

It's pretty good when someone who grew up in public housing manages to do something to improve it. And that's what David Borger did, a few years back, as the then NSW Minister for Housing. Seeing the difference between urban landscapes with big, mature trees and those without, he thought it would be good to do some greening in public housing zones.

THE GREEN STREET

The Green Street program was the result. It's government funded and its aim is greener, cooler, community-filled streets. Dig a little deeper (pardon the tree-planting pun) and other, more profound benefits emerge.

Matt Coggan from Turf Design was one of the landscape architects who helped to set up the project at the beginning. By the time the program was rolled out in pilot form in late 2009 it had the Department of Housing, local Council and the social enterprise organisation who would provide the first lot of manpower, all in communication. Needless to say it was a success, and the Green Street Program was then expanded to cover a series of locations from Moree to Eden, the aim being to get 15,000 established trees into the ground, all to plans and specs.

Says Matt, "The project focused on areas of public housing that were in particular need of street trees to shade the roads and footpaths, reducing the heat island effect and creating a more liveable environment for residents. Entire Housing Estate precincts throughout the state have been greened as a result.

Consultation has been key to the program's success." Of course this involves a significant amount of liaison not to mention the planting specifications necessary to make sure the trees are a success. "Retrofitting a street with advanced trees is not ideal. These areas are often inland where conditions are hotter and therefore harsher. Vandalism is also a huge consideration - previous plantings have been ripped out after just a few months in some of these areas."

Large planting stock is used to help counter the vandalism and TerraCottem specified to reduce transplant shock and act as a buffer between establishment irrigation. Green Street program contractors are responsible for getting the trees into the ground, EnterPRAise being one of them.

EnterPRAise's Brian McNamara explains. "We're part of an organisation which offers psychiatric rehabilitation, helping people to create a pathway for better things in the future. For those who are functioning at the highest levels, this opportunity is through employment - mowing, cleaning and tree planting."

THE GREEN STREET *cont.*

EnterPRAise was quick to see an opportunity to be part of the Green Street pilot program, gathering together the necessary equipment and training so that through the process the street crews could gain income, skills and formal qualifications. "We have a supervisor who understands how to look after his team; we brought in one of the tree suppliers to share his 25 years of experience so that the crews would know how to plant and look after the trees; we put them through our usual OH&S training which is why we have a terrific safety record; we had TerraCottem come in and run their training presentation; we sent the crew off for external training on the new equipment; and we organised a TAFE outreach program."

It's no surprise that all but one person graduated and some have gone on to further training. It's also no surprise to see that the investment in the people part of this project has massively reduced the vandalism by helping a sometimes resistant community gain respect for the trees.

There are still many trees yet to be planted as well as the necessary follow-up establishment which is wonderful - more trees, more community, more self esteem. Brian sums it up with something they say around at EnterPRAise, and it's fitting here: "You can do it - we can help".



Chestnut Street before planting the 3.5 metre high trees for shade and community building.



The pilot crew planting 200 litre, 3.5 metre high trees in Chestnut Crescent, Bidwill, NSW.

The pilot crew at work.



MORE SPORTS TURF PROOF

There are more than enough case studies around - real projects by real people - which prove that TerraCottem makes a real difference. Despite careful record keeping, some could argue that this type of evidence is somewhat anecdotal, so it's always good to get an objective, scientific view.

Michael Robinson is a senior consultant with Sports Turf Consultants*. He's also the author of a report commissioned late last year looking at how TerraCottem affects the way water behaves.

The test leading to the report is a simple one - comparing a sand that meets the USGA (or United States Golf Association) particle size range, with the same sand amended with TerraCottem at the recommended rate. The first observation was a confirmation that the addition of TerraCottem had a minimal effect on drainage - which is a good thing.

The next set of results are also worth noting. Compared with the straight sand sample, an increase was noted in the total porosity of the sample containing the TerraCottem along with a corresponding reduction in bulk density." In other words, as more particles were added to the mix, the total number of 'soil' pores increased, and with more pores (aka spaces between the particles) the less dense the sample became. Which is all good news, but wait, there's more...

"Total porosity is calculated by adding together moisture retention and aeration porosity, and in the case of the TerraCottem sample, the total porosity increased from 40% to 45%." Michael also points out that the majority of this total increase involved spaces filled with water rather than air (a 30% increase in moisture retention between 20cm and 30cm) - great news for anyone wanting to deliver water to plant roots.

But wait, there's even more good news. The test also showed that the optimum soil profile depth (ie ideal moisture retention and aeration) was 25 cm with the TerraCottem amended sand compared to 30cm with the raw sand. This may not seem like much, but it certainly is when you factor in the savings to be had when ordering cubic metres of sand for the construction of, for example, a putting green. Not to mention the savings** to be had when ordering less TerraCottem since there is less sand to be amended. You get the idea.

So to sum up the meaning of the tables and graphs, Michael points out that the combination of a significant increase in moisture retention, together with a reduced profile depth provides two benefits. One: construction costs are lower. Two: irrigation scheduling can be extended. Less water = more savings.

