in 11 different herbicide chemical groups. Multiple herbicide resistance within the one species has also been recorded.

In the International Survey of Herbicide Resistant Weeds (Heap, 2014) there are currently 437 unique cases (species x site of action) of herbicide-resistant weeds globally, with 238 species. Weeds have evolved resistance to 22 of the 25 known herbicide sites of action and to 155 different herbicides.

While the recording of resistance in turfgrasses is less well developed, Heap (2014) cites 19 cases globally of resistance in weeds associated with turf including *Poa annua*, *Elusine indica* and *Digitaria sanguinalis*. *Poa annua* makes up 11 of the recorded resistant weeds in turf and of these there is one documented case from Victoria, Australia of resistance to endothal.

In the US, McElroy (2014) states that *Poa annua* has developed resistance to almost all major modes of action eliminating or reducing the effectiveness of herbicides such as glyphosate, atrazine, prodiamine and foramsulfuron.

In addition to the resistance in these selective herbicides there is also a world-wide concern

regarding the resistance of various weeds to glyphosate and there are recorded cases of *Poa annua* resistance to this widely used herbicide.

Binkholder et. al. (2011) reported on a population of annual bluegrass in Columbia, MO that was not controlled with glyphosate after more than 10 years of continuous applications. Their research identified a new species of *Poa annua* with resistance to glyphosate and represented the first report of glyphosate resistance in turfgrass. Brosnan et. al. (2012) also reported on a population of annual bluegrass not controlled by glyphosate. Given the wide use of glyphosate on dormant couchgrass for the control of *Poa annua*, turf managers need to be aware of the potential for resistance to develop.

HERBICIDE CHEMISTRY

The chemistry of herbicides and how they selectively kill weeds is a complex science, however, it is worthwhile briefly considering it in the context of this article. In simple terms herbicides inhibit a process in the plant that is essential to life including;

- Photosynthesis;
- Amino acids and proteins;
- Fatty acid synthesis;
- Growth inhibition;
- Cell membranes;
- Pigment synthesis; and
- Growth regulation.

Powles and Qin Yu (2010) describe effective herbicides as having chemical properties that enable them to enter the plant, be translocated and reach their target site at a lethal dose. They also state that the great majority of herbicides inhibit specific plant enzymes (target site) that are essential in plant metabolism.

In reviewing evolved herbicide resistance, Powles and Qin Yu (2010) discussed evolved target-site versus evolved non-target-site resistance. Evolved target-site resistance exists when herbicide(s) reach the target site at a lethal dose but there are changes at the target site that limit herbicide impact. Evolved non-target-site resistance involves mechanisms that minimise the amount of active herbicide reaching the target site by absorption, translocation or metabolises (breaks down) the herbicide before it can get to the site of activity.

INTEGRATED WEED MANAGEMENT

Managing any pest requires a variety of strategies and not just being reliant on the use of a pesticide. Integrated weed management (IWM) is the control of weeds through a long-term management approach involving mechanical, cultural and biological strategies in addition to herbicides.

Plant health is at the top of the list and maintaining a dense, healthy turf that can resist the invasion of weeds is the primary aim. As we often note, weeds in general (*Poa annua* in particular) invade all of the stress areas in a turf sward. Whether it is related to traffic, poor drainage and excessive

High traffic areas, such as tees and walk off areas, are often susceptible to greater *Poa annua* invasion



thatch or shade, they all create an environment favourable to weed invasion.

If we can correct these problems we then have a better opportunity to control the weed and minimise herbicide use. What we want to avoid is multiple applications of a herbicide to control a weed where the turf species cannot grow and compete against it.

CropLife Australia (2014) provides several key strategies to be considered in managing weeds;

- Refer to specific guidelines for each herbicide mode of action group;
- Rotation of herbicide mode of action groups within and across years;
- Keep accurate records. This is already mandatory and most turf managers do it;
- Read the herbicide label and associated literature;
- Always use robust label rates. I read this to mean the effective label rate that will provide the best kill;
- Identify and monitor surviving weed populations and check for resistance. The Weed Science Society of America (WSSA) recommends scouting seven to 14 days after each herbicide application and continue at regular intervals. If weeds are present after a herbicide application, determine the reason. Check weed biology, environment (including microclimate effects), application problems, turf management cultural practices and herbicide resistance. Checking for

herbicide resistance is not easy and needs to be undertaken by a specialist in the area.

- If resistance is suspected do not use the same product or mode of action.
- Minimise weed spread. If it is *Poa annua* think about equipment movements and, in particular, mowers.
- For severely infested areas consider killing off the turf and weed species using a non-selective herbicide and replanting. Topmaking could also be another strategy employed.
- Hand removal of weeds if they are in isolated areas.

HERBICIDE MODE OF ACTION

For a number of years, herbicides have been grouped by their mode of action (MOA) to allow herbicide resistance to be managed. A detailed and up to date list of herbicide MOA can be found on the CropLife Australia website (<http://www.croplife.org.au/industry-stewardship/resistance-management/>).

In Australia, the different MOA groups are identified by a letter code on the product label and are based on the resistance risk of each group of herbicides. Not all MOA groups carry the same risk for resistance development. Products represented in Group A and Group B are considered to be 'high resistance risk' herbicides. Examples of herbicides used on turf in these groups are diclofop (Group A) and the sulfonylureas and bispyribic in Group B. The



Weed species such as *Poa annua* and summergrass (*Digitaria sanguinalis*, pictured) that produce a large amount of seed and have a short seed bank life are more likely to develop resistant types



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When planning a herbicide programme to prevent or mitigate the evolution of herbicide resistance in weeds, rotation among herbicides with different group numbers is necessary

rest of the MOA groups are considered to represent a moderate risk.

When planning a herbicide programme to prevent or mitigate the evolution of herbicide resistance in weeds, rotation among herbicides with different group numbers is necessary. When we look at the control of *Poa annua* in couch the sulfonylureas represent many of the registered post-emergent herbicides and hence the reason why we are already seeing signs of resistance to these relatively new herbicides.

The WSSA (2014) presents strategies to proactively delay herbicide resistance through one or more of the following tactics using different MOA's:

- Multiple herbicides with different mechanisms of action. It has been suggested that tank mixing or the use of pre-mixed products with different mechanisms of action and activity on the same target weed or weeds can be effective at delaying the onset of herbicide-resistant weeds. This raises the concern that in Australia we have to operate within the legal framework of the label and whether tank mixes would be strictly permitted.
- The sequence of herbicide applications needs to be considered across the year. For example, proflaminate, a Group D herbicide, could be followed by oxadiazon (a Group G herbicide). To illustrate the challenge of changing MOA groups, pendimethalin, dithopyr and proflaminate are all in the same MOA group.
- Herbicides with different mechanisms of action should be used across multiple years. For example, trifloxysulfuron (a Group B herbicide) could be used in year 1 followed by propyzamide (Group D) in year 2 and then what? Unfortunately the options are limited, particularly if multiple post-emergent applications are required across the same year.

An example of a possible proactive annual management programme that targets *Poa annua* may consist of proflaminate and oxadiazon applied pre-emergence, followed by trifloxysulfuron applied post-emergence (WSSA, 2014). All three of these

products have different mechanisms of action and have overlapping activity on wintergrass.

CONCLUSION

McElroy (2014) paints a somewhat bleak picture as to the future of weed control. He states that: "Considering the rapid rate of resistance development, the turfgrass community must think beyond simply applying another herbicide".

Future turfgrass weed management has to consider alternative methods of weed control so as to minimise the occurrence of herbicide resistant weeds. McElroy (2014) goes on to say that "without alternative strategies for weed control it is likely that all herbicides will eventually suffer the fate of herbicide resistance development.

As a turf industry, all sectors have a role to play. The herbicide manufacturers, the distributors, turf managers and agronomists all need to have an input. We also need more research into the effects of combinations of herbicides, pre-emergent vs early post-emergent control and whether particular weed biotypes are resistant.

In Australia we have a limited number of registered herbicides and we need to be mindful of the potential for resistance to develop. A superintendent once said to me that he wished that he had manually removed a half a dozen persistent *Poa annua* plants after the first use of a new herbicide. The consequence has been the increasing numbers of this tolerant biotype.

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Your course or their course?



Course superintendents are a passionate lot but sometimes that can cloud their perspective. AGCSA HR and Best Practice manager Daryl Sellar discusses the fine line course superintendents tread between course ownership and custodianship.

There is a sense of pride in what superintendents do that can be a great asset to their careers, clubs and the courses they manage, however, at the end of the day it must be remembered the course belongs to the members

“Daryl, you have to remember your job is to provide your committee with the best information you can so that they can make the best informed decisions they can for *their* course and *their* club”.

I have benefited from many great pieces of advice in my time in the turf management profession, but these remain some of the wisest words I've ever received. They were kindly offered by Jim Porter while I had the pleasure of walking around Royal Melbourne Golf Club with him during his tenure there, picking his brain and no doubt complaining about the frustrations of decision making, or more precisely, not getting what I wanted!

Such is their impact, they have resonated with me for well over a decade now and I have shared them a number of times in conference presentations. So why do I share them again here in the pages of Australian Turfgrass Management?

Passion for the job is one of the greatest attributes superintendents and greenkeepers possess and the sense of pride and ownership of 'our patch' is something we all relate to. However, I think we have probably all been guilty from time to time of letting this sense of ownership cloud our judgment.

Over the past seven years working in the capacity of the AGCSA's HR and Best Practice manager, I have received an unfortunate number of calls from members experiencing workplace

conflict and stress arising from the frustration of differences of opinion with (or not being able to get their message across to) club boards, committees and management.

There have been cases where members have made the conscious decision not to undertake a directive because they 'know it is not going to work', 'will result in problems down the track' or even set about doing something completely different because they 'know better'. None would be recommended as a great career move. Communication has usually broken down at this point, with neither party really sure of what the other is doing or why, and trust or professional respect is severely compromised.

Like most professions, decisions that may compromise efficient and effective management can be frustrating. As turf management professionals, we are trained to recognise the implications of our actions or those of others on our course, and in most cases the repercussions seem blatantly obvious to us.

Superintendents almost always believe they have the best interests of the club and course in mind, and that our decisions or plans are obvious in their intent. However, club members who volunteer their time to serve on committees or boards and are also generally motivated by the best interests of the club, usually come to these positions having specialised skills of their own that can be very beneficial to the club and superintendents. But the



“We need to remind ourselves that we are employed to manage the course utilising the specialised skills we have and that sometimes things can be beyond our control. Accept it and focus on the things we can control.”

complexity of golf course management is rarely part of this skill set. This ‘problem’ usually presents an opportunity if approached correctly. But how?

UNDERSTAND THE ROLE

As course superintendents, it is often said that we are custodians of a significant parcel of land for a period in time. While this is true, we must also recognise we are in a service role. Club members pay a premium to enjoy the course and facilities and their investment gives them the right to have an opinion on matters relating to the course and club. When members hold a position on the committee or board, they represent *their* constituents in the governance of *their* club and *their* course.

POSITION YOURSELF EARLY

Taking the opportunity to educate committee and board members about the issues (good and bad) you face in managing the course can be very beneficial. With the regular turnover of committee members, it may require a ‘refresher’ every one or two years, but by demonstrating your understanding and care of their course you immediately position yourself as knowledgeable and trustworthy, and the best qualified person within the club to advise on matters relating to the course.

