



Matter.

Impact Report.

2023.

Introduction.



Matter's vision is to live in a world without micropollutants in our environment. We are dedicated to building the necessary tools, techniques, and scalable solutions to drive this transformation. In line with cradle-to-cradle philosophy, we have adopted a circular approach with focus on the capture, harvest and recycling of micropollutants. At the heart of our impact framework lie three core pillars: research and development (R&D), education and legislation. These pillars serve as the foundation for our efforts to create meaningful and sustainable impact as we strive for a better future.

Over the course of 2023, we witnessed a wave of new research into the concerning impacts of microplastic pollution on both the environment and human health. This research, while alarming, serves as a wake-up call and will only increase awareness around the issue, which is a critical driver of change. I hope the sense of urgency that comes with this new research will continue to increase public pressure and drive the necessary legislation to compel governments and industry to find readily available solutions to tackle this issue. The research is a clear sign that action is not just a choice; it's a must.

We're pleased that legislation mandating microfibre filters for new washing machines has become an EU wide discussion,¹ despite disappointment that France won't meet their original commitment to a mandate from 2025. Setting the right standards to ensure legislation has a meaningful, positive impact on the planet is crucial. We are therefore proud to play an active part in the IEC² standard setting process, propelling us towards global benchmarks.


Lastly, 2023 marked a major milestone for Matter as we successfully closed our Series A funding round, securing a significant \$10 million investment. This funding has enabled us to continue building our dream team of passionate environmental advocates and engineering experts. With this investment, we're accelerating our technology roadmap of innovative solutions. Specifically, we are focusing on scaling our solutions to an industrial level, targeting microplastic pollution in textiles and wastewater. Alongside supporting our ability to scale, I believe the investment also provides a sense of credibility. Not only is tackling microplastic pollution commercially viable, but it also signals that our industry is on the brink of something big. We take pride in being pioneers in the space, and we're excited to welcome others who want to join us in making a real impact.


On that note, I am incredibly proud to present our second Impact Report. This report outlines our aspirations for creating positive change and highlights our progress to date. Finally, I would like to say a huge heartfelt thank you to our investors, partners, supporters, and our incredible Matter team for your continued support and belief in our mission. I look forward to continuing on this journey together.

Adam Root
CEO


Impact roadmap.


Click on the labels to explore the different areas.

 People

 Education

 Sustainability

 Partnerships

 Footprint

 Legislation

 Innovation



Sustainability.

Scaling Sustainability.

The problem of microplastics persists but so does Matter. As we scale, sustainability isn't just a checklist it's a strategic imperative.

Our view of 2023 offers transparency into our initiatives and sets the stage for the continued integration of sustainable practices into every aspect of our operations.

In 2023 we built on our previous Environmental and Sustainability Policy to be more specific and targeted with our ambitions and direction, creating a new policy which informs our approach alongside Matter's five year sustainability plan. We continue to strive to meet the standards and framework laid out in 2002 work Cradle to Cradle³ written by William McDonough and Michael Braungart and use their circular approach to translate our sustainability practices into five pillars at Matter.

The 5 pillars and how we will measure our success:



Material Health

The speed at which microplastics are banned globally.



Material Circularity

Our ability to not add technical nutrients to the biosphere.



Energy Stewardship

Our ability to operate a carbon neutral business.



Water Stewardship

The amount of micropollutants filtered by Matter technology.



Social Fairness

Our ability to certify as a BCorporation and continuously improve.



Footprint.

