

# ARCHIVE OF IMPERFECTION

## DESIGN INTENT

Set in 2085, this project reimagines Papplewick Pumping Station as a base of resistance within a future society governed by AI and a strict "Perfection Score." Exiles rejected by the system reclaim the derelict industrial site to preserve banned books, tools, and forgotten knowledge – resisting the AI’s sanitised version of history.

Rooted in the philosophy of Wabi-Sabi, the design embraces imperfection and decay as sources of meaning and identity. The spatial sequence includes paper-making, tool-forging, and communal workshops, culminating in a bookbinding ritual that marks entry into the growing archive.

To a large extent, original structures, machinery and materials are retained and reinterpreted. The imperfections celebrate the flawed and the incomplete, transforming a symbol of industrial progress into a living archive of human resilience and creative reuse.



## SITE : Papplewick Pumping Station

Address : Papplewick Pumping Station, Rigg Ln, Ravenshead, Nottingham NG15 9AJ

A Grade II listed building designed by Thomas Hawksley for Nottingham Corporation Water Department (1881–1884) and built to supply fresh water to industrial Nottingham’s growing population. Designed in the Gothic Revival style, the Engine House and Boiler Room housed two beam engines powered by six steam boilers.

Key

1

Boiler

2

Smoke to Chimney

3

Piston

4

Engine Beam

5

Fly wheel

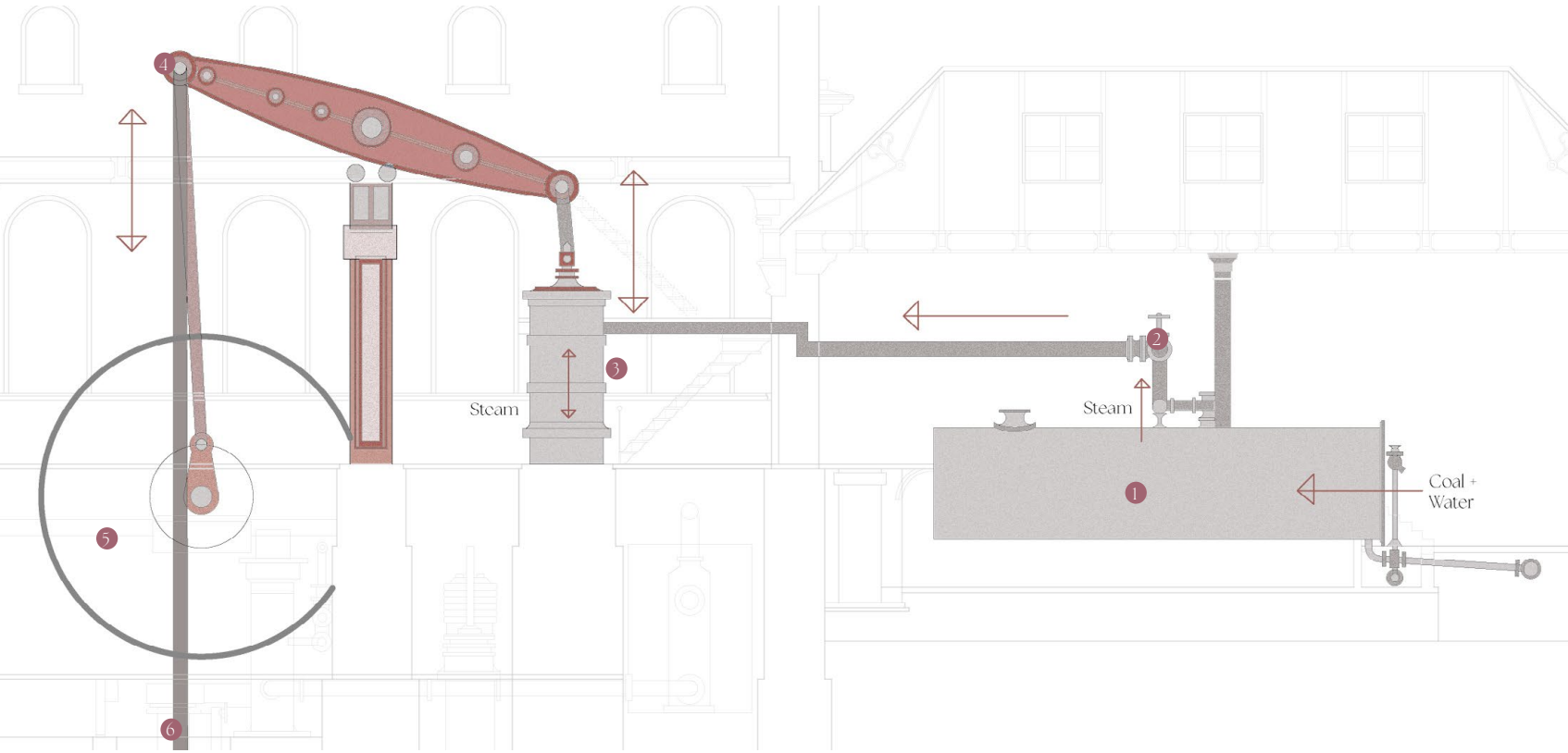
6

Keeps pumping action smooth

Cylinder - Steam and cold water mix to create a vacuum to drive piston up and down



