

Resource depletion & biodiversity

**Fabric Morphosis :
A Tactile Approach to
Sustainable Design**



The Arch Elevation

The structure's vertical presence stands as a landmark within the site, signaling a commitment to sustainability and innovation. It elevates the value of discarded materials by housing them within a framework that's as thoughtfully designed as the garments and textiles being reinvented within.



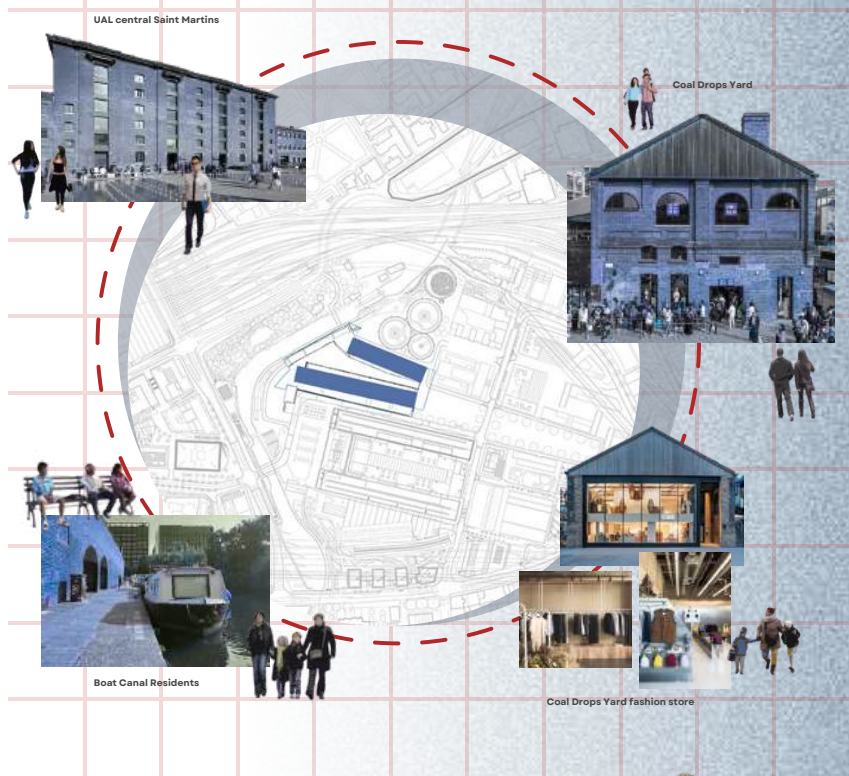
This projects address climate change, energy use, resource depletion, biodiversity, and other ways in which people can live within the Earth's natural limits.

My concept

This project's located in King Cross which has a diverse community with a steady flow of people that provides an excellent opportunity to engage various target groups effectively . Tailoring my approach to different categories of inhabitants ensures the concept to resonate with a broad audience .The space will bring together designers, students , artist and local residents—including the canal boat community –fostering a culture of collaboration, skill-sharing, and material reinvention. Workshops, exhibitions, and educational programs will engage people of all ages, turning waste into art, fashion, and functional design.



Site : Coal Drops Yard



Historical Context and Significance

Architectural Style: The original architecture of Coal Drops Yard follows the Victorian industrial style, characterized by robust brickwork, iron detailing, and functional structures built for the mass movement of goods. The 2018 redesign by Heatherwick Studio introduced a contemporary intervention, merging modern architectural fluidity with the rigid industrial framework. The most striking addition is the "kissing roofs", a curved steel extension that connects the two historic coal drops buildings, creating a dramatic central canopy. Coal Drops Yard, located in King's Cross, London, is a historically significant site originally constructed in the mid-19th century (circa 1850-1860). It was built as part of the expansion of King's Cross as an industrial hub, designed to receive coal transported from northern England via rail. The coal was distributed to businesses and homes across London, playing a crucial role in fueling the city's industrial growth. The site remained in operation until the decline of coal use in the 20th century, after which it fell into disuse.

Fashion waste .



Say No!
To Fast
Fashion
Overproduce!