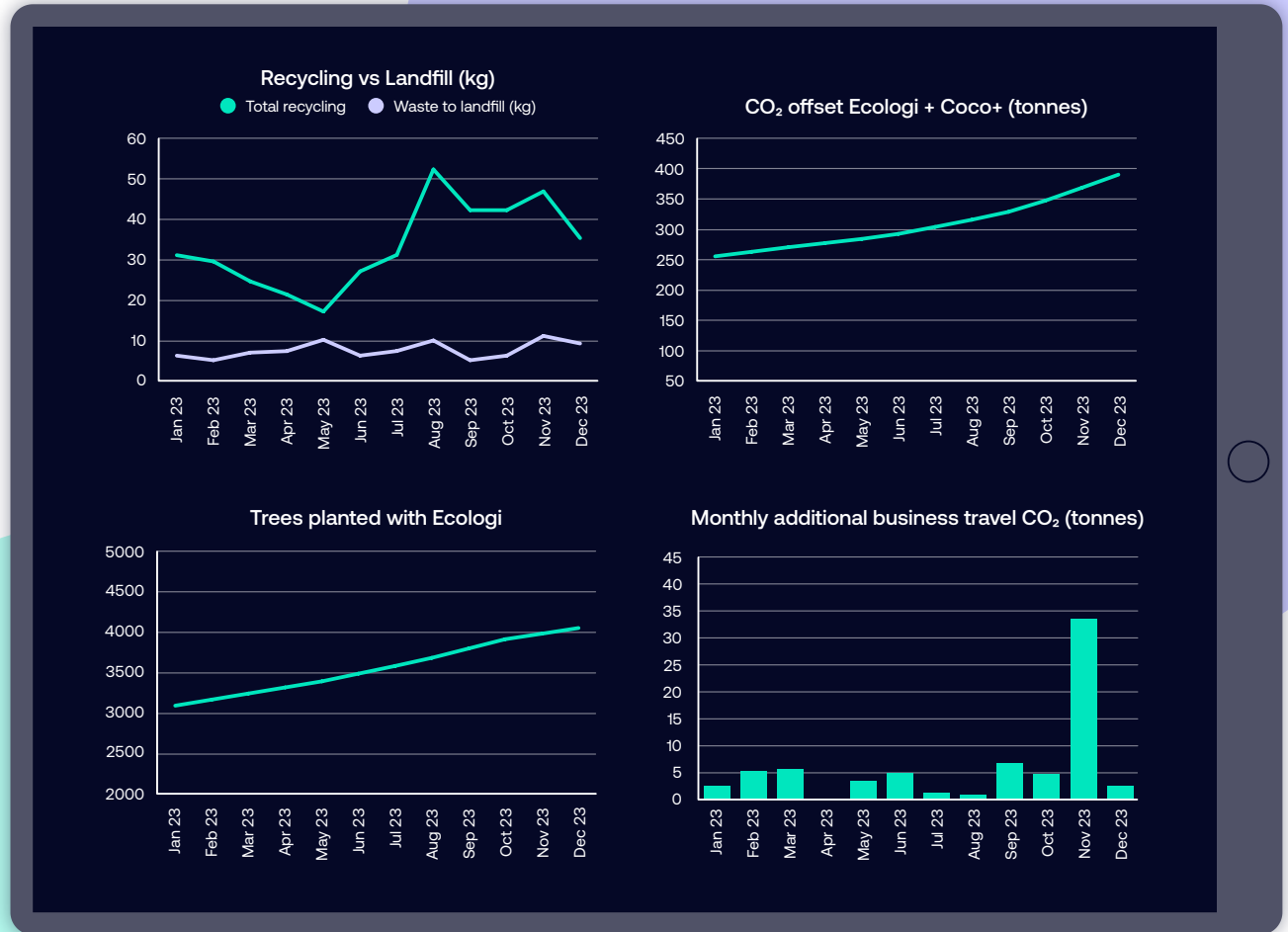
Measuring and monitoring.

We continue to measure our footprint in order to monitor our CO₂ emissions across scopes 1, 2 and 3.⁴

We record our utilities, recycling and waste levels on a weekly basis. We capture data on both commuting and business related travel, alongside an average distance of deliveries to HQ.

The recycling rate for 2023 was 80.4% on average, our monthly target is 80%. This is an improvement of nearly 9% from 2022 where our rate was 72%.

We are committed to recycling and have incorporated more ways to collect and reduce our landfill waste by utilising Terracycle⁵ collection boxes at our HQ. Hard to recycle items including those with mixed materials can now be collected and fully recycled. We hope this will further improve our recycling rate and bring us closer to our material circularity objective.



Usage for 2023.

	Matter. 2022	Matter. 2023	Average for SME under 50 employees ⁶
 Electricity	9,110 kwh	13,212 kwh	25,000 kwh
 Gas	3,442 kwh	4,574 kwh	25,000 kwh
 Water	142 m ³	234 m ³	431 m ³

Matter. vs Average

We have grown from a company of 18 at the beginning of 2023 to 34 by December, our usage remains carefully monitored and for a company of our size we are still well below national averages. We take improvement measures to try to maintain lower usage to reduce our impact, this means empowering people to take action.

