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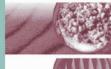




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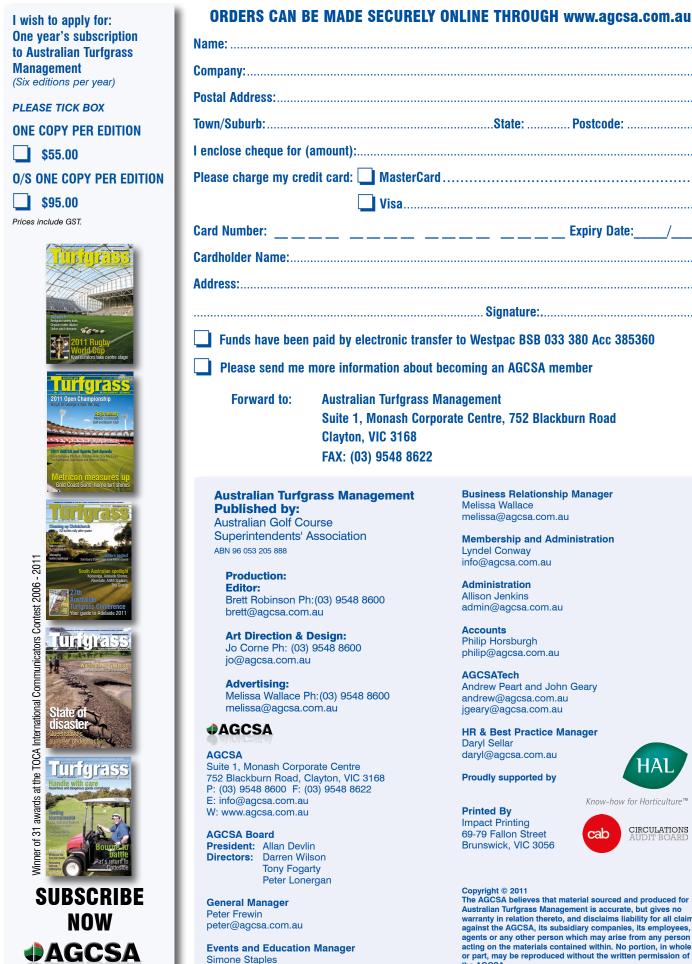
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Published by: Australian Golf Co	urse	melissa@agcsa.com.a	iu	
Superintendents' A	Association	Membership and Adn	ninistration	
ABN 96 053 205 888		Lyndel Conway info@agcsa.com.au		
Production: Editor:		Administration		
Brett Robinson Ph:(03) 9548 8600		Allison Jenkins admin@agcsa.com.au		
brett@agcsa.com.	au	Accounts		
Art Direction & Design:		Philip Horsburgh		

Melissa Wallace Ph:(03) 9548 8600

Suite 1, Monash Corporate Centre 752 Blackburn Road, Clayton, VIC 3168 P: (03) 9548 8600 F: (03) 9548 8622

Darren Wilson Peter Lonergan

Events and Education Manager Simone Staples simone@agcsa.com.au

philip@agcsa.com.au AGCSATech

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

HR & Best Practice Manager Daryl Sellar daryl@agcsa.com.au

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COVER:

Royal Melbourne 16 East: For the second time in its prestigious history, The Presidents Cup returns to Royal Melbourne Golf Club's Composite Course from 15-20 November, 2011. Photo: Brett Robinson.



COVER STORY: Royal Melbourne's remarkable renaissance

8-22

Three years ago Royal Melbourne Golf Club was making headlines for all the wrong reasons as years of drought had brought one of the world's most prestigious and treasured layouts to its knees. Appointed new course superintendent in March 2009 and with the 2011 Presidents Cup having only been announced a few months prior, the job confronting Richard Forsyth was mammoth, yet come November all the world will see just how he, his crew and the Royal Melbourne Golf Club have managed to turn around this Alister Mackenzie classic. ATM editor Brett Robinson profiles Forsyth ahead of the biggest tournament of his career and looks at the mountain of work that has gone into revitalising Royal Melbourne's prized turf surfaces.

24

FEATURES

Royal Sydney serves it up

Renowned as one of the country's premier championship golf venues, in September Royal Sydney Golf Club played host to Australia's Davis Cup tennis tie against Switzerland. While Lleyton Hewitt and Bernard Tomic had their work cut out on court against the likes of Roger Federer and Stanislaw Wawrinka, ATM discovers that the turf management crew at Royal Sydney had a few challenges of their own in getting the couchgrass court up to tournament standard. AGCSA HR and Best Practice Service manager Daryl Sellar asks whether golf clubs are taking up the challenging of meeting their obligations and responsibilities to the course, their staff and ultimately the industry in general, by planning

Are you keeping up with the times?

Links life in Vietnam

effectively for the future.

48

Lucas Skelton looks at his time as superintendent at The Montgomerie Links in Danang, Vietnam, one of a number of recent golf course developments on the country's central coast which are helping to kickstart a new wave of course construction and interest in the game there.







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AGCSATECH UPDATE Turning brown into green

This instalment of AGCSATech Update takes a look at golf courses in Oman and outlines the major three year biodiversity and carbon benefit study about to get underway of urban golf courses in Melbourne.



OPINION Feeding time!

88

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The Pulse asks superintendents whether they have changed their fertiliser management practices in recent times and if so what have they altered and why?

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Contributors to Australian Turfgrass Management Journal Volume 13.6 (November-December 2011)

Shaun Bilston (Kingston Links); Shane Bromfield (Royal Sydney GC); Michael Bradbery (Manly GC); Brendan Brown (Neangar Park GC); Grant Bunting (NZGCSA); Col Caulfield (Pine Rivers GC): Chris Chapman (STA NSW): Wade Cranston (Glenden Town Club); Peter Daly (McLeod Country GC); Allan Devlin (AGCSA); Ben Evans (Bardwell Valley GC); Richard Forsyth (Royal Melbourne GC); John Geary (AGCSATech); Charlie Giffard (Indooroopilly GC); Shane Greenhill (Sorrento GC); Chris Hamer (Royal Sydney GC); Scott Harris (Gold Creek CC); Steven Hewitt (VGCSA); Richard Kirkby (Pennant Hills GC); Peter Lawson (Wagga Wagga CC); Robert Lynas (Geraldton GC); Greg Marshall (Cronulla GC); Warren Maynard (VGA); Ian McKendry (STANZ); Dave Morrison (GCSAQ); John Neylan; John Odell (Royal Sydney GC); Andrew Peart (AGCSA); Des Russell (GCSAWA); Daryl Sellar (AGCSA); Lucas Skelton (Monash City Council); Tony Smith (TGCSA); Trevor Strachan (Lake Karrinyup CC); Wayne Tickle (Ballina GC); Nathan Tovey (TGAA VIC); and Caragh Threlfall (The University of Melbourne)

Putting things off...

here have been a few milestones in my family recently. My darling daughter Elizabeth turned one at the start of October, while at the other end of the ledger, on 27 September 2011 my dear grandmother Kitty notched up a century! If I make it to 70 I will be exceeding expectations, but my dear Nan is still going strong and is testament to a clean living lifestyle (so that's where I have gone wrong) with just the occasional nip of medicinal sherry! By the time you read this I will be across the Ditch with

four generations of my family celebrating Nan's special occasion, but rather oddly we will be doing so a whole month after her actual birthday. Why you ask? Well, the story goes like this. Kitty was born on 27 September 1911, one of eight children to Harry and Emma Robinson. Harry was an engineer at a flourmill in Southbrook, about 30km north of Christchurch, and

Harry was an engineer at a flourmill in Southbrook, about 30km north of Christchurch, and just days after his daughter was born was entrusted with the task of making the trek to the births, deaths and marriages office in Christchurch to register the birth.

Somewhere along the way, however, dear old Harry got 'distracted', as my Nan eloquently puts it, and her birth wasn't officially recorded until a full month later – 27 October 1911! As you can imagine, 100 years later the story has become part of family folklore and it's a running joke among us grandchildren that perhaps Harry stopped off for a quick pint en route and never quite reached the bottom...

Whatever Harry's reasoning for putting off registering the birth, 100 years on it has caused all sorts of palaver approaching Nan's milestone birthday. In order to get all the ceremonial bits of paper – the letters from the Queen, the New Zealand Governor General, the local mayor etc... you have to provide an original birth certificate. Problem is that my Nan's original birth certificate has 27 October 1911. Despite a mountain of correspondence back and forth with the New Zealand Department of Internal Affairs we couldn't get them to recognise Nan's actual birthday. Fortunately Nan has found the whole process rather amusing and commented to me when I rang her for her birthday, "Oh well, what's another month when you're my age!" Ah, bless!

My Nan's story provides a nice segue into Daryl Sellar's feature which we carry in this final edition for 2011. No, Daryl isn't turning 100, but rather his article questions whether golf clubs are taking up the challenging of meeting their obligations and responsibilities to the course, their staff and ultimately the industry, by planning effectively for the future. Just as my great grandfather did all those years ago, Daryl stresses that putting off the inevitable will lead to significant consequences further down the track and that in this day and age where golf courses are like any other business, such a mindset can spell the end for some clubs.

Leading this edition we catch up with Royal Melbourne Golf Club superintendent Richard Forsyth who, having been in the position for just over two years, is steeling himself and his crew for the upcoming Presidents Cup. The amount of work that has gone into revitalising Royal Melbourne over the past couple of years is mindboggling and there is little doubt that the problems of the past decade, where it was ravaged by drought, are well behind the club.

While he is one of the most modest individuals going around and will hate me for saying this, Richard is without doubt one of the finest greenkeepers of his era. Those who were fortunate to see Metropolitan Golf Club during the 2001 World Matchplay Championships when Richard was in charge there, will agree that he set a new benchmark when it came to course presentation and you can guarantee he will be striving to better that come mid-November. I'm sure we all wish Richard and his assistants Simon Muller, Paul Thomas and Michael Love all the best for the event. Enjoy the read...



Brett Robinson Editor



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FOREWORD THINKING

ALLAN DEVLIN, PRESIDENT, AGCSA

Frewin appointment heralds new chapter for AGCSA



lot has certainly happened since the last edition of Australian Turfgrass Management Journal, with the big news the appointment of a new AGCSA general manager. I would like to officially welcome Peter Frewin to the association and wish him all the best in his new role which he starts in the first week of November.

Peter is no stranger to the AGCSA, being a past board member and president, and brings a wealth of experience to the association. I am looking forward to hearing Peter's ideas for moving the AGCSA forward when we get together at the next board meeting. As president of the AGCSA I am committed to working with Peter and the Board to continue the good work the association has achieved and to provide our members with the best service possible.

The last few months have been an extremely difficult and uncomfortable time for the association and I would like to thank the wonderful staff at the AGCSA for their dedication and hard work. Peter is very fortunate to have these great people to help him develop and grow our association.

GMA CONFERENCE

In early October I represented the AGCSA at the GMA Conference in Melbourne. I was part of an industry forum that included the General Managers Association, Professional Golfers Association, Golf Australia and golf media. We were all asked what we felt were the five key industry challenges today and from an AGCSA perspective I was able to highlight the following points:

WATER

The increasing shortage of and future availability of good quality water is going to have a huge impact on golf courses;

- Water licences are becoming more restrictive and new licences harder to obtain; and
- Public perception is that golf courses are water wasters and guzzlers.

ENVIRONMENT & OH&S

- Environmental management has become an integral part of golf course maintenance;
- The public perception is that golf courses are environmental vandals;
- OH&S issues have also become a huge part of the golf course operation. Legislation is increasing and becoming stricter on a day-today basis and varies significantly from state to state:
- New Workplace Health and Safety (WHS) laws putting the onus onto committees come into effect on 1 January 2012;
- Time spent on these issues by course maintenance staff costs money and takes up a significant amount of working hours; and
- Who will be penalised and deemed responsible if a breach of legislation occurs.

STAFF RETENTION

- It is becoming increasingly difficult to attract and retain good employees;
- Due to the poor wages under the Award and • unsociable working hours, it is an industry that has always struggled to retain high quality staff; and
- Why are superintendents walking away from or being forced to leave the profession when they are generally well paid?

ASSOCIATION COLLABORATION

There are many association bodies that are all



AGCSA MEMBERSHIP

important in their own way to the development of golf. These associations must act more as a united body to have a bigger voice in promotion of the game;

- Although collaboration and respect exists between these various bodies, that does not always translate to club level between general manager, club pro and superintendent; and
- There still remains a dispute as to who is golf's 'peak body'.

CLUB MANAGEMENT KNOWLEDGE

- Most club boards and committees consist of people with minimal or no knowledge of golf course maintenance procedures; and
- Often unqualified and ignorant persons are issuing instructions to highly qualified, experienced professionals.

I thought these five issues were very important to the future of the game, but after 90 minutes of discussion and debate none of these were really covered by the panellists and the general feeling was that membership growth was the most important challenge the industry faces. It will be interesting to see what lies ahead when golf clubs that have focused on growing their memberships have nowhere to play due to ignorance of those five key areas I highlighted!

AGIC DELEGATION

I was also part of the Australian Golf Industry Council's annual delegation to Canberra to meet with those wise people who run this fine country of ours. I took part in the inaugural Parliamentary Sports Day and played golf with some MPs and government officials at Gold Creek Country Club. We all had a great day and it was nice to see some of the politicians relax and enjoy a game of golf. I must congratulate course superintendent Scott Harris and his staff for the condition of the golf course...how they grow couch in that climate amazes me!

Following the golf we attended a dinner in honour of the Australian Diamonds netball team, who recently won the World Netball Championships in Singapore. It was a delight to meet some of these young ladies who are obviously at the top of their sport. The MC interviewed six of the winning team on stage and the way these girls handled the media was a real credit to them with their quick wit and articulate answers. I wondered what the same situation would have been like with six of our top footy players!

It was refreshing to hear the way that netball has grown as a major sport and the golf industry could gain a lot from listening to their experienes in the future. Unfortunately, several of the delegation's meetings with key political figures had to be cancelled as Julia Gillard and her Carbon Tax were obviously of much greater importance than the future of golf!

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SA - South Australian Golf Course Superintendents Association	\$75
TAS - Tasmania Golf Course Superintendents Association	\$60
WA - Golf Course Superintendents Association of Western Australia	\$110
VIC - Victorian Golf Course Superintendents Association Please call 0408 354	100

THE NEVT OFNEDATION (OTHDENT MEMDEDOLUG

There was little surprise among the turf industry when Royal Melbourne Golf Club announced in early 2009 that it had appointed Richard Forsyth as its new course superintendent. Arriving after a celebrated stint at Metropolitan Golf Club, Forsyth was immediately thrust into one of the most significant makeovers in Royal Melbourne's history. As he has demonstrated many times throughout a distinguished career, Forsyth was the right man for the job and now, with The Presidents Cup just weeks away from returning Down Under, the club is set to showcase its new look as it returns to the world stage.





R ichard Forsyth stands on the rock hard Suttons mix green of Royal Melbourne Golf Club's 2nd East hole and gazes back down the plunging Legend couchgrass fairway as the mid-September sun begins its slow descent towards the 1st East fairway in the distance. Glancing right there's the sweeping vista of one of world's most recognisable golf holes – 6 West – while further right still is 5 West and its terrifyingly beautiful greenside bunkering.

It's a look of wonder and respect mixed with a fair amount of contentment that Forsyth has, one which only a golf course superintendent can feel when the piece of land that he or she is custodian of has transcended being a golf course and has touched a part of their soul. This is Forsyth's back yard now and although it has taken a while for him to settle in and appreciate his small, yet special place as just the club's fifth course superintendent, Royal Melbourne finally feels like home for the 49-year-old.

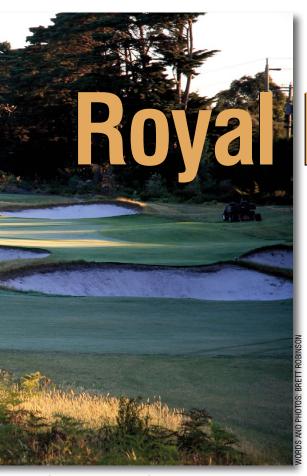
"Just look at the place," Forsyth exclaims with arms spread wide. "None of the other sandbelt courses have this sort of movement, the size, the vastness, the width of the holes. I love to come out here in the evening and take the dog for a walk when no one is around. It's then that you can take the time to truly appreciate the grandeur of the place and see why it is held in such high regard."

Come mid-November, for the first time since the run of Heineken Classics from 2002-2005, the world will again get a glimpse of just how special this piece of land is when the revitalised and re-routed Composite Course hosts The Presidents Cup. While the focus will be on whether the Greg Norman-captained International team can repeat its one and only famous victory over the US when the tournament ventured to Royal Melbourne in 1998, for Forsyth and the course staff this event is about more than just presenting tournament surfaces for 24 of the world's top golfers.

Even before that last Heineken Classic, Royal Melbourne was already feeling the impact of Victoria's savage drought and in the years following the club made the headlines for all the wrong reasons as water restrictions hit hard. For those on the links crew, it was a pretty demoralising time as the club's famed turf withered and deteriorated before their eyes. To add insult to injury, some quarters unfairly blamed them for the state of the course.

Six years on, however, and those days are hopefully well past. Massive expenditure on state-ofthe-art water production and treatment infrastructure, as well as a three month blitz over the summer of 2009/2010 to drastically revive the club's ailing turf surfaces, have transformed Royal Melbourne back into the respected championship venue that it is.

Overseeing and driving this change has been Forsyth and as he steels himself and the crew for their biggest tournament yet, it's his desire to showcase the monumental amount of work the club has instituted over the past couple of seasons and hopefully reinstate the club's credentials in the eyes of the golfing world.



CELEBRATED RISE

The Presidents Cup will be yet another highlight in a distinguished career Forsyth has forged for himself, one that started at another of Melbourne's respected clubs. Growing up on a dairy farm in what was then the semi-rural eastern Melbourne suburb of Scoresby, Forsyth had never picked up a golf club or set foot on a golf course when he decided to respond to an ad for an apprenticeship at Riversdale Golf Club in January 1980.

Having finished school, the thought of spending further time at university held scant appeal, as did the prospect of following in his father's footsteps milking cows seven days a week. What he did inherit from his dad, however, was a meticulous work ethic and a love for the outdoors and it was this element combined with his love of machinery and growing things that prompted him to apply.

After more than five years learning his trade under Riversdale superintendent Rob Cornell, Forsyth's next move was out of town after he spotted an assistant superintendent ad for Yarrawonga where construction was about to start on the new Murray Course. Despite having just bought a house and tying the knot a few months earlier, Forsyth said yes to the job and ended up spending more than three years on the Murray River gaining valuable course construction and grow-in experience.

That would hold him in perfect stead for his next appointment as superintendent of the new Murray Downs Golf & Country Club development a few hundred kilometres downstream at Swan Hill,

Forsyth fashions Melbourne ofold

a period of his career which he looks back on with areat fondness.

"I loved my time there," reflects Forsyth. "It felt like we were pioneers. We were in the middle of a sheep station with no water supply, no bitumen road, no power, just this red, sandy desert. They were pretty tough days. We didn't have a shed, instead we just camped out under a couple of trees, and most days it was 40 degrees in the shade. It was really satisfying to have been involved in that project and I still remember going out and cutting the holes on opening day and having a real sense of achievement because we had battled so hard to get it open."

After receiving the 1994 AGCSA Fellowship Award for his efforts at Murray Downs, Forsyth would then make a career-defining move. The display ads for course superintendent at Metropolitan Golf Club in the sports pages of The Saturday Age weren't hard to miss and while he could have easily stayed at Murray Downs, the opportunity to apply for a job on Melbourne's sandbelt was irresistible.

Duly appointed, Forsyth would go on to enjoy a near 15 year stint as Metropolitan superintendent and as well as rebuilding all the greens to a USGA perched water table spec and most of the tees and bunkers, he also prepared the course to widespread acclaim for the 2001 World Matchplay Championships.

Living on course and raising his family there, the emotional attachment to Metropolitan was strong, however, there was one job which Forsyth coveted and unexpectedly in 2008 the very rare opportunity

Left: In a change to the traditional **Composite Course routing, the** spectacular par three 16th East replaces 4 East for The Presidents Cup which returns to Roval Melbourne Golf Club from 15-20 November



Taking charge of Royal Melbourne Golf Club in 2009. Richard Forsyth has overseen and driven a remarkable transformation of the club's turf surfaces, backed by a management and membership which desired change



THE PRESIDENTS CUP

For the Royal Melbourne maintenance staff who weathered the worst of the drought, The Presidents Cup provides an opportunity to showcase the hard work they have put in over recent years to revitalise the course

NTS CUF



presented itself. After guiding the club expertly for more than 20 years, including through perhaps its toughest period with the drought, Jim Porter handed in his resignation at Royal Melbourne. With The Presidents Cup having just been announced, Forsyth quickly became the unbackable favourite among a who's who of candidates to apply for the job and sure enough in March 2009 Royal Melbourne announced Forsyth was their man.

