



UNPACK REMADE MATTERS

A Building Material Re-Circulation Hub with A Community Library

Unpacking a leftover structure while creating a material recirculation hub with a community library, the project is made with secondary timbers and reclaimed bricks. The building breathes into open air and invites the urban inhabitants to flow through the promenade of remade wonders. By looking at unused structures and changing communities, the project sees urban existence as building material inventories, awaiting for practical sustainability to create forward momentum.

REMADE MATTERS proposes the creative and sustainable adaptation of a 2,200 m² industrial structure—an overlooked remnant of North London's manufacturing past—set within a 10,300 m² site. It establishes a significant educational hub for people of all ages, providing accessible learning spaces that serve the local community. At its core, the project functions as a live testing ground, showcasing innovative structural fabrication and material reuse. Through the construction of 1:1 prototypes, it explores future-facing assembly techniques using secondary timber sourced from wood waste, alongside reclaimed brickwork, to promote circularity in building material stock and construction practices.



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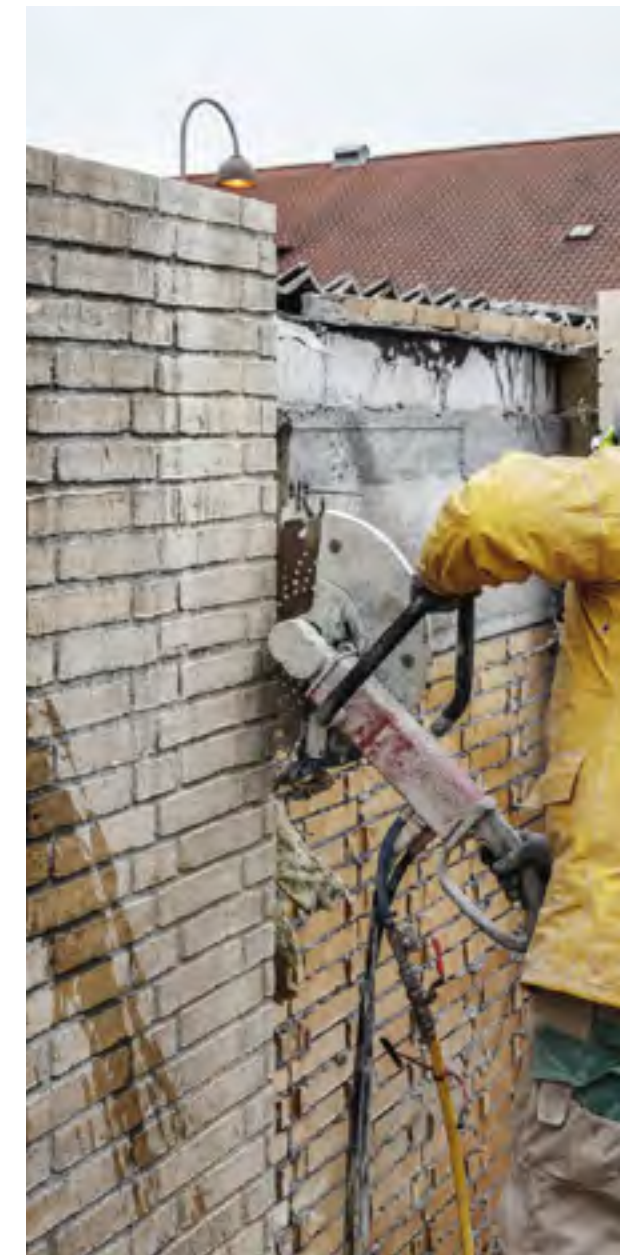
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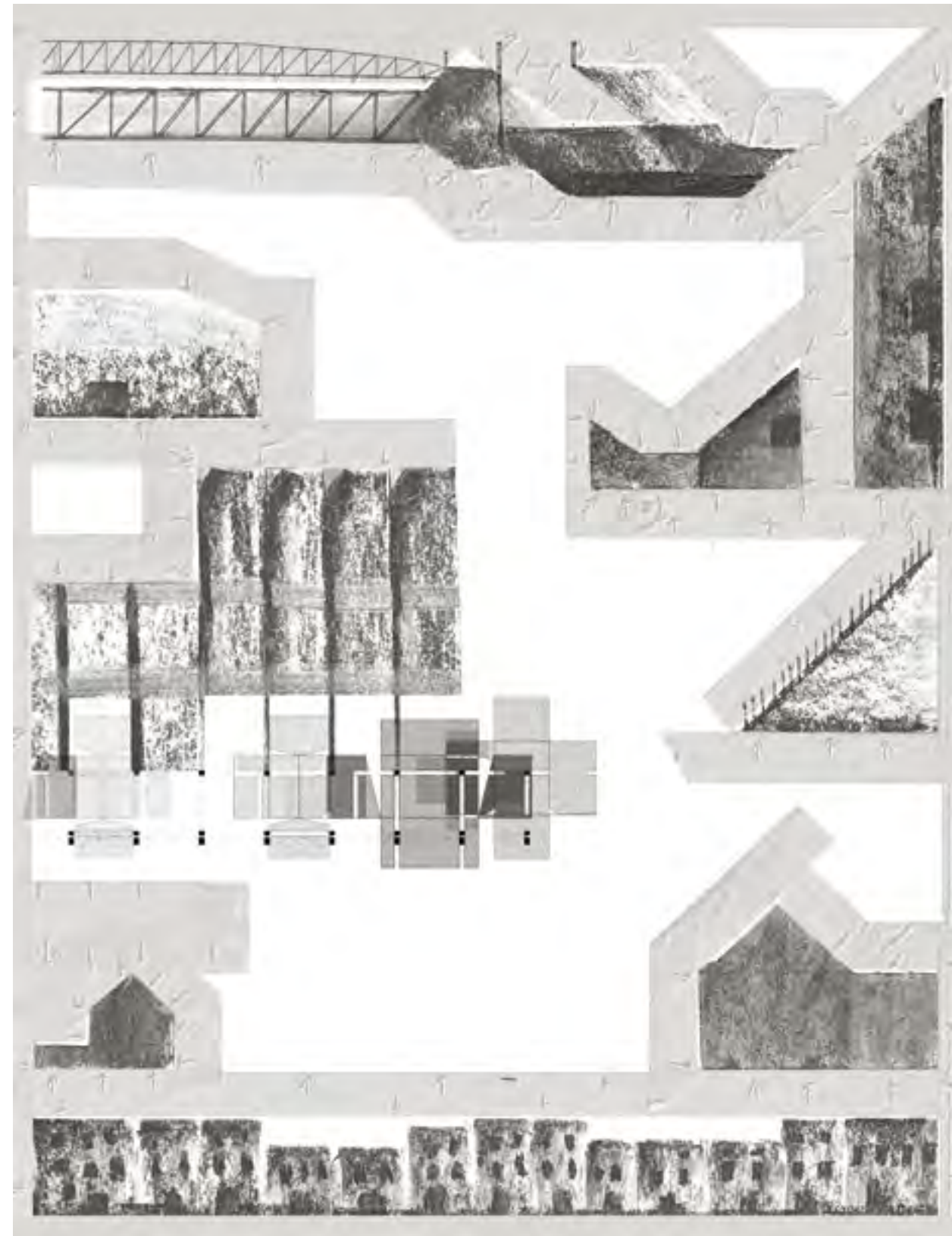


