




FASHION HUB
15 WESTFERRY CIRCUS

YU HUANG
MA Interior Design
Royal College Of Art



CONTENTS

01

compression artifact

02

context & research

03

design strategy

COMPRESSION ARTIFACT

Experiment on Spatial Perception and Material Strategy



Visual Resonance: The Altered Core

The effects of material, position, scale, and vertical variation on Eye movement and spatial perception

Basic Framework

Simulation space

A 1:50 model of the space, including key elements such as cores, column, windows, etc.

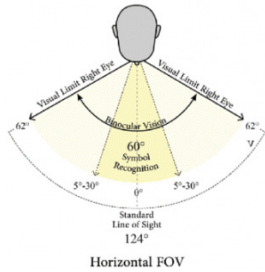


Basic Framework

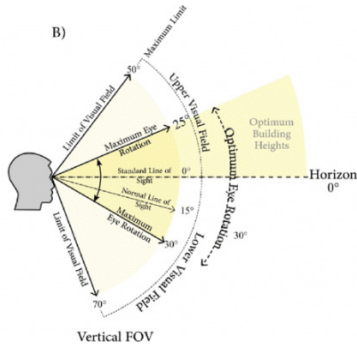
Movable observation point

Set the simulated position of the human eye

A)



B)



Reference for the human eye's field of vision

Horizontal field of vision: about 120°-180°.

180° represents the complete peripheral field of vision, and 120° is the area of regular clear vision.

Vertical field of vision: about 60° upward and 70° downward, a total of about 130°.

Focus field of vision (focus range): about 30°, usually corresponding to the front of the person.

Actual human eye field of vision (reference when standing)

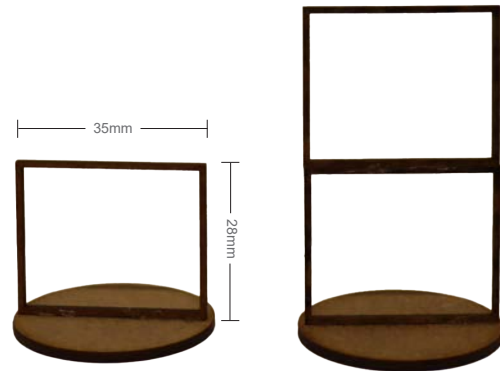
Standing height (eyes from the ground): about 1.5 meters.

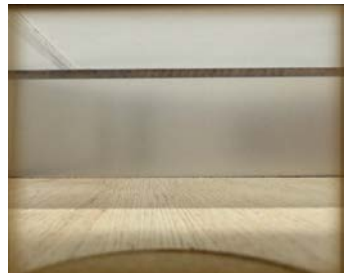
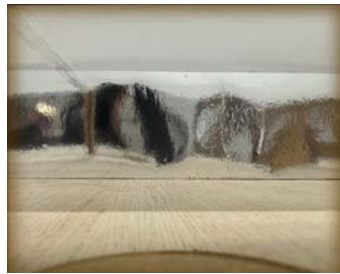
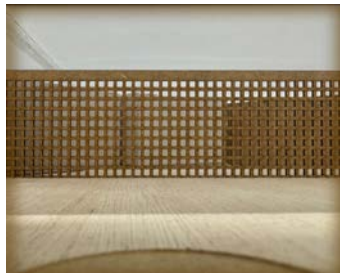
Horizontal range that can be clearly seen:

Actual width = 1.5 meters $\times 2 \times \tan(60^\circ) \approx 1.73$ meters.

Vertical range that can be clearly seen:

Actual height ≈ 1.5 meters $\times 2 \times \tan(65^\circ) \approx 1.38$ meters.





CONTEXT & RESEARCH

Before the Stitch: Understanding the Site and System



The Fast Fashion Graveyard A Crisis in the Atacama Desert

These discarded clothes take up to 200 years to fully decompose.



At least **39,000 tons** of these clothes are discarded in the Atacama Desert due to lack of buyers.

Resale



Annual Import Volume: **59,000 tons** of second-hand and unsold clothing from around the world

The Environmental Cost



Water consumption (93 billion cubic meters)



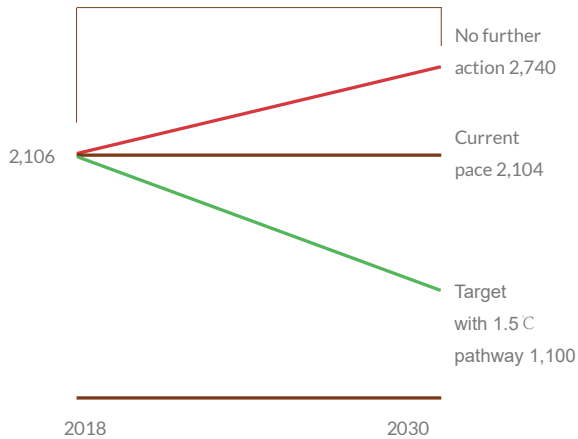
Clothing consumption growth (63% by 2030)



Discarded clothing (336k tonnes)



Greenhouse gas emissions (8-10%)

