**Talking rubbish - What happens to our waste in Teignbridge?**

CEBH were fortunate to have Tracey Fey, acting Recycling Officer from Teignbridge District Council offer up an evening and give a talk about recycling in our area.

It was an enlightening talk, and left the audience with a sense of pride in what is achieved in Teignbridge. It also revealed a fair bit about the recycling process that people weren’t aware of. So here is a summary of the talk so you too can be informed.

**Background**

Over 53,000 tons of waste is collected from 63,500 households per year in Teignbridge.

56% of that waste is recycled or composted (2nd highest in Devon and 23rd in country from 223 local authorities).

There are 39 vehicles in total that collect our waste.

* + Recycling collection vehicles have separate compartments – the crews have to sort glass and card from recycling boxes.
  + Plastic and cans go in the same compartment as they are squashed onboard

Recycling is delivered to the bulking station at Brunel Road.

Our plastics and metal cans which are still mixed together on the collection vehicle then

have to be separated. This is done by a large machine that has a magnet to take out steel cans and an eddy current to remove aluminium cans. This leaves plastics to roll off the end of the conveyor.

**Paper**

Our paper is taken to Kings Lynn for recycling. Last year this saved the equivalent of 22,680 trees. It is then put in a pulping machine, washed and the print removed. Pulp is then sprayed onto a forming mesh before going through rollers to remove liquid.

The forming mesh travels through a drying unit and comes out on a large reel which is cut and sent to newsprint companies in UK and Europe.

High quality paper requires good quality feed stock so only clean ‘white’ paper can be accepted. Paper is referred to as ‘white’ if, when you tear it, you can see little white fibres.

**Cardboard**

Our card currently goes to Kent where it is recycled into new card products, all done on site in both a paper mill and packaging plant. Contaminants are removed upon arrival and the card goes through the same process as paper, ending on a 60 ton reel. This is taken to the packaging plant where paper is fed into a corrugator machine which fuses the layers of paper into cardboard sheets, which are cut to size and branded for the customer on site.

The whole process takes 14 days and is an excellent example of closed loop recycling.

**Glass**

Our mixed glass bottles and jars go to West Yorkshire.

The glass goes through a pre-treatment process which removes any paper or plastic. Any metal objects are removed with magnets. It is then sorted by colour and washed to remove any further impurities. Then it’s crushed, melted and moulded into new products.

Glass is a highly versatile material with almost limitless applications; it makes complete sense to recover as much glass as practically possible. It does not degrade through the recycling process so it can be recycled again and again, indefinitely.

This is one of the most efficient forms of recycling of any type of commercial waste, with almost 100% recovery of the original material in an extremely clean and pure form, with fantastic environmental benefits.

**Metal**

Our aluminium cans are shredded and heated to remove the print on the can. They are then fed into a furnace at 750 degrees. Ingots are made, and then rolled into sheets when making new cans.

This is a closed loop recycling process that takes 8 weeks from start to finish.

Recycling an aluminium can saves 95% of the energy it would have taken to make it from the raw material.

Our steel cans are washed and graded in North Devon before being sold on to the metal industry as high quality feedstock.

**Plastics**

Once delivered to the reprocesser, the plastics are sorted into different types using an optical sorter which can identify the different grades.

The plastics are then shredded and washed, then melted into new recycled plastic

pellets.

They are then sold on to manufacturers who make plastic items. This can include fleece jackets made from recycled plastic yarn.

Black plastics can’t be recognised by the lasers in the machines so it is not widely accepted for recycling, including in Teignbridge.

*Plastic items that are very dirty cannot be processed by the machines, so it is important that you rinse out plastic items before recycling.*

**Food waste**

Our food waste is sent for Anaerobic Digestion (AD) to a plant in Holsworthy.

AD is the process by which organic waste is broken down to produce biogas and Biofertiliser. This is done in the absence of oxygen (hence anaerobic, as in anaerobic exercise – the type that leaves you panting with your tongue lolling out afterwards) in an oxygen free tank called an anaerobic digester. The process is as follows:

Food waste arrives at the plant. Packaged waste is fed into the machine that separates packaging from the food i.e. plastic bags from caddies. The shredded plastic material is sent off for recycling when possible and the food waste is mixed together with other waste streams in a tank where it is heated to kill off any pathogens and ensures the right environment for the bacteria to produce the biogas.

Once the food waste has been pasteurised, the waste is passed into a digester tank containing anaerobic bacteria which carry out the digestion process producing biogas (mixture of methane and CO2). The material that is left behind goes through further screening and is then used as liquid fertiliser on surrounding farmland.

The biogas is stored up on site until needed to convert into electricity and heat to run a combine heat and power combustion engine. Some of the electricity is used to run the plant and the rest is exported to the national grid. The heat is used to run the pasteurisation process and heat the site’s water needs.

*Surprisingly, putting composting bags in your caddy actually makes it harder for the machine to extract them.*

*You can use any plastic bag (except black bin bags) in your food waste container such as used bread bags or the plastic liners from cereal boxes which will be extracted automatically and recycled.*

**Garden waste**

Garden waste stays in Devon and goes to Kingsteignton, where it is made into compost.

**Black bin waste**

Devon County Council is responsible for the disposal of your black bin waste. This no longer goes into landfill.

Black bin waste is sent to Energy From Waste (EFW) facilities in Exeter and Plymouth. These facilities produce energy by incinerating waste to produce heat and create steam, which turns a turbine to produce electricity which is fed into the National Grid.

The remaining incinerator bottom ash is treated using magnets and eddy currents to remove metals which can then be recycled. Secondary aggregate such as asphalt and cement based products can be produced from bottom ash.

The remaining ash (fly ash) is treated chemically and physically to make sure it is safe before being released.

Gas is treated with activated carbon to absorb heavy metals and lime neutralises the acidic combustion gases.

**Why recycle?**

If everyone in the world consumed at the same rate as we do in the UK, we would need

2.7 earths to support our demands.

In Australia that figure rises to 4.1 earths and in the USA, 5 earths.

Recycling reduces the need to extract raw materials, conserves resources, saving water and energy and reducing the need for landfill or incineration.

Many of you will have seen documentaries which show the dumping of waste, particularly plastic, in developing countries, where it often pollutes land, rivers and sea. It was therefore comforting to hear that Teignbridge do not ship any waste abroad and all our recycling is dealt with in this country.