Energy to HQ is supplied as biogas and renewable electricity that is split into wind and solar, all energy to HQ is 100% renewable and still traceable.



Travel emissions.

Additional travel
56 tonnes

Commuter travel
164 tonnes



Offset.

Carbon offset Ecologi & Coco+
147 tonnes

Additional offset
73 tonnes

Trees planted in 2023
1263

Our offsetting partners Ecologi and Coco+ have a wide range of projects intended to either sequester or avoid CO₂ from planting trees in the UK to mangrove restoration, renewable energy and reforestation. Our travel partner Coco+ invests in renewable energy projects in particular the Sichuan Sanachahe River Hydropower China. This diversity of projects ensure maximum impact. We will continue to monitor our offsetting and commit to diversifying this further by 2025.

Next steps...

Commissioning a carbon accounting audit to consider emissions in more detail across Scopes 1-3 and our emerging supply chain, this will give enhanced accuracy to our reporting alongside informing an improvement stage towards becoming carbon neutral.



Education.

Awareness of the problem.

In 2024, we are witnessing [a continued surge in awareness](#) regarding the pervasive issue of microplastic pollution, building on the momentum from the previous year.

Growing awareness of the problem is likely to be correlated with the increase in research, particularly around the environmental and human health impacts.

[A study in 2023](#) estimates the ocean is now home to a 'plastic smog' of more than 171 trillion microplastic particles, weighing in at 2.3 million tonnes.⁷ This figure represents a tenfold increase from the microplastic pollution levels recorded in 2005.

On the human health side, [a 2023 study](#) conducted at MedUni Vienna has shown how microplastic particles manage to breach the blood-brain barrier in humans and as a consequence penetrate the brain.⁸ In addition, [another study](#) found that the infiltration of microplastics was as widespread in the body as it is in the environment, leading to behavioural changes, especially in older test subjects.⁹

Image: Soren Funk – unsplash.com

Awareness of the problem.

As research on the environmental and human health impact of microplastics continues to grow, we are seeing an increasing crossover of coverage in the mainstream media:



Jan 23 - BBC: How microplastics are infiltrating the food you eat



May 23 - National Geographic: Microplastics are in our bodies: how much do they harm us?



August 23 - Forbes: Microplastics found in human hearts for the first time



Nov 23 - The Guardian: Richard Thompson cautions about the danger of worsening microplastics pollution if the global community pursues misguided ideas

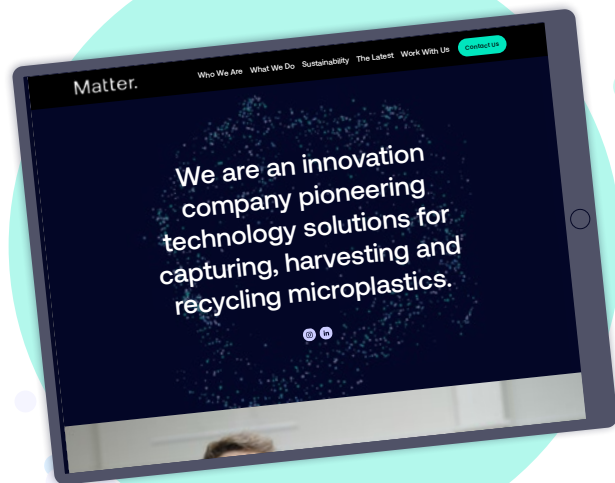


Nov 23 - The Guardian: Scientists in eastern China find 24 out of 28 water samples have plastic particles commonly seen in synthetic fibres and packaging