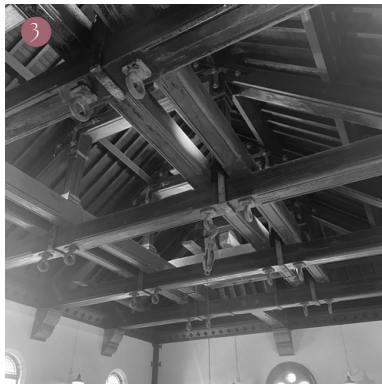
Existing Machinery Function:



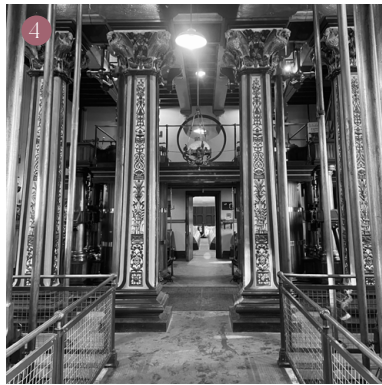
**Worn Stone Steps (Boiler Room):**  
These steps show signs of age and frequent use. Rather than removing them, they are retained and celebrated as a key heritage feature.



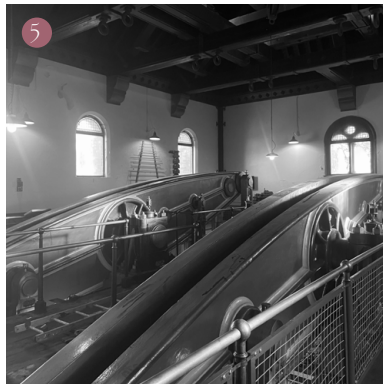
**Warped Wooden Floorboards (First Floor, Engine House):**  
The warped boards express time and wear. These have been retained or reused elsewhere in the scheme rather than being discarded.



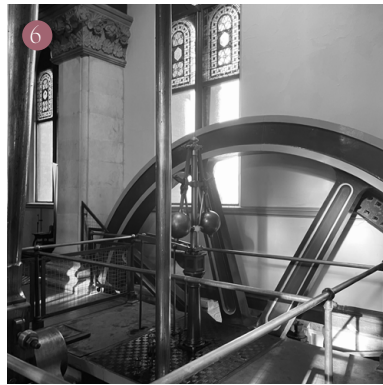
**Queen Post Truss Roof (Engine House):**  
This finely crafted timber structure remains fully exposed to showcase the building’s construction and heritage.



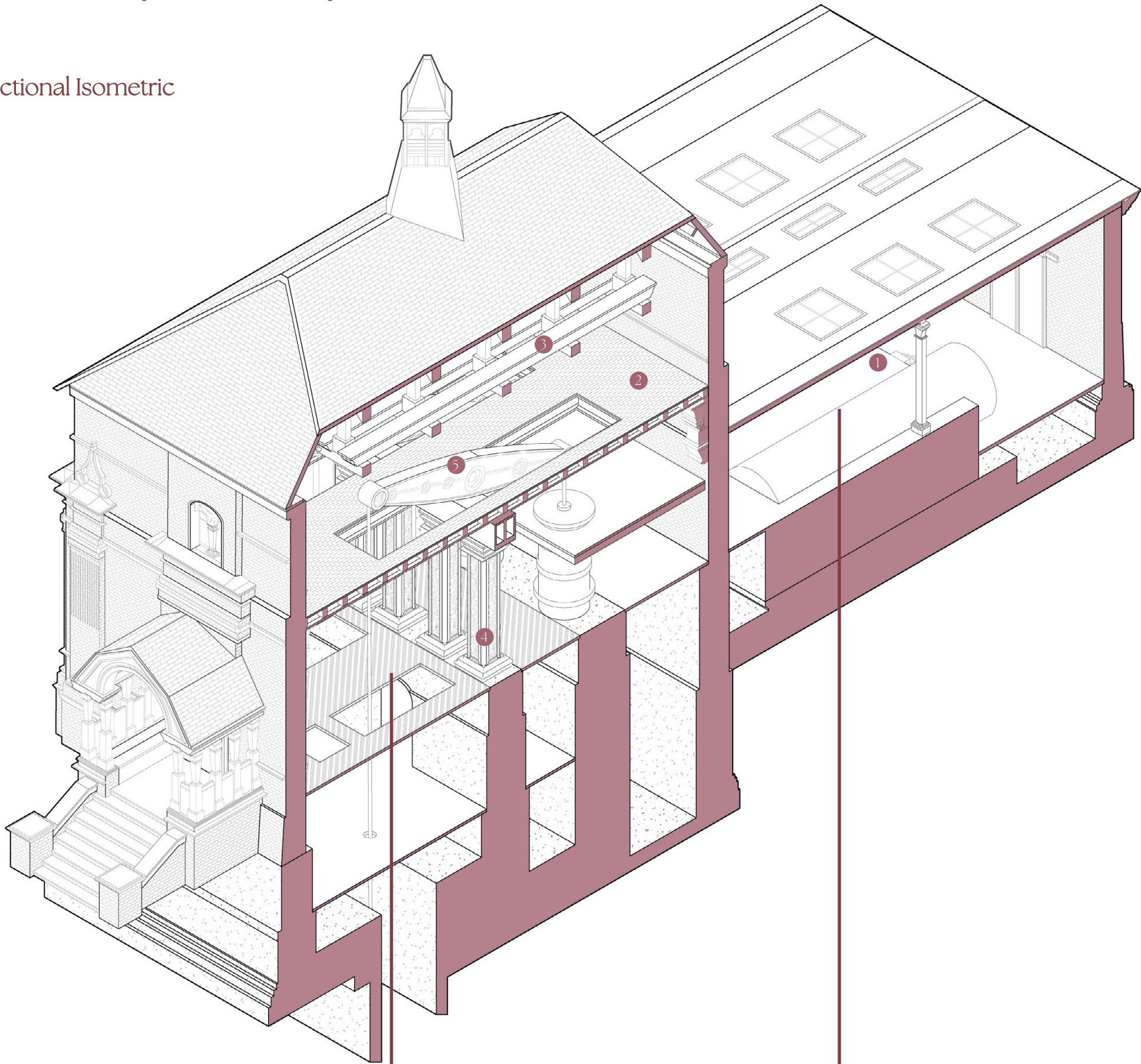
**Decorative Cast Iron Columns (Engine House):**  
Rich in detail and craftsmanship, these are retained as part of the architectural language.



