

eco

# RECYCLING DEMYSTIFIED

Anna Turns unpicks the mind-boggling subject of what can and can't be recycled, and explores how we can do our bit

**W**ith heightened public awareness about plastic pollution and the climate crisis, demand for a unified national recycling scheme has never been greater. English households produce more than 22 million tonnes of waste annually according to DEFRA, 45.7 per cent of which got recycled in 2017. The EU target is for the UK to recycle at least 50 per cent of household waste by 2020, but as a first port of call we must ditch our throwaway culture, consume less, and design infinitely recyclable products to create a more circular economy. 'Recycling gives that material the best chance of staying in use and out of the wider environment,' explains Recycle Now's campaign manager Craig Stephens. 'And it significantly reduces the need to use virgin material - recycling plastics avoids up to 1 tonne of CO<sub>2</sub> for every tonne that is recycled.'

But for even the most eco-conscious citizens it's wholly confusing, and for manufacturers, retailers and waste management facilities the current supply chain is inconsistent, inefficient and somewhat erratic. Each council collects recycling differently resulting in 39 kerbside collection systems. And recycling rates vary enormously, from 14 to 64 per cent between local authorities. Recycling needs an overhaul and, luckily, plans are afoot for a more cohesive, closed-loop recycling system.



Household recycling in the UK is not standardised, with 39 different kerbside collection systems



© WRP

## Recycling symbols: What do they mean?

<p><b>Widely Recycled</b></p>	<p><b>Widely Recycled</b> Packaging that is collected by 75% or more of local authorities across the UK, e.g. plastic bottles</p>	<p><b>Widely Recycled: Rinse, Lid On</b></p>	<p>Items should be rinsed and their lids left on. Even though the lid of a jar might be metal, it is better to be kept on; it will be separated and recycled elsewhere</p>	<p><b>Widely Recycled at Recycling Points</b></p>	<p>Items that are collected by many local authorities and can also be recycled at many recycling centres, e.g. food and drink cartons like Tetra Paks</p>
<p><b>Check Locally</b></p>	<p><b>Check Locally</b> Packaging that is collected by 20-75% of local authorities across the UK, e.g. some types of plastic packaging</p>	<p><b>Bottle Widely Recycled, Sleeve Not Yet Recycled</b></p>	<p>Depending on the packaging, you should remove the outer sleeve and put it in the waste bin</p>	<p><b>You may also see these symbols on packaging:</b></p>	
<p><b>Not Yet Recycled</b></p>	<p><b>Not Yet Recycled</b> Applies to packaging when less than 20% of local authorities collect it across the UK, e.g. crisp packets</p>	<p><b>Recycle with Bags at Larger Stores</b></p>	<p>Some plastic films can be recycled at supermarket carrier-bag collection points. Look out for the 'Recycle with carrier bags at larger stores' message on your breakfast cereal bag, toilet and kitchen roll wraps, bread bag, grocery produce, multipack shrink wrap, and newspaper and magazine wraps</p>		<p>The Mobius loop shows that an object is capable of being recycled</p>
<p><b>Widely Recycled: Flatten, Cap On</b></p>	<p>Squash or flatten the packaging to make the transport of recycling more efficient; replacing the caps on bottles (and some cartons too) helps to keep them flat and also avoids small caps falling through the holes in the sorting process</p>	<p><b>PET</b></p>	<p>This indicates the type of plastic resin used, ranging from 1 to 7. A number 1 indicates plastic resin that is easy to recycle, increasing in difficulty to number 7</p>		
<p><b>Widely Recycled: Rinse</b></p>	<p>Rinse packaging, e.g. food trays, to ensure food residue doesn't contaminate other materials</p>		<p>The green dot is meaningless in the UK. In some European countries it indicates that the company has contributed towards the cost of recycling in some way, but not that the packaging is recyclable</p>		
<p><b>Widely Recycled at Recycling Centres</b></p>	<p>Items that can be taken to many recycling centres, e.g. paint cans and some paint</p>				

### AISLE CHANGE

More than a hundred brands and retailers responsible for 85 per cent of plastic packaging sold through UK supermarkets have signed up to WRAP's UK Plastics Pact campaign, pledging to eliminate single-use packaging by 2025. The aim is to make 100 per cent of plastic packaging recyclable, reusable or compostable, and ensure that the recycled content of any plastic packaging is at least 30 per cent. But it's an expensive, complex process that could potentially result in more food waste if shelf life of fresh products is compromised.

Last year, the supermarket Iceland made an ambitious commitment to eliminate plastic packaging from their own-label products by 2023, as managing director Richard Walker explains: 'We have already taken out 1,500 tonnes of plastic across the supply chain, starting off with the replacement of black plastic frozen meal trays. We've still got a mountain to climb - and we're still all on our own. No other supermarkets are following our lead.' And it's no easy

feat. Iceland reintroduced plastic packaging for its bananas (that's 10 million plastic bags per year) after its paper-band replacement failed to reach expectations, but it recently relaunched new plastic-free banana packaging in 20 stores, with plans for a new plastic-free greengrocer initiative to trial in more than 30 stores later this year.

Meanwhile, Morrisons have replaced plastic bags with paper bags for loose fruit and veg - a move it said would prevent 150 million small plastic bags being used every year. And a new 11-week trial in Oxford - Waitrose Unpacked - encourages customers to bring refillable containers to restock from a choice of beer, wines, detergent, coffee and 28 dry products including cereals, lentils and pastas. Other unpacked concepts being tested by Waitrose include 160 loose vegetable and fruit products, flowers and plants wrapped in 100 per cent recyclable craft paper, and a frozen fruit pick-and-mix station.