Although appointed in March, Forsyth wouldn't actually start until July due to contractual obligations at Metropolitan. The club was about to construct a 19th hole and was keen for Forsyth to see that through, so for a four month period he effectively divided his time between the two clubs.

"It was an interesting period going back and forth and it felt like I was running two different courses," says Forsyth. "At the time I didn't think it was ideal, but looking back now, to have been able to see that 19th hole through from start to finish and have it so well accepted by the members was a great way to finish.

"All superintendents get attached to their bit of dirt and there were certainly some emotional times in the lead-up to finishing at Metropolitan, but from a timing and career perspective it was a good time to move. We had achieved a lot at Metropolitan and I was very happy to leave it in the condition it was, but at the same time I was also excited about coming here (Royal Melbourne) and the challenges ahead."

Reflecting on those early days, Forsyth admits that it took him a good year to feel fully at home in his new role. No sooner than being appointed, he had to quickly come up to speed with the club's massive water infrastructure project (see 'When it rains...', page 20), while significant plans to improve the turf surfaces in time for The Presidents Cup had begun in earnest. Following in the footsteps of illustrious predecessors like Morcom, Crockford, Williams and Porter, Forsyth also had the heady task of gaining an appreciation of the history behind Royal Melbourne's unique turf surfaces, in particular the Suttons mix browntop bentgrass.

"You certainly look back at the history and I'm very aware of my place in the timeline here," says Forsyth. "It was the same when I started at Metropolitan. You really want to understand what has happened in the past to help you going forward and never was that more important than Royal Melbourne.

"Here you have the Mick Morcom era and his expertise in construction, Claude Crockford's reign and the way he managed the greens and the environment and, of course, the history and romance of the Suttons mix. I really wanted to absorb as much of that history as I could.

"One of the things I have done is read a lot of Claude's monthly reports which are very interesting. Obviously I can't use arsenate of lead in topdressing as a pre-emergent like he did, but it was interesting to read his management techniques for the greens – low fertility, no regular coring or scarifying and lifting the turf every 10-15 years to remove organic matter build-up. It was important to look back on that old documentation to get an idea of how the turf performed and it has certainly helped to shape some of my management decisions now."

FIRM FOCUS

When he got the job, two overriding goals were impressed upon Forsyth by the Council of Royal Melbourne – keep *Poa annua* out of the greens and reinstate their firmness. Just over two years on and with a mammoth turf improvement programme nearly complete, Forsyth and his staff have achieved that and more.

During the summer of 2009/2010. Forsyth and his crew achieved what most clubs would be lucky to achieve in three decades. As well as installing a new irrigation system across 36 holes and bringing \$2.2 million worth of water production and treatment infrastructure online, 25 greens were stripped and reseeded/returfed with Suttons mix, the couch/Poa surrounds were sprayed out, stripped and solid turfed with fine fescue, while Legend couch was line-planted on fairways, thus consigning the club's famed two grass policy to history. (See 'Royal's renaissance', page 14, for a full description of the turf works undertaken). As well as the sheer volume of reconstruction work and the grow-in, Forsyth also had to get to grips managing three different grass varieties which he had no previous experience with.

"It has been a pretty steep learning curve," admits Forsyth. "I probably didn't fully appreciate the subtle differences of the browntop bent compared to the creeping bents. It's more sensitive to certain things you apply to it, it's not as resilient during the

ROYAL MELBOURNE COMPOSITE COURSE THE PRESIDENTS CUP

	3 West	10	18 West
2	4 West	11	1 East
3	5 West	12	2 East
4	6 West	13	3 East
5	7 West	14	16 East
6	10 West	15	17 East
7	11 West	16	18 East
8	12 West	17	1 West
9	17 West	18	2 West

Tournament Heights of Cut

Greens: 2.8mm-3mm Surrounds: 6mm Fairways: 11mm-12mm Tees: 8mm Fringe cut rough: 32mm



hottest months, but it does have very good spring and autumn growth.

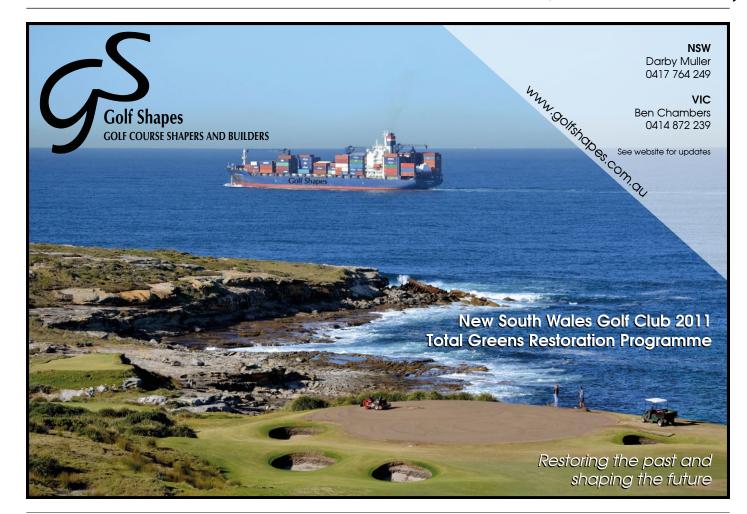
"I have learnt a lot in a very short time and I'm still learning. I haven't had mature turf yet to try and get the best possible surface out of the greens and we are going into The Presidents Cup not having put it under tournament pressure before. I do look to New Zealand to get a bit of inspiration with managing the browntop, especially about inputs, and I have also looked at Claude's past practices and had input from Jim (Porter) as well.

"I guess what I have done is gone back to a 'keep it simple, stupid' method in terms of managing the Suttons. We can overdo the science of turf management a bit sometimes, but for me it comes down to old style nutrition using ammonium sulphate, keeping the water lean and doing very little in terms of renovating or grooming. For the moment, at least, it seems to be working well."

ROYAL AS ROYAL

With the biggest tournament of his career looming, six weeks out from The Presidents Cup Forsyth was exuding a remarkably relaxed feel, which no doubt comes from having been involved in major tournaments before and an assuredness that all the hard work has already been done. The usual pretournament preventive applications and nutrition programmes were well in place, while the massive tournament infrastructure build, a nervous time for any superintendent, was being expertly overseen by experienced assistant Michael Love.

Thanks to last summer's wet and mild conditions followed by a relatively dry winter, the pressure on the turf hasn't been high, which, given the immaturity of the turf, especially the Suttons, has been a blessing. As Forsyth points out, although the Composite Course is steeped in decades-old tradition, the majority of surfaces on which this The dramatic green and surrounds of 18 East, the traditional Composite Course closing hole, which will be played as the 16th hole for The Presidents Cup, ensuring it will feature heavily in the outcome of the 34 matches scheduled





More than 35,000 spectators are expected to cram onto Royal Melbourne's Composite Course every day of The Presidents Cup with an estimated worldwide TV audience of 600 million Presidents Cup will be contested are less than two years old. They are also different varieties as in 1998 the greens were Penncross.

The fact that the turf is still maturing has led to some interesting discussions with the PGA Tour agronomists who have made regular visits to the course in the lead-up to the tournament, but Forsyth has assured them all will be okay and that come the tournament the hard, fast and frightening Royal Melbourne of old will be ready.

"If I wanted to prepare the best greens possible it would have been nice to have had another season or two under the belt, but on the positive side we have excellent firmness, a lack of thatch and no *Poa*," says Forsyth. "The fairways are probably similar, but given where they have been they are pretty good. They went into winter pretty decent and we have gone to a lot of effort to ensure their health and maintain colour over winter, as well as controlling spring dead spot.

"While the PGA guys have certain criteria when they go into tournament venues, the club has impressed upon them that it wants to present Royal Melbourne as Royal Melbourne, not something that has a US Tour look and feel and I think they understand that. They do struggle a little with having natural-looking rough and rugged bunkering which we are trying to encourage more, but they appreciate what we are doing."

As for the tournament itself, the format means that the usual pressures of preparing the course ahead of each day's play won't be as great. The Presidents Cup comprises a total of 34 matches – 11 foursomes (alternate shot) and 11 four-ball (better ball) matches played on Thursday, Friday and Saturday with 12 singles matches on Sunday.

Apart from Saturday where there are both morning and afternoon tee times, the other days have either late morning or early afternoon starts.



With just 24 players involved, wear and tear on the course will be minimal and with a maintenance crew set to number 65 – more than 35 volunteers are coming from as far afield as the US, Canada, the UK, Holland and New Zealand – the demand on staff won't be as taxing.

Where the pressure will come, however, is the expectation and international focus of the event and if Forsyth wanted a medium through which to showcase the new-look course then he couldn't have picked a better event. This year's tournament is expected to be double the size of 1998 and as well as the 35,000 spectators predicted to cram the Composite Course each day, the tournament will be broadcast to more than 225 countries and a TV audience in excess of 600 million.

"I guess the hard work has been done over the past two years and this summer is our time to show that off," says Forsyth. "For those guys who were on staff here back when the course was going through the worst of the drought, I hope they see this tournament as something special and unique and get a sense of satisfaction and achievement given the amount of hard work they have put in to get it back to this level.

"All the staff have been sensational, but the senior guys – Simon Muller (West assistant), Paul Thomas (East assistant), Mike Love (superintendent of works) and Luke Spartalis (equipment technician) – have been particularly supportive and worked hard to implement all of the changes which has been integral to the success of the programme. There is a lot of experience and knowledge on the crew and this has been a great asset during the period of change.

"For me, I guess I will derive most satisfaction from how the greens are judged. Royal Melbourne is all about the greens. The players will smash the ball down the fairways and make some of the holes look silly, but there's still that major strategy of being in the right spot to attack the pin. If you have got the right firmness, bounce and speed in the greens the challenge will still be great.

"It will be interesting to see some of the decision making on the short par fours, like 1 East (Composite 11), where you can easily drive the green, but if it's blowing and the greens are hard you had better hope like hell that you pull it off or else you are going to be left with an impossible recovery. I'm also interested to see what influence Greg Norman will have and whether his knowledge of the place will dictate how the International team plays certain holes.

"So much of our preparations will be determined by the weather, but hopefully we get the right conditions to produce the sort of surfaces we want to. The priorities for me will be firmness, smoothness and speed, in that order. The ultimate for me would be to hear that the players are delighted with the putting surfaces and surrounds and have been challenged by their bounce and firmness." ^{Jul}

Massive expenditure on state-ofthe-art water infrastructure as well as change of turf composition have helped to transform Royal Melbourne back into the respected championship venue that it is

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To say that Richard Forsyth has hit the ground running as the new course superintendent at Royal Melbourne Golf Club would be an understatement. In just over two years in charge he has overseen some of the biggest changes in the club's history, the most notable being a significant alteration of turf composition. ATM looks at the changes Forsyth and his team have instituted and the mountain of work they have achieved to get the club in a position to host The Presidents Cup.



Royal's renaissance

hen Richard Forsyth took over at Royal Melbourne Golf Club in 2009, the task confronting him would have made a lesser superintendent walk straight back out of the maintenance compound never to return. As well as the daunting prospect of hosting The Presidents Cup in a little over two years' time, Forsyth, just the fifth course superintendent in the club's illustrious history, was inheriting a course on its knees, having just gone the equivalent of 12 rounds with Mother Nature.

Crippling drought and a lack of good quality water had seen the famous turf surfaces of the sandbelt club decline to the point where action had to be taken not only to appease a passionate and demanding membership but ensure the club could fulfil its obligations to host a tournament that it had proudly and successfully hosted in 1998.

The issues facing Forsyth were numerous and all encompassing. Despite various strategies over the years, the battle to stop the spread of *Poa annua* in the Suttons mix bentgrass greens had become a lost cause and combined with the drought and poor water quality the greens surfaces lacked the firmness and bounce that the club cherished and desired so much.

The club's two grass policy on the fairways (native couch and *Poa*) had struggled with the drought and quality was highly variable, while the couch/*Poa* surrounds were providing an ample seedbank for further *Poa* invasion onto the greens. The tees too had their own issues with various grass types providing inconsistency and poor turf quality during summer.

Prior to Forsyth starting, the club had already embarked on the first and most critical component in its fight for survival – improving self sufficiency in terms of water (see pages 20-21 for a full rundown on the club's solution to its water problems). With that underway the focus could turn to improving the turf surfaces and by mid-2008 the club was assessing a number of options including:

- Legend couchgrass in the fairways (the club had solid turfed 6 West and line-planted 12 West in the spring of 2008);
- Fine fescue as a green surround and approach to provide a buffer to Poa tracking onto greens;
- Turf replacement of the worst greens with Suttons mix from the club's nursery;
- The use of Legend couch and fine fescue on tees; and
- A new irrigation system to fairways to improve uniformity and efficiency.

STICKING WITH SUTTONS

No sooner had Forsyth been appointed as superintendent in March 2009, he was quickly called upon to make some pretty major decisions, even though he didn't actually start on the ground until July 2009. There was a plan to close the entire West Course for three months and line-plant Legend into the fairways. A new irrigation system had been designed and costed, but most debate still centred on whether the club should persist with the unique Suttons mix browntop bentgrass on greens or switch to a new creeping bentgrass variety.

"It was a pretty interesting time," recalls Forsyth of the initial few months after being appointed superintendent. "The club asked for my thoughts on whether we should keep the Suttons mix and it was a very hard decision to make because I had absolutely no experience with it.



The conversion of the Royal Melbourne fairways from the existing native couch/Poa mix to Legend couch was among one of the major changes to the club's turf composition. Pictured far left is the 2nd East fairway six weeks out from The Presidents Cup and, left, when line-planting started in the summer of 2009/10

"From what I saw when Jim (Porter) reinstated the Suttons back in the early 2000s and how exceptional and widely acclaimed the putting surfaces were during the Heineken Classics around that time, the Suttons was worth a second chance. As well as having the ability to provide truly great putting surfaces at its premium, it also had the romance of being attached historically to the club and really sets us apart from other sandbelt courses with creeping bentgrass greens.

"I think the Suttons mix got a bad rap for all the problems associated with the Royal Melbourne greens in recent times, but most of the issues can be attributed to water and the proximity of abundant *Poa* seed which was readily tracked onto them."

To help eliminate that very issue, fine fescue was put up as the grass of choice for the approaches and surrounds and despite having never managed fescues before Forsyth was right behind the decision for a number of reasons. The concept of being able to spray two of the most invasive grasses – couch and *Poa* – out of the fescue was a big attraction, while he also liked the playability and aesthetic characteristics of the fescue.

"Although we have been through a bit of pain with it establishing, the introduction of the fescue



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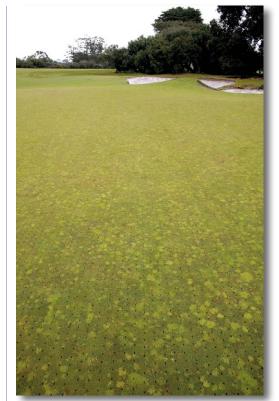
ENTS CUI

Right: Despite various strategies, the battle to stop *Poa annua* invasion in the Suttons greens had become a lost cause and combined with drought and poor water quality the surfaces lacked firmness and bounce

Far right: To remove as much of the old *Poa* seedbank in the greens as possible, the existing turf was stripped to the depth of the accumulated thatch layer and removed



The 1.8ha of couch/Poa surrounds were sprayed out, stripped and solid turfed with fine fescue that had been contract grown



has been a good thing," says Forsyth. "It has great vertical growth and does not have the same propensity to form grain, which can be a problem in the runoff and chipping areas. It provides a surface with characteristics in bounce similar to the green rather than the unpredictable nature of the bounce from the leafier Legend which would otherwise be there. It also provides a great contrast to the putting surface and accentuates the green itself and, like the Suttons, is something else that differentiates us from other sandbelt courses."

The final variety in the new-look Royal Melbourne composition and perhaps the most talked about, was Legend couchgrass. The prime goal was to introduce an improved couch that would have more vigorous growth and continued growth for longer in the cooler part of the year. Legend was ultimately chosen because it allowed for higher heights of cut and had a coarser, leafier surface which would reduce ball roll on sloping areas and therefore not artificially shorten holes. Legend also blended in better with the existing native couches.

"The club battled with its decision to choose the best quality couch," explains Forsyth. "But I think the switch to Legend was the right decision. The Legend suits Royal Melbourne better than say a Wintergreen or Santa ana because it has a more natural appearance in comparison to the carpet-like uniformity of those others. While I probably believed that we should have gone down that path when I first started, now that I have been here a while I think it would have looked out of character."

THREE MONTH BLITZ

While the bulk of the Royal Melbourne grassing strategy had been determined prior to Forsyth's



arrival, the method by which it would be implemented was left in his hands. As mentioned, the club had already agreed to close the West Course to undertake works on the fairways, while the plan was to returf 3-4 greens using turf from the nursery, then re-sow the nursery and do another 3-4 greens with the view of getting all new surfaces up before the Presidents Cup. Forsyth, however, had other ideas.

"Seeing that we were closing the West Course for three months, I suggested why don't we have a go at seeding all the greens," says Forsyth. "The club asked whether it could be done and I said yes probably without really knowing the full extent of what I was proposing. The reality was we were never going to get another window of opportunity where an established club like Royal Melbourne closes a course for a full three months, so with great support from CEO Paul Rak we said let's just hit things hard and get it over and done with."

With the installation of the new irrigation system already underway, the plan over late spring 2009 and the summer of 2009/2010 was to undertake the following:

- Close the East Course composite holes (1, 2, 3, 16, 17 and 18) on 1 November 2009, spray out the six fairways and line-plant Legend. Spray out the green surrounds and turf fine fescue around five greens. Turf three greens with Suttons from the nursery and attempt chemical control of *Poa* in the 18 East green, practice putter and 4 West green.
- Close the West Course on 1 December 2009 for three months. Spray out 13 fairways and line-plant with Legend couch. Strip and re-seed 14 greens, spray out and strip 15 surrounds and turf with fine fescue. Strip, level and returf

nine tees with Santa ana couch. Some minor enhancements were made to green contours on three holes, while some bunker reinstatement was carried out along with minor recontouring of some fairway shapes.

In addition to this work, Forsyth chemically treated all of the remaining East Course greens in an attempt to improve the percentage of bentgrass and reduce *Poa* infestation. For a period, during December and January, Royal Melbourne's members had just 11 holes out of 36 open, with those in play looking decidedly ordinary. Also there was extensive work going on with installation of new bore transfer lines and installation of all of the water treatment equipment and control system.

Given the scope of works and with little room for error, a number of techniques were employed to make sure that the returfing went off without a hitch. The most critical area was the greens as Forsyth had just 50kg of Suttons mix seed available and in order to reseed the 14 West Course greens he needed 48kg.

To begin with, removing as much of the old *Poa* seedbank in the greens was paramount. With no time to fumigate the greens, the existing turf was stripped to the depth of the accumulated thatch layer since seeding 10 years ago and removed. Maintaining surface contours in the greens was critical so the existing turf was rolled into large rolls by hand and removed by small frontend loaders.

AIN



A recommendation was made to take some of the West Course putting surfaces out to the bunker edges which required a strip of bentgrass turf to be installed along several bunker edges. The perimeter of greens were maintained and protected by installing a 150mm plastic barrier strip and prior to seeding the greens were scarified to make a seed bed without altering contours.

The Suttons mix was hydroseeded with paper mulch and stickers to ensure good coverage and adhesion to the relatively firm surface, with a fungicide also added. Plastic Evergreen turf covers were then laid across all seeded greens to protect the seed from wind and storm damage. As Forsyth says, if they lost any seed it wasn't like they could go down the road and buy some more. Prior to seeding the greens were scarified to make a seed bed without altering contours

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The Suttons mix was hydroseeded with paper mulch and stickers to ensure good coverage and adhesion to the relatively firm surface



The fairways were sprayed out with Roundup and Legend line-planted into the existing thatch layer, with repeat applications of Roundup and Fusilade required to control existing patches of hybrid couch. While not the ideal time of year, the 1.8ha of fescue surrounds were solid turfed with turf that had been contract grown.

Not surprisingly with a programme of this magnitude, Forsyth and his crew encountered a few problems along the way. Control of couch in the greens, control of *Poa* in greens and fairways, control of other couches in fairways and control of summer annuals created the greatest headaches.

At one stage an application of Fusilade drifted onto the greens, damaging the new Suttons mix seedlings, while Fusilade residual in patches of hybrid couch on fairways caused damage to some of the line-planted Legend couch sprigs. The establishment of immature fine fescue turf during the months of January and February was also a problem and required significant overseeding in the months after.

And, despite the lengths to remove the existing seedbank, there was still germination of *Poa* in the new greens, particularly around the edges where there had been thinning from herbicide drift.

"It was a massive three months," reflects Forsyth. "The biggest challenge I guess was the timeframe we had. The greens were our main concern and there was always that worry of what if the seed didn't germinate or failed for some reason. That's why we invested heavily in covers and barriers to avoid the potential for the seed to be blown away or washed off. We had a few hiccups along the way but we got it there in the end.