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Contemporary Practice on Circularity in Construction

Architects create with real life materials. To bring sustainability out of rhetoric and into practice, prototypes and built projects have been attempting to integrate "circularity" into construction, and further deconstruction processes. They see existing buildings or secondary materials as a forward momentum.

1. Modular System of OSB Cassette, BlokBuild, UK, current
2&3. Prototype trusses by Discarded Wood, WoodReFrame, Denmark, 2023
4. Modular Wall by Reclaimed Timber, Omtre, Norway, current
5&6. Resource Rows, Lendager, Denmark, 2019



7

Finding Fragments

Collecting fragments from reality which I see as inherently fractured, the process of cutting and pasting through outlines finds absence speaking as clearly as presence. Figures, partially kept from many visits, find their place through shifting positions. The city is a perpetual process of accumulation and release.

Ending Edge to Threshold

Given it is a current ending edge along an urban ecological passage, how can we enhance the quality of life through a meaningful threshold for the surrounding neighbourhood? By looking at unused structures and changing communities, the project sees urban existence as building material inventories, awaiting for practical sustainability.



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1. Finding Fragments through Figures, @A2
2. Site Mapping, 1:8000 @A2



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Coal Plant to Waste Collection

The site was Millfield Power Station from 1901 to approximately 1969, partially demolished in the 70s, leaving the side office and storage house on the site, with the main coal production plant demolished.

An Urban Back of House

The most recent change happened in 2009 when Hackney Council placed Millfield Waste Depot on southeast corner adjacent to the site. This stretch of the River Lea then becomes a back-of-house service space behind the apparent greenery around it, rather than a space connecting the community to its ecological and industrial past.

