

The Issue of Global Textile Waste and Sustainable Alternatives

Issues in Fashion

Background:

- Between 2000 and 2015, clothing production doubled from 50 billion units to over 100 billion
- Fast fashion began in the 1990s, with low-priced and short-lived items being generated by cheap manufacturing
- Now, influencers on social media often promote rapidly changing trends, encouraging more people to purchase more items
- We also wear clothes significantly less during our lifetime compared to the 1990s
- 460 billion US dollars' worth of value is lost globally each year from people throwing away clothes they could still wear

Social Issues:

- While textiles are harmful to the planet, their production, use and disposal can have negative impacts on people too



Social Issues:

- The untreated textile wastewater also harms the communities using contaminated water systems for fishing, washing, and drinking
- Microfibres released into our waterways infiltrate human diets via tap water, beer, sea salt and sea food and have even been detected in human lungs
- Textile waste exported to developing countries is sorted for sale in second-hand markets by low paid workers in unsafe conditions

What happens to our clothes?

- In 2015, just 13% of total material input was recycled following clothing use
- Most post-consumer waste is instead incinerated, landfilled, or exported to developing countries to be sold in second-hand markets
- This is not to mention the pre-consumer waste comprised of new, unworn, or returned clothes that fail to be worn by consumers- this causes enormous amounts of textile waste.

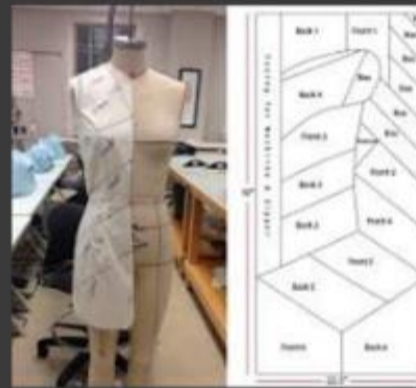


Environmental issues:

- Greenhouse gases- in 2018, the fashion industry produced around 2.1 billion tonnes of greenhouse gas emissions globally- this is the same as 350 million African Savanna elephants
- Water usage- the textile value chain (the whole product lifecycle) uses 215 trillion litres of water annually - this is the same as 86 million Olympic-size swimming pools for example, the Aral Sea Crisis- water extraction for cotton irrigation dried out what was the fourth largest lake in the world.
- Chemical contamination of textile wastewater- the textile industry uses over 15000 chemicals, most are harmful to the planet
- Toxic substances- reactive dyes and heavy metals often pollute local aquatic ecosystems
- All textiles are culprits, whether natural, semi-synthetic or synthetic
- An average 6kg wash load of synthetic acrylic fabric releases over 700,000 fibres
- These microfibres have been found in lots of different environments, including the deep sea and Mount Everest, and can be ingested by marine organisms including sea cucumbers and hermit crabs

Zero waste:

- Zero-waste is a design technique that eliminates textile waste at the design stage
- Approximately 15% of textiles intended for clothing ends up on the cutting room floor
- To help this issue we need to maximise the use of textile materials and minimise the wastage
- Using the zero-waste approach reduces textile waste and the demand on natural resources
- There are different ways you can do this such as a zero-waste pattern, draping or knitting
- **Zero waste pattern:** relies on creative pattern cutting- pieces are placed in a jigsaw-like arrangement to use all the fabric.
- **Zero waste draping:** relies on creative utilisation of all the fabric, by draping fabrics directly over a body or a mannequin.
- **Knitting and crochet** relies on knitting or crocheting products to the exact shape and measurements of the final product. You knit (or crochet) flat panels to the correct pattern shape to assemble them - whole garment knitting (3D knitting) is to knit the entire product without the need for panel assembly



My summary:

- Fast fashion creates social and environmental issues all around the world with textiles waste and water waste being the main issues
- Only 13% of materials are recycled – a number which should be much higher if we hope to improve this issue
- Clothing is being re-worn less each year meaning clothes are being thrown away more frequently and landfill is being piled up
- There are different ways to help reduce textiles waste such as the zero waste initiative hoping to completely eliminate any leftover fabric

