



Loving linen longer

**Five carbon and money-saving reasons
to get the most out of laundry stock**

A free, downloadable white paper



Every item counts - resources are precious

The UK hospitality and healthcare sectors require huge amounts of good quality bedding, towels, workwear, and tableware to operate. A total of [50 million items](#) a week – comprising 90% of the NHS's products and 95% of hotel linens – going through the wash at commercial laundries.

Yet this resource is still seen as too consumable, with owners and managers quick to bin anything that does not immediately meet standards – even though it could be revived and returned to stock.

Historically, it's felt very easy to condemn everything from bedsheets to staff uniforms and simply order more. However, times are changing and soon, many more companies and organisations will see that every item counts – and take seriously their duty to be careful with these resources, and make the most of them.

Five years ago, when we started out in business, the UK's textile waste problem was the key driver for laundries to change their ways. According to the Textile Services Association – which is now investigating recycling options for the sector – a total of [30 million pieces](#), amounting to 2,000 tonnes, are thrown away each year.

Around the same time, the environmental cost of fast fashion was becoming more apparent, not just in the [£140m of clothing](#) sent to landfill in the UK each year but the environmental devastation caused by the global manufacture of new fabrics.

In 2022, we are all too aware of the impact of textile production, generating more than [1 billion tonnes](#)

[of CO2e](#) per year. Producing cotton requires large quantities of agricultural land and water, sometimes in unsuitably arid regions. Synthetic textiles, often involving plastic polymers, result in even greater emissions – typically twice the toll of cottons.

These are reason enough for businesses of all sizes to think hard about their own contribution to our climate emergency and prioritise change for the better, but they are only the start of the story.

Moves are afoot, for example via [WRAP's Textiles 2030 initiative](#), to develop and promote longer-lasting, more durable, and less resource-intensive fibres and fabrics, throughout the sector's long and complex supply chains.

In this white paper, as we approach our fifth birthday, we highlight five key reasons to change long-held habits, which will help laundry businesses, hospitality providers, and healthcare organisations to decrease their impact on our earth.

These reasons begin with, and loop back to, one tactic. That is re-use. Simply loving linen longer. Buying less and looking after stock. The possibility is already there.

David Midgley, managing director
Paul Hamilton, technical director
Regenex

Reason 1:

Re-use

is a straightforward
no-brainer



Environmental concerns are at an all-time high among UK businesses, and the concept of re-use is emerging in all kinds of industrial processes.

Turning our attention to laundries, while commodities such as waste textiles can be sold to recyclers for a modest fee, keeping them for longer – and getting the best possible use out of them before replacement – makes increasing sense.

While not using the earth's resources to manufacture a product is the preferred choice, re-using that item is the second best option for what to do next with it, according to the well-established and respected [Hierarchy of Waste](#).

This ranking of waste management options, by what is best for the environment, is endorsed by the UK Government and others, and recognised as guidance for best practice.

In recent decades, we have focused on recycling. Organisations were happy in the knowledge that they were responsibly disposing of what they didn't need.

However, recycling is only the third best process on the list of five, followed by other forms of recovery and disposal to landfill or incineration. This is because recycling requires



another process that is likely to involve the need for more carbon and water.

Re-use needs no such intervention and savvy business owners are now thinking hard about what they can keep and use for longer. The benefit to the environment is clear, and of course firms with robust sustainability policies – perhaps including inventive examples of re-use – are the ones that will thrive and prosper in the years ahead.

Reason 2:

The UK has a shameful textile waste problem that we do not want to exacerbate

We point the finger straight at the fast fashion industry when we think about textile waste in this country, and understandably so.

In statistics highlighted by [Greenpeace](#), we buy [more clothes per person](#) in the UK than any country in Europe. When they are no longer wanted or needed, the majority are burned or buried as landfill.

However, commercial linens are a significant contributor to this mountain of waste fabric – an estimated [30 million pieces amounting to 2,000 tonnes](#) according to the Textile Services Association, are thrown away each year.

Recycling is important and unwanted hotel and hospitality linens are often sold for rags. This is important in the [Hierarchy of Waste](#) as an onward destination and further use is preferable to ultimate disposal.

However, anti-fast-fashion campaigners would simply say ‘don’t buy it in the first place’ and the logic of this straightforward edict can be applied to bedding, tableware, towels, workwear, and other items eagerly ordered in to laundry stocks, sometimes with a voracious regularity.

This brings us back to re-use – looking after each and every napkin or pillowcase, and getting the most out of its life cycle. Currently, it is estimated that only one in five pieces of commercial linen sees out its full service, meaning that the majority of this resource is being ragged too early, due to marks or tears.

