Plastic has become an environmental enemy and not without some cause. But sometimes it’s the best option for packaging. Plus, the carbon impact of producing it and transporting it can often be lower than that of other materials.

A project run earlier this year, the Big Plastic Count, found that the average UK household disposes of 66 pieces of plastic every week. That’s 500 billion pieces of plastic a year across the country. And plastics recycling charity Recoup found that only 41% of plastic that households dispose of is collected for recycling.

Technically, all plastic can be recycled at least once, but at some types are easier than others. Flexible plastics such as plastic bags and wrapping are now collected by supermarkets (all either have full rollouts or large trials), but only a small amount is currently collected and there are limited end markets for it. It can’t be turned back into food packaging because of safety regulations, and it has to be recycled at specialist plants. Relatively new chemical recycling (which breaks plastics down so that the end product can be treated as virgin plastic) is promising, but large-scale viability is yet to be proved.

Olive Howes explores what happens to the items you put in your recycling bin, what we get wrong and why the UK needs to improve its recycling efforts.

What really happens to your recycling?

Still have a long way to go in terms of how much of our household waste is recycled. In 2000, the UK target was to recycle 50% of household waste. England, Northern Ireland and Scotland missed this, with rates of 44%, 49.1% and 4% respectively. Wales is a stellar exception, with a 66.3% household recycling rate and overall recycling rate of 66.4%. In fact, Wales is the third-best recycler in the world.

At the heart of the struggle with recycling is a tangled story of outdated council infrastructure and waste facilities, a reprocessing system that made it more profitable to export some materials, and a booming market for more complicated composite packaging that can’t be broken down again, such as pet food pouches or toothpaste tubes. Add local inconsistencies on what’s collected and it’s created widespread confusion.

It’s also crucial to continue to push for the removal of unnecessary packaging. ‘Reduce’ needs to come before ‘reuse’, both of which are preferable to ‘recycle’. Some materials – especially paper and plastic – can only be recycled a finite number of times before they’re useless. So even with recycling in place, using these products in manufacturing will require new material at some stage.

The responsibility for changing packaging lies largely with the makers and sellers of goods – a challenge in a retail system built for single-use. But as we consumers can and do play our own role. We can demand change, and choose better options where they already exist: for example, buying loose fruit and vegetables, using refill stations, and choosing reusable materials when they’re available.

Change is on the horizon. There are policies in the pipeline, such as consistency in collection, in which all councils will have to collect the same materials, including food waste. Plus, Extended Producer Responsibility (EPR) will push the costs of dealing with packaging back on to manufacturers. These bring reasons to hope that the UK’s recycling efforts are improving.

Read on to find out what is actually recycled, what you really shouldn’t put in your recycling bin and how packaging and recycling is changing.

Council recycling

Much of what’s recycled in your area is down to your local authority. This has led to discrepancies in what’s collected, often due to a lack of local recycling facilities. Some councils take Tetra Pak (commonly used in juice cartons), plastic bags and textiles; some don’t even collect glass. Some 49% of English councils don’t have any kind of food waste collection. With that variety comes huge differences in household recycling rates – from St Albans (64.2%) right down to Barrow-in-Furness (27%).

Of the 10 English local authorities with the worst household recycling rates in 2020-21, five of them are London boroughs; Birmingham, Liverpool and Nottingham also feature. Lower recycling rates are often associated with high-density urban areas, and social deprivation. It’s different in Wales: councils largely follow a standard blueprint to collect the same materials and often collect them separately, which tends to lead to a higher recycling quality, and food waste collection is mandatory. There’s been significant investment in recycling in infrastructure and communication to citizens. Three of the five Welsh councils with the top rates of municipal recycling collect non-recyclable household rubbish (known as residual waste) every three weeks as a minimum – Croy’s every four. Less frequent rubbish collections, coupled with more frequent recycling and food waste collections, drives up recycling rates.

We’re promised that consistency in collecting is coming in England and will lessen confusion, improve infrastructure and lead to better recycling rates. But it’s been subject to delays, and the finer details of how it will work are still not known.

The MOST COMMON TYPES OF HOUSEHOLD PLASTIC

1. HDPE used for plastic milk bottles

High-density polyethylene is very recyclable. It’s the highest-value plastic on the market and around 78% of bottles are collected for recycling. Natural HDPE is turned back into milk bottles, while coloured HDPE (a mix of food and non-food grade) is likely to become other things such as pipes or building materials.

2. PET soft drinks/water bottles

These have a recycling rate of around 70%. It’s very common to see packaging that’s 100% recycled PET (or rPET). A new plastic packaging tax penalises manufacturers that use less than 30% recycled plastic.

3. PET soft drinks/water bottles

It’s working, but it has also pushed recycled plastic prices up as manufacturers try to get their hands on the limited amounts available.

4. Yogurt pots, tubs and plastic trays

These are often made of polypropylene (PP), which is widely collected. It can’t be turned back into food packaging because of food safety regulations. This means your yoghurt pot may end up being poured into a bin, gardening materials or clothing fibres. So while it’s recycled once, it’s unlikely to be recycled again after that.