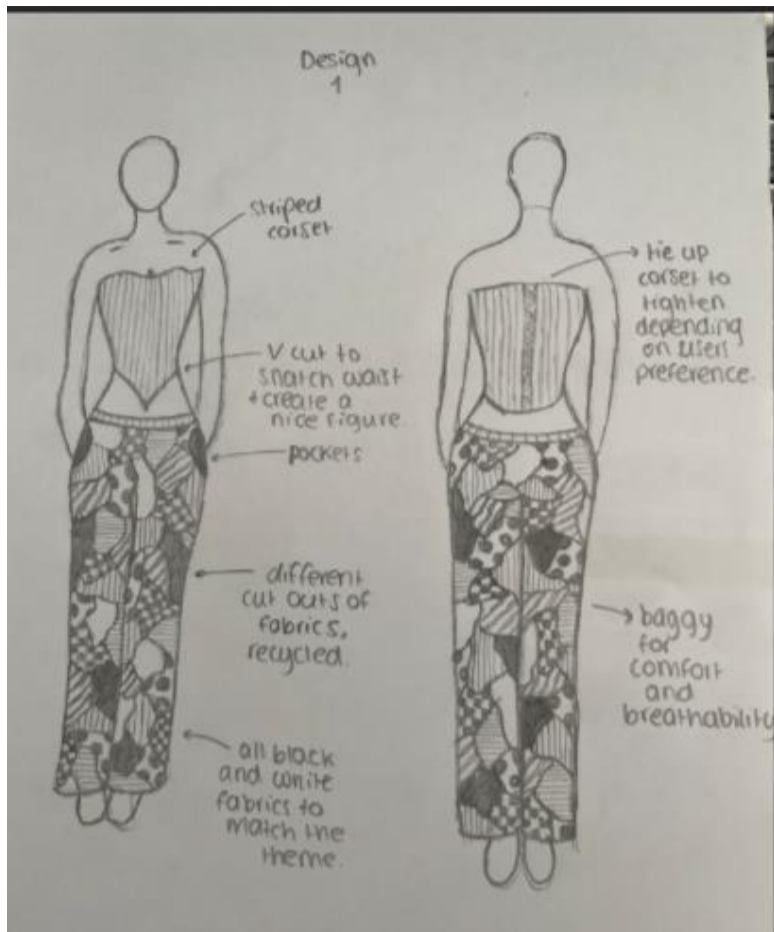
Other ways to help with the impact of fashion:

- Consumers can focus on buying durable clothing and supporting brands prioritising sustainable materials
- Clothing swaps or donating to- can extend the life of garments
- Adapting a mindful purchasing approach- helps reduce impulse buys that end up as waste
- Upcycling- transforms old textiles into inventive new products
- Technological advancements like advanced recycling techniques, development of bio-based materials- contribute to building a more sustainable future for the fashion industry
- Businesses can focus on recycling and reusing materials:
- Implementing take-back schemes- encourages consumers to return old clothing for recycling
- Transparent supply chains and eco-friendly production processes- reduces the industry's overall waste footprint.

How to dispose of textiles waste:

- Donating unwanted textiles to charities or recycling centres- keeps them out of landfill
- Utilising designated textile recycling bins in communities- promotes proper disposal.
- Ensuring garments are clean before recycling- ensures they can be effectively repurposed into new products.

