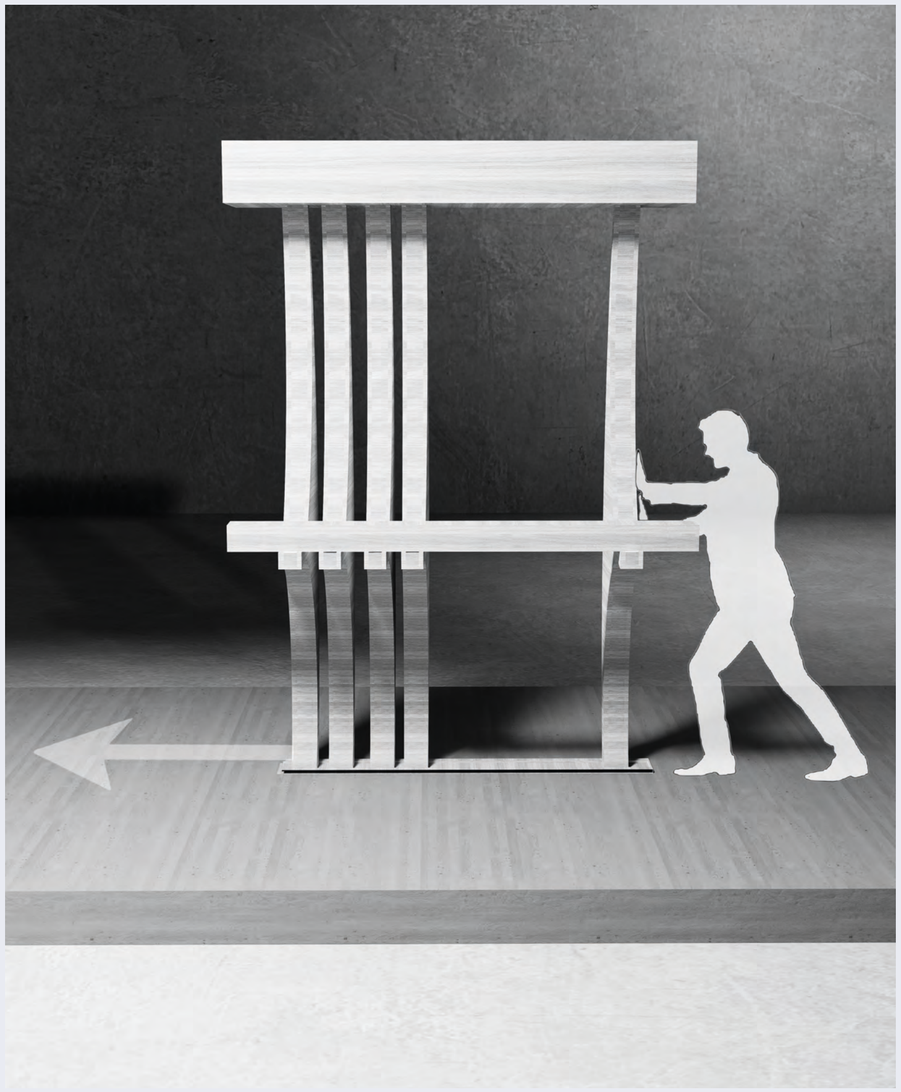
