

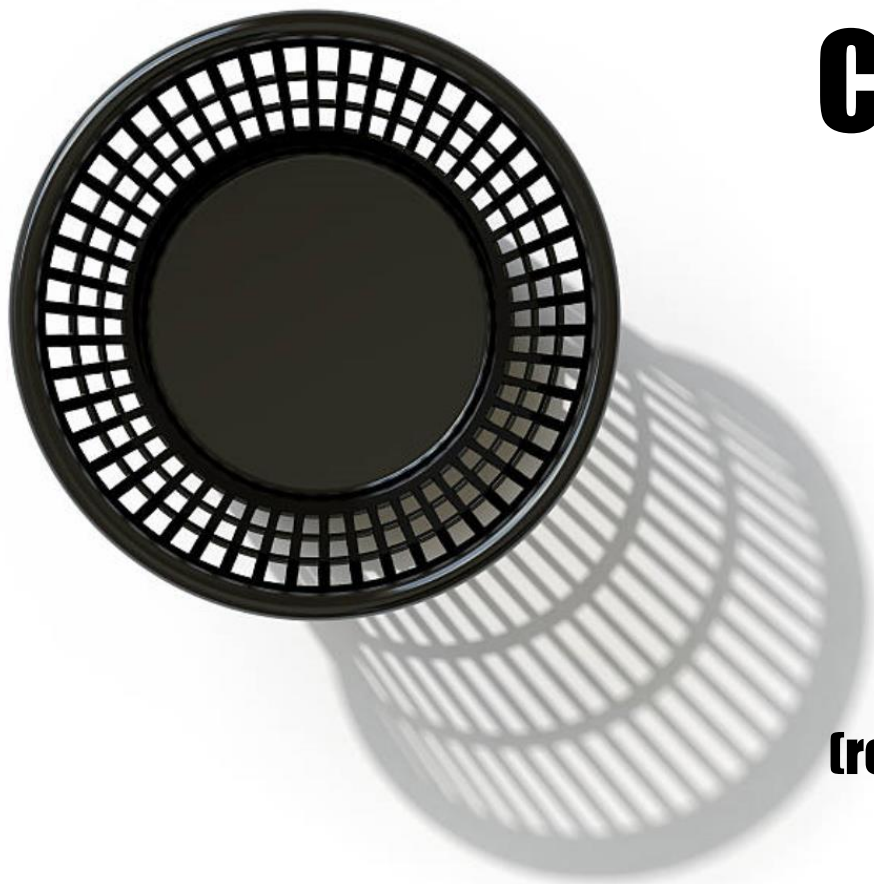


Carbon Footprint calculation

Filling Good

Year 2021-22

Finalized on the 11.10.2022



**(reviewed and approved by Dave Hampton, The Carbon Coach©, as a
volunteer work for Filling Good)**

A FEW WORDS ABOUT THIS CALCULATION — FROM THE FILLING GOOD TEAM

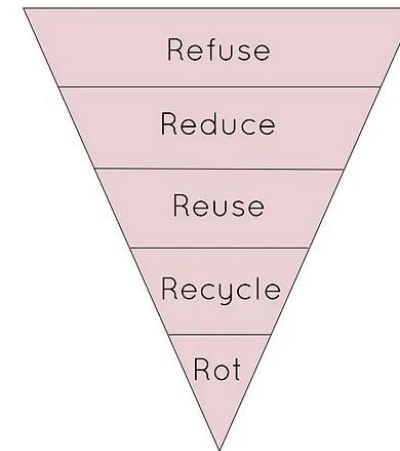


Filling Good is a community and not for profit zero waste shop, based in Maidenhead, Berkshire. Filling Good runs on cooperative principles, being a community benefit society. Mainly owned by locals, its overall goal is to encourage sustainable living, and dedicate as much to the environment protection as possible.

As a community, Filling Good tries hard to reduce its impact on the environment. The zero-waste philosophy is about the 5Rs: first refuse the unnecessary, then reduce our impact is simply the overall philosophy of the shop. Sobriety at heart.

