

Clothing and Textiles

<p>ZCS VISION</p>	<p>Consumers in Shropshire understand that the model best suited to lowering the carbon impact of clothing and textiles is to value good design and longevity of use. When an item is no longer needed there are opportunities, such as accessing skilled artisans who are able to transform the original product, or outlets that will buy and sell "pre-loved" clothes. Following the principles of the Circular Economy, there are many local "cottage industries" that use reclaimed textiles to repurpose them into a variety of products. The concern for microplastics entering the ecosystem through washing and shedding manufactured fibres has led to an increased interest in natural fibres made from renewable resources.</p>
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	Sourcing/Production	Distribution/Retail	Consumption	Post Consumption
<p>CURRENT PRACTICE (summary)</p>	<p>Many clothes are made from petrochemical fibres woven into textiles like polyester, nylon and so on. We now know that these shed micro particles of plastic into our environment. Even Mt Everest and remote polar regions are affected. Many natural fibres such as cotton require huge amounts of water and chemical fertilizers to grow. Look out for organic cotton. Some fabrics such as Rayon are made from cellulose (from plant and animal fibres) but to make this, wood has to be processed at high temperatures also using large amounts of water. Silk, linen (made from flax) and jute are traditional textiles, not produced on a large scale, are expensive but last well. Wool has been replaced by more modern fibres, fleeces rather</p>	<p>There are currently 4 ways that textiles and clothing come to market:</p> <ol style="list-style-type: none"> 1. The producer turns a raw material or reuses existing materials and sells directly (1 link in the chain); 2. The producer sells to a wholesaler who sells on to a retailer (2 links in the chain). 3. The producer sells to an agent, who sells to a wholesaler who sells to a retailer (3 links in the chain). <p>The more links the more carbon expended in transporting and retailing the textile/clothing.</p>	<p>"3 for 2" T-shirt offers, fashion changing with the seasons, not cool to wear the same outfit more than a few times. Adverts, on-line influencers, celebrities all showing you how to look good. Does this ring a bell? As Vivienne Westwood says, "Buy less, choose well, make it last."</p> <p>To produce the cheapest garments this means the energy is provided by many, usually poorly paid, textile workers.</p> <p>The real cost to buying cheap clothes.</p>	<p>Textiles are provided direct to charity shops for reuse and resold online by the public.</p> <p>In support of charity shop and public online selling of textiles, the public can also deliver textiles to bring sites operated by organisations such as The Salvation Army or deliver to Household Recycling Centres from where the textiles are reused/recycled. These tonnages are included in the baseline carbon-footprint below. The weight of charity shop and public online sales of textiles is not known.</p> <p>It is estimated that £140 million worth of clothing goes into landfill each year.</p> <p>WRAP has done studies into disposal of non-clothing textiles such as carpets, upholstery and mattresses, duvets and pillows which make up about 19% of UK</p>

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	<p>than woolly jumpers, but wool if produced using regenerative practices, and coloured using plant-based dyes is very sustainable as well as durable. Therefore, it is important to know how the fibre is produced as well as its origins. The transformation of these raw materials into fibres, cloth and clothes uses energy. According to Government figures (2020) emissions from the UK's textiles industry alone are almost as high as those from cars used for private trips.</p>			<p>bulk waste. They found that 56% of all mattresses disposed of at Household Waste Recovery Centres (HWRCs) had visible fire safety labels. Over 25% of all mattresses were assessed as being very clean.</p> <p>Around 20% of carpet at HWRCs was assessed through visual assessment as very clean and suitable for re-use.</p>
BASELINE CARBON-FOOTPRINT (estimate)	<p>Second to the Oil Industry the Clothing and Textile industry is the second largest polluter in the world. To make clothing, you need fabric; to make fabric, you need yarn; to make yarn you need fibres. (Respecterre) The choice of raw material has a big impact on the footprint of a garment. Some fibres are inherently more eco-friendly than others. Organically grown and mechanically processed is more environmentally friendly than chemically processed. There is growing interest in</p>	<p>WRAP figures show in 2016 1.13 million tonnes of clothing was purchased in the UK</p>	<p>The Carbon footprint of these purchases is calculated at 26.2 million tonnes of carbon.</p>	<p>Annual Shropshire Council textile tonnage collected at bring sites and received at Household Recycling Centres (HRCs) for 1st April 2019 to 31st March 2020 are:</p> <ul style="list-style-type: none"> • Bring sites: 188.49 tonnes • HRCs: 811.05 tonnes

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	looking at less well known sources of fibres such as Ramie, sisal , bamboo and some more unusual ones .			