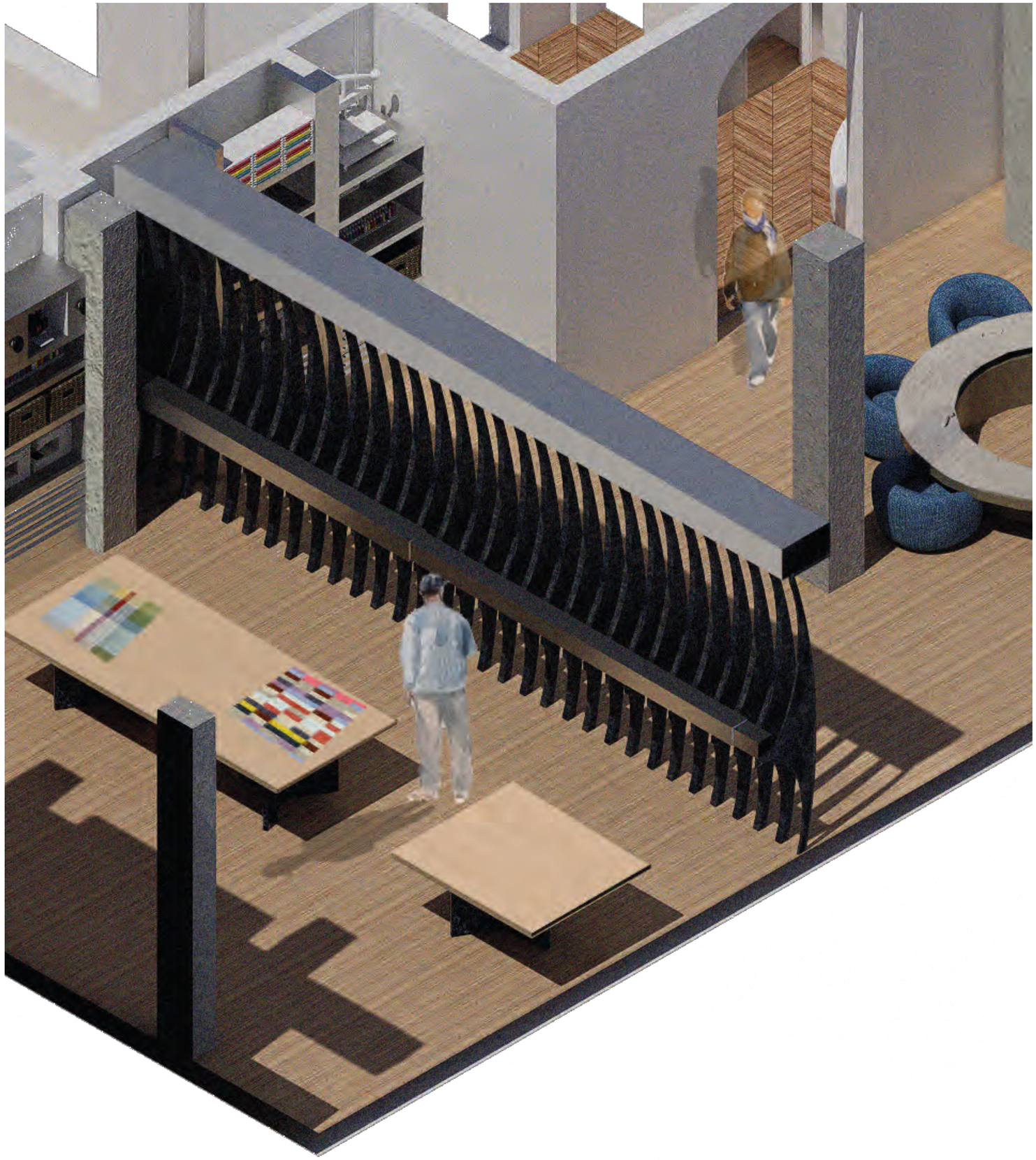
THE MAKERS YARD