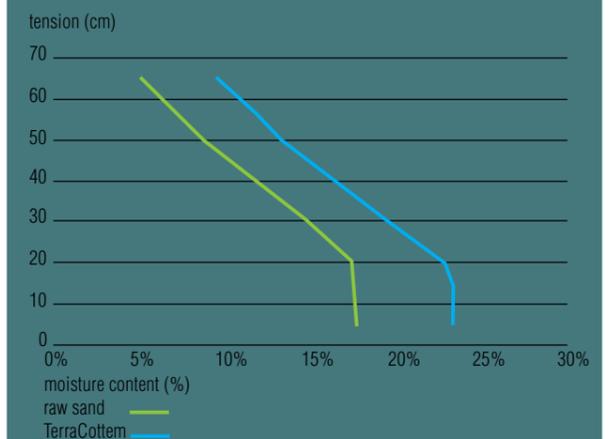
Seems the science is backing up what those case studies have been showing all along.

For a copy of the report, complete with lots of numbers in tables and on graphs, contact info@terracottem.com.au

* For more: visit www.sportsturf.com.au/

**According to TerraCottem's Russell James on a typical two hectare AFL field, you can save up to 1000 cubic metres of sand in construction. This can translate to savings up to \$60,000 and with a lot less trucks to site! The investment in TerraCottem is usually way better than cost neutral with long term savings on inputs.

SOIL MOISTURE CONTENT WITH TERRACOTTEM TURF



Here's a project anyone would wish to be a part of - developer, builder, landscaper, or resident. That's because a great deal of thought lies behind it. As the project's name implies, Beyond Today has an agenda - to leave a valuable, sustainable legacy - possibly something future developers might choose to copy.

BEYOND TODAY

But not at the expense of profit. Beyond Today is profitable. It also happens to be well designed - functionally, ecologically, aesthetically and sustainably. This South Australian 90 hectare project is poised a mere 250 metres from the great southern ocean near Victor Harbour. A former rural holding like those which still border it, when purchased by the Wright family it bore little resemblance the natural landscape it once was, sporting only 40-odd trees.

Corny as it sounds in today's culture of cynicism, Beyond Today's aim, in the words of Adam Wright, is "to create a place we would like to live in". Which he does, as do other members of the family. But that's not surprising when you consider their shared philosophy and commitment.

The Wright's skill set has made the project possible. Adam's father Steve with his social justice background has framed and driven the project; Adam's mother Margrit and sister Nadia are experienced landscape designers; his uncle Bruce has contributed his skills in procurement and project management; while Adam himself, with his real estate background, is responsible for sales and marketing. It's an A team which is why it's an A grade result.

And what is the result? A landscape that is dominated by the green spaces - 80% green to 20% buildings and roads. In fact the first chunk of development dollars was spent on the green spaces. Making use of the existing topography - the natural creek line and swales - the area has only been to better handle and bio-filter an estimated 350 million litres of stormwater runoff. It's been planted with the full suite of local provenance species so that in time it will closely resemble the landscape before settlement. These works have been large scale, but as Adam points out, absolutely necessary to showcase the family's commitment.

Over half the project is now complete and functioning, and while it's still early days, the planned benefits are already showing. Everywhere is evidence of consciously lowered embedded emissions, right down to the cold pressed bricks used in the weir construction using on-site clay. Careful specification and construction has resulted in eco rated built structures; while their siting and landscaping further boosts liveability. In other words the low impact homes are very comfortable and well linked by living corridors of green to form a community within this well planned landscape.

The success of this project is a good mix of big picture meshed with attention to detail. And like every choice made, the use of TerraCottem was deliberate. The wetlands area allowed for direct seeding of species, and is now such a success, it's functioning as a seed bank for other projects. But for the landscape sitting up at the project's residential core, a lush and established result was needed quickly. The landscapers in the family specified TerraCottem for the plants in this area. "Particularly here, when you're this close to the coast, and you're dealing with established plants, there's more risk of loss." Hence the TerraCottem. And the results? "Fantastic."

For more information: www.beyondtoday.com.au



Adam Wright, with his mother Margrit, father Steve and uncle Bruce.



It's a sweet moment when something falls into place that's meant to be. Sweeter still when everyone involved can see the logic (and the benefits)...

HAND IN HAND

A few months ago, the Green Horticultural Group and TC Advantage (supplier of TerraCottem) formalised a relationship that's so obvious it's almost embarrassing to point it out. It's a straight forward arrangement that will make everyone happy. Geoff Green explains.

"We'd done some turf installation work in the past which involved TerraCottem which obviously impressed them." Discussions followed which led to the Green Horticultural Group becoming Australia's inaugural certified TerraCottem Turf installer. And in practice? "TC Advantage always advises clients to have TerraCottem installed by someone who knows what they are doing simply because it maximises the benefits. Now they'll be able to offer a preferred installation expert - one who can offer certification alongside a professional, documented process."