"The other big unknown for me was that although we had stripped off the greens, we didn't fumigate so we weren't sure how much *Poa* was going to regenerate and whether we would be able to control the couch in the edges. The couch fairways were a sight for the members – dead and with lines ripped through them – and I'm sure everyone was thinking, 'Does this guy know what he is doing?' I had plenty of comments and a few members tell me it would never grow, but it was just a matter of being patient."

More than 18 months on, however, Forsyth's methods have been vindicated and while he would have liked another growing season under his belt before hosting the Presidents Cup, the new surfaces are in excellent shape. The greens have their trademark firmness and bounce back and, although still immature, the Legend fairways and fescue surrounds are providing a beautiful cover and contrast.

"When I started here, my priorities were to control the *Poa* in the greens and get firm greens, so by stripping them back we achieved both of those in the one hit," says Forsyth. "We are now waiting for feedback saying that they're too hard! Because we took away that organic layer when we stripped them back to the base profile and seeded directly into that, the greens have got their bouncy hardness back which was a real desire for the club. The fescue has taken a while to get its bouncy characteristic

CONTINUED ON PAGE 22

With very little Suttons mix seed at its disposal, the club invested heavily in protecting the newly seeded greens with perimeter barriers and turf covers



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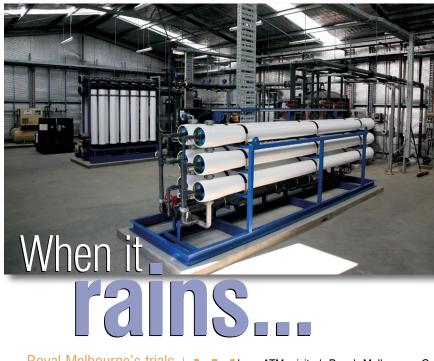
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Royal Melbourne's trials and tribulations with water have been well documented and publicised over many years, but thanks to heavy investment in water production and treatment facilities and some timely assistance from Mother Nature, the future is looking a lot healthier for the 2011 Presidents Cup host.



Above: Royal Melbourne has spent more than \$2 million in recent years to remedy its water management issues including the installation of a reverse osmosis and ultra filtration system hen ATM visited Royal Melbourne Golf Club in the autumn of 2008 ahead of the annual Australian Turfgrass Conference, then superintendent Jim Porter told the tale of how that previous summer, when he had upwards of 50 tankers each day topping up the club's meagre 2ML irrigation dam with Class A recycled water, he and his assistants would run back and forth between the office and the dam checking levels and calculating how much they could apply in the next irrigation cycle.

That's how bad the water situation had got at Royal Melbourne. At the height of the drought in the summer of 2006/2007, the club's then native couch fairways went into drought-induced dormancy by Christmas, while the increased reliance on poor quality bore water as water restrictions hit hard meant the greens profiles suffered greatly with the build up of sodium, chloride and bicarbonates.

Despite looking at many alternatives over the years, it wasn't until 2008 that things started to turn a corner at Royal Melbourne. Realising that storage was its major Achilles heel, the club embarked on the construction of a new 37.5ML storage dam in conjunction with the installation of a new stormwater harvesting system, both of which were up and running by the end of that year.

In theory, it was estimated that between 50-70ML per annum could be harvested from the 1.3m diameter stormwater drain running through the East Course, however, in practice those figures were never realised and the club remained at the mercy of drought and ongoing water restrictions.

Indeed, when it was announced that Royal Melbourne would again host the Presidents Cup in 2011, the club sought to gain an exemption to assist them with preparations for the event. The Victorian Government granted the club a 70ML exemption for use on the Composite Course holes only (12 West Course holes and six East Course holes) which proved to be an essential element in the returfing work undertaken over the summer of 2009/2010.

Around the time of Richard Forsyth's appointment as superintendent in 2009, Royal Melbourne had started investigating stage two of its water management solution which included optimising stormwater diversion, improving bore production and looking at water treatment to improve quality and alleviate safety issues with reuse of the stormwater.

Permeate Partners, which was involved in the development of the state-of-the-art water reclamation plant at Pennant Hills Golf Club in Sydney, was engaged to manage this phase of the project, with the main components being:

- Insertion of a diversion weir in the stormwater drain to redirect greater volumes. Prior to this, only high volume rainfall events were captured with low volume events simply bypassing the harvester. With the new weir in place the club is now getting about 1ML of stormwater per 10mm of rain.
- Construction of a bioretention filter to remove suspended solids and other contaminants from the stormwater and construction of a surface wetland to treat the reject from the filtration equipment;
- Installation of an ultra filtration (UF) system to remove *E.Coli*, viruses and algae from the stormwater;
- Installation of a reverse osmosis (RO) system to lower salts from bore water, including sodium, bicarbonate and chloride;
- Optimising of bore production and data collection to maximise flows and provide information for future bore drilling. The existing nine bore pumps were lifted, replaced or reconditioned, electrical and pipe work checked, pressure transducers installed and Clearbore treatment completed.
- Provision of a central system to operate and manage all water treatment and production systems.

Throughout 2009 and 2010 all of these components were designed, constructed and brought online and now the club boasts water infrastructure that is worth upwards of \$2.2 million.

In addition to this, a new irrigation system was installed throughout all 36 holes in 2009 ahead of the conversion of the greens, fairways, approaches and tees. Key to the upgrade was improving hydraulics to eliminate significant drops in pressure at the farthest reaches of the course, as well as having more control over distribution.

Rather than having big single row sprinklers, all fairways are now hard-lined with part circle sprinklers on the edges, while a similar set up has been incorporated into the greens. The new fescue approaches and surrounds have also had small, high volume sprinklers specifically installed. "It has been a massive effort by the club to get this infrastructure in place," says Forsyth. "It's a very hi-tech system and in terms of water treatment we have built the Rolls Royce model, whereby we are cleaning up the stormwater to a level where it is almost drinkable.

"We now have two separate systems that mange our water and we have a more elaborate control system for our water production and treatment than we do for our irrigation system. For a bloke who is pretty challenged when it comes to computers it has been a big learning curve, but fortunately one of our senior staff members Andrew Boyle has really taken ownership of it and oversees the system."

Although in a much better position than a few years ago, Forsyth says the club is by far from drought-proof and is embarking down a third stage which will see the construction of a 20ML storage dam between the 3rd West and 6th West holes starting in mid-2012.

"The problem we still have is slow producing bores not being able to give us enough during the height of summer," says Forsyth. "We need a bigger buffer above ground so we can fill up during winter and have enough water at our disposal during January and February."

While the planning and implementing of this new infrastructure has been carried out thoroughly, Royal's water issues have also been alleviated by another simple fact – it has rained. Forsyth jokes that the biggest thing installing the new water treatment infrastructure has done is to make it rain, either that or him starting there as superintendent.

The past 12 months have been nothing short of a blessing, and after a nice wet spring in 2010 (330mm), the rain kept coming over the summer months with more than 400mm recorded in the three months to the end of February 2011. While the past winter has been relatively dry, overall year to date figures have already exceeded the annual average and presently sit around 740mm. As well as taking the heat off the maturing new turf, the rain has provided a timely flush of the greens which will no doubt be of benefit with the likes of The Presidents Cup and 2012 Australian Women's Open to be held there this summer.

A new irrigation system was installed across both the East Course and West Course in 2009 to remedy issues with hydraulics and improve distribution



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More than 18 months after the works were completed, the greens have their trademark firmness and bounce back and, although still immature, the Legend fairways and fescue surrounds are providing a beautiful cover and contrast



CONTINUED FROM PAGE 18

around the greens that was there previously, but that is getting there as it starts to mature.

"The biggest challenge we now have is weed control in all areas. You have herbicide that you put on the greens which the fescue doesn't like, you have herbicide you put on the fescue that kills the Suttons and herbicide that you put on the couch which kills the fescue! So you've got these three turf interfaces where you have to tread a very fine line.

SANDRINGHAM SET FOR KEY CUP ROLE

ust as it did for the 1998 Presidents Cup, Sandringham Golf Club will again play an integral role in the successful hosting of the 2011 tournament. The 18-hole public access course, just a mere lob wedge across Cheltenham Road from Royal Melbourne, will house practice facilities for both the US and International teams, act as a base for volunteers and become the tournament's main car parking area.

While a similar arrangement was used back in 1998, the one major change this year will be the staging of the opening and closing ceremonies on Sandringham's 11th hole, which have been moved across due to the massive number of corporate hospitality facilities on the Royal Melbourne site this time (it is estimated that the 2011 tournament infrastructure build is double that of the 1998 event).

What is also different in 2011 is that Sandringham is now operated by its more prominent sandbelt neighbour. In July 2010 Royal Melbourne took over the lease of the Sandringham course, with Richard Forsyth overseeing the big picture when it comes to the course's turf management and maintenance operations. Andrew Wells, who has been at Sandringham for more than two decades, still runs the day-to-day operations as superintendent.

"I guess the biggest impact we have had since taking over the lease is being able to help them out with equipment and resources that we have and getting things done more efficiently," says Forsyth. "The rain has made us look like heroes as Sandringham had water issues too and there is now a full grass cover back on fairways. In saying that though Andrew and his team have done a lot of work to improve the quality of the fairways to promote the couch and to manage the greens to favour the bentgrass over *Poa*.

"We couldn't host The Presidents Cup without Sandringham. Each team has its own practice fairway and green and we have resurfaced the 9th green, which will act as a chipping green, with Suttons mix and put fescue around it and rebuilt the bunker to match the conditions over on the Composite Course. We have also put Legend couch on the practice tees, while the clubhouse will be the base for more than 2000 volunteers." "The purists would say we now have a very hard, definite line from the bentgrass to the fescue to the couch, when it should be seamless. But with the grasses we now have, if you want to do any form of weed control it is very hard to have them blend off into one another without having *Poa*."

BACK TO WORK

While The Presidents Cup will give Forsyth and his crew the opportunity to showcase their hard work of the previous couple of years, there won't be too much time to reflect. As soon as the tournament infrastructure is torn down, the crew will be gearing up for another busy summer of reconstruction.

For two months from 12 December, the remaining East Course holes – 5 through 15 – will be closed and greens, fairways, surrounds and tees returfed along similar lines to the rest of the course. In between all this the crew will have to prepare the West Course for the Australian Master of the Amateurs tournament (10-13 January) and then a month later the original Composite Course (4 East will come back in place of 16 East) will play host to the Australian Women's Open (9-12 February).

As well as the returfing works and finalising the irrigation system upgrade to the East Course, some subtle changes to greens contours and bunkering will be made to holes 6, 7, 8, 10 and 15 which have been made by the club's newly appointed course architect Tom Doak.

"It's going to be another intense summer for the staff, but it's all good stuff," says Forsyth. "The crew and the club have been fantastic and the success of all the work we have done in recent times can be put down to the dedication and professional work of the staff, suppliers and contractors involved.

"Assistants Simon (Muller, West Course) and Paul (Thomas, East Course) played a huge role in all this and approached all aspects of the project with enthusiasm and commitment. The management, Council of Royal Melbourne and the members were also incredibly supportive and strong in their commitment for improvement."

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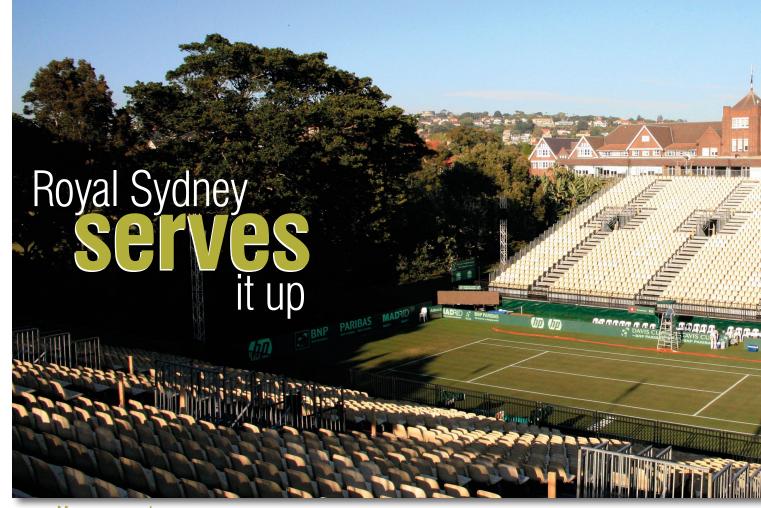
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I have already received many compliments from members, most of whom (previously) felt the high fence would be a visual intrusion on our lovely course. <u>That the net is almost</u> <u>completely transparent is quite amazing".</u>

Allan Shorland Secretary Manager The Metropolitan Golf Club





More renowned as a championship golf venue, in September Royal Sydney Golf Club played host to Australia's Davis Cup tennis tie against Switzerland. While Lleyton Hewitt and Bernard Tomic had their work cut out on court against the likes of Roger Federer, as Brett Robinson discovers the turf management crew at Royal Sydney had a few challenges of their own.

t was the sort of chance encounter that Royal Sydney Golf Club foreman Chris Hamer won't forget in a hurry. Going about his business washing down a mower in the club's northern area maintenance compound, Hamer's attention was grabbed by a gentleman in his mid-60s who had managed to poke his head through the brush fence and was waving vigorously.

Asking whether he could come in and inspect the club's grass tennis courts, Hamer initially thought it was just a curious member. However, when the man introduced himself as Tony Roche, Australia's Davis Cup coach and a man who has mentored some of the greats of tennis like Ivan Llendl, Roger Federer and Australia's own Grand Slam champions Pat Rafter and Lleyton Hewitt, Hamer realised this wasn't just any ordinary request.

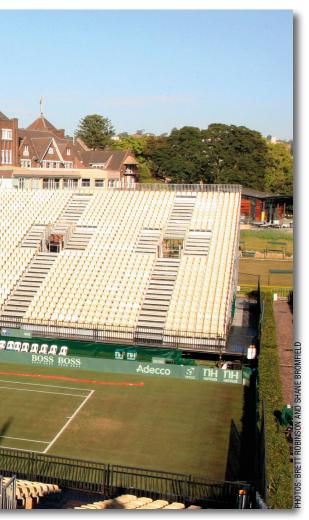
Following a quick call on the two-way, a few minutes later a somewhat star-struck Shane Bromfield, Royal Sydney assistant superintendent and the man running the day-to-day operations of the club's tennis, bowls and croquet facilities, was showing the 1966 French Open champion around the club's couchgrass courts.

The reason for Roche's visit to the Rose Bay club on that last Thursday in July had its origins a few weeks earlier when the Australian Davis Cup team, led by Hewitt, Bernard Tomic and Chris Guccione, swept aside Group 1 Asia/Oceania rivals China 3-1 in Beijing. In doing so the Australians, captained by Rafter, booked a home World Group playoff tie against Switzerland in mid-September.

This particular match-up had a lot riding on it and a win would propel Australia back into the top echelon World Group (the 16 best Davis Cup nations) for 2012. First however, they had to get over a Swiss team boasting the likes of 16-time Grand Slam winner and current world No.3 Federer and world No.20 Stanislaw Wawrinka, but being able to choose the surface on which the tie would be contested, Australia had a distinct advantage.

A grass surface was always going to be the choice for a number of reasons. First, such a surface suited the Australian team more than their Swiss opponents, especially given that grass was Wawrinka's least preferred surface. There was also the fact that Australian No.1 Hewitt was heading into the tie battling a recurring foot injury and playing on grass would be more forgiving.

The problem for Tennis Australia then became finding a venue that could get a grass court up in the middle of winter at such short notice – literally less than six weeks. After looking at a number of potential grass court facilities all around the country, Royal Sydney quickly emerged as the most probable venue and eight days following Roche's visit Tennis Australia officially announced, on 5 August, that Royal Sydney would be host venue,



the first time in the club's history it has staged the prestigious event.

TENNIS PEDIGREE

While the Davis Cup, initially a contest between Great Britain and the US, can trace its origins all the way back to 1900, tennis at Royal Sydney Golf Club has a similar pedigree. As course superintendent John Odell will tell you, Royal Sydney is much, much more than a golf club and as well as housing one of the finest championship golf courses in Australia, one which has been the setting for 13 Australian Opens since 1906, Royal Sydney also boasts impressive tennis, bowls and croquet facilities.

Although no precise date can be fixed for the start of tennis at Royal Sydney, the club's archives reveal that in 1907 the handsome sum of 97 pounds was set aside to develop a new tennis and croquet area and at least three courts were established between 1907 and 1909. At its peak in 1920, Royal Sydney had 25 courts in play and as it stands more than 90 years later, there are now 18 – 11 grass courts (four Wintergreen couchgrass and seven Santa ana couchgrass) and seven synthetic courts.

The courts, which nowadays entertain the club's 600-strong tennis membership, form part of what the maintenance team dub the 'northern area' which also comprises a croquet lawn and, up until 2009, two bowling greens. (Over the past couple of years



the club has had just a single Greenlees Park couch bowling green after the other made way for the construction of a multi-million dollar leisure centre facility. A new Tifdwarf green is currently being constructed and is expected to open in March-April 2012).

Of the grass tennis courts, there are two separate areas – the four Wintergreen couch 'Birdcage' courts, which were resurfaced in the mid-1990s using turf taken from Royal Sydney's 11th fairway, and the seven 'Long Row' Santa ana couch courts which run parallel to the club's northern boundary along New South Head Rd.

The 'Birdcage' courts are deemed the club's championship courts and are used when it hosts events. The Davis Cup is by no means a first for the club and back in 2001 the same centre court was used for Australia's Federation Cup tie (the women's Centre court at Royal Sydney Golf Club on the morning of the opening day of the Davis Cup tie between Australia and Switzerland. After a lengthy search around the country, Royal Sydney was ultimately chosen by Tennis Australia to host the tie, leaving the crew just six weeks to get the Wintergreen couchgrass court up to tournament standard

Royal Sydney assistant superintendent Shane Bromfield and Australian Davis Cup captain Pat Rafter talk turf ahead of the opening rubber between Tomic and Wawrinka



DAVIS CUP

As soon as the tie was announced, the court was Hydrojected, double scarified and broomed prior to being oversown with ryegrass



equivalent of Davis Cup) which was, coincidentally, against Switzerland. On that occasion Australia, led by Alicia Molik, triumphed despite rain forcing the tie indoors on the final day.

To oversee turf management operations at Royal Sydney, Odell operates two separate maintenance crews – the 'links' crew which is charged with the upkeep of both golf courses (the club also has the nine-hole Centenary Course) and the 'northern area' crew which looks after the tennis, bowls, croquet and clubhouse areas.

Bromfield, a former Australian baseball representative who recently notched up his tenth year at the club, has been Odell's assistant in charge of the northern area for the past three years, while under him is foreman Hamer who next January will chalk up 13 years. They are complemented by a further seven staff.

RACE AGAINST TIME

So how do you get a Wintergreen couchgrass court in Sydney up for one of this country's most critical Davis Cup ties in years in the middle of winter? Well, you could forgive Odell and Bromfield for being slightly on edge when it was confirmed that the

Carbon Trader was applied twice to give the couch a kick-start



club would be hosting the event, however, thanks to some thorough planning and a little bit of luck with the weather, they were ultimately able to deliver a surface tailor-made for the Australians.

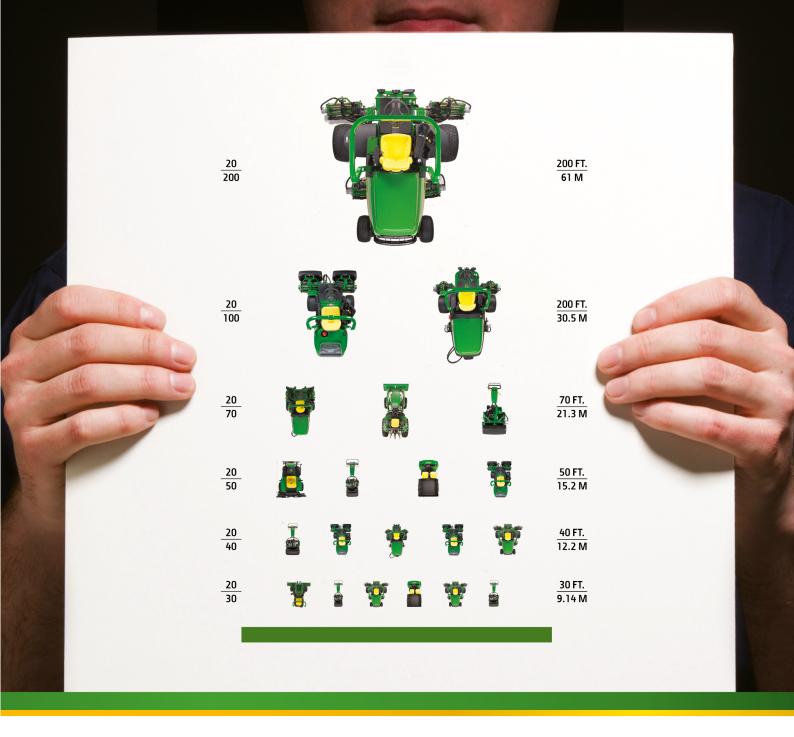
"It's fair to say that we were fairly anxious about hosting the tournament because we didn't want the club to be held in poor regard if the whole thing went pear shaped," says Odell, who has been superintendent at Royal Sydney since 1988 and a veteran of five past Australian Opens. "Royal Sydney doesn't shy away from a challenge, so when the club agreed to have it we had to do everything we could to make it a success.