DEVELOP GUIDELINES

Whether it is a documented vision for the course

or a set of maintenance standards, taking the lead in having written consensus from the board or committee on the presentation of the golf course can help to maintain consistency and improve efficiency over time.

DEVELOP POSITION DESCRIPTIONS AND PERFORMANCE APPRAISALS

Similarly, documented position descriptions help to clarify roles and responsibilities for all positions throughout the club. In turn this allows performance appraisals to be conducted against the position description, again promoting consistency of management priorities.

Neither document should be feared. On the contrary, they should serve as comfort and reassurance of the expectations of the club, especially in the environment of regular changes of boards and committees.

If you do not have a documented position description and have performance appraisals at least annually, the AGCSA strongly recommends you request the club develop them as soon as possible. Templates are available through the HR and Best Practice section in the members’ area of the AGCSA website – www.agcsa.com.au.

COMMUNICATE HONESTLY

Being open and honest about the positive and negative attributes of the course, projects that have

It can be a very demanding profession, but it can also be extremely rewarding. There may be one thing going wrong, but the beauty of golf courses is that there is always something good about them





◀ **Listening effectively allows superintendents be more perceptive and ask more considered questions and in turn gain an insight as to the issues that may be affecting people on the course or within the club**

or haven't been completed, or problems as they arise helps to build a level of trust and reputation for integrity that helps relationships over the long term.

The reality is that there will come a time when we need to tell people what they need to hear, not what they want to hear. If we have a reputation for honesty and integrity on our side, it is more likely to be taken in good faith knowing you have the best interests of the club and course at heart in your recommendations.

LISTEN CAREFULLY

There are variations of the proverb 'we have two ears to listen and one mouth for talking, and we should use them in the same proportions'. Regardless of the exact wording, the sentiment is wise. We can make life so much easier for ourselves if we listen, really listen to what is being said or suggested.

It allows us to be more perceptive and ask more considered questions and in turn gain an insight as to the issues that may be affecting people on the course or within the club as a whole. This can allow solutions to be found before a problem arises, or at least stop it from becoming a major issue. We don't always have to agree, but listening effectively also demonstrates that we value people's opinion.

PRESENT OPTIONS AND MAKE RECOMMENDATIONS

There are usually a number of options available to solve a problem or improve an aspect of the course. We shouldn't be afraid to narrow the search down for club management and honestly present the best or most appropriate ones, and, at the same time, make a well-constructed recommendation if we firmly believe it to be in the best interests of the club. This demonstrates a preparedness to consider alternatives and can do away with the myth that we are locked into one company, supplier or methodology.

INFLUENCE DECISIONS WITH FACTS, NOT OPINIONS

As golf course management becomes increasingly business-like in its day-to-day operations, it follows

that our decision-making processes should follow a similar path. We all have our opinion on aspects of the way our country should be run, but until we know all the facts, we are not well placed to make an informed comment.

The same applies to our golf course, so take the time to gather the information you need to help board and committee members make the best informed decisions they can. Well-presented facts can be invaluable when making decisions regarding emotive issues that can affect people (and their judgement) in different ways.

KEEP IT IN PERSPECTIVE

Passion for the job is a wonderful thing. But it can be fraught with danger. I have spoken to dozens of colleagues who have experienced real problems (personal, health and career) from getting too emotionally involved in what we do. Heck, I've been there!

It can be a demanding, frustrating and stressful profession. It can be the most rewarding, inspiring and beautiful profession. But our passion sometimes exaggerates the rollercoaster of emotions to the point that we fail to keep things in perspective. There may be one thing going wrong, but the beauty of golf courses is that there is always something good about them; we need to remember that.

We need to remind ourselves that we are employed to manage the course utilising the specialised skills we have and that sometimes things can be beyond our control. Accept it and focus on the things we can control.

As much as I hate to say it, it is only a job. We shouldn't risk our health, our family and all the good stuff in life because of it. If we keep things in perspective, the chances are we will be better at our profession anyway.

Course superintendents, turf managers and greenkeepers share a special global bond. No matter where we go in the world we will always find a welcome mat at a greenkeeper's shed, if nowhere else. It is the love for what we do that connects us.

There is a sense of pride in what we do that can be a great asset to our careers, our clubs and the courses we manage. But it is a fine line between ownership and custodianship. We are entrusted to use our skills and knowledge to care for the course, ensure that it has the chance to improve and meet the challenges of the future and advise the club on the best way forward.

Clarifying roles and developing a reputation for honesty and integrity regarding course management will most likely result in being entrusted with course-related decisions, allowing board and committee members to utilise their skills to focus on the governance of the club overall.

But remember, as much as we pour our heart and soul into the courses we manage, we must remember they belong to the members. So don't sweat the small stuff. 🌱



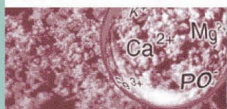
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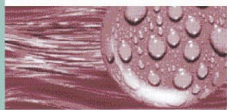
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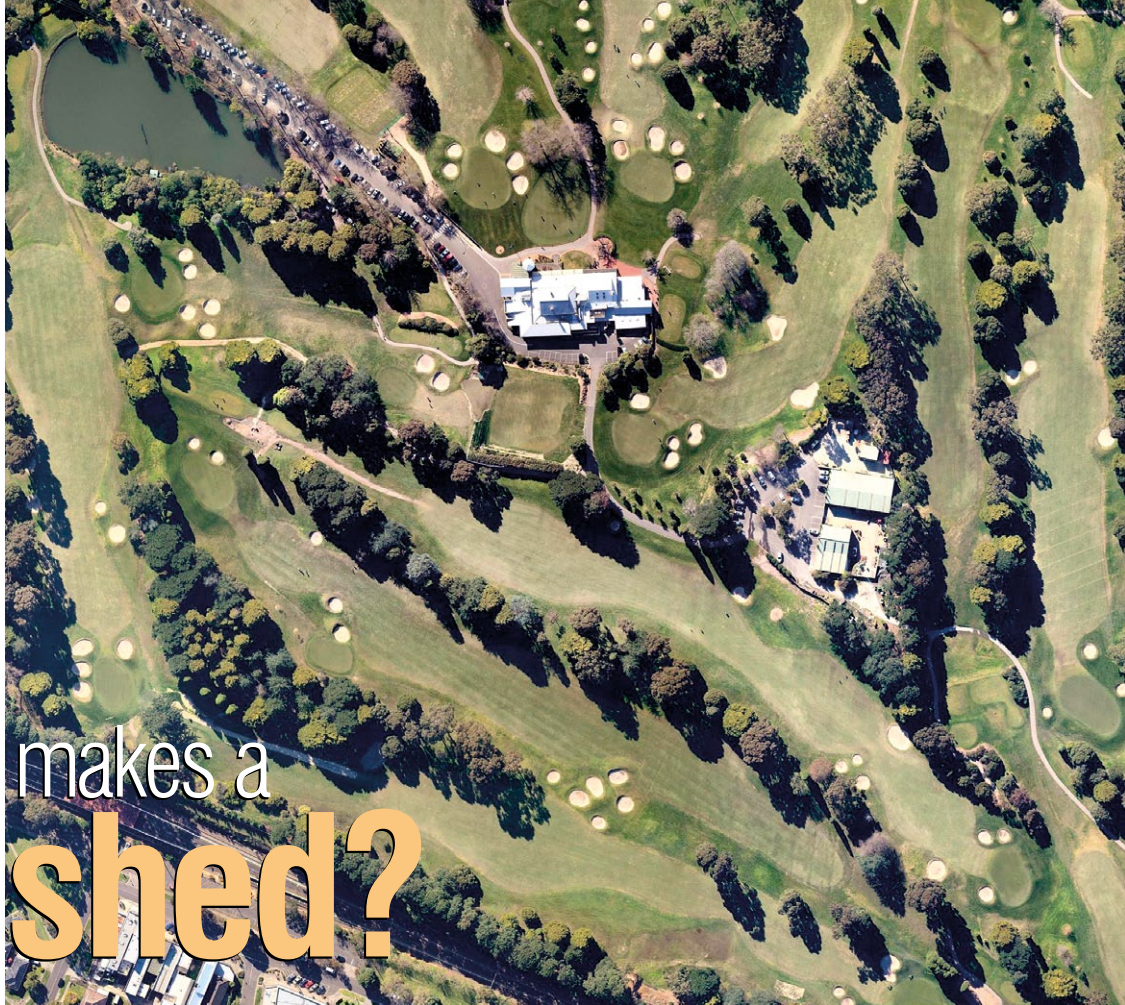
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Right: Ideally, the golf course maintenance facility is centrally located so staff can quickly reach multiple areas of the golf course. Poorly located maintenance facilities increase transit time and decrease staff efficiency

Bottom: There is no 'one-size-fits-all' model for golf course maintenance facilities but having separate zones for each area improves staff efficiency and workflow



What makes a good shed?

They range in shape, size, age and condition, but as USGA senior agronomist Todd Lowe writes effective turf maintenance facilities share several key attributes.

Golf courses vary in size and quality and so do the facilities that maintain them. In my years with the USGA I have visited many inadequate and outdated maintenance facilities. However, I also visit many newer facilities with spacious courtyards, ample equipment storage areas, safe and efficient equipment repair areas, state-of-the-art chemical handling areas, separate fertiliser storage and covered storage bins for bulk materials like soil, sand, gravel etc. The staff members at these facilities generally take greater pride in their work and maintain cleaner, safer maintenance facilities. It stands to reason that with improved facilities come more professionalism, increased worker safety, higher staff morale and greater overall efficiency.

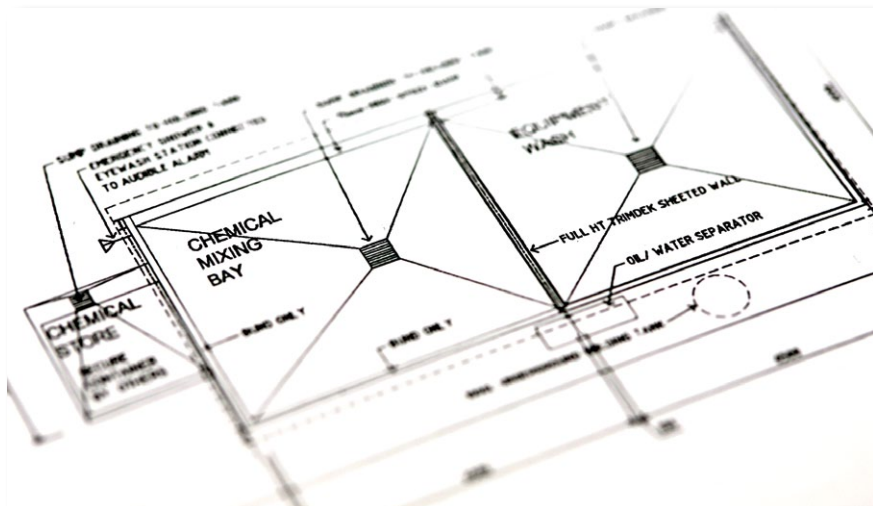
There is no 'one-size-fits-all' model for golf course maintenance facilities, as they differ in size, available area, layout and location. However, successful modern facilities share many common attributes that can be incorporated into your maintenance facility. This article lists several features that should be considered when building or redesigning your next maintenance facility.