1. Historical Photograph of Millfield Power Station, 1950-1969 , Wikimedia Commons
2. Current Existing Building, author's photograph
3. Site General Area on Historical Map before 1970
4. Site General Area on Historical Map after 2009



Social Initiatives among Repairing

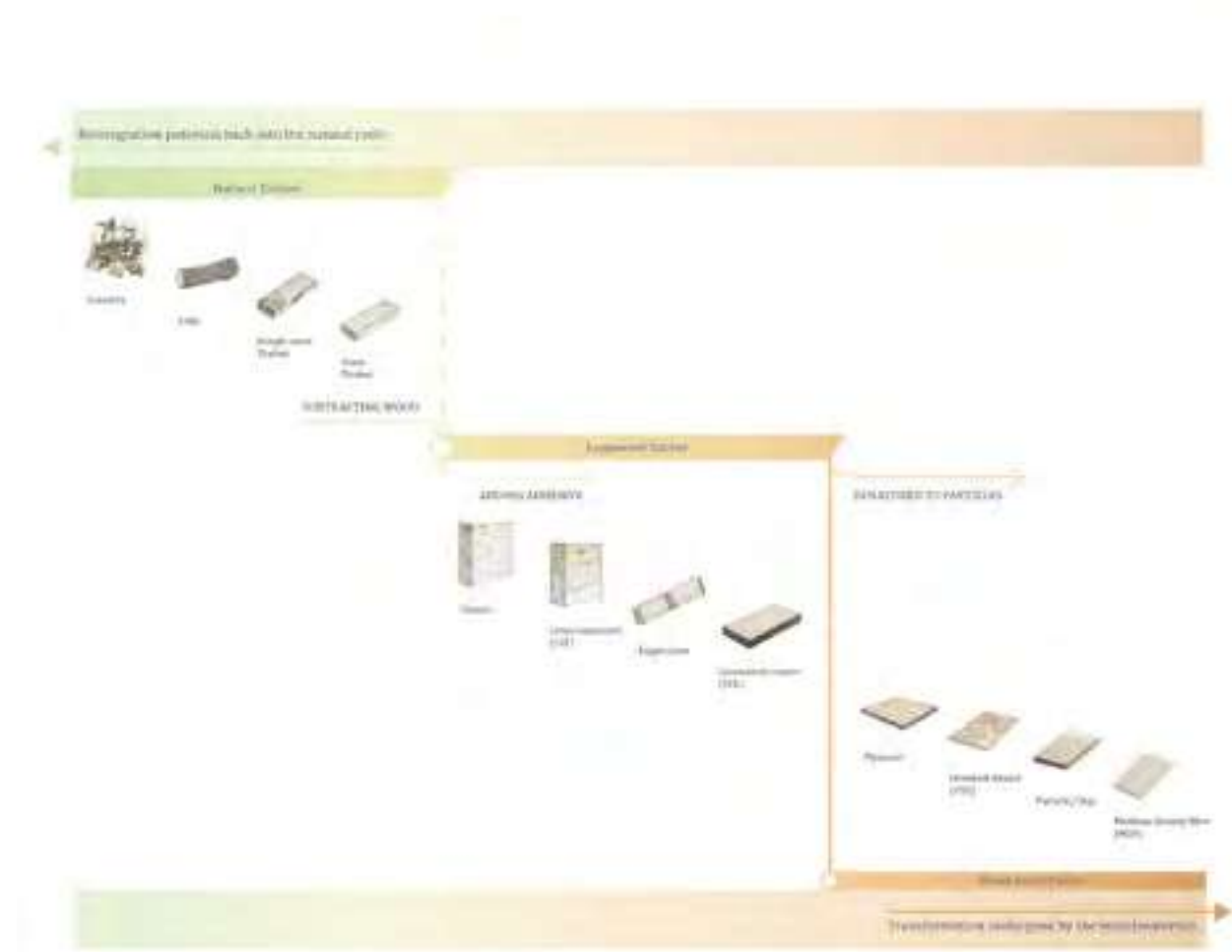
Around the site, gradually the condition has been improved community initiatives, like Hack-ey School of Food at the elementary school across the street. On the other hand, there are repairing on council housings around indicating aging of the buildings in this neighbourhood.

