PROJECT:
To design a regenerative fashion incubator in Shoreditch that responds to a world of excess by reusing an existing building and transforming it into a space of material awareness and innovation. The project acts as an insertion within a dense urban context, contrasting surrounding overdevelopment by demonstrating a more responsible and adaptive approach to design.

The space makes material origins, ethical sourcing, and sustainable possibilities visible through a semi-visible lab, material exhibition, and researcher workspace, revealing the lifecycle of fashion from waste to new material. Through adaptive reuse and circular thinking, the project reframes fashion as an environmental and cultural system, shifting focus from consumption towards regeneration, transparency, and long-term sustainability.

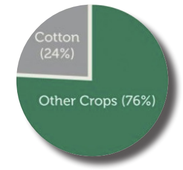
CLIENT:
The project supports emerging designers, material researchers, and bio-design start-ups developing regenerative, animal-free textiles. It prioritises transparency, education, and experimentation over commercial retail.

USERS / TARGET AUDIENCE:
The space is designed for resident researchers, fashion students and designers, industry professionals, and members of the public interested in ethical fashion and material innovation.

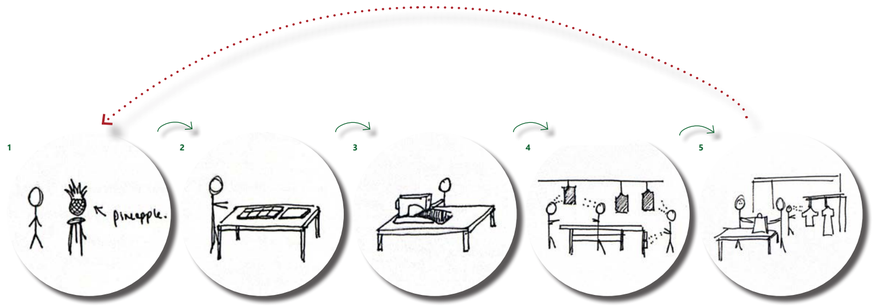
LOCATION:
Located at 233 Shoreditch High Street within the historic Norton Folgate Power Station, the site sits in a culturally rich area linked to London's textile history and contemporary creative industries, making it ideal for public engagement and experimentation.

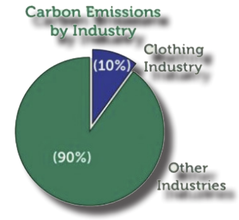
ETHICAL FASHION / MATERIAL RESEARCH:
The project exposes the fashion supply chain through visible experimentation and material testing. It focuses on regenerative, animal-free materials such as hemp, flax, algae, and mycelium, highlighting both successful and failed outcomes as part of an open learning process.

SUSTAINABILITY:
Sustainability is embedded through local sourcing, reduced transportation, and circular material strategies. The design promotes regenerative practices, transparency, and education, encouraging a shift from consumption towards awareness, experimentation, and responsible production.

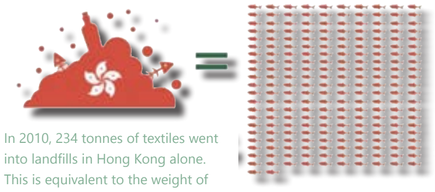


Global Insecticide use in Agriculture:
Although cotton occupies only 2.4% of the world's arable land, it accounts for approximately 25% of global insecticide use. This intensive chemical dependency leads to soil degradation, water contamination, and severe harm to surrounding ecosystems, including insects, birds, and aquatic life.





Spatial Narrative and Circular Logic
The overall organisation of the building follows a clear sequence:
Organic waste is transformed into fibre, fibre into sheet, sheet into garment, garment into exhibition, and exhibition into informed retail. Movement through the building reflects this cycle. The architecture supports the storytelling of material transformation, ensuring that sustainability is not abstract but visible, legible and experiential. The project therefore proposes that architecture can structure understanding. By embedding the full lifecycle of a textile within one adaptive reuse building, the design connects research, making and public awareness into a single continuous system.



In 2010, 234 tonnes of textiles went into landfills in Hong Kong alone. This is equivalent to the weight of 212 great white sharks.