Adaptive Material Reuse Hub

The Re-invention Material Hub explores how interiors can operate as adaptable, recoverable systems through material reuse, reversible construction and transactional spatial strategies. Rather than treating demolition as waste, the project reframe down takings as a process of material recovery, catalogue and reassemble, allowing existing building components to be transformed into new spatial interventions. Through experimental axonometric drawing method, circular material work flows and adaptable architectural insertion, the proposal challenges conventional fixed interior constructions. The project combines research-led design with speculative spatial strategies to demonstrate how interior architecture can support long-term adaptability, community engagement and circular economy principles through evolving material and spatial systems



Front view of the wall partition



Rendered Isometric showing the yard lab, emphasis on the rib-like wall partition

DEMOLITION

Removal Of Elements.

The Demolition strategy focuses on material recovery through the careful down-taking of existing building elements within the makers yard. Rather than treating removal as waste, partitions, joinery and timber elements components are selectively dismantled, catalogues and re purposed for new interior interventions. This process establishes a circular framework where existing materials become resources for adaptable and reversible spatial systems, reducing unnecessary waste while extending the life cycle of the buildings fabric.

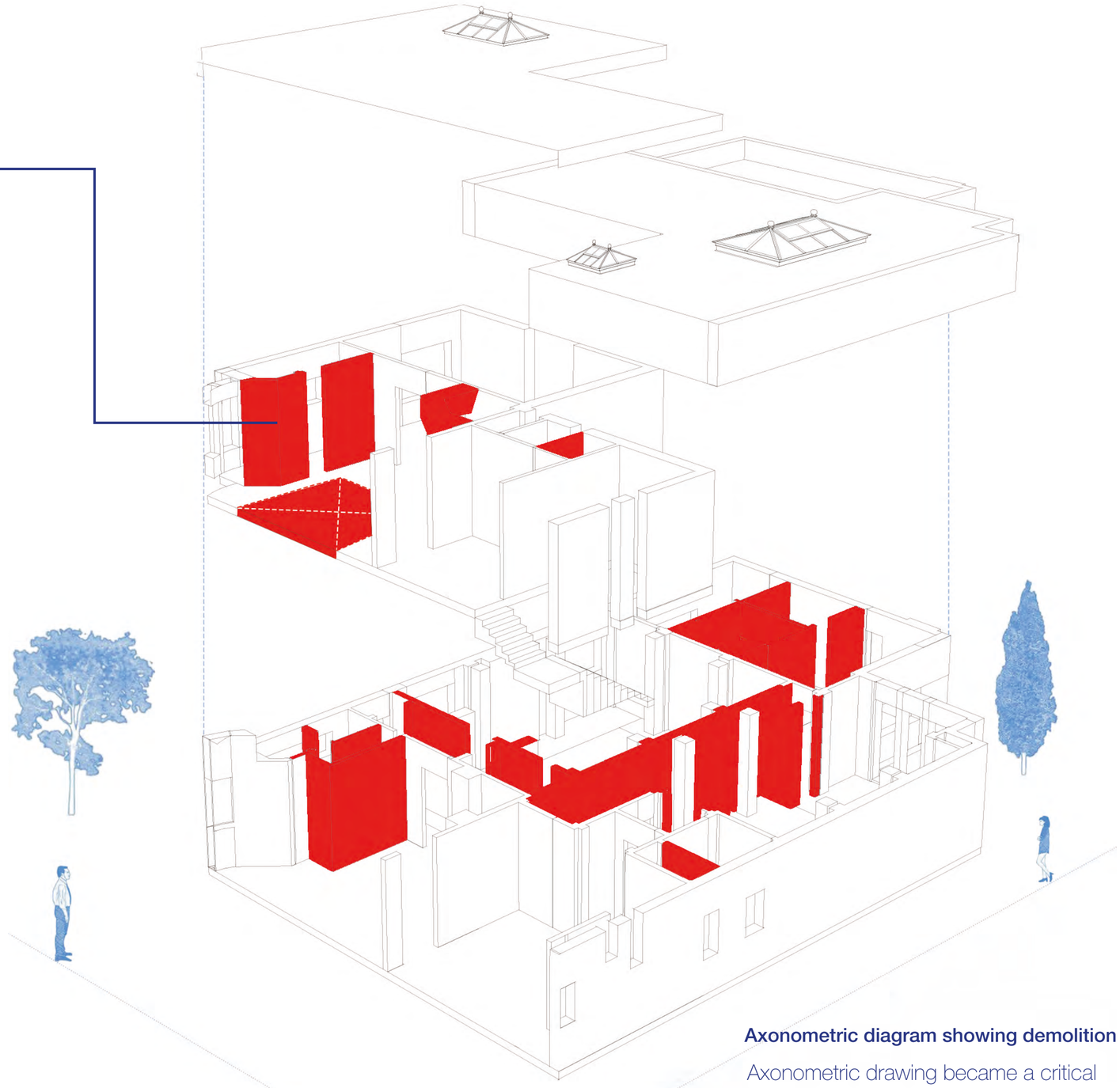
Mind Map

This diagram maps the flow of material recovered during the demolition of the existing building fabric and their integration into the new wall partition system. Elements are selectively salvaged and reassembled to construct new interior components. By tracing the origin of these materials, the diagram illustrates how the design strategy prioritises resource efficienty and reduces construction waste.

