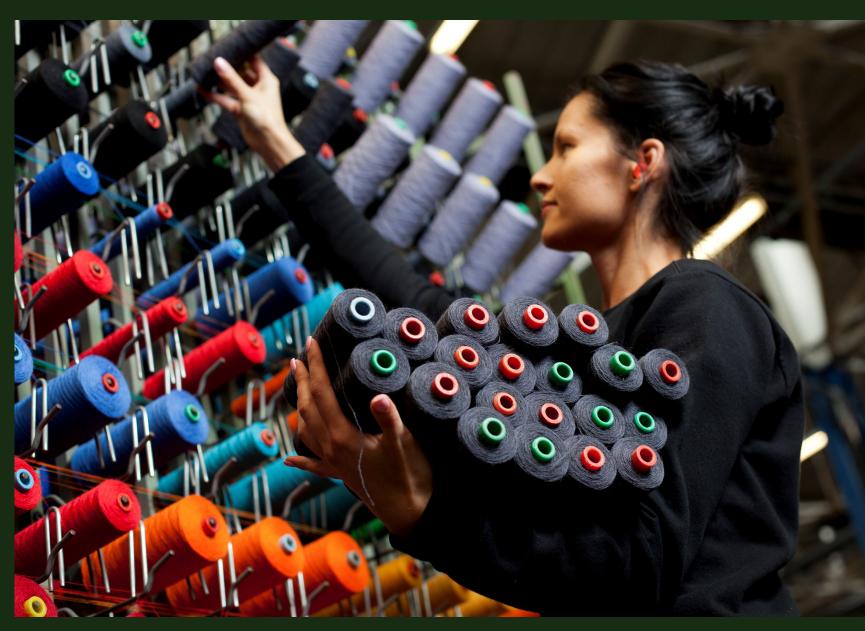


camira

We're a global fabric manufacturer, making some of the most sustainable fabrics in the world and now innovating in textile circularity.

We handle all manufacturing processes, from yarn spinning, to weaving and knitting fabrics, dyeing and finishing. We're proud to have been a valued supplier to Nowy Styl over many years. We introduced post-consumer recycled polyesters in the 1990s; we innovated a new category of wool blended with harvested plant fibres from nettles, hemp and flax; we were first to market with SEAQUAL ocean waste recycled polyesters; and now we're breaking new ground in fully circular recycled wool fabrics. We're a signatory of the UN Global Compact and support the UN Sustainable Development Goals.



Project description

Category 2

Origin, recycling content and recyclability of the product in the context of circular economy support.

Advancing the circular economy through innovation in closed loop wool recycling, along with circular approaches in polyester fabrics, knitted component covers, and bio-based materials.

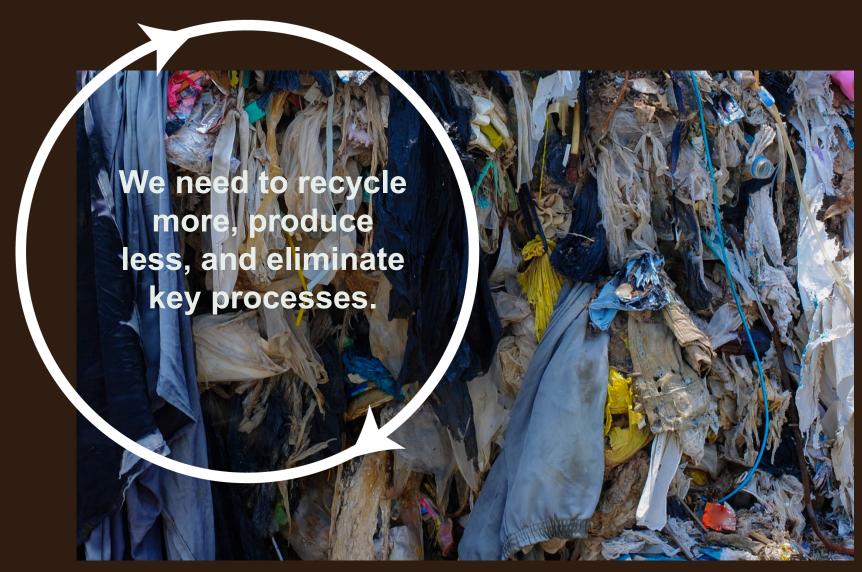
Backed by Lifecycle Assessment and Environmental Product Declarations, including 21 independently verified, third party accredited EPDs.



The problem we need to address

Globally, it is estimated that the textile industry generates 92 million tonnes of waste annually, while less than 1% of all textiles worldwide are recycled into new textile products.

- Textiles account for 8% of global carbon emissions – more than international flights and maritime shipping
- Approximately 20% of industrial water pollution worldwide is attributed to textile dyeing and treatment.



In March 2022, we acquired iinouiio, a wool and cashmere recycling business, headed by Dr John Parkinson. In August 2022 we installed state of the art wool recycling machinery to re-process our own waste, as well as post-consumer apparel.