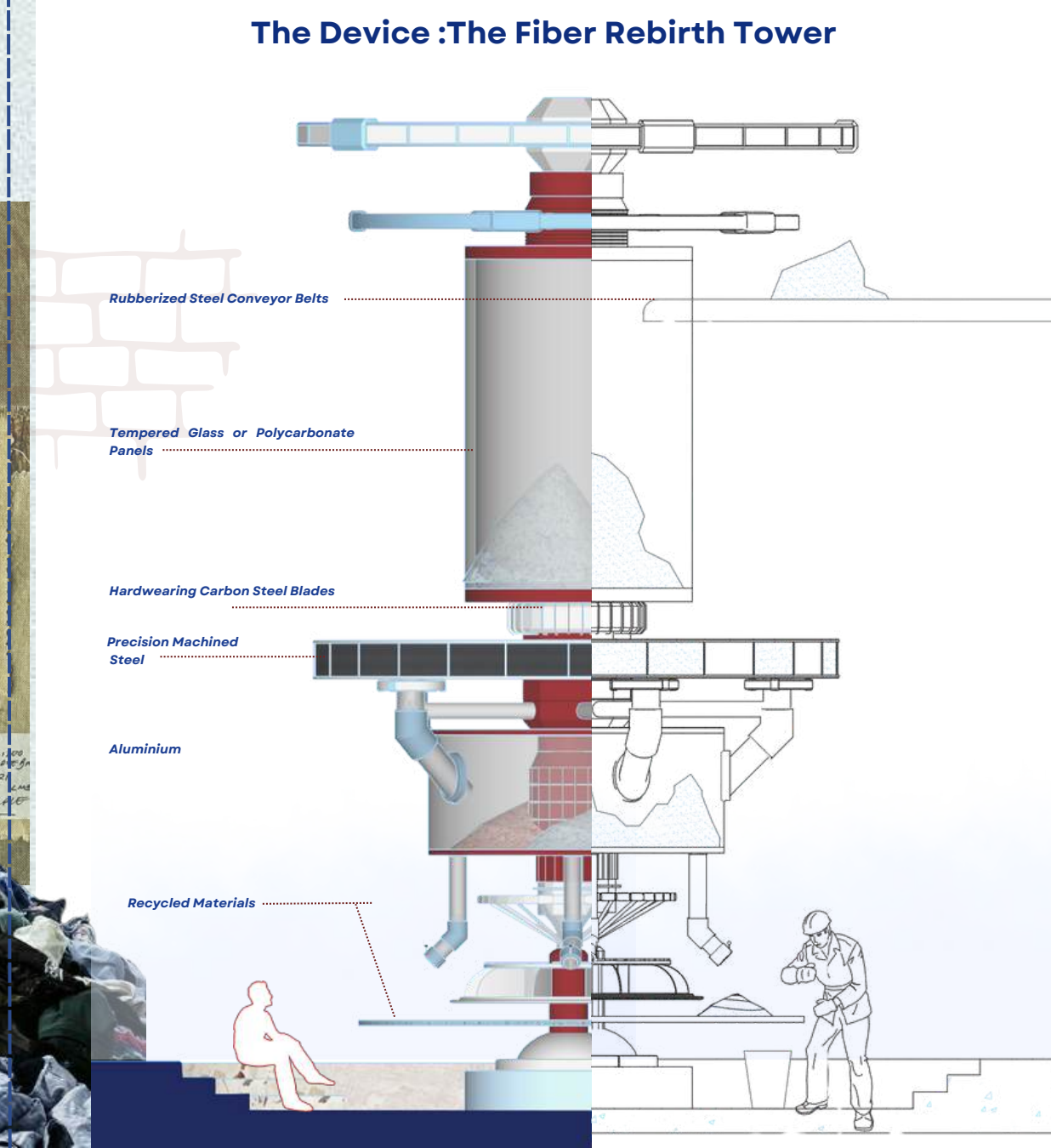
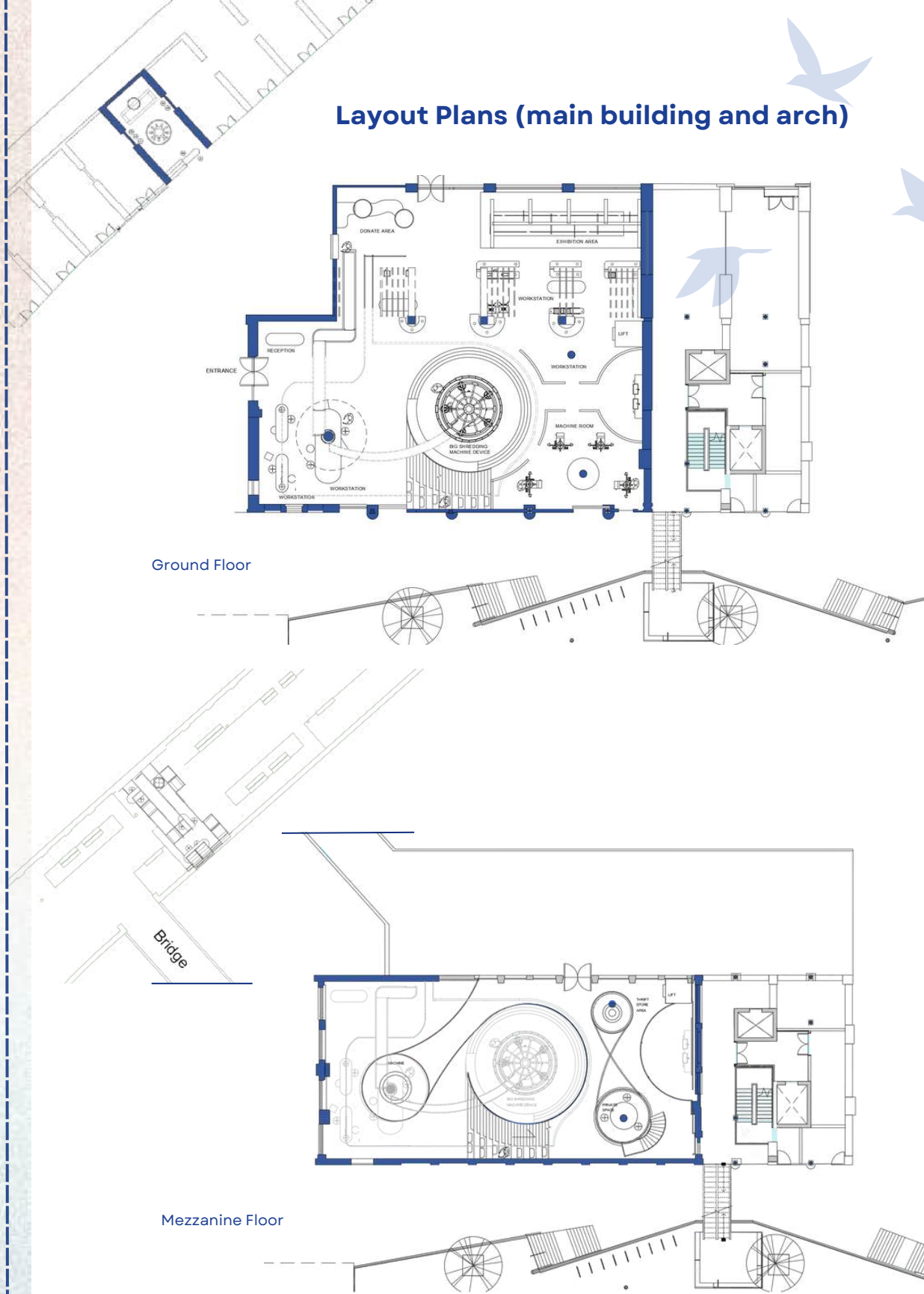
London, like many major cities, faces a significant issue with textile waste. The UK alone generates over *1 million tonnes of textile waste annually*, with a large portion ending up in landfills or incinerators. Fast fashion and consumer culture have exacerbated this problem, leading to shorter clothing lifecycles and increased waste. In London, this waste contributes to environmental degradation, including pollution and greenhouse gas emissions.

