

argan shells, spent chai spices, juice water, fruit pits and wood. Next, UpCircle even has designs on the 45 percent of flowers wasted by the floristry industry. "The world has finite resources, and at the minute we are depleting them at a scary rate. So, if you ask me, businesses that extend the lifecycle of things that are already in circulation, or find ways to reimagine something that was previously seen as being at the end of its service life, are the future," Anna adds.

Anna and Will's example has inspired others to push by-product beauty: the new Scalp Shield Shampoo from Hydrosil, which uses an anti-inflammatory polyphenol salvaged from inedible passionfruit pips; Green People's purifying face mask made with coconut shells; or Kind2's solid shampoo range formulated with hemp seed oil diverted from food waste and crushed charcoal made from fencing offcuts. Kind2's Sue Campbell is an Aussie living in London who gave up a corporate career to follow her passion: reducing the plastic waste she always ran into on adventures in wildernesses around the world. "As a small indie brand, sourcing ingredients reliably is actually quite challenging since the minimum order quantities can be large compared to our production runs," says Sue. "For our upcycled ingredients we opted for an ingredient supplier, rather than going direct to the producer, because they're typically more flexible on their quantities."

In fact, Sue's supplier, Full Circle (upcycledbeauty.com), not only provides active beauty ingredients to commercial makers, but home beauty fans keen to experiment with their own DIY products. The company's impressive catalogue of upcycled ingredients includes a hydrating moisturiser made from salvaged grain ferment from gin distilling, a blue light-fighting oil squeezed from blueberry pomace, and exfoliant powders ground from rejected rice grains. "We're nowhere near exhausting potential projects within the food industry," says general manager Harry McIlwraith, whose background as a chemist for a beauty manufacturer opened his eyes to wastage. "Many plant-based leftovers contain an abundance of valuable nutrients and vitamins which are particularly ideal for beauty and personal care. Many of our food-derived upcycled ingredients have been shown to significantly outperform conventional ingredients, proving that formulators don't have to sacrifice quality or performance to be sustainable."

*"Passionate innovators are putting ingredients salvaged from the byproducts bin at the heart of some rather fabulous beauty products"*