

# HAIR-VOLUTION

Utilising *human-hair waste* from local salons as a bio-material to activate a sustainable *circular process*, create *employment* and enhance *community life* in Chatham, Medway.

## CHATHAM, MEDWAY

the 'depressed' High Street with empty shops and the huge plans to revive it



## PROBLEM

**72 million** kilograms of human hair is wasted in Europe every year clogging the drain and ending up in landfill.

**200 years** needed to decompose synthetic fibres which made up 60 percent of the textile industry. They contain virgin plastic and becomes released into rivers polluting them.

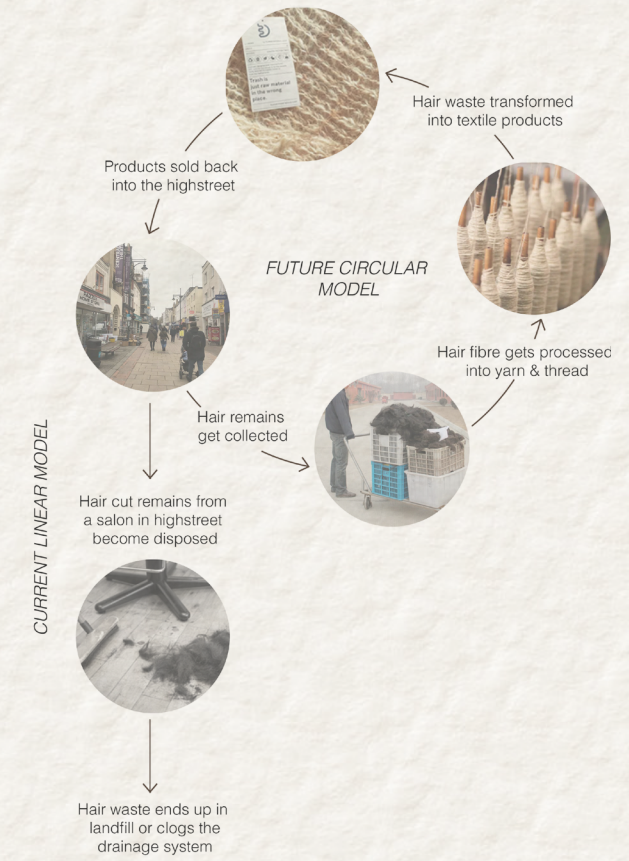
## OPPORTUNITIES

Human hair contains keratin, the same protein fibre found in animal wool making it possible to be integrated into textile production. Ultimately, hair-textile can *replace the harmful synthetic fibres* used in today's industry and tackle the *waste issue*.

The current Chatham highstreet is described as 'depressed' with shops closing down. I see an opportunity to revive the high-street through repurposing a former armour plate shop of Chatham's historic dockyard into a hair-textile production, utilising hair waste from local salons, and sell the products back into the highstreet, with the building being the first retail satellite.

Chatham is characterised as a low-wage economy making it a less desirable location for employers to seek skilled workers. In response, my proposal aims to create a pathway from institution to industry through a graduate hub for local textile graduates, and offering an opportunity to work with the new hair-material.

## HAIR-TEXTILE ADVANTAGES



## HAIR-LINE // MATERIAL EXPERIMENT



First experiment



Second experiment

Beyond textile, human hair can be applied in product and architecture materials. Hair Highway, a project by Studio Swine reimagined hair as an alternative to tropical wood, an overconsumed natural resource. Inspired, I began collecting hair from local salons and binded them with bio resin, which I intend to integrate in the design of counter top in my proposal- the "Hair-line"

The first experiment applied the technique influenced by Studio Swine, pouring bio resin over strands of human hair I collected. The outcome product is a glossy, translucent brick that exposes the random pattern of hair strands. In the second experiment, I combined hair with the bio compound paste made out of agar agar, glycerol, cornstarch and water. The result is a compacted hair brick that can be moulded into different objects.

In practice, advanced machines and facilities would be needed to produce the real material and for industrial composting. The anticipated outcome of this hair-material I have experimented would be similar of the tile sample (furthest right on image 2) created from compacting animal hair and binding it with resin, giving it a marble-like texture.