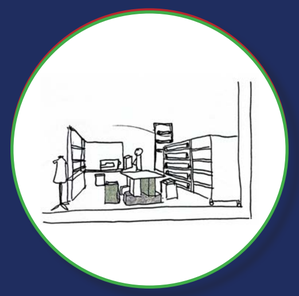
In a world full of excess, value is found in what is discarded

STORY BOARD

1. Facade: Invitation Through Visible Making:
Visitors are drawn in by glimpses of live prototyping and the movement of materials, where making is exposed to the street and the process begins before entry.

2. Entry: From Waste to Material Awareness:
Upon entering, visitors encounter the donation point alongside material samples, immediately understanding how discarded textiles are transformed into new materials.

3. Layered Spaces: Observation & Reflection:
Visitors move through a sequence of levels where interactive material exploration leads into a moment of pause, overlooking the semi-private sunken lab and reflecting on the process below.



4. Private Research Workspace: Focused Development (secondary):
Above, the researcher occupies a fully private and acoustically controlled workspace, allowing focused experimentation away from the public while remaining part of the wider system.

5. Education: Learning Through Live Prototyping:
Back on the ground floor, visitors engage with talks and demonstrations where materials are actively shaped, reinforcing knowledge through observation and discussion.

6. Retail: Material Outcome & Application:
The journey culminates in a retail space where processed materials are presented as finished products, connecting experimentation to real-world use.

7. Return: Completing the Circular Journey:
Before exiting, visitors return to the donation point, completing the loop and reinforcing the idea that materials are continuously reused rather than discarded.

This storyboard shows how the space mirrors the process of sustainable material making. The journey begins at the donation point, representing the collection of waste, then moves through stages of interaction and observation where materials are explored, processed and developed. Visitors see this clearly through the circulation of the space, from material samples to live research and prototyping, reflecting steps such as shredding, forming and testing.

The journey ends in the retail area, where materials become final products, before returning to the donation point to complete the loop. Through movement, visibility and interaction, the space makes the material process clear, allowing users to experience sustainability as a continuous and circular system.

MATERIALITY

1. FSC-certified plywood / bamboo plywood (furniture structure / workshop tables / seating blocks)
Source: FSC-certified birch plywood such as Metsä Wood or bamboo plywood suppliers.
Properties: Strong, dimensionally stable sheet material that can be CNC-cut into modular forms; exposed edges reveal natural layered grain.
Application: Structural base material for workshop tables, seating blocks and modular display units which are later wrapped with experimental biomaterials developed by researchers.
Sustainability: FSC-certified timber from responsibly managed forests stores carbon during its lifecycle and can be refinished or repaired to extend lifespan.

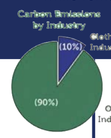
2. Bio-material textile composites (furniture wrapping / acoustic panels / experimental surfaces)
Source: Materials produced within the Biomaterial Lab research programme, using organic waste such as fruit skins, plant fibres or agricultural by-products.
Properties: Flexible bio-textiles that can be moulded, dried or layered to create durable surfaces; unique textures and natural colour variations.
Application: Used to wrap furniture surfaces, workshop tables and seating blocks, as well as acoustic wall panels for soundproof workspaces. These materials showcase the research outcomes of the laboratory.
Sustainability: Produced from organic waste streams, reducing landfill and encouraging circular material experimentation. Many biomaterials are biodegradable or compostable at end-of-life.

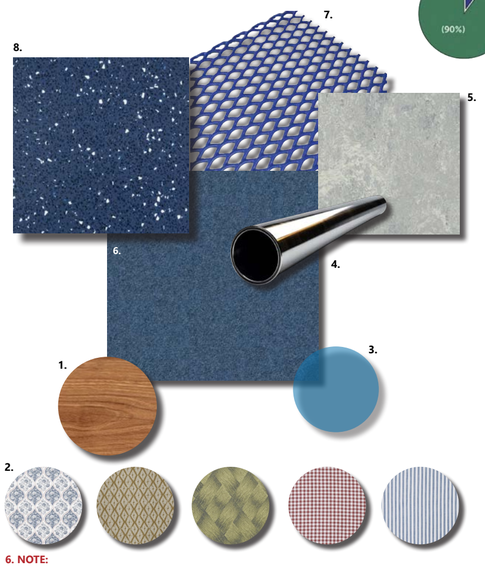
3. Low-iron laminated glass (protruding laboratory façade / viewing panels)
Source: Architectural structural glass manufacturer such as Vitro Architectural Glass
Properties: High-clarity low-iron laminated glass with low-E coating; strong, impact resistant and thermally efficient; allows maximum daylight and clear visual transparency.
Application: Used for the protruding laboratory façade and observation panels that allow visitors and passers-by to view the research and making processes inside the building.
Sustainability: Glass contains recycled cullet and can be fully recycled. Low-E coatings improve thermal performance, reducing heating and cooling demands across the building's lifespan.

