

# SYNERGY

37 THE  
TERRACOTTEM  
ADVANTAGE

## JUGGLING OVALS



Earth works - stripping the oval surface to remove the unsuitable clay material that the original oval was constructed on.

**Does anyone really enjoy delivering a tricky sports field reconstruction? Probably not, but everyone loves to hear about them. Here's one that has all the bells and whistles: a four metre difference in levels (that's not a typo), the need to keep part of the playing surface available throughout construction, and the too-common issue about there not being enough water to ensure establishment...**

This story is set in the Shire of Kalamunda, best described by the Shire's President, Andrew Wadell. "We're roughly 24 kilometres east of Perth in the hills, with a population of 60,000 across an areas of 350 square kilometres. The project was based on the Kostera Oval precinct which is over 100 years old and had been used as a race track and for agricultural shows."

What Kalamunda's capital works team and the contractors had to deliver was a major overhaul of what had over the years evolved into three separate playing fields... on varying levels. "Previously the site was multi-level... the main football and cricket oval, a lower portion and a higher portion to the south of the site. It made the southern sections under-utilised. They were the wrong size for any competition cricket or football games, couldn't be used by the school for athletics or team sports and generally were disconnected to the main site." As well as this, these playing fields were being pummelled through keen use, in this instance the local Junior Football Club, Cricket Club and the Kalamunda Senior High School which sits right on the edge. The Education Department ensures access rights during the school year as it's treated as an outdoor classroom.



The works team were faced with performing a trick: to stage construction so that not only the levels could be sorted, but that a chunk of green playing field would be safely made available to students at all times. The design itself was a clever transformation: where three separate ovals would be brought onto one uniform level to create four playing spaces. And with more playing space, the pummelling could be lessened. The Shire's Co-ordinator of Project Delivery, Daniel Nelson, explains how it was achieved.

After spreading the TerraCottem Turf, it's inserted into the top 100mm with a rotary hoe.

“So we worked to lift the bottom oval by two metres, and dropped the top one by the same. We broke up and removed section of ancient volcanic rock that was two metres thick, and recycled it to create a new bank face for the irrigation reservoir in the south west corner.” This policy of retaining and reusing as much material as possible on site meant that soil excavated from above would find a new setting to help adjust the levels of the lower areas. A series of diagrams which were produced to help keep community members informed looks like a complex sequence of cell division in a biology text book. Carrying it all out as planned was an impressive feat. “It was a challenge.”

The actual construction was fairly straight forward, though you have to remember the staging meant that it couldn't be done at the same time. Two sets of contractors tossed the project back and forth, one doing the earthworks and drainage: the other irrigation and final trim. A herringbone pattern of sub soil drainage went in, directing precious water to the reservoir; this was covered with 300mm of drainable sand followed by another 300mm of turf growing sand. “To minimise compaction, we used a spreader to apply the TerraCottem and followed that with a rotary hoe. This was the first time we'd used TerraCottem with turf – we use it for our street tree plantings. The decision was made based on the lack of available water for the turf establishment and I'm convinced it got us through that really hot period in January. We're working on another oval at the moment and we're using it there too.”

So with the project ticked off, how did it all shake down? The first oval was up any open for play after only four months, and the remainder followed at the eight month mark. It all finished well ahead of schedule and budget.

Surely a successful project can be measured by the feedback from the community that benefits – here stakeholders surround Shire President Andrew Waddell (R) and the member for Kalamunda the Hon John Day (L).





Amazing root growth  
approximately –between  
150mm- 200m - after  
only two to three weeks  
of laying.

The finished result.



# 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 H<sub>2</sub>O/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®**