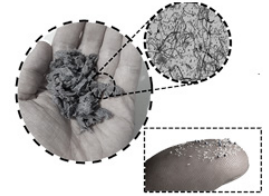


Key Issues with Textile Waste in the UK

Fast Fashion Impact



Microplastic Pollution



TEXTILE WASTE

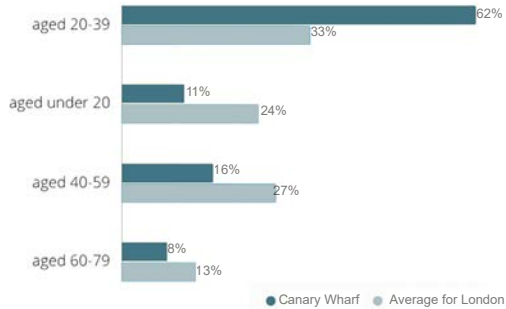
Low Recycling Rates



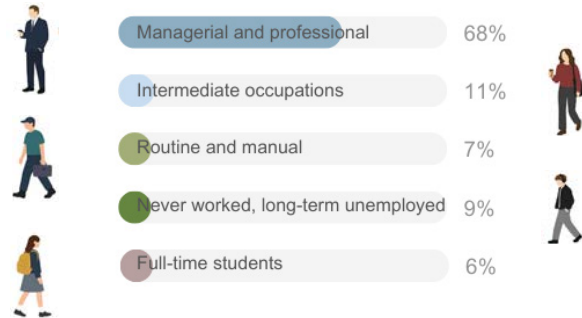
Limited Recycling Infrastructure

Crowd Analysis

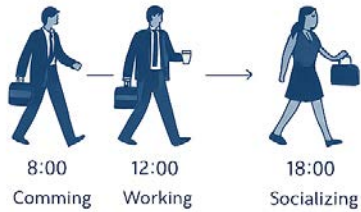
Age Distribution



Occupations



Daily Clothing Needs



Existing Context

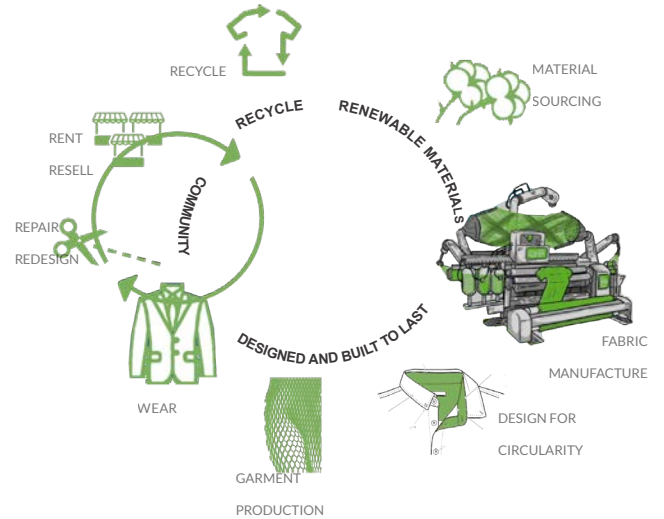


From Waste to Renewal: Two Systems, Two Futures

Linear Fashion Economy



Circular Fashion Economy



The dominant model of the fashion industry follows a linear path—raw materials are transformed into garments, consumed, and ultimately discarded. This take-make-waste system results in massive environmental degradation. In contrast, a circular fashion economy envisions a regenerative cycle—where garments are designed to last, shared, reused, and eventually recycled.

