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The mattress landfill crisis: how the race to bring us better beds led to a recycling nightmare

As the sleep economy grows, online companies vie to sell us new mattresses, offering 100-day returns. This has helped create an impossible waste mountain - and a wild west of rogue recyclers

Mike Scollick and Richard Allsopp are talking about the worst things they ever found in a mattress. “We had one where I think a dog had been lying on it, and the whole thing was just jumping with fleas,” Allsopp says, shuddering. No one would touch it, so they had to use a cherry picker to move it. But that’s not the worst of it, Scollick says: “I stripped the cover off one once and it looked like somebody ...” “Died,” interjects Allsopp.

It’s fair to say you need a strong stomach to be in the mattress recycling game. Which Scollick and Allsopp have, along with several million pounds’ worth of equipment in their Coventry warehouse. I have come to see Circom, their mattress recycling firm, at work. It’s a dirty but noble enterprise: Circom is one of only a handful of recyclers tackling the UK’s ever-growing mattress problem.

The UK threw away more than 7m mattresses in 2017, the vast majority of which went straight to landfill. Zero Waste Scotland has estimated that if the 600,000 mattresses Scotland throws away every year were stacked on top of each other, the pile would be more than 100 times taller than Ben Nevis. Flytipping is another huge area of concern: English councils spend £58m a year on clear-up, with mattresses among the most commonly illegally dumped items. According to the National Bed Federation (NBF), only about 19% of mattresses are recycled. The reason? They are a nightmare to recycle - it’s the springs. “They’re a machine killer,” says Scollick.

And it’s not just a British problem. Mattresses are a global environmental nightmare. The US throws away 18.2m mattresses a year, but there are only 56 facilities available to recycle them.

Changing consumer behaviour is behind this ever-growing mattress mountain. Time was, you would change your mattress every eight to 10 years. But with online retailers offering more choice than ever, we have learned to expect better mattresses, and to replace them more frequently.

The development of roll-down technology - which allows mattresses to be packed into small, easily shippable boxes - has led to a plethora of start-ups targeting a \$30bn international market. There are now at least 175 companies that will ship roll-down mattresses to your front door; one of the first movers in this space, the US firm Casper, was valued at \$1.1bn in 2019.

Most of these start-ups offer 100-day comfort guarantees, during which consumers can return their mattresses for a full refund if for any reason they are not up to scratch. Some, such as the US's Nectar, even offer a 365-day guarantee. Theoretically, consumers can cycle between these providers for high-quality mattresses at no cost: a Wall Street Journal reporter recently calculated that if she took advantage of all the offers available, she would be able to sleep on a free mattress for eight years.



The dream of the perfect mattress is fuelling a consumer boom - with unimagined environmental repercussions

There is evidence that some consumers are gaming the system. A standard mattress retailer would aim for a return rate of less than 5%, says Jessica Alexander, of the NBF. "I've heard of 20% return rates, or even more, for some of these online retailers," she adds. Not all consumers are behaving selfishly: some may be genuinely dissatisfied with their purchase. "The traditional way of buying a mattress was to go into a shop, lie down, discuss your needs with a salesperson, then buy a mattress," Alexander says. With the online companies, "people are buying them, finding they weren't as comfortable as they hoped, and sending them back".

That was the case for Cara (not her real name), a 26-year-old marketing executive from Florida. "I probably wouldn't have bought a mattress without the guarantee," she says. She bought a \$900 mattress in 2018, before returning it for a full refund. "Ultimately, it just wasn't that much more comfortable than my old mattress, which I had held on to just in case. I didn't realise that returning it would mean that it was going to be potentially thrown out. If I'd known that, I probably would have hesitated about buying it."

Some online providers have arrangements with care homes or hospitals to collect lightly used mattresses, re-cover them, and put them back into use. Others send them for recycling. But many will, inevitably, end up in landfill. "We've introduced a disposable

mattress business model at a time when we probably should be moving in the exact opposite direction,” says Alexander.

It is difficult to recycle the materials in a mattress because they aren't worth much on the secondary market. “A lot of people would feel that there's value in the materials in a mattress,” says David Fitzsimons, of the circular-economy experts Oakdene Hollins. “But, generally, that's not true.” You may be able to get a few pounds for the metal springs in a mattress, but it's hard to find takers for the foam and fibre.

Back at Circom, Allsopp and Scollick recycle about 60% of the materials in the mattresses they process, and hope to eventually get that up to 100%. (The 40% that isn't currently recycled is processed to be used as fuel.) Loosening the regulations around fibre and foam would be a big help, so they can be reused in the same way that old carpets are processed for horse stabling.

As we tour the Circom plant, Allsopp asks me not to go into too much detail about the processes, lest its competitors steal their trade secrets. He needn't have worried - you'd need an engineering degree to describe a machinery system this complex. And I'm a literature graduate.

Suffice to say, there is an enormous crusher that crunches the mattresses, before belching them into a series of chutes that suck the detritus out like a big vacuum cleaner, separating it into fibre and foam. At some point, magnets are involved, but they have to be kept up high so they don't destroy your mobile phone. The steel blades of the crusher have to be replaced every few weeks because they wear out so fast - there is an employee whose job it is to weld the blades to make them more durable.