Image: Diane Deaver – unsplash.com

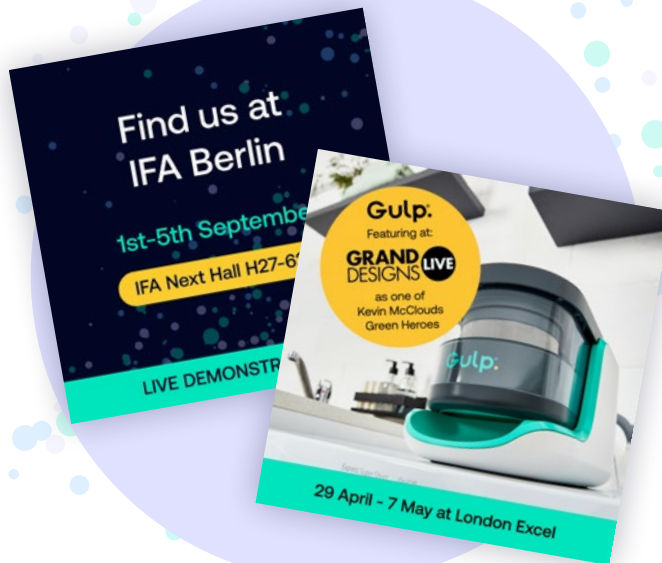
Our reach

In 2023, we reached...



25,478

website users



6,600

social media followers
(+1600 since 2022)



3 million

estimated views across 126
PR media pieces

2023 Events Highlights.



Matter Series A investment announcement.



Gulp selected as one of Kevin McCloud's Green Heroes at Grand Designs Live 2024.



IFA 2023: Talking to industry and general public about the problem of microplastic pollution and demonstrating our solutions.¹⁰



Channel 4 interview at Matter HQ: 'How new tech could fix microplastic pollution threat'



Matter CEO Adam Root hosting Matter's expert virtual event 'How we can protect our rivers and seas from textiles-based microplastics' alongside Anna Gross, Political Correspondent, The Financial Times, Office of Alberto Costa MP, Conservative, Chair of the Microplastics APPG, Baroness Natalie Bennett, Green Party of England and Wales, Alison Waliszewski, Director of Policy, The 5 Gyres Institute, Emily Axten, Director of Marketing and Communications and XEROS.



2023 Press highlights.



The Guardian feature: ‘Worried about your laundry releasing microplastics? A filter could be a simple solution’



Matter featured in Daily Telegraph¹¹ calling on the UK Government to follow progressive policymaking in France and Australia and mandate microfibre filter technology on new washing machines.



Chief Executive Adam Root featuring in The Independent calling for action to tackle microplastic pollution resulting from textiles.¹²



The Times Article: ‘Green jobs will power the economy’

The textiles industry is key to addressing microplastic pollution

Some \$7.1 trillion (£5.8 trillion). That's how much plastic pollution will cost society by 2040.

Today microplastics are present in virtually every aspect of the global economy. However, the manufacturing, use, and disposal of textiles is a particularly alarming pathway for microplastics to enter the environment.

Approximately 430 billion microfibres are released into the environment by the textiles industry every day.

Textiles create 35 per cent of the world's microplastic pollution. Some 60 per cent of textiles are now made from synthetic materials. As a result, microplastics have become an almost ubiquitous industrial wastewater systems.

Every time clothes are washed, up to 700,000 particles of plastic are released into waterways. From washing machines and into waterways, and from sewer systems are the primary channel for microplastic pollution. Microplastics are a colossal environmental problem.

Microplastic plague

SIR - There are 171 trillion plastic particles in our oceans today. About 35 per cent of these come from textiles. Each time clothes are washed at home, 600,000 plastic microfibres can be released from washing machines into rivers, seas and oceans.

Across the world, governments are waking up to the importance of protecting people and the planet from microplastic pollution. Landmark legislation in France and Australia similar measures are set to be introduced by the end of the decade.

The UK is lagging far behind. As a result, the British public and our ecology are not being protected from microplastic pollution. This is particularly concerning given that microplastics carry chemicals that are causing cancer, mutations in DNA, metabolic disorders and endocrine disruption, have toxic reproductive effects, affect neurodevelopment and can affect the nervous system.

What's more, microfibre filtration technology is readily available and is being used by a number of British companies already working with international partners. The Government now has the chance to address the greatest environmental challenges of our time. Today we're calling for the urgent introduction of mandatory microfibre filters on all new washing machines sold in the UK.

Green jobs will power the economy

Leonardo DiCaprio and Anushka Sharma. He was in the UK in 2015 and 2019 and represented the UK at the G20 summit in Canada. Root, 35, from Bristol said: "Matter has grown at a rapid pace. We're looking at the industry that's the future."

Worried about your laundry releasing microplastics? A filter could be a simple solution

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Legislation.