CONCEPT



CLOTHES AS MEMORY

GATHERING THROUGH GIVING

SORTING

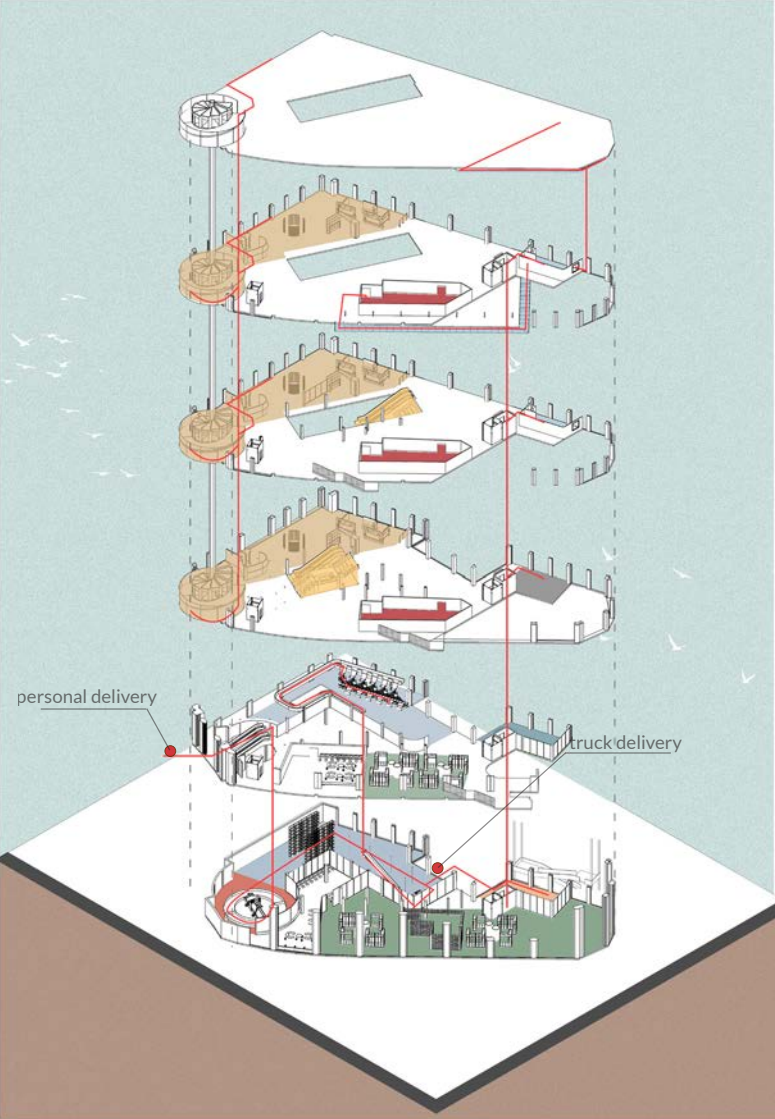
DISPLAYING

REDESIGN

RESALE

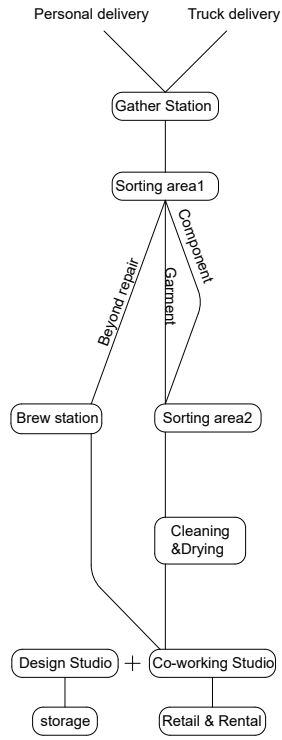
DESIGN STRATEGY

Spatializing the Acts of Sewing



- COMMUNITY EXCHANGE HUB
- GATHER STATION
- SORTING AREA 1
- SORTING AREA 2
- BREW STATION
- CLEANING&DISINFECTING
- CO-WORKING STUDIO
- DESIGN STUDIO
- RETAIL&RENTAL
- STORAGE

The journey of garments



This diagram illustrates the spatial and operational flow of second-hand garments within the redesigned 15 Westferry Circus. From arrival—via personal or truck delivery—to sorting, cleaning, repairing, and reimagining, each level of the building supports a stage in the transformation of discarded clothing, culminating in their final sale.

COMMUNITY EXCHANGE HUB + GATHER STATION



The flea market and clothing collection area are visually connected, encouraging public awareness of reuse and material cycles through spatial transparency and shared engagement.



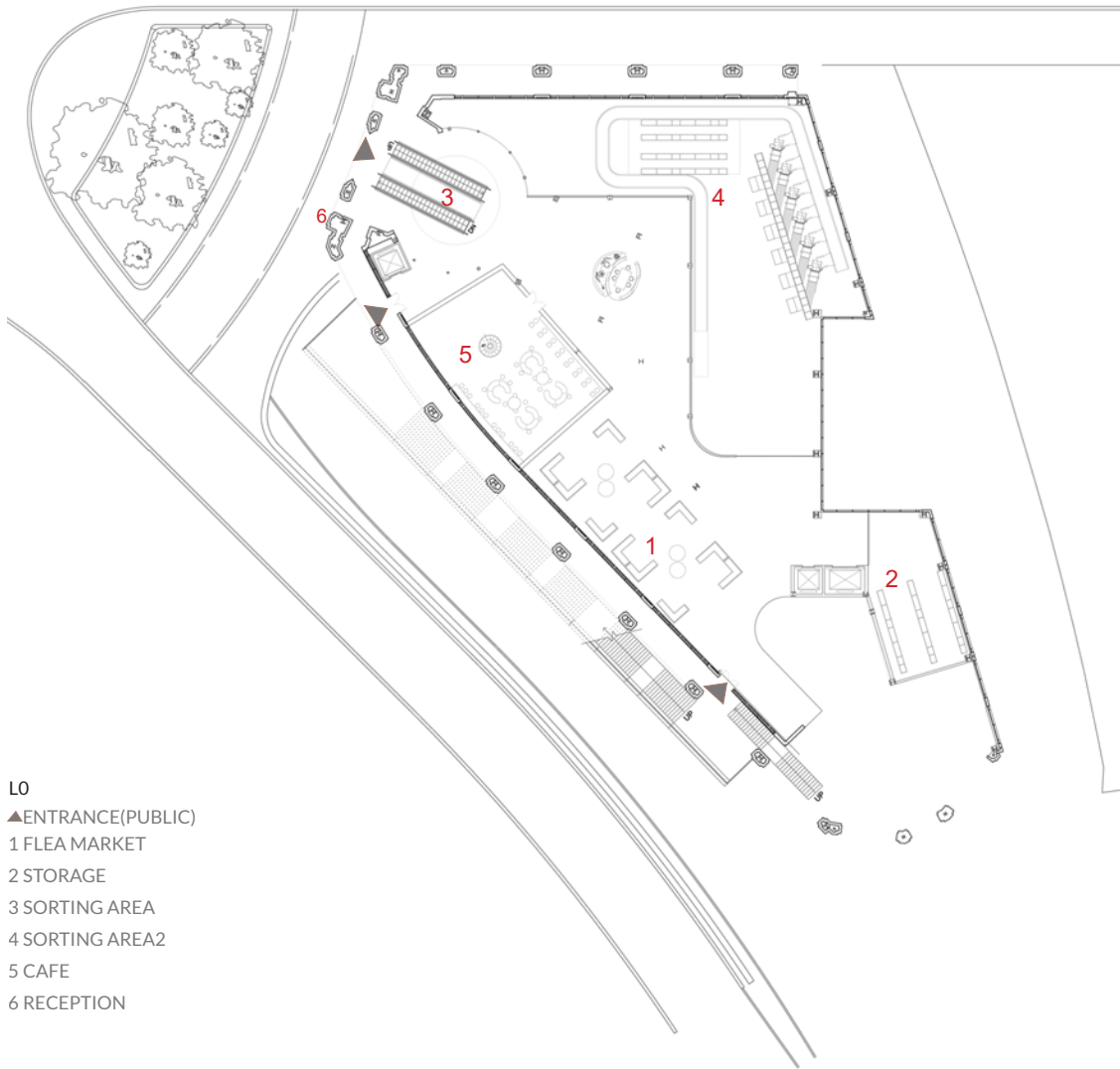
LG1

- ▲ ENTRANCE (WORKERS)
- ▲ ENTRANCE(PUBLIC)
- 1 COMMUNITY EXCHANGE HUB
- 2 GATHER STATION
- 3 SORTING AREA
- 4 SORTING AREA2
- 5 CAFE



