



Water bottle alternatives

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1 Introduction

City to Sea is an environmental not-for-profit campaigning to stop plastic pollution – from the city to the sea. Our award-winning campaigns are focused on tackling the single-use plastic items found most commonly on our beaches by providing practical, solutions-focused initiatives and advocating reduce and reuse over single-use.

Refill is our biggest campaign to date – what started as a pilot in Bristol in 2015 has now grown to a global movement. Our mission was simple – to prevent plastic pollution by making it easier to reuse and refill your water bottle on the go than to buy a single-use plastic bottle.

The campaign is now set to expand and become the one-stop shop for avoiding single-use plastic and switching to reusables. The expanded concept will include places that are happy for customers to bring reusable containers for refills of hot drinks; lunches & food-to-go; fruit and vegetables; toiletries; and all other grocery and household refills.



Source: ⁽¹⁾ Earth Watch Plastic Rivers report found that 14% of river litter items was bottles.

The problem with plastic

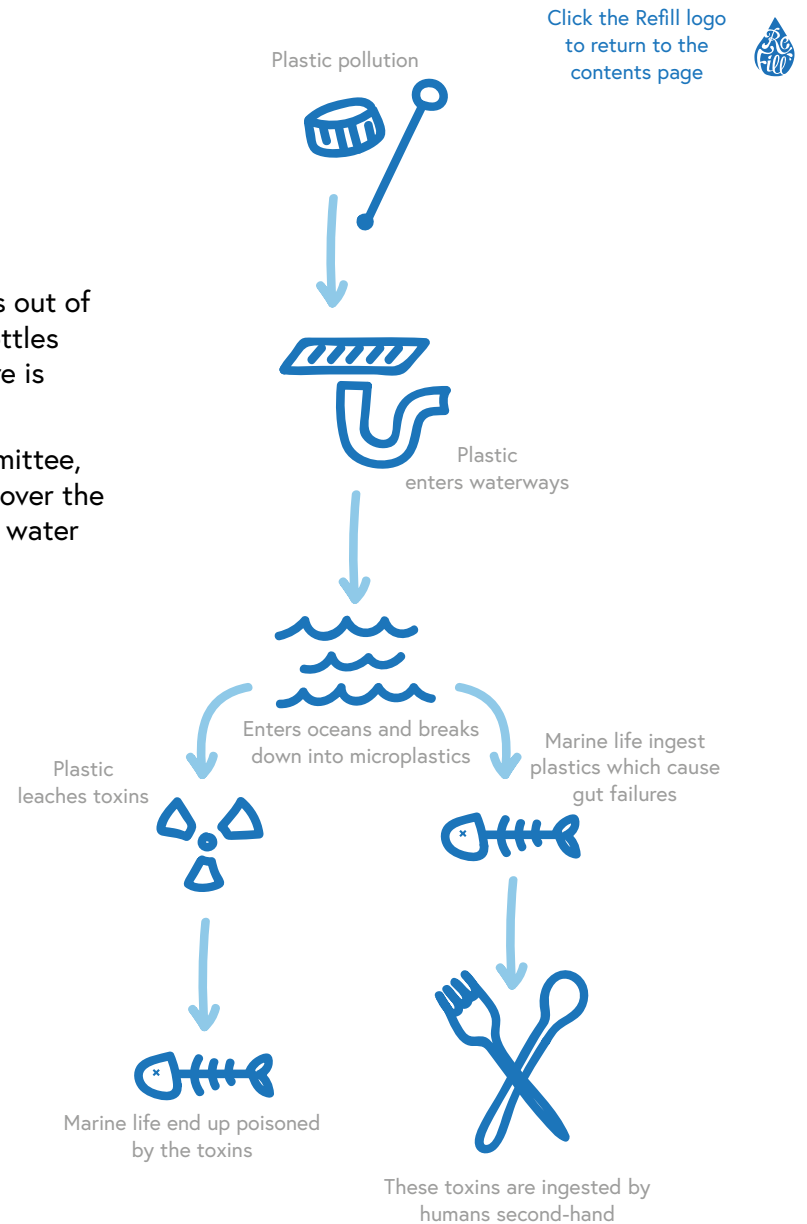
Our addiction to single-use bottled water is out of control. Every minute, one million plastic bottles are bought around the world, and that figure is expected to go up 20% by 2021.

According to the Environmental Audit Committee, consumption of bottled water has doubled over the last 15 years, with over seven billion plastic water bottles used each year in the UK.

