



British Glass

British Glass responds to *Towards sustainable packaging materials* report from Cambridge University.

Following the publication of *Towards sustainable packaging materials: Examining the relative impact of materials in the natural source water and soft drinks value chain* by Cambridge University, British Glass would like to correct the glass data used in the report.

Given that this data has a potential negative impact on the glass sector, both through this study and subsequent reports which reference the findings, we wanted to set the record straight.

Water Use


In the methodology section of the report, it states that the water usage is for the production of each packaging material. The figure used for the production of a one litre glass bottle is 8.6 litres. This figure is taken from a study which compares the water footprint of a single use PET bottle with a **refillable** glass bottle. The system boundary is the extraction and bottling of the mineral water in the factory so this does not represent the water consumption due to manufacture of a glass container. The study concluded that the high water use for glass was mainly due to the rinsing requirements for the refillable glass bottle. I understand that there is limited data available for water use in the glass sector, however, it is clearly wrong to use this figure to compare glass against the other materials.

The main use of water in glass manufacture is for cooling and cleaning. It may also be added to the batch materials to maintain the batch moisture at around 4% to prevent issues with dust. Sites have systems to recycle the cooling water so the main losses are due to evaporation. From our data we estimate that the water consumption for the manufacture of a 360g container is between 100-300ml.

Recycled content

The recycled content figure used for glass is 25% for a clear glass container. This value is taken from a list of facts on a website of a supplier of recycling bins which does not give a reference for the information, nor does it give details of how this has been calculated. We would not have thought this would be classed as a credible source of information for this study. Information on recycled content is available on the British Glass website (<https://www.britglass.org.uk/knowledge-base/resources-and-publications/recycled-content-glass-packaging>). The last published figure we have for clear is 32% for 2016 and we expect to publish an update later this year and based on feedback from manufacturers we expect that there will be an increase in recycled content.

As the report points out, there is a lack of comparable reporting when it comes to recycled content. The British Glass figures are calculated based on ISO14021 and do not include containers which are rejected or broken onsite and recycled back into the process. Although we accept that many of the glass containers for mineral water and soft drinks will be in clear glass there are still some popular brands such as Green Bottle Company, Appletiser and Highland Spring sparkling water which are packaged in green containers. Green containers have a much higher recycled content in the UK (68%) due to a colour imbalance in the availability of cullet. This is an important point which should be highlighted in the report.



There are many other aspects that should be considered when assessing the environmental impact of packaging materials these include:

- Plastic pollution which is not yet addressed by traditional LCA.
 - Product shelf life (e.g. glass is a much more effective CO₂ barrier, which means that sparkling drinks have a longer shelf life).
 - Recyclability (whether the material is infinitely recyclable such as glass or has finite recyclability).
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