Trial along waterway

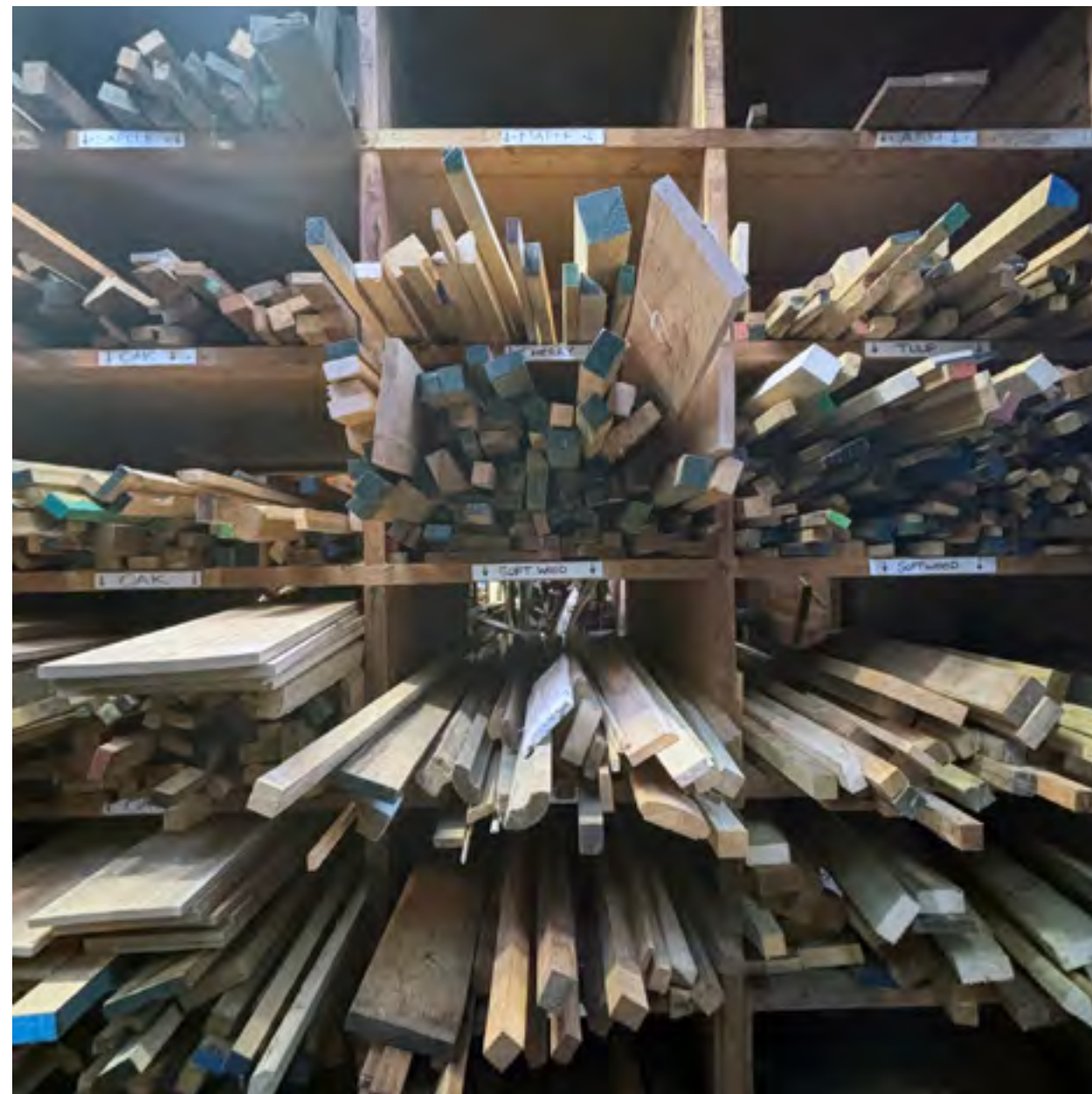
Former material transport routes along the water have gradually transformed into informal leisure spaces, calm while neglected, offering retreat spots while reflecting the uneven conditions of transitional urban edges.