4. Recycled steel tube (circulation frames / display structures / stair handrails)
Source: Structural steel sections such as Tata Steel Celsius® or recycled steel suppliers.
Properties: High structural strength with slender profiles; durable and easily fabricated into frames or loops; powder-coated for long-term protection.
Application: Used for display frames, garment rails, stair handrails and structural elements that support the modular exhibition systems.
Sustainability: Steel is infinitely recyclable. Using recycled-content steel reduces embodied carbon and bolted connections allow future disassembly and reuse.

5. Bio-based linoleum flooring (ground floor circulation areas / exhibition zones)
Source: Forbo Marmoleum bio-based flooring collections.
Properties: Durable natural flooring made from linseed oil, wood flour, cork dust and jute backing; warm to walk on and resistant to wear.
Application: Used across the ground-floor exhibition and circulation areas where visitors interact with materials and displays.
Sustainability: Marmoleum is made from renewable natural ingredients and is marketed as climate-positive cradle-to-gate. It is biodegradable and available with Environmental Product Declarations (EPDs).

6. Recycled textile acoustic panels (soundproof research rooms / shredding workspace)
Source: Recycled fibre acoustic manufacturers such as Autex Acoustics, alongside recycled textile suppliers such as Camira Fabrics.
Properties: Dense fibre panels with strong sound absorption; soft texture and lightweight structure; available in natural tones or recycled textile finishes. Panels can be cut into different shapes or integrated into wall systems.
Application: Used within soundproof workspaces and research rooms to reduce noise from material processing equipment such as shredders and textile machinery.
Sustainability: Manufactured from recycled fibres such as PET plastic bottles or textile waste, diverting material from landfill while improving acoustic performance.



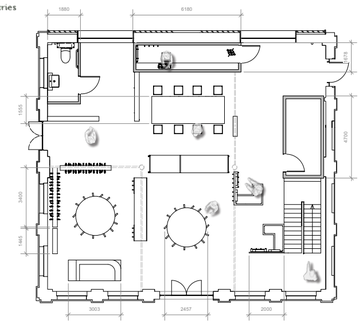


6. NOTE:
Some acoustic panels within the space may also incorporate bio-textiles developed through the lab's own research, exploring how organic waste materials can perform as acoustic surfaces. Alongside these experimental materials, products fro m companies already using recycled waste, such as Autex and Camira, demonstrate how industry is also moving toward circular material solutions. Integrating these systems within the space helps highlight wider innovation and encourages collaboration with other sustainable material producers.

7. Expanded steel mesh / perforated metal flooring (first-floor viewing floor / balustrades)
Source: Architectural metal mesh manufacturers such as Amron Architectural (UK)
Properties: Strong yet lightweight steel mesh with high load capacity; allows light, airflow and partial visual transparency between floors.
Application: Used as a perforated viewing floor in the first-floor research area, allowing visitors below to see activity above and reinforcing the concept of transparency within the building. Also used for internal guardrails and screening elements.
Sustainability: Manufactured using recycled steel content and fully recyclable at end-of-life. Expanded mesh is produced through slit-and-stretch methods which minimise production waste.

8. Recycled plastic composite surfaces (workshop counters / repair benches / display worktops)
Source: Recycled surface manufacturers such as Durat.
Properties: Dense composite material made from post-consumer plastic waste; highly durable and resistant to wear; often features speckled textures from recycled fragments.
Application: Used for workshop surfaces, repair benches and key display countertops where durable, wipeable surfaces are required.
Sustainability: High recycled plastic content keeps waste within a circular material loop and many manufacturers offer take-back or recycling schemes at end-of-life.
NOTE:
The material palette prioritises recycled metals, certified timber, bio-based composites and experimental biomaterials developed within the laboratory. Together these materials support a circular approach where components can be repaired, replaced or reintroduced into new material cycles rather than discarded.