"One of the important things after the tie was announced was to get the tennis players down here as soon as possible. We had a very good meeting here a few weeks later with the likes of Pat Rafter, Todd Woodbridge and Tony Roche. We asked them how they wanted the ball to react and told them what we could do from a greenkeeping perspective – if we cut it down too short you'll end up with stubble and the ball will grab, but if we kept some leaf the ball would skid through and keep low.

"That meeting was really beneficial and it was important from our perspective to see if we could meet their expectations and be frank with them if we couldn't. As it was we told them that getting a couchgrass court up in Sydney in winter at such short notice was going to be a challenge but we were going to do everything we could to try and get it as close to where they wanted it to be."

Taking the whole 'Birdcage' area out of play as soon as it became apparent that the Davis Cup was heading the club's way, Odell together with Bromfield, Hamer and links crew assistant superintendent Cameron Stuart sat down and tossed around a few ideas as to how they were

CONTINUED ON PAGE 26



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Above: Centre court looking a picture just ahead of the grandstand build

Right: Wade Russell is a picture of concentration as he marks the court on the eve of the opening rubber

Foreman Chris Hamer cleans

off the drum to prevent the

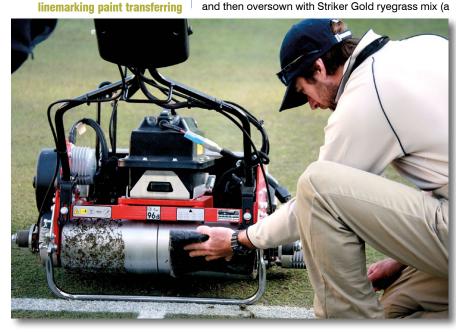
CONTINUED FROM PAGE 25

going to get the centre court up, as well as three practice courts on the Long Row, in such a short amount of time.

The weather had done them little favours and as well as being on the cool side more than 280mm of rain had fallen in July, most of that coming in a 12-day stretch towards the end of the month. The courts were also showing signs of wear thanks to a heavy schedule of local Badge competition and club championships which were also underway.

At the top of the list was getting a firm surface and with the courts traditionally carrying a bit of thatch into winter to help keep them together, a minirenovation was needed immediately. The Monday following the Friday 5 August announcement, the northern area crew ripped into the centre court, Hydrojecting first before running a pedestrian scarifier over in two directions (east-west and westeast) and then dragging a heavy broom over the surface to pull the turf back.

Two days after being scarified the court was then given a foliar feed of Nutrifeed 23 at 1kg/100m² and then oversown with Striker Gold ryegrass mix (a





blend of Derby Xtreme, Premier II and BrightStar II) at 10kg/ha. The decision to oversow with ryegrass, something that hasn't been carried out on the Royal Sydney courts for years, was more an insurance policy just in case the couchgrass failed to perk up in time.

With two massive grandstands holding some 3700 spectators to be constructed either side of the centre court, as well as a myriad of hospitality marquees and other tournament infrastructure to cover the Birdcage area, preventative applications of 3Sixty5 (iprodione) and Chipco Signature (fosetyl) fungicides at label rates were made over the whole area. (Odell recalls in the club's centenary year a massive marquee was set up on the Long Row courts for a function and after ripping up the floor coverings the entire area was blanketed in fungus). Carbon Trader was also applied twice at 11/100m² to give the couch a bit of a kick, while an application of Acelepryn was put out after an unseasonal outbreak of black beetle.

While the ryegrass had an excellent strike, it didn't get the chance to reach its full potential primarily due to an application of Barricade herbicide which had been made to the courts back in mid-April at 2l/ha. As soon as the ryegrass roots hit the Barricade their growth became stunted and combined with the Carbon Trader and the subsequent drying out and rolling as the tournament got closer, conditions weren't exactly conducive for it to stick around.

Following recovery from the mini-renovation, the court was cut with a Jacobsen Eclipse 122 walkbehind at 10mm and was gradually brought down to 6.5mm which, as well we being the standard height of cut for the courts at Royal Sydney, was maintained during the tie. Despite some initial concerns by the players that the surface was too



soft, the onset of rolling using a one tonne Wacker RD 11 the Wednesday before the tournament had the surface ready for the first official practice session on the Monday before the tie.

Ahead of those practice sessions, Odell and Bromfield met with international match referee Javier Moreno and had some pretty frank discussions regarding the amount of practice each team was allowed on the centre court prior to the actual tie. With both the Swiss and Australian teams wanting as much time on the court and Odell and Bromfield wanting to spare the court any wear before the tie started, a compromise was finally reached whereby each team could have three quarters of an hour each day.

"Our main concern was getting the soil aerated enough so we could grow the grass and once we got the cover then we started to worry about rolling," says Odell. "About a week out they were a little concerned that it was too soft and too slow, but we knew the surface would firm up.

"As it turned out the grass grew really well for a variety of reasons – the mini renovation we did, the oversowing with rye, the Carbon Trader and having a good crew led by Shane. We were also pretty lucky with the weather, especially after what had been a very wet July."

"We really couldn't have worked it any better," adds Bromfield. "Everything went to plan and with the timeframe we had I think we did well to get where it needed to be. The time leading up to the tie was bedlam and I guess when we look back on it in a few months time this whole period will seem like it went in a flash.

"I think it helped that our planning was all set up and we were able to demonstrate to Tennis Australia that even though the turf might not be at its best because of the time of the year, we had the team that



would do its best to deliver what they wanted and be as organised as possible.

"We have a really good crew here and we made sure all the i's were dotted and t's were crossed which is something that is bred into you being at Royal Sydney. We had most things covered, even down to practicing getting the covers out if it rained and coming up with some unique ways of ensuring the lines didn't transfer when we were rolling the court."

DOWN TO THE WIRE

The one thing the northern area crew didn't plan for, however, was the dramatic, somewhat controversial and ultimately agonising finish to the tie itself.

Tomic, ranked 59 in the world, got Australia off to the perfect start in the opening rubber on the Friday, proving that grass was indeed Wawrinka's Achilles heel by defeating him in four sets. Federer predictably accounted for Hewitt in the other singles match and then in the crucial doubles rubber on Saturday Hewitt and Guccione pulled off a sublime 2-6, 6-4, 6-2, 7-6 win over Federer and Wawrinka. Despite Tomic taking a set off six-time Wimbledon champion Federer in the first of the reverse singles on Sunday, the tie went down to the deciding fifth rubber between Hewitt and Wawrinka.

Bromfield was all set to have a few days deserved R&R on the Monday and Tuesday immediately after the tie, however, when the Hewitt-Wawrinka match was sensationally halted due to bad light at 5.50pm on Sunday with the scores locked at two sets all and Hewitt down 3-5 and on serve in the final set, he and the crew found themselves heading back in early Monday to prepare the court for the deciding few games.

Going through their pre-match maintenance routine of dewing off, cutting and rolling, it turned



Above: Before each day's play and in between ties the court was quadruple-rolled

Far left: Bromfield (top) and Hamer get the court ready ahead of Friday's opening tie

Left: Hamer and Alex Munro set up the net

Sixteen-time Grand Slam winner Roger Federer led the Swiss team for the tie





Bromfield puts the finishing touches to centre court

out the match lasted for all of three minutes. After going for and nailing two massive forehand winners, Hewitt proceeded to double fault twice which handed Wawrinka the win and Switzerland a 3-2 victory and qualification back into the World Group for 2012.

Not surprisingly by the time Hewitt and Wawrinka had walked off court that Monday morning, the Wintergreen had deteriorated significantly, especially around the baselines, but considering it had entertained four four-setters, a five set decider and a total of 209 games with three sets decided by tiebreaker, the court held up remarkably well to the punishment.

Indeed, right throughout the lead-up to and during the tie, the comments forthcoming from many quarters on the job that Odell, Bromfield and their team had achieved were extremely positive. One local Sydney radio station even proclaimed on the eve of the tie that Odell had "produced the second best grass court in the world this year", behind Wimbledon one assumes.

"Hearing from guys involved in the set-up of numerous Davis Cups around the world over many



years saying that the grass surface was among the best they had seen was very satisfying," says Bromfield. "Pat (Rafter) was great too. He was very grateful for what we had done and was always asking us about the turf. He even wanted to know about buying a walk-behind mower for his home!"

"It was a really solid and high pressure build up, but it was a privilege to be able to host the tie," adds Odell. "It was a far more mentally challenging event to prepare for compared to Australian Opens we've hosted in the past purely because of the time constraints and conditions we had to work with which meant there was a very narrow window for success. While there is just as much pressure to succeed with an Australian Open, at least you usually know a year or two out and you can put all your management practices well into place beforehand.

"The northern area here at Royal Sydney is a very detailed and maintenance-intensive area and it comes under intense scrutiny by the members. We have very strong tennis, bowls and croquet memberships and for the guys working here they are dealing a lot more one-on-one with the members and presentation is extremely important.

"However, unlike the guys who work as part of the 'links crew', the northern area guys rarely get the big events. While they always assist when we have an Australian Open, the only major event of note recently was croquet's Eire Cup which came here in 2009. Now to have hosted a Davis Cup tie on their turf, which is the first major tennis tournament event for a lot of the guys, it was great for them to experience something on this scale."

NO REST

No sooner had the all the grandstands and infrastructure been pulled down and the courts cleaned up, Bromfield and his crew began a major renovation of the entire Birdcage area in late September. Initially it had been planned to have the courts out of action for 12 weeks in order for renovations and the installation of a new 90mm irrigation ring main, however, the decision was also made to strip the entire surface off with a Koro field topmaker.

As they were undertaking this work, it was announced that Australia, which now has to fight its way back through the Asia/Oceania zone to reach the World Group playoffs, had drawn a home tie against China on 10-12 February 2012. Within hours of that being broadcast, Bromfield received a text message half jokingly asking whether they could get a court up for that tie.

If, by chance, Tennis Australia does decide to bring it back to Royal Sydney, they can at least be assured in that instance the season will be more conducive to growing couchgrass and, more importantly, Odell, Bromfield and the northern area crew will have a bit more time up their sleeve to prepare another championship surface.

With some 209 games and a 3-2 final scoreline, the court understandably took some punishment from the likes of Swiss No. 2 Stanislaw Wawrinka



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This instalment of AGCSATech Update takes a look at golf course developments in the Sultanate of Oman and outlines the goals of a three year biodiversity and carbon benefit study about to get underway of golf courses in Melbourne.



n mid-September, AGCSA senior agronomist Andrew Peart ventured to Muscat, the capital of the Sultanate of Oman, for an opportunity to inspect some golf courses. Oman is situated to the west of the Gulf of Oman and the Arabian Sea and to the east of the United Arab Emirates, Saudi Arabia and Yemen, in the area known as the south west of the Arabian Peninsula. Like many of its neighbours, oil is Oman's major export commodity.

Muscat is somewhat unique in terms of its topography compared with other cities in the region and even the majority of Oman itself. Muscat is located between the Gulf of Oman and the dramatic Al Hajar mountain range which runs the entire length of the northern coastline. The mountain range provides a stunning backdrop to the city but also provides some more moderate temperatures over the winter months, but summers (June to August) are still incredibly hot and humid. Along with very hot weather, the capital only receives an average rainfall of 100mm per year, generally during January and February.

Irrigation water for vegetation is generally sourced from sewerage treatment plants and is locally known as TSE water (treated sewerage effluent). As with most effluent water it has elevated salinity levels, chloride, sodium, nitrogen and phosphorus. The other source of irrigation water becoming more common is desalination. While the people of Oman are sports fanatics, with the two most popular being soccer and cricket, most sport is generally played on non-grassed surfaces with the only sign of green on many sports grounds being the strips of artificial turf used for cricket pitches.

RAS AL HAMRA GOLF COURSE

Ras Al Hamra is currently a nine-hole sand course that will be transformed into a grassed course over the next couple of years. It has spectacular backdrops of the Al Hajar mountain range which will be enhanced even further with the addition of grassed tees, fairways and greens. The course is presently private and exclusive to the employees of Petroleum Development Oman, but is expected to be available for play to anyone once the transformation has taken place.

While the course will consist of just nine fairways, it will be designed to allow for a full 18 holes to be played. This will be facilitated with the use of different tee complexes, separate greens on selected holes and in one instance the construction of a large double green. There will also be a driving range.

The existing oiled sand scrapes will have to be removed and it is likely the majority of the natural sands will be used in the rough as they are very fine, of inconsistent depth and highly alkaline. As with true desert courses, the roughs will not be grassed and will consist primarily of these natural sands as well as the existing vegetation.

The course currently has mature stands of vegetation which will be kept or relocated during the reconstruction process. It is anticipated that the course and surrounding landscape will provide an oasis in this very rocky and dry environment.

MUSCAT HILLS

The first grass golf course to be opened in Muscat was Muscat Hills Golf and Country Club which lies

AGCSATech



inland of the international airport. The natural terrain provides some stunning golf holes, with the position of the 10th green in particular constructed beneath a natural rock wall.

The course is perched high above three natural wadis (water courses) that weave throughout the holes. Although these wadis are dry for the majority of the year, they can carry large amounts of water during the wet season.

The Muscat Hills greens and tees are grassed with Tifdwarf couchgrass, while the green surrounds, fairways and rough were sown with Princess 77 couchgrass. While there was an excellent cover of Tifdwarf on the greens, they were very spongy with evidence of scalping and wheel rutting. They had also just been cored and topdressed and with some more frequent renovation will produce very good putting surfaces. The Princess couch was generally providing a good golfing surface but due to some recent scarification they again were not as good as could be expected.

There is one major irrigation lake on the golf course as well as three smaller lakes. The course is irrigated with TSE that has salinity levels around 1000ppm with sodium and chloride levels that are elevated but not excessive. The level of nutrients in the water would provide generally adequate levels of N, P, K for sustained growth.

THE WAVE

The second course to open in Muscat will be a Greg Norman signature design within a residential development known as The Wave. Adjacent to the international airport and on the coastline, The Wave will comprise more than 4000 properties, a 400-berth marina, premier hotels, retail outlets and the golf course.

The course is very narrow and at times no more than two fairways wide as it is squeezed between the Gulf of Oman and a major freeway, with some of the holes actually being on reclaimed land. As well as the 18 holes, the course will also comprise a dedicated academy, driving range and floodlit par three practice facility. It is expected to fully open in 2012 with nine holes scheduled to be in play by the end of 2011.

The playing surfaces are grassed with Sea Dwarf seashore paspalum while the roughs have





Above: A typical sports ground in Oman. Even the artificial wicket strip looks brown

Left: The existing oiled sand scrapes at Ras AI Hamra will be removed and it is likely the majority of the natural sands will be used in the rough as they are very fine and highly alkaline

Far left: Ras AI Hamra is currently a nine-hole sand course in the Omani capital of Muscat. Over the next two years it will be transformed into a Graham Marshdesigned grass course

Muscat Hills was the first grass course to open in Muscat and boasts Tifdwarf tees and greens and Princess 77 couchgrass surrounds, fairways and rough DATE EGE UPDAT



Victoria Golf Club is one of a number of Melbourne golf courses to be involved in a major three year biodiversity and carbon benefit study to be undertaken by The University of Melbourne in collaboration with the AGCSA been hydroseeded with a blend of other warmseason grasses. The Wave has established a large Sea Dwarf nursery (around 4000m²) on site to grass all the playing surfaces with the sprigs being spread by hand.

A tremendous amount of sand has been moved to create the golf course, especially on the freeway side to block out the view of the road and recapture a sand dune type environment. The natural sands are particularly fine and while they have been used in construction they have been blended with a coarser sand, as well as an inorganic amendment, for the construction of the greens. It is believed a local supplier has been crushing marble for the production of the bunker sand.

The location of the golf course has taken a heavy toll on machinery with ex-pat Australian superintendent Steve Johnston indicating that machinery only six months old appeared to be more like five years old.

BIODIVERSITY AND CARBON STUDY

In the coming weeks researchers from The University of Melbourne will embark on a major scientific study into the biodiversity and carbon benefits that golf courses provide within our cities. The intention of this three year project is to measure these two important 'ecosystem services' that golf courses provide using the same research framework.

It is widely recognised that large green spaces, such as a golf course, make a big difference to the retention of biodiversity within urban areas. They provide habitat for birds, mammals, insects, reptiles and amphibians to inhabit and forage within. Golf courses also often contain some of the most important patches of remnant vegetation within city landscapes. Their role in the urban carbon balance is less well understood and the amount of carbon stored within golf courses has not previously been researched.

After a golf course is landscaped, it takes several decades for the vegetation to establish and surface litter to accumulate providing a more natural ecosystem for faunal biodiversity to find refuge. As such, it is expected that there may well be a greater biodiversity benefit in older, more established golf courses. Concurrently, as the vegetation grows and establishes there will be steady increase in vegetation biomass and therefore above-ground carbon and potentially an even bigger increase in below-ground soil carbon, because the cultivation and maintenance of a productive turfgrass sward can support a big increase in soil organic carbon.

The project aims to investigate within a given climate and soil type (Melbourne's sandbelt) the strength of the link between golf course age, golf course biodiversity value and golf course carbon sequestration status. Golf courses provide an excellent means to investigate the ecosystem services provided by all large urban green spaces because they keep excellent records of any changes in landscaping and management practice.

Another reason why golf courses provide a really good opportunity to investigate ecosystem services and ecological processes is that they contain the full spectrum of green space types, from intensively managed and manicured greens and mown fairways, to less managed, or passively managed, rough and woody vegetation patches.

This provides an opportunity for this project to investigate the relationship between green space type (i.e.: management intensity), soil biodiversity (bacteria, fungal and insect) and soil carbon status. This has real relevance to soil health in urban green spaces and the influence of management practices. Linking soil (and surface litter) biodiversity to soil carbon status could provide some real indicators as to the value of the diverse landscape elements within a golf course, or any large urban green space.

At this stage 11 golf clubs and courses have agreed to be a part of this groundbreaking study and they include Brighton Golf Course, Victoria Golf Club, Woodlands Golf Club, Rossdale Golf Club, Frankston Golf Club, Peninsula Country Golf Club, Centenary Park Golf Course, The Sandhurst Club, Amstel Golf Club, Ranfurlie Golf Club, Kingston Links and Spring Valley Golf Club. These clubs cover a range of ages, from less than 20 years old to more than 100 years old.

The University of Melbourne team to undertake the collection and analysis of data includes Dr Stephen Livesley (soil-plant ecologist), Dr. Nick Williams (urban plant ecologist), Dr Caragh Threlfall (urban ecologist), Prof. Nigel Stork (entomologist) and Dr Amy Hahs (GIS ecologist) who will work in collaboration with the AGCSA.

The first round of onsite research will start prior to Christmas through vegetation surveys, while in the New Year the soil and biodiversity elements will be surveyed which will involve PhD students and visiting international scientists. The project will run for three years in total and regular updates will be published in ATM and in the AGCSA's environmental newsletter Keeping it Green.



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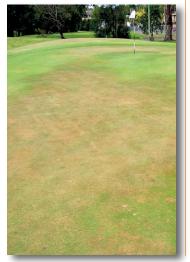




Pythium problems

With summer fast approaching, Ben Evans looks at the causes of *Pythium* root dysfunction which left unchecked can quickly decimate turf.

Running water transports the mycelium, sporangia, zoospores and oospores over considerable distances. Note how the spread of the disease on this green follows the surface drainage pattern



D iseases of turf caused by *Pythium* species include damping off, foliar blight, grease spot and crown and root rot with each name referring to only one aspect of the wide spectrum and symptoms caused by *Pythium* spp. To date, there are some 45 species of *Pythium* recorded which parasitise turf (Abad et al. 1994).

Pythium root dysfunction is one particular form that is a major problem to golf green managers during the summer and, if left untreated or ignored, can quickly damage large areas of turf. It occurs as small patches of blighted turf that are pale green at first and later turn yellow. They can be 2.5cm to 10cm in size and frequently coalesce to produce large patches. Under warm conditions, with extremely wet soils, the turf appears reddish-brown.

Turf affected by *Pythium* root dysfunction displays a general decline in health and symptoms are often non-specific. Blighted areas are thin, off-colour and grow slowly and the turf does not respond to applications of nitrogen. Infected plants are stunted, with leaves that are narrower than healthy plants.

As air temperatures rise, these plants readily wilt, despite the presence of abundant moisture in the rootzone. Unlike foliar affecting *Pythium* spp., no mycelium is present on the foliage. These symptoms are similar of those experienced with basal rot of anthracnose, however, no acervuli are present.

