

## Supercharged Smile Plastics expands zero-waste manufacturing model

Eco investment sees pioneering circular-design company set to double in size



100% recycled and 100% recyclable, Smile Plastics products are in demand by architects and designers for high-profile projects worldwide. Image courtesy of Smile Plastics.

Smile Plastics is one of the biggest and most respected manufacturing brands in the world of circular design. Its 'micro-factory' in Wales is a demonstration of the viability of their no-waste local-manufacturing model, focused on recycling and recyclability of plastics, driven by a high-end design aesthetic.

Today, Smile Plastics 100% recycled and 100% recyclable products are in demand by architects and designers for high-profile projects worldwide, and the company's achievements in sustainability have recently been recognised with over £980K in equity funding to grow the business further. The majority of this has come from the Green Angel Syndicate's Climate Change Funds, BBI Fund and its own angel syndicate, as well as the Angel Cofund.

Smile Plastics is now preparing to relocate its manufacturing base to a much larger facility in Swansea, ratchet up production capacity by a factor of three, and double

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the size of its team – big news for the global circular-design movement, and for the local economy.



Smile Plastics co-founder and directors Rosalie McMillan and Adam Fairweather. Image courtesy of Smile Plastics.

## The 'recycled' business

Smile Plastics was first established in the early 1990s – a time when recycling plastic was a niche interest and climate crisis a much lower-tier global concern than today. Launched by Colin Williamson and Jane Atfield, the business was a small operation, focused on making 100% recycled plastic panels for the design industry.

For two decades, Smile Plastics led the way in the drive to reclaim and recycle plastic waste while demonstrating the incredible design potential of recycled plastic – perhaps most notably when Jane Atfield's RCP2 Chair, made entirely of recycled plastic bottles, was added to the V&A's permanent collection. The business wound down when Colin Williamson retired in 2010, and would have been consigned to history were it not for circular-material specialist Adam Fairweather (who had met Colin while at university and collaborated with him on a coffee-waste bioplastics project), and psychology student-turned-jewellery designer Rosalie McMillan.

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Smile Plastics co-founder and directors Rosalie McMillan and Adam Fairweather. Image courtesy of Smile Plastics.

In 2014, a time when the necessity of environmental preservation and the threat of climate change were becoming increasingly urgent, Rosalie and Adam saw that Smile Plastics had the potential to fulfil a growing need for sustainable designable material solutions for the creative sector, and approached Colin with a proposal to revive the dormant business. He gave them his blessing, and they set about reimagining the business for the modern age.

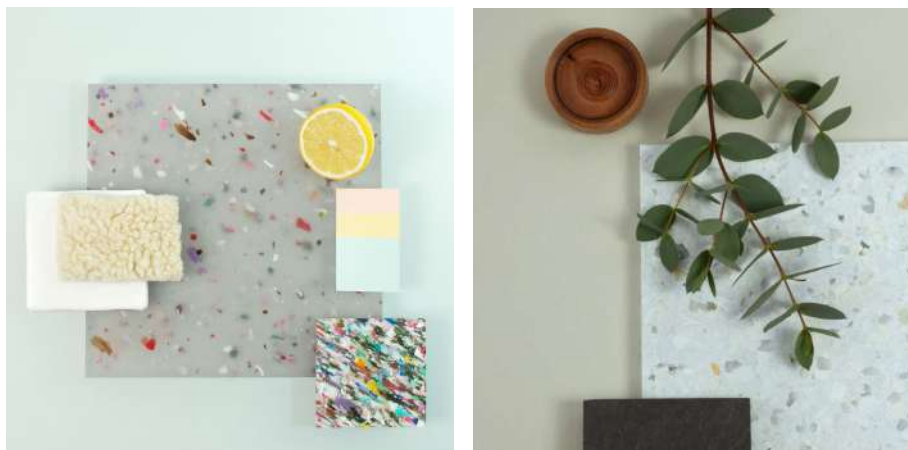
Having developed new processing techniques and low-energy manufacturing technology that allowed them to produce recycled-plastic panels via a continuous batch process, Adam and Rosalie unveiled the resurgent Smile Plastics's product range at London Design Festival in 2015.

In the seven years since, Smile Plastics has expanded, developing a committed international customer base, alongside ever more advanced production methods and technology, and an always-growing range of products, in all sizes – as well as a popular custom manufacture service. Its sophisticated purpose-built machines have all been named 'Colin', in tribute to the original founders.

The company's distinctive, terrazzo-like surfaces have become regular sights at major global design events, thanks to an ongoing programme of collaborations with designers and creative studios, and in high-profile commercial, retail and hospitality spaces worldwide.

