

SYNERGY

THE TERRACOTTEM ADVANTAGE

It's not an accident that Darling Park was so named, given that at the centre of this Sydney waterfront development lies a jewel of a garden. Created with some of the best talent around – Eric Kuhne & Associates, Site Image Landscape Architects, the Royal Botanic Gardens Sydney and The Lend Lease Design Group – from concept through to creation these gardens were ambitious. Roughly ten years on, they remain a wonderful example of what can be achieved with the right expertise and a willingness to push the boundaries. In fact, many of the boundaries pushed have become today's benchmarks. [Read on >>>](#)

A TOUGH JEWEL



Everyone involved should be justifiably proud, after all, they created a wonderful garden in one of the most challenging sites imaginable. It's proof that expertise and science can produce magical results.

ISSUE

6



Ross Shepherd (Site Image) recalls the brief – to develop a multidimensioned corporate garden with many functions. “It was to provide an outlook for the tenants; areas for lunchtime seating; spaces for use during functions.”

All this was achieved by creating a parterre which, when viewed from above, reveals itself as an astonishing flower. Each section within the flower gives Park users that chance to find seclusion, while a stroll around the perimeter takes you through a series of rooms, each distinguished by flora from the continents of South America, Europe, Africa, Oceania, Asia and North America. Winding its way through all flows a creek, broken here and there by falls which muffle noise from outside the Park and help build a sense of distance from the city beyond and the traffic below.

Probably the most challenging aspect of the project was the slab over which the garden was constructed. “The beams within the slab created planting pockets, the soil depths varying from 600 to 1200mm deep. Our task was to design a landscape without apparent interruption (by the beams) to the design of the garden.”

Also part of the team were Ian Innes and Bruce Rann from Sydney’s Royal Botanic Gardens. Ian recalls, “It was a site with a lot of constraints – quite hostile – but that was offset by the fact that we were working with Lend Lease who were open to our suggested solutions to the technical aspects. This was a project where the landscape was not a minor afterthought. It was the key element. The result is a long way from the space marked in green on the initial master plan.”

Bruce and Ian’s main task was to support Eric Kuhne’s plant designs with knowledge of how plants would likely behave in that particular harbourside site. But what any good horticulturalist knows, success comes from the soil up, and apart from the plant knowledge, it was Ian’s self confessed interest in soils that proved invaluable.

“The garden is essentially a large planter box, sitting over a carpark and Sydney’s Western Distributor. Our first task was to ensure good drainage, not only to reduce the potential load on the slab but to avoid anaerobic soil conditions. We then spent some time getting a specialised planting mixture concocted – light-weight, free draining, without too much organic matter to produce subsidence later. We explained to Lend Lease that it was important to spend time and effort getting the soil right – you don’t want to have to take it out.”

The final recipe included a high inert quotient (volcanic ash), pine bark nuggets for their ability to break down slowly, ground dolerite for good cation exchange – and TerraCottem. “Not knowing what the future maintenance would be, we specified TerraCottem, not only because of the hydrogel content and additional boost to cation exchange, but because of the slow-release fertilisers.”

The mix proved to be a performer – “Plant growth was a great success from the outset”, says Ian while Ross describes it as “a very high level of success of both the garden and the planting.” However it wasn’t an easy task getting it or the trees into position.

Ross explains. “All materials were brought in on conveyor belts, and the trees, which had been grown specifically in crates only 600mm deep, were planted by crane.”

“Post planting some trees failed, though this was well within the accepted range, and while we don’t have two Darling Parks to make a comparison, TerraCottem reduced requirements for fertilisers and watering – it was an integral part of the solution to on-slab planting.”

From Ian’s perspective, success came through paying attention on two fronts; appropriate plant species and a good soil mixture. Ten years ago, TerraCottem was chosen to be part of the mix, and it looks as though the decision was a good one.

too much growth

Cockle Bay, the waterfront face of the Darling Park precinct, was also given the TerraCottem treatment when crated trees (*Ficus benjamina* and *Waterhousea floribunda*) were planted into a decked-over trough sitting on ground. The same soil mixture was used along with a series of buried pierced ag lines inserted into the soil to act as soil aerators. No-one anticipated the trees growing as vigorously as they actually did, quickly blocking out the harbour views from the upper verandah restaurants. After a year of debate the trees were removed to provide clear views.

Who would suspect this visual feast of a parterre is actually growing in a giant planter box.



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FROM THE ENDS OF THE EARTH

Sharing what works is what it’s all about. And here in Australia we’ve a great deal to offer others – which is why Ian Martin travelled from Cornwall to Alice Springs last year. Ian is Curator for the Arid and Semiarid Regions and Curator-designate of The Edge Biome within the Eden Project. (For those who may not have heard of the Project, it’s a horticultural interpretive experience, set in a series of massive domes, and its aim is to show the many essential ways in which man is tied to plants.)

The focus of Ian’s visit was the Alice Springs Desert Park where he hoped to learn about the plants of Central Australia – botanically, ethnobotanically, ecologically and in relation to land management practices. “Given other inhabited continents had pastoralists and or agriculturists prior to the introduction of modern ‘Western’ agriculture, I discovered a unique story of humankind’s impact on a semiarid and arid environments. It’s also obvious that neither farming as currently practised nor idealised Aboriginal practices, nor even tourist habits, can remain unchanged if sustainable biodiversity and viable livelihoods are to be the goals.”