Greenery in Patches

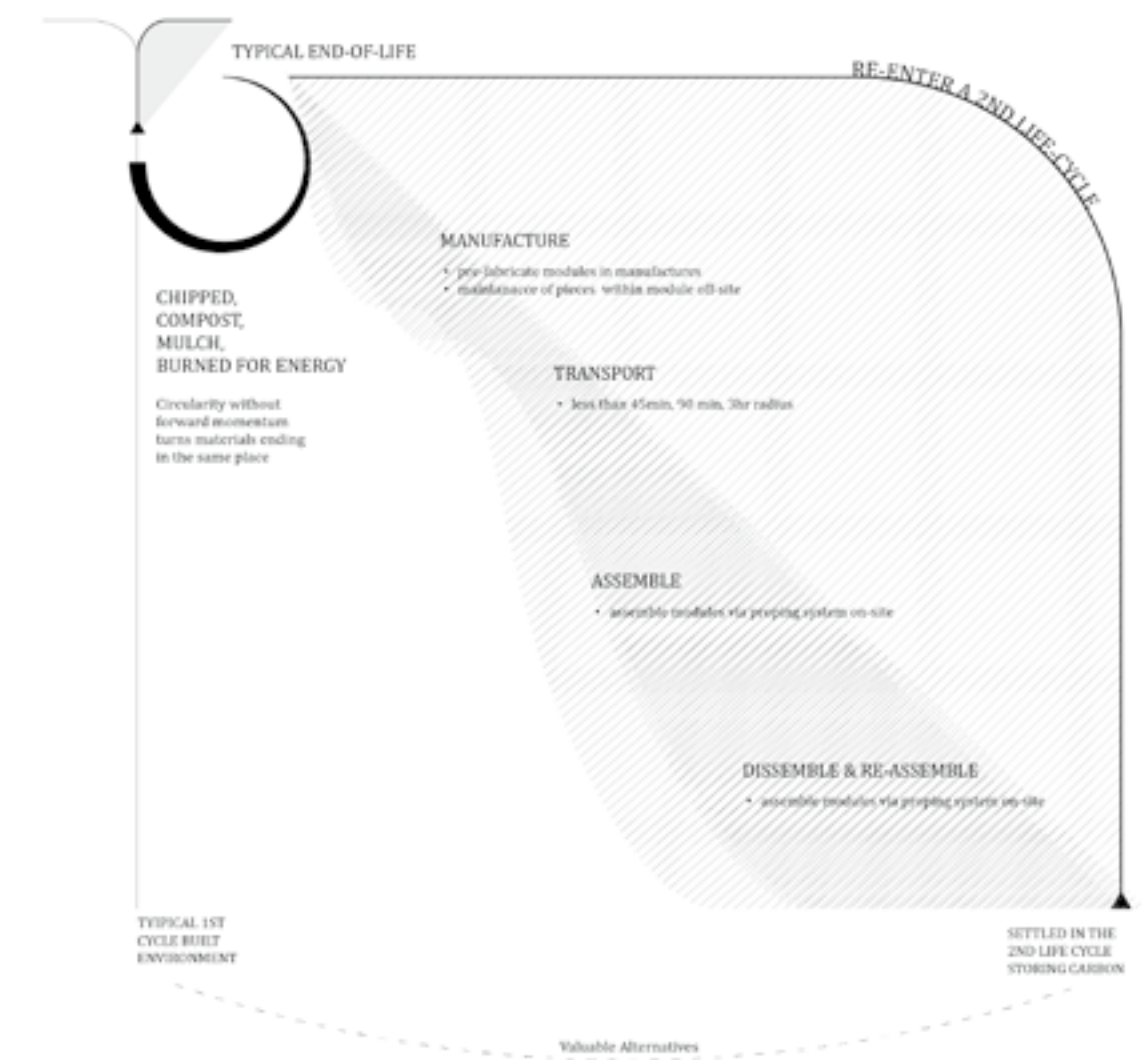
While parks and orchards provide valuable spaces for community well-being, an overemphasis on leisure-oriented development can deter long-term ecological and social resilience.



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Slow Tree and Fast Timber

As a piece of wood travels through its native ground into a manmade built environment, slow trees become fast timbers. My practice is driven by fabrication of wood, and in particular, the **/contradiction/** between slow trees and fast timber has brought me to investigate the secondary timbers in the context of material circulation practice.

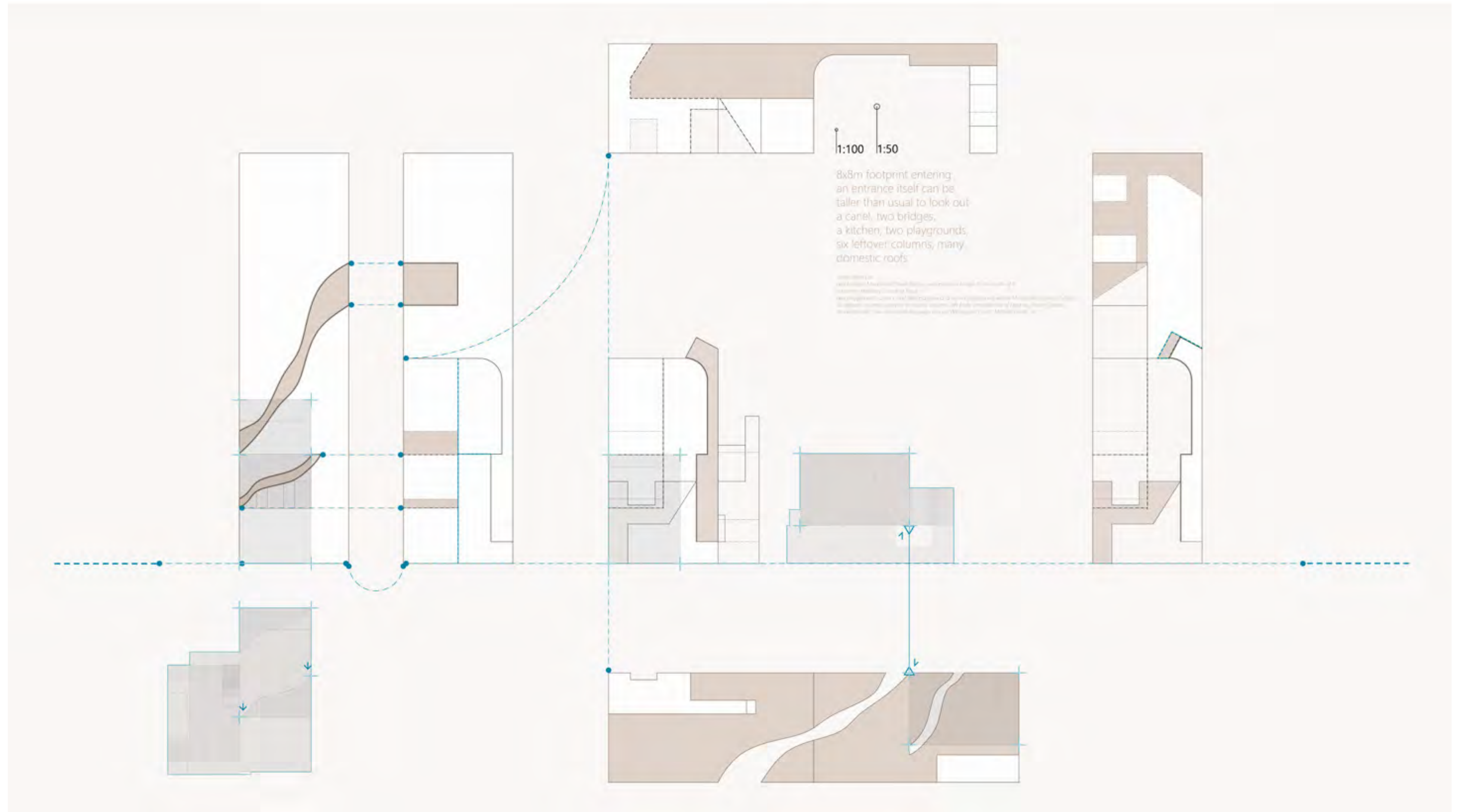
1. Timber Offcuts at a Timber Shop, London, author's photograph
2. Degree of Processing for Common Timber to Wood Products, author's thesis extracts
3. Re-enter second life-cycle to create valuable alternatives, author's thesis extracts