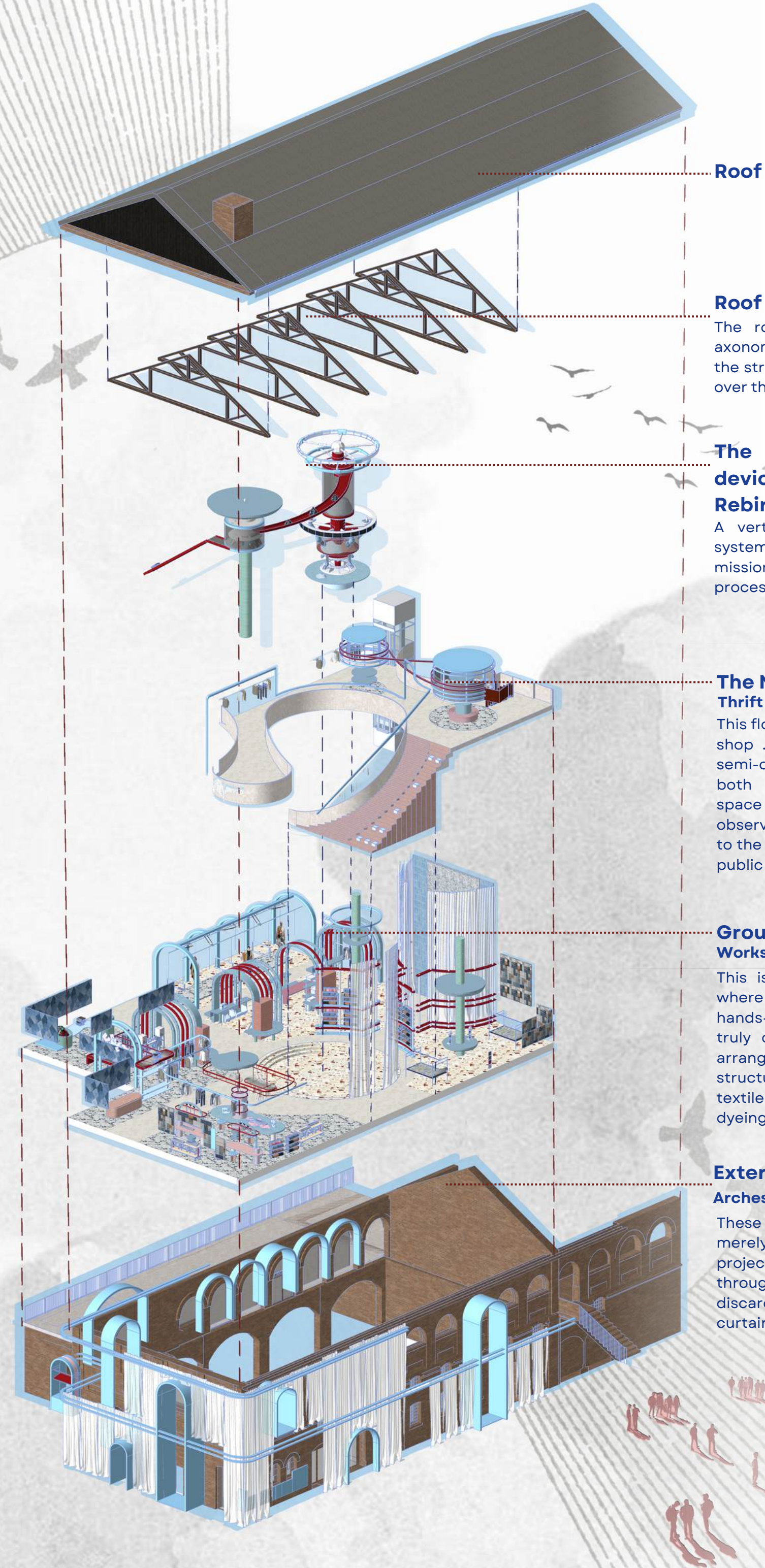
Upcycling fabric offers a creative and sustainable solution to this problem. By repurposing discarded textiles, you can reduce waste, conserve resources, and create unique, functional, and aesthetically pleasing interior design elements. This approach aligns with the principles of a circular economy, where materials are reused and recycled rather than discarded.

