

Waste Management

The future of waste

The word Sustainability is used a lot nowadays. It can be defined as 'using techniques that allow for continual reuse'.



Robin Buller
 Director of Business
 Development KRR
 ProStream

Reuse can mean turning vegetables into compost to feed the earth to grow more vegetables; or it could mean burning waste to produce electricity to provide power to process vegetables and freeze them (also using electricity) for later use. Its use as a word has increased exponentially since 1990 and nowadays it is used a lot more than it should be.

This article will introduce the concept of waste in a slightly different way to how you may have considered it before. 'Where there's muck there's money' may ring true!

A few facts first. The UK produces tons of waste - over 220 million tonnes a year indeed - with an income of £1 billion derived from recycled material sales. However, the UK pays about £400m a year to Germany, the Netherlands and some Scandinavian countries to take our waste non-recyclable materials.

I was in Norway in October 2018 at an 'Energy from Waste' plant and they thanked me - by which I believe they meant the UK - for sending more plastic over (at least since the Chinese embargo on imports of waste plastics) as it increased their BTU (British Thermal Unit of Heat) which meant they could produce more steam and derive a higher

income. Why, you may ask, do we pay these countries to take our waste? Because it is cheaper than the alternative - landfill in the UK. Fees for hosting landfill have been increased due to a Government mandate to avoid both the production of methane from landfill and to encourage the construction of Energy from Waste (EfW) plants.

With Germany and other EU countries currently having a surplus of EfW Plants, they are happy to be paid to take our waste. To date there are about 44 EfW plants running in the UK with many more under construction and in planning. The UK has a lot of waste to deal with and more will be produced as the population increases and more packaging is used. But is this situation sustainable?

There is no single answer. The recycled material sold to the EU is something, but a lot of material we throw out is not recyclable. What is not exported or landfilled is sent to the EfW plants in the UK, and these plants are usually localised. These plants provide both a clean and simple way to remove our 'black bag' non-recyclable waste from our lives, provide us with electricity and construction materials and even some scrap metal (removed from the ash) to boot. So, whilst it is not sustainable in the strictest sense, it is very cost effective. And with emissions being monitored very carefully, it's also a very clean method for dealing with our waste.

So, what of the future? With EfW plants being built in the UK for the next decade or so, we will also be able to deal with more options for recycling to try to fulfil that magic word - sustainability.

If we recycled more material, using automatic machines designed and

built in the UK, and it should be said that human sorters are not really a great long-term option, we could not only increase our exports of useful sorted waste - be it plastics of one type, paper or cardboard - but also sell the machinery doing the job abroad.

It represents a great opportunity for the British manufacturing industry to develop a new market. But, like many things in life, it needs support from communities, local Councils and the Government. This way we can turn our waste production from a cost to an income and also go some way to providing a sustainable solution to the problems that mountains of waste (and they are only going to get bigger) will present us with. There are already several laudable efforts being taken in this area. A number of start ups are working on, not only separation of materials (for easy onward processing), but also turning the recycled products into something new. An innovative example is a British based company that chemically converts plastic waste which currently cannot be recycled into a valuable hydrocarbon product.

This kind of innovation will not only help solve our domestic waste issues, but also allow the technology to be licensed abroad wherever there is waste plastics - and I think we would all agree that is pretty much everywhere. Waste might not in itself be sustainable, but developing methods to deal with it are going in the right direction and making money out of cleaning it up seems like a great idea. ■

KRR ProStream is a UK based company that sells boiler cleaning services and machinery to Energy from Waste Plants, and Energy from Biomass plants in the UK.