- #1 Timber Studs
  - Used as the new stud frame of the partition
  - Timber framing from removed partitions
  - Recut timber members
- #2 Timber Boards
  - Used as wall cladding or panel surfaces
  - Recovered from floorboards, doors ect.
  - Timber cladding boards
- #3 Reclaimed Brick
  - Reused for base plinths or structural infill
  - Recovered from internal masonry walls
  - Lime mortor residues
  - Brick offcuts
- #4 Recovered Fixings
  - Reused as reversible fixing systems
  - Steel brackets
  - metal connectors
  - Srews and bolts
- #5 Reclaimed insulation
  - Reused for acoustic insulation within the partition
  - Mineral wool from existing cavity insulation

Material Cycle within the Makers Yard

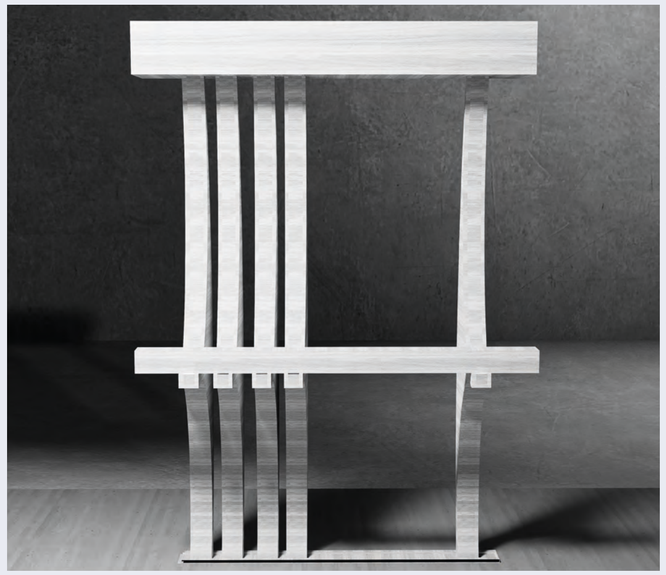
The material cycle visualises a closed-loop system of recovery, processing and reintegration. Informed by circular economy research, the framework demonstrates how materials can remain in continuous use through successive cycles of adaptation. Rather than entering waste streams, recovered components are transformed into future architectural interventions, reducing environmental impact while extending the lifecycle of existing resources



Axonometric diagram showing demolition

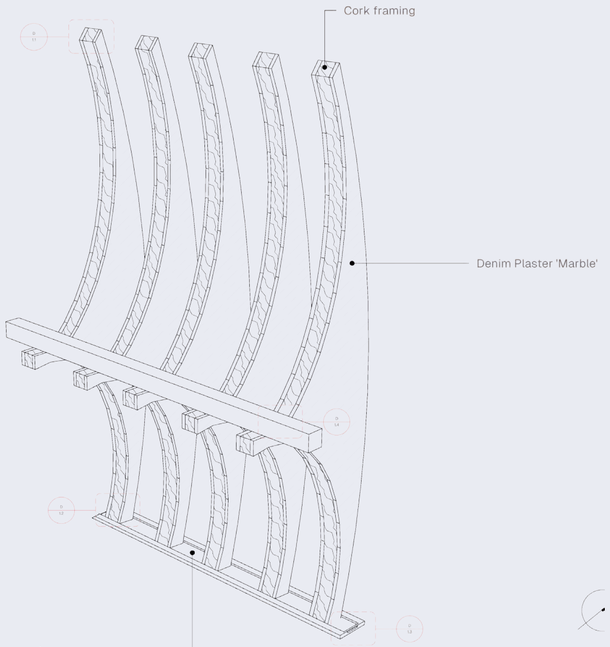
Axonometric drawing became a critical design tool, enabling material flows, dismantling sequences and a future reuse scenarios to be visualised simultaneously. These drawings moved beyond representation and became instruments for testing circular systems, allowing spatial decisions to emerge directly from material availability and recovery systems.