- 4 . Quality Education**
This project provides a space for everyone to learn and share their experience . Focusing on ensuring inclusive, equitable, and quality education for all while promoting lifelong learning opportunities. Promote skills development for employment, decent jobs, and entrepreneurship for youth and adults , Ensure that people have relevant information and awareness for sustainable development and lifestyles.
- 8 . Decent work and economic growth**
Promote productive activities, entrepreneurship, and innovation. Develop sustainable tourism that creates jobs and promotes local culture.
- 9 . Industry , innovation and infrastructure**
focuses on building resilient infrastructure, promoting inclusive and sustainable industrialization, and fostering innovation to drive economic growth, create jobs, and improve quality of life. Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean technologies. Enhance research and innovation in sustainable material design
- 11. Sustainable cities and communities**
Reduce the environmental impact of cities, especially by managing waste and improving air quality. This Reduce the environmental impact of cities by minimizing waste. Strengthen efforts to protect and safeguard cultural and natural heritage through craft and sustainable design.
- 12. Responsible consumption and production**
Substantially reduce waste generation through prevention, reduction, recycling, and reuse. Ensure that people have relevant information and awareness for sustainable development and lifestyles.



This *concept board* explores the creative potential of textile upcycling* in interior architecture. It visually communicates ideas of recycling, transformation, and interactive textile experiences* through various fabric-based design elements . Hanging & Suspended Textiles, Interactive & Playful Use of Fabric , using fabric not just as decoration but as a *spatial, structural, and interactive material*, reinforcing sustainability while creating unique, engaging environments.





Roof

Roof structure

The roof system completes the axonometric by highlighting how the structure is respectfully placed over the heritage shell.

The Machinery device : The Fiber Rebirth Tower

A vertical textile transformation system that embodies the project's mission of renewal through process

The Mezzanine floor Thrift shop , private room

This floor serves the retail and thrift shop . Above the main floor is a semi-open platform that serves as both a circulation route and a space for informal learning and observation. It offers visual access to the activities below, bridging the public with the process.

Ground Floor Workshop and donate area

This is the heart of the project, where community engagement, hands-on creation, and upcycling truly come to life. The space is arranged with layered arched structures that form zones for textile donation, sorting, natural dyeing, sewing, and remaking.

Exterior building Arches and textile

These draped textiles are not merely decorative; they embody the project's ethos of transformation through touch. Repurposed from discarded or deadstock fabric, the curtains act as a symbolic veil



The Fiber Rebirth Tower stands as the centerpiece of Fabric Morphosis, symbolizing the transformative process of textile recycling. The tower is designed with layered cylindrical forms, each part dedicated to a stage in the textile transformation journey. Once clothing is donated, it travels through a conveyor system that brings it up to the shredding chamber, where it is broken down into raw fibers.