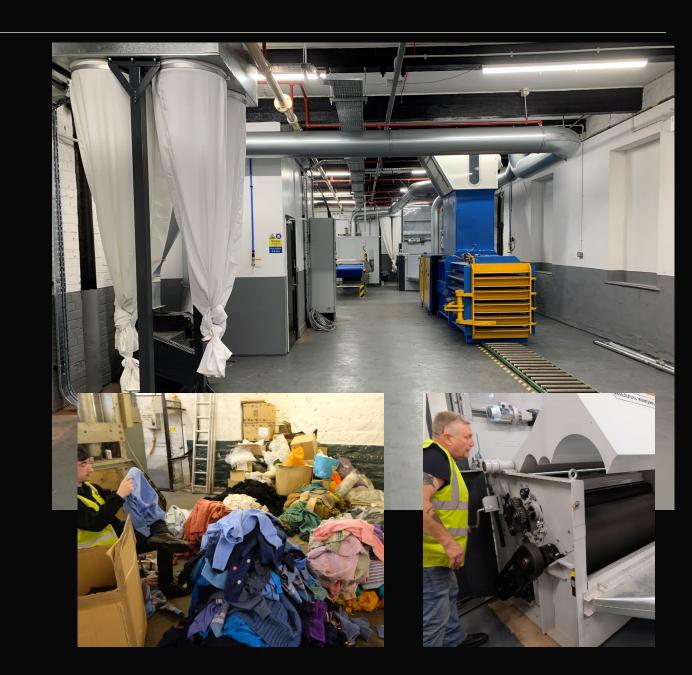
Dr John Parkinson, left, who has 30 years' wool recycling experience, together with Camira's Commercial Director Anthony Croall.





We are committed to advancing textile circularity at Camira, and in the wider textile, fashion retail and furniture industries.

Together we can make beautiful new products from textile "waste".



In spring 2023, we launched Revolution, our first closed loop recycled wool fabric made from our own yarn waste. This addresses our biggest source of textile waste, which is yarn remnants from our transport fabric manufacturing process.

This circular process not only recycles wool yarn waste, but also the colour within it, as subsequent dye processes are eliminated.





Shredded



Project benefits / KPIs

Providing a new outlet for our biggest source of textile waste

we produce over 1 tonne of waste yarn per week from our transport fabric looms face to face) due to the irregular uptake of yarn into patterned fabric

Providing proof of concept to develop a new generation of circular fabrics

our next fabric will be made from 75% recycled wool and 25% flax, creating a new dimension in sustainable textiles (recycled and renewable)

Eliminating the dye process, thereby removing the need for added chemicals

we preserve and recycle the colour from the original dyewares, so we remove this entire process when working with recycled wool, saving both water and chemicals

Reducing environmental impacts, as shown through Lifecycle Assessment

LCA data is provided on the next slide for three key impact categories



Project benefits / KPIs

- LCA shows reduced impacts across all environmental impact categories, including Global Warming Potential (ie Embodied Carbon)
- LCA carried out independently by Huddersfield University School of Applied Sciences

Impact category	100% virgin wool – per m2	26% recycled wool	Percentage reduction
Global warming potential	9.40 kg	6.70kg	28%
Abiotic depletion (fossil fuels)	57.27 MJ	40.55 MJ	29%
Water depletion	3.08 m3	1.88 m3	39%

Project benefits / KPIs – 2023 and beyond

Textile and retailer collaborations

working with UK textile manufacturers and retailers to recycle and re-process their high value wool and cashmere waste

Take-back schemes

to recover wool upholstery offcut waste from furniture manufacturers, re-process it, weave it into new fabric and return it to the furniture company

Increased recycled content / new yarn blends our next circular fabric will be made from 75% recycled

wool and 25% flax



Project benefits / KPIs – 2023 and beyond

Autosort for Circular
Textiles Demonstrator –
a £4 million, two year, UK
government funded
project to divert
thousands of tonnes of
textile waste from landfill.

We have partnered with UK Fashion and Textiles, Brtiain's largest textile network, alongside a consortium of textile manufacturers and retailers, including New Look, Marks & Spencer, Tesco and Pangaia, as well as academia and textile recycling technologies, to lead this ground-breaking project to provide intelligent and high speed textile sorting for recycling purposes.





Camira is a world leader in bio-based fabrics made from wool blended with natural fibres from harvested hemp, nettles and flax. This forms part of the biological cycle of the circular economy as articulated by the Ellen MacArthur Foundation.

We began with a project in 2008 to commercialise fabrics made from nettles grown on UK farmland. This taught us that wool and bast fibre in the right ratio is inherently flame retardant with no need for added chemicals. This leaning paved the way to expand our environmental fabric portfolio into using hemp and then flax.



As long ago as 2012, we launched X2, a closed loop recycled polyester fabric which uses our own waste yarn and fabric selvedge. This is upcycled into a black yarn which provides the base for this first to market fabric.

We worked in partnership with our polyester yarn supplier, whereby we return our waste selvedge and yarn remnants for upcycing into a new yarn. This is so far limited to a black yarn which is used to provide intrigue alongside piece dyed postconsumer recycled polyester.





Camira Knit is our technical knitting capability which creates fully finished bespoke fabric components which are zero waste in manufacture and product assembly. They're also removable and designed for dis-assembly.

Our knitted components are light -touch in impact, using just two basic inputs - yarn and electricity - and creating zero waste. We use post-consumer recycled polyester, or SEAQUAL Yarn, and knitted covers are easy to remove at the end of life of the furniture, so can returned and / or recycled.



This year we have introduced third party verified Environmental Product Declarations for 21 fabrics, covering our natural, recycled and synthetic fabrics. These are independently accredited by SCS Global.

A mark of our product transparency, this project was a major undertaking taking more than two years, culminating in the publication of EPDs which conform to the very latest Product Category Rules for textiles. We believe this is another industry first to be able to state that they are "independently accredited, third party verified".

