

Waste and Recycling Guide

This guide uses the 'Waste Hierarchy' principle to run through what the opportunities could be in your organisation to reduce the cost of waste and improve your impact on the environment.

The Waste Hierarchy

The Waste Hierarchy is an internationally recognised approach for reducing and managing waste. This guide runs through each of five steps for good practice waste management – from avoiding waste in the first step, to looking at the options for reusing, recycling and recovering waste, to waste disposal as a last resort.



Figure 1: The Waste Hierarchy

Reduce



The first step is to reduce the generation of waste in the first place. Keep a close eye on exactly how much stock you need so that none is wasted unnecessarily, for example in a shop that sells perishable food products. Look how much packaging your goods come in, the more people who insist on having low levels of packaging, the more suppliers will have to listen! This sounds obvious when you think about it, but being as careful as you can before purchasing something that will become waste can be the simplest way of reducing your waste.

Re-use

Secondly, re-use items that could be seen as waste to you but not to others. One person's junk is another person's treasure! At home many of us send clothes and other goods to charity shops for other people to purchase and use, why not see what you could send to be re-used from your business? There are now a growing number of centres that will take your waste goods, such as electricals, to be refurbished and sold on. If you are moving office consider taking your current furniture with you rather than simply assuming that you will need to purchase new furniture. In some cases, if materials can be re-used for their original intended purpose – e.g. returning a glass bottle to be re-filled by the original supplier – they do not have to be counted towards your waste figures as they effectively never became waste!



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Recycle

The next option is to recycle something if it cannot be re-used. This is where a process must be carried out for the material to be re-used, such as melting down and re-forming metals, plastics or glass. Energy will be needed to carry out these processes which is why it is usually better to re-use an item rather than recycling it.

For businesses there are ways of improving the value of your recyclables. For organisations who create a substantial amount of plastic or card waste it may be worthwhile to invest in a compactor and/or baler. A compactor will crush the waste so it will take up less space, and a baler will wrap it in wire or plastic. These processes mean that the material takes up less space not only on your site, but also on a vehicle collecting it – meaning that more of a material can be taken away per trip, making it more valuable. Making sure that empty containers are cleaned is another way of potentially improving the value of your waste.



Some materials are more valuable than others so if you do produce a lot of waste materials it could be worth speaking to a waste specialist to understand which wastes you should take particular care of.

If you work in a building or area where there are multiple businesses very close to one another, it may also be beneficial to pool your waste together to reduce transportation costs.

Recovery

Recovery is the next option, and this is where you are sending your waste away to be disposed of *but* instead of the material just being burned or landfilled where it no longer has any use, it is sent to a facility where the energy within it can be recovered. This would usually be either burning the material as a fuel source – such as in a municipal Waste to Energy plant – where electricity and heat are generated, or in an anaerobic digestion plant. This is where food and other natural wastes are put in a sealed room without oxygen, allowing the bacteria in the materials to break it down ‘anaerobically’ producing a biological gas. This ‘biogas’ can then be used in an engine or boiler to generate electricity or heat.



Even something simple like using your vegetable peel and other food waste to produce compost is classed as recovery, as the chemical energy in the material is transferred to the plants it then helps to grow – much better than sending this to landfill!

Disposal

The final option, if none of the above is possible, is to dispose of your waste. This will usually mean that it is sent to landfill where it will take up valuable land and generate harmful gases and runoff as it decays over time, or will be incinerated without energy recovery. This is usually the most expensive option as well as the most harmful to the environment, and deterrents such as the Landfill Tax are in place in an effort to encourage people to use the other hierarchy options first.



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