The Fiber Rebirth Tower



The Open Space DIY Making Area is an expansive, collaborative zone designed to foster creativity, learning, and hands-on making. The space is divided into functional zones that encourage both individual engagement and community collaboration. The flooring of fragmented terrazzo, in soft greys, blush, and brick tones, subtly echoes the project's theme of upcycling—reflecting how the discarded materials of the past come together to form something new.

THE OPEN SPACE DIY MAKING AREA



The area is divided into zones that support a "collect and make" cycle: on one end, residents can donate unwanted textiles through open arch windows that establish transparency and accessibility; on the other, workbenches, sewing machines, and display surfaces provide opportunities for hands-on making, learning, and collaborative repair. The floor patterning, composed of fragmented terrazzo in soft greys, blush, and brick tones, reflects the project's upcycling theme, subtly echoing the idea of textile remnants being pieced into new form.

THE WORKSHOP AND MACHINE AREA



At the heart of the room is the Fiber Rebirth Tower, a dynamic and central feature, surrounded by compressing and sewing machines. This space is designed to encourage interactive learning and collaborative textile transformation, where visitors can observe and participate in the shredding and reworking of materials

The Machine and making room



visitors can explore the stories behind upcycled textiles and fashion waste. The area is designed to be visually dynamic, with sweeping archways and open spaces, allowing for a clear flow of movement between displays. Interactive panels and projected information on the walls allow visitors to engage with the process of textile recycling in a fun, informative way.

EXHIBITION AREA



the interactive donation station is highlighted, showcasing how the arches are used to create functional pathways for visitors. The arch structure frames the donation area, making it both aesthetic and practical. The flowing, curved arches guide visitors naturally towards the donation windows, where they can drop off their unwanted garments. The smooth, rounded design of the arches symbolizes the circular nature of the textile reuse process.

THE WORKSHOP AND DONATION AREA



The design of the workspace area mirrors the fluidity and openness of the rest of the arch structure, with ample natural light and comfortable seating arrangements that invite users to spend time engaging with textiles.

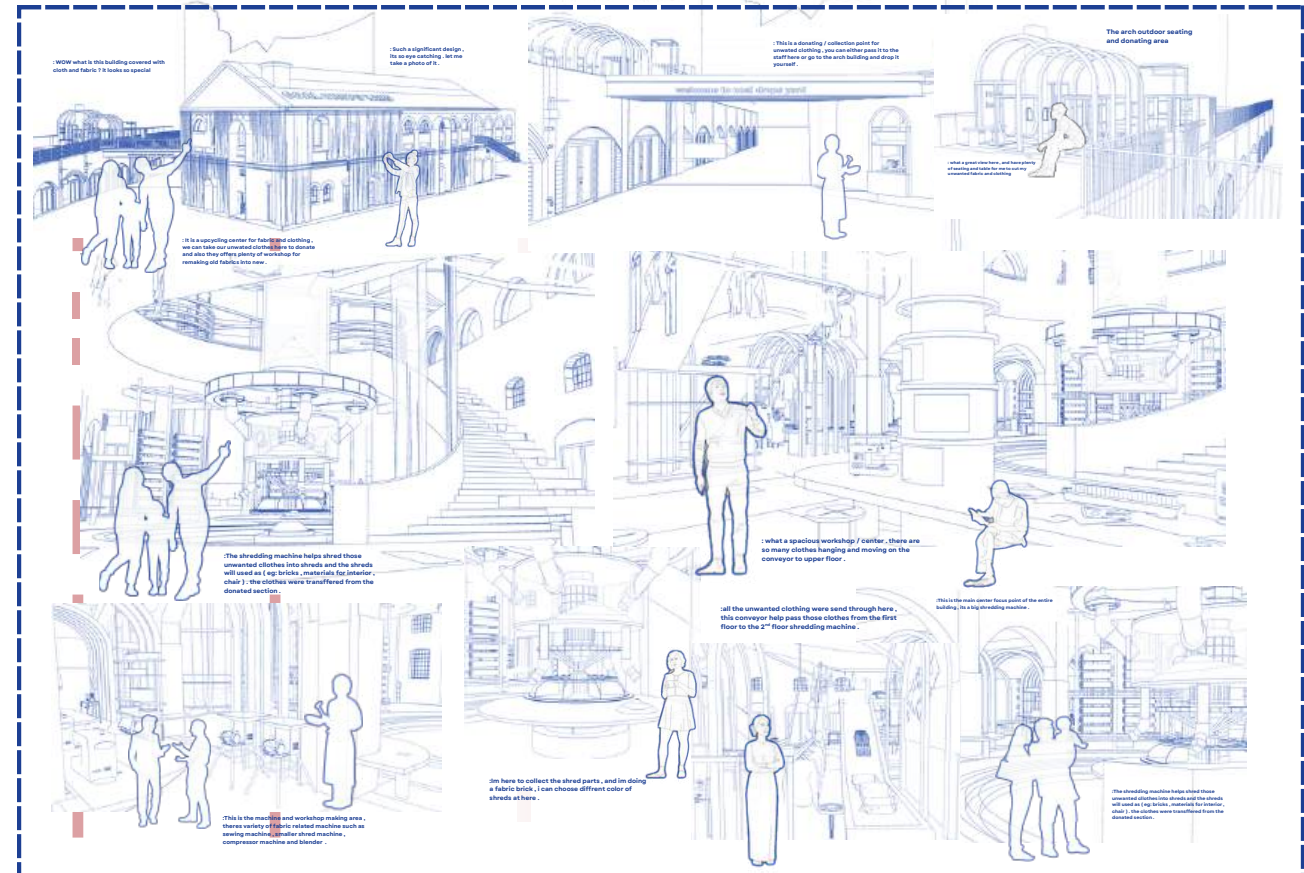
Visitors or professionals working here can feel both supported and inspired by their surroundings, with the space offering a clear connection to the recycling process that is central to the building's mission. This workspace area encourages collaborative learning, where visitors can not only create but also share ideas on sustainable fashion practices.

