



## Crafts Council / Stories

# Going to waste: recycling matters more than ever – but sourcing sustainable materials remains tricky



We hear from the innovators pioneering a waste not, want not philosophy

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sustainable craft premium

As the climate crisis hits home, a growing number of makers, designers and craft businesses are looking to become more sustainable. One option: working with waste. Seeing vast landfill

sites, mounds of ocean plastic and heaps of discarded clothes reminds us of the scale of the problem, yet recycled materials remain scarce and hard to access.

Household recycling rates in the UK are decreasing, while commercial and industrial waste levels remain stubbornly high, generating 43.9 million tonnes in 2018. Forthcoming legislation on ‘extended producer responsibility’, or EPR, will lay more responsibility for a product’s treatment and disposal at the manufacturer’s door, but there is still significant improvement to be made in collection and recycling infrastructure, which are still inconsistent among local authorities.

*Above: Detail of Green Art Panel, a custom material made by Smile Plastics. Photo: courtesy Smile Plastics*



Objects including Myceliated Vases, made from used takeaway cups by Blast, and a vase made from discarded eggs by Studio Basse Stittgen, from the Home of Sustainable Things. Photo: courtesy HOST

Upcyclers are the category of maker most obviously engaged with these issues. Their creations visibly bear the marks of a material or product’s former life, sometimes re-appropriating it mostly intact. Other designers are seeking to switch from working with raw metals, plastics, fabrics and glass to recycled materials, while some innovators are tackling food waste by

experimenting with the likes of eggshells, coffee grounds and animal bones.

The Home of Sustainable Things is a London-based craft store that showcases many of these groundbreaking approaches across furniture, homeware, lighting and textiles. ‘As a society, we like to speak about the potential of circular design,’ says owner Petko Tashev. ‘But first we need to make it the normal way of making and part of our daily lives. Then it becomes desirable.’

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Petko Tashev

There is a host of challenges facing those who are trying to innovate in this area. Tashev believes the main issues are the limited market for circular design, difficulty in accessing recycled materials, and financial constraints. ‘Glass crucibles can’t be contaminated, for example,’ he says. ‘So, finding professional glassblowers willing to try using glass that behaves differently in the melting, blowing and annealing phases can be extremely difficult, particularly if no financial incentives are offered.’

Creating value around the idea of making with waste, as well as challenging the idea of perfection in our material culture, will be key to change. ‘We should embrace the unique variations some materials have when repurposed,’ says Tashev.



Smile Plastics use 100% recycled plastic materials. Photo: courtesy Smile Plastics



Rosalie McMillan, founder of Smile Plastics, knows the frustrations of doing things differently. The Swansea-based company makes interior surface panels exclusively from recycled plastic. ‘We have a whole network of brokers and waste management companies that we’ve developed over many years,’ she says. ‘But initially it was quite difficult to get them take us seriously.’

Starting out as a small-batch manufacturer, Smile Plastics only needed a tonne of recycled plastic every couple of weeks, whereas large companies process thousands of tonnes each week. Small quantities, and the company requiring a specific type and quality of plastic to make its high-end product, mean it has to pay for its source material. ‘Best case scenario, you’d work directly with the producer of the waste itself – but often you’re not wanting enough,’ she says.

The situation has given rise to several online marketplaces for recycled materials, like Cyrkl and BaleBid. On these sites, small businesses can find specific recycled materials to buy, and organisations can advertise waste materials for sale.



Bangle for COS featuring Alba, a recycled plastic material made by Smile Plastics. Photo: courtesy Smile Plastics





2LGStudio bathroom counter featuring Black Dapple, a recycled material made by Smile Plastics.  
Photo: courtesy Smile Plastics

Sourcing recycled materials can be like chasing a moving target, as waste streams evolve and supply chains get interrupted. This affects the consistency of Smile Plastics' products, which means it has to manage the expectations of clients. It also requires constant creative thinking and innovation to keep products available.

'What we are able to source at one point in time is quite different to what we can source a few months later,' says McMillan. 'We'll make up a batch and halfway through recognise something within the material that makes it not suitable.' The company is committed to using pure recycled plastic without additives, meaning the properties and appearance of the panels can vary.

Electronic waste is another area of opportunity for designers and makers. 'In Europe, we are currently only recovering around 12 per cent of precious metals from e-waste,' says Sandra Wilson, a jeweller and professor in ecological metal design at University of Dundee. 'If you mine a ton of ore from the earth you can generate around 7 grams of gold. However, if you mine a ton of e-waste you can generate around 300 grams!'



Professor Sandra Wilson in the Love Chemistry Laboratory with a solution of gold chloride.  
Photo: David Cheskin

The main problem with procuring metals from dumps is accessing them safely and knowing exactly what they are. Alongside gold, copper and palladium, e-waste also contains toxic chemicals and metals including lead, cadmium, mercury, and nickel. There is a market for recovered metals, but provenance and labour use can be unclear. ‘A big issue is transparency. We often don’t know what happens to our e-waste or where it ends up,’ says Wilson. ‘Industries need to get better at creating circular economies for their products and talking about how they handle any waste.’

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Sandra Wilson

While manufacturers have continued to pump out products at scale and speed, waste management companies have been left to tidy up. Over the last decade their scope has changed vastly: from dealing with disposal, to handling a complex set of resources appropriately.

Dr Tracey Leghorn of SUEZ Recycling and Recovery UK [reflected](#) on the company’s blog: ‘The waste disposer has become a recycling specialist, electric power generator, manufacturer of alternative fuels, compost producer, processor of waste wood, trader in reclaimed materials – and innovator.’ Transformation to a circular model has required the company to invest in new facilities, technologies, skills and expertise. They are also working in response to increasing environmental legislation that can rapidly change what materials are produced and recycled.



Common Sands vase by Studio Plastique, made from recycled glass. Photo: Home for Sustainable Things





Nunome brooch by Sandra Wilson, recycled sterling silver, 24 carat gold foil and steel pin, 2021.  
Photo: Gabriela Silveira

With the market and infrastructure for recycled materials still developing, those seeking to work with waste will need to initiate relationships for themselves. ‘Find these marketplaces, understand the scale you want to work at and what’s in it for the producer of waste,’ advises McMillan. ‘Be prepared to pay for materials if you are going to be specific about quantity, quality and the way it’s being curated for you.’

Regarding the traceability of e-waste, Wilson suggests that Assay Offices could offer marks that guarantee what materials are and where they come from. To educate consumers, she says: ‘Jewellers and metal workers can also continue to tell their stories about where their materials come from and how they are working in responsible and sustainable ways.’

Tashev is hopeful that future designers will learn how to work with waste materials as part their education, and that the profitability of using recycled materials will improve. ‘Unless that happens, the question of profits over nature will still exist – whereas in reality you can have both.’



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