When profit has been made in the fiscal year 2021-22, a resolution has been submitted for vote to the members, to dedicate a big part of it to environmental charities and carbon compensating projects. The members have, with a big majority, voted for the resolution, making from Filling Good the first carbon negative shop in Maidenhead (and probably far beyond!).

But it is important for us as a community shop to make something clear: we don't like the term "offset" as you can't 'reverse' or wipe away CO2 emissions. We are doing our best to reduce our impact first before going for a compensation. And to understand our impact overall, we went into the details of our own impact. Hence this piece of work. We hope you will appreciate the efforts we do. Have a good read!



The Filling Good Team



SCOPE

Greenhouse gas emissions are categorised into three groups or 'Scopes' by the most widely-used international accounting tool, the Greenhouse Gas (GHG) Protocol.

Scope 1 covers direct emissions from owned or controlled sources.

Scope 2 covers indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company.

Scope 3 includes all other indirect emissions that occur in a company's value chain.

Scope 1	Scope 2	Scope 3
Fuel combustion Company vehicles Fugitive emissions	Purchased electricity, <u>heat</u> and steam	Purchased goods and services Business travel Employee commuting Waste disposal Use of sold products Transportation and distribution (up- and downstream) Investments Leased assets and franchises

SCOPE 1 : FUEL COMBUSTION, COMPANY VEHICLES, FUGITIVE EMISSIONS



None at Filling Good.

Total impact per year:

0 ton

SCOPE 2 : PURCHASED ELECTRICITY, HEAT AND STEAM



Electricity:

only 100% renewable electricity used

Annual consumption impact:

6737 Kwh x 0.193 kg (source bulb.co.uk national average carbon intensity for renewable energy 2022)

= 1.3 T CO2

Indirect heating:

We probably get some indirect heating from Halifax (neighbour) and the flat above.

The most it could realistically be would be about 2000kWh per year which is 400kg CO2.

(10000kWh is average for an entire uk house and you'd be less than a 5th of that I guess)

<https://www.ovoenergy.com/guides/energy-guides/how-much-heating-energy-do-you-use>

= 0.4 T CO2

Total impact per year:

1.7 ton

SCOPE 3 – PURCHASED GOOD AND SERVICES



- Impact of the packaging received for the delivery of resale goods:

Assumption of 10kg of Cardboard per week

Cardbord carbon intensity : 1.53kg for cardboard national UK average thanks to consumerecology.com

(NB: we also receive some plastic, but the plastic is lighter – so taking in account cardboard will be on the prudent side).

$10 \times 52 \times 1,53 = 0.8 \text{ T CO}_2$

- Purchased good for the shop operations :

Toilet paper is usually taken from the stock – bamboo (Lowest carbon impact)

Cleaning products from the shop, like sponges and liquids etc

The clothes are reused over and over again, and a volunteer washes them at home

Other purchases are the sticky labels for the dispensers, the rolls for the card machine

Small electrics were all second hand (vacuum cleaner rescued from the bin, kettle donated, etc...) pens are donated, etc..

We assume **0.25T CO2** which is probably too high

Total impact per year:

1.05 ton

SCOPE 3 – BUSINESS TRAVEL



- Monthly trip to Marlow to get some stock delivered to Seed 1

151g per km for Nellys car

= $30 \times 1.6 \times 0.151 \times 12 = 87\text{kg}$

3 days of conference at Warner Bros last year with Sophie's car (Electric)

Total of $30.1 \times 2 \times 3 = 180\text{miles}$

=0 as electric car

Return train trip to London to go the TopDrawer fair in Olympia London (Nelly and Sophie)

=7.24 kg thanks to GWR carbon calculator

Total impact per year:

0.1 ton

SCOPE 3 – EMPLOYEE AND VOLUNTEER COMMUTING



Helen taking the car (regular) one a week 47 weeks a year . 6 miles return, 3 miles per trip

Sophie 2 shifts a week 52 weeks a year with electric car. 2.5 miles per trip, 5 miles return

Tina gets picked up but after a grocery shopping that would happen anyway

Jane : cycle down and bus if raining

Laura : cycling and car if raining

Sarah : sometimes the car – depends on if many groceries needed and if it is too heavy then car

Eva : comes on the bus

Robert : cycles or walk

Elisabeth : cycles

Nelly : cycles or walk

Astrid : walks

Sophie Piper : walks

Mary : walks

Pat : cycles or walks

DofE students are often picked up

Overall assumption:

6 (days) x 51 (weeks) x 4 (miles) = 1224 miles is 30.6 gals is 0.3T CO₂

Total impact per year:

0.3 ton

SCOPE 3 — WASTE DISPOSAL AND USE OF SOLID PRODUCT



Stock cannot really go off, we only have BBD and no use by dates so we do not really waste any stock, worst case our volunteers take the old stock for free.