THE WORKSHOP AND DONATION AREA

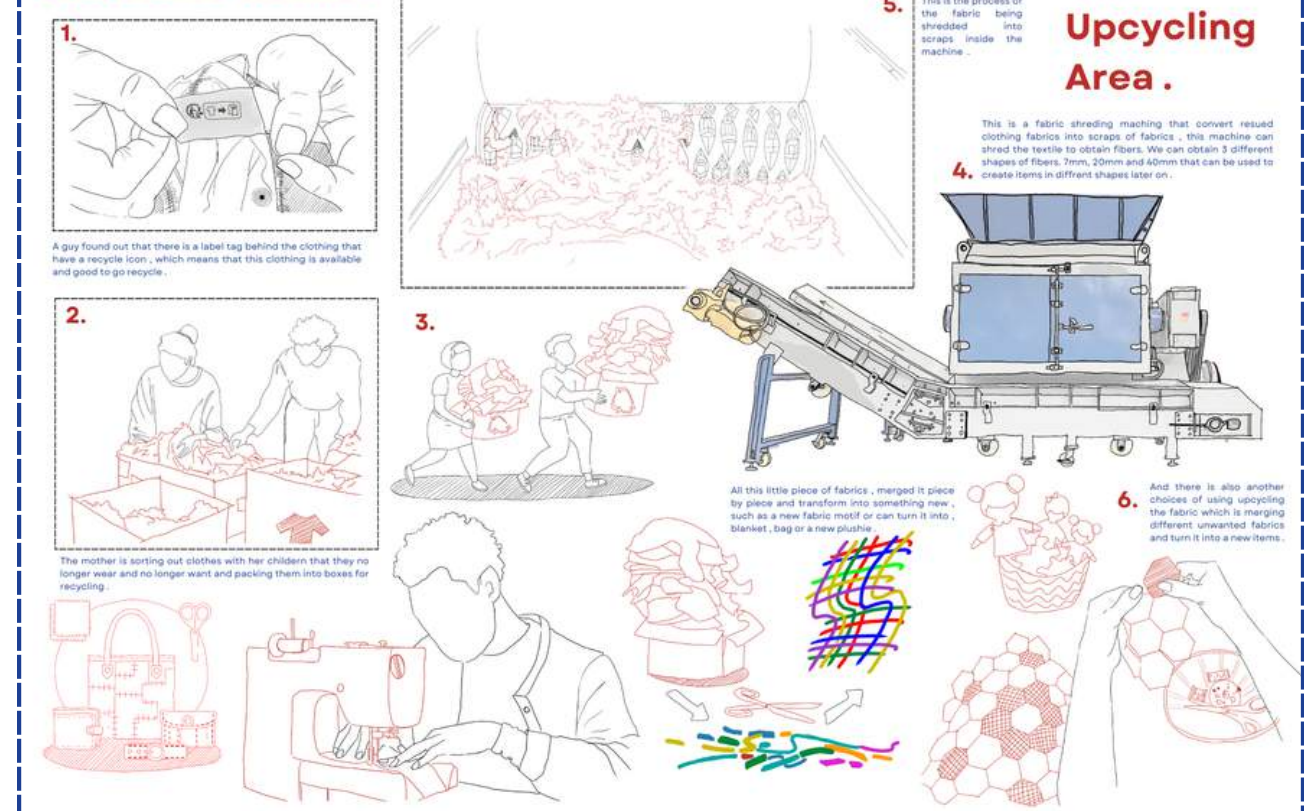


The inside of the Arch serves as an interactive donation and scanning area for visitors to engage with the textile recycling process before they donate or upcycle their unwanted clothing. The machine, housed within the arch structure, allows users to place their garments on top of it. Once the items are scanned, the machine provides detailed information on the recyclable percentage of the clothing, how much energy is saved by recycling it, and which materials can be transformed into new products. The function of the machine goes beyond simple donation—it's designed to empower visitors with knowledge about the environmental impact of their clothing choices and help them understand how their contribution fits into the circular economy.

