

Zero waste solution for catchment waste stockpile

What do you do with a stockpile of catchment waste big enough to cover the playing surface of AAMI Stadium to a depth of five metres?

Turn it into garden compost, is the hope of the Patawalonga Board.

The Board has joined forces with a range of scientific experts to find a "Zero Waste" solution for the 6,000 tonnes of waste collected annually in trash racks and silt traps from around the Patawalonga catchment area.

The Board's General Manager Alan Ockenden said that the search was on to come up with an economically and environmentally viable solution.

"Each year we dispose of about 1,000 tonnes of material caught in our trash racks, much of which isn't trash at all – a lot of it is organic matter such as leaf litter, twigs and branches," said Mr Ockenden.

"We also have a stockpile of more than 30,000 cubic metres of silt and sediment material which is growing at the rate of an additional 3,000 cubic metres each year.

"It's the sort of stuff that, with a bit of creative thinking, we hope to turn into inexpensive garden compost."

"The high organic content and 'twiggy' consistency of much of the material makes it particularly suitable for this purpose.

"Composting is a very attractive option, because it takes these materials out of the current waste disposal stream and converts them into a harmless by-product that can be marketed for a range of other uses."

Low Contaminant Levels

A comprehensive analysis of the sediment material by environmental consultants Golder Associates had revealed generally low levels of most contaminants.

"They discovered that a lot of what we thought to be contaminated with hydrocarbons is actually a combination of natural gums and oils from the high leaf litter load in the waste," said Mr Ockenden.

"There are also some petroleum products and zinc, most likely from motor vehicles, washed off road surfaces by rainwater."

Composting Trials

Scientists from the Flinders University-based company Flinders Bioremediation are conducting a set of pilot-scale composting trials to confirm the economic and technical feasibility of composting the catchment waste.

"If the trials prove that we can reduce contaminant levels through composting, the treated material could be used for landscaping or capping landfill sites," said Mr Ockenden.

"The process could also be used to produce a beneficial organic soil-conditioning product for horticultural or agricultural uses.

"The high temperatures reached during composting would kill off any weed seeds, so it would then be perfect for horticultural use."



Checking progress on the composting trials are (left to right) Board Project Manager Andrew Thomas, Dr Richard Stewart (Flinders Bioremediation), Vaughan Levitzke and John Blumson, from Zero Waste, Board General Manager Alan Ockenden and Charles Ling (Flinders Bioremediation)



Silt removal from Brown Hill Creek in progress at Netley

Patawalonga Catchment Waste Fact File

- estimated waste breakdown is 5% man-made litter, 60% organic (leaf litter etc) and 35% silt
- an average of 6,000 tonnes per year is collected from trash racks and silt traps
- the most productive site is the floating boom and trash rack at Watson Avenue on Brown Hill Creek – in 2003 alone, the boom collected over 200 tonnes of material and the silt trap 800 tonnes of sediment
- the Sturt River's Tapleys Hill Road floating boom has collected over 300 tonnes of floating debris since its 1999 installation



Silt stockpile above the Patawalonga Lake silt weir at West Beach