Upon inspection with a high powered hand lens (18x), the crowns and roots appear severely discoloured, with a reduction in length and number. Infected roots may have lesions or generalised, light-tan to brown discoloration and very few root hairs are seen under a microscope. When samples Pythium root dysfunction is a debilitating disease which affects a wide range of turf species. The disease can occur at any time of the year, however, it is most commonly associated with wet, warm conditions in summer

are examined in a laboratory, confirmation can be made with the presence and size of oospores on roots - (see photo opposite page).

Pythium spp. is a water mould fungus, which means it can survive under water-logged conditions. The fungus is a facultative parasite where it is a saprophyte in the thatch layer living off the organic matter, however, it quickly becomes pathogenic to plants when favourable conditions occur.

This is ecologically and pathologically advantageous, as the fungus can rapidly infect plant structures which have short periods of high susceptibility. The oospores have thick cell walls and may survive for long periods in the thatch layer.

There are many species of *Pythium* which infect turfgrass. The most common species associated with root dysfunction include P. aristosporum, P. catenulatum, P. irregulare, P. gramicola, P. dissotocum, P. rostratum, P. vexans and P. vanterpooli. Different species of *Pythium* will be more dominant in some locations compared to others.

CAUSES

Pythium root dysfunction affects a wide range of hosts with all bentgrasses (Agrostis spp.) being susceptible. Couch (Cynodon spp.), zoysia (Zoysia spp.), perennial ryegrass (Lolium spp.) and wintergrass (Poa annua) are particularly susceptible to Pythium root dysfunction while the fine-leaf fescues (Festuca spp.) and Kentucky bluegrass (Poa pratensis) are least susceptible to infection.

The disease occurs at any time of the year, however, it is typically associated with wet, warm conditions in summer. Occurrence of *Pythium* root dysfunction depends on the environmental conditions, the type of *Pythium* and the host.

Vargas (2005) reports on a predictive model for root dysfunction with maximum air temperatures of 30°C, minimum air temperatures of 20°C and a relative humidity of 90 per cent providing the best conditions for the disease to be most active. Close attention to such an environmental model is economically and environmentally viable, as fungicides can be strategically applied when environmental conditions for the disease are present.

With the advent of hot weather the foliage dies rapidly even though it is not under any high temperature stress. The death of the foliage is due to the infected roots which are dysfunctional and impede the uptake and translocation of water.

Root dysfunction is the inability of what otherwise would appear to be a healthy root system to adequately absorb water and mineral nutrients. Under microscopic examination colonies of *Pythium* are evident in the vascular cylinder and root tip. The fungi directly penetrate the root hairs, roots and crowns through invading hyphae from zoospores and sporangia. Running water transports the mycelium, sporangia, zoospores and oospores over considerable distances and the infection can occur a long way from where the spores originated.

A common accelerant of *Pythium* root dysfunction is low cutting heights and low soil oxygen levels. Low oxygen levels affect a reduction in host vigour causing premature root death via asphyxiation. Since roots are vital in supplying water in periods of drought, the turf becomes more susceptible to wilting under these conditions.

Bentgrass putting greens are often under stress in summer, which predisposes the turf to pathogen attack. Bentgrass roots shorten naturally as soil temperatures rise in summer and this decline occurs throughout summer until new growth resumes with a drop in temperature in autumn.

Regular irrigation through the summer months provides *Pythium* with sufficient moisture to germinate and move about the soil. At high temperatures, root loss may actually begin close to the crown, as roots emanating from the crown are subject to slightly higher temperature stress than roots growing deeper in the soil. Root loss occurs more in over-watered, undrained soils and this is due to displacement of oxygen by water and a buildup of carbon dioxide in the rootzone.

The effect of constant, low mowing heights predisposes the turf to considerable stress. Putting greens demand low mowing heights to allow for sufficient ball roll and speed which can result in a restriction in root development. The dual accelerants of wet soils and low, aggressive mowing heights predispose putting greens to attack by *Pythium*, which is further compounded by summer stresses.

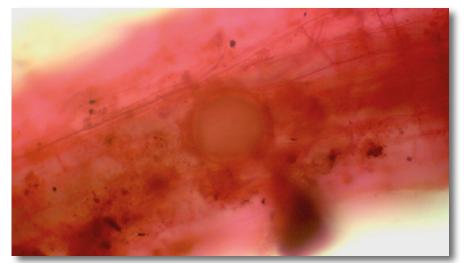
MANAGEMENT

There is no substitute for good soil drainage when controlling *Pythium* root dysfunction, while the management of irrigation is also regarded as key to keeping the disease in check. Any practice that encourages greater root growth is also needed during times when infection can occur.

Because wet soils allow the movement of spores throughout the infected area, adequate surface and subsurface drainage is essential to reduce the opportunity for infection to occur. Any low-lying areas on greens must be identified and re-levelled to allow excess water to drain away.

Compacted soils restrict root growth and limit infiltration and percolation and regular aerification practices are required on greens affected by *Pythium* diseases. Deep coring in spring is vital to encourage new root growth before the onset of summer stress.

Irrigation should be on an as needed basis and irrigating late in the day should be avoided. Watering should be infrequent, wetting the entire rootzone and allowing the soil to dry between watering to encourage greater carbon dioxide displacement.



Settle (2001) found that *Pythium* occurrence in plots irrigated daily was higher than for plots irrigated infrequently. In another experiment, he reported that by reducing irrigation frequency it moderated *Pythium* development in tall fescue (*Festuca arundinacea*).

A slight rise in mowing height and a reduction in mowing frequency is usually beneficial as this allows greater carbohydrate production which will promote greater root growth. Light, walk-behind mowers should be used, as heavier triplex mowers may twist and bruise leaves on the periphery as they turn. All mechanical stresses upon the turf should be delayed until cooler, favourable conditions set in. Topdressing, vertical mowing, double-cutting and rolling should be delayed to reduce stress on an already stressed plant.

Nitrogen fertility should be reduced, as *Pythium* is favoured by lush, dense growth. In an experiment by Gaussoin (1999), newly constructed bentgrass greens were fertilised with an accelerated fertiliser programme (total 6.1 per cent N) compared to a controlled fertiliser programme (total 3.04 per cent N) with severe *Pythium* outbreak occurring in the plots with high nitrogen fertility.

There are several fungicides registered for the control of *Pythium* root dysfunction. Because there are numerous species involved in root dysfunction, different fungicides with different modes of action may be required in an effort to control the disease.

Although the narrow spectrum acylalanines control diseases of *Pythium*, failures do occur with the use of these fungicides. Systemic fungicides such as propamocarb and azoxystrobin are recommended for curative control, but should be watered in to deliver the fungicide to the root system. Sanders (1985) reported excellent control with half-rates of metalaxyl with propamocarb or mancozeb. Fosetyl aluminium is also an excellent fungicide for preventative control.

REFERENCES

For full references, please contact the AGCSA on (03) 9548 8600 or email Ben Evans bennyevans_ au@yahoo.com.au The distinctive circular pattern of the *Pythium* oospore. When samples are examined in a laboratory, confirmation of *Pythium* can be made with the presence and size of oospores Along with mowing and

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started at Kingston Links in March 2010 and set out to look through the fertiliser and chemical records straight away, with greens a priority. The amount of Poa seedhead was a huge problem, as was our root depth which was next to none. Large amounts of high nitrogen-based liquid fertilisers had been used in the past for long periods.

With no hand spraying at my disposal and therefore difficulties getting herbicides onto the greens to reduce Poa, the only way to remedy these issues was to set up a four month programme using more seaweed-based products to promote root depth in conjunction with mini-tine aeration. Our Poa seedhead this time last year was out of control but with just 5kg of ammonium sulphate applied over the past 12 months to our 1ha of bent greens, they are in far better condition this year. I have found it works better to watch the turf and give only what is needed rather than to set a programme in stone." Shaun Bilston, Kingston Links, VIC

"I have been experimenting with prilled fertilisers (Noculate) this year and have had good longer lasting results compared to liquids (Coron). As far as costs go, I think you get what you pay for. My choices of fertiliser used are often influenced by what amendments (i.e.: wetting agent) I could need to add, possibly saving me an extra application and time." Wade Cranston, Glenden Town Club, QLD

"Unfortunately, fertilising is affected by budgets. Most of us look after the greens first, then, if money is available, tees and fairways come next (in our case it is usually whatever is cheapest and then going out at low rates). This year, however, has been different and with the floods affecting the course so prominently we have subsequently received grants.

Having some money to allocate towards fertiliser and soil amendments, like gypsum and organics, has seen remarkable results, with a good lush sward and great growth rates which is a bonus when we are trying to get bare areas covered. The use of slow release fertilisers on these areas has prolonged the growth rate and is producing good results. The only problem now is how do we get the money next year?" Peter Daly, McLeod Country GC, QLD

"Cronulla has just started receiving recycled water with less than desirable levels - 164ppm sodium, 222ppm chloride and pH of 6.5. To displace sodium, about 45kg of gypsum per ML of recycled water is required. I'm currently applying WDG dolomite on a fortnightly to monthly basis depending on irrigation frequency. I like the water dispensable granules and I hand water them in with a minimal amount of water if required and I'm using cal prill on tees and fairways. I will be doing more regular water and soil testing in the future and am also looking for a calcium product to put through my injection unit to help maintain the balance and reduce the SAR." Greg Marshall, Cronulla GC, NSW

"I have in the past fertilised my greens with a combination of soluble and liquid fertilisers. I now

" viven our unique situation here at Indooroopilly, it is the first growth period since the devastating floods to hit Brisbane and I am keen to ensure the plant has the right nutrition. I will be carefully monitoring the turf's performance and will try to ensure it has the best possible chance to recover. This year we will be applying more fertiliser, both straight up NPK and CRN types to the fairways, tees and general surrounds than in a normal year, endeavouring to get lots of initial growth in an effort to minimise the adverse affects of January's untimely inundation. We will be also fine-tuning the nutrition strategy with more inputs of readily available phosphorous to better aid root growth especially on the 328 greens which should combat outbreaks of ERI." Charlie Giffard, Indooroopilly GC, QLD



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mainly apply a soluble fertiliser custom blended to my specifications. My method of application is with a fishmouth nozzle which enables me to apply more fertiliser to worn areas or weak spots." **Brendan Brown, Neangar Park GC, VIC**

"All of Gold Creek's fertiliser programmes have changed over the past four years. The major reasons for this include a greater understanding of soil/water tests, the greater variety of liquid formulations on the market, fertiliser price increases and a change of grass type on fairways. Our greens programme sees only two applications of granular fertiliser and regular applications of liquid fertiliser when required. We do not have a set programme for fertilising greens and by running them lean we have better root growth and less disease.

Over the past three years we have changed all the fairways from ryegrass/Kentucky bluegrass to Transcontinental (seeded couch) which has completely changed the way we approach fertilising. Our fairway programme has gone from four applications a year with a granular to less fertiliser applications due to the grass being in dormancy for four months." Scott Harris, Gold Creek CC, ACT

"I haven't changed any fertiliser practices recently but they have changed over the longer period. Studying under Professor Peter Martin for my Masters gave me a good understanding of soil chemistry and nutrition, which helps when sorting through the many products on offer.

I start with the soil test and work on the soil chemistry with the basic products to amend. The granular ranges of limes and gypsums have been a benefit to apply if affordable. Fertilising on greens includes the basics of sulphates of potash and magnesium, slow release liquid nitrogen, light rates of chelated manganese and iron and liquid organics.

Although the science says a balanced aerated soil should sustain a healthy microbe population, I do apply liquid organics such as seaweed extract and humic acid type products for both plant and microbe food. We also now use the granular slow release potassium to keep a good baseline of K in the greens. The use of Primo and other growth retardants would be one of the greatest advances in keeping nutrients in the plant longer which has probably been the biggest change in recent years." **Michael Bradbery, Manly GC, NSW**

"My modest budget (\$9000) comprises applications to all tees, greens and fairways. It also includes wetting agents and growth retardants. I renovate greens twice a year and once they are fertilised I try to push this application for two months before applying a liquid. I have a minimalist approach when it comes to greens fertilising and with Tifdwarf this combination works well." Col Caulfield, Pine Rivers GC, QLD

"Our programme has been fairly constant bar some minor tinkering after soil and tissue testing. The greens programme has been using the same type of slow release fertiliser for a number of years with the yearly N count decreasing as the A1 ages.

We employ a fairly regular spoon feeding programme over the growing months with a fertiliser mix that includes all nutrients as well as kelp and organic products. One change is a late August foliar feed to the couch fairways to help them out of dormancy." Shane Greenhill, Sorrento GC, VIC



¹¹ Pennant Hills has been using A+ recycled water since May 2008 and as a result our fertility programme has changed dramatically. The use of artificial nitrogen has been reduced by 75 per cent. The soil sodium content has increased significantly which has necessitated regular applications of Ca, Mg and K to reduce the relative amount of sodium. We have had success on greens using potassium nitrate (250g/100m²), Epsom salts (1kg/100m²) and Cal-Sap (300ml/100m²) on a fortnightly basis during the irrigation season. The greens still receive fertiliser twice a year at renovation times and also after prolonged rainfall. The tees and green surrounds receive fertiliser in early spring and autumn, while the fairways haven't been fertilised since May 2008, except for a few shaded areas in spring and autumn.

Water sampling is carried out monthly to ensure nitrogen levels are maintained around 10-15mg/l. However, our treatment plant has the capability to increase the water's nitrogen concentration which is a feature we use in spring and autumn to get the turf in 'grow mode'. This has proven to be very beneficial on thin tees, green surrounds and fairways coming out of and going into winter. Primo applications to all playing areas have increased by at least 30 per cent and the overall cost saving in N has been offset by the increased amendment applications." Richard Kirkby, Pennant Hills GC, NSW

superintendents and golf clubs course maintenance standards



"During my 35 years as a superintendent, fertilising has been one of those components that has been different with each course I have been at. I was fortunate at The Vines that shade was minimal and the greens were large enough to handle the traffic. We made four applications of a soluble fertiliser 24:0:24 plus trace elements in spring and autumn at 2kg/100m² and after topdressing in December and January at 1.5kg/100m² before the Heineken Classic. Rates were about 1.8kg of actual N per year, while phosphorus was just 0.5kg/100m². Key to the programme was using powdered fowl manure, while we used organics to improve CEC and retention of nutrients. Fortnightly foliar supplements of iron, potassium and magnesium maintained good appearance. Mowing was every second day in winter and summer and daily in autumn and spring.

At Lake Karrinyup, fertiliser applications have been very different. Mowing is carried out every day with higher mowing heights requiring more inputs of fertilisers to maintain more leaf for photosynthesis. Other issues include shade, the smaller size of some greens and greater traffic. I am currently fine-tuning our programme since the greens were constructed three years ago. We are finding that fowl manure as an organic does not work due to the amount of moisture when incorporating with topdressing material, causing leaf burn. We are now using the liquid forms of organics to improve CEC.

IT PAYS TO CHECK

Dear Editor,

Upon reading "Does the Award reward?" (**The Pulse, ATM Volume 13.5**), I have to point out an inaccuracy in relation to overtime rates for Saturdays. If the agreed working hours between an employer and an employee are either 38 hours or 40 hours with accrued rostered days off, Monday to Friday, then overtime rates are calculated at time and threequarters for the first two hours and double time for all work thereafter (28.2 (b), page 33, Registered and Licensed Clubs Award 2010). Where the ordinary hours of work are 38 hours worked in five and one half days in each week, then penalty rates do not apply until after 12 noon on Saturdays.

So all those out there who work either 38 or 40 hours Monday to Friday and have not been paid overtime rates of 1.75 for the first two hours and double for all hours after that on Saturdays, you may be owed back pay from the first pay period of January 2010. This can be verified through your Australian Workers' Union organiser.

PETER LAWSON, COURSE SUPERINTENDENT WAGGA WAGGA COUNTRY CLUB, NSW Nitrogen levels are greater than I have used previously. We would be applying between 2.5kg to 2.75kg actual N per 100m²/yr. Our phosphorus levels are higher at Karrinyup to maintain root development due to shade issues. We still maintain the foliar applications as I did at The Vines as I have found that this helps maintain colour and hardens the plant to maintain green speed.

I prefer to apply my fertilisers as a liquid for more even coverage. Also I have found that the Penn Series bents require more nutrients to maintain a dense surface." Trevor Strachan, Lake Karrinyup CC, WA

"We tend now to stay away from slow release and granulars and liquid fertilise fortnightly to control the growth. We only granular feed at renos or just prior to winter. We have also been using molasses, Noculate for the micro-organisms and Phosphite to try and build up the plant's strength to avoid or at least minimise the use of fungicides in the battle with Take-all patch." Wayne Tickle, Ballina GC, NSW

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"We have looked at different practices on our couch greens over the last two summers. One of the main challenges we have is thatch control and with limited major renovations, dethatching and dusting programmes, I decided to try different methods with fertiliser applications to see if we could keep the thatch from build up. Last year I decided to spoon feed the greens with low rates of nitrogen on a monthly basis. Traditionally I haven't applied many granular fertilisers on the greens. A high K product normally goes out mid-year and at renos and the rest of fertiliser applications for the year are liquids.

Late spring last year we had a pretty bad disease outbreak on several greens. After seeing the disease report and seeking advice, we came to the conclusion our fertility programme contributed to our disease issues. This year we have added more granular fertilisers to the greens and have increased liquid applications from monthly to fortnightly. The idea with the granular applications was to get the plant healthier and then regular foliars to follow up keeping the nutrition at the right levels." Dave Morrison, Windaroo Lakes GC, QLD



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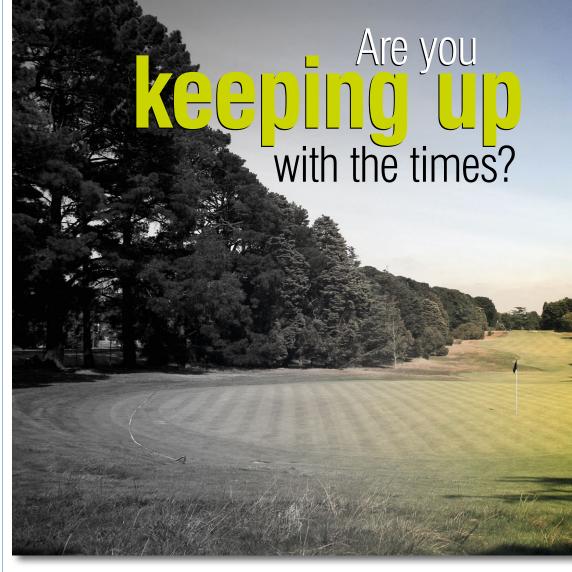


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Historically golf clubs have operated on the basis that meeting the daily needs of golfers was the main objective. But with progress has come additional responsibility and the way we do our job is vastly different from 20 or 30 years ago. The question, however, is whether clubs are addressing these changes and the challenges they present



AGCSA HR and best practice manager Daryl Sellar asks whether golf clubs are moving with the times and embracing the challenge of effectively planning for the future.



have written and said many times that golf course management is an increasingly complex profession, which is usually met with universal agreement. However, there are concerns that within the golf industry we are not preparing ourselves for the existing and future challenges as well as we could be.

This concern is supported by the number of calls I receive from golf clubs suffering varying degrees of turmoil and conflict, often with management unsure of how to meet the costs (financial and time) of managing and improving their course, or superintendents feeling under pressure to retain their positions.

Time on the phone talking through the issues usually reveals some common problems centred around a lack of understanding of individual roles and responsibilities, leaving many clubs 'sailing without a rudder'. This can see simple issues manifest into larger problems, which inevitably leads to tension and strained working relationships, as individuals can see their thoughts and ideas becoming lost in a whirlpool of confusion. So how do we stop this from happening for the benefit of clubs and staff?

A WAY FORWARD

Golf clubs are filled with people who only want to see the best for their club and course and thankfully there are usually enough that want to contribute in a meaningful way by taking up positions on committees and boards.

Most clubs also have hard-working staff members who are passionate about their roles within the club and enjoy the relationships that are forged with members or regular customers. These people are fantastic resources and can contribute to the success of our clubs and courses into the future and whether we realise it or not we all want to feel there is a purpose to what we are doing.

However, many of the conversations I have with members and clubs suggest very strongly that problems stem from a lack of understanding of what is trying to be achieved. This is always going to be a challenge for the traditional golf club, where committee/board terms are relatively short and therefore continuity of decision making is difficult to sustain.

It is in everyone's interests to address this and I have spoken on numerous occasions about the benefits of having the following in place;



- Vision: Where do you see your golf course in 10-20 years' time? What style and character will it have? Having a well planned and documented vision for the course immediately gives some focus for current and future decision makers.
- Strategic plan: To achieve the vision for your course, what limiting factors need to be addressed? What challenges do you need to prepare for? Identifying and planning to address these factors immediately creates a sense of purpose for all involved.
- Business plan: There is usually a cost associated with each step of a strategic plan and having a clear understanding of these costs greatly assists the long-term financial management of our clubs.