COMMON PRINCIPLES

No matter how large or sophisticated the facility, there are several common principles including providing adequate space in each area of the facility, location in relation to the golf course, the 'zonal' concept, workflow, staff safety and protection from outdoor elements. While it may not be possible to address each factor at your facility, these principles are important to keep in mind.

Take time to consider how much space you will need in each area of the facility. Make certain there is adequate parking for employees and guests. Allow enough space and facilities in the lunchroom and bathrooms to reduce wait times for employees. Provide ample storage area for each piece of equipment and sufficient office space for all administrators and managers.

Spacious courtyards allow large delivery trucks to safely unload materials and provide equipment staging areas. While golf course superintendents seldom complain of having too much space, there are numerous instances of small, cramped facilities that reduce efficiency and production.





PHOTOMAP COURTESY OF NEARMAP

Ideally, the golf course maintenance facility is centrally located so staff can quickly reach multiple areas of the golf course. Poorly located maintenance facilities increase transit time, decrease staff efficiency and make it more difficult to protect staff during inclement weather. Workers seeking shelter in the maintenance facility remain safe and can perform other tasks like organising and cleaning the facility until the weather improves. Relocating a maintenance facility represents significant expense, but it may be worthwhile if it results in greater safety and operational efficiency.

The zonal concept is important to keep in mind when constructing or redesigning a maintenance facility. This principle creates separate 'zones' for each area of the facility which keeps it organised and improves staff efficiency by reducing the time spent looking for tools and materials. For instance, the fertiliser zone creates an area where fertilisers and all associated equipment are stored together. Likewise, a separate IPM or chemical zone houses all chemicals applied to the golf course and associated equipment. Creating zones also protects the staff and the environment by isolating materials like fertilisers and pesticides in separate, secured areas.

Keeping the zonal concept in mind is not only important for staff efficiency but also staff protection. For instance, the equipment repair zone is best located near the equipment storage zone but not necessarily within the same structure. Storing equipment in the same area where it is repaired can disrupt equipment technicians because other

workers are continually moving through the repair area. The likelihood of an accident increases if workers are continually moving through repair areas while equipment is being raised or lowered, mowers engaged and reels honed or sharpened. Furthermore, tools can be easily misplaced when they are exposed to increased employee traffic.

Workflow is another principle to keep in mind when designing maintenance facilities. Workflow patterns are generally the same at each facility as employees arrive, receive their daily assignments, locate their designated equipment and proceed to the golf course. At the end of each day equipment is blown off, washed, refuelled and then adjusted by an equipment technician or parked at the completion of each task. Be mindful of workflow when placing features like fuel islands and equipment wash areas in relation to equipment storage and repair areas.

You should also keep weather and climate in mind when designing a maintenance facility. Having a roof over every zone protects staff from rainfall and solar radiation. Roofs over structures like staging areas, fuel islands, blow-off areas and equipment wash areas improves staff morale and increases the likelihood that equipment is thoroughly washed and properly maintained. Roofs also protect other items like hoses and chemical containers from solar degradation and extend their useful life. Lastly, having a roof over the fuel area decreases fuel loss through evaporation.

Features like appropriate insulation, taller structures, extended roofing, lighter colours and landscaping around the facility improves energy efficiency and may reduce your electric bill. In cooler climates, having appropriate heating is necessary to keep staff warm and protect equipment during cold weather.

ADMINISTRATIVE AREA

The administrative area is usually comprised of several offices, perhaps a meeting room, lunchroom and bathrooms. The administrative area generally opens into a reception area where an administrative assistant may be located. In addition to providing space for a computer, telephone, desk, file cabinets and other necessary office items, a small sitting area for reps and guests is often appreciated.

If space allows, a conference room is another valuable feature, as it provides an area for staff,



Chemicals should also be stored in a separate facility to reduce exposure and the potential for contamination

Course superintendent Gary Dempsey played a major role in the redesign of the NSW Golf Club maintenance a number of years ago to ensure it was functional for his course operations and crew





◀ **The lunchroom is a hub and should have ample space and amenities for all employees**



When determining necessary equipment storage area, get the dimensions for each piece of equipment and add at least a foot to its length and width. This allows space for staff to safely move around the equipment

reps and greens committee meetings to take place. Conference rooms can also become an area of instruction and having a TV mounted is a helpful tool for video presentations. The conference room can also serve as a library for safekeeping of irrigation as-built drawings, architectural renderings, construction blueprints, textbooks, reports and trade magazines.

Adequate office space is recommended for the golf course superintendent and other managers with a separate office recommended for the superintendent. Offices for assistant superintendents are also recommended and perhaps shared offices for irrigation technicians, chemical applicators and crew leaders.

The lunchroom should be large enough for the entire crew and should have ample space for tables, chairs, refrigerators and multiple microwaves. Generally, the lunchroom is the hub where the crew receives daily job duties and training sessions throughout the year. Several newer facilities utilise SMART® board technology that can connect to a computer or tablet for both daily job duties as well as training sessions.

Bathrooms with tile are professional in appearance and easy to clean. Hands-free toilets, urinals, soap dispensers and paper towel dispensers are recommended because they reduce

the amount of work necessary to keep the facility clean each week. Each employee should have a large, well-ventilated locker, ideally located near the lunchroom and bathroom. Lockers with flat tops quickly accumulate clutter like hats and coats, but those with bevelled tops do not allow stacking of items and thus maintain a cleaner look. A dry room or mud room to store rain gear and work boots is also worthwhile.

EQUIPMENT STORAGE

The average golf course equipment fleet is quite costly and should be stored indoors to protect the golf facility's investment from solar degradation, rain and temperature extremes. There should be adequate area to store nearly all equipment indoors. Some units – like tractors or front-end loaders – can be kept outdoors, ideally under some sort of covered structure. When determining necessary equipment storage area, get the dimensions for each piece of equipment and add at least a foot to its length and width. This allows space for staff to safely move around the equipment.

There should be sufficient bay doors with concrete posts or landscaping to protect the building. Furthermore, a sturdy epoxy floor sealant provides a professional appearance that can last many years. Epoxy floor coatings are easy to clean and can help detect equipment oil leaks. Some equipment storage areas use paint or tape to outline parking spaces for each vehicle. A designated area for hand tools reduces clutter and improves staff efficiency as well. Some facilities also provide areas for golf course setup, as it is important that these tools are quickly located each morning.

EQUIPMENT REPAIR

The equipment repair zone should have an office with a computer for the equipment manager to track equipment maintenance and repairs and maintain a proper inventory of parts. A secured area for parts storage should be included in the equipment repair zone. Parts storage areas can be located in or adjacent to the equipment manager's office.

The equipment repair zone should also have an area for grinding reels. This operation is noisy, dirty and, unless it is self-contained, should be in an enclosed or isolated area. Pressurised air is used for multiple functions at a maintenance facility including inflating tires, blowing off clippings and debris from equipment and powering a variety of hand tools. It is important to place the compressor in a location that reduces noise. Underground or overhead lines can be run from the compressor to multiple locations throughout the facility to allow for easy access.

A quality equipment repair area includes several types of lifts and chain hoists to raise heavy equipment for service and repair. Movable racks for mowing units are also nice features. Floor mats with sufficient cushioning protect workers from injury and wear on joints, especially in areas of prolonged

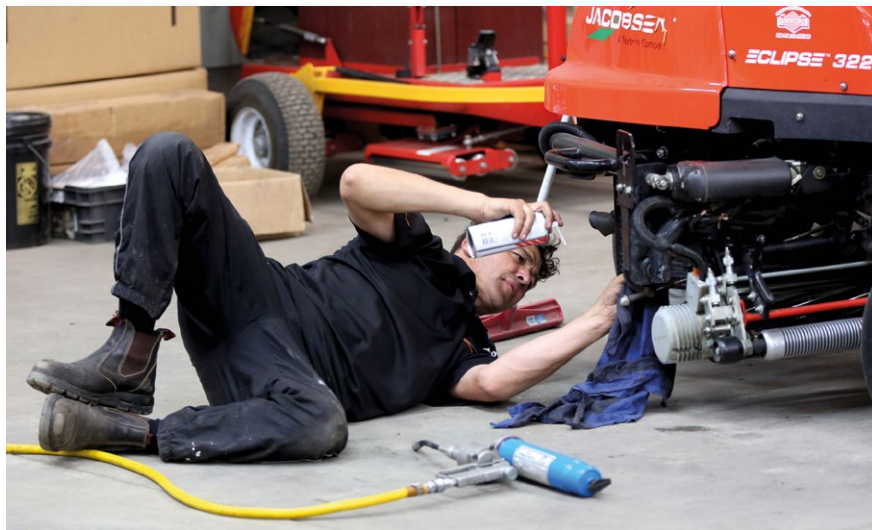


standing or kneeling. Ideally, the repair area is large enough to allow several pieces of equipment to be worked on comfortably at the same time.

FERTILISER AND CHEMICAL STORAGE

Fertilisers are best stored in a separate, secure facility to reduce exposure from environmental elements and decrease the likelihood of theft or accidental spillage. Fertilisers are generally delivered on pallets; therefore, taller buildings with heavy-duty shelving that can be accessed with a small forklift are recommended. Ideally, the fertiliser storage area should be large enough to store tractors, pull-behind spreaders, push spreaders and other equipment used for fertiliser applications. Since fertilisation is generally not a practice that is performed daily, fertiliser storage areas can be located farther away from the administrative building.

Chemicals should also be stored in a separate facility to reduce exposure and the potential for contamination. The chemical storage area should be enclosed yet well ventilated. It should be large enough to store chemicals and all spray equipment, as well as provide ample space for chemical measuring, mixing and loading. Chemical storage facilities should be able to contain a spill and have all required safety features. Ideally, chemical storage areas should be sloped to a drain that collects spills or rinsate after each application. Once collected, the rinsate and any spilled chemicals can




be pumped into holding tanks or back into a sprayer for nonselective herbicide applications in landscape beds.