Bottled water is almost
1,000 times
more carbon intensive than drinking
main tap water

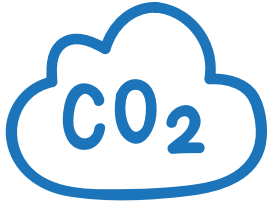
An estimated **700,000**
plastic bottles are littered every
single day in the UK.

Plastic bottles, caps and lids are the
most commonly found single-use
item on beaches in Europe.



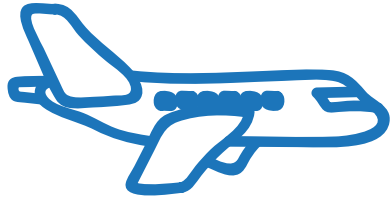
2 Environmental impacts

All reusable bottles have environmental impacts and a higher carbon footprint than plastic because they're made of more durable materials. These impacts are from:



The environmental damage

Mining materials like aluminium and steel, or manufacturing glass, causes the release of greenhouse gases as well as carcinogenic and toxic particulates.



The transportation

Bottles are often shipped from China and therefore have a damaging environmental impact (particularly eco-system damage from ore mining).



The production of materials

Large quantities of energy, materials and water are required for production.

Did you know?

Landfill and incineration of plastic bottles from the UK produces approximately 233,000 tonnes of CO₂e emissions a year.



3 Reusable bottle considerations

These would be our top-line recommendations when thinking about purchasing reusable bottles.



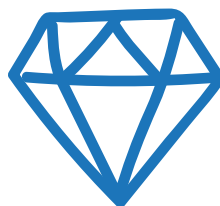
Choose high-quality stainless steel options

When selling or giving away reusable bottles choose a high quality stainless steel bottle that has a value rather than a low-quality plastic or aluminium bottle that leaves a nasty taste when used.



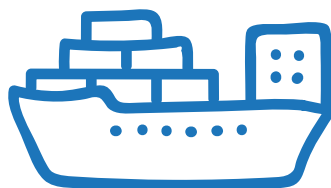
Think about pre-sales

To address concerns about investing in bottles that aren't sold you can do pre-sales.



Choose products that hold a higher value

People place a higher value on things that are finite or have a cost rather than cheap free things. When selling or giving away reusable bottles choose high-quality items people are going to keep, use and value.









Request ship-freighted delivery

Allow enough lead time to have items shipped rather than flown.



3 Reusable bottle recommendations



	1	2	3	4	5	6
						
	Stainless steel	Recycled aluminium	Glass	Aluminium	Bio-HDPE	Plastic
MATERIALS	Stainless steel	Recycled aluminium	Borosilicate glass	Aluminium bauxite	Plastic polymer made from sugarcane in Brazil	Oil based plastic
BENEFITS	High quality, hard-wearing	Lower cost	High quality, hard-wearing	Low cost	Plastic-free polymer made from by-product of sugarcane Low cost	Low carbon footprint in production
IMPACTS / ISSUES	Mining of raw materials	Check the % of recycled content Lined with plastic Damages easily	High energy and carbon impacts in production	Mining is energy intensive and polluting Lined with plastic so damages easily	Can look cheap	Looks cheap and disposable so isn't valued Leaches chemical taste in the water
COST	£££	£££	£££	££	££	£
TOXICITY TO HUMANS	Toxic-free	Depends if the liner is BPA plastic	Toxin-free	Depends if the liner is BPA plastic	Toxin-free	Toxic
DISPOSABILITY	High reuse	Medium/high reuse	Medium/high reuse	Medium reuse	Medium reuse	Low reuse
RECYCLABILITY	100% recyclable	Recyclers can tolerate a few bottles but not large quantities (e.g. at an event)	Hardened glass can't be recycled	Recyclers can tolerate a few bottles but not large quantities (e.g. at an event)	Depends on plastic type and current recycling markets	Depends on plastic type and current recycling markets
DURABILITY	Very durable	Durable but may dent	Durable and lifetime guarantee	Durable but may dent	Durable	Durable
TASTE / ODOUR	None	Yes – metallic taste	None	Yes – metallic taste	No	Yes
WEIGHT	Medium weight	Medium weight	Heavy	Medium weight	Light weight	Light weight
DISHWASHER SAFE	Yes	No	Yes	No	Yes	Leaches chemicals

3 Reusable bottle recommendations



Chilly's bottles

Chilly's and Refill are both on a fearless mission to accelerate the daily use of reusable products. The Chilly's x Refill bottle combines both style and performance whilst being eco-friendly and durable – it's the only bottle you need for hot or cold drinks on the go. Named 'Best Buy' by the Independent. Co-branding options – have your organisation's logo laser etched on your bottles.