Spending time with the Desert Park’s team, and Assistant Botanical Curator Gary Dinham in particular, Ian was also able to pick up some tried-and-tested methods, specific to managing a botanic collection in an arid environment. Which is why he was there on the day Russell James held a TerraCottem workshop, the training component of the TerraCottem service package. Seems as though picking up a good tip is sometimes about being in the right place at the right time...

Ian Martin (second from the left) picks up tips at the red centre.



THAT SMART WATERMARK



Once upon a time, not so long ago, there were two groups of people, wandering around, looking for each other. Lucky for them, four associations spotted the need to do a little match-making, and the Smart Approved Watermark scheme was created.

“We give consumers the confidence to make informed choices that will help them save water.” Smart WaterMark’s Julian Gray sums up what in essence is a brilliantly simple approach: provide a list of products and services which save water outdoors around the home, and make it available to those who need the information – consumers. On the flip side, the scheme also provides a vehicle for truly useful products and services to reach the end users and ultimately make a positive impact.

Of course the power behind a scheme like this rests in its authenticity and stringent selection criteria. Smart WaterMark has both. Its credibility comes in part from its foundation associations: the Australian Water Association, Irrigation Australia, the Nursery and Garden Industry Australia and the Water Services Association of Australia. And to top this off, the scheme has been written into the National Water Initiative and it is supported by Federal Government funding.

However it’s the work carried out by the technical expert panel which is making the greatest practical impact. “We’ve members who are authorities in soil science, irrigation, gardening, retailing, research and development and water supply. We set up the scheme with a critical mass of products and services, and since then the number of applications we deal with has doubled.”

In fact, fifty percent of applications are knocked back, but when you learn more about what the Smart WaterMark represents this statistic isn’t so surprising. “The panel looks at each using four core criteria: is it a fully developed product which anyone can purchase and take home ready to use; does it meet with all the necessary standards and regulations – plumbing certificates, electrical regulations and for chemicals, health and safety regulations; is it environmentally sustainable; and above all, does it save water?”

Having a recognised symbol to help people navigate often unfamiliar purchases – for example grey water treatment options – is vital and timely given it seems everyone is keen to hop on the water-saving-sustainable-green bandwagon. So let’s thank all those who not only worked hard to get Smart WaterMark off and running, but who make our lives a little easier as we compare drip hoses in the gardening aisle at Bunnings.

TerraCottem carries the Smart WaterMark, and it was one of the first to be given the honour. You’ll find it listed on the scheme’s consumer website – <http://www.smartwatermark.org> – under gardening where, as Julian Gray points out, “it not only has the polymers to improve water retention and therefore give plants the ability to withstand longer periods without water, but it’s also a soil conditioner.” Obviously TerraCottem is part of the scheme, not only because it met the panel’s criteria, but also because it does a good job getting plants established.

This landscape has won an award for the way it manages water. It's also worth checking out for its planting choice and methods.



GOLD STAR FOR SUSTAINABILITY

It's the way things should be – that clever, sustainable landscape projects win awards.

In this case Seabank Estate (Barwon Heads, Victoria) was a winner with a landscape created by development & environment consultants Beveridge Williams and Ocean Road Landscapes.

Seabank was awarded the 2007 award for excellence by the Urban Development Institute of Australia for Water Sensitive Urban Design for its holistic approach. Basically, the public open spaces surrounding the development were created with more than beauty and community enrichment in mind. Explains Peter Shaw of Ocean Road Landscapes, "The reserve doubles as an overflow, delivering stormwater to a pond at the Barwon Heads Gold Course. We've seen it in action, and it works."

And while TerraCottem didn't have a direct impact on water management on the site, it was specified and used in all the grassed areas and garden beds. As Peter says, "It's all part of good management, good techniques, good plants. Together it adds up to the overall success of the project."

BENEATH THE TREES

TerraCottem has again taken out silver sponsorship of TREENET, an independent not-for-profit organisation whose aim is to build the bank of knowledge around street trees. Says Russell James, "The great urban forest makes up a massive chunk of our green asset. We all know how valuable this is, and day by day, we're learning more about how to make these plantings a success. TREENET is the means by which all this information can be shared amongst the people who can make good use of it." Of course one of TREENET's most effective knowledge-sharing methods – apart from the web site and newsletter – is the symposium. It's at this annual event that we all have the opportunity to hear experts discuss related topics, as well as meet other people involved with street trees. This year's symposium will be held September 4 – 5, at The University of Adelaide's National Wine Centre and the Waite Arboretum at Urrbrae, South Australia. For more information visit www.treenet.com.au

WHAT IS TERRACOTTEM?

TerraCottem is a tough one to understand, probably because it works on various fronts at the same time. So let's keep things simple,...

To start with, TerraCottem uses two main mechanisms to encourage substantial root development – polymers and root growth precursors.

Let's start with the polymers which 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 polymer with a narrow water-holding and water-releasing ability, there is a group of them providing the same function over a wide range. To put it crudely, more water can be stored and released under a broader variety of conditions. (And for those who question toxicity, TerraCottem's co-polymers are potassium-based and non-toxic unlike sodium-based water crystal products which are most often used in nappies.)

Now, let's talk about 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 micro-biological activity and general soil health.

Add this all together and the result, at least initially, is fast and furious root establishment. And this means greater accessibility to water, fewer losses, and, given the reciprocal dynamic between roots and canopy, noticeably vigorous growth.