Ideally, the equipment repair area is large enough to allow several pieces of equipment to be worked on comfortably at the same time

EQUIPMENT WASH AND FUELLING

At the end of the day equipment should be cleaned and refuelled before it is either stored or adjusted by equipment technicians. Mowers accumulate turf clippings that should be removed each day before the mower is parked. A clean mower not only helps maintain a clean facility, but also makes it easier for technicians to adjust and repair the mower. Clippings contain 2-5 per cent nitrogen by weight







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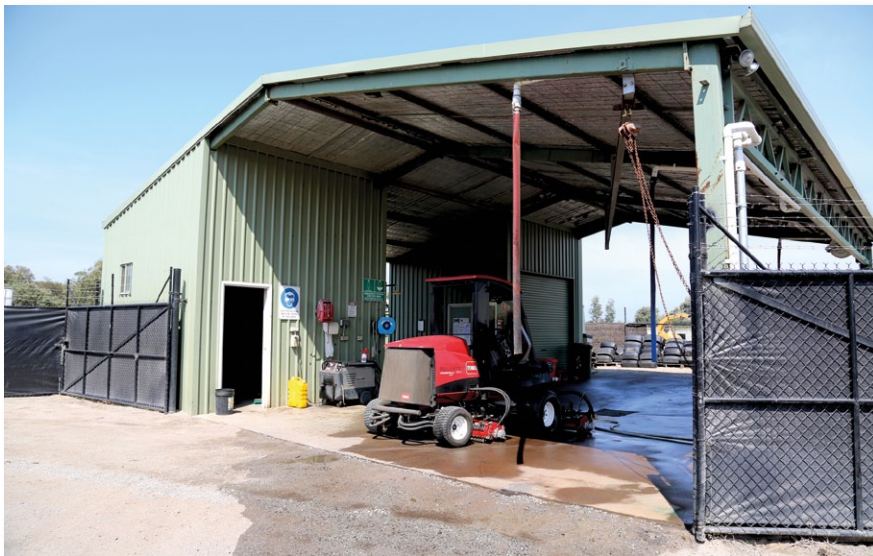
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SAND, SOIL AND AGGREGATE STORAGE

The maintenance facility should have an area for bulk storage of sand, soil, mulch and gravel as well as a waste area for aggregates. Incorporating topdressing sand into the turf canopy is difficult when it is wet and having a covered sand bin greatly improves topdressing practices on putting greens. If large enough, bulk storage facilities can also store tractors that are used with these materials.

The location of sand bins can be farthest away from the main facility, because these materials are used less frequently. Locating bulk storage areas away from the remainder of the maintenance facility can also keep the equipment storage area cleaner by reducing tracking of sand and soil into the main facility. Bulk-material storage areas must be accessed by large trucks, so locate them with this, staff safety and traffic flow in mind.

CONCLUSION

Many of the features listed in this article were gathered from several newer facilities and would be considered ideal. When planning a new maintenance facility, many superintendents remark that the best advice is to visit others that have been recently built or renovated to get ideas. Also, take your time and seek input from the entire staff. After all, you rely on these individuals to keep the golf course in great condition and their opinions are valuable. Lastly, many golf course superintendents feel it worthwhile to hire a building contractor with previous experience in building golf course maintenance facilities.

ACKNOWLEDGEMENTS

This article has been reprinted with permission from the October 3, 2014 edition of the USGA Green Section Record, Vol 52 (20). Copyright USGA. All rights reserved. Todd Lowe is a senior agronomist in the USGA Green Section's Florida Region and has seen the good, the bad and the ugly when it comes to golf course maintenance facilities.

For further reading and to help determine whether your golf course needs a new or renovated maintenance facility, read the article 'Time to Upgrade' which appeared in Australian Turfgrass Management Journal Volume 16.3 (pp58-63) written by David Oatis, director of the USGA Green Section's Northeast Region. [📄](#)



◀ **Covered equipment wash/fuel areas improve staff morale, reduce fuel evaporation and lengthen the useful life of tanks and hoses**

and should be recycled back into the soil instead of loading additional nutrients and debris into sewage systems. An ideal wash facility has a blow-off station that uses compressed air to remove clippings before washing. Clippings can be gathered and spread onto adjacent turf areas.

Wash-water recycling systems are excellent features of equipment wash areas. These systems collect water in a reservoir that filters out clippings and oil before the water is recycled to wash more equipment. Wash-water recycling systems not only reduce environmental nutrient loading but also considerably reduce maintenance facility water use. Another suggestion is to allow wash water to be filtered through a turf area before entering the sewage system.

Areas for blowing off equipment, washing and fuelling should be in close proximity to each other to improve workflow and efficiency. Also, covering these areas with roofs protects workers from environmental elements, reduces fuel loss and extends the life of hoses and fuel tanks. Lastly, providing multiple air, water and fuel lines allows several machines to be cleaned and fuelled simultaneously.

Bottom right: Relocating a maintenance facility represents significant expense, but it may be worthwhile if it results in greater safety and operational efficiency

Bottom: When planning a new maintenance facility seek ideas and input from your crew. After all they are the ones who will be operating out of the new facility



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Deniliquin Golf Club lies on the outskirts of the township which is just over 70km north of Echuca across the Victoria/NSW border. The course has literally been cut out of the Deniliquin State Forest

Deniliquin Golf Club, NSW

It may be known for its infamous Ute Muster, but Deniliquin is also home to a very proud golf club which has been nurtured for the past 23 years by course superintendent Terry Howe.

Superintendent: Terry Howe (53).

Nickname: 'Tez' or 'Shiney'.

Family: Wife Debbie, sons Nick (24), Clayton (18) and daughter Bridie (15).

Period as a superintendent: 23 years.

Association involvement: AGCSA (21 years) and VGCSA (22 years).

Turf management career: I started at Deniliquin Golf Club in February 1987 as a groundsman. I enrolled at Rye Horticultural College to gain my qualifications by correspondence and completed the course in 1991. That same year long-serving greenkeeper Reg West retired and I was appointed head greenkeeper in the 'short-term'. Richard Forsyth (then Murray Downs superintendent) was employed by the club for a period of 18 months as a consultant to provide some initial support. I've been here ever since!

Turf management qualifications: Certificate III Horticulture.

Where in Australia is Deniliquin and what is the club/town famous for? Deniliquin is situated on the banks of the Edward River in NSW, some 78 kilometres north of Echuca and the Victorian

border. Primarily Deniliquin is a farming town which can be described as resilient for surviving the last drought. The last four years has seen a resurgence in this vibrant town. The rice mill has reopened, the abattoirs re-open next month and an ethanol plant is being constructed as we speak, so things are looking up.

The town is known for some great sportsmen – Roy Higgins, Simon O'Donnell and Leo Barry to name a few (Adam Gilchrist resided here for a couple of years in primary school so we'll claim him as well). The iconic Deni Ute Muster seems to have gained notoriety nationally and attracts over 18,000 people to the muster site, not bad for a town with a total population of 8000. Add to this the Blues and Roots Festival over Easter and a planned Hot Rod Show, the town now has a more tourist focus.

The banks of the Edward River provide fantastic camping areas, while the fishing is exceptional, with the iconic Murray Cod not too hard to find. Deniliquin is very much a self-sufficient rural town, but due to necessity is branching out into other areas of business and trade.

Tell us a bit about your background in turf management. How did you start out in the industry, why did you choose a career in turf management and how did you end up at Deniliquin GC? My start in the industry stemmed from an interest in golf. I was a late starter to the game but was hooked by the age of 25. I worked for the Mitsubishi dealer at the time in spares and was sick of office work, so registered my interest with Deniliquin Golf Club's head greenkeeper at the time

Reg West. Within a month I was offered a position as a groundsman and a month after that I started my correspondence course to get some qualifications. I was sure I had found the perfect career.

From that moment on I read everything I could get my hands on concerning turf and golf courses in general. By 1991 when Reg retired I had my qualifications and a hell of a lot of ideas. The board at the time trusted me with their course, but provided some insurance with the knowledge of Richard Forsyth. My 18 months with Richard as our consultant was sensational. I still keep Richard's original reports as a reminder of the professionalism we should all aim for.

Give us an overview of Deniliquin GC and some of its unique characteristics? Deniliquin Golf Club was officially formed in September 1900, making it the 18th oldest club in NSW. The site chosen was part of the then Jubilee Park run by the Deniliquin Council. Much of the current course uses land from the original site. Grass greens were established in 1965, with 13 of these greens still in use.

Deniliquin Golf Club is a true test. While the course is short in length, it's high in difficulty. As you can see from the aerial shot opposite, the course has literally been cut out of the Deniliquin State Forest. Fully mature Red gum and Box gums line the fairways, and by 'line the fairways' I mean some only 5m from the fairway cut. The golf course is very strategic and big hitters tend to end up in some very unforgiving places.

Wildlife is abundant and over 500 kangaroos can be seen grazing over the course each evening. Birdlife is also extensive (50 different species have been identified by the local birdwatchers) with the endangered Superb Parrot our club emblem and now seen on our course in numbers.

What are some of the unique features about Deniliquin GC from a turf management perspective? I guess our climate makes our turf management unique. While our annual temperature averages look quite benign, it is really deceiving. Summer can provide runs of temps in the 40s accompanied by night time temps no lower than 30. Growing bentgrass greens in those conditions is a real challenge.

The reason we use Penn G2 for all the new greens (five of them currently plus the nursery), is because of its ability to handle extreme heat and recover from heat stress quickly. Last summer we experienced six days in a row with temps above 43 and even though we regularly syringed our old greens they suffered, whereas the G2 greens showed no signs of wilt.

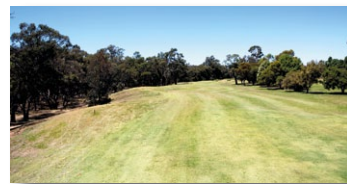
From May through to October we can experience significant frosts. Thirty days in a row is not that uncommon, with temps down to -3°C. So as you can see, we deal with a lot of extremes and have to plan accordingly.

Is it an easy/hard facility to manage and has that changed during the time you have been there? I have always described Deniliquin as a high maintenance course. The forest environment keeps us on our toes, with debris cleanup a regular time-consuming chore. Thankfully the club is pretty well placed as far as up-to-date machinery and with only three staff it really is a necessity. When I first started here everything was done by manual labour. We can blow off all the fairways in 4-5 hours now and then sweep up when time allows.

Our climate puts our watering system to the test every summer with over 200 megalitres used, so the staff continually monitors the system. The control system is now outdated and needs constant repairs, so that is our biggest priority in the near future.

Take us through your turf management operations there and your management philosophy? My management philosophy is 'You're only as good as your staff.' My guys are super efficient in many things and I make sure they experience a wide variety of responsibilities. Jamie has just started the third year of his apprenticeship but already is proficient on all our machines. He has been given responsibility for greens fertilising and has been involved in treating fungal outbreaks. By the end of his apprenticeship he should have a very broad experience base to kick off his career. Peter, who has been with me for 23 years now, is an A-grade mechanic by trade, but has become such an integral part of our operation and can perform any job you can think of.

What, if any, changes have you brought about in terms of managing the course during your time as superintendent and what other changes would you like to implement? Many changes were performed in my first five years as superintendent. The course was initially mown with trail-behind gangs set at 22mm from fence line to fence line, so one of the first things done was convince the board to purchase a second-hand Toro 4000D and shape



In 2001 part of Deniliquin's flood levee system came through the course which required the reconstruction of two fairways (pictured is the 12th) and four greens

The Deniliquin Golf Club crew (from left) Peter Wilson (assistant), Jamie Shields and Terry Howe (superintendent)





Deniliquin's new 22ML holding dam which stores both river water (from Edward River) and stormwater run-off from the township



Deniliquin's opening hole

The 5th green from across the pond on the 4th at Deniliquin Golf Club



and shave the fairways down to 17mm. This instantly made the place look more like a golf course. From there we got a bit more serious with our couchgrass programme and aggressively sprayed out unwanted grasses, much to the members' horror. After a couple of seasons members were rapt with the change in fairway quality.

The greens had shrunk to resemble circular bowls in the centre of the green structures, so we set about reshaping those back to their original size and got some interesting shapes back.