Wood as A Totem

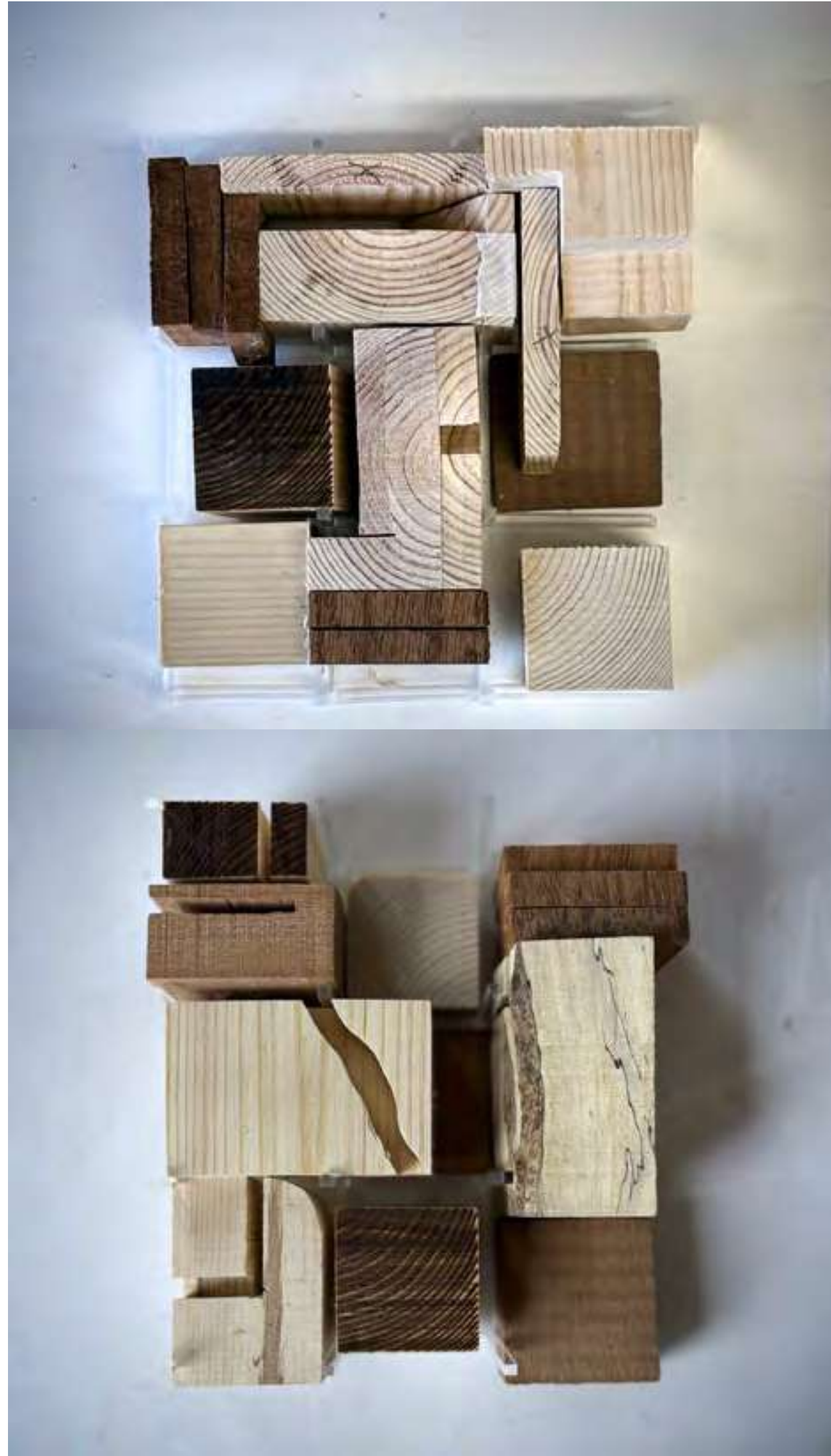
A totem is a collection of figures appearing and reappearing in a city. Ideas that emerge from a maker's hands combine them through a stereotomy process which aiming to carry the tradition of wood carving. It controls the input, but not controls the outcome.