The waste charity WRAP estimates that demand for raw materials to produce textiles will triple by 2050 – a staggering statistic, especially given our collective focus on net zero ambitions.

We’re challenging the healthcare and hospitality sectors, and the laundries that serve them, to minimise their part in this acceleration of consumption and wastage, and set a good example for other sectors – and the apparel-loving public – to follow.





It's not just discarded carrier bags, single-use plastic bottles, and old fishing nets causing danger to marine life in our oceans.

Microplastics – particles smaller than 5mm – are another significant contributor of this toxic mass, and according to a recent report, industrial laundries together with domestic washing machines are the source of 35% of them.

Emissions of microplastics decrease dramatically after five washes – so it is new linen that causes the literal bulk of this problem. An annual million tonnes of plastic particles are now entering our seas, amounting to what the Marine Conservation Society, and plenty of others, call an [ocean emergency](#).

While microplastics originate from many sources, many are emitted by textiles – from polycottons to regenerated textiles, and those woven from synthetic polymer sources.

Though what exactly comes out in the wash has perhaps been an under-explored area of scientific research, a paper in *Textile Research Journal* puts the focus on this most urgent of situations.

[Fragmented fiber pollution from common textile materials and structures during laundry](#) by Alma V Palacios-Marlin, Abdul Jabbar, and Muhammed Tausif, examines the relationship between fibre types and yarn structures on the fragmented fibre release during laundry processes.

If all fabrics shed in this way, it might seem to commercial laundry groups there is little they can do to reduce their own impact on the oceans – and that of their customers. However, one crucial point emphasised in this meticulously researched paper is that the first few washes are the most harmful.

The researchers based with the University of Leeds washed new, dyed, woven textiles under controlled conditions to discover that samples showed a reduction in fragmented fibres shed through repeated laundry cycles.

They concluded that the heaviest concentration of such pollutants was linked with the “mechanical and chemical stresses” in manufacturing, including yarn texturisation. So, contract laundry groups’ real power to turn this situation around lies in the care they take to make the most of *all* linen.

Reason 3:

Microplastics shed in the wash are causing an ocean emergency

Reason 4:

A robust *environmental policy* is the only way do business now



Banks, other lenders, and investors, as well as potential commercial partners awarding contracts, are already favouring companies with a genuine desire to do the right thing by the planet and an action plan to prove it.

Demonstrating progress and good intentions regarding environmental policies are becoming increasingly important when it comes to borrowing money.

Increasingly, funders do not want to support polluting firms and therefore finance will be harder to come by for those that cannot easily show they are doing their utmost to work towards net zero ambitions.

Evidence of this sea change is all around. Lloyds Bank, for example, has [recently announced](#) it will not fund new oil or gas projects, and financial institutions who do not steer clear of non-environmental practices are increasingly being called out – such as [current investigations](#) into some lenders' links with deforestation.

Whether a laundry can access essential funds – or win game-changing contracts with other, environmentally minded players – is beginning to rely more heavily on being able to provide evidence of sustainability considerations.

When we talk about good business, we must also think about the money-saving aspect of developing good habits to re-use stock, limiting both textile waste and microplastics in the oceans.

Taking hospitality or healthcare linen as our example, getting more wears and washes out of workwear, bedding, towels, and tableware means that less top-up stock must be ordered.

This makes increasing business sense in these difficult times of rising commodity costs and utility bills.

Reason 5:

The cost of *everything* is rising, and saving money is more important than *ever*



The laundry sector is deeply concerned about rises in energy prices and the potentially disastrous effects they could have on the UK's hospitality industry over the coming year.

Some businesses have already seen their fuel bills jump to five times their previous levels. Now the Textile Services Association is calling on the Government for [continued action](#).

It is good news that, according to a TSA survey, 83% of commercial laundries have returned to or increased their pre-pandemic turnover, and 79% anticipated turnover to be on a similar trajectory in 2023.

However, the vast majority (79%) report issues with supply chains, in particular difficulties with equipment and spare parts, as well as linen. The reasons for this are myriad, and include global political and economic situations, as well as climate issues such as floods.

Due to the Ukraine situation, grain planting has taken precedence over cotton in some territories and this is expected to further disrupt the cost and supply of this essential commodity.

A year ago, it was reported that the [cost of linen](#) had risen by 50%, and even at this inflated rate, reliable supplies were harder to come by – so the sector has already endured several months of significantly more expensive top-up stock.