ASSEMBLY

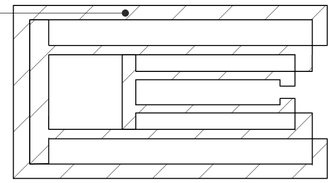


Rib-like wall partition from disassembly

The rib partition was developed through iterative testing of reclaimed materials and adaptable, the intervention functions as a flexible spatial device capable of responding to changing programme requirements. Its construction demonstrates how recovered materials can be transformed into performance architectural elements without compromising adaptability or future reuse.

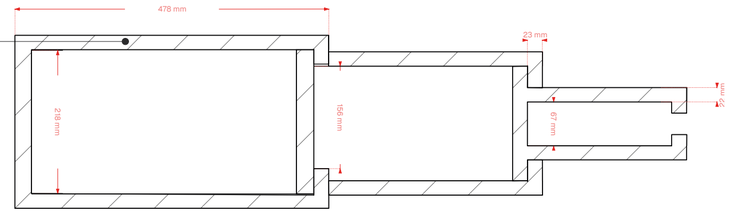


Closed Position
In the closed position, the aluminium telescopic sections fully retract into one another, forming a compact, minimal profile. The nested profiles align precisely within the outer casing, concealing the internal mechanism and maintaining a clean edge condition. This compressed state allows the partition system to remain unobstructive, supporting clear circulation and spatial continuity when not in use



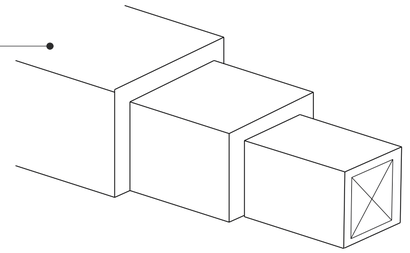
Closed

Open Position
In the open position, the aluminium sections extend outward through a guided sliding action within the internal channels. Each profile incrementally separates while remaining structurally aligned, allowing the rail to reach its full extension . This controlled movement enables the system to support the deployed partition, accommodating functional use while maintaining stability and smooth operation



Open

M1 Aluminium (22mm)
Provides a lightweight yet rigid structure for the telescopic mechanism. Its durability and corrosion resistance ensures smooth operation and long-term performace