Wood Cut Totem, Before Reformation, During Transformation, After Reformation



Cuts and Offcuts

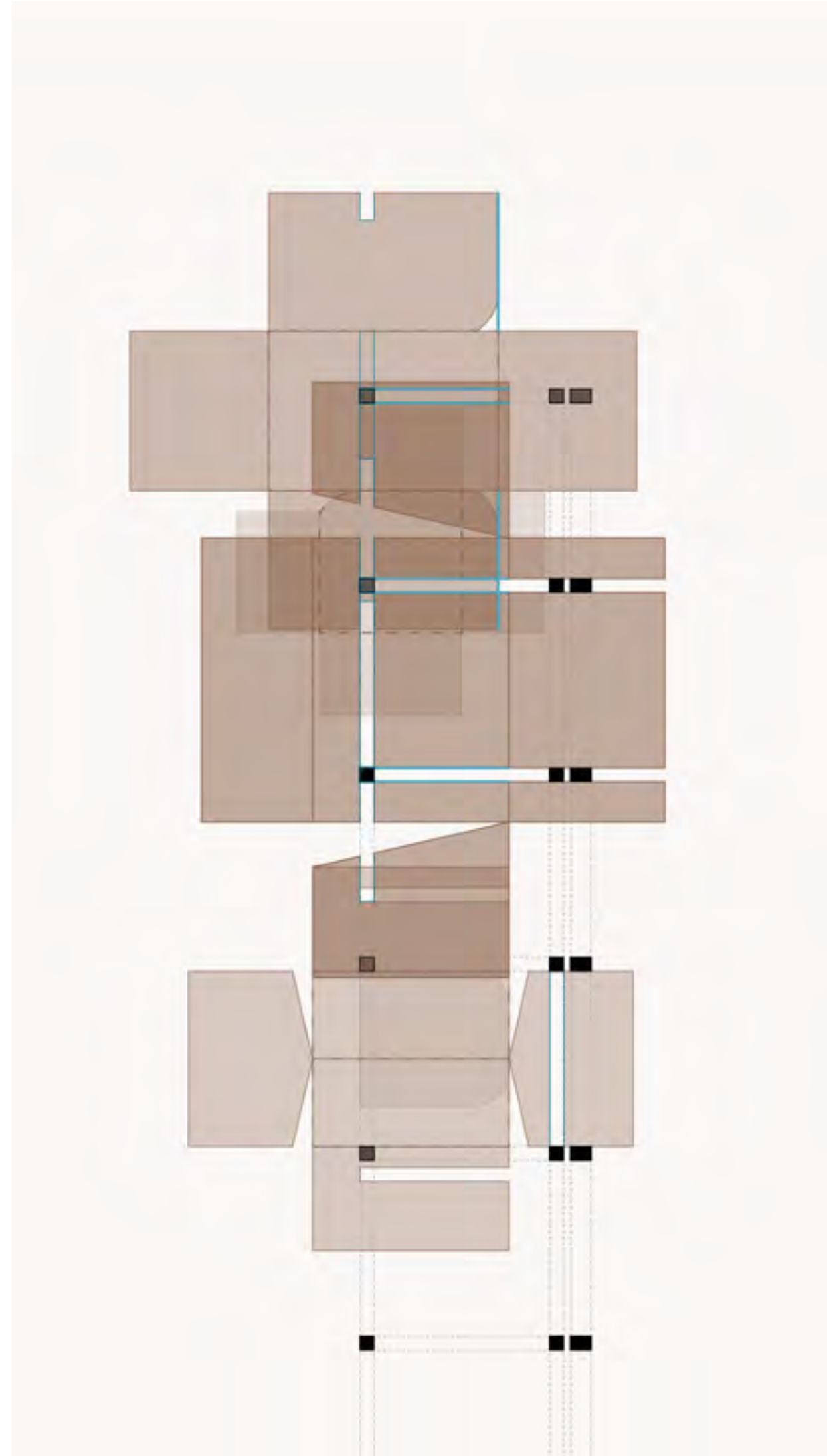
This becomes a practice that equally values designed cuts and undesigned-offcuts. Offcuts from larger-sized entities are seen as input materials for smaller-sized pieces, which can be further empowered. This is essential in thinking through the imperfection of given materials in the process of remaking existing buildings.