Deniliquin had in those days 10 holes with large clay pan carries. One by one, we fitted irrigation and sprigged these areas with Wintergreen couch. This provided golfers with a much more comfortable walk to the fairway, especially in summer. The practise fairway was irrigated and sprigged and is now used regularly, as well as serving as our couch nursery.

A machinery replacement plan was initiated some 15 years ago and while it's been a battle the club to its credit has stuck with it. With only three staff, we can't afford Peter spending long hours repairing old machinery.

Any special environmental considerations that you have to incorporate into the management of the course? Being right on the edge of the town (the post office is only 900 metres away!), I have to consider noise levels, pedestrian traffic (everyone likes to walk their dog on the course) and waste disposal carefully. The fact that golfers will regularly play until it's dark can make any sort of pesticide

application a challenge. The course has two creeks running through it, so pesticide/fertiliser fate is critical. Then there is the huge amount of native animals to consider as well. Any pesticide use here is the absolute bare minimum.

What are some of the major challenges facing Deniliquin GC both from a turf and club management perspective? Our turf management challenge here has always been about getting our fairways up to standard. Being a big budget and time item, they tend to be put last on our priority list. Yet if we are going to attract more of the visiting golfer types then they need a lot more attention.

From a club management perspective the challenges are huge. Rural people do not spend a lot on leisure activities. When times are tough the first thing you do is drop your leisure expenditure. The club has addressed the fall in membership and numbers are slowly increasing. But the challenge is addressing the fall in bar and poker machine revenue. Public transport is not that available in country towns, so the .05 laws have made a huge difference in takings.

Out on the course we have tried to increase the club's income source by undertaking some renovation jobs with local councils. We also look after 18 Santa Ana tennis courts at the Deniliquin Lawn Tennis Club. It's a huge work load for three staff but the club now relies on that income.

Outline any major course improvement works recently completed and/or highlight any ongoing or future works that the club is undertaking. Part of the town flood levee system came through the course in 2001. For us it meant two fairways and four greens would need to be removed and then rebuilt. Being part of the consultation then negotiation period was exciting and I was determined to see this project through. To have it all done in the tight time schedule allowed was an amazing effort considering only local contractors were used.

A 22ML holding dam has been constructed to store both river water and town stormwater collection. Also a bore was installed which can provide 1ML a day. These two projects were done to protect the course from the ravages of drought.

Two years ago I was entrusted with designing and building a new 8th green for the short par 5 hole. A small but intricate green was built, protected by mounds on the right and a bail out area on the left. It's been performing well and the response from members has been great. The board was impressed with the final cost of less than \$26k so another may be done in the near future.

Water is obviously a critical issue for any golf course. How is Deniliquin faring in the water management stakes? As stated earlier a lot of the projects on the course have been aimed at securing a reliable amount of water to irrigate. It was pretty

important to me to not just rely on pulling from the river. Our bore and our storm water collection mean a saving of river water to the tune of 40 per cent. The bonus for me is that I will always have a sufficient amount of water for the course.

The weather and climate is always a great leveller for a course superintendent. How has Mother Nature treated the course in recent seasons? Some intense hot spells last summer were memorable that's for sure! A mini tornado tore through a section of the course four years ago. The width of damage was only 300 metres but the amount of debris brought down closed the course for a few days. We estimated that 300 tonnes of debris was removed thanks to my staff and about 10 sturdy volunteers.

The one product I couldn't manage my course without is... Bet you haven't had this one before – Winchester shotgun shells! Without them the long-beaked corellas that come here in their thousands would destroy a green in two minutes!

What are some pros and cons of being a regional-based superintendent? The pros are definitely the lifestyle. I live on the opposite side of town and it takes me six minutes to get to work – 10 minutes in Melbourne traffic and I'm looking for the blood pressure pills! Cons are the isolation from others in the industry. I get to as many meetings as I can but sometimes it's just impossible.

Do you think regional/country superintendents have a better work-life balance than their metro counterparts? Work-life balance is such a personal thing. My wife thinks I'm crazy spending the time I do at work. Yet this job has never felt like a chore to me. The course has actually been a sanctuary to me during some tough times.

Are expectations of course presentation and conditioning any less than that placed on your metropolitan counterparts? I think some country golfers can be just as unreasonable as the city guys.



I've spent a lot of time explaining to our members why our course presents the way it does, what our shortcomings are and what needs to be done to rectify things. Most understand and are grateful I've spent the time to explain. But then there is that very small percentage that are more about the whinge than the solution. I guess that happens everywhere. Our annual fees are around the \$400 mark and you can get on the course every day if you wish. I know city golfers have to be prepared to pay a hell of a lot more, so have the right to expect more as well.

Do you have to be more resourceful as a regional-based superintendent? Any innovations or tricks of the trade that you employ to make your turf management operations run smoother? I do not consider it a trick as such, but I've made a point of getting to know as many of the members here as possible. More importantly I know how they could help out resource-wise and use them regularly. A couple, who are also good friends of mine, wanted to know how we could protect the course from the ravages of drought. I suggested a bore and within six months they had raised \$120k for a bore and water purchases for the years to come. Another member built us a fairway scarifier from scratch which we still use today. Another donates water allocation for our bore. Others just donate their time.

Deniliquin boasts five new Penn G2 greens with USGA-spec sand, while the remainder are the original Highland bentgrass greens oversown with Penncross and Penneagle which were constructed when the club switched to grass greens in 1965. Pictured is the 13th



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◀ **Extreme temperatures (Deniliquin had six consecutive days above 43°C last summer) puts both the turf and crew under pressure during the summer months. Pictured is the 6th**

How important are the relationships you have with other course supers/trade reps? The reps that call here are great, although they must get sick of me pumping them for information about what's going on in the industry. My fellow supers are who I get real practical knowledge from. Every time I attend a meeting or visit a course, I come away with something new to try or a better way of doing things.

What have you got in your shed? Toro 3250D greens mower, Toro Sidewinder tee and surrounds mower, Toro 6500D fairway mower, New Holland 6300 rough mower, 27hp and 50hp New Holland tractors with FEL, Hardie 1200L sprayer 8m boom, Widespin 1530 topdresser, 7212 Verti-drain, Cushman truckster, Turf-Tec broom and catcher, Debris blower.

What will be your next major purchase (and why) and what's the one item you have on the wish list

and why? Our next major purchase will be a new irrigation control system; we can no longer get parts for our current system. The wish list item would be a scarifier/vac machine to make fairway scarifying a one-man job.

Any interesting pieces of machinery? We have an old Ryan fairway aerator which at one stage was converted into a line planter for couch sprigs and now is a slicer to trim tree roots.

Favourite spot on your course? My favourite spot is anywhere along the flood levee project fairways. This was a huge project that was a long time coming and which transformed our course for the better.

Best advice you have received about being a course superintendent/greenkeeper and who gave it to you. Funnily enough it came on one of the Deni boys' golf trips. Late at night propped at the bar, I was having a grizzle about the lack of resources at our course when a mate, who is quite a clever businessman, said, 'Terry, forget about the need for big wins, just make sure you keep having lots of little ones'. That's stuck with me ever since. Another came from my old boss Reg West. He always said 'We water for the day we've had, not the day we might have!'

Most pleasing/rewarding moment during your time as Deniliquin superintendent? I guess it has happened a bit over my time here because I know so many of the members as friends. But when a long-time member makes a point of saying how much they appreciate our course and how lucky they feel being a member here, that is when you can allow yourself that little bit of self-satisfaction. 🌱

AT A GLANCE – DENILIKUIN GOLF CLUB

Course specs: Deniliquin is a 5848-metre, par 72 course with a configuration of eight par 4s, five par 3s and five par 5s. The 15 hectares of fairways consist of Wintergreen couch, common couch and kikuyu. Tees are all Wintergreen. The greens consist of five newer Penn G2 greens, plus a nursery, while the old greens are a mix of the original Highland bent with both Penncross and Penneagle oversown over the years.

Members: There are over 600 members of different playing categories and another 250 social members.

Annual rounds: About 20,000.

Major tournaments/events held during the year: Summer, autumn, winter and spring Four Ball Classics, Deniliquin Open and Deniliquin Senior Open.

Annual course management budget: \$276,000 (incl. wages).

Staff structure: Terry Howe (course

superintendent), Peter Wilson (assistant superintendent) and Jamie Shields (3rd Year apprentice). We also have a team of 12 volunteers who work for a couple of hours each Monday and Friday in teams of four.

Climate/annual rainfall: Average maximum temperature 23.6°C and average minimum temperature 9.5°C. During summers we can easily have consecutive 40-plus days as we did in January 2014 (mean temp for that month was 34.8°C). Average yearly rainfall 404mm.

Soil types: Silty clay soils under the fairways. The 13 old greens (50-60 years old) are a sandy red loam, tees are loam, while the five new greens and greens nursery are a USGA spec sand.

Water sources: Edward River provides fresh water, a 1 megalitre per day bore and a storm water transfer system.

Irrigation system: Rainman central controller,

11 Rainman satellite boxes, Hunter g90 sprays on holes 12-17. The remaining holes have Toro 650s on greens, fairways 670s and 690s and on tees assorted Hunter and Toro sprays.

Cutting heights/regimes: Fairways 14mm (summer) and 17mm (winter), tees 10mm, greens 3.5mm and rough 60mm. Cutting regimes – greens five times a week, tees twice a week, fairways twice a week and rough fortnightly.

Renovations: Generally happens twice a year, around March and October.

Major disease pressures and how you combat them: Deniliquin's climate doesn't suit a lot of turf diseases; we tend to have dry heat and drying winds. Greens are treated on an as needs basis. We do get some leaf blight diseases on our fairways. We now have a preventative programme but are restricted by resources and funds.



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JOHN DEERE LAUNCHES NEW TERRAINCUT 1500 SERIES FRONT MOWERS



The new John Deere TerrainCut 1500 series offers more performance and comfort to meet customer needs

For the first time in Australia and New Zealand the new John Deere 1500 Series TerrainCut commercial front mower range is open for ordering. The range features a fully integrated, factory-installed cab that provides comfortable operation across all seasons.

Equipped with powerful, high-torque, three-cylinder diesel engines, four-wheel drive and high-capacity rotary mower decks, the 1500 Series can mow thick grass at high speeds and still produce a quality cut. Featuring a compact design for manoeuvrability and easy transport, the range has been designed to suit the various needs of landscapers, contractors, groundsman, greenkeepers and local councils.

The new 2015 line-up consists of five TerrainCut models, with a choice of 152, 157 and 183cm (60, 62 and 72-inch.) side- and rear-discharge decks:

- **1550:** 24.2hp with 4WD, diesel engine;
- **1570:** 30.9hp with 4WD, diesel engine;

- **1575:** 30.9hp with 4WD, ComfortCab, diesel engine;
- **1580:** 38.2hp with 4WD, two-speed transmission, diesel engine;
- **1585:** 38.2hp with 4WD, two-speed transmission, ComfortCab, diesel engine.

A robust hydrostatic transmission allows the mowers to perform well over rough terrain and in tough grass conditions. The two-speed transmission on the 1580 and 1585 models also allows faster working speeds and a transport speed of up to 24kph. A new 25cm-152cm (1-6 inch) height of cut adjustment improves cut quality and performance by stabilising the deck's rake angle.