PLANS AND SECTIONS

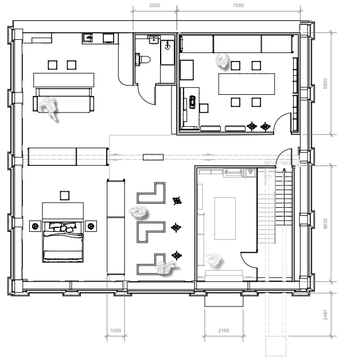


GROUND FLOOR

The ground floor is designed as an open, interactive environment where visitors move through a sequence of learning, exploration and reflection. The journey begins at the donation point, introducing the transformation of waste into new materials. Users engage with interactive displays, seating areas and workshop spaces, encouraging touch, observation and understanding of biomaterials.

A palette of recycled and sustainable materials, including steel, plywood and composite surfaces, reinforces transparency in production, while experimental bio-textiles are integrated into furniture and displays. Modular elements allow the space to adapt for different activities, reflecting the evolving nature of research and supporting a flexible, educational experience.

RENDERED GROUND FLOOR

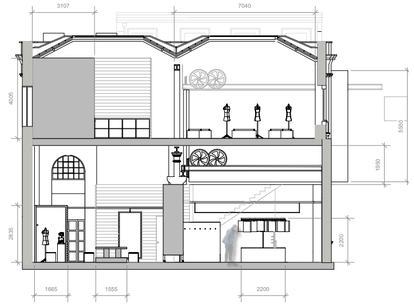


FIRST FLOOR

The first floor is designed as a quieter, observational environment where visitors gain insight into the research process while maintaining a clear boundary from the resident workspace. A perforated mesh floor marks the transition between public and private zones, acting as both a threshold and a viewing platform into the sunken lab below. Through glazing and level changes, visitors can observe material experimentation and prototype development, turning the research process into a subtle performance.

Seating areas along this edge allow for reflection and engagement with material samples and garments, while a palette of recycled and bio-based materials reinforces the project's sustainable approach. The space balances transparency and privacy, creating an experience centred on observation, learning and respect for the working environment.