FITTING ROOM :Patchwork style fabric





L0

▲ENTRANCE(PUBLIC)

1 FLEA MARKET

2 STORAGE

3 SORTING AREA

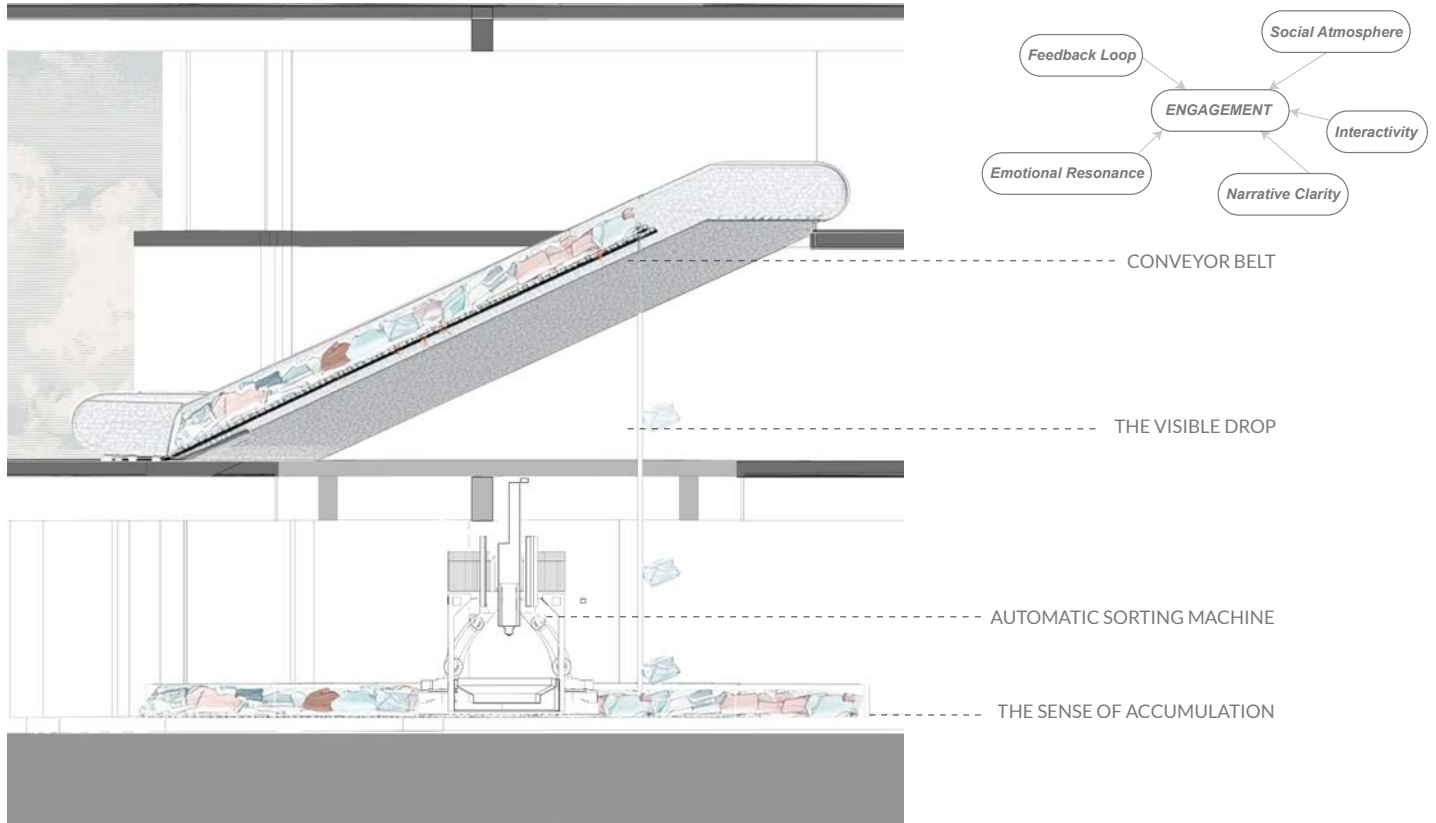
4 SORTING AREA2

5 CAFE

6 RECEPTION

GATHER STATION (PERSONAL DELIVERY)

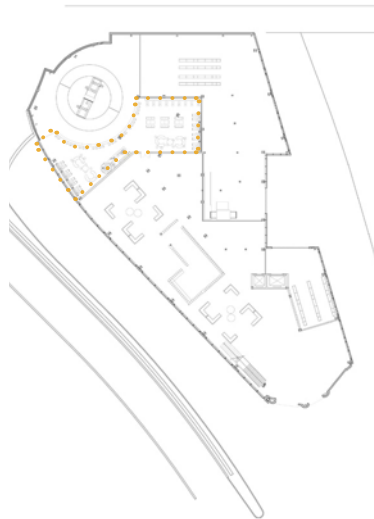
The gather station is located at the main entrance, transforming the donation activity into a shared public ritual. It increases collective participation by increasing the visibility of the donation process and prompts people to reflect on the value and quantity of discarded clothing.