Building momentum.

During 2023, Matter continued to **add our voice** to calls for progressive policy making to **protect our rivers and seas from textiles-based microplastics**. We also focused on helping to build understanding about the problem that needs to be solved and the solutions that are already available to help meet those challenges. Highlights included:



May

Participated in a round table hosted by Plastic Soup¹³ as part of their Plastic Health Summit in Brussels, the headquarters of the main EU institutions.

August

Submitted evidence supporting legislation by the state of California on mandatory microfibre filters for washing machines.



April

Co-authored a **whitepaper** delivered to members of the European Commission calling for a mandate of filters in new washing machines as the only effective, near-term solution to reduce the release of microplastics in the environment, in partnership with A Plastic Planet, PlanetCare, Xeros and 5 Gyres.



July

Contributed to the US Environmental Protection Agency¹⁴ consultation process for the National Strategy to Prevent Plastic Pollution.¹⁵



November

Hosted an expert virtual panel event on 'Protecting our Rivers and Seas from Textiles-based Microplastics' with policy makers on the panel and in attendance.

Looking ahead to 2024, we plan to build on this momentum and continue to call for action on microplastics.



Innovation.

Scaling solutions.

Investment.

2023 marked a **huge milestone** for Matter following a groundbreaking **\$10 million** Series A investment.

This funding has enabled us to scale our microplastic filtration technology and accelerate the roadmap of solutions for commercial and industrial applications.

Laundry.

In 2023, we made significant technical advancements across our microfibre filtration solutions for laundry.

Following our initial presence at IFA in 2022, this year marked a more substantial presence as we showcased our internal and external washing machine solutions to potential partners and the public, providing live demonstrations for the first time. Our innovative solutions mark a substantial step forward in our commitment to combating environmental challenges.

In 2024, we will continue to pioneer in this space and partner with washing machine manufacturers to bring our technology to market as quickly as possible so that we can start stamping out micropollution from laundry at both a domestic and commercial scale.

[For more information about how our integrated technology works, check out our animation here](#)

Industries.

Our Series A investment enabled us to continue our journey towards **global impact** by scaling up our filtration technology for industrial applications.

In 2023, we made strides in building out our products and services to support the textile industry; a huge contributor of micro pollution, through the release of microfibres.


For every 500 t-shirts made, 1 is lost in microfibre pollution. The microfibres shed during garment manufacturing processes pose a risk to human health, the environment, and result in a huge waste of materials. Whilst the shift to better fabrics is a key step, these materials still shed fibres. At Matter, we believe we must focus on capturing, harvesting, and unlocking the potential of these wasted microfibres.

Industries.


In 2023, Matter created the Microfibre Assessment Programme (MAP).

We utilised our expertise to identify the extent and nature of the micropollution present in a facility before supplying bespoke recommendations to stop it reaching waterways. We continue to work globally with brands and manufacturers to help set the gold standard on stopping microfibre emissions from the textile industry.


Matter have pioneered a three-pillar approach to support both brands and textile manufacturers:



Identify the problems brands and textile manufacturers have in their production facilities through the microfibre assessment programme (MAP)



Use MAP to inform how brands & textile manufacturers can cap the problem with our filtration technology and expertise.



Extract the value from what's captured by reusing the material gathered and return the water for use.





Partnerships.



Investors.

22

Our impact is correlated with support from companies who invest in Matter and believe in our mission, we are working with the right companies at the right time to scale our business operations to have an even bigger impact on micro pollution.



Builders Vision is an impact platform dedicated to supporting people and organizations building a

more humane and healthy planet through philanthropy, investment, and advocacy. The organization aims to shift markets and minds for good by offering a range of tools to help seed and scale sustainable solutions to societal and environmental issues across three key focus areas: Oceans, Food & Agriculture, and Energy.



Katapult Ocean is proud to support leading ocean founders from all over the world, who are building scalable and innovative

companies to tackle the challenges facing the ocean and building the new, sustainable blue economy. Since 2019, they have made 60+ investments in ocean impact companies from all over the world. Matter participated in their accelerator program in 2021 to enhance and focus our evolution as a business and progress the impact we can have.