The food spillage is kept apart in order to feed Sophie's chicken.

We bring our flexible plastics to Sainsburys as they have a recycling point.

Waste disposal Veolia is their footprint – we have cardboard we dispose of mainly, and a small bin for general waste that is collected only once a month (and never really full).

We do not here count the impact that we actually collect some unwanted containers that people bring us, removing some waste from other waste streams externally to Filling Good, but could be counted as a positive impact rather than a negative one.

We estimate 0.1T of CO2

Total impact per year:

0.1 ton

SCOPE 3 – PURCHASED WATER



We estimate 50L per day are used – dishwashing + a few flushes in the toilet.

$6 \text{ days} \times 51 \text{ weeks} \times 50 = 15.3 \text{ m}^3$

$15.3 \times 10 \text{ kg per m}^3 \text{ (Source wint.ai)} = 0.15 \text{ T}$

Total impact per year:

0.15 ton

SCOPE 3 – TRANSPORTATION AND DISTRIBUTION

A. UPSTREAM



We have too many suppliers to be able to calculate bottom up the precise impact the deliveries are generating. So we chose our biggest supplier, and calculate their precise impact and extrapolated this to our whole business.

Supplier	Depot	Miles from FG	Delivery per day	Miles per gallon	Delivery per year	Total delivery impact	Gallon	CO2 in kg
Sesi	Oxford	40	8	15	26	130	9	87
Infinity	Brighton	80	8	15	26	260	17	173
Waltham place	White Waltham, Berkshire	0						
Suma	Elland, West Yorkshire	194	8	15	8	194	13	129
Miniml	Cononley, north Yorkshire	172	8	15	4	86	6	57
Queenswood	Sherbone, Dorset	91	8	15	10	114	8	76
Total							52.25	522.5
Portion of the turnover								47%
Extrapolation for the whole business in T of CO2								1.1

Total impact per year:

1.1 ton

SCOPE 3 – TRANSPORTATION AND DISTRIBUTION

B. DOWNSTREAM



Filling Good doesn't deliver - people are coming to the shop to make their purchase.
No impact downstream.

Total impact per year:

0 ton

SCOPE 3 — INVESTMENTS, LEASED ASSETS, FRANCHISES



Not applicable to FG

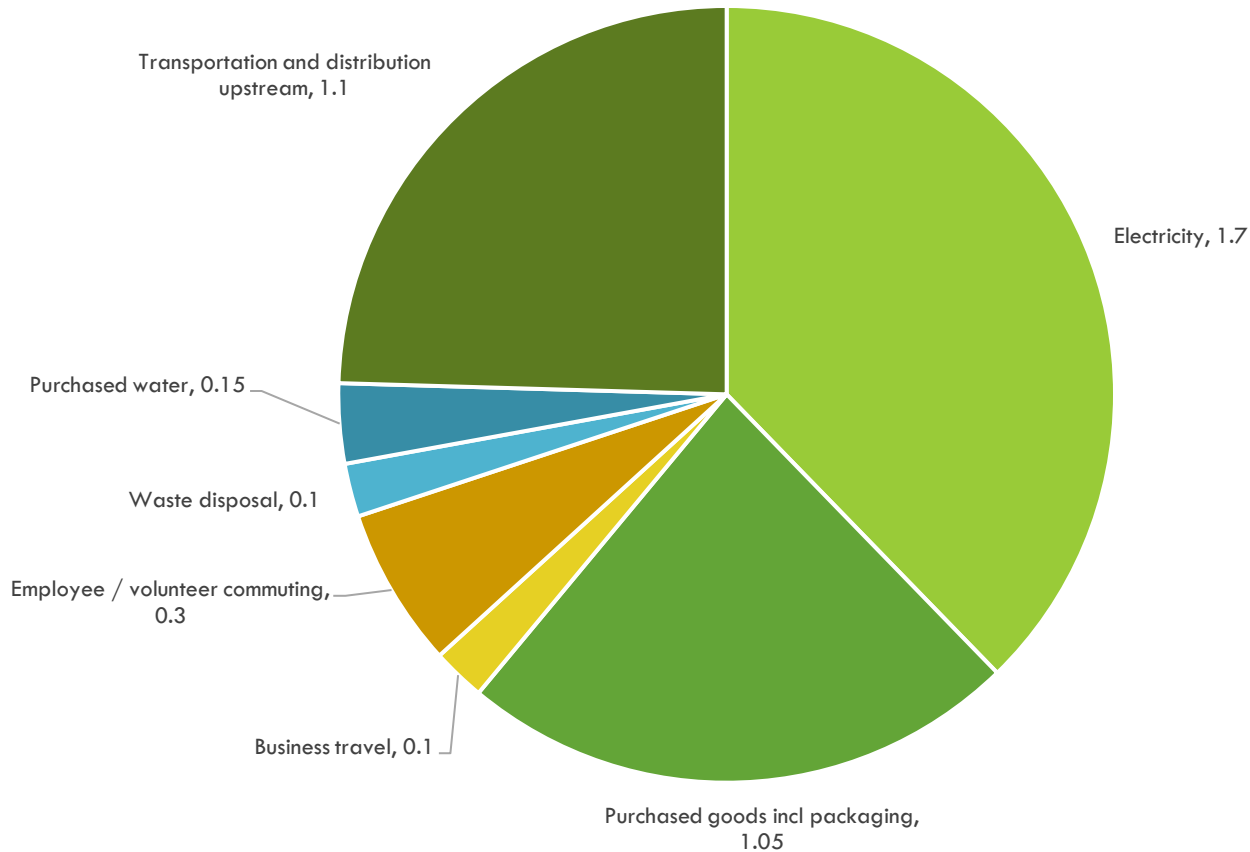
Total impact per year:

0 ton

SUMMARY: TOTAL YEARLY IMPACT OF FILLING GOOD IS 4.5T OF CO2



Tons of CO2 per year



Scope	Emissions type	Tons of CO2 per year
Scope 1	Direct emissions	0
Scope 2	Electricity	1.7
Scope 3	Purchased goods incl packaging	1.05
	Business travel	0.1
	Employee / volunteer commuting	0.3
	Waste disposal	0.1
	Purchased water	0.15
	Transportation and distribution upstream	1.1
	Transportation and distribution downstream	0
	Investment, leased assets, franchises	0
	Total	4.5

