



Waste Management

Waste Collection

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Municipal waste comes from a variety of sources. The principal source being what we put out in our dustbins each week. However, we shouldn't forget that in some areas 20% of municipal waste is delivered to 'Civic Amenity Sites' by residents and increasing proportions are collected through recycling schemes and at recycling centres. So, let's look at the ways in which waste is collected.

'Wheelie-Bins' are now common-place. They've many advantages over 'refuse sacks' or 'conventional dust bins':

- The contents are protected from dogs, cats and other wildlife.
- Heavy items don't break the containers.
- They can be moved and emptied without the need for lifting.
- The collection crew are protected from injuries from glass and sharp items.

'Wheelie-Bins' are also ideal for collecting garden and kitchen waste for composting and they can be used to collect mixed recyclable material.

Some local authorities use a specially designed vehicle and sort the recyclable materials, as they're collected. 'Kerbside sorting' takes longer than merely collecting the waste and so is more expensive. On the other hand, the subsequent processing at a Materials Reclamation Facility is simplified and therefore cheaper and the scheme can be used to collect glass.

In this scheme in South Northamptonshire householders are given a recycling box, which is emptied weekly:

One week it's used for cans and plastics and the next it's used for paper and glass, which is sorted by colour.

When necessary, the side of the truck is raised and the content is tipped into compartments within the body of the vehicle.

Civic-amenity-sites are used to collect any wastes that householders produce that can't be disposed of via 'Conventional-Bins'. DIY and Garden activities result in much of the input to such sites, but old furniture and electrical appliances are also collected in large quantities.

These sites divert a significant amount of their input for recycling - especially the segregated garden waste for composting.

Scrap metal, soil, building rubble and oil are also recovered at these sites

Non-recyclable waste is sent to landfill or incineration. Waste that can't be disposed of without further treatment such as car batteries, tyres and fridges are taken to specialist companies for treatment.

'Recycling Banks' have been a feature of our landscape for many years. Initially, they were almost exclusively used to collect glass. However, nowadays 'banks' can be used to collect paper, cans, plastics and textiles.

Bank sites are generally environmentally benign, but they can attract vandals and litter, which needs to be collected. And finally, sites must be located where noise is unlikely to be a problem, as is the case here.

Materials Reclamation Facilities, 'Murfs' for short, are on the increase.

This plant is typical, in respect to the technology involved and the environmental impact.

Mixed recyclable-materials are collected through the local kerbside scheme in a conventional refuse collection vehicle.

On arrival at the Murf, the 'load' is discharged into an under-cover tipping area.

It's then transferred onto the main feed-conveyor by means of a mechanical loading-shovel. In this 'acoustically-hard' building it's extremely noisy and dust levels can also be high.

As the feed enters the sorting area it's inspected. Any closed bags are opened and large pieces of cardboard and plastic are removed.

At this stage, any non-recyclable material is removed before it can contaminate the products or present any further health risk to the staff.

Again, the noise levels are very high.

The next separation process is carried out automatically. The material flows onto a vibrating, inclined table with a 'Velcro-like' surface, which holds the larger pieces of paper, separating them from the remaining material – mainly plastics and cans.

The stream containing the cans is then passed under a 'Magnetic-Separator' that removes any ferrous-metal.

Aluminium and any plastics are then removed from this stream by hand. The remaining material is sent for incineration or landfill.

Once separated; the cans, plastic and paper are compressed and bailed into cubes so as to maximise the available space on the lorries that take them on their onward journey to the recycling plant.

Glass is an exception. Although it's delivered to the Murf, direct from the bottle bank scheme, no sorting takes place. It's only stored temporarily until there's a sufficient quantity to fill a large truck – whereupon it's shipped to the glass works.

There's just two final points:

Firstly, the Murf is just one stage in the recycling process. It's where the material is sorted prior to re-processing.

And lastly, some local authorities use a dedicated vehicle where some sorting takes place at the kerbside. This option involves higher collection costs, but requires a less-complex and therefore cheaper, Murf.