GATHER STATION (PERSONAL DELIVERY)



CAFE TO SEE THE SORTING

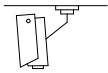


SORTING AREA 2

Fibersort® technology

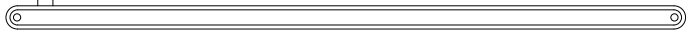
6 fiber types: wool, cotton, polyester, viscose, acrylic and nylon

NIRS detection



1 piece / second

Sort on fiber



Automatic

WOOL

COTTON

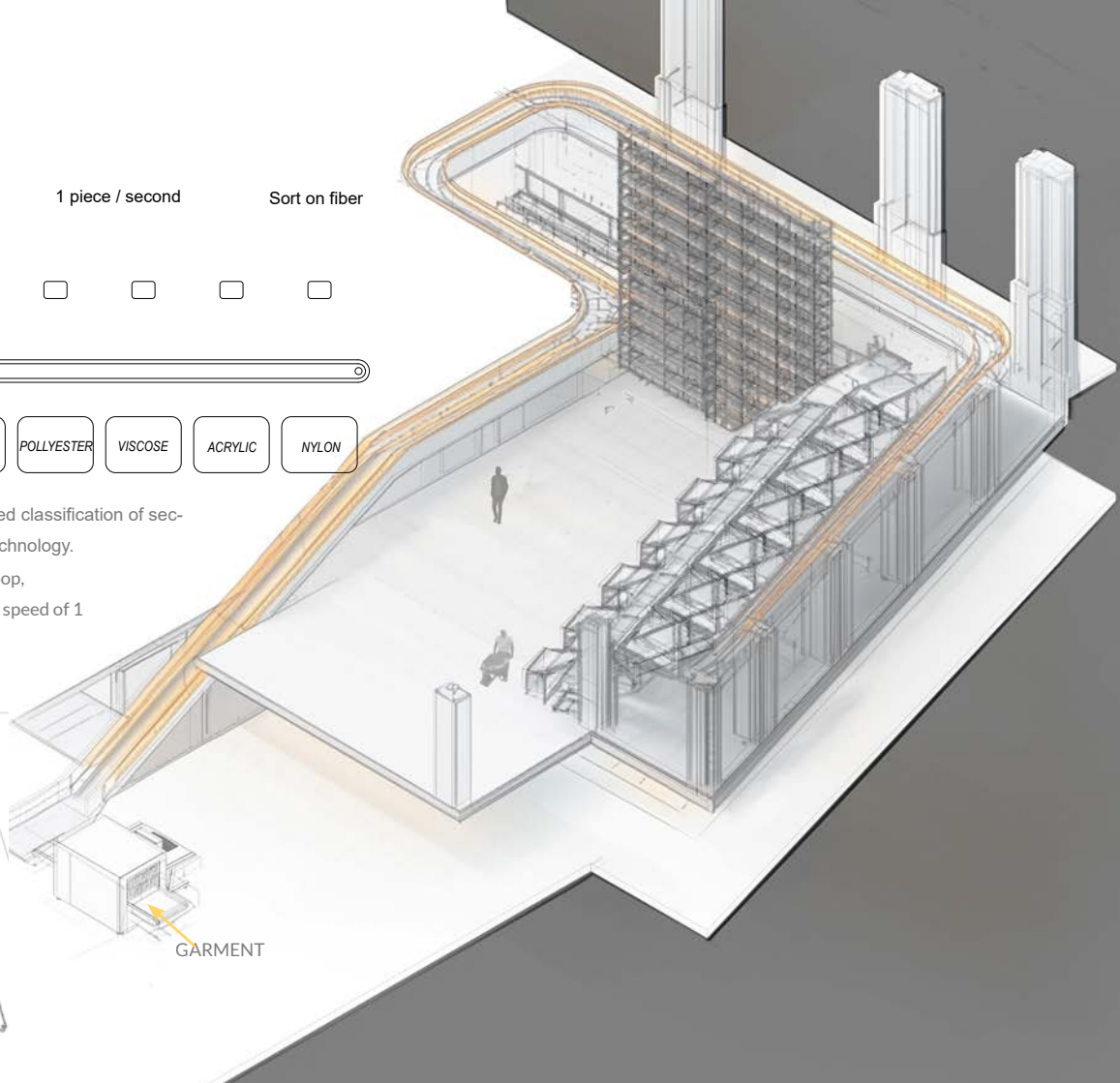
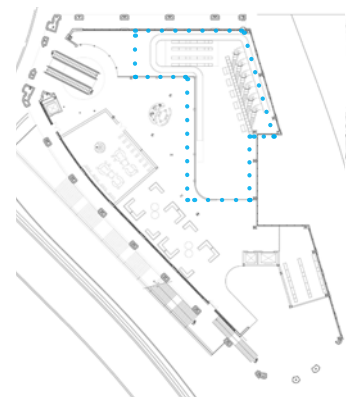
POLLYESTER