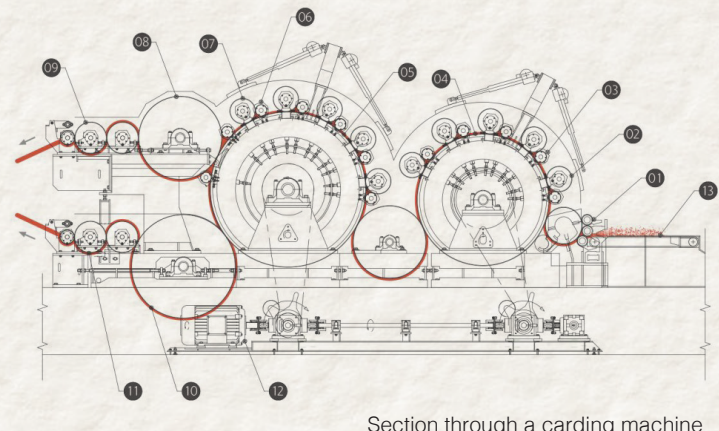


1. Hair collected from the salon 2. Hair washed and sorted 3. Hair placed in the molds 4. Bioplastic paste poured on top

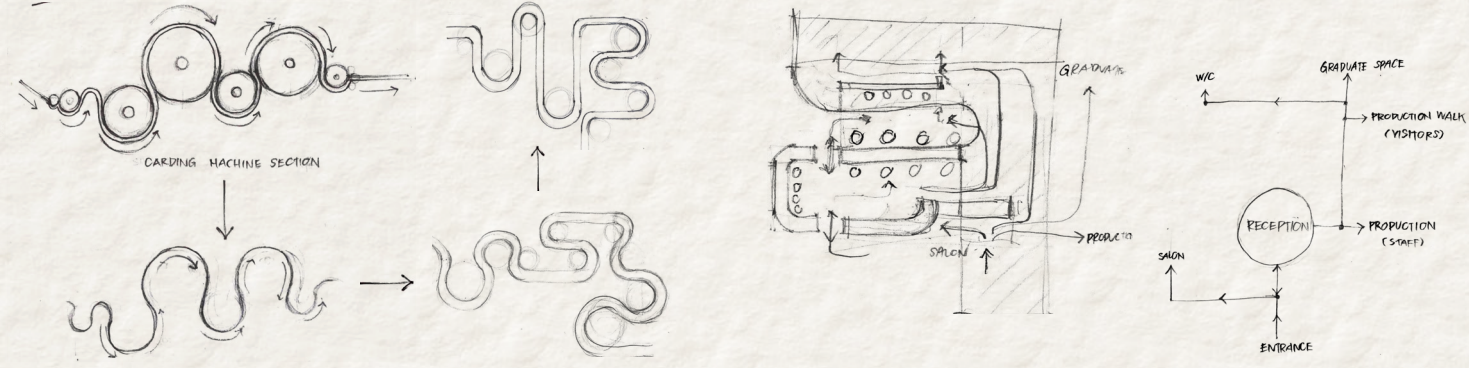
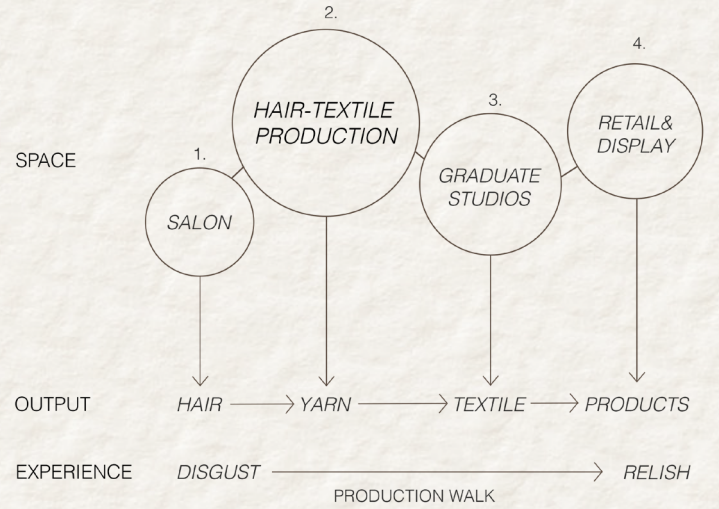




