

SYNERGY

THE TERRACOTTEM ADVANTAGE

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FORESHORE MAKEOVER

Here's a project anyone would love to get their hands on. It's got it all - mature trees and funding (who ever has enough?); a crumbling car park, eroded sea walls, a community fiercely protective of their views and a front line coastal aspect that would make it tough to establish plants. Yes, if ever there was a dream foreshore redevelopment, this was it. Derek Hill, the project officer lucky enough to grab and run with it, tells the story...



The old eroded sea wall and crumbling car park have been transformed into a thoughtfully designed foreshore precinct - there's now so much more on offer.

No transformation is easy, and working in a tidal area demanded some clever thinking.



An hour north of Sydney sits Gosford, a city wrapped around Brisbane Water and surrounded by a collection of national parks and hefty reserves. The amount of green open space per person is big so it's no surprise that it's an attractive place to live. Many young families and retirees move up from Sydney where they settle into the areas of dense development that hug the coastline and enjoy the bushland that cloaks the ridges inland. Derek Hill, a landscape architect with a specialty in arboriculture, joined the Gosford City Council team in 2011.

"I joined the team at a time when the Ettalong Foreshore redevelopment project had Council approval and funding, ready to create and present concepts to the community." Months of community consultation followed. "Most people are naturally cautious of change so proposals are usually met with apprehension." The area identified for redevelopment included a battered sea wall, a narrow strip of bitumen car park, sparse turfed areas and struggling trees. On offer were two playgrounds, a beach café kiosk, a new sea wall, a plumped up beach, an invisible litter trap, significant shade trees, lawns and fitness stations.

"Concerns were raised about the loss of views, parking and easy access to and from nearby homes as a result of the redevelopment. We met onsite with residents and clearly identified where every new tree would be planted and where some existing trees would be removed. In this way we could say to them, this is the view you're going to gain and this is the view you're going to lose." The consultation was a two-way negotiation and problem-solving exercise, made possible by the fact that Derek was the landscape designer and project officer, an in-house local-resident resource offering a remarkable level of service. "It was a cost-effective model that allowed Council to offer this level of response to the community's needs."

With plans finalised, work began in mid 2013 involving around a dozen consultant contractors, a number that's not surprising when you go back over the list of items going in. Coastal engineers advised on the new sea wall, factoring possible sea level rises, storms and erosion. An architect designed the lovely beach facility building. A specialist designed and built the litter trap, positioning it underground, out of sight yet accessible for maintenance, and civil works covered the new parking, kerbs and gutters, the shared pathways, barrier fences, playgrounds and shade structures. And that's just part of a list which extends further to include the environment audit necessary to ensure the project sat gently in this place where the land meets the sea. In fact, it was just this aspect that proved to be a bit fiddly...

"The foreshore had eroded over the years so with the wall's reconstruction we reclaimed some of what had been lost. During the process, the toe of the new sea wall had to be set below sea level, a difficult task given the construction crews were working in an area of tidal inundation. They tried bulk-a-bags as a coffer dam to hold back the

The foreshore is more inviting now that the parking has been set back and by various means, pedestrians have been welcomed to the seafront.



water, but these were washed away. The option of sheet piling wasn't feasible (the cost) so they simply worked at low tide. By timing the concrete pours carefully so that they would have time to set partially before the sea came in, the concrete finished setting under water."

Establishing trees, turf and other planting on the exposed site was also going to be tricky. An extensive irrigation system combined with soil additives were installed to provide new and existing plants with optimum growing conditions below ground. Opportunities for expansive root growth for trees planted within the car park were created through the use of porous paving linking the planting beds to the large new areas of turf. Some trees were placed to complete avenues while others formed useable clusters of shade – the species were selected for their ability to cope with the environment. Understorey massed plants were likewise chosen carefully. TerraCot-tem went in throughout the planted areas. "We incorporated the additive though all turf and garden beds to help maintain available moisture in the soil. This also improved the soil conditions for existing trees by providing a new layer of sandy soil for the roots to occupy." By the end of the project the carpark had been realigned with the edge of the road which helped to open up the reserve to create more green space. Amenity, aesthetics and new facilities aside, visitors to the foreshore now have 300 extra square metres to enjoy. And do they? "The positive feedback from the community has been overwhelming."



Left to right: Derek Hill standing in the midst of it all before work began; hard and soft landscaping allow the roots of the newly planted trees to access water and nutrients in the turfed areas; Ettalong now offers places to walk, sit, eat, sun, shade and water views.

THE TC ADVANTAGE

TC Advantage is a package deal. It's about supplying TerraCottem (more about that in a minute), along with all the training, technical specification and compliance needed to turn a tricky project into a genuine long-term success. So when anyone has a turf, street tree, revegetation or whatever project to tackle, bringing in the TC Advantage expertise means you get: advice on which TerraCottem product to specify; training so that it's applied for maximum benefit; and monitoring to ensure compliance within the project's specs.

As for TerraCottem, it's a brilliant soil conditioning treatment because it works on various fronts at the same time...

To start with, it uses two main mechanisms to encourage substantial root development – polymers and root growth precursors. The polymers are a little like water-holding crystals except that TerraCottem's hydroabsorbent polymers 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, for years. To put it crudely, more water can be stored and released under a broader variety of conditions. (To put it precisely for specification purposes: TerraCottem has an absorption capacity of a minimum of 4500 g H₂O/100 g in distilled water using Method of Analysis CEN EN 13041, with a minimum of 90% of the water contained in the polymers being plant available.)

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.



TERRACOTTEM®

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