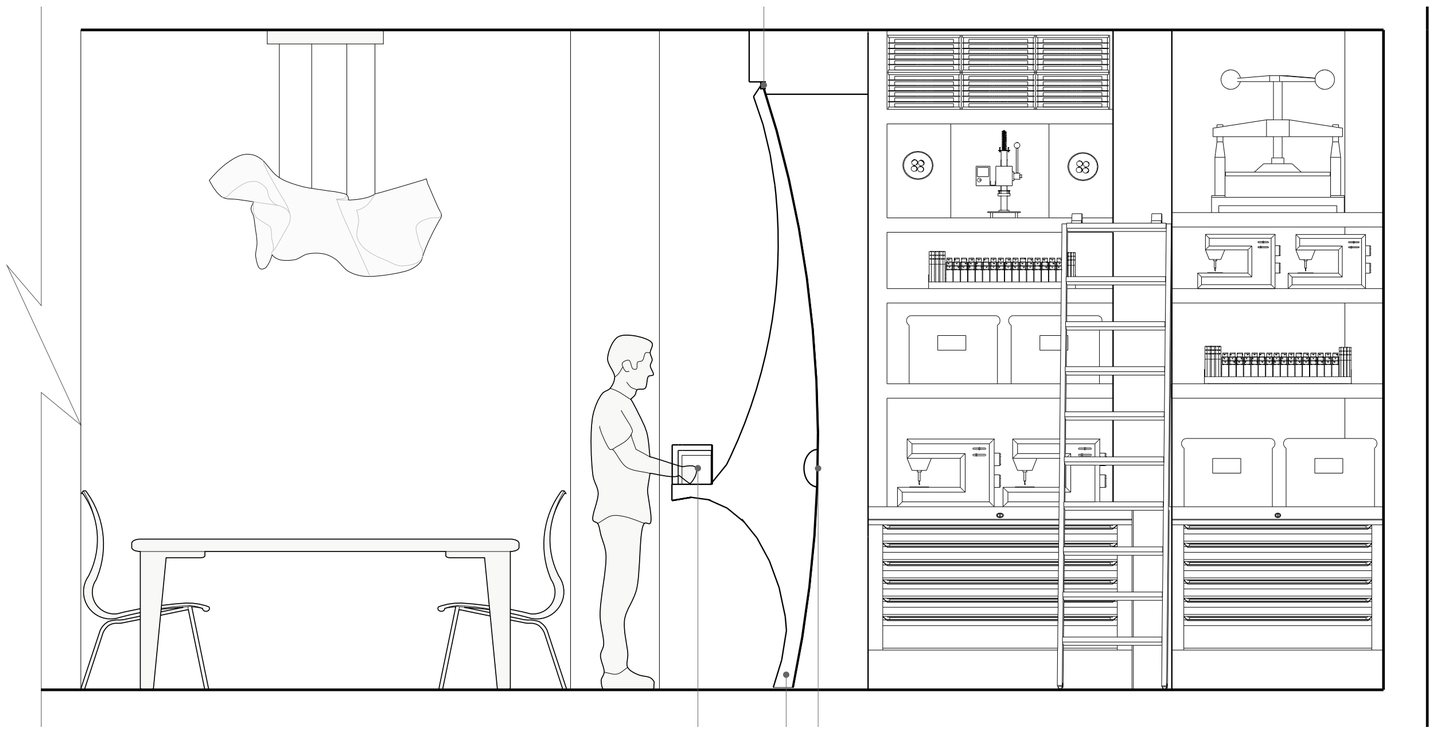
D 1.4 Construction detail : Cross Section Telescopic Rail
Scale 1:5

This detail illustrates the telescopic rail mechanism, demonstrating how nested aluminium sections extend and retract to accommodate the movement of the rib partition. In the closed position, the sections compress into a compact profile, while in the open position they extend to support the full width of the partition. The system enables smooth, controlled movement without the need for additional fixings, allowing flexibility while maintaining structural alignment. The telescopic configuration ensures a seamless transition between open and closed spatial conditions.