S2G is a multi-stage investment firm focused on venture and growth-

stage businesses across food and agriculture, oceans, and energy. Embracing a macro view of interrelated systems and sectors, the firm invests in and supports entrepreneurs and leadership teams pursuing innovative solutions that are cheaper, faster or better than traditional alternatives. This approach is purpose-built to help companies achieve scale and maximize positive outcomes.



SOUNDWaves is an investment vehicle dedicated to the next

generation of clean, circular and sustainable businesses, anchored by a partnership program with some of the world's leading brands and corporations. Their unique investment thesis is focused on identifying and investing in solutions that decarbonize corporate supply chains.



Regeneration.VC is an early stage venture

fund supercharging circularity and consumer-powered climate innovation. Their investment strategy focuses on the design, use and reuse of materials to address waste and pollution across global consumer supply chains.

Local suppliers.

We want our partners to share the same vision of sustainability as us, so it runs through our business choices from the micro to the macro. Prioritizing local partnerships and suppliers that share our sustainability goals and commitment to BCorp standards is vitally important to us.

In 2023 we worked with suppliers including:





People.

People Matter.



Growing from a team of 18 to 34 in 2023.



Gender pay gap closed to **6% mean** and **11% median** for December 2023.



People and EEDI Policy **written and approved**, underpinning our People strategy for 2024.



Introduced Bamboo HR as our HRIS system to enhance our **employee experience**, improving **accessibility and consistency** across our people processes.



Launched a comprehensive **benefits package** with BCorp supplier Amba, including: enhanced leave, PMI, Dental insurance for employees and families alongside Life Assurance, sick pay, Income Protection and an EAP.



Introduced **performance management procedures and OKRs** as a goal setting methodology that **encourages transparency**.

Growing and learning together.

In 2023 we continued working to improve gender representation. We have fully recruited and embedded at the most senior levels. With Nicole Kapel as Chief Operations Officer and Jess Middlemiss as Chief Technical Officer our Executive Leadership Team is 40%/60% women to men. Our Board of Directors gender split is 60%/40% women to men. Overall the gender split is 50/50 at the most senior levels.

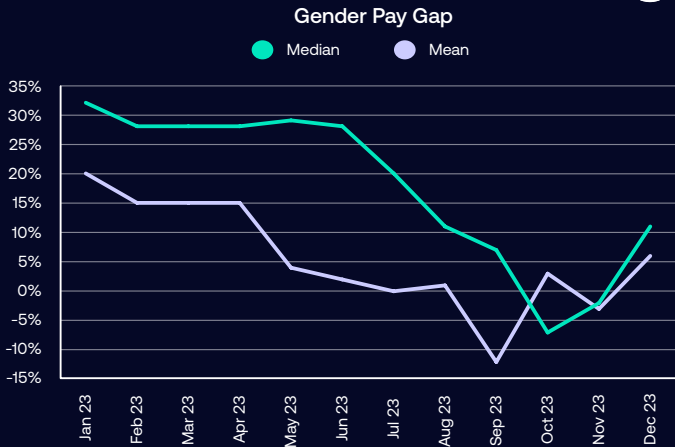


We believe it's vital to support management to continually improve as leaders and our Executive Leadership team received tailored coaching in 2023. We have also created opportunities to learn as a whole team, with a suite of monthly training sessions including Lunch and Learn which provides training across the whole company and Toolbox talks where we focus on health and safety.

Supporting our team - post Series A, we increased salaries to market rate across the entire team, and we guarantee that all team members will receive a pay increase at a minimum of inflation levels.



Reporting the gender pay gap at Board level means we can take action to improve representation and equity at all levels.



We saw significant improvement across 2023 at Matter. The gap was closed in July. By the end of 2023 the mean was 6%, significantly lower than the [national mean average](#) of 10.6%.

In 2023 we formalised both our People and Operations strategies to effectively align our day-to-day work with our vision and mission as a business.

We brought the entire team on our evolving journey by consistently engaging with the team in All Hands meetings, inviting valued feedback and questions along the way. We introduced the methodology of OKRs (Objectives and Key Results)¹⁶ to communicate our business-wide objectives, which helped us align and focus our priorities as our departments have grown to achieve them together.

Local Impact.

From school pupils to university students we loved having Bristol's young people through our doors to discover and collaborate at Matter.