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Left: Spectra – created from PET packaging waste; right: Heron, made from discarded white goods. Images courtesy of Smile Plastics.

## A recipe for renewal – the Smile Plastics process

Smile Plastics taps into the waste streams of more than 60 local businesses, which supply the micro-factory with materials ranging from drinks cups and cosmetics bottles, to yoghurt pots and used plastic packaging. Having sorted these materials by colour, the Smile Plastics team select these ingredients depending on the colour and pattern desired, like a painter picking his palette, or, as Adam puts it, like a whisky blender selecting his spirits.



Smile Plastics produces highly aesthetic and extraordinarily versatile panels from plastic waste. Image courtesy of Smile Plastics.

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Shredded, heated and pressed into sheets, these combinations of different plastics create variety of surface patterns – from the natural stone mimics like Grey Mist and Alba, to vibrant, maximalist styles such as Kaleido, in which you can still glimpse traces of the barcodes from the products that formed it. Any waste plastics or substandard materials generated during manufacture are shredded again and returned to the beginning of the process, so production is as close to zero-waste as possible.

The products that result from the process are highly aesthetic and extraordinarily versatile. Depending on the material mix, they can be thermoformed into 3D structures, CNC-milled, cut, edged or jointed to suit their intended purpose, whether it's a table top, a washroom counter, a wall panel, a piece of signage, a storage box or a piece of furniture.

*“Plastics are considered a modern, even unnatural, material, but they have a primaeval history, rooted in the living world. In some ways, plastics can be considered as old as stone – there’s an embodied value in that. Our mission is to encourage people to recognize that value and therefore waste less. We do this by re-imagining end-of-life materials into beautiful new products that tell a story and that people can connect with.”*

– Adam Fairweather, co-founder and technical director, Smile Plastics



London's GANNI store by Stamuli featuring display plinths made from Smile Plastics products. Image courtesy of John MacLean.

## A hyperlocal manufacturing model for the future

The Green Angel Syndicate investment made in May 2022 recognises Smile Plastic's closed-loop, full-circle ecosystem – currently delivering over 500 tonnes of CO2 savings each year compared to conventional methods of making plastic. This funding (totalling £980K) is being used to purchase a new larger factory space in Swansea, obtain new machinery to establish parallel production lines, and expand the staff. This has meant that Smile Plastics is now producing 100% recycled, recyclable plastic 24 hours a day, seven days a week, and is now able to deliver outputs of a size and scale never possible before. In the next financial year, Smiles Plastics is on track to divert 1,500 tonnes of plastic waste from landfill into valuable products.



Co-founder and director Adam Fairweather getting hands-on. Image courtesy of Smile Plastics.

For Rosalie and Adam, this will mean not only the realisation of their ambition to produce beautiful, versatile and sustainable decorative materials at scale, and to encourage us to re-evaluate our relationship with plastic, but something much bigger, too. They see the Smile Plastics model – turning local waste streams into local products via local micro-factories to support local economies – as a template for a new approach to manufacture – an entirely circular system of sustainable, hyperlocal making with the potential to be deployed anywhere in the world.

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*"We are looking to start building a distributed network of micro-factories, taking local waste streams and transforming them into panels and products for local markets around the world. The last seven years has proven that the ecosystem we have developed is viable; now we are excited to see how far the Smile Plastics model can go. We are planning a potential site in Europe for 2023, paving the way for a Continental production line. We can envisage a world in which every major city has its own micro-factory."*

– Rosalie McMillan, co-founder and technical director, Smile Plastics

## Notes for editors

For more information about Smile Plastics plans and products, or interviews with Adam and Rosalie, please contact [smileplastics@zetteler.co.uk](mailto:smileplastics@zetteler.co.uk).

### **Smile Plastics**

Smile Plastics is one of the UK's leading recycled material design studios, producing 100% recycled and recyclable decorative panels for retail, interior, furniture, and product design since the early 1990s. Re-established in 2014, directors and head designers Adam Fairweather and Rosalie McMillan have developed the technology and the product range, winning the brand a substantial following in the design industry and building up an international client list, from hospitality start-ups to premium brands such as Mercedes-Benz, Ganni, Christian Dior and Selfridges.

Smile Plastics' Classics range is made from post-consumer and post-industrial recycled plastics including rHIPS, rPET and HDPE. Distinct traces of the plastics' origins found in the finished products maintain the narrative of the raw material journey.

[smile-plastics.com](https://smile-plastics.com)

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