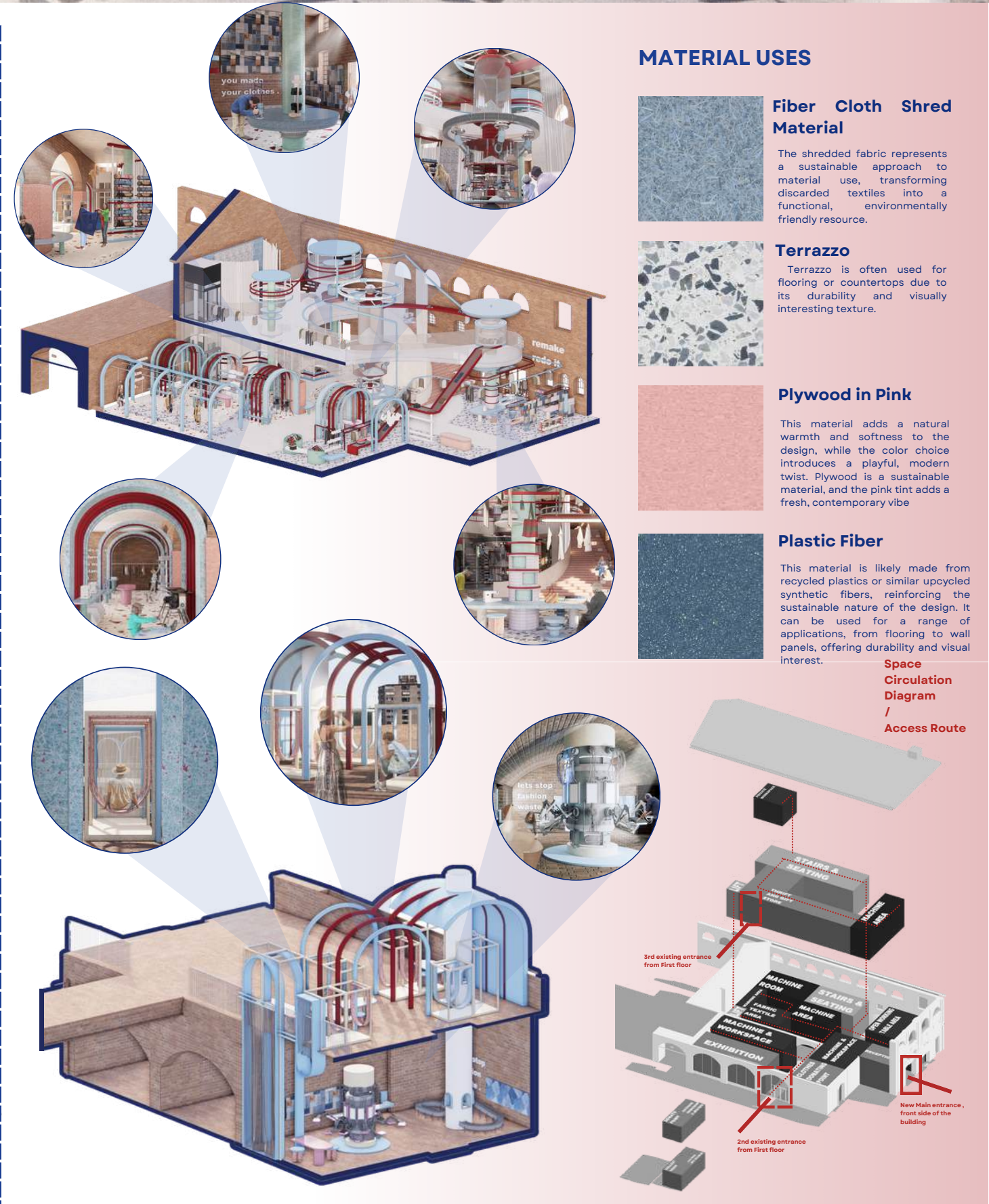
TheTextile info machine



Storyboard sketches .



The Upcycling Area .