**Existing Machinery:**  
Key elements of the original machinery are re-purposed or integrated within the new proposal to retain site identity and reduce material waste.



Existing Building Sectional Isometric  
Scale 1 : 300



### Adaptive Re-Use strategy

The project adopts a low-impact, adaptive reuse strategy by retaining Papplewick’s Engine House and Boiler Room, preserving original brickwork, stone and iron to reduce embodied carbon and celebrate the building’s aged character. Key machinery is repurposed: a pivoting engine beam becomes a large-scale letterpress, a preserved wheel powers a bookbinding pulley system, and a former boiler is transformed into a furnace for the workshop. These interventions honour the site’s industrial heritage while supporting a new narrative of resistance, learning, and human-making.

The existing wear and aging of materials revealed a quiet beauty in the site’s history and impermanence. These crafted, time-worn features hold emotional and material value and could be identified as key aspects to retain and celebrate in the final design. Rather than replacing or covering these details, the approach moving forward is to preserve and highlight them—embracing irregularity and the traces of use as a way to ground the new scheme within its past.

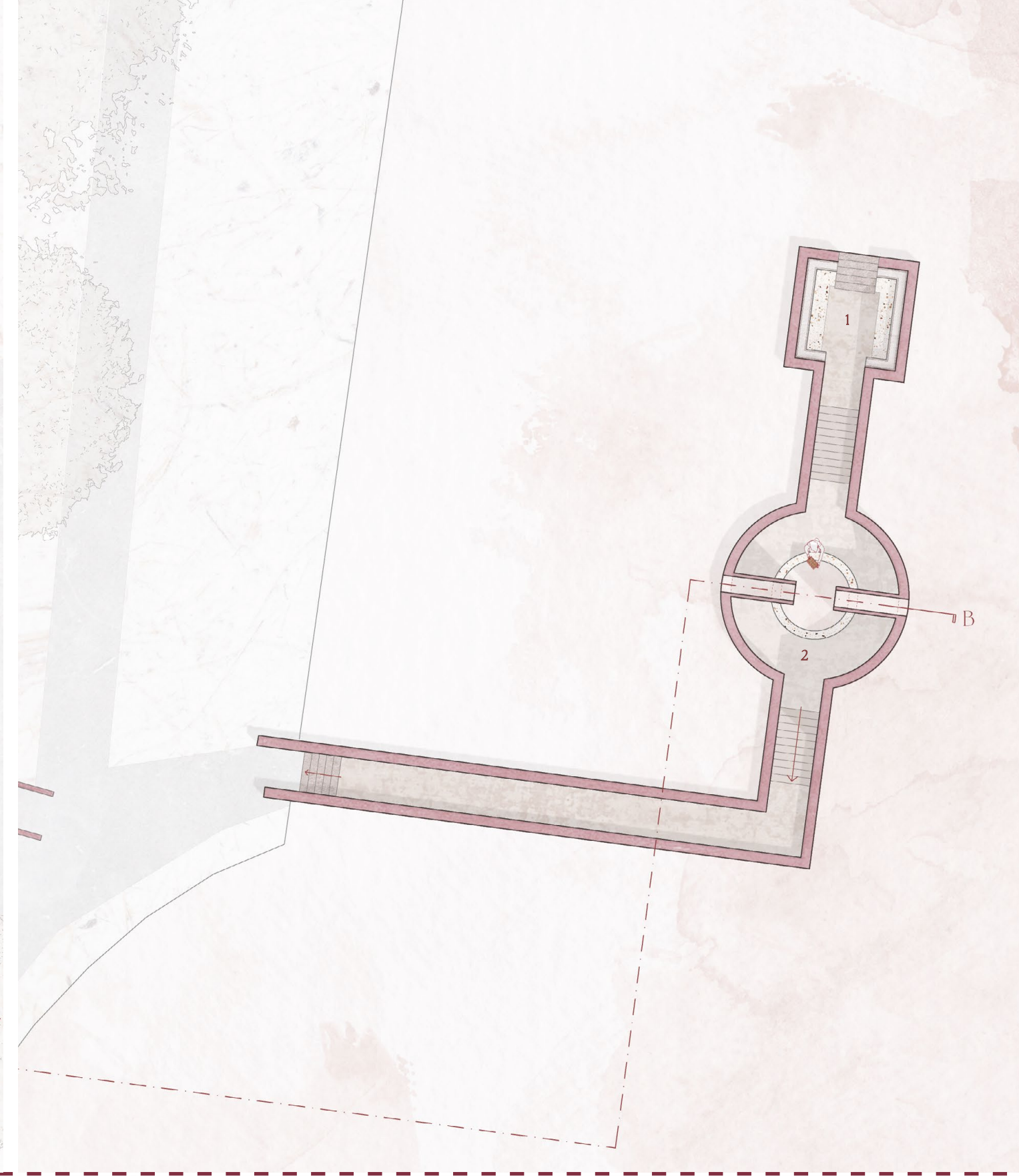
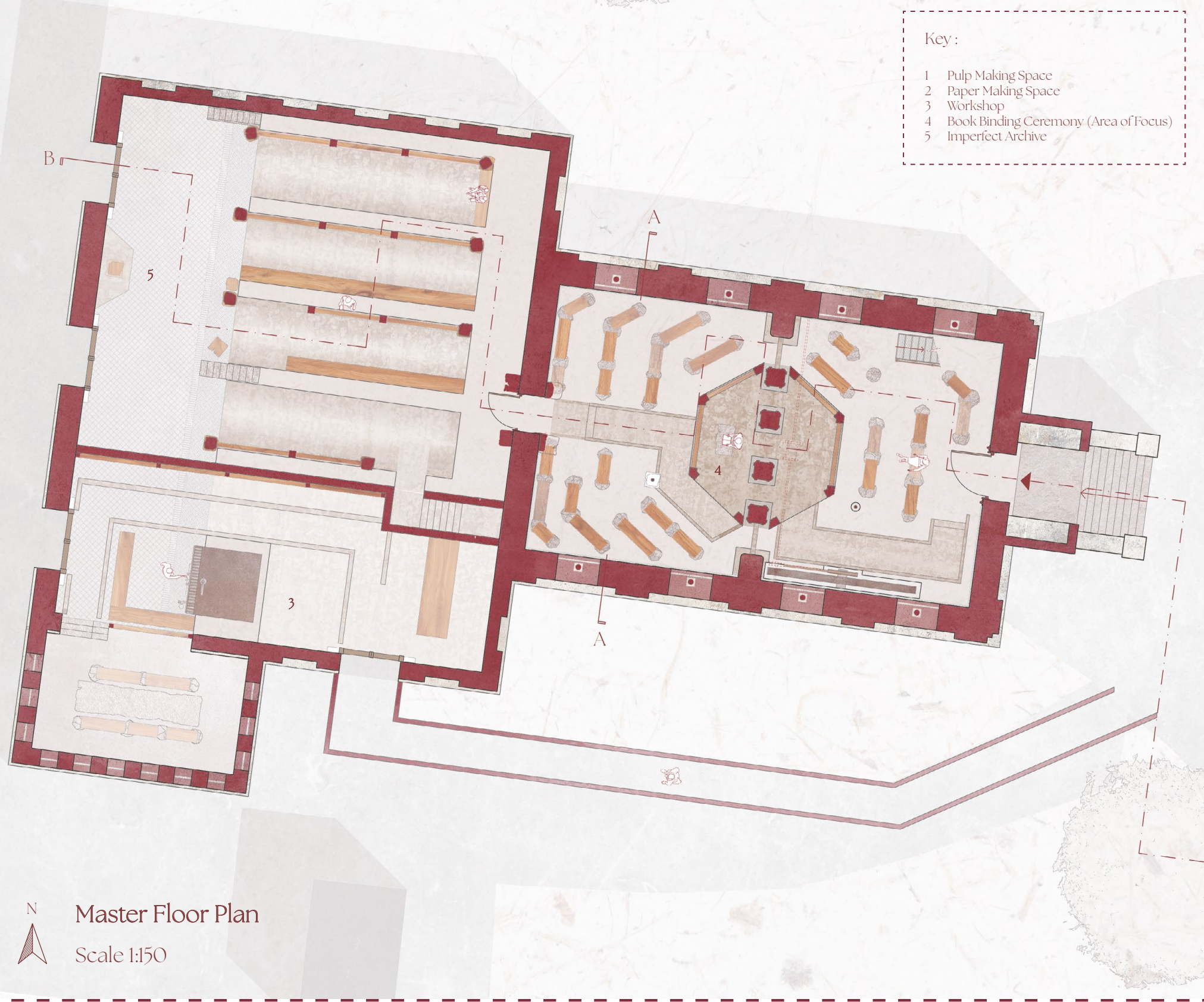
### Engine House



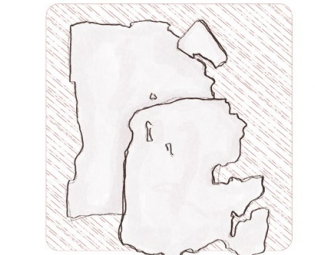
### Boiler Room





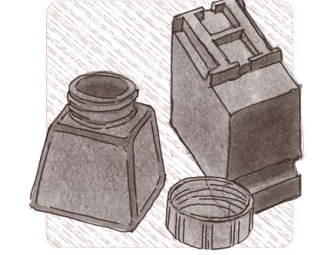


## SPATIAL SCHEME



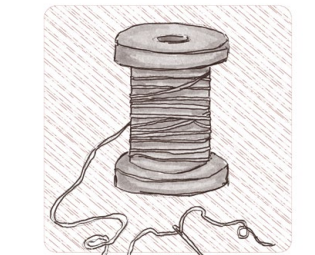
**Paper Making Space**

The starting point for all new arrivals. This is where individuals begin by making their own sheets of paper, marking the first step in their journey toward embracing imperfection.