D 1.4 Isometric view : Opening Rail
Scale 1:5

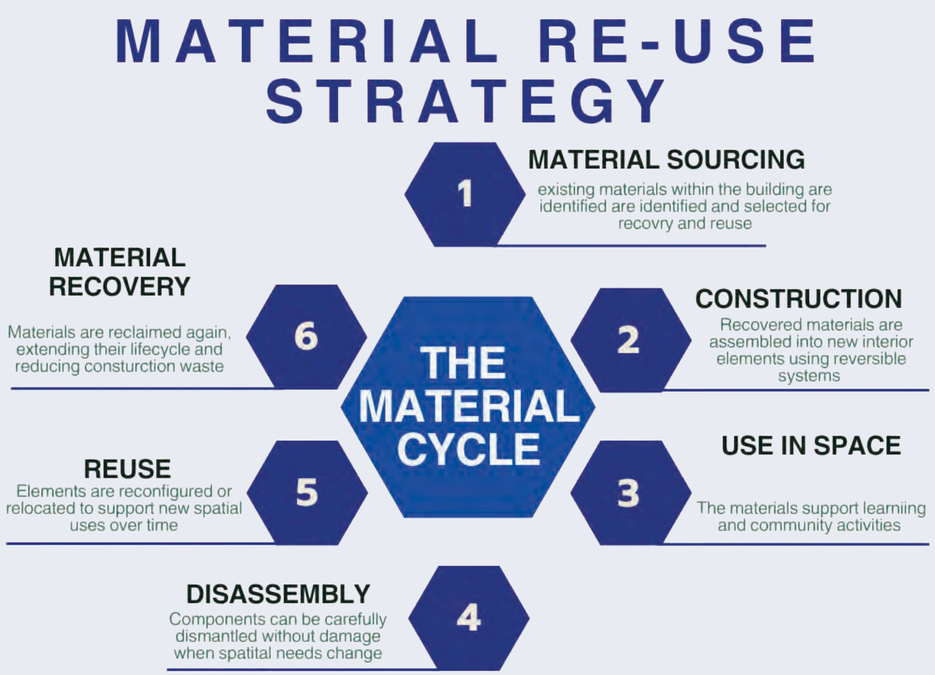
Telescopic Rail from recycled aluminium

The telescopic rail mechanism explores how movement and adaptability can be embedded within architectural detailing. Developed through technical experimentation, the system allows the partition to expand and retract while maintaining structural stability. By elimination permanent fixings and enabling future disassembly, the detail supports circular approach and construction where components can be repaired, relocated and reassembled over time



OUTCOME

Material Re-use Strategy approach



The reuse strategy establishes a direct relationship between demolition outputs and construction inputs. Materials recovered on site are catalogues, processed and reintegrated into new interventions, reducing reliance on virgin resources. This process transforms waste into opportunity and supports a more resilient model of interior production. Rather than treating sustainability as a final outcome, the project embeds circular thinking throughout the design process. The diagram illustrates how materials, users ans spatial interventions interact within on-going cycle.

Process of making custom material using design strategy

Material Recovery

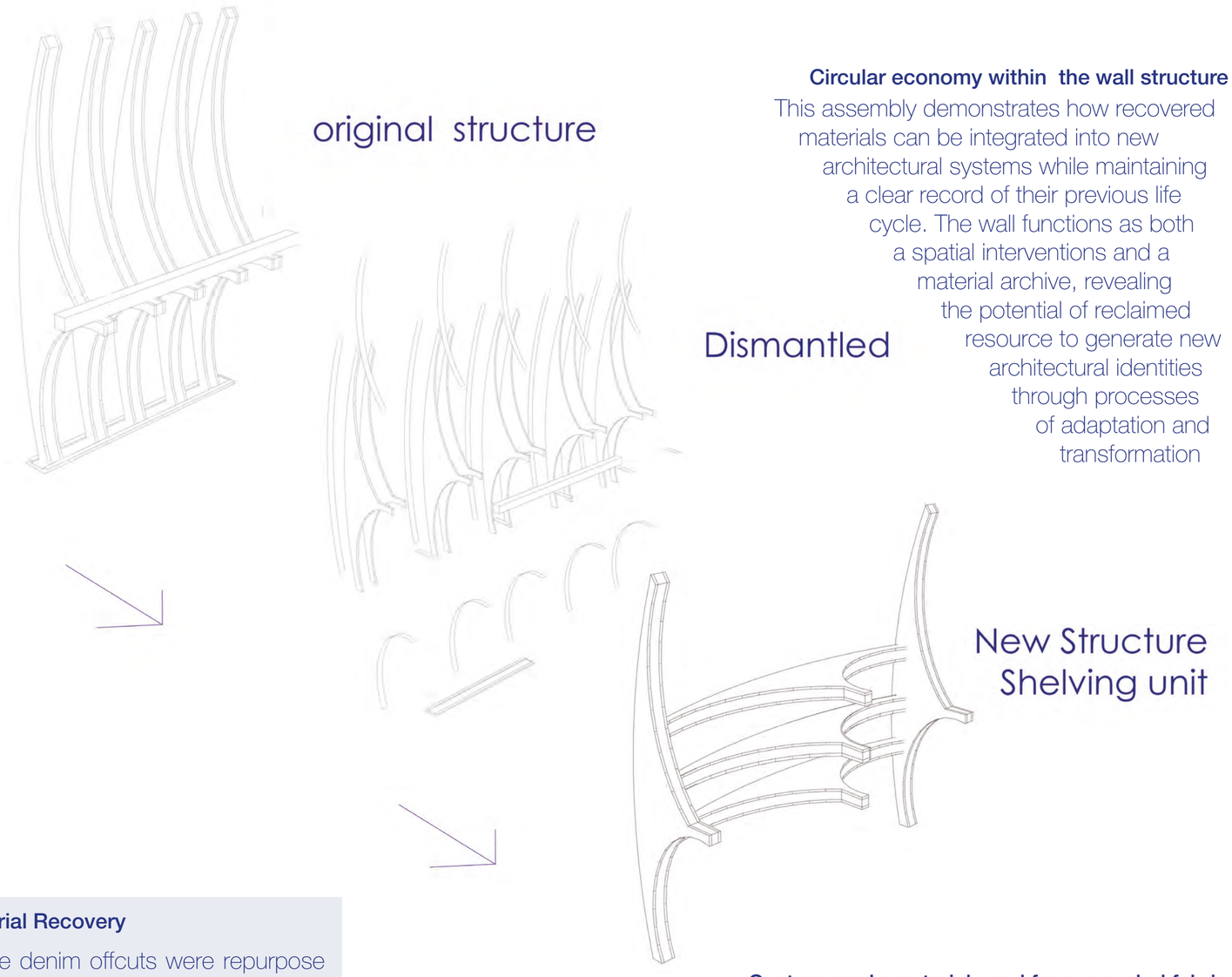
Waste denim offcuts were repurpose as the foundation of a bespoke surface material, extending the lifecycle of discarded textiles through creative fabrication