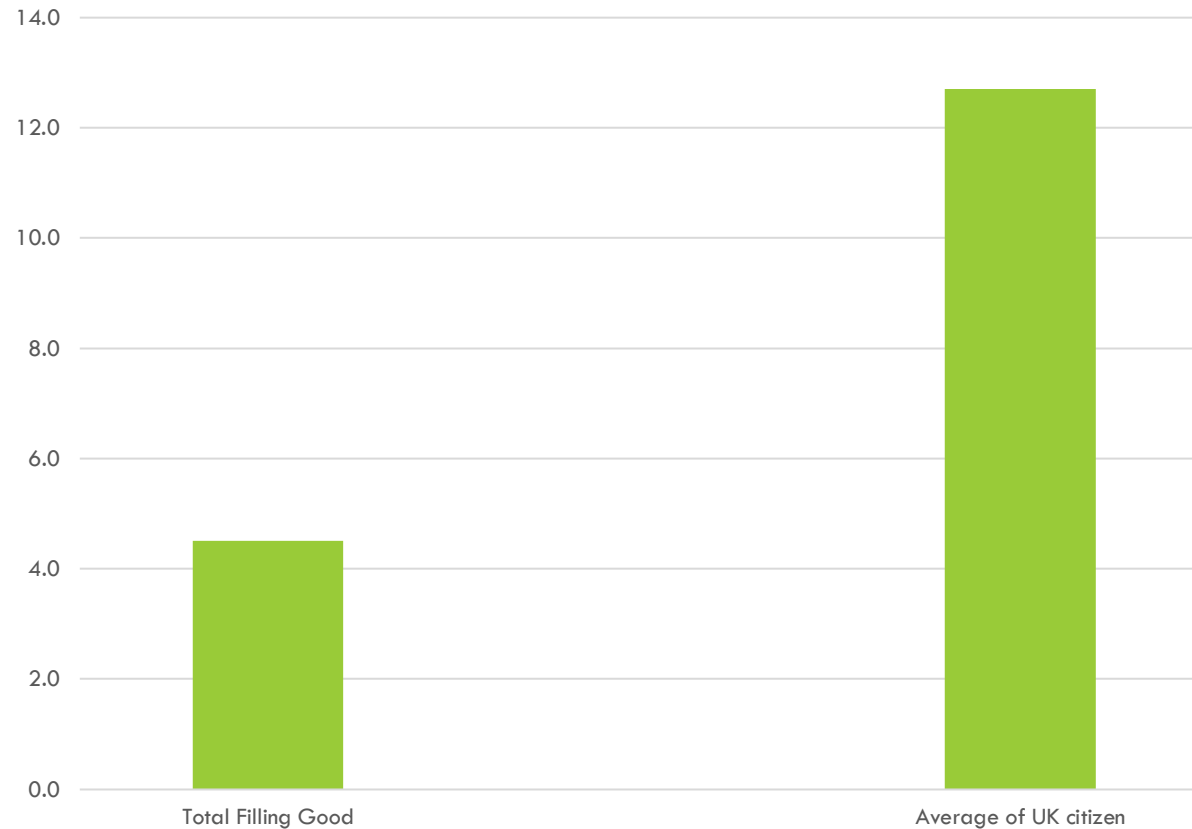
Total impact per year:

4.5 ton

SUMMARY: TOTAL YEARLY IMPACT OF FILLING GOOD IS 4.5T OF CO2



Filling Good impact vs. average UK Citizen in ton of CO2



The impact in CO2 of Filling Good in one year is a big third of an average UK citizen (source pawprint.eco)

We are confident that our estimates are very careful, if anything more overestimated than underestimated.

DONATIONS MADE



We chose to invest in a tree planting scheme, Tree sisters UK, who is actively encouraging the cultural shift required to grow from a consumer to a restorative culture. They encourage feminine leadership by providing resources, experiences and communities that inspire personal and collective action on behalf of the trees. So far they have planted over 26 million trees across 12 locations in Brazil, Borneo, Cameroon, India, Kenya, Mozambique, Madagascar, Nepal and West Papua. (impact 83T of CO2)

We also chose 2 different projects with Gold standard, having in mind that we wanted our money to work the hardest for the environment, while supporting communities :

- Clean water access for families in Laos
- Biomass power project in Chhattisgarh

(Total impact of 433T of CO2)

More information on the projects can be found here:

[Home — TreeSisters](#)

[20 MW Biomass Power Project in Chhattisgarh, India – Gold Standard Marketplace](#)

[Terraclear - Clean water access for families in Laos – Gold Standard Marketplace](#)

DONATIONS MADE



We will have in total **compensated 516 T of CO2**, which is about 115 years of Filling Good impact, or the impact of 41 average people of the UK. It makes Filling Good a truly carbon negative shop!

We are proud of this achievement, and we really must thank everyone involved in the shop, as it is the result of a common work.

Aside from the CO2 impact, we still thrive to reduce our plastic impact, and have a plastic reduction impact through all the products we sell on refills, and our closed loop suppliers upstream. This has less a CO2 impact and more of a pollution reduction impact, which is at the core of our work.

We hope many businesses and individuals will start calculating their impact, see how they are able to reduce it, and take steps to compensate their emissions for what is not possible to reduce!

SUMMARY



We don't need a handful of people doing zero waste perfectly. we need millions of people doing it imperfectly.

Anne Marie Bonneau § Zero Waste Chef