RENDERED FIRST FLOOR



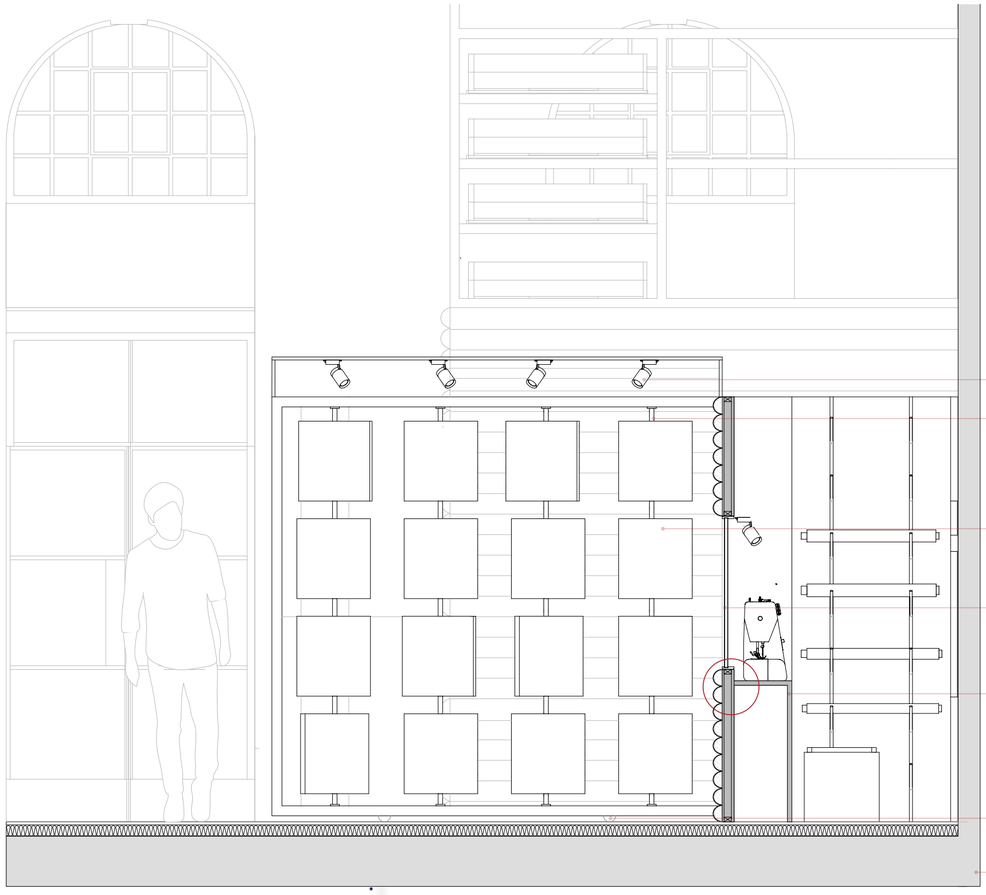
SECTION AA

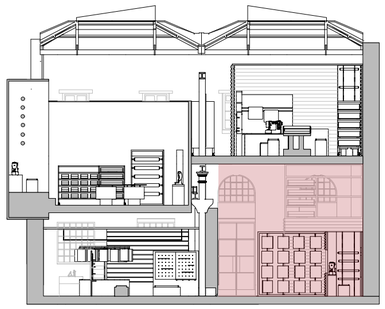
The section illustrates the building as a layered environment of learning, research and observation, where the transformation of waste into textiles is made visible. The ground floor operates as an open public space, while upper levels introduce quieter areas for observation and research. A sunken lab connects these levels, allowing users to view experimentation from multiple perspectives.

Glass partitions, a protruding façade and perforated mesh flooring reinforce transparency while clearly defining boundaries between public and private zones. A palette of recycled and bio-based materials is integrated throughout, supporting the project's sustainable and circular design approach.

RENDERED SECTION AA

1:20 SECTION CC DETAIL





Section BB

Adjustable LED track lighting system,
integrated lighting to textile display wall, recycled aluminium track
Lighting Directs

12–16mm Recycled steel rod system,
vertical support for rotating textile display panels,
powder coated RAL (5008) Grey Blue, Tata Steel

24mm FSC-certified birch plywood core,
internal structural support within textile display panel system,
Metsä Wood

24mm double glazed sealed unit,
transparent screen between public display and semi-private prototyping area,
Vitro Architectural Glass

35mm Recycled solid surface worktop,
prototyping / sewing workstation surface,
R5003-03 Sapphire Blue, Durat recycled composite

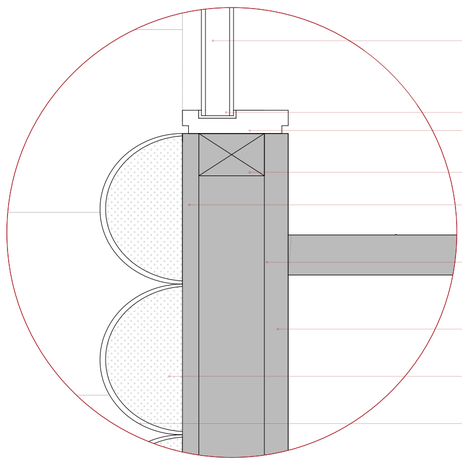
50–75mm Lockable castor wheels,
concealed within base of modular textile display system for mobility and reconfiguration,
Recycled nylon wheel with steel fixing bracket

Marmoleum Ohmex 73146 serene grey from Forbo,
over 12mm plywood substrate,
over 12mm JCW Impactalay Acoustic Floor Insulation,
over exisitng concrete floor

Material Display & Prototyping Interface:

This detail shows the relationship between the interactive material display and the semi-private prototyping space, where learning and making happen at the same time. Visitors engage directly with the textile sample wall by touching and rotating the materials, allowing them to understand how bio-based and recycled textiles can be applied in real life. Behind this, the prototyping area is partially visible through a clear glass partition, allowing users to observe the garment-making process as it happens, turning the researcher into part of the experience. The material palette supports both interaction and performance, combining a plywood structural core with layered textile finishes, recycled steel supports and durable work surfaces. Acoustic panels made from upholstery foam and finished in Camira Blazer Lite fabric help absorb sound from the machinery while also using recycled fibres, reinforcing the project's sustainable approach. Together, this detail demonstrates how materials, user experience and education are integrated, creating a space where experimentation is both functional and publicly visible.