This is particularly pertinent when it is remembered that laundries typically spend 10% of their turnover on topping up linen. However, as we have seen in this white paper, much of this purchasing is needless.

So, prices are soaring for all goods and services that laundries require – but there are still ways to save money, and what better time to take advantage of these?

The environmental reasons for enlisting the help of Regenex are clear.

The carbon saving of reviving tired linen, rather than binning and buying again, is 4kg carbon per 1kg linen. This is a calculation based on the treatment of linen halfway through its life cycle and returned to stock, compared with 8kg carbon associated with the manufacture and life of 1kg linen.

The financial reasons are equally as compelling. A bath towel here and a table cloth there, consigned to the bin, might seem inconsequential, but they add up.

Receiving 25,000kg of condemned linen back following Regenex processing would save a laundry over £200,000 on the cost of buying new linen. The £3.50 per kg processing cost is less than a third of the current, inflated price of new linen, now reaching £12 per kg.

So let us introduce our services to you.

How Regenex can help laundries love linen longer...

Our current six areas of service

- ✓ Stain removal of white linen pieces for hospitality and healthcare laundries
- ✓ Stain removal and re-whitening for workwear garments
- ✓ Topping up of shade for coloured tableware pieces
- ✓ Re-dyeing of tableware to new shades
- ✓ Dyeing of white pieces to new shades
- ✓ Expert solutions to individual, laundry-specific problems.



Regenex can rescue and revive up to 80% of condemned linen, either by removing marks and stains, or by dyeing it a new or topped-up colour.

Most of our customers use us for cleaning rather than dyeing, and we are able to return heavily blemished or discoloured items to a snowy-white condition, suitable for the highest-end hotels.

Regenex became operational in early 2017, following a detailed programme of research and development into stain removal method for commercial linen.

So far, we have used our expertise in the above, specific areas – although our flexible approach to problem solving in collaboration with contract laundry groups makes us an ideal partner for any problem area.

The multi-bath process that forms the core of our business – and our already widespread reputation – has its foundations in almost a century of textile dyeing

expertise, amassed by our parent company, Bulmer and Lumb Group.

On our site, we have the technology and expertise to colour a full range of textiles in any bespoke shade, on behalf of laundry customers. Our dyestuffs meet industry standards and our effluent management systems are stringent, and subject to tight controls.

Regenex uses some water and energy during treatment but the alternative for this linen is early ragging or landfill. A total of 70% of the carbon footprint of a piece of linen comes from its manufacture, with only 30% generated during its use of 100 washes or more.

Regenex's technical director, Paul Hamilton, is a chartered colourist and a liveryman of the 550-year-old Worshipful Company of Dyers, overseeing a team of versatile specialists.



The customer view: “The more you waste, the more it costs you.”

Founder of short-stay accommodation provider, [uSnooz.com](https://www.usnooz.com), **Glenn Ackroyd**, talks about his attitude to re-use and sustainability, and his successful partnership with Regenex.

How have you seen attitudes to textile waste change during your time in the industry?

Yes and in truth it boils down to the bottom line. Cost – in terms of both carbon and cash.

The more you waste, the more it costs you. As fuel, shipping costs, and inflation bite, margins get squeezed. And you can't simply push these costs onto consumers because the pound in their pocket is being hammered at the same time.

The greater gain of course is the carbon savings you can make by developing more careful habits with your resources, and the expanding business prospects that go with having a well-thought-out environmental policy.

Can you give me a couple of examples of ways in which you have become more frugal with linen?

Firstly, we have changed our marketing to encourage longer stays. That means fewer changeovers and reduced housekeeping costs. Secondly, we've engaged Regenex to recycle spoiled stock that would otherwise require replacement. This is good-quality linen that gets spoiled by sun creams and wine – all the usual suspects for the hospitality industry. We regularly get over 80% of our marked linen back from Regenex. This is a huge cost saving and helps us maintain our profit margins.

How have rising prices and disrupted supply chains affected your business in the last couple of years?

Our housekeeping costs are higher due to fuel rises, but demand is lower as the cost-of-living crisis intensifies. So, it's a double whammy of increased costs and lower revenue. Naturally, this focuses your attention on money savings to keep yourself competitive.

What difference has using Regenex made for you?

Quite simply, they have reduced our re-supply cost by more than 60%! It's a real no-brainer. Do you dump your spoiled stock into a landfill or preserve its lifespan and save substantial sums of money and carbon? Any smart business owner would do the same.

I tell all my friends about Regenex and let my dinosaur competitors keep on doing what they're doing.

Want to find out more?



Get in touch!

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