VISCOSE

ACRYLIC

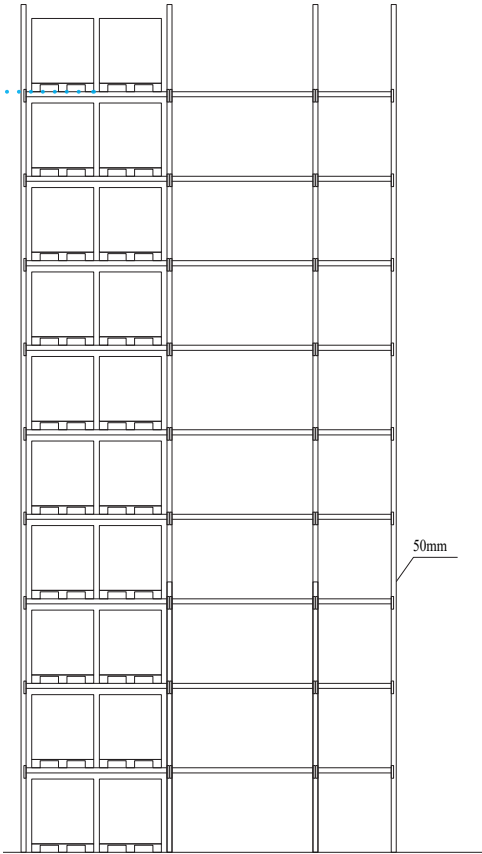
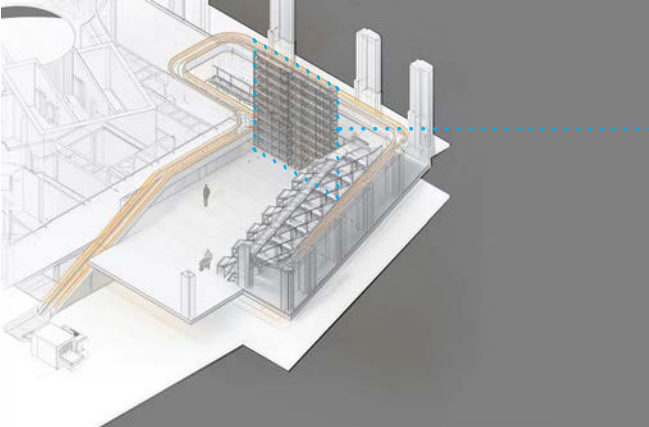
NYLON

Sorting Area 2 focuses on the fiber-based classification of second-hand garments using Fibersort® technology. Integrated with an overhead conveyor loop, garments move through the scanner at a speed of 1 piece per second, enabling high-efficiency sorting.



GARMENT

SORTING AREA2—Automated vertical storage system

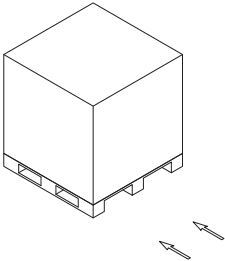


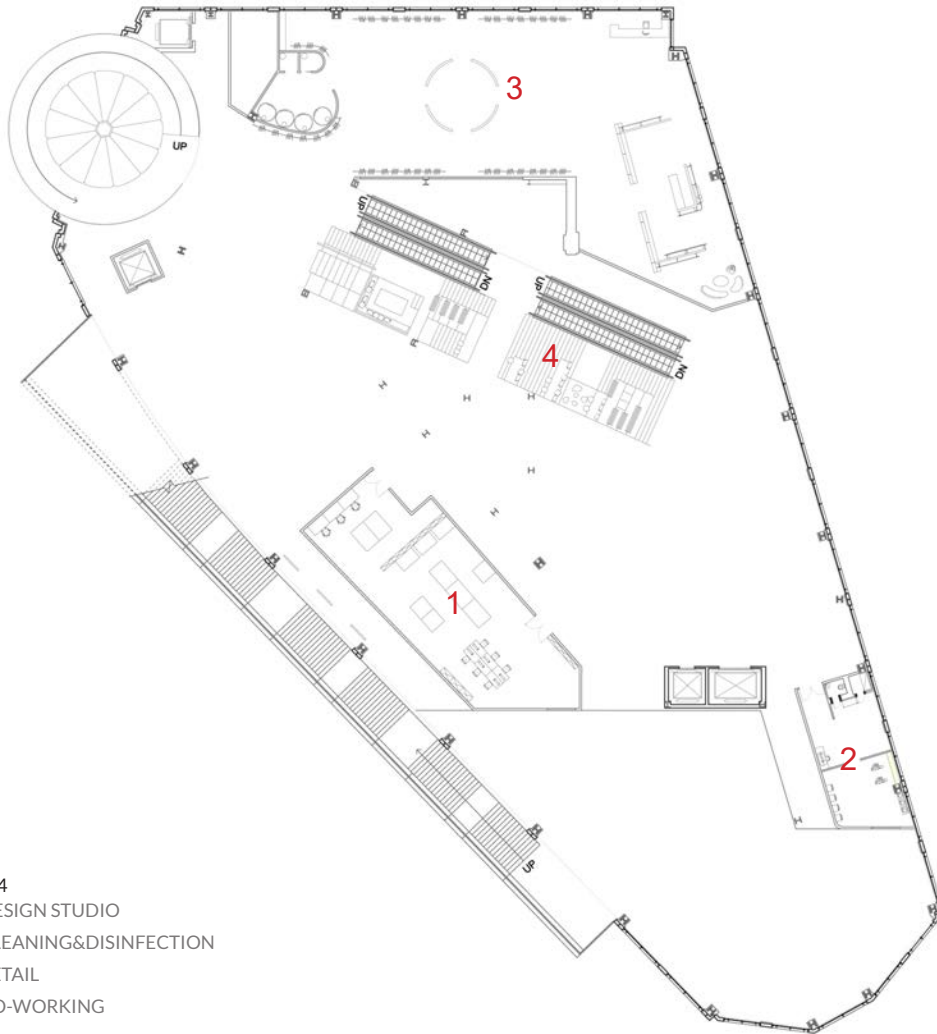
To optimize vertical space usage and enhance logistical efficiency, a high-bay vertical racking system is integrated between Basement -1 and Level 1.

