



Waste Management

Waste Re-use & Recovery

Jane Van Hool:

Next in the hierarchy is 're-use'. A good example of that is the British milk bottle collection system.

Then there are chains like The Body Shop, which encourage their customers to reuse their packaging.

After reuse, comes recovery, this means treating the waste in some way so that something useful is produced. Value can be recovered from waste, by composting it, if it's organic, by recycling it, if it's glass or plastic for example, or by using it to produce energy. But again the choices are not so simple.

Alison Austin:

There was a very traditional view, that you would always look at, reduce reuse, recycle. I think though that the views have matured such, that we're looking to say, use that option which is most appropriate for that situation, because it might be, that sending something for recycling, might be environmentally, not wise, and economically not wise. You might spend more money and more energy sending it through the recycling loop, than if you used virgin material again. So, who are you trying to kid, and who's benefiting. Is it you just because it gives you a nice warm feeling? Or is it the environment?

Gwenan Edwards:

Already many of us have joined in the pilot schemes, separating our waste into paper plastics, metals and glass, for separate collection and recycling. The contenders want to build something along the lines of this project in Milton Keynes, where there's one of Europe's largest recycling plants.

Half the annual tonnage is paper and card waste which goes for recycling. This facility handles ten thousand tons of waste, collected from curb sides, with another fifty thousand tons of industrial waste.

Much of the sorting has already been done by the householder, but in this purpose-built facility, they have magnetic sorting, to separate out the ferrous metals, then both they and non-ferrous metals are recovered for sale.

They'll separate plastic waste into seven grades, from P E T, to low density polyethylene. Overall they've calculated that a quarter of domestic waste is diverted from landfill and recycled.

There's a visibly useful product from this facility. As you can see, in the piles of sorted plastics and metals, which are going to be reused.

The picture may not be so rosy for the plant operators where health and safety issues are concerned, and critics of the scheme point out, that it can only handle part of the rubbish from the area, and that the economics are unknown.

There are the costs, and the fact that markets for the recycle products are unproven. Also, we mustn't forget that the collection vehicles will add to the area's traffic pollution.

These pictures are from a pilot scheme, but full scale plants are being built across the UK. The pilot scheme uses waste products from the council's parks and recreational department, it's all familiar garden waste, such as tree clippings and cut grass. The process is completely organic. There are no synthetic chemicals applied to speed things up, but there's a quarter of a million pounds worth of equipment tied up, just in this small scheme.

Woody material and large items are ground up, and then simply piled into heaps. Soluble materials such as proteins, are quickly decomposed by micro-organisms, leading to a build up of temperature in the heaps. This was monitored by the research team. Within a day, the temperature inside the heap will rise by ten degrees. It's important not to let the temperature rise above fifty degrees, or the micro-organisms will be killed off.

On this pilot scheme, where they're processing about one hundred tons a day, things happen much quicker than in domestic compost heaps. It's vital to turn the heaps, both to allow aeration of the inside, and prevent the temperature rising too high. That's actually steam coming off the heaps.

Other micro organisms decompose the cellulose and lignin in the piles, and the process is complete within twelve weeks. The material is then screened and separated, and the undecomposed rubbish sent to a land-fill site. The coarse material makes excellent ground cover in copses, and the fine crumbly compost is suitable for lawn treatment.

Like the material recycling option, this scheme is heavily reliant on finding markets for the compost, and the savings in land fill charge, won't necessarily offset the collection and processing costs.