Costs: starting at £13 for co-branded, wholesale or bulk orders. RRP £20. All orders include a minimum of £3 donation from Chilly's towards growing the Refill campaign.



RAW bottles

RAW Foundation helps to educate and empower young people to tackle plastic pollution, so all RAW bottles support their cause. 500ml bottles. Single wall 100% stainless steel. Laser-etched logos. Refill and/or City to Sea logo options as well as your own.

Costs: starting at £7.10 per bottle. RRP £10. Minimum order 30+ bottles.

Contact Alannah for bottle orders or queries: alannah@citytosea.org.uk

4 Case studies



Robeco glass bottles

Robeco hosts and sponsors a number of large conferences and events throughout Europe. To avoid handing out single-use plastic water bottles, Robeco has provided glass reusable bottles and mobile water refill stations to fill them up throughout the events. These bottles have been well liked by attendees, with Bethany Morris, Head of UK Marketing, saying "Through our partnership with Refill we have been able to take the message to delegates, asking them to swap their single use plastic bottles and to encourage them to start refilling a reusable. By combining the onsite activity with email, social media and content we have been able to make an amazing impact." Robeco has also negotiated with conference organisers to encourage them to go plastic free and worked with them to find solutions.

They have replaced all bottled water in many of their European offices with the same glass reusable bottles; storing them in the fridge and using a new Sodastream to provide clients with chilled still or sparkling water without the environmental impact.



Wastepack bottles

After meeting some of the Refill team members at an event, Wastepack Group purchased reusable water bottles for all of their employees, to encourage them to ditch single-use plastics. They went for the Refill x Chilly's bottles, which they were able to purchase at a bulk order discount and have their company logo engraved for free. Chilly's also kindly donates to the Refill campaign for every Refill x Chilly's bottle bought, so through this order Wastepack were able to fund the campaign.

Even better – Wastepack also teamed up with Kids Against Plastic and bought one for each of the hard-working team of kids there!

5 Disposables review



If it is not possible to offer reusables and you are required to give out disposables because there is not a water point available this is our evaluation of disposables:



Plastic bottles



Cans



Tetra Pak cartons



Glass



Paper bottles (Ch2oose)

	Plastic bottles	Cans	Tetra Pak cartons	Glass	Paper bottles (Ch2oose)
MATERIAL	Oil	Up to 68% recycled content and plastic lining	Virgin paper, aluminium and plastic lining	Sand, lime ash and soda Recycled content varies from 0 - 100%	Recycled paper and a waterproof liner
PLASTIC LID?	Yes	Some do / some don't	Yes	Metal or plastic lid	Metal lid
PROS	PET is easiest plastic to recycle Light weight	Aluminium is infinitely recyclable	Light weight	Reusable Infinitely recyclable	Using waste material with a non-plastic or PLA liner
CONS	There are lots of challenges with plastics recycling in the UK Water bottles need to be made from recycled plastic to stimulate the demand for recycled plastics	32% of virgin aluminium is sourced from strip mines	Hard to recycle all the materials Not made from recycled materials	Heavy – not all glass bottles are made from recycled content	Can't recycle afterwards
WASTE STREAMS	Recycling	Recycling	Depends on local authority	Recycling	General waste



About Refill

Refill is an award-winning campaign to prevent plastic pollution, making it easier to reuse and refill your water bottle on the go than to buy a single-use plastic bottle.

The campaign works by connecting people who are looking for water, with thousands of local businesses, transport hubs and public spaces where they can refill for free via a location-based app. Participating cafés, bars, restaurants, banks, galleries, museums and other businesses simply sign up to the app and put a sticker in their window – alerting passers-by that they're welcome to come on in and fill up their bottle.

We estimate Refill will have saved over 100 million single-use bottles from entering our waste stream by the end of 2019. In 2020, City to Sea, the organisation behind Refill, will be rolling the campaign out internationally and expanding to cover more than just drinking water. Get in touch to find out how to get involved.

www.refill.org.uk



About City to Sea

We're an environmental not-for-profit campaigning to stop plastic pollution - from the city to the sea. Our vision is for the world's waterways and coastlines to be strewn with sticks, sand and seaweed... not plastic!

Our award-winning campaigns are focused on tackling the single-use plastic items found most commonly on our beaches by providing practical, solutions-focused initiatives and advocating reduce and reuse over single-use.

Working with communities, corporates and retailers we're inspiring and empowering everyone to tackle plastic pollution – by connecting our actions to our oceans.

www.citytosea.org.uk

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City to Sea is a Registered Community Interest Company, No. 09948596

Thank you

Please contact info@refill.org.uk for more information.



www.refill.org.uk



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