Garment containers are stored and retrieved by an automated fork stacker, enabling fast circulation and high-density storage. The transparency of the rack system makes the process of accumulation and redistribution visible



Movable Fork Stacker





L3-4

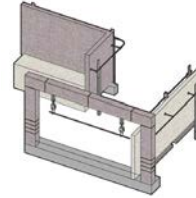
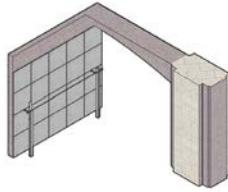
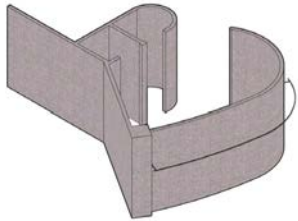
1 DESIGN STUDIO

2 CLEANING&DISINFECTION

3 RETAIL

4 CO-WORKING

Retail Space — Reassembling Fragments, Reframing Value



Threading The Building

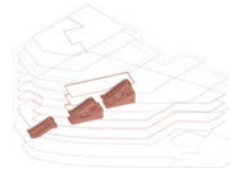
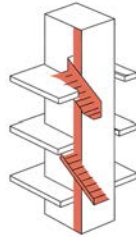
Translating Sewing Actions into Spatial Intervention

ACTION

TRANSPPOSITION

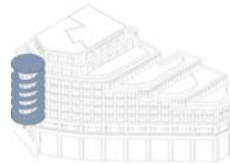
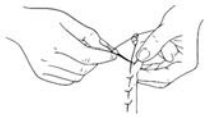
APPLICATION

CUT



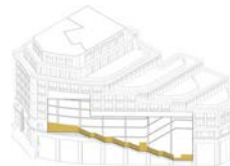
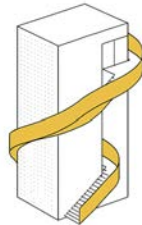
the staircase slices vertically through the structure, opening up new circulation paths and creating voids within the volume

STITCH



the stair acts as a seam, linking fragmented levels and mending spatial disjunctions

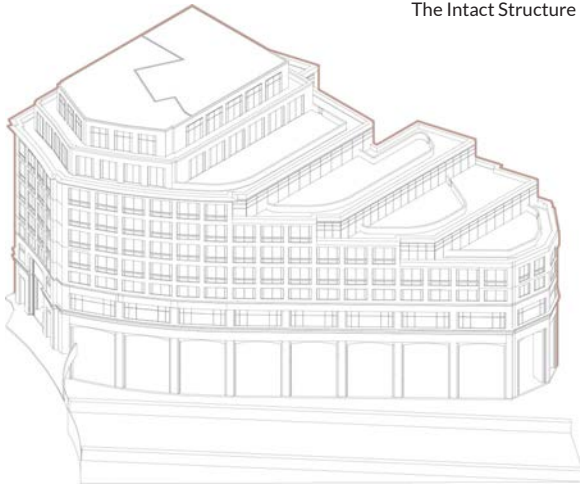
WRAP



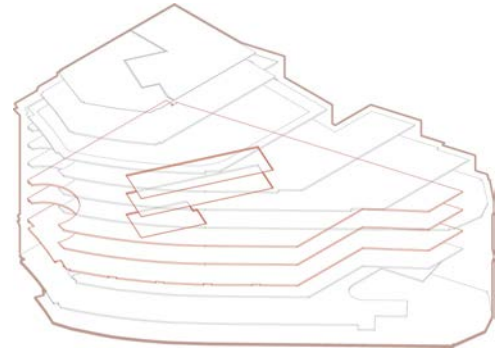
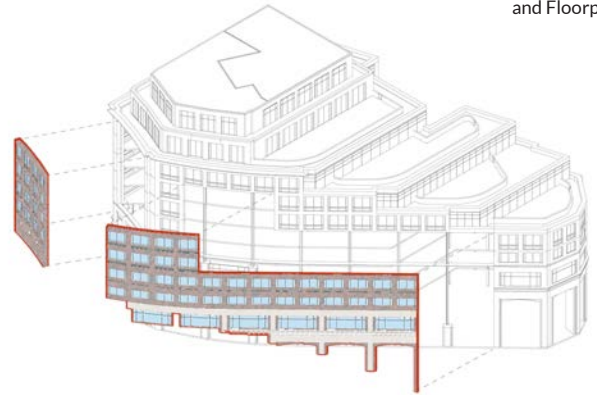
the staircase wraps around the façade, introducing a dynamic external flow and engaging the building's skin.