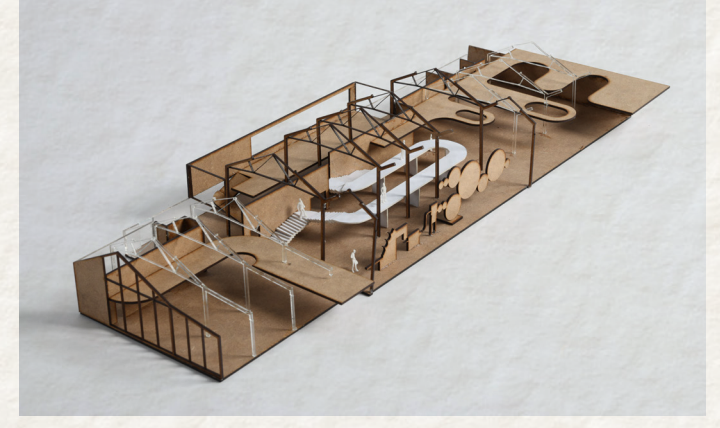
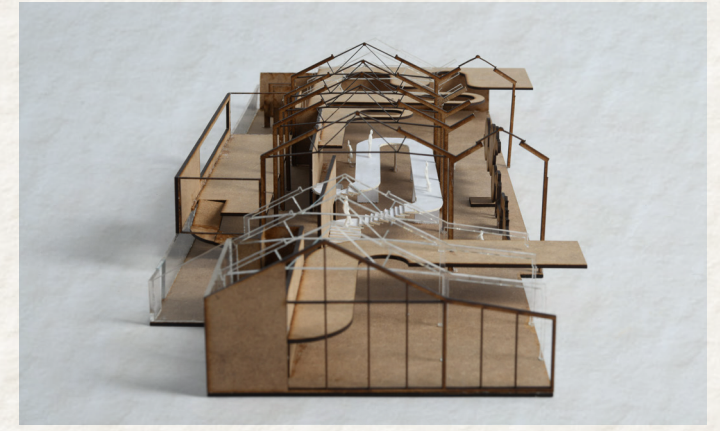
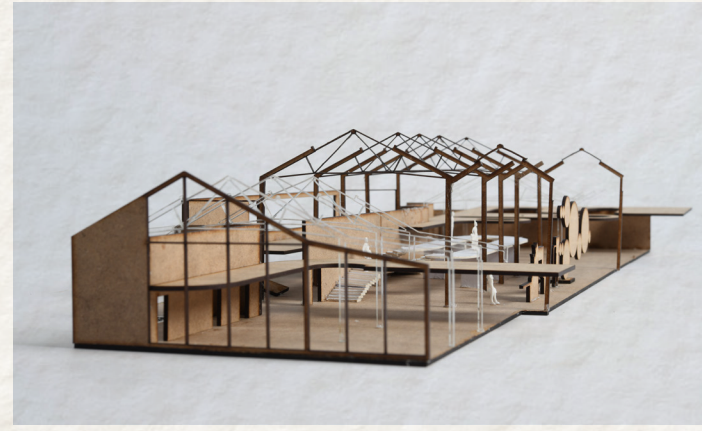
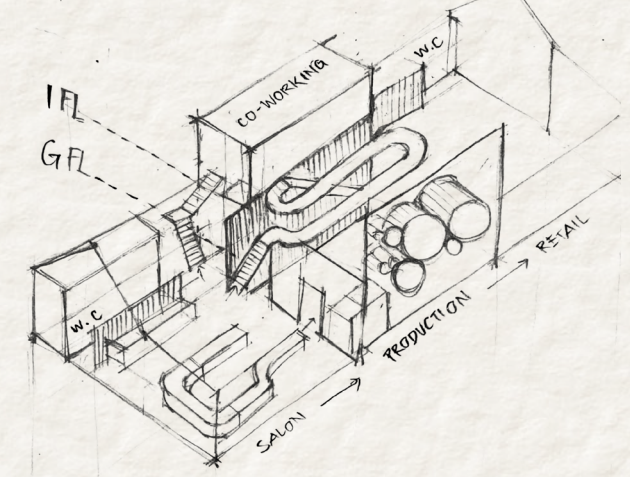
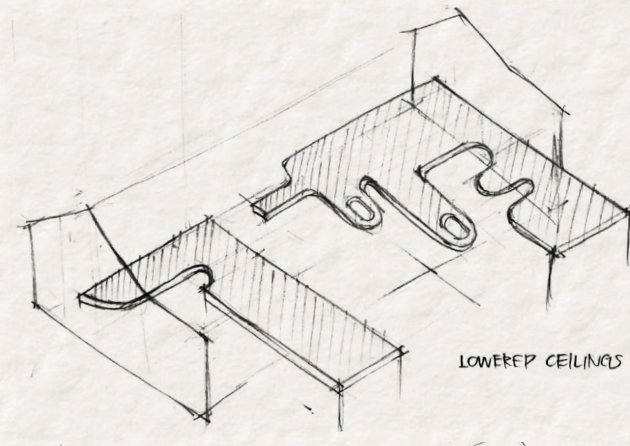
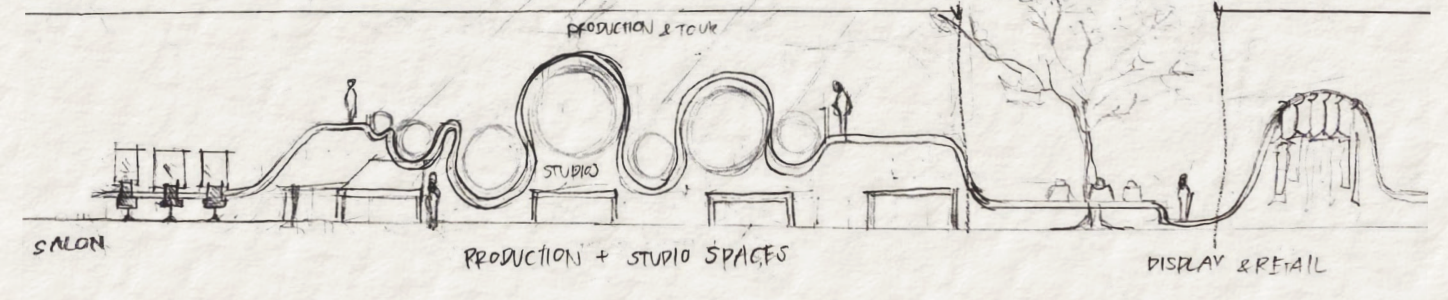
PRORAM & USER EXPERIENCE