Experimental Process

Pigmented plaster was manipulated through layering, compression and mixing to generate a unique marble-like finish, exploring alternative approaches to material production

Material Innovation

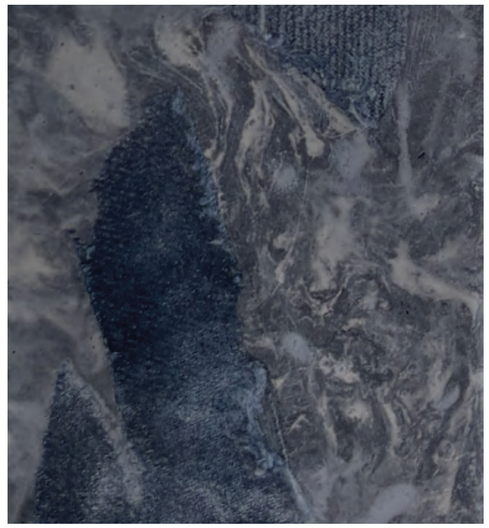
Denim fibres were integrated into the final prototype, creating a custom architectural surface that reflect the makers ethos of making and reuse



Circular economy within the wall structure

This assembly demonstrates how recovered materials can be integrated into new architectural systems while maintaining a clear record of their previous life cycle. The wall functions as both a spatial interventions and a material archive, revealing the potential of reclaimed resource to generate new architectural identities through processes of adaptation and transformation

Custom made material used from recycled fabric



Informed by the projects investigation into material recovery and circular production, this surface treatment was developed through the experimental combination of waste denim fibres and plaster. The resulting marble-like finish challenged conventional perceptions of waste by transforming discard textiles into a durable architectural material. Situated within the makers yard culture of making and material experimentation, the process demonstrates how hands on fabrication can generate new aesthetic and functional possibilities from locally available waste streams

Closing statement

The innovation of the project lies in its methodology rather than its final form. By integrating demolitons, material recovery, reversible construction and adaptable occupation into a unified design process, The Makers Yard proposed a new model for interior architecture that prioritises transformation, longevity and continuous reuse over permanence and replacement.

Wide View Render of The Makers Yard

The final spatial proposal visualise the application of the projects research finding within an operational environment. Recovered materials, adaptable systems and community-focused programmes combine to create an interior capable of evolving over time. The render represent s not a finished architectural object by a framework for continuous adaptation, demonstrating how interior design can support long-term environmental, social and material resilience.