Architectural Surgery: Facade + Floor Cutting

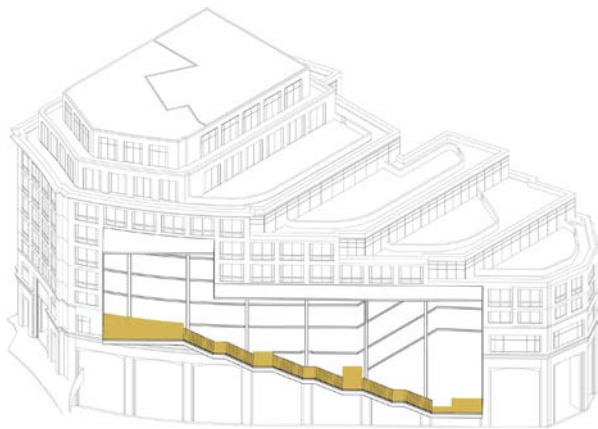
Baseline Condition:
The Intact Structure



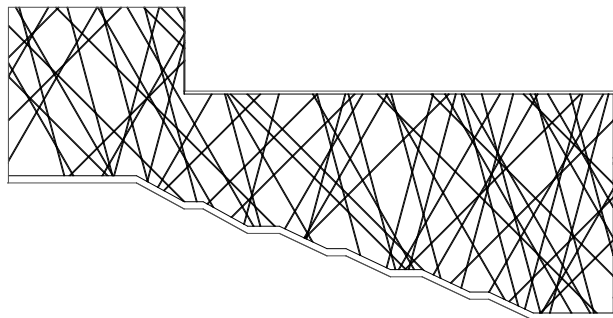
Surgical Extraction:
Cutting the Facade
and Floorplate



Spatial Wrapping: External Circulation Inserted

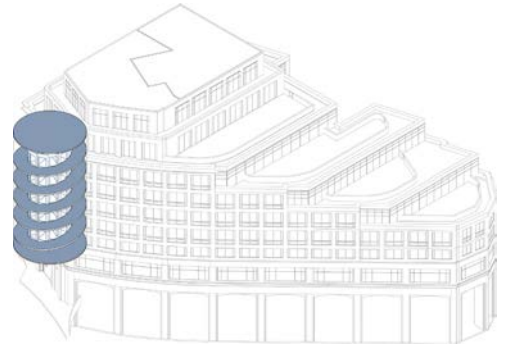


A Textile-Like Metal Skin

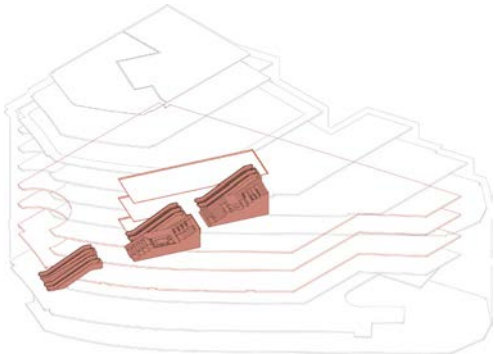


Structural Stitching: Vertical Connection Rewoven Stitch Stair and Central Garment Display Capsule

The STITCH staircase acts as a vertical seam within the building—linking fragmented levels through a continuous zigzag movement.



Spatial Incision: Vertical Access Unsealed



Inserted between Levels 1 and 3, this staircase cuts through existing slabs to act as both circulation and a functional seam. It separates the retail space (left) from the design studio (right), while offering shared platforms and seating areas for visual and spatial interaction.



Sewn Skin

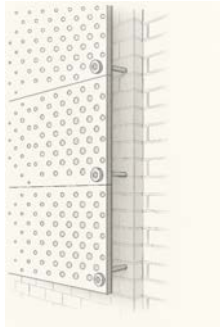
renovate the facade of 15 Westferry Circus by applying a layer of perforated metal panels from the 3rd to the top floor.

Layered Composition



3rd to 9th Floor (Cladded):

Apply a secondary skin composed of patchwork-style perforated metal panels



Lower ground to 2nd Floor (Preserved):

Retain the original stone facade to maintain the historical and pedestrian-scale continuity of the street.

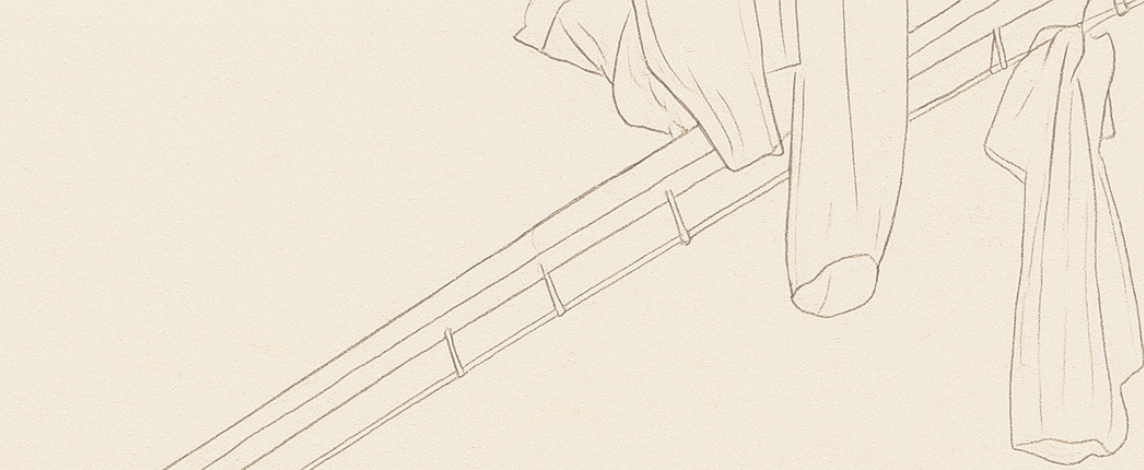
Material Gradient

the bottom gradually dissolves into the original brickwork.





THE END



The spatial narrative that stitches together vision and the body
- Reinventing fashion with reuse, repair, and upcycling.