While it is impossible to budget precisely for every situation in the golf course environment, it is possible to predict many of the repeatable maintenance and capital costs to within reasonable tolerances and these should be seen as the foundation for maintaining the course. Additional projects should not be at the expense of these basic costs, but budgeted for and undertaken when they can be afforded. We have all probably managed our courses successfully with reduced budgets for a year or so and the temptation is to continue with reduced inputs (fertiliser, labour, renovations etc...) or machinery turnover year after year to allow other new projects to be undertaken. However, the consequences become evident throughout the course soon enough and they are often slow to reverse.

ROLES AND RESPONSIBILITIES

An increasing number of Australian golf clubs are now over 50 years old, with many closing in on their centenaries and quite a few which have already surpassed that milestone. In many cases, these clubs are still on their original sites which existed for thousands of years before golf was ever played on them.

Despite all the work we have done over decades, all the sleepless nights stewing over decisions regarding grass types and bunkering, these landscapes remain largely unchanged. Should we stop maintaining these sites as golf courses they would quickly return to their natural state.

It is important to keep this in perspective when entrusted with a management role associated with a golf course. We are truly custodians of these sites for a very brief moment in time. But this custodianship should be taken seriously as it comes with the responsibility of ensuring these sites are managed appropriately.

Golf courses are unique working environments. So much of what we love about our courses is based on the time they have taken to evolve and such ongoing evolution cannot be hurried. Yet, this conflicts with the urgency of decision making we find ourselves forced into to meet the demands of the modern golfer.

It is this conflict between the urgent and the important that often leads to problems for golf courses. Short-term decisions often compromise the long-term management of our courses and the sites they occupy.



With new technology and greater knowledge allowing course conditioning to improve throughout the year, many golf clubs are now producing what would have been tournament conditions in the 1980s on a weekly basis

Most clubs have hard-working, passionate and skilled staff, however, it is important across all facets of golf club management that responsibilities and roles are clearly defined



Casual conversation with colleagues, committee members and golfers can be very powerful in conveying confidence in your role and what you are trying to achieve



Whether we take on a paid or volunteer role within a golf club, the complexity of decision-making needs to be highlighted. There needs to be some form of induction that outlines the need for a longterm management strategy that looks well beyond the tenure of an individual's appointment.

To assist this process of people understanding their role in helping the course achieve and maintain its vision, the following is strongly recommended for every club:

- Position descriptions: Whether a staff member or committee/board member, every role should have an outline of responsibilities and expectations.
- Inductions: Having a formal induction process for each of these positions provides an opportunity for questions to be asked and clarified before the position is undertaken.
- Appraisals: The power of feeling valued should never be underestimated and a well structured appraisal system (carried out at least annually) provides the opportunity to demonstrate a person's worth and identify areas where they may require some assistance.

An effective appraisal system is only possible with something to assess performance against, hence the value of the position description and



induction. The majority of problems that I deal with within clubs centre around a lack of these crucial documents, or a lack of detail within them.

Problems arise when performance is being measured against an interpretation of subjective criteria (e.g.: 'the course will be maintained in good condition throughout the year'). While challenging to establish, some measurable criteria are required for each role so that each individual's performance can be assessed more objectively.

COMMUNICATION SKILLS AND METHODS

Like any relationship, communication between staff and management is absolutely vital in the management of a golf course. Everyone benefits from clear explanation of expectations so that messages do not get misinterpreted.

In this day of electronic and social media, a lot is said and written about communication methods and styles, but let's not lose sight of the fact that talking still has a pivotal role to play and it can come in several formats:

- Relaxed and respectful: Casual conversation with colleagues, committee members, shop staff and golfers can be very powerful in conveying confidence in your role and what you are achieving and can also help to remind others of the importance of what they are doing.
- Formal and frequent: A debrief with all staff or an information session with management can be very valuable to remind everyone of the direction you are taking and what is expected. These sessions can be brief, but should have a clear structure and be undertaken regularly.
- Detailed and documented: Whenever actions are required as a result of conversation, or there is some detail that needs to be clarified, it pays to document these and ensure actions are agreed to by all parties. This can help to eliminate the inevitable finger-pointing as to who was responsible.

It seems there is increasing reliance on written communication within golf clubs and this can be

Golf clubs around the country are now facing challenges of asset management with the likes of machinery, irrigation systems and maintenance facilities in need of significant investment to upgrade or replace them a good thing in many cases. Too often problems arise when decisions are based on conversation alone and having written records can alleviate a lot of confusion.

- Reporting: While written reports are never high on the most attractive parts of any job, they are critical to clarify progress or decisions in areas that are critical to the vision for the golf course. A well structured report should reflect the structure of course management and the issues that are critical to the vision for the golf course. This ensures that all parties are consistently reminded of the importance of these matters, rather than getting distracted by urgent issues that may affect their game on the weekend.
- Email/Blogging: There is no doubt these have vital roles in communicating to a wide range of people very efficiently. However, their use should be well considered and probably avoided in moments of frustration.
- Pictures: We all know the saying, but because so much of what happens on a golf course has a visual impact to some degree, it is much easier to communicate the outcome by including some photos or plans. The inclusion of photos to update progress of a particular project can be invaluable and save committee members a lot of time by being kept updated without necessarily having to visit the site, as well as keeping them informed so they are better placed to answer questions next time they are at the course.

CLARIFYING EXPECTATIONS

Modern 'management speak' has seen the term 'key performance indicators (KPIs) roll off the tongue quicker than a 'G'day'. Are KPIs relevant to golf course management? Given the diversity of skills and management areas associated with the role of the modern superintendent, I think they are. However, often they are confused with issues that relate directly to the course, many of which can be beyond a superintendent's control (can someone be blamed if it doesn't rain?). These issues are better classified as course quality objectives (CQOs), standards that can be adjusted as required depending on issues beyond our control that may impact on the quality of the course (e.g.: weather, finances, staffing levels).

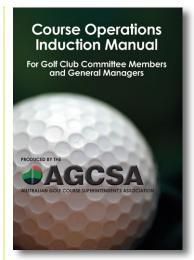
Creating a distinction between the two can go a long way to clarifying expectations of the role of the superintendent and their team and the course itself.

OBLIGATIONS

As mentioned earlier, it is very easy to get caught up in the day-to-day urgency of course management and before we know it we have some longer term management challenges to contend with. There will always be a tendency for conflict between daily expectations and the important responsibilities and obligations we have as managers, but with good understanding and communication of these, decision making should remain consistent with the vision for the course.

Golf clubs around the country are now facing challenges of asset management. Irrigation systems, maintenance facilities, plant and equipment are examples of resources that have accumulated over the life of our clubs but are now in need of significant investment to upgrade or replace them. Unfortunately, many clubs are not prepared for this and either continue to defer the work or plunge into significant debt to finance the projects.

Clubhouse projects often take precedence over capital works for the course, as this is often an easier 'sell' to the members. However, there are usually significant matters of work place health and safety (WHS) and environmental compliance that are being ignored by not addressing the course asset issues.



Whether a paid or volunteer role, some form of induction is imperative. The AGCSA recently launched an induction manual for golf course general managers and committee members to assist them in their understanding of course maintenance operations



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This compromises the safety of staff and volunteers, as well as placing all levels of club management at significant risk.

Every club should have an asset replacement schedule that is documented and included in the induction process for all management staff and committee. This should highlight the essential elements for maintaining and managing the course so they receive first priority when they are due. Such a schedule allows for more predictable financial management.

Every club should also adopt a systematic approach to WHS and environmental management. Changes to WHS legislation to be adopted in 2012 remind us of our obligations to everyone that undertakes work (staff, volunteers, contractors, subcontractors etc) on our courses and that investment in these areas must be a priority and budgeted for. In their governance roles, Board and committee members need to be aware of these responsibilities to help them ensure sufficient resources are being allocated to compliance management.

We all face challenges meeting budgets as well as expectations. The use of unregistered

AGCSA MODERN AWARD SURVEY

t was decided that after having the modern Award in place for some time (since January 2010), it was time to seek feedback from AGCSA members about certain aspects of the Award and whether it has provided suitable coverage for our industry.

It must be remembered the AGCSA's original intention prior to the modern Awards being finalised was to develop our own golf course greenkeepers Award. This submission, made by the AGCSA in 2009, was rejected by the Australian Industrial Relations Commission with the advice being that we would require the entire golf industry submitting an application for a separate award, rather than just the greenkeeping sector.

The intention of the recent survey was to make it easy and quick to complete and to provide a snapshot of the feelings among AGCSA members. The survey was completed by 186 members and the results were enlightening, if not surprising. Some of the key points and comments to come out of the survey were as follows:

- There is still a great degree of variability in working conditions throughout the country. This is reflected in communication with members and the disparity in pay rates. It can also make negotiation very difficult when 'benchmark' figures vary so much.
- A clear majority felt that work conditions had not improved under the modern Award across all sectors of the course management spectrum (from superintendent to apprentice), while 74 per cent said the Award didn't provide suitable coverage.
- When asked how the award could be improved 5 per cent said they thought nothing needed to change; 55 per cent said pay rates needed to be reviewed (read increased); 17 per cent felt the Award did not provide sufficient recognition of our industry, or provide suitable distinction of roles and responsibilities; and 23 per cent felt there was a problem with the clarity/relevance/recognition of hours to be worked. (See The Pulse in ATM Volume 13.5 Does the Award reward? which contains a selection of comments from those who responded to this question.)

It is felt the modern Award has failed to meet the needs of our members and the industry in general. This is not surprising and the responses support the recommendation of the Commission at the time of our submission that we should be working towards a whole of golf industry Award so that we have a better opportunity to correct some of the issues highlighted in the survey.

In the meantime, we will work on developing some proposed amendments to the Award based on member feedback and we will keep the industry informed of any progress. - Daryl Sellar

products can be very tempting to achieve both objectives, with pressure sometimes coming from committees to use these alternatives. All levels of club management need to think very carefully about the risks associated with this strategy and when you get a moment, stop and ask yourself "Why am I taking this risk and who could potentially be hurt by this decision?"

Reliance on practices such as the use of unregistered products also places a false value on our industry and the investment required to meet its needs into the future. We all have a responsibility to the game of golf.

TAKE UP THE CHALLENGE

Historically golf clubs have operated on the basis that meeting the daily needs of the golfers was the main objective. But with progress has come additional responsibility. Times have changed and the way we do our job is in many ways vastly different from 20 or 30 years ago.

We are proud of the progress most of our courses have made and thanks to new technology and greater knowledge allowing course conditioning to improve throughout the year, many clubs are now producing what would have been tournament conditions in the 1980s on a weekly basis.

Our industry boasts a proud history of smaller clubs still operating on the goodwill of volunteers, working bees and donations. These clubs rely on the passion and community spirit of people who genuinely love their course and their clubs and usually have some ripping yarns about their past! But many of our clubs now have a staff structure that resembles a corporation, with increasing expectations and greater diversity of income streams needing specialised skills for their management.

Both groups (and those in between) have the same responsibilities to ensure their clubs are meeting their obligations to those who work for them, the land the club occupies, the wider community and the same challenge to ensure decisions being made now are in the best interests of their clubs and courses into the future.

Are we as proud of our management of every aspect of our courses as we are of the playing surfaces themselves? Can we clearly identify everyone's roles and responsibilities to ensure smooth succession? How do we compare with other industries in our commitment to compliance management? In short, have we kept up with the times, or do we still fail to understand the difference between what is urgent and what is truly important for the management of our courses and clubs into the future?

More than ever our clubs and courses need to be run like a business. Now is the time for every club to take up the challenge to plan effectively for its future, to ensure it is meeting its compliance obligations and that everyone understands their role in the process.

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Driving Environmental Performance

While the Asian golf market has been booming for a number of years, it has only been in recent times that Vietnam has become a focal point for new golf course developments. In 2008, then Melbournebased assistant superintendent Lucas Skelton became a part of that scene when he headed up the construction, growin and maintenance team at The Montgomerie Links in Danang. Here he looks at his time spent in Vietnam and some of the challenges he has had to face as a turf

Links life in Vietnam

G rowing up playing cricket on turf at Croydon Cricket Club in Melbourne's eastern suburbs, I had a very early introduction to turf maintenance. Throughout high school I assisted the curator with some extra rolling and Saturday morning preparations and this prompted me to undertake a Diploma of Horticulture at The University of Melbourne's Burnley Campus.

ant the reality and the

Specialising in turf management under Dr David Aldous, I was required to complete a period of work placement where I was extremely fortunate to work at Metropolitan Golf Club. My time there was priceless, being involved in the reconstruction of greens and tees, green, tee and fairway renovations, bunker construction and native tree maintenance.

Learning the ropes of daily course maintenance at Metropolitan under then superintendent Richard Forsyth also taught me that the finer details like sprinkler edging, hole changing and bunker raking, to name just a few, were the elements that really made the difference.

After completing my studies I moved to the Heritage Golf and Country Club development which had started and I ended up spending the next 10 years constructing, growing-in and maintaining a Jack Nicklaus Signature design (the St John's course) and the Tony Cashmore designed Henley course as an assistant to Sam Myott.

NEW HORIZONS

In August 2008 I finished up at Heritage and embarked on what would be one of the most interesting periods of my turf management career to date. Along with my wife, I made the move to Danang, located on the central coast of Vietnam and the country's fifth largest city, to work for a company constructing, growing-in and maintaining the region's very first golf course – The Montgomerie Links. The Montgomerie Links is owned and operated by Indochina Land, a foreign-owned investment and development company that has committed hundreds of millions of dollars over the last 20 years of operations in Vietnam. Indochina Land also has involvement with two of the oldest golf courses in Vietnam – Dalat Palace in Dalat and Ocean Dunes in Phan Tiet.

The Montgomerie Links was the company's first foray into golf course construction and it subsequently acquired the services of Colin Montgomerie Design and IMG Golf Services led by Chris Gray and Laurie Walsh to design and project manage the construction of the course.

Montgomerie's design features a great mix of holes passing alongside local villages and rice fields. The design required very little earth to be moved in the bulk shaping phase, leaving many of the native plants and ground covers in original condition. This provided a great contrast from the lush, green paspalum playing surfaces. Many of the holes can be played several different ways depending on wind direction, hole location and how much is riding on the shot.

The construction process, not surprisingly, was completely different to my previous experiences at Heritage and Metropolitan. Working on a full native sand base with hundreds of local rice farmers at our disposal and various local contractors with their armies of labour, the site required very different management strategies and methods to get the job done.

Throughout the construction we came across many reminders of the Vietnam War. Danang was home to one of the biggest air bases during the war and at varying stages throughout the earthworks human remains were often uncovered which were reclaimed by relatives for a traditional ceremony to mark their passing. We also had the situation later

manager.



on where our Verti-drain speared an old grenade that was beneath the surface (see photo page 50).

Tom Addis shaped the course with the blade of a D5, leaving the Vietnamese staff to smooth out the final contours, while planting was carried out by hand and sliced in with a locally fabricated roller with discs. The highlight was seeing the course and the local staff, who were being trained in all construction and maintenance tasks as they went, progressing and developing so quickly. While there were some delays, the course took a little under two years to create from start to finish.

WALL-TO-WALL

Sealsle Supreme paspalum was selected as the turf variety due to its dark green appearance which contrasts against the glistening white native sand, as well as its ability to deal with prolonged low light conditions and adaptation mechanisms when high salt content water is used for irrigation. It was imported from Jennings Turf farms in the USA and was used wall-to-wall throughout the course and driving range.

Depending on the time of year, 8-10 weeks was the average time required to bring the paspalum into play. Frequent grooming was then required on the greens to get them up to scratch due to the very coarse leaf and aggressive growth of the paspalum throughout most of the year.

The greens were constructed to a USGA-type design with Zeoplant incorporated into the rootzone to assist with moisture and nutrient retention in a sand that had very high infiltration rates and low CEC values. Greens are maintained between 2.5mm and 3mm depending on the season and turf health, with regular verticutting and needle-tining a key to their success. Weekly dusting and Primo have also proved beneficial in getting a very even, true putting surface.

Tees, fairways and approaches are all maintained at 8mm with a regular verticutting and topdressing programme allowing these heights of cut to be achieved. Being a links-type course it is important to keep the fairways hard and fast despite the aggressive growth during periods of heat and continual rain.

LEARNING ON THE JOB

Managing a new grass in a new environment was always going to provide some unique challenges, but little did I realise exactly how much I would learn about managing this type of grass and maintaining high quality turf in a location where it hadn't been grown before.

It didn't take long after starting to come across what would become one of the most stressful, interesting and educational disease issues I had seen in my relatively short time managing turfgrass. What seemingly started out as everyday dollar spot on a couple of fairways in small patches, soon became large patches which then became whole fairways over night. The controls for dollar spot are well known and while the weather wasn't helping, I thought I had put plans and spray applications in place to get it under control.

What happened next had me extremely concerned. Rather than subsiding and growing out, the injury and spread of the disease increased and it became highly active. I was fortunate to have Dr Ron Duncan, who developed Sealsle Supreme paspalum at The University of Georgia, on speed dial and I sent pictures through to get his thoughts and diagnosis.

The disease was eventually labelled as 'false dollar spot' which had been seen on only a handful of courses with this type of paspalum. We found that normal dollar spot controls including applications of nitrogen would only further activate the pathogen similar to a pythium-type spread. After three wet seasons we have a much better handle on this pathogen and have learnt a lot about a relatively new type of disease. Opened in 2010, The Montgomerie Links is among a number of new golf course developments in Vietnam in recent years which are injecting a new interest in the game

After 10 years working at The Heritage in Melbourne, in 2008 Lucas Skelton joined the team at The Montgomerie Links. One of the most rewarding aspects of his role has been the development of the local Vietnamese staff and the pride they take in presenting the golf course





During construction and grow-in at The Montgomerie Links there were numerous reminders of Vietnam's troubled past. It's not every day you spear a grenade with a Vertidrain



Sealsle Supreme paspalum was used wall-to-wall across the course for its dark green appearance, ability to deal with prolonged low light conditions and tolerance to high salt content irrigation water The local climate is another challenge and the course drainage system runs off into an interconnected lake system that has to deal with an annual average rainfall of 3-3.5m. The majority of this rain falls in the months of October and November.

The weather on the Vietnam central coast also provides its challenges with distinct changes in season from the heat of summer (mid-40s), the heat, rain and typhoons of the wet season, and the cold, dry conditions which prevail in winter. Managing the paspalum in these conditions has been a continual learning process with many successes and failures.

In 2010 the course was turned upside down by Typhoon Mirnae which caused so many deaths and destruction in the Philippines which lies to the east of Vietnam. Winds upwards of 150kph blew casuarinas to the ground, 2-3 inches of bunker sand covered greens and fairways and the roof of the driving range ended up on the ground. While all of my staff would have had their properties ruined by this typhoon, their first port of call was the golf course to repair the damage.

The crew have been extremely committed to the presentation of the golf course and have become very proud of their patch of turf. This dedication was rewarded when in 2010 and again in 2011 The Montgomerie Links was named best course by Asian Golf Monthly magazine.

The golf course is irrigated by a Watertronics pump station providing water to a Rain Bird system



made up of 700 and 750 Series heads. Cirrus and Freedom central control systems have been used to monitor and control a very demanding watering schedule on the quick-draining dune sand. Handwatering is required daily throughout the course in the summer months to keep any 'hot spots' under control, while wetting agents and Zeoplant are utilised on known dry areas.

A full fleet of Toro equipment is very well maintained by head mechanic Emilliano Zarogoza and operated by the trained Vietnamese staff. Many of our staff went from steering water buffalo in the nearby rice fields to steering Reelmaster 5410s and Greensmaster 1000s in straight lines over greens and fairways.

The maintenance crew consists of 75 Vietnamese staff from the nearby Dien Ngoc commune in the province of Quang Nam. The crew is mostly made up of women aged between 18 and 65 who are kept busy as the course, through its design, requires a high level of detailed maintenance. The team of mechanics are kept equally busy with the upkeep of the Toro inventory.

The irrigation crew learnt their trade during construction on how to operate, service and repair the Rain Bird system and have one of the hardest jobs during the middle of summer in keeping enough water up to some of the dry areas out on the course.

From a personal point of view, one of the biggest challenges has been the language barrier. While I have learnt some Vietnamese and my staff learn English, there are still many occasions where instructions get lost in translation and I will go looking for a team of people supposed to be topdressing the 14th green and find them on the sixth edging bunkers! A level of patience and a sense of humour are required to deal with constant misunderstandings from both sides.

The highlights so far are many both on and off the course. The development of the local staff and the pride they take in the daily preparation of the course has been very pleasing, while for the grand opening Colin Montgomerie visited and shot 68, entertaining the members and VIPs who played with him. Montgomerie's feedback and comments regarding the course and its ongoing management showed a very good understanding of the challenges superintendents face and what are realistic goals to meet for daily member play.

GIVING SOMETHING BACK

While the Vietnam golf industry is still very much in its infancy, many of the existing 15-20 courses attract decent numbers, are profitable and most importantly keep the playing surfaces up to members' expectations.