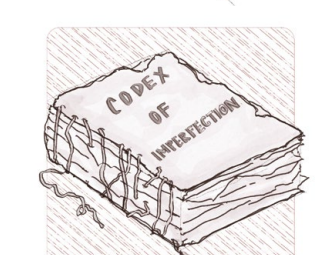
**Workshop and Learning Space**

A hands-on environment for learning core skills such as reading, writing, and tool-making. This space supports self-development and practical preparation for later stages.



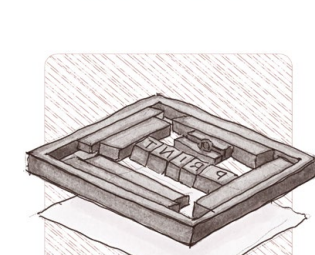
**Book Binding Ceremony (AOF)**

The central gathering space where the binding ritual takes place. It marks the moment an individual officially joins the resistance by binding their page into the Codex of Imperfection.



**Archive**

Stores all of the resistance's recovered and recorded knowledge, including the Codex, with space for reading, documenting, and preservation work.



**Print Room**

This is where official material will be printed and reproduced. Currently not in active use. It is reserved for the founders and will only become operational when the resistance is ready to publicly share their message.



Stepped Section BB  
Scale 1:150



# RE-PURPOSING EXISTING MACHINERY AND STRUCTURES

## ENGINE HOUSE



One of the two original engine beams and its connected flywheel are retained and repurposed as central features within the bookbinding ceremony space, forming part of a new mechanical ritual. The existing decorative cast iron columns that once supported the beam are also preserved, reinforcing the spatial and structural integrity of the Engine House while embedding its industrial heritage into the new scheme. These elements are reinterpreted not only as functional components but as meaningful links between the building's past use and its new purpose.

Re-purposed Fly Wheel and Engine Beam Model:



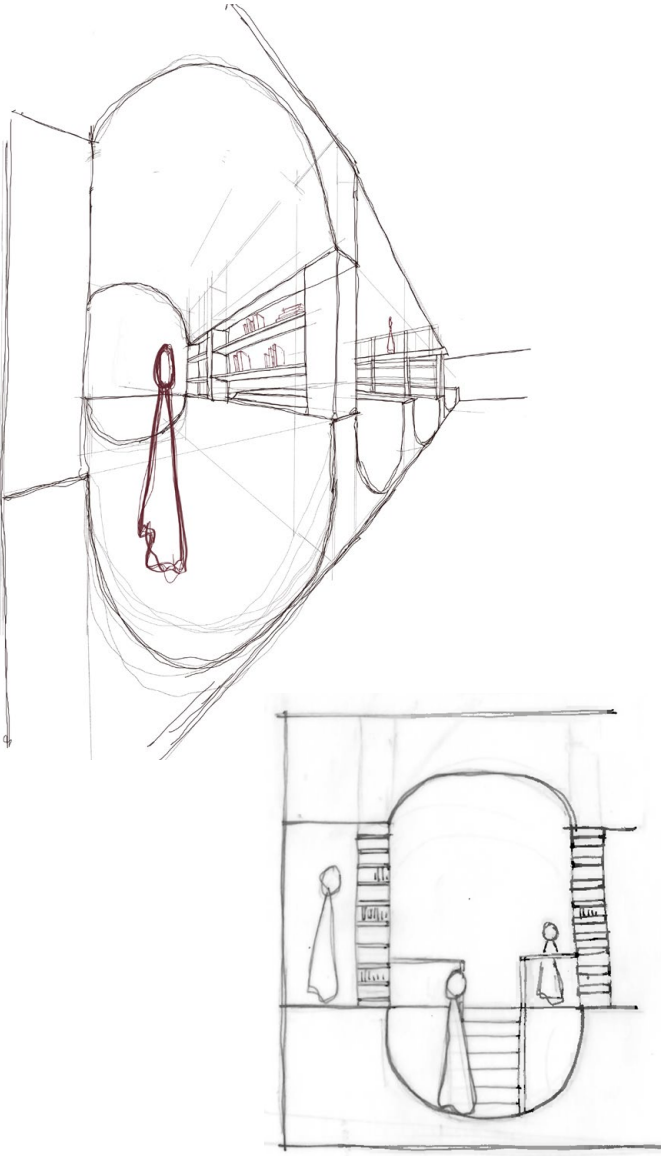
## BOILER ROOM



Retaining the boiler shells also means keeping the existing floor levels, which leads to a more layered and interesting shelving design. It allows for movement across different heights—people can access books from both upper and lower levels, adding a sense of exploration to the archive space while embracing the building's existing structure.

I made this model of the shelving design using grey plaster and wood—the plaster represents the stripped-back concrete of the old boiler shells, intentionally leaving the other with just one side filled. The resistance is still collecting, repairing, and crafting new books, so not every boiler shell needs to hold shelves. I think that slight imbalance adds to the atmosphere and create a sense of intrigue within the space.

Archive Shelving sketches



## EXISTING BOILER SHELLS



Archive Shelving Model

## Archive Spacial Visual

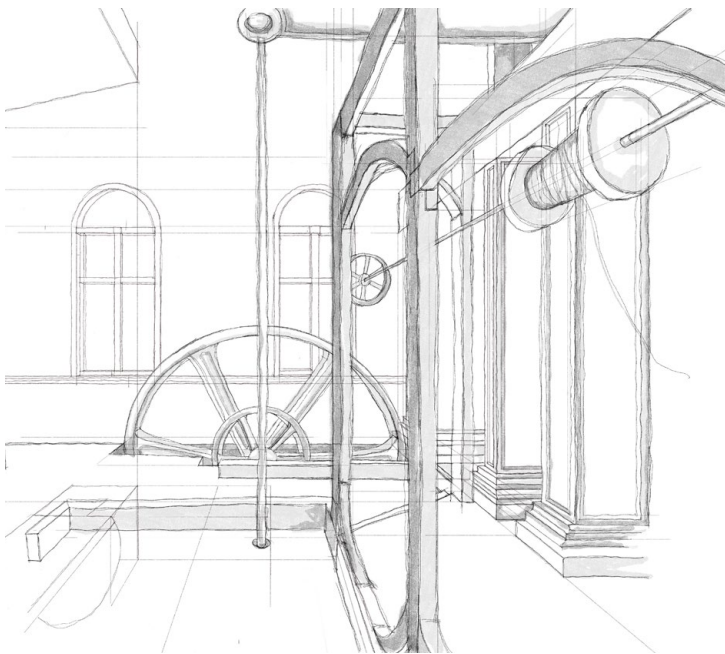
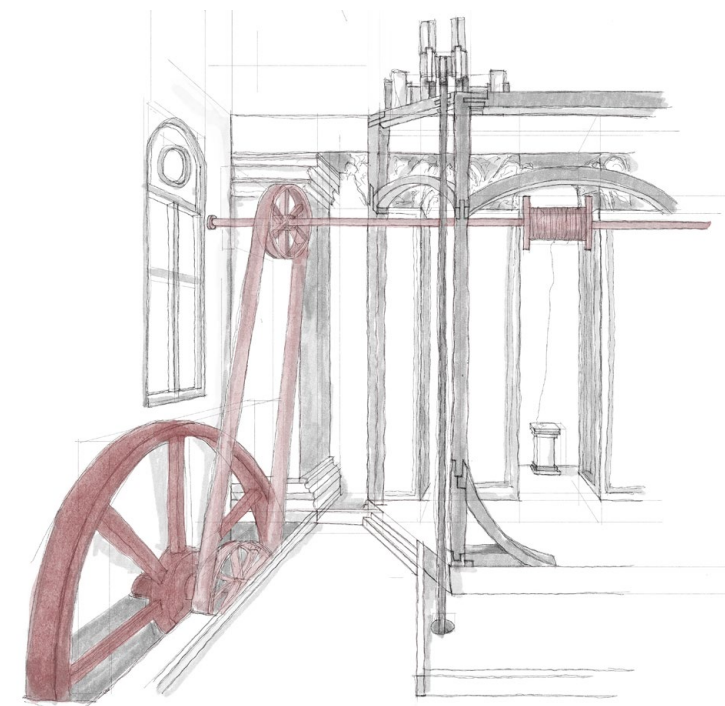


## FLY WHEEL



The existing Engine House flywheel at Papplewick Pumping Station is repurposed as part of a new mechanical system, driving the spindle used in the bookbinding ritual. This intervention preserves the building's industrial heritage while supporting its new narrative function within a speculative future.

Repurposed Fly Wheel Sketches:



## COLUMNS



The existing decorative columns are reinterpreted as a *rood screen*, acting as a symbolic and physical threshold between the uninitiated and those who embody the values of the movement.

## Book Binding Podium - Moment Visual



## Spacial Visual



## ENGINE BEAM



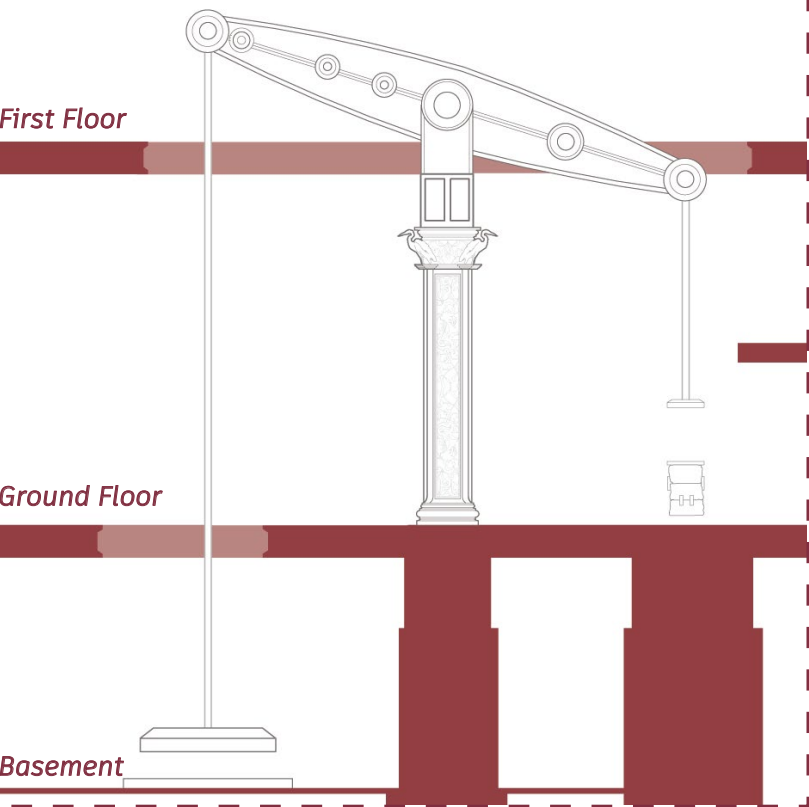
Repurposing the existing Engine Beam into a central spatial and conceptual feature. One end of the beam operates as a large-scale functioning letterpress within the basement, transforming the print room into an active production space. The other end is adapted into a book press, positioned within the ceremonial binding space—bridging the acts of making and ritual.

Book Press Sketch



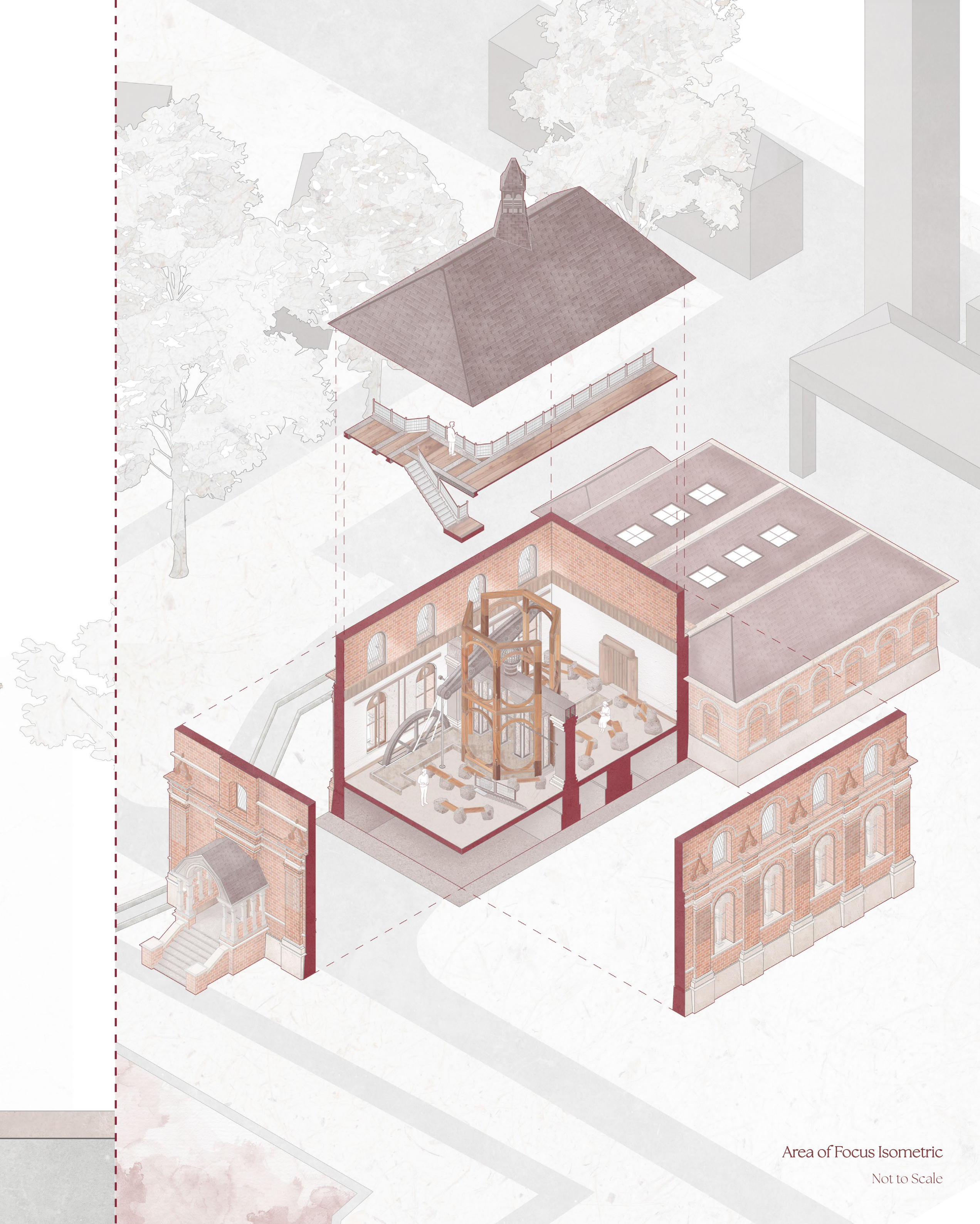
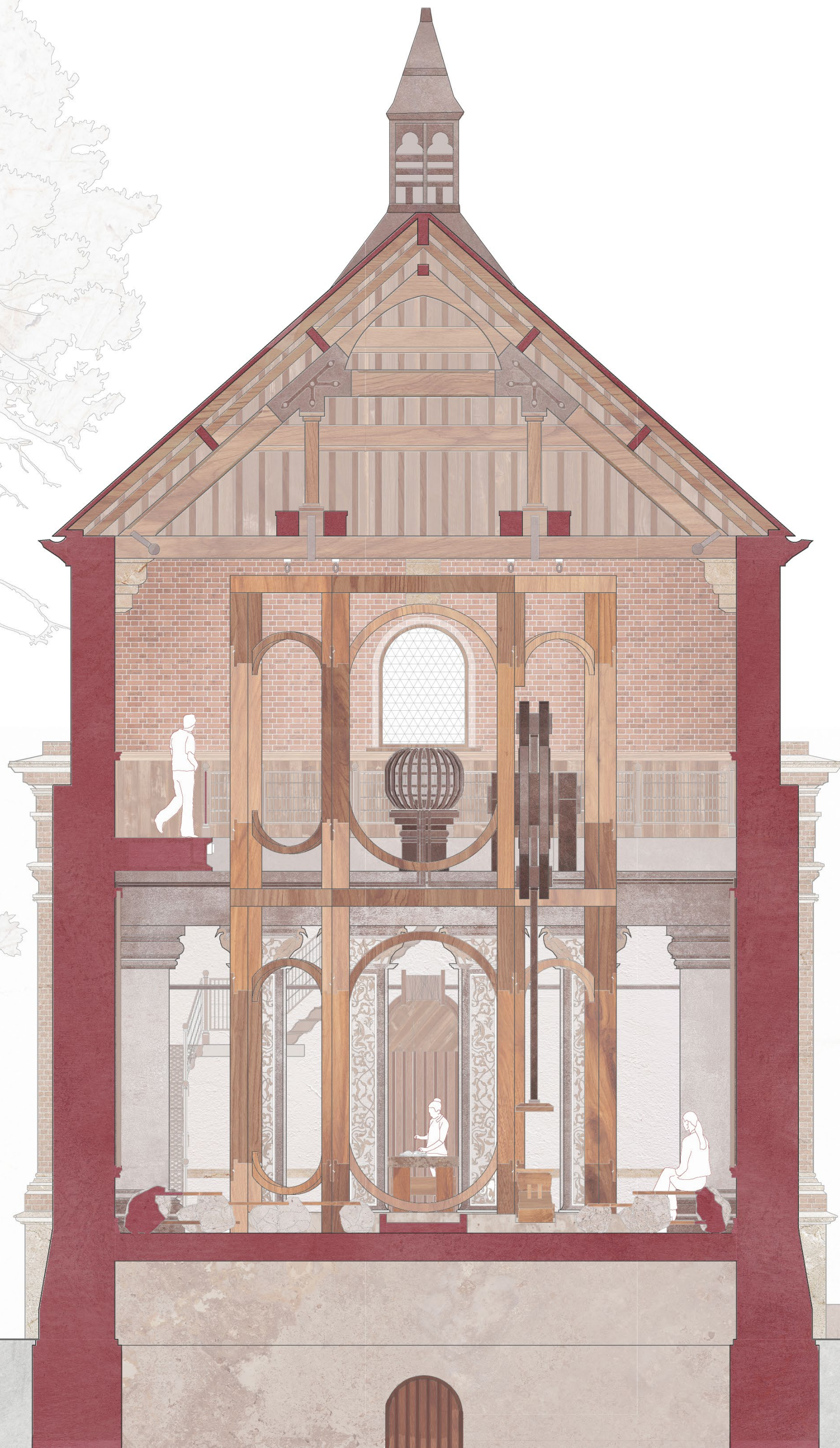
With the new energy source being a micro fusion reactor, the original steam-driven pistons are no longer needed, allowing the beam to be reimagined with new purpose while still honouring its mechanical heritage.

Repurposed Engine Beam:





Area of Focus Section AA  
Not To Scale



Area of Focus Isometric  
Not to Scale





Area of Focus Spacial Visual - The Binding Ceremony

# MATERIAL BOARD



- 1 Existing Brickwork**  
*Specification:* Brick walls are retained and exposed where possible. Reuse of original brick reduces embodied carbon and preserves historic character. No new material production required.
- 2 Handmade Paper**  
*Application:* Window blinds – filters natural light, softens atmosphere.
- 3 Existing White Plaster Walls**  
*Specification:* Retained and touched up where necessary. Preserving original finishes avoids waste and reduces emissions from new plaster production.
- 4 Stone**  
*Application:* Seating/ Furnishing
- 5 Existing Iron Beams and Columns**  
*Specification:* Re-purposed structural and mechanical elements. Retention reduces demolition waste and honours the building's industrial heritage.
- 6 Existing Brass Decorative Ornaments**  
*Specification:* Preserved as found. Brass is highly durable and recyclable, contributing to the embodied history of the space.
- 7 Terrazzo**  
*Application:* Walls in paper-making space.
- 8 English Oak**  
*Application:* Timber frame (Japanese joinery) and furnishings.
- 9 Dark Walnut**  
*Application:* Timber frame (Japanese joinery) and furnishings.
- 10 Concrete**  
*Application:* Podium and Pathways