5. Plastic bags and wrapping

This is normally either low-density polyethylene (LDPE) or it falls into the ‘other plastics’ category. It’s still rare to find soft plastic recycled at the kerbside, but you can now take it to places that sort plastic and wrapping to collection points at most supermarkets. Some also take cat food pouches, crisp packets, chocolate and biscuit wrappers.
THE LABELS TO LOOK FOR

The best label to look for is the OPRL label: the green 'Recycle' version means that more than 50% of UK local authorities must collect and recycle it. Don't Recycle means less than 50%, so local authorities collect it, so yours may still be able to check. The Recycling Now website will tell you what your council allows.

Soft plastic packaging may be labelled 'Recyclable with bugs at large supermarkets'. Other wrapping may not carry the label yet but should be recyclable at stores. The Terrace scheme for crisp packets means that you can take to a participating supermarket instead.

TIP
Don't recycle broken glass at home: it's dangerous for collectors. Also keep drinking glasses, Pyrex, flat glass or light bulbs out of your recycling bin. They'll not melt in the furnace and can cause expensive damage or affect the end product. Some councils say to keep lids on glass jars; others ask you to take them off. If in doubt, leave lids on — they'll be removed when it's sorted.

Collect steel metal caps, like those on beer bottles, in a steel can such as a baked bean tin and squash the lid on top so they won't be lost during the recycling process. Our snapshot research into councils found that some do not accept foil. But if yours does, the foil should be clean and ideally crushed into a ball that's tennis-ball sized or larger.

Whether to recycle takeaway pizza boxes is a common question. According to Recycle Now you can recycle them as long as they're clear of all food — grease spots are fine. Remove sticky tape from wrapping paper if you can, because too much can cause problems with the sorting machinery. Envelopes with plastic windows are generally OK.

If you line your food caddy with a liner, use a compostable one unless your council specifically requests otherwise. Even though the bags are removed at the plant, fragments contaminate the resulting compost or fertilizer with plastic.

All food waste can go in the food waste bin, although liquids (not oil) should go down the sink.
WHAT NEEDS TO CHANGE

Makers, sellers, authorities and end users all have their part to play in ensuring that materials are made and recycled properly

1 Manufacturers
It’s vital that unnecessary packaging is eliminated from packaging design and that the focus is on using materials that are truly and widely recyclable. Extended Producer Responsibility (EPR) will bring in the ‘polluter pays principle’: manufacturers will bear the full cost of recovery of the packaging they place on the market. Packaging that is not truly recyclable will be subject to higher disposal fees. The plastic packaging tax should mean more and more recycled material is used in packaging.

2 Retailers
Shops have a big role to play. A 2021 Environmental Investigation Agency (EIA) report noted that while all 10 major supermarket chains have plastic reduction targets, some of them only focus on their own-brand items – supermarkets need to be pressing branded suppliers too. Fruit and veg should be sold loose where possible. The market for refillable goods is still small, but it’s mostly been limited to localised trials. Government-mandated targets could make larger roll-outs more achievable.

3 Central, devolved and local governments
These need to deliver, without further delays, consistency in collection, EPR and deposit return schemes – the first one is due to start in Scotland in August 2023. Deposit return schemes could particularly improve ‘on-the-go recycling’. Consistency in collection needs to be coupled with investment in communication to householders so that people better understand what they can and can’t recycle. A consistent and clear approach to mandatory labelling is also key.

4 Consumers
We can all help too – by avoiding packaging where it’s possible to do, and committing to actually reusing ‘reusable’ items such as coffee cups and bags. The EIA report found that almost 57 ‘bags for life’ were bought per household in a year – the thick, heavy plastic equals a heavy carbon cost. Reuse glass rather than recycling it if you can. And don’t be tempted to do what’s called ‘wishcycling’: putting things that can’t be recycled – especially batteries – in the recycling bin.

IN TAKING CARE OF PLASTICS

In researching this feature, I visited a plastics recycling facility (PRF) owned by Viridor. Standing on a vertiginous platform looking down at the criss-crossing maze of conveyors, machines and people building bales of material, I was impressed by the scale of the operation. The plant makes a huge effort to recover as much material as possible; it has to for the endeavour to make economic sense.

The charity Wrap found that 16.6% of what arrives at an MRF (materials recovery facility) are contaminants or what’s known as ‘non-target materials’, but seeing this statistic reflected in real life was a surprise. This PRF was taking in materials that had already been sorted once, but there was still plenty that shouldn’t be there – I saw Wellington boots, clothing and toys.

The manager showed me a shed that’s used to store all the batteries they find – chest heaving with tablets and smartphones and bins full of power tools and children’s toys. All of them were items that people have chucked into recycling bins with little thought to what might happen to them. Lithium-ion batteries are a serious fire risk for recycling plants; they regularly cause whole plant shutdowns and pose a significant danger to workers if they are missed.

There’s no doubt that government and industry need to do much more to reduce our packaging problem. We as consumers have a role too, in the packaging choices we make when decent alternatives are available to us, and in disposing of waste in a responsible way.