Key user-friendly features include cruise control, ergonomic controls, Twin Touch pedals for the transmission and an electro-hydraulic deck drive clutch, while an air ride seat is available as an option. In addition, the 1575 and 1585 are equipped with a new ComfortCab that provides 360-degree visibility. The cab features an air conditioning and heating system for comfortable year round use (the air ride seat is standard on these models).

The 1585 model also comes with an increased axle load capacity to hold the high-specification cab. The mower's front PTO is used to supply power to the mower deck which makes installation and removal easier and also reduces heat in the hydraulic drive system. As well as cutting, the TerrainCut 1500 Series also has a range of additional attachments including blades.

To learn more about the new 1500 series range, visit www.deere.com.au or call 1800 800 981 in Australia or 0800 303 100 in New Zealand to contact your local John Deere dealer.

DINTTM Golf Solutions

AMBASSADOR PUTTER MARKS DINT'S RETURN

Twenty-five years after releasing their first bronze golf putter, golf course equipment manufacturer and AGCSA Bronze Partner Dint is making a comeback to the putter market. November saw the limited release of its latest putter – the Ambassador – which is available in 11 selected 'On Course' outlets throughout Sydney, including Royal Sydney, Woollahra, Monash, Wakehurst, Killara, Cromer, Stonecutters Ridge, Oatlands, Concord and Cronulla golf courses.

The Ambassador, which retails for \$295, is the first model in the company's new series and although on limited release at present will be made available in other states of Australia and to distributors overseas come the end of the first quarter of 2015.

"Over the last two years the number of requests from the public for Dint putters has been remarkable both from Australia and the United States," says Dint

managing director Anthony Dinte. "With this in mind we have decided to develop a new range of putters using the metal that made our putters so successful both with professional and amateur golfers.

"The alloy used in these putters was chosen, developed and tested in our Sydney foundry over the years and is something special. The energy absorbing qualities, the natural pendulum action, the incredible feeling off the machined face and the unbelievable solid sound of the club stroking the ball makes putting with this putter a great experience."

For more information about the new Ambassador putter and a full list of stockists, visit www.dintputters.com.au.

GRIGGS BROTHERS FERTILISERS AVAILABLE DOWN UNDER

Globe Growing Solutions has been appointed Australian distributor of Griggs Brothers' Proven Foliar fertilisers, adding to the company's liquid nutritional product portfolio.

US-based Griggs Brothers products are formulated based on years of plant nutrition research and development, the basis of which has been the efficient foliar uptake of correctly chelated nutrients. Delivering individual minerals in the correct ionic state through proper chelation ensures maximum plant uptake and reduced nutrient losses.

In recent months Globe Growing Solutions has been working closely with Griggs Brothers' international business manager Bruce Williams to bring these liquid formulations to the Australian market. Among the products now available are:

- **Gary's Green Ultra:** A complete analysis fertiliser that is effective at low rates. The formulation includes a non-ionic surfactant to assist in even coverage of the product as well as a buffering agent designed to resist large changes in spray tank pH. The product provides quick visual response and can be used with PGRs.
- **P-K Plus:** Contains nitrogen, phosphorus, potassium and potassium phosphite. Potassium phosphite stimulates up-regulation of plant defence mechanisms and can be used in an IPM programme for diseases such as pythium and anthracnose.
- **Displace:** Soil applied, Displace is a combination of readily available calcium and soil surfactant formulated to rapidly displace sodium from the soil and add calcium for improved soil structure and water infiltration.

For more information on the Griggs Brothers range, contact Globe Growing Solutions on 1800 244 300 or visit www.globegrowingsolutions.com.au

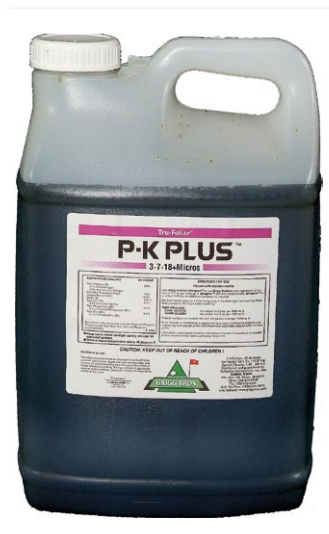
TURZINE-PRO'S NEW APPROACH TO BROADLEAF WEED CONTROL

Dow AgroSciences' selective turf broadleaf herbicide Turzine-Pro is now available exclusively from Nuturf Australia. Bringing two new actives to the Australian turf market, Turzine Pro contains 610g/kg Isoxaben and 40g/kg Florasulam for a unique, dual mode of action formulation combining group K and group B herbicides.

Turzine-Pro contains both strong and reliable post-emergent as well as residual pre-emergent weed control properties and is safe for use over a wide range of turfgrass species. Turzine-Pro herbicide is available in 2kg packs and should be applied at a rate of 0.75-1kg/ha (7.5-10g/100m²). Recommended water volume for application is 200-400L/ha.

To enhance movement of the florasulam component into the plant, it is recommended that Turzine-Pro be mixed with an adjuvant. For optimum results it is best to apply to actively growing weeds and ideally do not mow the turf for two days prior to or following the application.

For more information about Turzine-Pro herbicide contact your local Nuturf territory manager.



P-K Plus is one of a number of Griggs Brothers' Proven Foliar products now available from Globe Growing Solutions

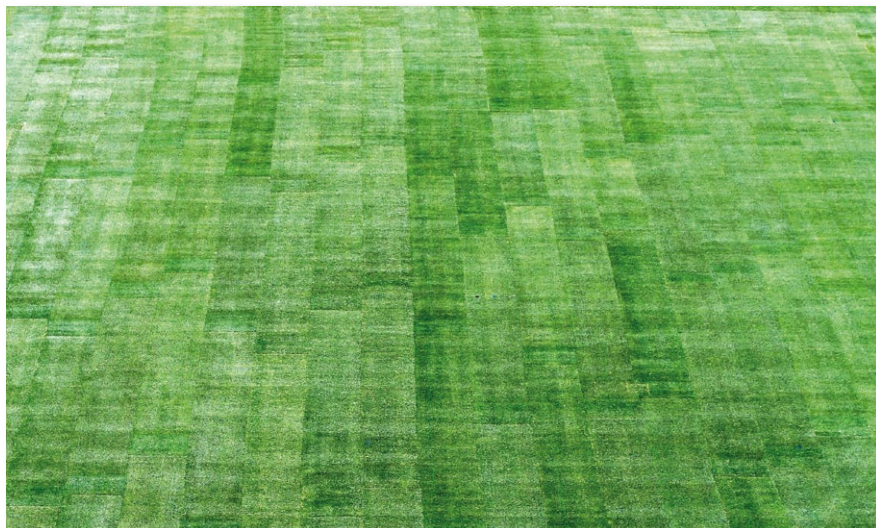
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'A voice for horticulture'

Turf Australia business and industry development manager Richard Stephens updates ATM on the latest happenings from the turf production industry.



Grow Green

www.turfaustralia.com.au

Since its inception, Turf Australia has worked hard to lead the turf industry, represent its members and the industry as a whole, as well as promote turf to the market place. The need to ensure issues that are affecting the turf industry can be heard has never been more important, particularly with the significant changes that are currently taking place with horticulture's newly prescribed industry body – Horticulture Innovation Australia (HIA) Limited – which has replaced Horticulture Australia Limited (HAL).

As a result, the Horticulture Task Force (HTF) has been created to provide a 'voice for horticulture'. HTF will enable advocacy and coordinated political lobbying on behalf of many horticulture industries. HTF has 20 founding member industries, including turf. Current board members include Pat McNamara (walnut grower), John Tyas (Avocadoes Australia), Tania Chapman (citrus grower), John Dollinson (Apples & Pears Australia) and Alex Livingston (Growcom/pineapples).

The opportunity exists for additional HTF board members, preferably growers, and Turf Australia is currently working with the HTF to ensure appropriate representation from the lifestyle horticulture sector and the turf industry.

One example where the HTF can help industry concerns be heard is the review of the federal horticulture Award rates for labour, which will be conducted in early 2015. Horticulture industries will be invited to be involved in this important review and the HTF will advise of and coordinate with its member industries regarding the consultation process.

As Turf Australia gets on with the task of working with HIA to develop a new way of operating in regard to delivering benefits to growers from the investment of levy funds, it is reassuring to know that through the HTF Turf Australia will be able to have a say and be heard by the new HIA Board and other key organisations that have a direct impact on the turf industry.

HORTICULTURE INNOVATION AUSTRALIA LTD

The appointed board for the new horticulture R&D body, Horticulture Innovation Australia (HIA) met recently to determine the strategic direction of HIA. The re-branded HIA website, www.horticulture.com.au, says:

"HIA is a not-for-profit, grower-owned Research and Development Corporation (RDC) for Australia's \$9.5 billion horticulture industry. It works in partnership with Australia's horticulture industries to invest in research, development and marketing programmes that provide benefit to industry and the wider community.

"HIA invests more than \$100 million in research, development and marketing programmes annually. HIA's key functions are to:

- Provide leadership and promote the development of Australian horticulture;
- Increase the productivity, farm gate profitability and global competitiveness of the horticultural industries by investing grower levies and government funds in research, development, extension and marketing funds, programmes and services and; providing information, services and products related to project outcomes; and
- Promote the interests of horticultural industries overseas including the export of Australian horticultural products."

HIA's operations are determined by its Deed of Agreement with the Federal Government and its own Constitution, both of which are available on the HIA website <http://www.horticulture.com.au/about/>. The HIA Constitution has the following characteristics:

- HIA is/will be a levy payer owned company;
- Growers will need to individually declare the amount of levy they pay;
- A minimum of \$200 in levy payments per year is required to obtain one vote;
- An additional vote for every \$10,000 extra per year in levy payments will be provided, up to a maximum of 100 votes;
- Voting rights will be held in trust by a law firm for the first 12 months to give HIA time to set up a shareholder registry;
- Service providers to HIA, such as peak industry bodies (PIBs) like Turf Australia, are excluded from being shareholders;
- Proxies can be held by non-shareholders, such as PIBs, but all proxies will need to be directed (i.e.: cannot be left open);
- Any interested stakeholder, such as PIBs, can

Above: Turf Australia has been very proactive in the media in recent times espousing the benefits of laying natural turf over synthetic

register as non-voting members of HIA and the interested stakeholder registry will open shortly;

- HIA Board members have a three-year term, with a maximum of two terms; and
- Half of the HIA Board members will be elected, the other half appointed by the Federal Government.