RENDERED SECTION BB



24mm double glazed sealed unit,
transparent screen between public display and semi-private prototyping area,
Vitro Architectural Glass

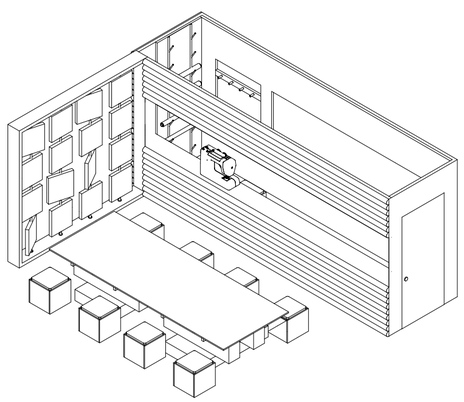
Sealant
18mm Solid surface (Corian),
with 6mm shadow gap
55 x 32mm Timber joist framework
12mm FSC-certified plywood panel

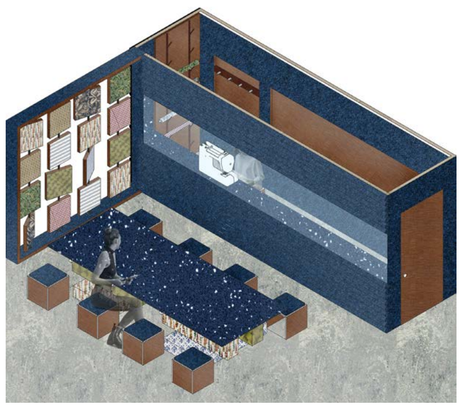
18mm WBP plywood panel,
Moisture-resistant structural plywood (WBP grade)

1mm Stainless steel plate finish,
Protective edge / durable surface lining
60mm Upholstery foam (ribbed profile),
acoustic absorption layer
Camira Blazer Lite upholstery fabric,
acoustically transparent fabric finish for sound absorption panels

This junction reflects the wider project strategy, where making is not hidden but carefully revealed through layers of material and transparency

1:5 Detailing
Section BB - Layered Materials & Transparency





1:20 Isonometric_
Section CC - Photoshop Render

Material Junction: Transparency, Acoustics & Structure:

This 1:5 detail explores the junction between the interactive sample display and the semi-private prototyping area, where materiality directly supports both user experience and performance. A low-iron glazed panel creates a clear visual connection between public and research spaces, allowing live prototyping to remain visible while maintaining separation.

The layered construction combines FSC-certified plywood, timber framing and Corian work surfaces to create a durable and adaptable system, while integrated recycled textile acoustic panels reduce noise from machinery within the workspace.

The material palette is layered to support both interaction and research, combining modular bio-textile displays with durable surfaces for prototyping and education. Soft elements such as recycled textile acoustic panels enhance comfort and tactility, while harder materials like recycled composites and concrete ensure longevity and functionality. Transparent partitions maintain visual connections between users and researchers, reinforcing openness and the project's commitment to sustainable, adaptable design.

1.

Exterior – Import & Waste Collection

The building's facade integrates a visible waste import system, where sustainable transport and direct material transfer make circularity part of the urban streetscape.

BRAND ALIGNMENT - DESIGN INTENT

1. Circular Material Lifecycle:

The project is grounded in sustainable and animal-free design, where waste materials are collected, reprocessed and reintroduced into use rather than discarded. This reduces reliance on new resources while avoiding harmful production methods. The space itself reflects this approach by working within the existing building, retaining brickwork and structural elements to minimise environmental impact. The layout follows a circular journey, with the donation point marking both the beginning and end, allowing users to understand sustainability as a continuous cycle.

2. Transparency & Visible Making:

Production is made visible to reveal how materials are developed through low-impact and ethical processes. Through glazing, open thresholds and a protruding facade, making is exposed both internally and to the street, encouraging curiosity and engagement. This openness reinforces the idea that sustainable design should not be hidden, allowing users to witness material transformation as it happens.

3. User Experience as a Spatial Journey:

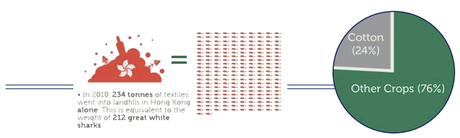
The space is designed as a spacious and open sequence of moments that allows users to move freely while discovering different stages of the process. Existing structural elements are preserved and worked around, creating a balance between old and new. Layered levels, including the sunken lab and perforated floor, create visual connections that guide users through the building while maintaining a sense of openness and exploration.