Repurposed Fashion for the Brit Awards



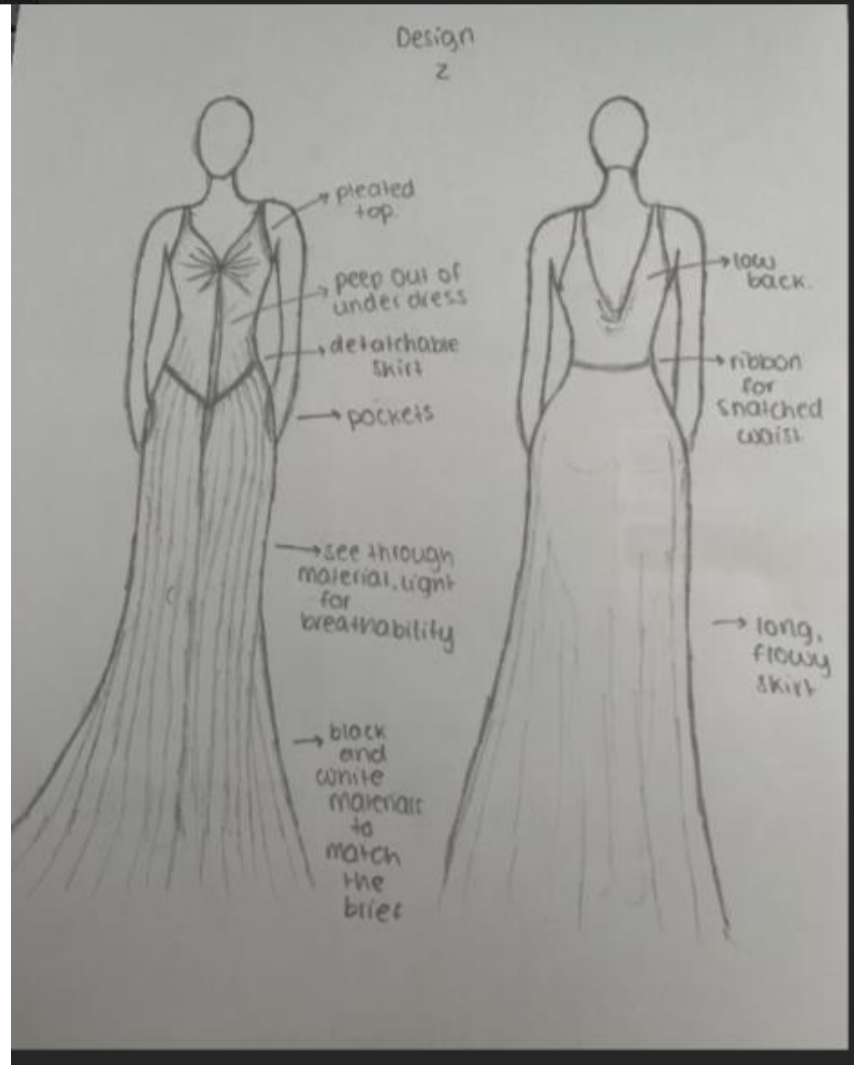
- Design 1**
- Suit look
 - Influenced from the 2025 met gala looks such as Sabrina Carpenter for the corset
 - Trousers made of a patchwork of fabric scraps to include the zero-waste approach
 - All black and white fabrics to fit the brief
 - Pockets for added space

Some of the fabrics I would look for:



- Design 2:**
- Drop back dress
 - Pleated design on the front with a sheer, lightweight, white fabric
 - Black belt/ribbon low on waist to create a more snatched effect
 - Peep out under dress in black
 - Long and flowy skirt for breathability
 - V of the waist mimicked in the v of the corset in the final design

Experimenting with the fabrics:



- Design 3:**
- Ball gown look
 - Simple black dress with white folds in the fabric for a peep out effect
 - Simple look that could be worn for different occasions
 - V back
 - Only black and white to meet the brief
 - Flowy skirt for comfort
 - Pockets for the added space
 - Inspired by the iconic black and white Marilyn Monroe looks
 - The folding of the fabric creates some texture to add excitement with the black and white colours

Final Design Presentation

My Chosen Design:



About the design:

- Trousers made of a patchwork of fabric scraps to include the zero-waste approach
- All black, white and grey fabrics to fit the black and white theme
- Pockets for added space
- Corset for a flattering, snatched look and a tie up back for more comfort
- Low waist on the trousers inspired by design 2
- Lightweight fabrics for the trousers for comfort
- Inspired by 2025 Met Gala looks
- Different patterns on the fabric scraps for the trousers to add texture and excitement to the outfit

Possible fabric patterns:



Colour scale:

