

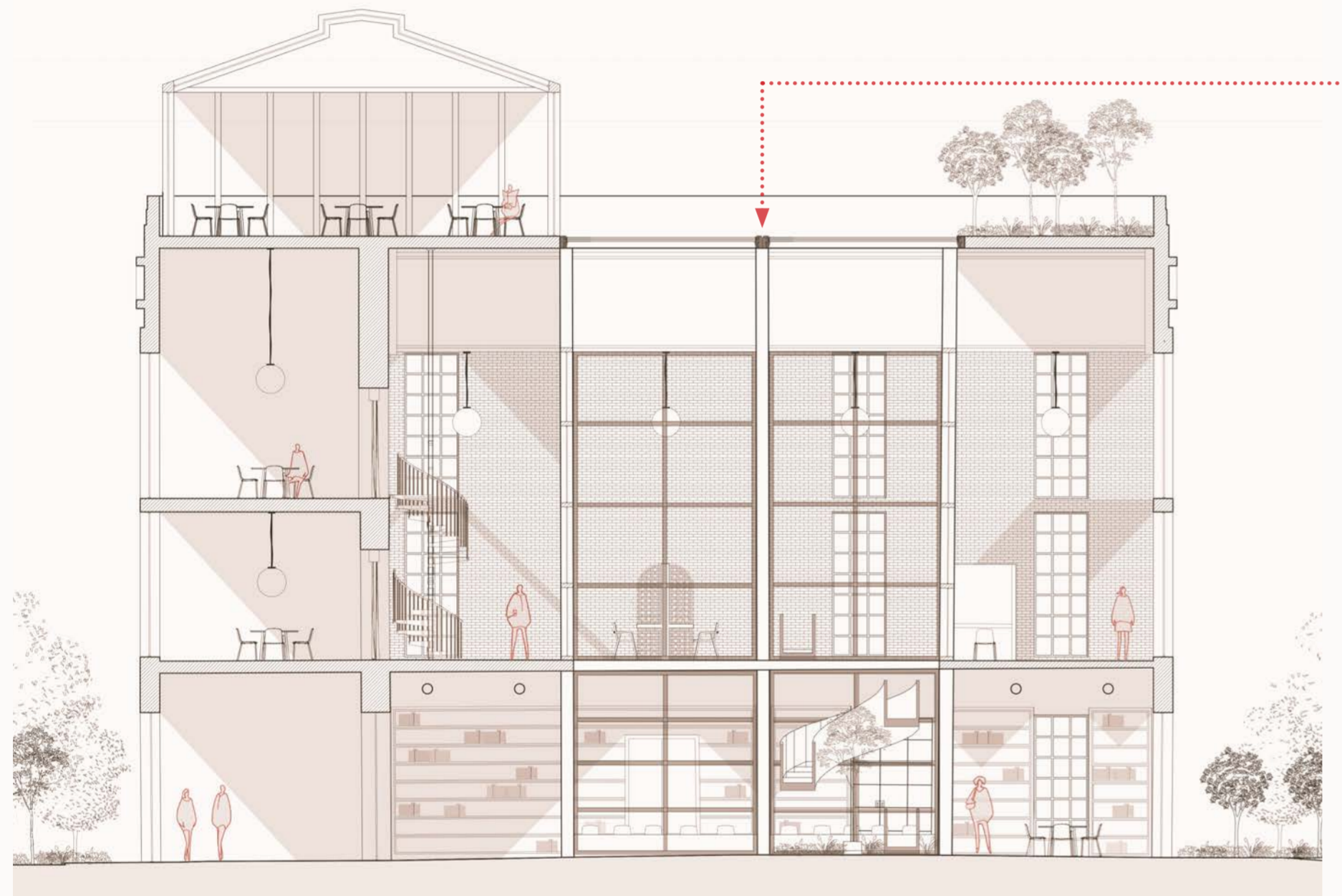
# Haven on the Horizon

## Climate-Responsive Adaptive Reuse Retreat

This project envisions the adaptive reuse of the West Reservoir Centre into a retreat for students. It is designed to support mental well-being and encourage meaningful social interaction, while responding to environmental concerns through circular material strategies and adaptive reuse. As academic and social pressures continue to shape students lives, there is a growing need for restorative environments that offer calm, inclusivity, and temporary escape from the fast pace of urban life.

The retreat operates as both a short-stay residential environment and a facility incorporating a library, study spaces, and areas for meditation and slow movement. The proposal aims to foster a sense of community while preserving opportunities for solitude, allowing users to choose how and when they engage with others.

Integrating biophilic design principles, adaptive reuse, and reclaimed materials, the project responds to the Material and Environmental Resolution category through circular material strategies and climate-responsive interior design. Retained industrial elements reduce embodied carbon, while reclaimed terracotta is transformed into tactile composite surfaces that enhance sensory experience and material longevity. The proposal aims to create a contemporary sanctuary where nature, community, and restorative spaces support well-being and environmental resilience.



Short Section Through Atrium



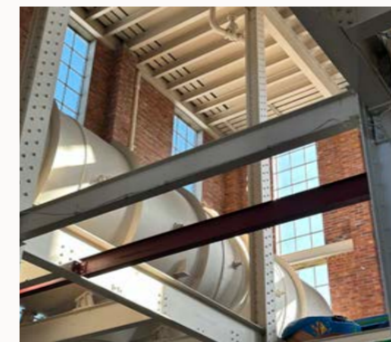
Restorative Garden Room

## Site: West Reservoir Centre

Hackney



Framework Re-imagined as Window System



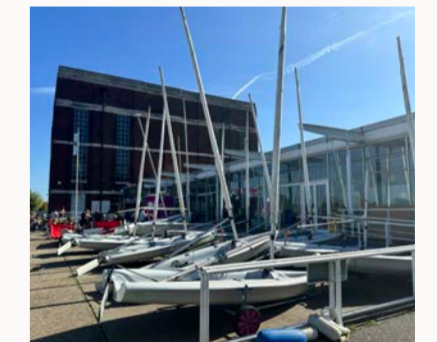
Original water tank retained



Existing industrial character



Historic brick facade preserved



Ecological connection to site

The West Reservoir Centre, located in Hackney, was originally constructed in the 1930s as part of London's industrial water infrastructure and later adapted into a watersports and activity centre. It offers a unique visual and sensory connection to nature while remaining connected to the city. This provides a rare opportunity to create a retreat that feels both secluded and accessible. Retaining the existing structure reduces embodied carbon while preserving the industrial memory of the site.



Supporting the United Nations Sustainable Development Goals

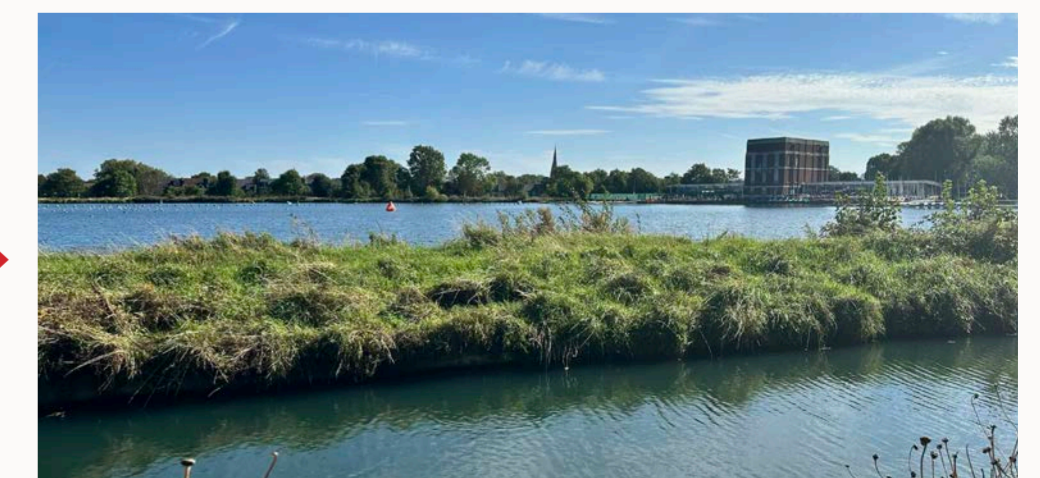
This project supports environmental resilience adaptive reuse, and inclusive well-being through circular material strategies and climate-responsive interior design.



Atmospheric Narrative



West Reservoir centre (1950-70s)



West Reservoir centre (2026)

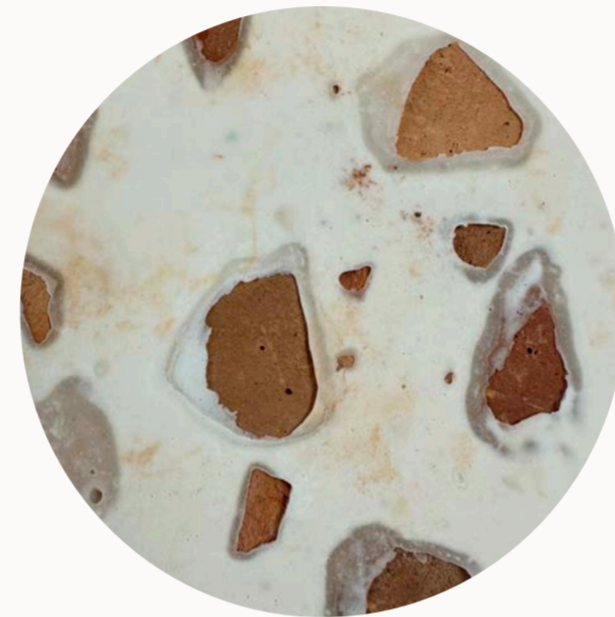
# Material ecology + Circular strategy



Exploration of reclaimed terracotta fragments through composite material experimentation.



Paper Clay Binding



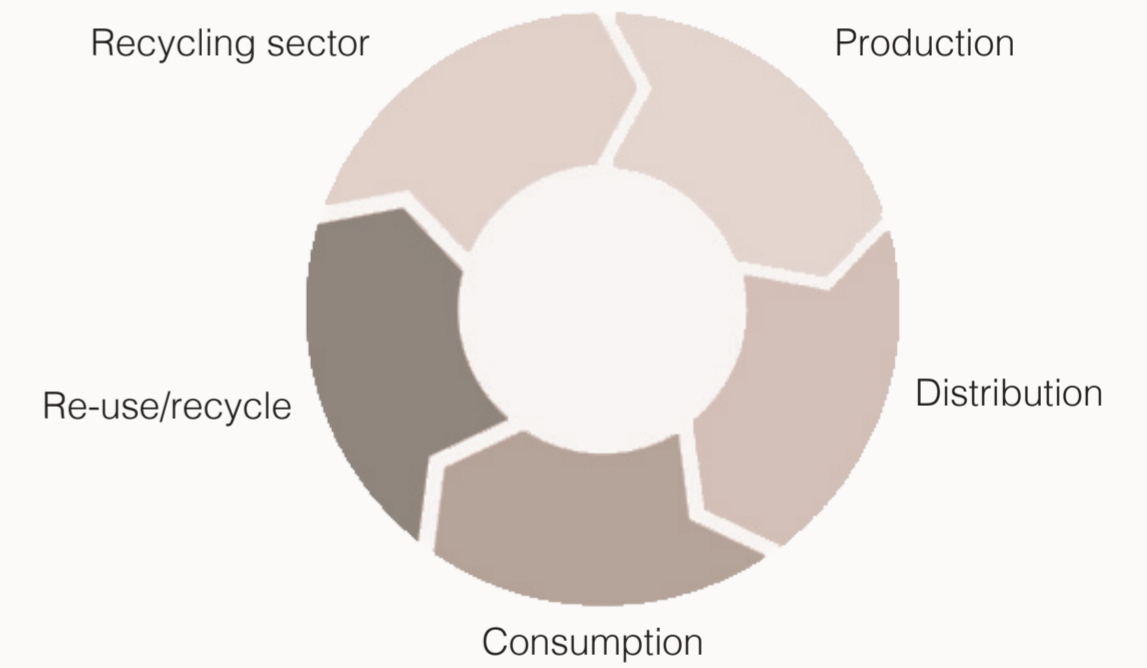
Jesmonite Binding

Material experimentation explores the reuse of discarded terracotta fragments to develop a terrazzo-like composite material. Through hands-on testing of binders, durability, texture, and finish, the research investigates how waste materials can be transformed into tactile interior surfaces with low environmental impact. The experiments informed the project's material strategy, reinforcing themes of circularity, longevity, and sensory experience.

Material transitions distinguish communal and private spatial experiences throughout the retreat. Reclaimed terracotta flooring is applied within public and transitional areas to create warmth and continuity, while the terracotta composite tiles developed through material experimentation are introduced within private restorative spaces to provide tactile grounding, sensory richness, and a calmer atmosphere.



Linear Economy



Circular Economy

Diagram showing linear economy and circular economy.

## Terracotta Waste → Fragmentation → Binder Testing → Composite Material → Interior Application



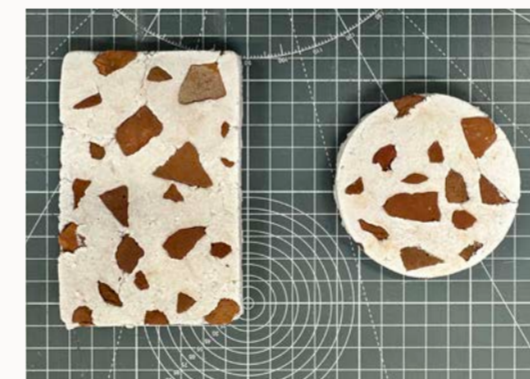
Terracotta Waste Collection



Terracotta Fragment Testing



Composite Binder Testing



Final Composite Material



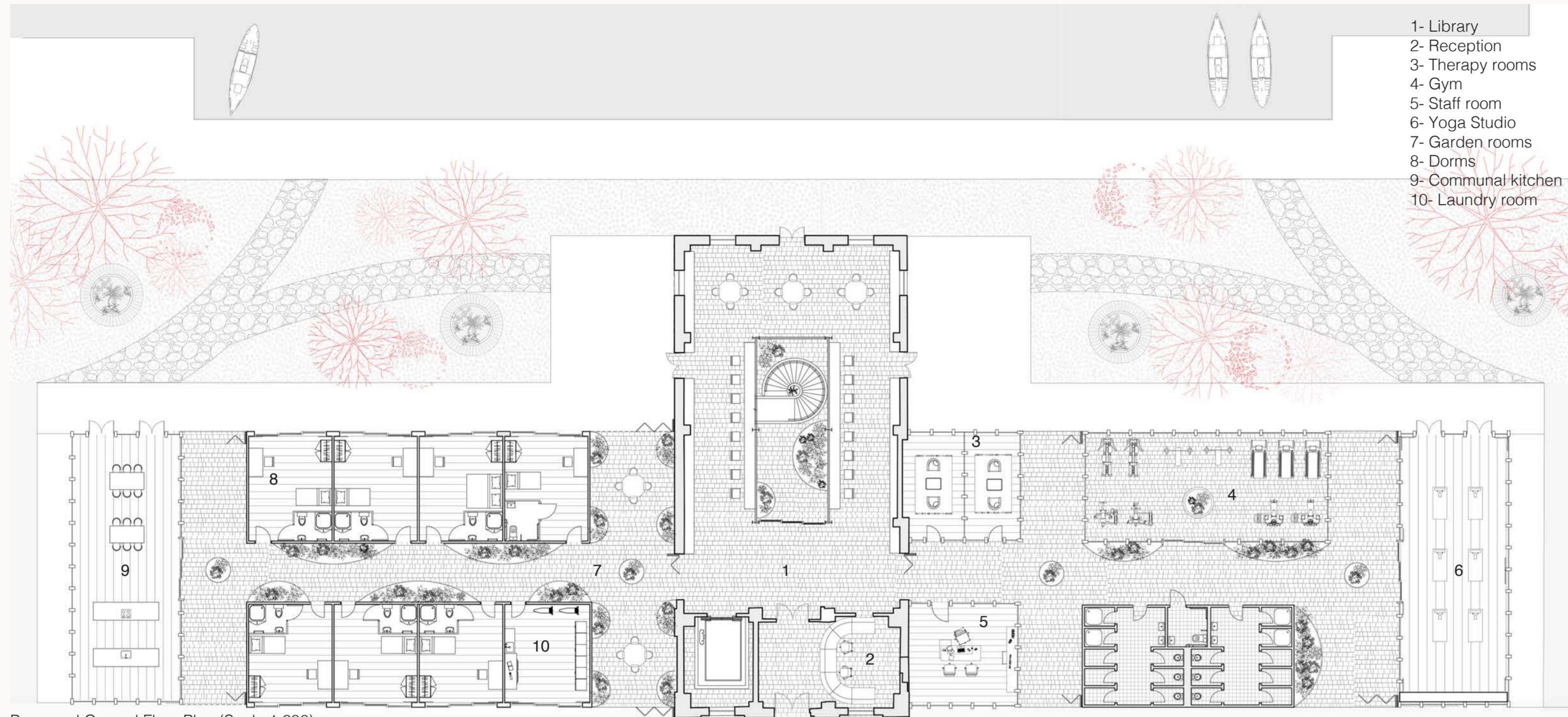
Terracotta Composite Tile Application in the East Wing



Terracotta Composite Tile Application in the Atrium

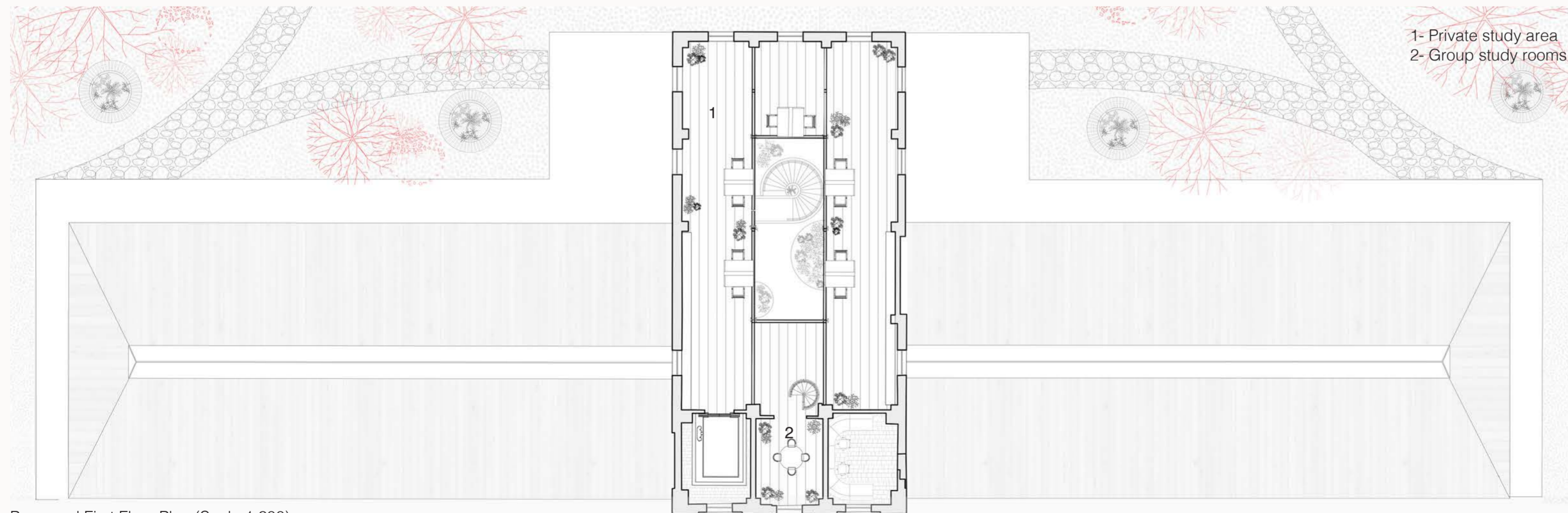
Material reuse lies at the core of circular design. There is an urgent need for a more sustainable and circular future. Discarding usable materials and mass-producing new ones contributes significantly to climate change and resource depletion. This wasteful cycle increases carbon emissions while exhausting natural resources. Material reuse supports circular design by reducing embodied waste and limiting the extraction of new materials.

# Spatial Organisation + Restorative Experience



Proposed Ground Floor Plan (Scale 1:200)

The plans illustrate the spatial organisation of the retreat, highlighting the gradual transition between spaces. Public areas are designed to ensure maximum accessibility, while private spaces are located within quieter zones to support comfort, calmness, and retreat.



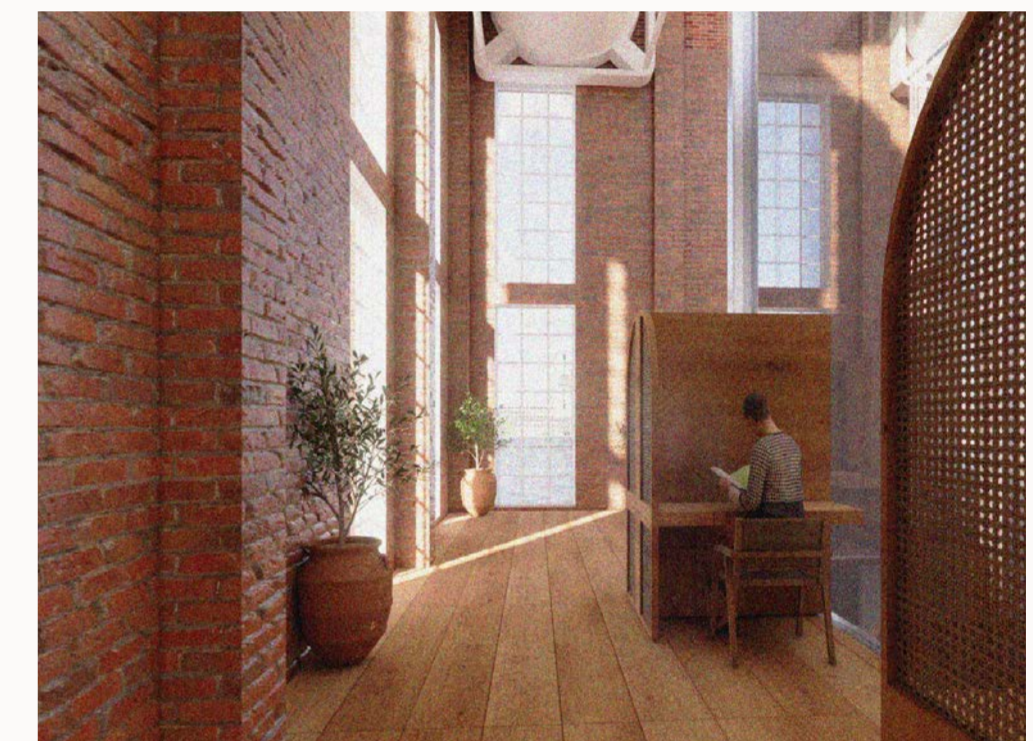
Proposed First Floor Plan (Scale 1:200)

The first floor plan prioritises privacy and calmness. Circulation is deliberately simplified to reduce stress and cognitive load, enabling intuitive movement through the space.

- 1- Library
- 2- Reception
- 3- Therapy rooms
- 4- Gym
- 5- Staff room
- 6- Yoga Studio
- 7- Garden rooms
- 8- Dorms
- 9- Communal kitchen
- 10- Laundry room



Public Reading Room

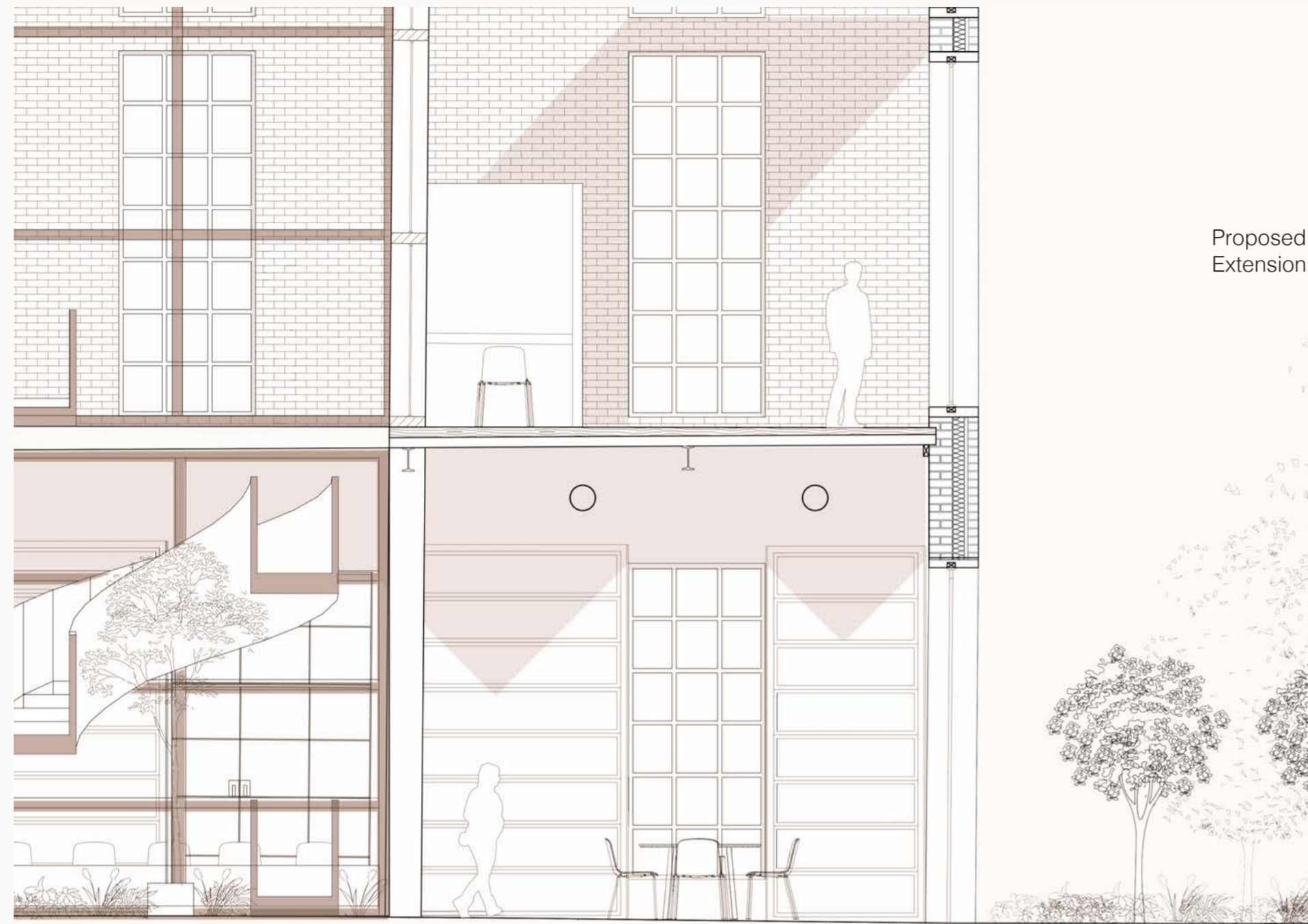


Individual Study Space



- 1- Reclaimed terracotta
- 2- Terracotta composite
- 3- Porcelain stoneware
- 4- Terrazzo tile
- 5- Rattan weave
- 6- Timber slatted panelling
- 7- Reclaimed oak wood
- 8- Frosted glass
- 9- Walnut wallpaper
- 10- Retained brickwork

# Construction + Technical Resolution



Detailed Wall Section Through Atrium (Scale 1:50)

Detailed section drawing exploring the structural layering of the existing building. The drawing highlights the building's construction details and the proposed atmosphere.

## Sectional Environmental Diagram Through Atrium and Wings

The long section illustrates the spatial sequence and vertical relationships across the zones, revealing natural light and volume to support well-being and reduce environmental impact.



This tectonic exploration model investigates material layering, lightweight timber construction, and environmental shading strategies that later informed the design of the communal pavilion spaces throughout the proposal.

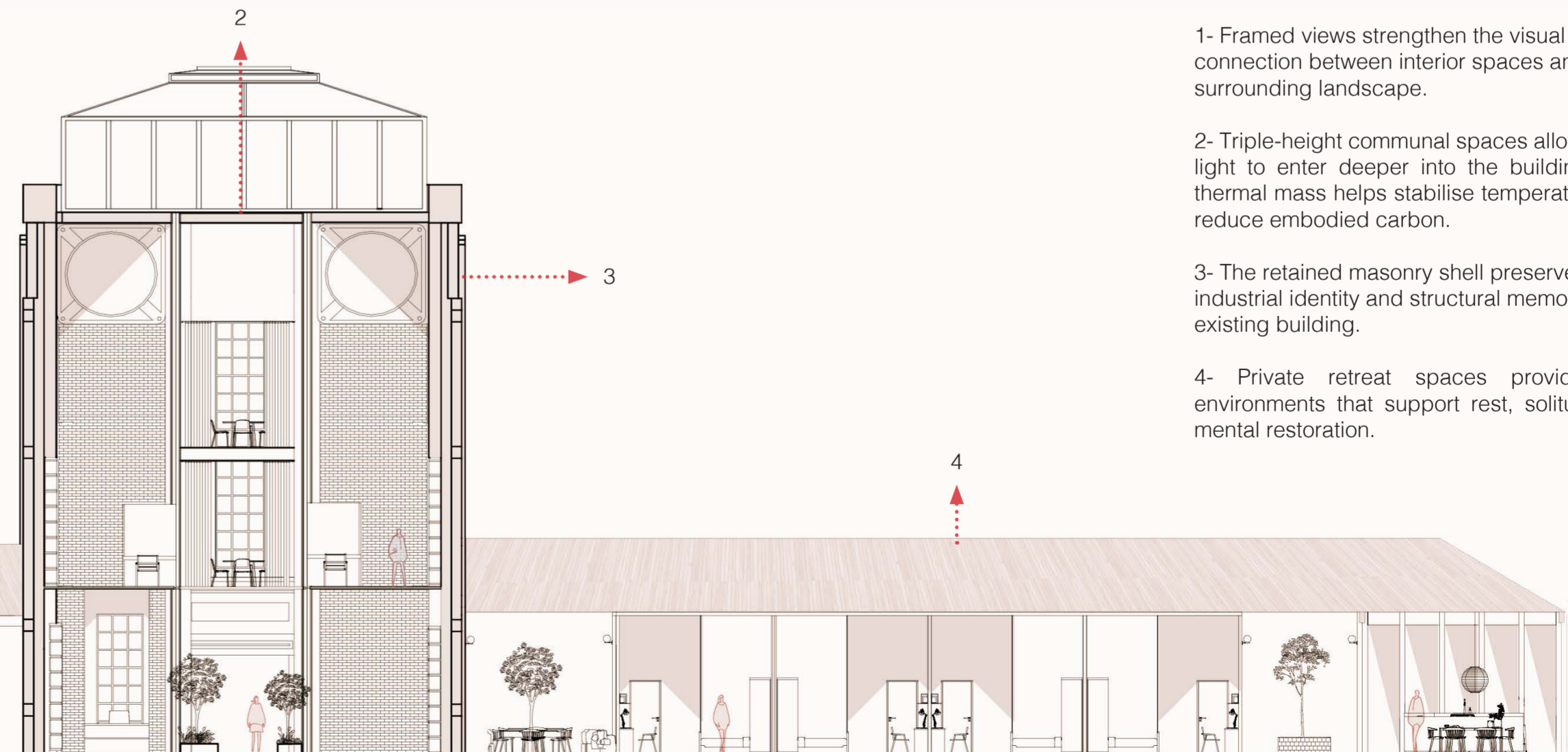
Proposed Timber Extension

Retained Industrial Structure



Massing Model (Scale 1:200)

The physical massing model explores the relationship between the existing structure, the atrium, and the proposed extension that frames the existing habitat. The model highlights the roof form and overall composition of the proposal.



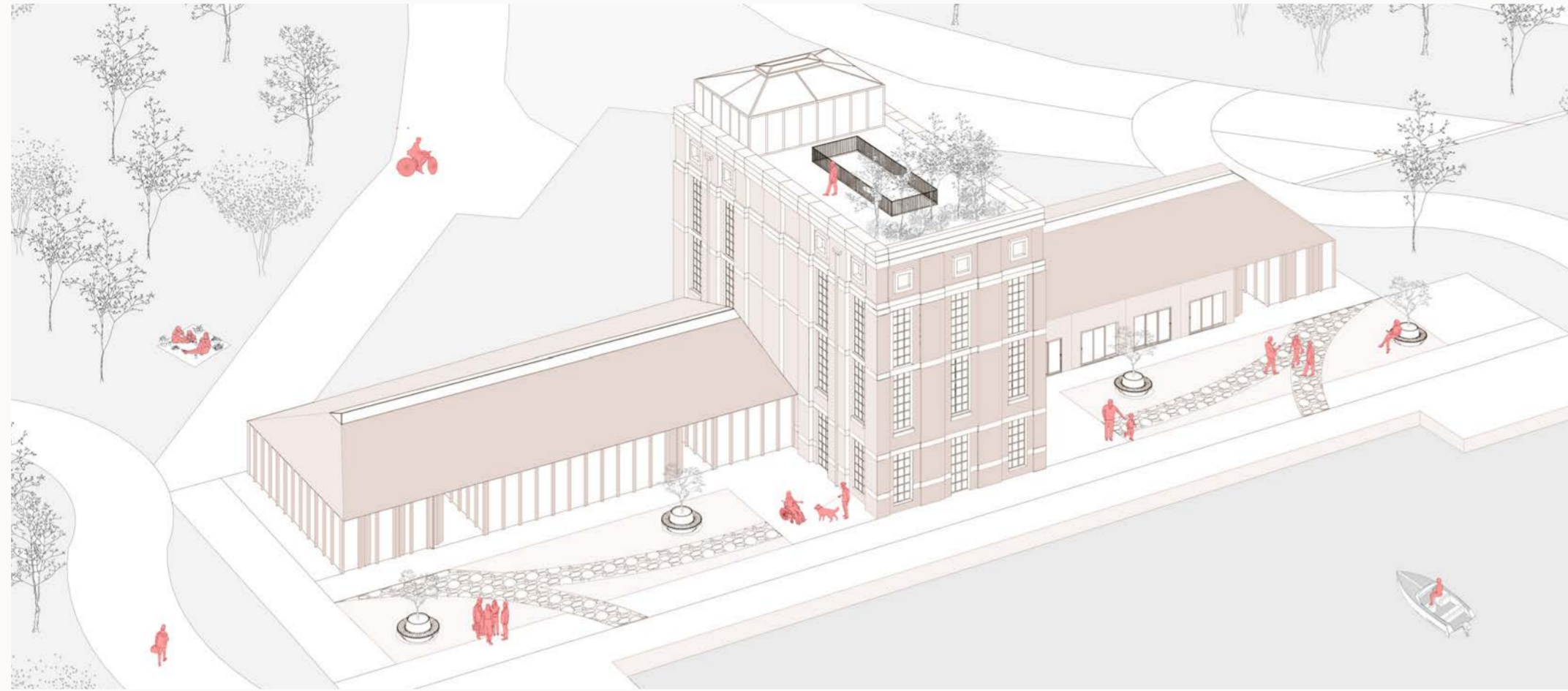
1- Framed views strengthen the visual connection between interior spaces and the surrounding landscape.

2- Triple-height communal spaces allow natural light to enter deeper into the building, while thermal mass helps stabilise temperatures and reduce embodied carbon.

3- The retained masonry shell preserves the industrial identity and structural memory of the existing building.

4- Private retreat spaces provide calm environments that support rest, solitude, and mental restoration.

# Material atmosphere + Human Experience



This isometric drawing presents the overall massing of the project and its relationship to the surrounding landscape. The original building that was built in the 1930s acts as the central core, while the new extensions expand the building to accommodate additional functions.



Adaptive Reuse + Structural Intervention Model (Scale 1:50)

The physical model explores the relationship between the retained industrial structure and the new architectural intervention. It investigates how adaptive reuse, structural extension, and material contrast can create restorative environments that support connection, light, and spatial openness within the existing building fabric.



Shared Dining Pavilion



Shared Kitchen Pavilion



Garden Room (East Wing)