WRAP's UK Plastic Pact campaign aims to make plastic packaging reusable, recyclable or compostable



To avoid contamination, recycling must be clean and composite materials split into types



**GETTING SORTED**

Confusingly though, a range of recycling symbols can be found on most supermarket shelves. Plastic packaging alone is made from seven types of resin – bottles made from PET or HDPE are easily recycled by most local authorities, whereas polystyrene isn't. So, it's important to check the labels before you buy, but beware. Even Simon Ellin, CEO of the Recycling Association, says it's 'easy to be duped'. Many consumers mistakenly believe that the 'Green Dot' trademark, commonly found on supermarket products, implies recyclability. In fact, this European symbol – meaningless in the UK – shows that the company has paid towards supporting the recycling industry, not that they specifically recycle their own products.

Once collected from households, recycling is taken to a materials recovery facility (MRF) which vary in configuration: some are more reliant on labour-intensive manual picking, whereas others are more machine-driven using magnets to sort cans and optical scanners to identify plastics, for example. Tom Harrison, contracts manager for Coastal Recycling, which operates an MRF near Exeter, Devon, says the existing system is too fragmented and optional. 'Labelling is very confusing with so many mixed messages from producers about packaging, especially for plastic household recycling. Contaminated products are problematic and even the wrong type of plastic in the polymer stream is effectively contamination and slows down the process.'

He explains that the public's role is crucial: 'Recycling needs to be clean from food residues and composite packaging should be split into types – for example, a cardboard packet with a clear plastic film window should be recycled as two

items.' Substandard materials can be rejected and sent to incineration or to landfill, because ultimately recycling has to make economic sense.

Once sorted, materials are sent off for processing. For instance, at a paper mill, bales of cardboard and paper are turned into pulp then transformed back into rolls of cardboard or paper; glass is crushed into small pieces called 'cullet' which is melted in a furnace at more than 1,500C, then the liquid glass is blown or pressed into new items.

**WASTE AS A COMMODITY**

The linear 'make, take and dispose' model has become so engrained in modern culture, but in an ideal world nothing would be thrown away. In fact, the Recycling Association avoids the term 'waste', referring instead to resources or commodities. Lots of product redesign is underway and some innovative companies are creating a sustainable market for previously unwanted byproducts – recycled nylon yarn is repurposed in fashion textiles, and ecobricks (made by filling a plastic bottle with clean, dry, unrecyclable plastic) have been used in the UK to build children's playgrounds. The

Packaging should first be reused if possible, then recycled as a second option

The industry can no longer rely on countries like China to take our mixed waste recycling



French biotech firm Carbios has successfully produced the first clear PET bottle made with 100 per cent recycled post-consumer plastic waste, using lab-engineered enzymes. And Paper Round, the leading commercial recycling company established by Friends of the Earth in 1988, cleverly repurposes segregated waste streams back into valuable office products, such as business cards made from coffee cups and uniforms made from plastic bottles.

**SUSTAINABLE STRATEGIES**

Ellin hopes that DEFRA's new Resources and Waste Strategy for England will result in a more streamlined system once implemented in 2023. 'When China, Malaysia and Vietnam stopped accepting our mixed waste recycling, the industry got a wake-up call,' he says. 'We launched our Quality First campaign to join up the supply chain which we felt was broken. Fundamentally, manufacturers are producing too much and not designing products for reuse or recyclability.'

Extended Producer Responsibility (EPR), a form of product stewardship, means that manufacturers will soon have to pay for the materials they produce – the less recyclable it is, the more they pay. Money raised from EPR will be ring-fenced for local authorities to create a more consistent approach alongside better national communications. The government plans to follow Scotland's commitment to a bottle deposit return scheme and proposes to introduce a tax on plastic packaging made of less than 30 per cent recycled plastic.

'To minimise the net carbon impact, decisions must be underpinned by robust science. Ideally, all packaging should be designed for recyclability, then labelled with a colour-coded system so it can be sorted correctly,' adds Ellin, who estimates that a fully functioning recycling system could be a decade away. 'That's the holy grail.'

**Reclaim your recycling bin with our 10 dos and don'ts**

- 1** Do avoid unnecessary packaging. Buy loose fruit and veg and take reusable containers to the shops. Find your local bulk store at [zerowastenear.me](http://zerowastenear.me).
- 2** Don't buy products in black plastic trays. They are harder for infrared sorting machines to spot.
- 3** Don't choose products with composite packaging. Pringles tubes have a metal base, plastic cap, metal tear-off lid and foil-lined cardboard sleeve that are impossible to separate. Even birthday cards with glitter are considered contamination at the paper mill.
- 4** Do take your recyclable bread bags, plastic film and frozen food bags to the plastic carrier bag recycling point in most supermarkets.
- 5** Do wash all containers before recycling to avoid contamination.
- 6** Do put the lids back onto plastic bottles and squash them before recycling, and note that clear plastic bottles are far easier to recycle than coloured bottles.
- 7** Don't be misled by the Green Dot. Look for proper recycling symbols.
- 8** Do find out what you can recycle locally, using the Recycle Now locator ([recyclenow.com/local-recycling](http://recyclenow.com/local-recycling)) or [gov.uk/recycling-collections](http://gov.uk/recycling-collections).
- 9** Do register online with TerraCycle to find communal collection points or post off hard-to-recycle items such as felt-tip pens, contact lenses, sweet wrappers and crisp packets ([terracycle.com/en-GB](http://terracycle.com/en-GB)).
- 10** Do join Recycle Now's celebration of recycling and sign up to be part of Recycle Week on 23-29 September (partners. [wrap.org.uk](http://wrap.org.uk)).