



Flinders Bioremediation tests a new future for Adelaide Hills waste

While Adelaide Hills residents don't have much trouble filling their septic tanks, disposal of the waste is becoming increasingly expensive as well as posing environmental concerns.

A pilot composting program by Flinders Bioremediation looks set to provide the solution.

A study of options for the reuse of septage

recycling organic waste and treating contaminated soils, has been engaged as a consultant on behalf of the working party.

Ms Giffard and Field Manager Mr Charles Ling are beginning an experimental pilot program that will trial the composting of septage with green waste with the ultimate aim of producing a soil conditioner suitable for commercial use.

Standard septic tanks hold 3000 litres, and require pumping out every three to five years. Up until now, the septage waste has been pumped out for transportation to SA Water's wastewater treatment plants or to the Brukunga mine site, where it has been spread to assist a revegetation program.

The population of the Mount Lofty region is expected to double in the next 20 years, taking quantities of septage solids from the current level of

around 3,600 tonnes per year to about 7,200 tonnes.

With the current steep increases for the cost to ratepayers for treatment of septage by the local wastewater treatment plant, as well as local unease about the use of the Brukunga site and general concerns about the long-term implications for the quality of water in the catchment area, composting appears to be a good alternative in both economic and environmental terms.

Mr Ling said the plan to combine two waste streams - septage and green waste - seems an ideal solution. The Adelaide Hills region produces approximately 17,000 tonnes of green waste at present; a full-scale composting facility would absorb up to 30 per cent of it.

Flinders Bioremediation has established a trial site at the Southern Waste Depot

where several truckloads of septage waste, which has had its liquid component reduced to achieve a concentration of about 20 per cent solids, will be combined with varying ratios of shredded green waste or wood chips.

Although similar projects are not uncommon in other parts of the world, Mr Ling said this is one of the first such projects in Australia. The Flinders Bioremediation study is drawing on data from similar projects in Norway and the United States.

Composting will take about 12 weeks, and the Flinders Bioremediation scientists will monitor the process for a range of environmental impacts in terms of the levels of pathogens it generates and its capacity for leaching.

Occupational health and safety aspects of the process will also be monitored. Mr Ling said the smell of the septage, while unpleasant, is not particularly strong, and is diminished further by the de-watering and composting processes.

"It has the typical faecal 'pong', but the smell from the shredded green waste is actually more pungent," he said.

Once the correct ratio of materials for composting septage is established, it is likely that a scaled-up treatment facility would be run by one of the State's major composting firms.

"That is the obvious scenario, and would be a good outcome for the environment, ratepayers and Adelaide's nutrient-depleted soils," Mr Ling said.

Flinders Bioremediation recently completed a similar trial for the Patawalonga Catchment Water Management Board, which demonstrated that sediment collected from silt traps could be successfully composted as an alternative to landfill disposal.



Ready for composting: Ms Raya Giffard and Mr Charles Ling with a test batch of septage solids at the Southern Waste Depot.

waste was commissioned by the Mount Lofty Ranges Biosolids and Green Waste Reuse Regional Working Party, comprising representatives from Adelaide Hills and Mount Barker Councils, in conjunction with the Environmental Protection Authority and commercial stakeholders.

"What's come out of that is a recommendation to consider composting as a disposal option," said Ms Raya Giffard, Project Manager for Flinders Bioremediation.

Funding was obtained by the working party through a Local Government Research Grant and the Onkaparinga and Torrens Catchment Water Management Boards.

Flinders Bioremediation, the Flinders University-owned company devoted to developing biological techniques for