Next year will see summer placement opportunities and internships coming up at Matter. We are also working with Team NotImpossible,¹⁷ to provide opportunities for 16-24 year olds to access mentoring and education to create more impact across the South West.

Events/Social Life.



Creative and active team socials.



Career Days – Bath, Uni of Bristol and Imperial College London.



Lunch Club grows.



Final thoughts.



2023 marked my fourth year with Matter, and I'm really proud of the progress we've made as we continue on our journey to stop micropollution from entering the natural environment. **The sense of urgency to develop solutions to stop micropollution threatening the world's oceans and human health remains one of our core values.**

Across the year, I was pleased to witness significant progress on global policy and initiatives set out to protect our oceans. The High Seas Treaty finally agreed to protect areas of the ocean beyond national jurisdiction, this is a hugely important step in achieving the UN biodiversity pledge to protect a third of sea and land by 2030. The treaty's scope includes action on pollution, overfishing, climate change and the rights of indigenous peoples. Alongside this, the Global Plastic Pollution Treaty held two more sessions aimed at creating a legally binding agreement that considers the entire cycle of the life of plastics from design to disposal. This is perhaps one of the most significant intergovernmental negotiations since the 2015 Paris agreement.

As we continue to grow as a business, we remain committed to advancing solutions that protect our planet and ensure a healthier future for all. We are building a collaborative supply chain to leverage collective expertise and align our sustainability commitments to our revenue goals. I look forward to reporting on this in next years report. Alongside internal commitments, our accreditation work continues with both Cradle to Cradle and BCorp projects ongoing.

This impact report serves as a continued call to action for policymakers, industries, and communities to collaborate on more effective strategies to mitigate microplastic pollution. To drive real impact, we must implement measures to reduce plastic consumption whilst also improving waste management practices and adopting circular solutions. Together, we can work towards minimizing the proven adverse impacts of microplastics on ecosystems and human health.

Laura Humphreys
Sustainability Officer

References and useful links.

1. To read more about the EU wide discussion - https://single-market-economy.ec.europa.eu/commission-regulation-eu-20232055-restriction-microplastics-intentionally-added-products_en
2. International Electrotechnical Commission (IEC) - <https://www.iec.ch/who-we-are>
3. McDonough, William. *Cradle to Cradle : Remaking the Way We Make Things*. New York: North Point Press, 2002.
4. Scopes 1, 2 and 3 are ways to categorise carbon emissions according to the The Greenhouse Gas protocol and can be understood as:
Scope 1 = direct emissions that are owned or controlled by the business eg. Fleet vehicles or boilers.
Scope 2 = indirect emissions are from activities of the company but occur from sources not owned or controlled by it eg purchased heating, power, steam and cooling
Scope 3 = indirect emissions in supply chain. From sources not owned by the business but associated with its operations eg leased facilities, employee commuting and business travel, purchased goods, transport and distribution.
5. For more information on Terracycle www.terracycle.com
6. Average for SME under 50 employees <https://smarterbusiness.co.uk/blogs/what-is-the-average-business-energy-consumption-in-the-uk/>
7. A study in 2023 Marcus Eriksen et al A growing plastic smog, now estimated to be over 170 trillion plastic particles afloat in the world's oceans—Urgent solutions required. Available at: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0281596#sec012>
8. A 2023 study [Study shows how tiny plastic particles manage to breach the blood-brain barrier \(phys.org\)](#)
9. [Microplastics infiltrate all systems of body, cause behavioral changes | ScienceDaily](#)
10. IFA <https://www.ifa-berlin.com/>
11. Daily Telegraph 01/11/2023 [Microplastic plague - The Daily Telegraph](#)
12. The Independent 30/10/2023 [Sunak and Starmer must stop sitting on the fence over war in the Middle East | The Independent](#)
13. For more information on Plastic Soup Foundation visit <https://www.plasticsoupfoundation.org/en/>
14. For more information on Environmental Protection Agency <https://www.epa.gov/water-research/microplastics-research>
15. For more info on the National Strategy to prevent Plastic Pollution visit <https://www.epa.gov/circulareconomy/draft-national-strategy-prevent-plastic-pollution>
16. OKR – read more about Objectives and Key Results methodology visit <https://asana.com/resources/okr-meaning>
17. For more information visit Team NotImpossible <https://www.teamnotimpossible.com/>

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