Construction of The Montgomerie Links, as well as other courses such as Danang, Bana Hills and Twin Doves, has kick-started a new wave of golf course development and interest in the game in



Vietnam. The quality of clubhouse, practice facilities and the golf courses has increased, setting new standards to be met by new and existing clubs trying to attract the ever-growing golf market. While golf is played primarily by the rich elite, there has been a move to promote junior golf and pricing driving range buckets so that middle class Vietnamese can be introduced to golf as well.

Ex-pat superintendents are also playing their part and about three years ago the Vietnam Superintendents Association was informally started by a group of Australian superintendents, with the aim to bring together the superintendent community both local and ex-pat to share experiences and provide elements of training.

The meetings, held quarterly, are also attended by turf suppliers working in the region including Sportsturf Solutions, Rain Bird, Jebsen and Jessen,



Toro and Simplot who have supported the meetings both from a financial and education point of view.

Through these meetings and contact with the local greenkeepers a relationship was built with the Chisholm Institute of TAFE in Victoria to organise for the Certificate II in Turf Management to be conducted online and onsite for the local superintendents. This education will be invaluable to many of the local supers whose only previous experience was growing rice or a vegetable crop.

All of these elements will see the Vietnam golf industry continue to grow quickly with, hopefully, long-term benefits for all groups involved.

Editor's Note: Since writing this article Lucas has had to return to Melbourne due to family medical reasons. He is currently working for Monash City Council. \underline{W}

The Montgomerie Links maintenance crew consists of 75 Vietnamese staff which is mostly made up of women aged between 18 and 65





After growing up tending to the bents and fescues of his native Scotland, Robert Lynas now finds himself literally a world away managing seashore paspalum and couchgrass as course superintendent at Geraldton Golf Club, WA.



Above: Geraldton Golf Club is one of two clubs in Geraldton which lies some 450km north of Perth in Western Australia

Geraldton Golf Club wa

Superintendent: Robert Lynas. Age: 38.

Period as a superintendent: Three years. Period as an AGCSA member: Three years.

Turf management career: Bathgate Golf Club, Scotland (apprentice greenkeeper, one year); Pumpherston Golf Club, Scotland (apprentice greenkeeper/greenkeeper, 9.5 years); Castlewarden Golf Club, Ireland (greenkeeper, two years); Pumpherston Golf Club, Scotland (assistant superintendent, five years); Wonthella Bowling Club, Geraldton, WA (greenkeeper, two months); and Geraldton Golf Club, WA (superintendent, three years).

Turfmanagementqualifications:Level2greenkeepingandgroundsmanshipatOatridgeAgriculturalCollegenearEdinburgh, Scotland.

Where in Australia is Geraldton and what is the town famous for? Geraldton is 450km north of Perth in Western Australia. It is famous for its crayfish industry and is home to the war memorial for HMAS Sydney II which honours the 645 Australian sailors who were lost off the WA coast during a World War II battle in November 1941. Tell us a bit about your background in turf management and how you came to be at Geraldton Golf Club? I grew up in Livingston just outside of Edinburgh, Scotland and with about 12 golf courses within a 10 mile radius it wasn't an unusual career path to take. I started out as an apprentice at Bathgate Golf Club east of Edinburgh before moving up the road to Pumpherston Golf Club where I stayed for nearly a decade.

I then took up a position at Castlewarden Golf Club in County Kildare in Ireland for a two year stint. Moving back to Scotland I took up the assistant's role at Pumpherston and after five years decided to move with the family to Australia.

We had always wanted to come to Australia to live, but it was always the wrong time or family issues arose. However, when one of our friends was diagnosed with cancer, we decided that life was too short not to try so we started looking at different places – Townsville, Adelaide, Melbourne, Ballarat and Geraldton. Taking all things into consideration (wages, renting a house etc...) we thought that Geraldton would be a good place to stay. My first job in Geraldton was at Wonthella Bowling Club and after just a few months there was appointed superintendent at Geraldton Golf Club. Give us an overview of Geraldton Golf Club and some of its unique characteristics? I would have to say the seashore paspalum (*paspalum vaginatum*) greens are the most unique aspect of the course. We are one of only a few courses in WA that have this variety. As well as having it on greens, we also have it on tees and fairways.

What are some of the unique features about Geraldton Golf Club from a turf management perspective? Is it an easy/hard facility to manage? The aggressive growth rate of the seashore paspalum on the greens in the summer is quite incredible. At first I found it hard to get to grips with, especially given that I had come from the Northern Hemisphere and was more used to fescues and bents, but despite some minor mistakes early on I can now say I'm a lot more comfortable with their management. At present we spray Primo Maxx every three weeks in the summer months and do a light verti-mow nearly every week.

Take us through your turf management operations there and how you have fine-tuned them since starting there as superintendent? Since I've started we have worked hard on presentation, getting all the little things right that make a big difference – for instance bunker maintenance and making sure they are weeded, edged and raked. Other changes include a fertiliser programme for the fairways, changing holes more than once a week, as well as having a more flexible environment for staff as I currently do a nine-day fortnight.

Any special environmental considerations that you have to incorporate into the management of the course? I would like bigger water storage tanks which would allow us to have a shorter watering window. At the moment we have to stop watering for the tanks to refill. This would also save on power.

What are some of the major challenges facing Geraldton Golf Club both from a turf management perspective and general club management perspective? Like most clubs, the financial belt has been tightened with memberships declining which has a knock-on effect with budgets. The club is actively looking into sponsorship deals with local and major businesses to erect signs around the perimeter of the golf course.

Outline any major course improvement works completed in the past couple of years and highlight any ongoing or future works that the club is undertaking. One of the major improvements would have to be putting 400 tonnes of bunker sand into the bunkers over the last two years. This year we have also reshaped four bunkers, making them bigger and deeper and removing the grass faces. We have extended three existing tees and built three new tees. Ongoing work includes tree-felling.



Water is obviously a critical issue for any golf course. How is Geraldton faring in the water management stakes? For a few years now Geraldton has been using effluent water mixed with bore water. I would like to increase the amount of effluent water to 100 per cent and only use bore water when necessary.

The one product I couldn't manage my course without is... Rovral. The paspalum lies dormant in the winter and has a slow recovery rate from winter fusarium.

What are some pros and cons of being a regional superintendent? The big 'pro' for me is the clean country living, knowing who the people are that play at your course and the relaxed feeling that you get from the town. On the flipside, the increase in freight charges and the time it takes for parts to arrive. Education is also difficult being so far from Perth.

Are expectations of course presentation and conditioning any less than that placed on your metropolitan counterparts? No matter where you are, members are still paying to have the course at its best, but I do think country members have more patience when it comes to issues out on the course (i.e.: machinery breakdowns, irrigation problems). The Geraldton crew (from left) Robert Lynas, Dylan Bentley, Leo Popelier, Brody Marsh, Richard Theiss and greens chairman Greg Anderson

One of the unique features of the course is its use of seashore paspalum on greens, tees and fairways





A series of eight water tanks are used to store a mix of effluent water from the local treatment plant and bore water

Middle right: Geraldton GC's red shed

Far right: Winter fusarium and brown patch are the major disease pressures at Geraldton. These are combated through good irrigation management, an aeration programme and chemical control Do you have to be more resourceful as a regionalbased superintendent? Absolutely! Being 450km away from Perth means parts can take one or two days longer to get here. Luckily we have two ex-boilermakers who can manufacture things and if they can't make it then they know where to go to get it or get it made. Having them makes my life easier.

If you could change one thing about your job as a regional superintendent what would it be and why? At the moment, not a thing. If I was back in Scotland at this time of the year it would be wet and cold (down to -17°C in winter).

How important are the relationships you have with other nearby country course supers/trade reps? It's very important to have good relationships with nearby courses and reps. Chris Clarkson, superintendent at Spalding Park (Geraldton's other major golf club), has been a great help with his knowledge of paspalum grasses. Thanks Chris.

Given your distance from the major metro areas, how do you make sure you keep abreast of the latest turf management techniques and methods. The ATM Journal is a great source of information, as well as the internet and industry sales reps.

What have you got in your shed?

- 3 Toro Greensmasters (two for greens, one for true surface roller);
- Toro Reelmaster 5610 (fairways);
- Toro Reelmaster Sidewinder (tees, surrounds, semi-rough);
- Toro Groundsmaster 325D and 328D;
- 2 Toro Workman utilities;
- Toro SandPro;
- New Holland and John Deere tractors; and
- Boom sprayer, topdresser, Verti-Drain; Turf Tec sweeper and Turf Tec verti-cutter.

Which piece of machinery gets trashed the most and, if you had a wish list, what would be the next major ticket item you would purchase? Where do I start – I think half the shed would go, but definitely the 325D and 328D Groundsmasters get trashed (both belt driven and run down). I would love a Toro Groundsmaster 4300D.

Do you have any interesting pieces of machinery which have been manufactured out of necessity

AT A GLANCE - GERALDTON GOLF CLUB

Course specs: 18 holes, just under 6000 metres in length, with about 30 hectares to look after. Greens: Seashore paspalum maintained between 2.5m-3mm.

Tees: Seashore paspalum maintained at 9mm (surrounds are also maintained at this height). Fairways and rough: A mix of seashore paspalum and couchgrass. Fairways kept at 13mm. Members: Around 400.

Annual rounds: 14741.

Major tournaments/events: No major national tournaments but our big events include Country Week, the Geraldton Amateur Open and Easter Open.

Annual course management budget: \$60,000 (wages not included).

Staff structure: 2IC Leo Popelier (Pops); third year apprentice Dylan Bently (Dill); first year apprentice Brody Marsh (New Borne); part-timer Richard Thess (Ditch); and greens chairman Greg Anderson (Stork).

Climate: Temperatures are generally between 30°C-37°C in summer with maximums up to 45°C. In the winter we can experience anywhere from 8°C-19°C.

Soil types: The course has two different soil types. The flat, bottom part of the course is clay loam, while the top section is more of a sandy loam and has a stone ridge that runs about 8 inches from the top of the surface.

Water sources: We have a series of eight water storage tanks on the course. We are contracted to take 50 kilolitres of effluent water from the Geraldton Shire Council treatment plant, with the remaining water coming from our four production bores.

Irrigation system: We have two irrigation pump stations at Geraldton. At the bottom of the course we have a recently upgraded Grundfos CU351 which runs three CR 32 pumps. The top pump station is a Southern Cross unit which runs one Southern Cross and two Grundfos CR 64 pumps. Renovations: Carried out twice a year. For our major reno we deep scarify and core with 3/8" tines, topdress then fertilise, while for our smaller one we solid tine and topdress.

Major disease pressures: Winter fusarium and brown patch are our main concerns. We try to combat them with good irrigation management, an aeration programme and chemical control.



or any old pieces of equipment that you keep alive? We have a Turf Tec verti-cutter which we have converted into a tree root pruner.

Do you think regional/country superintendents have a better work-life balance than their metro counterparts? This is a hard question for me because I have only worked in regional areas, but I think the more staff and members you have the more trying it can be.

Favourite spot on your course? It would have to be from the water tanks behind the 14th green in the middle of the course. You can see the entire course.

Most pleasing/rewarding moment during your time as Geraldton superintendent? Having members who have been here for over 40 years telling you that you are doing a great job and that the course is looking the best it has ever been.



OFF THE COURSE - ROBERT LYNAS

Family: Married to Mary for six years, daughter Kaley (4), son Ryan (18 months) old and dog Benny.

Claims to fame outside of turf management: I was walking the St. Andrew's Old Course while on a field trip at college and walked in front of 007 himself Sean Connery. I have also meet Steve Elkington who is a life member at Pumpherston Golf Club.

Hobbies/past-times away from turf? I have just joined a gym – trying to get into shape. Cycling and walking the dog with the family.

Favourite sporting team? Celtic Football Club.

What book are you reading now? All the nursery rhyme books to my little girl! Golf handicap? Used to be 18.

Favourite golfer? Seve Ballesteros and Nick Faldo.

The best thing about Geraldton (aside from the golf club) is... the weather! If you come from Scotland, you'll know what I mean!

What do you do to get away from it all? We go to Perth and catch up with friends from Scotland.



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TORO 360 QUAD-STEER HITS THE GROUNDS RUNNING

oro has recently unveiled what it hopes will be the new benchmark for commercial mowers with the release of the Groundsmaster 360 Quad-Steer. Designed for a range of turf applications, whether on golf courses, municipal grounds and large landscaped areas, the Groundsmaster 360 Quad-Steer is Australia's only four wheel steering commercial mower with a centrally mounted mowing deck.

The Groundsmaster 360 Quad-Steer is available in three variants – a two-wheel drive model, a fourwheel drive model and a four-wheel drive model with a permanent all season safety cab. The latter variant is fitted with air conditioning and heating and offers opening side and rear windows, tinted glass, front wiper and washer, interior and side mirrors and an interior light.

Powered by a 36 horsepower Kubota four cylinder liquid-cooled diesel engine, it provides users with a forward speed of up to 23kph and a reverse speed of up to 13.7kph. All models come with a 183cm (72-inch) cutting width with three options of clipping disposal – side discharge, rear discharge or Guardian Recycler configurations, where clippings are cut, recut and fed back to the ground as mulch.

The Groundsmaster 360 Quad-Steer has a hole and pin system that enables a change of cutting height from 25mm to 152mm in 6mm increments and a transport setting that raises the deck height when moving between jobs. The four-wheel drive models also come with the ability to switch to two-wheel steering when not mowing, while the pivoting front axle and high ground clearance makes climbing curbs a lot easier.

The Groundsmaster 360 Quad-Steer delivers fuel consumption of about 5.3 litres per hour (2.7



litres per hectare) depending on driving conditions. Other features include a multi-disk wet clutch and a direct-drive transmission that requires less servicing. The engine also has quick tool-free access to regular service points.

"This is a revolutionary and unique design when compared to other mowers in this category, and is really the next generation in terms of efficiency and stability," says Toro national sales manager for equipment Robert Rein. "Having four wheel steering means the inside and outside tyres pivot around a common point, enabling far sharper turns around objects. When combined with a rear end that follows within the width of the deck, it allows users to mow in and out of tight areas without damaging turf, equipment or property." For more information on the Groundsmaster 360 Quad-Steer, visit www.toro.com.au to locate your nearest dealer.



Bayer's new Turf ID app illustrates weeds, insect pests and diseases



BAYER LAUNCHES TURF ID APP, PERFORMANCE GUARANTEE

Bayer is embracing the benefits of new technology with the launch in September of its new Turf ID app for iPhone and iPad. The Turf ID app retails for \$4.99 + GST and is available to download from the Apple iTunes Store.



Complementing Bayer's existing suite of turf management resources and publications such as the Turf Technical Manual, Turf ID Poster and Turf ID e-Book, the Turf ID app illustrates 14 common weeds, seven insect pests and 14 turf diseases. Each high-resolution photograph shows a magnified view of the weed, pest or disease for easy identification and is captioned with both the common name and botanical name. The app also briefly describes three categories – situation, occurrence and treatment.

Developed by Bayer's turf consulting manager Jyri Kaapro, marketing and technical services manager John Hall and marketing and communications specialist Lesley Pepperell, the app is designed as a value-added marketing tool for turf managers, in particular, golf course superintendents. "The Turf ID app provides practical information

to assist the professional turf manager and will help in the identification of common weeds, insect pests and diseases," says Kaapro. "It will prove to be an invaluable tool for the turf manager and will allow quick identification at a glance, as well as advising the turf manager which product solution is best."

In other news, all Bayer products sold into the turf management and pest control markets are now covered by Bayer's Performance Guarantee. Under the guarantee, if a Bayer product doesn't meet label claims, Bayer will replace it or provide an alternative of equivalent value. Among the products covered by the guarantee include 3Sixty5, Dedicate, Merit, Spearhead and Tribute and a complete list of applicable products can be found listed on www.bayeres.com.au. Customers will need to complete the online claim form which can also be found on the website.

To coincide with the launch of the Performance Guarantee, Bayer is offering customers the chance to enter its V8 SuperSchool Competition. Any customer who purchases \$2500 worth of Bayer products from the pest control and turf management ranges between 12 September and 12 December 2011 is eligible to enter.

For further details of the Performance Guarantee and the V8 SuperSchool Competition, visit www. bayeres.com.au

TORO LAUNCHES T7 SERIES ROTOR



Toro Australia has introduced the T7 Series 1-inch rotor to its irrigation product range, which builds on the company's success with the T5 Series rotor. Coming with a five-year warranty, the T7 Series design is ideal for large areas such as commercial sportsturf fields and municipal grounds.

The T7 Series features a full 5-inch (127mm) pop which sits high above tall grasses and enables a good, clear throw. An arc setting indicator on top of the rotor makes wet or dry adjustments from 45 to 360 degrees trouble-free.

The T7 Series rotor is available in stainless steel or plastic and features debris-tolerant planetary gearing and a non-strippable drive mechanism making it resistant to vandalism and abuse. It also features a 'Smart Arc' device which returns the rotor to its original arc setting if tampered with. Dimensions of the T7 Series rotor are:

- Pop-up height to nozzle: 5" (127mm)
- Body height: 8.8" (223.5mm)
- Rubber cover diameter: 2.2" (55.9mm)
- Body diameter: 2.7" (68.6mm)

The T7 Series rotors are now available through Toro Irrigation dealers and for more information call 1300 130 898 or visit www.toro.com.au.

INDUSTRY APPOINTMENTS

STACEY NEW EVERRIS TECHNICAL MANAGER



Dr. Sam Stacey has recently joined the Everris team (formerly Scotts Australia) as technical manager. Stacey has a Bachelor

of Agricultural Science with Honours in soil science from The University of Adelaide and went on to complete a PhD on trace element fertilisers. Although very accomplished academically in the science field, his passion is in the practical application of fertilisers, specifically in how they can be used to sustainably improve crop production.

Prior to joining Everris, Stacey spent five years at The University of Adelaide as a senior research fellow, co-managing the Adelaide Fertiliser Technology Research Centre. He also managed the Australian agronomy programme for the Mosaic Company. Some of the rewarding outcomes from his time with the university were from projects that led to three patents, including new chelating agents for trace element fertilisers and improved methods for adding trace elements to phosphates.

MCLEAN JOINS NUTURF



Paul McLean has left his position as course superintendent at RACV Royal Pines on the Gold Coast to take up a

Queensland territory manager position with Nuturf Australia. McLean, who joined RACV Royal Pines in October 2007 and was a sales representative for Simplot Pro-Line between 2002 and 2007, started his new role with Nuturf in September. McLean can be contacted on 0488 333 939 or paul.mclean@nuturf.com.au



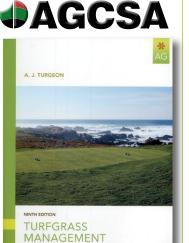
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Turfgrass Management (Ninth Edition)

By A.J. Turgeon Prentice Hall, 2012

ver the past 25 years Alfred Turgeon's Turfgrass Management has become regarded within the industry for its thorough coverage of turfgrass science and technology and has been a principal text for many of those making their first foray into the world of turfgrass management.

2012 will see the ninth edition of this publication released and although there have been numerous updates and an improvement in appearance, the book holds fast to its original premise of being a basic text for turfgrass practitioners by addressing the important features of turfgrass systems, interactions and management.

Among the many updates, this new edition features expanded coverage of the history of turf, anatomy and morphology, climatic adaptation as well as soil physics. The updates and improvements have been based, in part, on feedback from many users of the book as well as those who have contributed to its production over the years. Many of the illustrations have been painstakingly redrawn and overall the new format from publishers Prentice Hall gives the book a much fresher and modern feel.

The ninth edition employs the same organisational structure of the earlier editions and following the introductory chapter the second section looks at the turfgrass plant and how it develops into a sustainable turfgrass community. An expanded treatment of turfgrass physiology and biochemistry has been included in this chapter.

The updated third chapter contains botanic descriptions, environmental adaptations, cultural requirements and uses of various turforass species. New information on how environmental stress tolerance can be improved has been added to the fourth chapter which examines the turfgrass environment, while chapters five and six delve into the array of primary and supplementary cultural practices for maintaining turf at desired levels. The section on cultivation, in particular, has been enhanced to reflect new techniques to remedy soil compaction and improve drainage.

The seventh chapter examines the important aspect of turfgrass pest management, including those involved in the management of diseases, weeds, nematodes, insects and large-animal pests, while the penultimate chapter looks at propagation. The final chapter attempts to bring it all together into integrated cultural systems for sustaining specific types of turf.

For the benefit of students, illustrations are widely used to demonstrate concepts, processes and relationships of importance in turfgrass systems, while at the end of each chapter there are a series of questions which help to focus attention on key concepts outlined in the chapter.

Turfgrass Management (Ninth Edition) is now available through the AGCSA Bookshop and AGCSA members can purchase a copy for \$247 (non-members \$284). 业

CURRENTLY AVAILABLE THROUGH THE AGCSA BOOKSHOP....



