



Only biodegradable plates, cups and cutlery and recyclable drink containers were allowed for sale at the WOMAD festival.

Waste trial at music festival

By Dr Richard Stewart

The 2005 WOMAdelaide music festival held in Adelaide's Botanic Park recently was officially a "Zero Waste Event". Caterers were permitted to serve only biodegradable plates, cups and cutlery and recyclable drink containers, while patrons were asked to place their waste into either a "compostables" bin or a "recyclables" bin.

Flinders Bioremediation physically audited the compostable waste on-site over the three day event. Project manager Raya Giffard and her team sorted through more than 380kg of compostable waste, which was then delivered to a local composting facility as part of a large-scale composting trial.

Contrary to popular belief, the biodegradable stream of event waste typically contains less than 25% putrescible food by weight. We found about 40 glass bottles and some non-biodegradable plastic in the five tonnes of waste delivered to the site, which was consistent with the audit results. The worst contamination, some 10%, was manually removed upon delivery at the site, and the remaining material was batched up with various types of green organics using a front-end loader. The spread of litter was a key concern, so the waste was covered with a layer of green organics on arrival, and batching was performed in the early morning on a day with little wind.

Waste and degradation

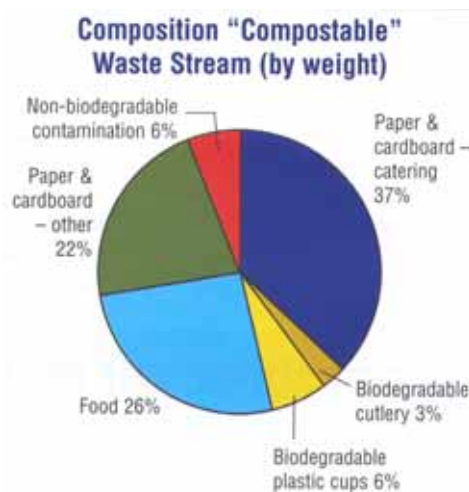
Following batching, five static piles of approximately 25m³ each were formed into a cone shape. Each one was covered with a fresh layer of coarse green organics approximately 100mm thick to contain odour, minimise vermin attraction and prevent the litter from spreading.

The batching process was completed within approximately five hours. Some odour consistent with fresh food waste was observed during batching, while afterwards the odour was typical of coarse mulch/pine bark and no discernable food smells were detected. There was some evidence of animal attraction to the piles in the first three days, consistent with a dog or similar animal.

Monitoring continued for nine weeks, during which time

the piles were not turned. Normal composting temperatures (55-70°C) were achieved, with no signs of anaerobic conditions observed. Most of the biodegradable catering products in the centre of the static piles were substantially weakened or had begun to disintegrate.

On the outer layers of the piles, the biodegradable plastic products (mainly PLA) were essentially still intact. Paper and cardboard products had substantially weakened throughout the pile and had begun to disintegrate. Wooden cutlery was mainly still intact but had lost some of its strength.



After nine weeks of static composting, the piles were combined to form a single open windrow, which is currently being treated as a typical commercial open windrow for another three weeks, with regular turning and watering. While the oversize material from screening is expected to contain some partially degraded catering products, these will be incorporated into a fresh green waste windrow for further degradation.

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www.flindersbioremediation.com.au or
www.zerowaste.sa.gov.au