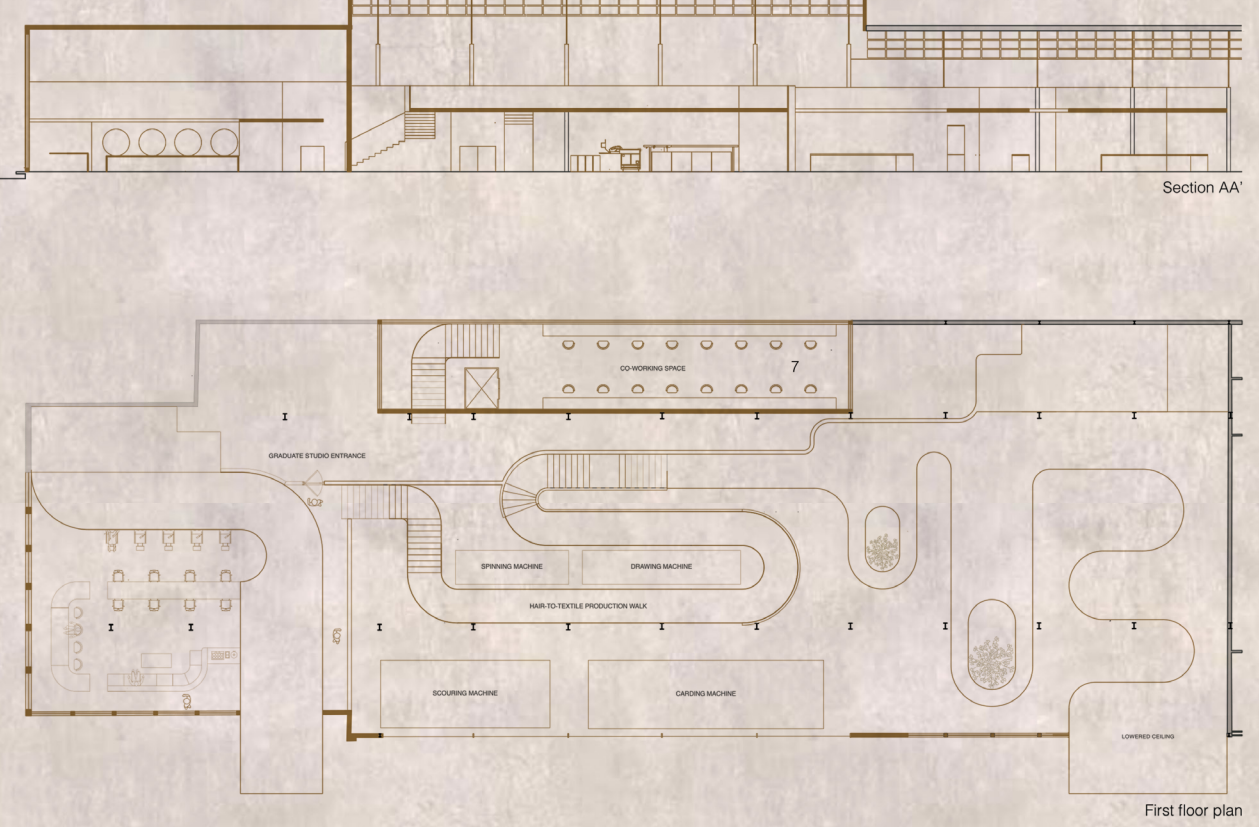
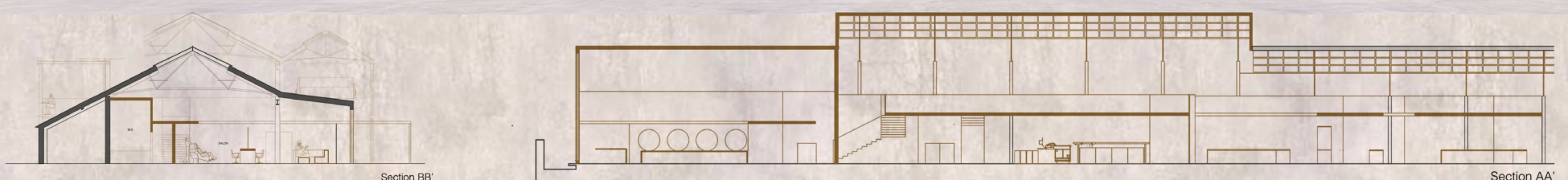
The spatial arrangement takes inspirations from the section of a carding machine used for the process of opening up fibre



