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## Carbon footprint of 1kg General Glass

**CO2e: 1.00kg CO2e (16 days)**

Not recycled : 8.4 kg Co2e per kilogram of glass

Recycled : 1.4 kg Co2e per kilogram of glass

Recycling may not be that simple... see source 1a

**Source 1:** <http://www.york.ac.uk/sei/projects/completed-projects/york-ecological-footprint/>

A Material Flow Analysis and Ecological Footprint of York

Gives 8.39 tonnes Co2e per tonne of glass manufactured and 1.43 tonnes for recycled glass.

**Source 1a:** Interview with Councillor Andrew Waller, (at time of writing) Deputy Leader of York Council says (in the UK) green bottles are ground down to make "green sand" for motorways. Extracting raw sand creates a tiny fraction of the CO2 compared with that from making glass – it is hard to see this "recycling" as a saving. He also says that recycling of white glass saves 20% of the energy (CO2) much less than indicated in source 1. (to be investigated...)

**Source 2:** <http://www.britglass.org.uk/NewsEvents/BGNewsArchive/CarbonTrustGTSSStudyProves.html>

This source has not been used yet. It does not seem to give a useable figure for Co2e per kilogram of glass.

**Source 3:** <http://www.sundropjewelry.com/blog/?p=23>

"How does this add up for Sundrops?"

"To figure the impact of the glass we start out with, we took the carbon footprint of glass production, and combined it with the costs of shipping the raw materials and finished glass. Bullseye provided us with precise numbers for their glass production. I can't publish them here because they're a trade secret, but have used them in my own calculations.

...

"Carbon Footprint of Glass"

"Plugging in the different kinds of fuel (natural gas to melt glass, diesel to move it around), and the distances, I get a carbon footprint of 4 pounds CO2 per pound of glass"

"This is the impact of the glass when I pick it up from the store (I walk to and from the stained glass store, so I'm not counting any extra transport cost there), before we melt it into earrings."

**Source 4:** [http://www.cat.org.uk/catpubs/pubs\\_content.tmp?subdir=catpubs&sku=PUBS\\_25&key=whb](http://www.cat.org.uk/catpubs/pubs_content.tmp?subdir=catpubs&sku=PUBS_25&key=whb)

The Whole House Book from the Centre for Alternative Technology has a graph (probably based on Building Research Establishment Data) which seems to indicate 0.3 kgs of CO2 per kg of glass.

**Source 5:** International Centre for the Environment, University of Bath

A large selection of embodied energy research can be found at the International Centre for the Environment.  
(<http://www.bath.ac.uk/mech-eng/serf/embodied/>)

They give 0.77kg CO<sub>2</sub> per kg glass. They may have used a 38% rate of recycling for this figure.

Source 1a (above) suggests green bottles are not recycled – unless grinding down to sand for motorways is considered to be recycling.

Perhaps a guideline figure of 1.00kg CO<sub>2</sub>e per kg of glass should be used.

How does this fit with the other figures, which range from 0.3 to 8.4...

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