MATERIAL USES

Fiber Cloth Shred Material

The shredded fabric represents a sustainable approach to material use, transforming discarded textiles into a functional, environmentally friendly resource.

Terrazzo

Terrazzo is often used for flooring or countertops due to its durability and visually interesting texture.

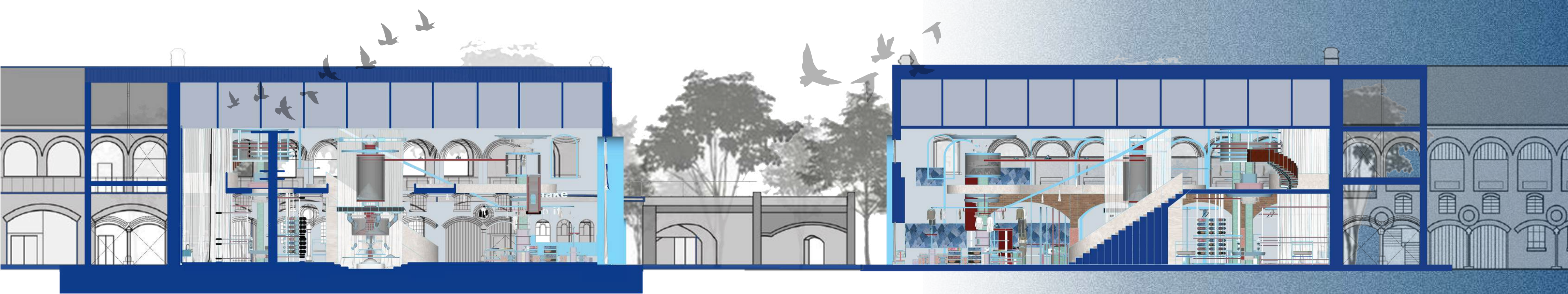
Plywood in Pink

This material adds a natural warmth and softness to the design, while the color choice introduces a playful, modern twist. Plywood is a sustainable material, and the pink tint adds a fresh, contemporary vibe.

Plastic Fiber

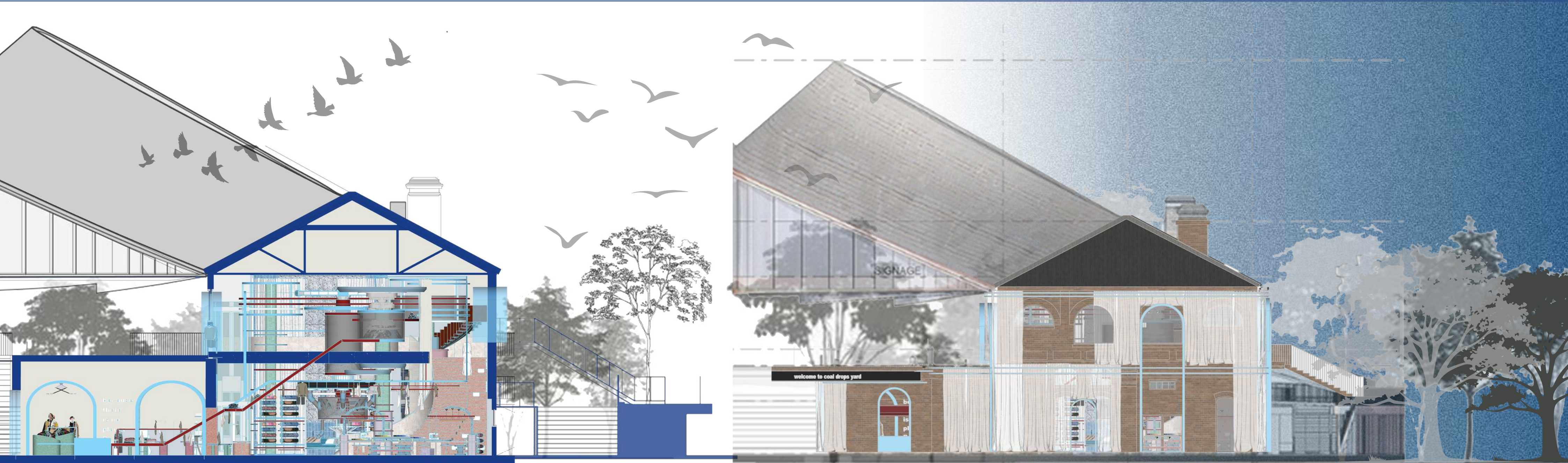
This material is likely made from recycled plastics or similar upcycled synthetic fibers, reinforcing the sustainable nature of the design. It can be used for a range of applications, from flooring to wall panels, offering durability and visual interest.

Space Circulation Diagram / Access Route



SECTION A (LEFT VIEW)

SECTION B (RIGHT VIEW)



SECTION C (FRONT VIEW)

FACADE ELEVATION (FRONT VIEW)