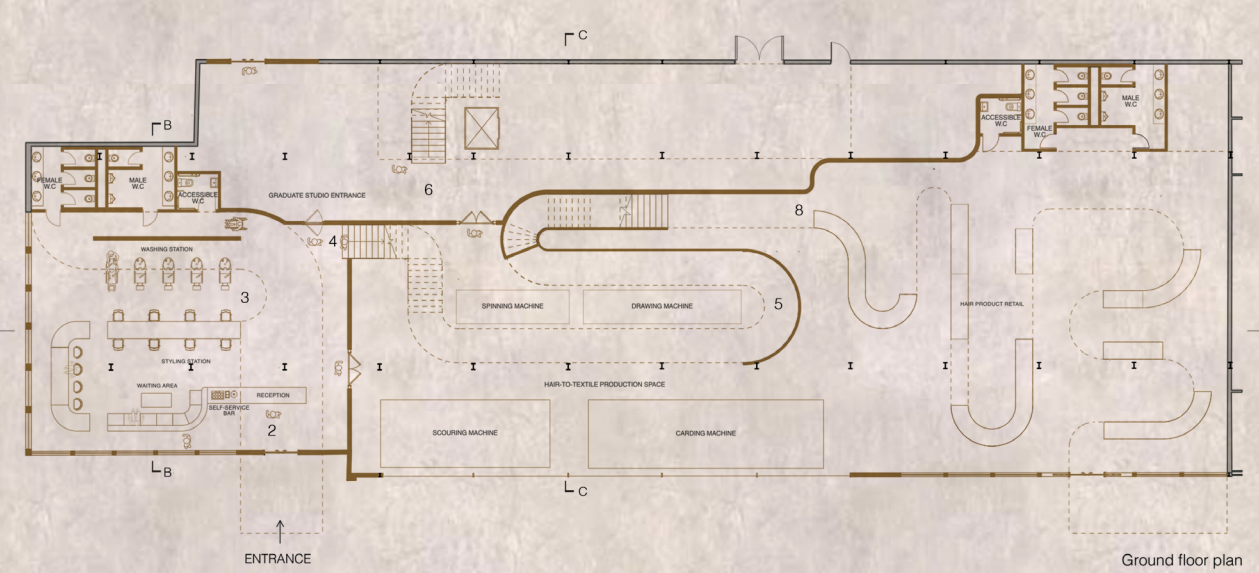
Human hair is often reacted with disgust, and associated with unhygienic connotation. My proposal aims to deconstruct this negative perception of hair and create realisation and fascination to the public community about the potential of this new innovative material that can be found on the top of their heads! To do this, I am designing a production walking experience navigating visitors through the process of transforming hair, starting from the floor of the salon, all the way to the final hair-textile products displayed on the shelves of the retail space. Working with hairdressers has allowed me to explore its social aspect, seeing it as a generator of community, designed a hair salon that acts as a community hub bringing people of different cultures in Chatham together.



Physical model exploring the production walkway



First floor plan



Ground floor plan

- KEYS:
1. Entrance
  2. Reception
  3. Salon
  4. Staircase to production walk
  5. Production walkway
  6. Foyer + staircase to co-working space
  7. Co-working space
  8. Retail & display

Lowered ceilings are added in the salon and retail space, mirroring the curves of the interventions on the ground floor plan. They protrude into the courtyard forming a canopy where the main entrance and exit are located.



Interior view of the hair salon



HAIR-LINE: Bio-degradable counter top made out of human hair for displaying hair-textile products created by design graduates