4. Materiality as Interaction:

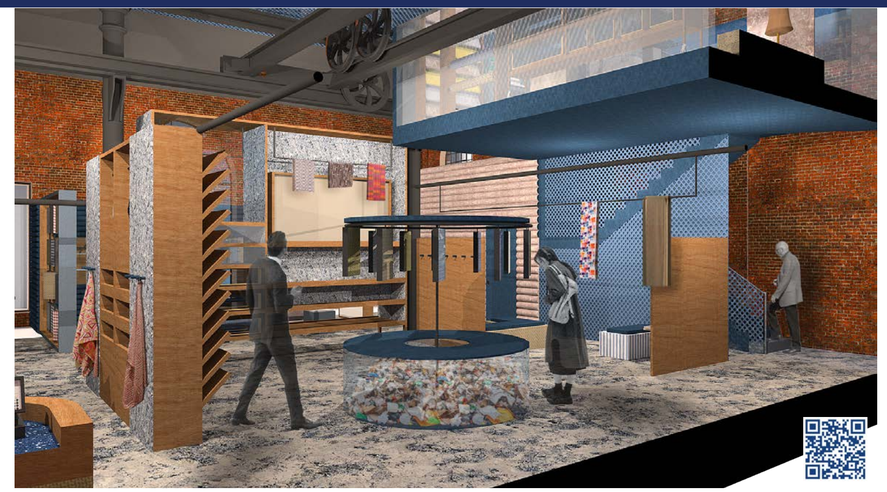
Materials are introduced as part of an insert within the existing structure, allowing new elements to sit lightly within the space without unnecessary alteration. Recycled, bio-based and low-impact materials are used across surfaces, furniture and acoustic elements, encouraging users to touch and engage with them directly. This approach allows sustainability to be experienced physically, while maintaining a clear distinction between the original building and the new intervention.

5. Adaptability & Evolving Research Space:

The interior is designed as a flexible system where most elements are movable, modular and easily reconfigured. This reflects the changing needs of the designer-in-residence and the evolving nature of material research. Rather than being fixed, the space acts as an adaptable insertion that can shift over time, supporting different layouts, exhibitions and uses while extending the life of the building with minimal intervention.



2.



Ground Floor – Central Circular Donation Space

At the heart of the space, collected waste is made visible and central, transforming disposal into an active, transparent moment of participation and awareness.

3.

Ground Floor – Workshop / Material Engagement Table

Hands-on making and material experimentation encourage users to actively engage in circular processes, turning waste into tangible outcomes.

4.

Ground Floor – Retail / Display & Counter Area

Reimagined materials are reintroduced into circulation through display and purchase, completing the loop between waste, production, and use.

EXPLODED ISONOMETRIC

Existing Structure (Retained Brick & Beams):
Original fabric is preserved and celebrated, reducing material waste and grounding the project in adaptive reuse. Acts as a contrast to new insertions.

Modular Furniture System:
Moveable elements allow the space to adapt to changing research, workshops and exhibitions. Reflects the evolving nature of the designer-in-residence programme.

Material Storage & Archive:
Houses evolving material samples and research outcomes. Organised shelving system allows visibility while supporting ongoing experimentation.

Resident Researcher Workspace:
Private and acoustically controlled area for focused work. Separated from public zones to balance openness with productivity and comfort.

Perforated Mesh Viewing Platform:
Marks the threshold between public and private zones. Allows visual connection to the lab below while maintaining spatial separation and respect for the researcher.

Educational Workshop Table:
Central gathering space for talks, demonstrations and collaborative learning. Corian worktop provides a durable, cleanable surface for live prototyping and experimentation.

Interactive Material Display Wall:
Users engage directly with material samples through touch and exploration, encouraging curiosity and understanding of bio-based and recycled materials. Modular plywood system allows continuous updates.

Donation & Waste Collection Point:
Entry moment where users actively contribute to the material cycle. Waste is deposited below, while samples above reveal its future transformation, immediately introducing circularity.

Sunken Research Lab (Glass Enclosure):
Semi-private workspace where material experimentation becomes visible. Glazing allows users to observe the process without disruption, turning research into performance.

Retail & Final Product Display:
Represents the final stage of the material journey. Products are displayed above raw samples, reinforcing the transformation from waste to finished outcome.