Golf Architecture: A Worldwide Perspective -Volume 5 **By Paul Daley**

Full Swing Golf Publishing, 2009

The fifth instalment of Paul Daley's series follows very closely the successful formula which has made the previous volumes in this series such a hit with golf course architecture aficionados in Australia and around the globe. Australian courses to feature in this volume include Royal Queensland as well as picture essays of Peterborough Golf Club and the new par three course at Barwon Heads Golf Club. As well as devoting plenty of space to home grown tracks, the book travels well outside the traditional heartlands of America and the UK, taking in far flung places such as Uruguay, which is home to Alister MacKenzie's little known Club de Golf del Uruguay, Poland (Sand Valley G&CC), The Netherlands (Royal Hague G&CC and De Ullerberg), China (Weihai Point Golf & Resort) and Iceland (Geysir GC).

Turf Maintenance Facility Design and Management



By John Piersol and Harry Smith Wiley 2009

Aimed at turf technicians and turf managers alike, this 180+page hardcover book examines a range of proven techniques that will enable them to design, build and manage an efficient and safe turf maintenance facility or overhaul an existing facility. Calling on nearly 50 years' combined experience, the authors look at how to develop and implement cost effective maintenance programmes to help maximise the performance of plant equipment. The book begins by examining the role of the turf technician before looking at maintenance facility and workshop design, covering key areas such as site selection, layouts and equipment storage areas. It also looks at how to remodel older facilities and emphasises the importance of taking into account the possibility of future expansion. AGCSA members: \$99 Non-members: \$115

Tournament Management By John C. Miller **Wilev 2009**

S NO

Written for superintendents and greenkeepers of all levels and from all clubs, 'Tournament Management: A Superintendent's Guide to Preparing a Golf Course for Competition' addresses the needs and challenges faced in planning and managing golf tournaments. Miller, an LPGA Tour agronomist and former superintendent, kicks off by examining the critical aspect of planning and communication. After establishing that foundation, he looks at implementing an effective agronomic programme before embarking on specific chapters on the management of greens, fairways, tees, roughs and bunkers. The final chapter focuses on the immediate lead-up to the tournament and considerations that need to be made, as well as post-tournament recovery and evaluation. AGCSA members: \$105 Non-members: \$120



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STATE REPORTS

GCSAQ



Brisbane Golf club assistant Ray Lawrence, along with two other assistants, will be heading to the Barclay's Singapore Open in mid-November after receiving the GCSAQ's Assistant Superintendent Recognition Award have been given the pleasure of presenting our latest report to you while our esteemed president gets lost on some remote getaway off the coast of Bali.

The second part of the year has been busy for the GCSAQ with a number of days happening around the state. Our annual bus trip became another ute trip with attendances well below previous years (an unfortunate clash with Father's Day didn't help!). Nevertheless we headed off to Byron Bay Golf Club and started with an enjoyable lunch before heading out to see what superintendent **Shaun Cross** had in store for us. Despite some early rain, the full field (all 14 of us) managed to complete a round and we all thoroughly enjoyed the course.

STANZ STANZ

his is the first report of the newly formed STANZ for Australian Turfgrass Management Journal. STANZ has been established from two industry groups – the Sports Field Forum of New Zealand and the Turf Industry Profiling Group – and will enable a nationally-recognised industry body to advocate for and represent the interests of the sports turf industry and turf managers in New Zealand. It also aligns nicely with the various Sports Turf Associations in Australia.

The STANZ executive, led by chairman **Dr Richard Gibbs**, is made up of representatives from councils, consultancy groups, national sports bodies, trade representation and private enterprise. In November we will be undertaking a strategic planning process to identify the way forward for our organisation, the key outcomes of which will be to identify our short-, medium- and long-term priorities for the organisation, as well as major projects. Without doubt the highlight for the New Zealand sports turf industry has been recent Rugby World Cup. Every province across New Zealand has in some form been engaged in the tournament and the atmosphere in this rugby-mad nation was electric.

The turf surfaces at all stadiums and practice facilities (over 45) across the country were of outstanding quality. Playing surface performance standards developed in 2008 for RWC2011 Ltd were used to help guide venues in surface preparation and to ensure consistency of standards between matches and venues. We offer our congratulations to all NZ turf managers for playing their part in the preparation and execution of the event.

STANZ looks forward to forming close ties with our ANZAC cousins in the world of turf management.

IAN MCKENDRY /ICE-CHAIRMAN, STANZ

It was interesting to see what measures Shaun has implemented at Byron Bay to help get golf carts out on the course despite copping heavy rainfall. Rope, rope and more rope through the tree lines was pretty much the ploy and in doing so they have been able to keep the all-important revenue coming in. Following dinner that evening we had an open forum discussion to come up with new ideas for the trip and other GCSAQ events for next year.

The second day of the trip saw a number head home, while the rest played at Ocean Shores Country Club where we had the chance to catch up with newly appointed superintendent **Shane Heaney**. The GCSAQ would like to thank Simplot Pro-Line (**Colin Thorsborne** and **Paul Bevan**) and Country Club International (**Brendon Hill** and **Brent Robinson**) for their support and sponsorship.

In late September, the GCSAQ headed to Cairns for a field day at Paradise Palms Golf Club. This is the second day we have had in FNQ and Globe Australia continued its great support to make this day a success. We had guest speakers from Barmac, Bayer, Syngenta and, of course, Globe and topics ranged from the latest herbicides on the market through to machinery demonstrations.

Globe was also able to pull some strings and present **Fred Yelverton** and **Travis Gannon**, specialists in weed science from NCSU, who were in town for a weed symposium. We held an open forum on weed control and the guys present were able to ask them plenty of questions which proved very beneficial. A big thank you to **Chris Johnston** from Globe for putting this event together.

Recently the GCSAQ announced a new award as part of its annual programme – the Assistant Superintendent Recognition Award. Sponsored by Toro and Simplot, the award is due recognition for the great work our assistants do and will hopefully give them a boost as they move on into superintendent positions later in their careers.

The GCSAQ received 11 nominations and they were interviewed by a panel made up of representatives from the association and sponsors. We decided on awarding three assistants this year - Ray Lawrence (Brisbane Golf Club), James Gordon (Sanctuary Cove Golf & Country Club) and Matt Duff (Bonville International) – who will all now attend the Barclay's Singapore Open 2011 Golf Course Maintenance Tournament Preparation/ Education Program which will be held at Sentosa Golf Club in mid-November.

Finally, our annual Christmas party will be held on Saturday 3 December at Wet 'n' Wild. For more details please contact me on 0439 284 201 or email windaroogolfclub@gmail.com

> DAVE MORRISON TREASURER, GCSAQ

VGCSA 👁

The lead up to the holiday season is fast approaching and with that the VGCSA committee would like to wish everyone involved in the turf industry a Merry Christmas and a safe and Happy New Year.

First, congratulations to Nathan Bennett for securing the position of course superintendent at Royal Adelaide Golf Club. Nathan makes the move across the border after spending the past six years as superintendent at The Sands, Torquay on Victoria's Surf Coast. Nathan has also been an active member of the VGCSA committee for the past four years and as well as being treasurer most recently held the role of vice-president.

On behalf of the committee I thank Nathan for his positive involvement with the VGCSA and the golf industry in Victoria and wish him all the best in his new role which he starts on 4 November.

And while we are talking about new appointments, the VGCSA also would like to pass on its congratulations to former Barwon Heads Golf Club superintendent **Peter Frewin** on being appointed as general manager of the AGCSA. The committee looks forward to his continued involvement with the VGCSA in this new role.

Trevor Strachan from Lake Karrinyup Country Club in Western Australia was guest speaker at our recent spring education meeting held at Marysville Community Golf and Bowls Club. Host superintendent **Rob Christie** excelled with the venue, the food and the perfect weather on the day. Globe sponsored the event which we are all very appreciative of.

A big thank you to Trevor for making the long trip over from Perth and his presentations were well received by all attendees. The many questions during and after his presentation certainly indicated the relevance of his topics.

During the day Rob was able to update on the progress in Marysville, both at the golf club and in the community since the devastating Black Saturday bushfires. There are certainly challenges that still lie ahead for the redevelopment of the township and associated infrastructure. It was good to support Rob on the day as he has been a VGCSA member for many years.

As this report goes to print the VGCSA will host its annual Turf Research Golf Day at Peninsula Country Golf Club (host superintendent **Steven Hughes**) while our end of year social function will be held at George's Short Room in the Melbourne CBD.

STEVEN HEWITT PRESIDENT, VGCSA



Rob Christie was host superintendent when the VGCSA's recent education meeting headed to Marysville

A test plot with Santa Ana couch planted in a fairway of **GRAND PRIX** couch.

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o doubt by the time you read this the whole of New Zealand will be experiencing a huge hangover caused by the 2011 Rugby World Cup and hopefully we are celebrating an All Blacks victory! Even if the ABs have done the unthinkable and not brought the Webb Ellis trophy back home I am sure the whole event has made a number of us very proud to be a Kiwi! On behalf of the golf industry we would like to pass on our congratulations to all the stadium managers throughout New Zealand on a fantastic job.

Within the golf sector, most New Zealand courses are now recovering from their scheduled renovations and carrying out management practices to get their courses ready for the onslaught of summer, perhaps the busiest period for most courses within New Zealand.

The regional associations are also busy with hosting a number of workshops/field days and the NZGCSA would like to thank all of them for their continued work. The Canterbury and Manawatu/ Wanganui regions will be holding their respective interisland Fine Turf Seminars in 2012. While the South Island FTS is yet to be confirmed, Palmerston North will hold the North Island FTS from 18-19 June. I encourage all to participate in these fantastic events.

The NZGCSA Board will be meeting on 1-2 November in Auckland and I encourage any NZGCSA member to make contact with a Board member and express your views about past and future initiatives.

The New Zealand Open, which will be held from 1-4 December, is just around the corner and this year will be held at the Clearwater Resort in Christchurch. We wish course superintendent **Ryan Adams** and his team all the best and trust the event will be a success for the club and the city itself given the hardships faced by all over the past 12 months.

GRANT BUNTING PRESIDENT, NZGCSA





Gary Thurgood (right) was recently named 2011 VGA Greenkeeper of the Year



Doug Agnew (right) has been bestowed life membership of the VGA

The past winter was a big one for the Victorian Greenkeepers Association and after a great Federation Week in Adelaide we held our AGM and Information Day at Gladstone Park Bowling Club on 22 June. With over 60 greenkeepers in attendance we had four guest speakers talking on a range of turf-related topics.

Before the BBQ lunch we held our AGM with Dyson Appleyard retaining the position of president. Adam Shawcross was elected vice-president and after 10 years as secretary Alan 'Bundy' Elliot stepped down from the position. Bundy will still have a role in the VGA but with huge travel commitments it was getting hard for him. I have assumed the secretary's position and I know I have some very big shoes to fill. The full VGA committee is:

- President: Dyson Appleyard
- Vice-president: Adam Shawcross
 - Secretary: Warren Maynard
- Assistant secretary: Mark Colless
- Treasurer: Brian Hoey

 Committee: Phil Grant, Nick Scholfield, Lee Govan, Alan Mathers, Doug Agnew and Alan Elliot. Match committee: Tom Sculley, Alan Elliot and Mark Colless

In July, the VGA celebrated its centenary and to celebrate the occasion we organised a night that will hopefully be remembered for years to come. The VGA Centenary Celebration was held at the Melbourne Aquarium in what is known as 'The Fish Bowl', a windowed room surrounded by huge sharks, stingrays and thousands of fish.

It was a very special night with life members and past and present greenkeepers and many more involved in the industry attending. Past president **Doug Agnew** was presented with life membership of the VGA for his many years of involvement in the association, while **Gary Thurgood** (Lalor BC) was named Greenkeeper of the Year.

This is the second time that Gary has received the award and with the time he puts into the industry and the quality of his work I'm sure it won't be his last. He beat home fellow finalists Adrian Marston (Middle Park BC), David Zitters (Williamstown BC), Scott Roberts (Sebastopol BC) and yours truly.

With a successful night coming to an end, our eyes were set for this year's Gudgy's Tiff Tour. This annual event sees a busload of greenkeepers hit the road for a three-day educational journey looking at greens over the state and across the border.

The 2011 tour headed up to north-west Victoria and into southern NSW visiting towns such as Ballarat, Kerang, Swan Hill, Deniliquin and Echuca. It is a great opportunity for greenkeepers such as myself who are relatively inexperienced maintaining couch greens, to gather information from guys who have years of knowledge.

With the warm weather now upon us, the couch greens are starting to perk back up and mowing heights on the bent greens lowered all in preparation for what will be another busy seasons. So far it's been a busy year for the VGA, but I'm sure one that that we won't forget, especially those greenkeepers who have had to battle through floods and get their greens back to a great standard.

WARREN MAYNARD SECRETARY, VGA

TGAA VIC 💿

fter a long winter, spring has finally arrived and we can all start to look forward to some warmer weather, longer days and some longer workings hours, not that we want too much of the that

The TGAA VIC committee has been putting the final touches on our next event, the TGAA VIC Seminar and Trade Day at Wesley College on 23 November. This day is being held with the support of Storm Water Victoria, Australian Seed Federation, Turf Victoria and Irrigation Australia. The day will have talks from all of these organisations as well as a trade display showcasing what these industries combined have to offer.

There will also be some field demonstrations from companies, including a site visit to Mt Scopus Memorial College to look at the seeded couch trial currently underway and an irrigation audit conducted on site. We look forward to seeing you all there, but get in early as limited seminar seats are available.

Looking into the future we will then switch our attention to our next Regional Seminar at Wangaratta Turf Club on 28 March 2012. This event will include the racing industry as well as spreading the TGAA to another part of Victoria. From there it will be full steam ahead to the AGCSA conference in Melbourne which we have already had discussions with the AGCSA regarding speakers on content. Following this will be the TGAA/Cricket Victoria Cricket Wicket Seminar at the MCG on 26 July 2012.

NATHAN TOVEY PRESIDENT, TGAA VIC

STA NSW 👀

t is hard to believe we are approaching the end of another year. At the time of writing this report we are preparing for our end-of-year social event which has had a make-over from previous years. This year we are taking our event outdoors with a focus on chilling out and catching up with mates.

The theme for our event is a ute muster and will be held on Friday 4 November at Parramatta Stadium. We have a great day planned with our regular activities of raffles, auctions, phantom race call etc... as well as a few new ones. The stadium surface will turn into a country style shindig – the drinks will be chillin' and the spit will be roasting. We look forward to a great day and in this hectic world we live in it will be a good opportunity to take some time to sit back and smell the roses – or in this case the bales of hay!

2012 is looking set to be our biggest year to date. We have six events planned including the return of our Sydney Seminar and Cricket Wicket Seminar. All the details can be found at www.sportsturf.asn.au.

> CHRIS CHAPMAN PRESIDENT, STA NSW



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STATE REPORTS

TGCSA®



Tasmania Golf Club superintendent Danny Gilligan

GCSAWA

he final TGCSA gathering for 2012 will be the Christmas meeting on Thursday 1 December at Launceston Golf Club. The day will include a BBQ lunch with a few refreshments, followed by nine holes of golf where the hotly contested Reg Roberts Memorial Trophy and North vs South Cup will be up for grabs. Surely the northerners can bring home the Cup on home soil this year after the southerners have claimed the last two. It should be a great day to relax ahead of the stresses of summer, so the committee hopes to see a good turnout.

Speaking of the committee, in the last edition we reported the departure of **Doug Ollington** from the TGCSA committee. Doug was on the committee for several years during which time he was a great help with advice from a trade perspective. We wish Doug all the best as he is now returning to university to undertake some studies along with running his business.

Special mention must also go to Tasmania Golf Club course superintendent **Dan Gilligan**. Dan has now been on the committee for over 22 years during which time he has held all office bearer positions, including four years as vice-president and two years as president. Dan was also secretary for four years and up until this year's AGM at Kingston Beach Golf Club held the treasurer portfolio for six years.

Dan was made a life member of the TGCSA back in 2002 for his services to the association and while he stands down from an office bearer position, he still remains active on the committee and always willing to help in any way.

TONY SMITH PRESIDENT, TGCSA

The new GCSAWA committee has started to settle down quite nicely and filling all the roles that **Darren Wilson** has left for us now that he has joined the Board of the AGCSA. Darren was the most central person on the old committee, so he got roped into all the different meetings that were set up over here in the West.

The University of Western Australia's Turf Research Programme is about to undertake a new trial on managing turfgrass on reduced water allocations. Such an issue should be at the forefront of the minds of all golf clubs throughout Western Australia in the face of the extreme climatic conditions we are currently experiencing.

The GCSAWA together with Golf Western Australia and Golf Management Australia (WA) have

ON THE MOVE

A quick wrap up of major staff movements around the country... Nathan Bennett: From superintendent The Sands, Torquay, VIC to superintendent Royal Adelaide Golf Club, SA

Ben Evans: From 3IC Woolooware Golf Club, NSW to superintendent Bardwell Valley Golf Club, NSW.

Leon Hennessy: From assistant superintendent Elanora Country Club, NSW to superintendent Cromer Golf Club, NSW.

Shane Herring: From superintendent Bardwell Valley Golf Club, NSW to superintendent Camden Golf Club, NSW.

Tom Hogan: Recently appointed assistant superintendent at Barwon Heads Golf Club, VIC.

Luke Partridge: Recently appointed assistant superintendent Emirates Golf Club, Dubai, United Arab Emirates.

Brett Skinner: From assistant superintendent to superintendent Howlong Country Golf Club, VIC replacing Sara Hagy who is expecting a baby.

Brad Sofield: From superintendent Gosnells Golf Club, WA to senior technical officer – parks at the City of Armadale, WA.

Pat Wilson: From assistant superintendent Tura Beach Country Club, NSW to superintendent Pambula-Merimbula Golf Club, NSW.

agreed in principle that each club in WA will donate one half of a member's fee towards the research.

The GCSAWA Super Series has just about finished for the year with the last round to be held at Nedlands Golf Club (host superintendent Aaron Petrovski). It seems that anyone with a chance to take out the title for 2011 will need about 25 points for nine holes to catch our fantastic leader Peter Fleming from Burswood. Our only hope is that he will be tied up with work as he is preparing the course for Tiger Woods' visit on 5 November, one of two invitational events he will play ahead of the Australian Open and Presidents Cup.

Paul Needham (Secret Harbour) has done a great job organising some quality golf courses for the Super Series and we even recoded our first ever hole-in-one which went the way of Callum Hitching during the Mosman Park round.

Our walking wounded man of the West Glenn Cross (Mt Lawley Golf Club) has taken over from Darren Wilson on the Water Wise Golf Course Program Committee and together with water authority representative Aaron Compton, Colin Campbell (Hydroplan), Corrine Lorton (Lake Karrinyup CC), John Forrest (Challenger TAFE) and Trevor Strachan (Lake Karrinyup CC) is working on a structure for golf courses to become 'water wise' and get recognition from the water authority.

The program will provide water security for the WA golf clubs through collaboration between the industry and government regulators to ensure the efficient and sustainable use of water for golf course irrigation and will promote our industry as being responsible users of water.

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The warm season collection

First turf-type seeded seashore paspalum. Excellent turf quality, tolerates high salinity.



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(CLOWARA



What is The Hydrovar?

The Hydrovar has gained a reputation as THE pump mounted microprocessor pumping system controller. But it does much more than just change motor speed.

It actually manages the performance of the pump to match a wide range of system conditions and requirements.

The Hydrovar is fully programmable on site as it incorporates the microprocessor and the variable drive in one compact and unique package

How The Hydrovar reduces energy consumption

Most applications involve the pump operating either along its full speed performance curve or the pumps performance is throttled or regulated by a valve. The Hydrovar eliminates these operating methods by regulating pump speed and hence output to match the system demand. This saves wasted energy traditionally lost in these conventional pump systems. Energy savings of up to 70% can be realized. (figure 1)

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We installed a Lowara Hydrovar system 3 years ago but unfortunately only had one season of use before the bushfires destroyed everything. One of the first priorities was to reinstate the irrigation system and we had no hesitation in installing the exact same pumpset. The Hydrovar system has proven to be more efficient, user friendly, reliable and costeffective than any other system I have worked with. The after sales service from Brown Brothers Engineers has been outstanding, as has the quality of the installation and backup from Jim Waring (Tee's & Greens).

Rob Christie Course Superintendent Marysville Community Golf & Bowls Club

How The Hydrovar reduces maintenance cost

The Hydrovar software is designed specifically for centrifugal pump operation, control and protection. The Hydrovar can thus be setup to protect the pump from operating under various unfavourable conditions eg. cavitation, operating against closed head, low NPSHa or operation past a pumps maximum flow rate. The Hydrovar will automatically shut down and alarm if adverse conditions occur.

The Hydrovar provides the Golf Course Superintendent with the flexibility of watering as required with substantial savings on installation, power usage and maintenance. For details about the experience of some of Australia and New Zealands most prestigious Golf Clubs who have installed Hydrovar pumping systems, contact the Lowara distributors nearest you.