To anyone who's been in and around the turf business for over ten years, Green's appointment is probably not news. The Group covers all the horticultural services associated with turf - from design through to maintenance - and is driven along by a team of 50 lead by Geoff. Their work is everywhere: from White Oval at The King's School to Sydney's Olympic Stadium. Coming originally from an agricultural background, Geoff's approach has always been a little outside the square: using tilt trays to make equipment delivery fast and safe; long-term capturing and recycling water at Green Horticulture's head office compound; trolling for new ways and equipment. "We're looking all the time for more efficient, cost effective ways to do things. It lets us offer clients better value for their money."



Top: Responding to rising tipping fees, Green's Blecavator does much of the work of several traditional bits of equipment - while keeping all materials on site. It's sustainable and cheaper for everyone.

Middle: Laser levelling, Tumbalong Park at Darling Harbour.

Below: A great team - the Terra Cottem boys (L to R) Russell James, Tarrant Baguley, Colin Wise and Adriaan Schepel with Geoff Green, second from left.



THAT CERTIFICATE

Here's a simplified snapshot of what you can expect when you sign up for the TerraCottem+Green preferred package...
 > construction by Green Horticultural Group (including removal of existing vegetation, supplying and installation of the irrigation, application of TerraCottem, Blecavating, laser levelling, turfing)
 > soil analysis as part of the process, commissioned by TC Advantage
 > final certification based on fully documented and signed off handling of TerraCottem from delivery through to application



As the announcement of the next PLA TerraCottem Award winner looms, it's worth taking a look at last year's winner to remind ourselves of what it's all about.

AND THE WINNER IS...

Since 2008, the Award has aimed to recognise people working in the arena of public open space: people who are adaptable and open to new methods; people who are working towards sustainable green spaces.

Last year the Award was given to Newcastle City Council's Roger Ward, not only for the way he does what he does on a day to day basis, but also for one project in particular, the Arthur Edden Oval. But first, Roger's boss Rod Maughan has this to say.

"He brings a lot of experience to the job and he does a lot of research. Roger took a very average field and made it a top class venue for elite competition and training. And he worked across Council to do it, engaging community and the operational staff to develop a sense of ownership, to make the oval sustainable. There's now a sense of responsibility, and no-one wants to see it fail after just one season."

As for the Edden project, the oval itself is home to both the Northern Soccer Federation and the Lambton Jaffas Soccer Club. Though it had great club facilities, the playing surface was an extreme version of the usual tragedy - compaction, poor drainage, poor cover and too many weeds.

Of course that's now a thing of the past and the current playing surface is green, the weeds are minimal, the drainage is good. Given he won an award for it, Roger Ward had a fair bit to do with this metamorphosis. He had a hand in the usual sequence of works: the stripping; adding organics and TerraCottem with a rotary hoe; laser levelling; irrigation; and then the kikuyu maxi rolls. Hooked up to spring-fed tanks, establishment was guaranteed and players were back on top of the turf a little over a month later.

What's not so obvious is Roger's contribution to the project to ensure it took place, and that it was carried along by more than just the Newcastle City Council. This project was in fact made possible thanks to dollar for dollar support - from Council and from the Soccer Club. Additional funding from the NSW Department of Environment and Climate Change gave it a further bonus - funding for the addition of organic material into the playing field along with follow-up monitoring (which, by-the-way shows the project as a success). This may all seem slightly irrelevant, but as Roger explains, it is not.

"This wasn't a sole Council project and with the Club coming on board, there was a joint sense of responsibility. And it's continued. Where you might see other playing fields where the users have no connection, there's also often no interest in protecting it - helping to keep it at a decent standard. At Arthur Edden, partly because of their investment, the Club is prepared to close the field or defer training to protect the long term condition of the field."

It's a good, sustainable outcome and it's being used as a model for future projects. "Where previously we didn't have the resources with a Club's involvement we now have the means to produce and maintain better grounds."

What is TerraCottem?

TerraCottem does a great job because it works on various fronts at the same time...

To start with, TerraCottem uses two main mechanisms to encourage substantial root development - copolymers and root growth precursors. The copolymers are a little like water-holding crystals except that TerraCottem's hydroabsorbent copolymers have been carefully selected and well researched. This means that instead of just one copolymer with a narrow water-holding and water-releasing ability, there is a group of them providing the same function over a wide range, for years. To put it crudely, more water can be stored and released under a broader variety of conditions.

As for the root growth precursors, by definition a precursor is a chemical compound which leads to another. The precursors found in TerraCottem do exactly this, and for a very good reason. If you put growth hormones into soil, they rapidly biodegrade. But if you put precursors into the root zone, the plants get a kick-start by synthesising their own growth hormones. And this conducive environment - for optimum cell division and elongation - stays like this for 12 months.

Then there is a nicely varied collection of plant nutrients - soluble mineral fertilisers, in a format suited to the early growth phase of a plant; slow-release fertilisers, designed to offer a constant source of food over many months; and synthesised organic fertilisers which focus on the soil, stimulating microbiological activity and general soil health.

Add this all together and the result is fast and furious root establishment. This means greater accessibility to water, fewer losses, and, given the reciprocal dynamic between roots and canopy, noticeably vigorous growth. In the longer term, the soil conditioning power of TerraCottem means that plantings are buffered from stress. It's great stuff



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