Contained in the Deed of Agreement are several requirements that will affect the turf industry marketing and/or R&D investment programme. These include:

- HIA will need to submit annual operating plans to the Department of Agriculture (DoA) for approval, with the level of detail yet to be determined;
- HIA will also need to submit annual industry consultation plans to DoA for approval, and, again, the level of detail is yet to be determined;
- HIA must now manage all new projects and programmes;
- HIA can seek short-term management advice for projects and programmes, but HIA is prohibited from paying a retainer for such;
- All of the current 1200 HIA projects that were contracted under Horticulture Australia Limited (HAL) will need to be reviewed by November 2015;
- Any HIA project that does not fit with the new Deed of Agreement criteria, will need to be modified or terminated by Nov 2015;
- HIA will consult with industry, which may include PIBs such as Turf Australia, but the process and funding of this is yet to be determined;
- All recommendations from the ACIL Allen Review of HAL (apart from the marketing programme recommendation) need to be implemented within 12 months (go to www.acilallen.com.au/halreview for a copy of the review report containing the recommendations); and
- The level of administration detail and governance reporting requirements from the Federal Government in projects/programmes is, as yet, unknown.

The task ahead for HIA involves engaging with 43 different industries that represent over 100 commodity groups, reviewing over 1200 current projects, developing new industry consultation, organisational governance and administration processes. There will most likely be a 12 month transition process for HIA to develop and resource this enormous task.

At an operational level, Turf Australia will continue to work with HIA staff and management in an effort to ensure the new organisation and its operational processes are focused on delivering benefits to the turf industry. At a strategic level, Turf Australia through its membership of the 'Voice for Horticulture' will communicate with the HIA Board.

TURF IN THE NEWS

Three media releases have been distributed recently



on behalf of Turf Australia resulting in nearly 50 pieces of media coverage and more than a million opportunities for Australians to see important, positive messages about natural turf.

Following a sudden influx of councils announcing synthetic turf being used for community sports fields, a media release was crafted about the downfalls of synthetic turf. The release was proactively distributed to a wide network but has also been used as a reactive tool to contact editors with when they publish a story on synthetic turf. The content from the media release was also turned into a newsletter and distributed to 480 council members, urging them to reconsider synthetic turf as a choice for sports fields.

Additionally, in an effort to help create positive experiences with turf and keep it top of mind as an ideal surface, two seasonal care releases have been crafted and distributed. To then bring their content to life graphically, an infographic was created for each media release. 🌱

Horticulture Innovation Australia

Increasing the productivity, farm gate profitability and global competitiveness of Australia's horticultural industries is one of HIA Ltd's key functions

Horticulture Innovation Australia Ltd has replaced Horticulture Australia Ltd as the new horticulture R&D body

HOME OWNERS LOOK FOR SOME 'LAWNSPIRATION'

A national competition to win a new lawn was run through Turf Australia's Facebook page and for the seven members of the Lupino household, winning this amazing prize was a dream come true.

Based in Waikiki in Western Australia, the Lupino's backyard was more like a soily sandpit than a garden. In a creative effort to take out the prize, Emma Lupino created a home video where she adapted the popular song "Let it Go" to a 'lawnsprational' "Let it Grow". The video can be viewed on the Lawnspration Facebook page.

Turf Australia received nearly 200 entries from excited fans looking to nab the great prize, which included site preparation, new turf, professional laying and advice on how to keep their lawn looking great. If you or your business has not yet 'liked' the Turf Australia Facebook page, please do (we have nearly 9200 at this stage). The page is regularly updated with compelling posts about turf that can be shared through your own channels. Head to www.facebook.com/lawnspration.



Tauranga's Bay Oval has cemented itself as an International cricket venue

Over the years STANZ has enjoyed a close and interactive working relationship with NZ Cricket, however, we haven't had similar relationships with other sporting codes such as NZ Rugby, NZ Football or NZ Rugby League. To this end a number of the executive are currently having conversations with these codes in order to enhance our future relationships.

The connection STANZ provides between turf managers and our respective sporting codes is useful for information sharing and hopefully provides a better understanding of the challenges both parties face on a daily basis. The role local government plays in managing the contracts between the codes and turf managers is on the

whole an effective model and I doubt anyone is in a rush to change this, but it does result in a disconnect from our codes.

Around the traps, the world-first covered natural grassed cricket practice facility at Palmerston North Boys' High School was opened recently by NZ Cricket's **Peter Dale** and has been a roaring success. The locally-designed and built facility cost only \$NZ400,000 to construct and has drawn interest from around New Zealand and abroad. The indoor wicket was built in partnership between the Manawatu Cricket Association and the school with financial assistance from NZCT. The 52m by 21m facility has five lanes that can be used at both ends rotated to avoid wear.

Cricket fans at the Black Caps v South Africa ANZ Series on Tuesday (21 October 2014) gave the Bay Oval in Tauranga an overwhelming seal of approval. While the result didn't go the way of the home team, the overriding consensus by cricket fans in attendance was that the Bay Oval had cemented its place as an international cricket venue. Congratulations to **Jared Carter** and his team for their skill in bringing the Bay Oval up to international standard, an asset the Bay of Plenty region will enjoy for many years to come.

KELLIE ROSE
CHAIR, STANZ

ON THE MOVE

MARTYN BLACK: Departed Castle Hill Country Club, NSW after nearly 26 years on 12 December 2014.

PATRICK CASEY: From assistant superintendent to superintendent, Adelaide Shores, SA.

CAMERON HODGKINS: From director of sports fields, Landscape Solutions, Qld to head of Sports Turf Department, Leisure and Cultural Services Department, Hong Kong Government.

MARK JENNINGS: From superintendent Box Hill Golf Club, Vic to Serco, Vic.

DYLAN KNIGHT: From assistant superintendent to superintendent Sanctuary Lake Golf Club, Vic.

PAUL NEEDHAM: Departed as superintendent at Kwinana Golf Club, WA.

WES SAUNDERS: Departed St Michael's Golf Club, NSW as assistant superintendent.

STA NSW



A very happy New Year to everyone! I trust that the year has started well for everyone and you all enjoyed a break over the Christmas-New Year period. If you are lucky enough you might just still be chilling out on holidays!

Summer well and truly hit NSW with some force. We have had extreme weather patterns, from very high temperatures and dry days in November to early December with weeks of thinking we had turned into a 'tropical' state with warm days and storms and heavy winds in the evening. Hopefully we can get some balance over the remainder of the summer months.

It is hard to believe that 2014 is already over. On reviewing the past year, we held the first NRL Turf Manager's Conference in March at ANZ Stadium which was a big success and something that we will continue to work on. The biannual Cricket Wicket Seminar was held at the Sydney Cricket Ground in August and was well attended.

We have had improved communication with our members through regular e-newsletters and the magazine and we have plans to increase information to members in 2015. The Regional Seminar was held in October and while numbers weren't as strong as they have been in the past, there were

good presentations and we had good feedback from the delegates who attended. We wrapped up the year with our Golf Day at St Michael's Golf Club and it was great to spend time with STA members and guests and finish off the year on a fun note.

I would like to take this opportunity to thank all our members and sponsors for supporting STA NSW during 2014. This support allows us to continue to provide important industry information and work towards the promotion and development of the industry. I would also like to thank the AGCSA for their continued support of STA and publishing our reports in each edition of ATM.

As for the coming year, the final plans are being put on our events for 2015 with a focus on a soccer/football seminar as well as taking our regional seminar down south to the Wollongong area. All the details will be available on our website, www.sportsturf.asn.au. We are also excited to have visitors to NSW for the Australian Turfgrass Conference and Trade Exhibition in the Hunter Valley in June and look forward to seeing many sports turf managers at the event.

CHRIS CHAPMAN
PRESIDENT, STA NSW

The latter part of 2014 saw a mixed bag weather-wise in Canberra. We had some cooler mornings in the early spring with occasional frost to some very warm and dry conditions in the latter part of spring. Rainfall was minimal with only 20mm recorded for November when daytime temps were averaging 25°C, with a maximum of 39°C recorded on one particular day. It was quite windy as well which didn't help when coupled with warm and dry conditions.

As this article was being written we had experienced a week of afternoon thunderstorms that dumped a significant amount of rain. As is the nature of these downpours there is significant runoff but given the lack of rain we gladly took what was on offer.

It was very interesting to read the recent article regarding the reconstruction of Royal Canberra Golf Club (*ATM Volume 16.6, 'Going Agrostis', pages 14-20*). At the beginning of November course superintendent **Andrew Boyle** was kind enough to give up his time to show anyone who was interested around the course reconstruction as it stands now. Around 20 turned out and were given a guided tour by Andrew of the front nine holes which form stage one of the redevelopment.

Andrew happily fielded questions from the delegates as we walked the course and his enthusiasm and confidence was easy to see and certainly rubbed off on all in attendance. The fairways, greens and tees had been well and truly sprayed out and it's always a surreal feeling walking the barren landscape of a course under construction. Shaping of fairways, greens and bunkers was well underway with new concrete cart paths also in the process of being constructed from green to tee areas. We plan to have future tours of the course as it progresses and thank Andrew for this opportunity.

On 19 November Manuka Oval hosted a One Day International between Australia and South Africa. It was another very successful evening at this very underrated venue. Curator **Brad van Dam** and his team once again produced a wicket that yielded plenty of runs, around 600 in total, which is exactly what the large crowd in attendance wanted to see. There were plenty of boundaries with the fast outfield rewarding the shot makers.

I was in attendance for the game and sitting with the punters in the Hill Stand I can tell you the mood among the crowd was very good and they lapped up the action and stayed right to the end. It's easy to see why Manuka Oval has picked up more high profile games including three 2015 Cricket World Cup games, Big Bash matches and, of course, the Big Bash Final.

I am very pleased to announce the nominees for this year's Living Turf Graduate of the Year Award.



Alex Smith (Royal Military College Duntroon Golf Club), **Darcy Jones** (Bermagui Golf Club) and **Ryan Stores** (Yowani Golf Club) will contest this year's prestigious award. Interviews will be held very soon and we will report in the next edition our winner who will go on to contest the AGCSA Graduate of the Year Award which will be handed out at the Hunter Valley conference in June. Congratulations to these three young men and their supervisors and work colleagues as well.

The STA ACT Region's annual Golf Day has found a new venue and will now be held at the Federal Golf Club (host superintendent **Mark Thomson**). The event will be held on Monday 11 May and will start around 9.30am. It will be a shotgun start and the format will be a four-man Ambrose. We encourage everyone to start to organise their teams for this year's event.

Our annual STA ACT Region Turf Grass Seminar has also been locked in for Wednesday 29 July. The venue will once again be the Tuggeranong Town Sports Centre and we hope to build on the success of last year's seminar with a strong line-up of local and interstate speakers covering a range of topics that everyone can relate to. Topics and speakers will be confirmed in coming editions of ATM.

The STA ACT Region committee trusts everyone had a Merry Christmas and safe New Year and sends its best wishes for the year ahead.

DANNY HULL
COMMITTEE, STA ACT REGION

Superintendent Andrew Boyle shows attendees the new Pure Distinction bentgrass greens nursery during the recent Royal Canberra visit

Construction is well underway in stage one of the Royal Canberra Golf Club redevelopment which focuses on the front nine holes



Having recently caught up with a number of superintendents at the AGCSA State Presidents meeting in Sydney, it was interesting to be reminded of how similar the challenges we face are with club boards, irrigation systems, staff training and retention and keeping regional associations strong and relevant.

Maybe as the pressures of the industry change and new generations take over we need to remember to take more time to check up on our counterparts and keep the social networks going. We all know how much we get from one-on-one interaction with our peers and have to get better at selling the value of those interactions to our clubs, so that involvement with association events is more valued.