Mattresses are processed at Circom's warehouse in Coventry

I watch transfixed as a cherry-picker operator feeds mattresses into the machine as if they were fruit being fed into a blender. As the machine chomps bulky mattresses down in seconds, I think: this would be an excellent place to get rid of a body.

Many companies claim to recycle mattresses. But by no means all operate legitimately. “We do everything according to the law,” says Allsopp. He is a matter-of-fact, gruff presence. “We like the law.” Unfortunately, Scollick notes: “Wherever waste is, there's criminality somewhere.”

The pair encounter criminals on a regular basis: they call the warehouse, asking for mattresses for resale, or if they have any leftover foam they can purchase. You can spot the fraudsters easily, because they'll email from Gmail or Hotmail accounts, or call on mobiles. Allsopp says: "I have to be careful about what I say; I don't want to start naming people because, basically, I'm frightened of them. I don't want to wake up one morning and find that this place" - he gestures at the building - "is on fire."

One scam involves fraudsters posing as reputable mattress recyclers. They set up an official-looking website and start offering their services to residents and businesses. When people bite, the fraudsters collect the mattresses, pick the ones in good condition, replace the outer casing, and then wrap in new covers that often have the logo of a reputable manufacturer on it. These secondhand mattresses are then sold as new. "Some of the mattresses you get from the general public are disgusting," warns Allsopp. "If you strip the outer polycotton layer off a mattress, underneath it's just a horror," Scollick agrees. "That, unsanitised, is going into supposedly brand-new mattresses."

It is easy to fall victim to mattress scammers: a member of Fitzsimons' own family was duped. "I was agog!" he says. "In spite of all my stories over the dinner table!" A common scam involves a man with a van - often with the name of a reputable firm on the side - who goes door-to-door in residential neighbourhoods. He was meant to be delivering mattresses to a hotel, he'll say, but there was a problem with the order, and they have surplus, high-quality mattresses. There's no space back at the warehouse. Would you like to purchase them cheaply? "It works because people can't resist a bargain, and don't ask questions," Fitzsimons says.

To reassure anxious customers that it's all legitimate, salesmen will sometimes issue professional-looking paperwork, with false contact details. "These carefully wrapped mattresses are made to look as new, sometimes with fake branding and fire-resistant labels, when they are often actually worn-out, dirty and unhygienic mattresses destined for the tip," says councillor David Renard, of the Local Government Association. "These mattresses generally fail fire safety tests," he adds. "Many victims won't realise they have been conned and could be sleeping on a potential death trap."

Allsopp and Scollick have visited the warehouses from which the scammers operate. It is common for workers to run the minute they see them, mistaking them for Environment Agency officials. (It's the hi-vis jackets.) When they get inside the warehouses, it's a grim affair. "They were just spraying glue," says Allsopp of one rogue operator they stumbled across. "The smell from the glue - you were as high as a kite." In addition to the sites being illegal and unsafe, they possibly use trafficked workers. "A lot of the staff don't speak English, so you're wondering if anything is wrong there," says Scollick.

The mattresses these criminals can't resell, they fly-tip - Circom has had mattresses dumped outside its warehouse - or dump in landfill. In some cases, fraudsters have been known to rent a shed from an unsuspecting landlord, fill it to the brim with mattresses - and scarper. "There are loads of fake companies out there filling up sheds," agrees Ray Bagnall, of Matt UK, another mattress recycler. "Dumping them on farms in Sussex or

Essex.” He was recently called to clear out a shed full of thousands of mattresses in Snowdonia.



Sri Lankan customs officials inspect a container full of mattresses illegally imported into the island from Britain.
Photograph: HANDOUT/AFP/Getty Images

Our ever-growing used mattress problem is also being exported. In July 2019, 100 containers of British waste were found in the port of Colombo, Sri Lanka. They had been illegally sent there, under the guise of metal recycling. Allsopp pulls up a photograph of the containers on his computer. “If you look at what’s in there, those are baled mattresses,” he says, pointing to the screen. Many of the mattresses appear to be wrapped in distinctive green packaging. “Those are the green bags that national retailers use to take mattresses back under their return scheme,” Allsopp says. Which means that mattresses that were sent for recycling by major retailers have been illegally dumped in a foreign country.

The authorities are aware of the criminality in the industry, but don’t have the resources or political wherewithal to deal with it. “It’s the wild west at the moment,” says Alexander. “Yes, there are a number of good mattress-recycling facilities out there, but they’re limited.” The Local Government Association would like to see tougher criminal penalties on flytipping, as well as more manufacturers offering take-back services for old mattresses.

Without action from regulators, the industry is trying to self-regulate. The National Bed Federation has a code of practice and accreditation system for genuine mattress recyclers: it audits facilities to check firms are compliant with the law and there’s no exploitation of their workforce. The organisation also aims to divert 75% of new mattresses sold from landfill by 2028, and is encouraging manufacturers to consider eco-friendly designs, such as reusable mattresses that would be leased to consumers for a period of time, before being sent back, stripped and refreshed.

For now, though, it seems likely that mattress scamming will continue unchecked. Until that changes, consumers would do well to be wary of the fake mattresses flooding the market. Beware the man with a van and a winning smile.

This article was amended on 12 February 2020. Text was added to clarify details of Circom's recycling process and to remove an erroneous reference to an employee as an "engineer".

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