

# A PLASTIC PLANET

## 4. SOURCE MATERIAL: GLASS

Glass is an astounding packaging material that has used for thousands of years. An energy audit concluded that bottle banks that separate glass by colour (clear, brown, green) have a significantly better carbon footprint than comingled collections<sup>2</sup>. Co-mingled glass makes a greeny brown colour called Autumn Leaf – if this became an aspirational colour - we would have a real surfeit and a tighter recycling loop for glass.

### GLASS JARS & BOTTLES

#### STARTING LIFE

Like treacle, glass is fluid at high temperatures, making it moldable into an infinite number of shapes. Three main ingredients: Silica, in the form of sand, soda ash and limestone are heated in furnaces in temperatures as high as 1700°C. Previously blown by hand, bottles and jars are now made using two automated methods, Press and Blow or Blow and Blow.<sup>3</sup> In both, the liquefied materials (virgin or recycled) are poured into a mold; air is blown in to create the shape of the bottle or jar and once cooled, the container is filled with food or sauce.



#### WORKING LIFE

Glass is air tight, oven safe and sterile and as an inert material, there is no glass 'taste' or the need for extra layers to protect the food from its container.

Typical uses for glass packaging include wine, pasta sauces, jams, spreads, condiments (ketchup and mayonnaise), drinks and previously milk. Every household in the UK uses on average 331 bottles and jars each year.

#### ENDING LIFE

As a mono material, glass can be recycled an infinite number of times without losing quality, strength and functionality and avoids down cycling or landfill.

-Using cullet achieves -2.5-3% energy savings for every 10% of cullet used to replace virgin materials as no reaction energy is needed to melt cullet.

-For every tonne of quality, recycled cullet used to make new glass bottles and jars, 670 kg of Co<sub>2</sub> and 1.2 tonnes of virgin raw materials from being quarried are saved.

#### WEBSITES

<https://www.britglass.co.uk/facts-about-glass>