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“We wanted to see if we could reduce the use of chemical fertilisers, reduce soil compaction and improve soil structure”

Project co-ordinator

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Compost for turf – a case study from Adelaide Shores, West Beach, SA

Who

Adelaide Shores

Where

West Beach, Adelaide,
South Australia

What

Turf in tourism and
recreation precinct

Aims

- reduce chemical fertiliser use
- reduce compaction
- deeper root growth
- improve soil structure

Outcomes

- less soil compaction
- more leaf growth and higher plant density
- less stress on plants, indicated by turf not going to seed

Adelaide Shores

Covering 135 hectares of Adelaide’s West Beach, Adelaide Shores encompasses golf courses, sports fields and recreation reserves as well as a caravan park, resort and function centre. The area is a destination for tourists and locals who come to relax and play along this stretch of Adelaide’s coastline. Turf is an important part of the look and functionality of the precinct. Adelaide Shores are interested in reducing synthetic inputs and improving the health and structure of their soils used to grow turf.



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“The end of the lacrosse pitch where the compost was applied is in considerably better condition than the end where no compost was used”

Recreation and Environment Manager, Adelaide Shores

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Why compost?

Adelaide Shores has an environmental management plan that includes sustainable energy, water and waste management practices across the entire precinct. Reclaimed water has been used for irrigation at the site for over 40 years. Adelaide Shores wanted to see if they could use compost to reduce the use of synthetic fertilisers on their turf. They were also interested to see if compost could improve soil compaction, structure and turf root depth.



Compost application

A highly refined compost product (which boosts carbon) was specifically designed for Adelaide Shores by their compost producer. This compost was applied to turf on a golf course, sports field and caravan park to measure the impact of compost on turf used in different ways. Each site was prepared using Verti-Drain, a specialised machine that uses tynes to aerate the soil and decrease compaction. Compost was then broadcast over the sites in August 2010 at a depth of 5mm and watered. An area adjacent to each site where compost was applied was left untreated as a comparison.

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“Compost-treated areas on the sports field were softer, less compacted and had good regrowth, particularly in the goal areas” Project co-ordinator

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Assessing the impact

Turfwise Consulting measured nutrient levels in the turf and soil where compost had been applied as well as in the untreated areas. A range of turf characteristics, such as turf quality, density, colour and thatch were rated and root depth, root system health and surface hardness were also assessed. These characteristics are being monitored monthly and six months of follow up data has been collected to date. It's early days in the compost trial at Adelaide Shores, as only one application of compost has been made and changes to soil and turf characteristics may take some time to become apparent.

Where to from here?

The project team will apply the same compost product at the same rate in October 2011. Monthly monitoring will continue to assess the impact of compost on turf characteristics and soil structure over time.

The bottom line...

There are early signs that compost has had positive effects on turf at Adelaide Shores, particularly on the golf course and the sports field.

The caretakers at the golf course noted that the treated area on the fairway didn't go to seed this year whereas untreated areas did – an indication that the grass was less stressed in the compost treated area.

No differences have been observed so far in the caravan park. Maintaining turf in the caravan park is a challenge as caravans and annexes are often covering turf for long periods, and the park is a high and heavy traffic area.

On the sports field, leaf growth and density was higher at the eastern end where compost had been applied, making the area softer and less compacted than the western end where no compost was applied. Both the eastern and western end of the field are high traffic areas.

For more information on the program contact:



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the resource for compost users