Key STRATEGIES to achieve ZCS vision	Avoid "fast fashion"	The seduction of Instagram and peer pressure to wear the most up-to date fashion and not to be seen in the same clothes twice has spawned a demand for cheap clothes, made for limited wear. Recent years have seen that the low cost of clothes comes at a price for others.	Keep the chain from producer to buyer as short as possible.	As Vivienne Westwood says, "Buy less, choose well, make it last."
	Ethical/Environmental business model Case Study BAM	Bamboo absorbs five times more carbon than hardwood trees. It needs half of the land for the same fibre than cotton, doesn't need irrigation or pesticides. The business model is to be "Impact Positive" rising to the challenge to be zero carbon by 2030. This model applies right through the supply chain from growers to retail, ensuring that employees are treated fairly and with dignity. Read the BAM Sustainability Report 2020	Every item is benchmarked against conventional cotton to work out the water and chemical pollution that has been averted.	Until the company achieves carbon zero it is offsetting with a water project in Kenya. They have even offset the energy customers may use in washing their clothes.

EXAMPLES of good practice or innovation	Shropshire based company Turtle Doves uses discarded cashmere clothing this company repurposes the fibre into new products.			Prato : The Italian town turning rags into new clothes.

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	WRAP has case studies on carpets, mattresses and furniture fabrics and duvets and pillows	Bundle beds		Want to change an old settee or chair? Reupholster rather than throw away.
	Tencel is produced from plant fibres in a sustainable manner	Buying sustainable clothing	Buy Pre loved jeans , or rent them	Hold a clothes swap in your local area. There was an annual clothes swap in Ludlow until 2020 until it was suspended due to Covid restrictions.

Recommended POLICIES/ACTIONS and associated carbon savings/impacts & other benefits

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policy/action #1	Recommended policy/action Adopt Circular Economy Business Models	Business models designed for renting and reselling. Technologies that “close the loop” so that old clothes can be turned into new ones. Because doing good is not simply doing less bad; it is about creating technologies and systems that actively benefit us all. These innovations and many more are promising because they fundamentally change the way we do business, creating an opportunity for a regenerative closed loop system that eliminates waste.		
	CARBON-SAVINGS (CO2e tonnes)	Difficult to quantify as it is determined by uptake of companies applying circular economy practices, individuals choosing to invest in sustainably produced clothing and repurposing fabrics no longer needed rather than throwing away.		
	Potential biodiversity benefits			
	Other benefits e.g. health/social benefits			
	Key STAKEHOLDERS to engage			
	Potential sources of funding			
	Obstacles to overcome			

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policy/action #2	Recommended policy/action Adopt Circular Economy Business Models	In 2012 the Rana Plaza Building in Bangladesh collapsed killing 1134 workers and injuring hundreds more. Despite this there are still people working in dangerous conditions and on very low wage levels.	"One of the central causes [of poor working conditions in garment factories] is the global system of the [fast fashion] industry itself, which relies on outsourcing and subcontracting and offloads the social costs and risks of garment production onto already vulnerable workers," (The Conversation)	Avoid cheap clothes designed to be worn only a few times and then thrown away.	Not throwing clothes away so that they end up in landfill, or burnt could have a significant impact on people's carbon footprint. What if... a Slow Fashion attitude became the fashion. One of the many slow fashion apps could be used to sell, swap or share clothes and accessories Country Living magazine gives 5 examples. Consider also repairing clothes, look for a local tailoring service or use an on-line service such as Sojo .
	CARBON-SAVINGS (CO2e tonnes)				Annual Shropshire Council Textile tonnage collected at bring sites and received at HRCs for 1 April 2019 - 31 March 2020 are Bring sites 188.49 tonnes HRCs 811.05 tonnes. It is difficult to translate into carbon because we have no idea what the embedded carbon is for every piece. However, for help and ideas look at WRAP's site Love your Clothes