From an NZGCSA perspective, planning is under way for the 2015 Fine Turf Seminar (FTS) which is to be held in Wellington. Venue and dates are still to be confirmed but are likely to be the week before the 31st Australian Turfgrass Conference and Trade Exhibition in the Hunter Valley from 21-26 June. Once details have been finalised information will be available at www.nzgcsa.org.nz.

The FTS model for conferences continues to be incredibly popular with the focus being on camaraderie and tailored education. They are similar to the Novotel Twin Waters event held by the AGCSA in 2013 but with very small, or in some cases no, trade displays.

At the last NZGCSA Board meeting in September it was agreed to automatically enrol new trainees from 1 January 2015 as NZGCSA Associate members with a free membership for the duration of their training. It is hoped that the trainees will benefit from NZGCSA membership and this will also give them all an opportunity to enter the NZGCSA Graduate of the Year Award supported by Powerturf at the end of their training.

This will be extended to current trainees who are NZGCSA members and also non-NZGCSA members currently undertaking an apprenticeship once the new subscription year starts on 1 April 2015. This is something the NZGCSA has discussed for a number of years and we are grateful for the support of NZ Golf that has allowed this to happen.

The first Industry Excellence Award Exam was recently held with 10 top sports turf industry wide trainees invited to sit the exam. This will become the premium achievement possible for trainees and is set to provide a great opportunity for trainees to show themselves to be among the very best in the NZ sports turf industry, which will open lots of employment opportunities in the future. Employers really need to take note of who these people are.

The following graduates successfully achieved the Industry Award, which is credit to both them and the people that trained them:

- **Brad Leathard** (Pakuranga GC, NZGCSA member)
- **Josh Leitch** (Titirangi GC, NZGCSA member)
- **Bryce Campton** (Turftech, Remuera GC – Achieved with Excellence)
- **David Fisher** (Waimairi Beach GC)
- **Clint Sinclair** (Hamilton GC)

Summer has been a late starter in many parts of New Zealand. Queenstown, for instance, had more snow centimetres in November than in July! We were looking enviously at Sydney's spring temperatures, perhaps without too much thought as to what it might mean for turf moisture levels. Hopefully both sides of the 'Ditch' get through the summer season without too many stressful days.

BRENDAN ALLEN,
PRESIDENT, NZGCSA

STA QLD



STA QLD had some excellent turnouts to their 2014 events, including the visit to Doomben Racecourse

As I write this report, approaching Christmas, another round of good old fashioned afternoon storms are surging through Brisbane, for about the fourth day in a row now. Some of the storms have caused damage to those unfortunate to be in their direct path but the rain to most of us is a welcome sight after what has been the driest October and one of the hottest (and driest) Novembers on record in SE Queensland.

The dry months we have just been through have been a sort of silent drought. With the dams high and no mention of water restrictions, at least in Brisbane, most people don't realise just how little rain we have received, unless of course you actually work, as we do, with the elements.

And then the rain brings its own set of challenges! All of these issues are what we, as greenkeepers,

deal with on a daily basis and sometimes we need to remind ourselves how well we deal with these challenges that are constantly thrown at us.

2014 was a huge year for our association. We had two events, back to back, with over 100 attendees (our cricket day and open day), while the other two field days were also well attended. We have also reached our greatest number of members, have more partners than ever before and our social media is very busy too with regular Facebook and Twitter posts. 2015 will be another big year for our association with event planning already underway, so stay tuned.

MARTYN HEDLEY
VICE-PRESIDENT, STA QLD

Typically, as I write this, the weather has turned from very hot and dry across the majority of the state to the situation where large parts of eastern NSW have received at least 100mm of rain in the past week and are now suffering unbearable humidity and severe afternoon thunderstorms.

Even with this, I will still be below average rainfall for the year and above average temperatures, which is just continuing the pattern of more extreme weather events with increasing periods between very heavy periods of rain.

The NSWGCSA finished 2014 off on a good note with our annual Rube Walkerden Trophy Day and AGM held at Pennant Hills Golf Club (host superintendent **Richard Kirkby**) in mid-November. As always the golf course was in immaculate condition allowing over 60 members to enjoy the very pretty layout on a glorious spring day.

Steven Kazurinski (Cabramatta GC) took home the Rube Walkerden Trophy with 40 points while the 2BBB Nuturf Cup was won by **Steve Harris** (The Vintage) and **John McCafferty** (Country Club International) with 46 points.

During the AGM, **Martyn Black** (Castle Hill CC) was nominated for life membership of the NSWGCSA which was passed unanimously. This is the second life membership Martyn has received in as many years after also being given the honour by Asquith Golf Club in 2013.

It was a very fitting location as it was at Pennant Hills that Martyn started his apprenticeship 41 years ago under legendary superintendent **Vince Church** as a 15-year-old. There were no changes to the Board at this AGM as it wasn't an election year, with one more year of this term left.

At the dinner that followed, Martyn joined the other NSWGCSA life members in recounting some of their memories and stories from the good old days. Funnily enough, quite a few related to WHS (or the complete lack of) in the days of mercury-based chemicals and pre sun sense.

As we were at Pennant Hills, Martyn and fellow apprentice-cum-life member **John Odell** had a number of stories about the club, including the fact that it seems Martyn completed his apprenticeship wearing little more than a pair of stubbies and thongs!

In between the laughter there were a couple of serious moments when we handed out our major awards to superintendents for the year. The Outstanding Achievement Award went to **Mark Crittenden** from Cumberland Country Club for over 20 years of hard work under very trying circumstances.

This was followed by our Excellence in Turf Management Award which went to Martyn Black for over 25 years of outstanding work at Castle Hill, as well as untold work as part of the NSWGCSA and



NSWGCSA life members (from left) John Odell, Reg McLaren, Peter McMaugh, Martyn Black and Geoff Hatton

AGCSA committees and his contributions to the industry as a whole. (The decision to give this award to Blacky was made well before the news of his resignation). **Mark O'Sullivan** was also recognised for reaching the milestone of being a superintendent for 30 years (all at Roseville Golf Club).

Congratulations are in order for **Phil Beal** (The Australian Golf Club) and his crew for the fantastic job they have done in the re-building and subsequent preparation of the course in the past couple of years. The course proved to be a stern but fair test for the recent 2014 Emirates Australian Open and it was great to see one of Australia's most challenging layouts in such fantastic condition.

Unfortunately, we had some bad news in early December with the announcement that Richmond TAFE in Sydney will not be running their Certificate III Sports Turf Management programme any more. There is also more change coming, as the system of funding for training is being overhauled which brings some uncertainty to funding in the future, with the current industry body having no guarantees past the middle of next year.

In the past few months, **Dennis Grounds** (Catalina Country Club) vacated his position from the NSWGCSA Board after taking a leave of absence prior to that, and we thank him for his time during the past couple of years. The remainder of his term will be filled by **Stuart Gill** (Terrey Hills Golf & Country Club) who has also taken over the 'Environment' portfolio from me.

Here's hoping for a good summer and I trust you didn't stress too much over the Christmas and the New Year period.

STEVEN JACOBSEN
PRESIDENT, NSWGCSA



Pennant Hills hosted the 2014 NSWGCSA AGM and Rube Walkerden Trophy



Indooroopilly Golf Club was one of a number of clubs to sustain significant damage after a severe storm ripped through Brisbane in late November

It has been another challenging period for course superintendents these past few months, with crippling drought followed by violent storms and destructive winds. We recorded the driest and warmest period on record for spring in south east Queensland and areas further out west are struggling with what some are saying may be the worst drought in over a century!

My club – Indooroopilly – was among a number of golf courses to be in Mother Nature's firing line (again!) with around \$500,000 storm damage sustained during the week of the Australian Open in late November. I was in Sydney for the annual meeting of state presidents when late on the Thursday afternoon I started receiving a flood of text messages with photos and videos of all hell breaking loose in Brisbane.

The storm brought with it wind gusts of up to 140 kilometres per hour and 70mm of rain. We lost somewhere in the vicinity of 100-150 major trees (figs, tipuanas, gums, tulipwoods, African tulips and lillipillies) of which about 25 were considered iconic. Thankfully we didn't get the hail damage that other parts of Brisbane did.

Most of the storm damage was sustained on the East Course which remained closed for 12 days. Unfortunately that meant Golf Queensland was forced to make a last minute venue change for the 2014 Queensland Boy's and Girl's Amateur Championship. Fortunately, the three-day tournament was able to be moved to Virginia Golf Club and Nudgee Golf Club and thanks must go to the respective superintendents **Barry Lemke** and **David Brushfield** for getting their courses up in very little time.

Elsewhere, we've had a bit of movement in jobs up north with our former vice president **Brendan Clarke** leaving Cairns Golf Club after some five years to take up the mantle of south east Queensland's e-par representative.

We had another good roll up for the recent GCSAQ Christmas party with the Wet & Wild theme park again proving popular with members and their families. Usually it is a good day out and this year was no exception. I trust all members had a safe and happy festive season and hope that 2015 brings us some more consistent weather and our respective clubs remain viable and enjoyable places of work!

CHARLIE GIFFARD
PRESIDENT, GCSAQ

BOOK REVIEW

TURFGRASS HISTORY AND LITERATURE: LAWNS, SPORTS, AND GOLF

By James B. Beard, Harriet J. Beard and James C. Beard Michigan State University Press, 550 pages, hardcover

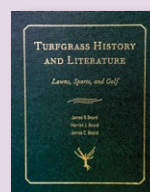
James Beard needs little introduction to turf industry practitioners. One of the world's most influential names, he is truly a father-figure for the turf industry. Despite suffering some recent setbacks to his health, Beard, together with wife Harriet and James C Beard, has finished compiling what is set to be a lasting legacy with the release of **Turfgrass History and Literature: Lawns, Sports, and Golf**.

The true heritage of turfgrass science and culture is best represented by an extensive historical record encompassing the principles, cultural practices, grasses,

materials and equipment that have been developed over the course of 300 years by turfgrass scientists, private companies, professional turfgrass managers and amateur practitioners.

A detailed chronicle of the evolution and history of turfgrass, the book documents the use of turfgrass worldwide as reflected in early publications and photographs and explores the development of its science and culture.

In Beard's compilation, resumes of book authors characterise their historical activities and contributions to the turfgrass field, providing an extensive bibliography of turfgrass texts, research development and educational programmes via reviews, scientific journals, research reports and trade publications. Selected quotes and unique original photographs depict early activities, equipment and conditions and their evolution in the turfgrass field.



The books, proceedings and reports cited in this text are drawn primarily from the comprehensive James B Beard Turfgrass Collection donated to the Michigan State University's Turfgrass Information Center.

Not surprisingly, Turfgrass History and Literature has drawn widespread praise from many within the industry. Golf course superintendent and executive director of the Wisconsin Turfgrass Association Monroe Miller comments: "We now have access to the most complete, thorough and well-rehearsed work on the history and literature of turfgrass. This magnum opus, which represents a colossal effort that took many years to complete, is well-organised and will be valuable to students, academics and practitioners alike. Many will find the biographies Beard offers of the authors noted in his book very intriguing and they offer insight to those who made early contributions to turfgrass."

Turfgrass History and Literature is available from www.msupress.msu.edu.



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