Circular Seating & Reflection Area:
Positioned between key zones, this space encourages pause and reflection. Upholstered acoustic surfaces soften the environment while reinforcing comfort and focus.

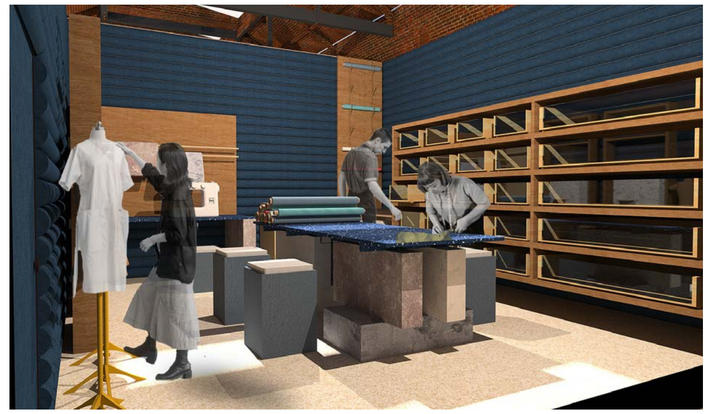
Waste Import System (Facade Insertion):
Visible delivery mechanism bringing materials into the building. Creates curiosity from the street while supporting sustainable transport and reducing manual handling.

Glass Façade / Viewing Threshold:
Blurs the boundary between inside and outside. Passers-by can observe live making, turning the building into an active and engaging display of sustainability.

Circulation & Layered Journey
Movement through the space mirrors the material lifecycle, from waste, to experimentation, to final product, creating a continuous and educational user experience.

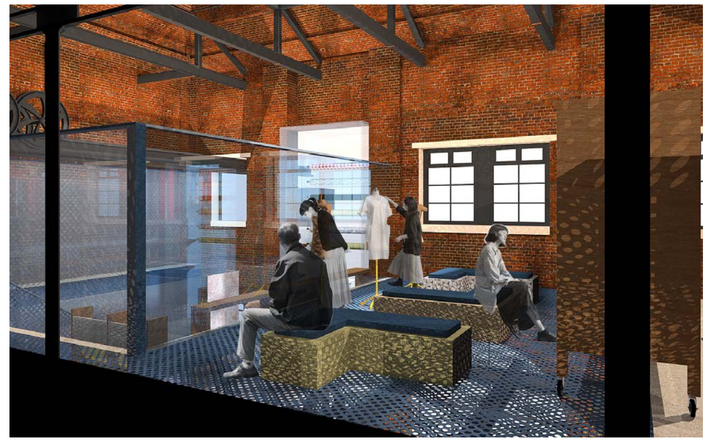
Sectional Perspective – Full Spatial Relationship
Layered floor levels and visual connections reveal the continuous journey of materials, allowing users to follow transformation across space and time.

5.

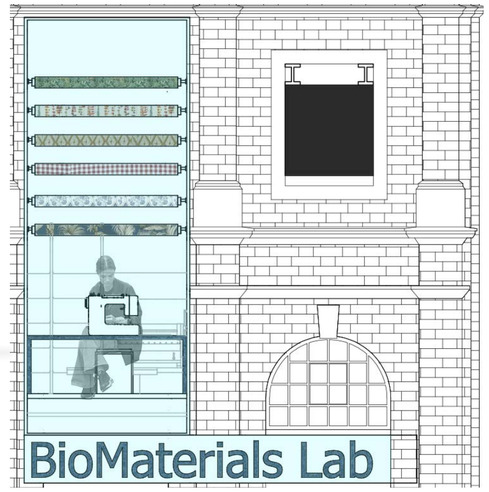


First Floor – Private Research Workspace
As part of the building's layered narrative, this enclosed workspace offers a moment of retreat, balancing openness with the need for focused, uninterrupted making.

6.



First Floor – Viewing / Seating Observation Area
Elevated seating allows visitors to observe the research below, creating a moment of pause where transparency fosters understanding and curiosity.



The facade presents the building as a public research space, making material experimentation visible to the street. The existing brick is retained to preserve character and support a sustainable adaptive reuse approach, while a protruding glass element introduces transparency and reveals interior activity. This glazed volume showcases live making and displayed biomaterial samples, turning the façade into an engaging, educational interface.