1

Iterate through improvisation

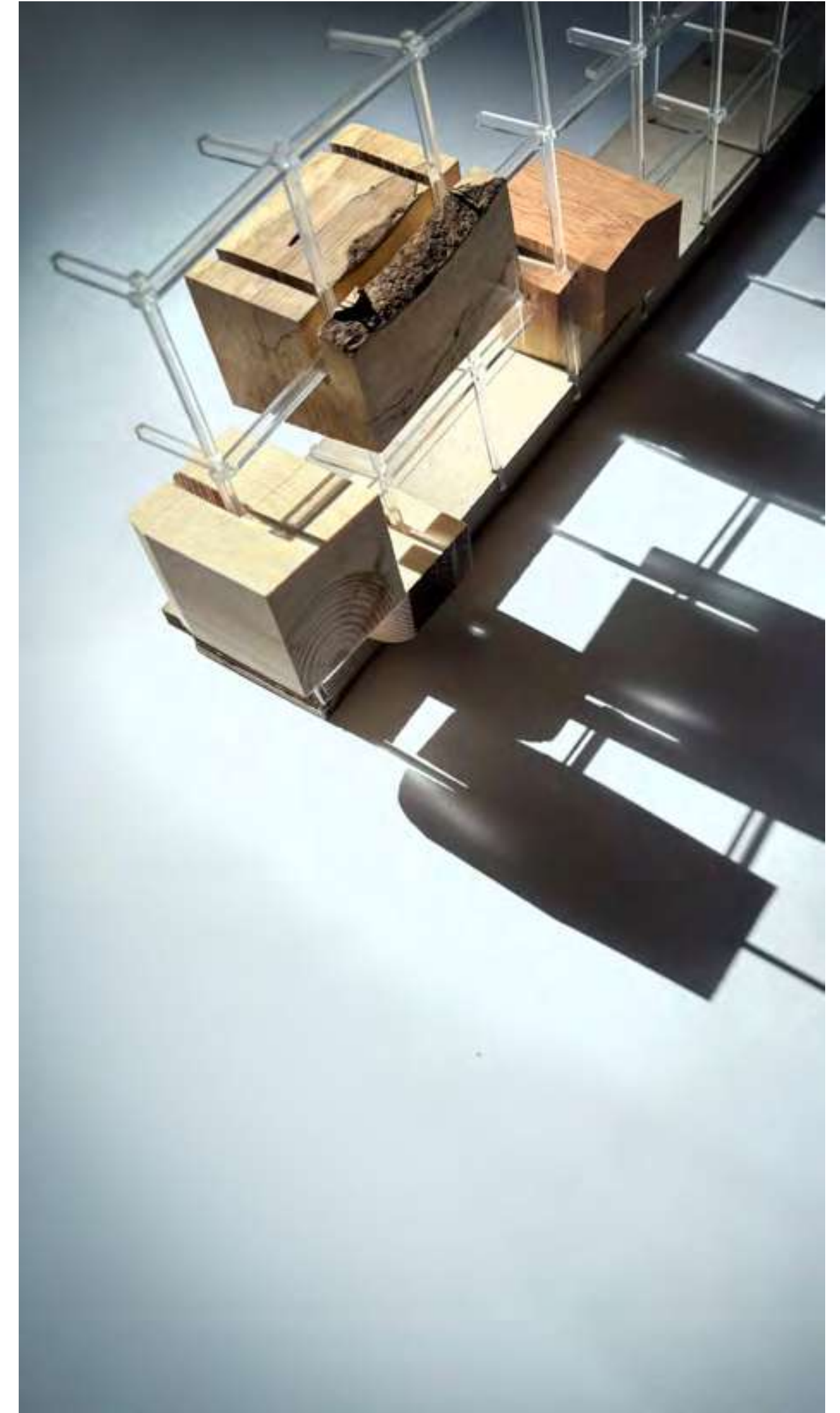
With the dimension from the leftover structure on site, further iterations consist of improvisations to design for a sequence of volumes threaded onto the ghosted grid, lifting reading rooms for the community library space.



2

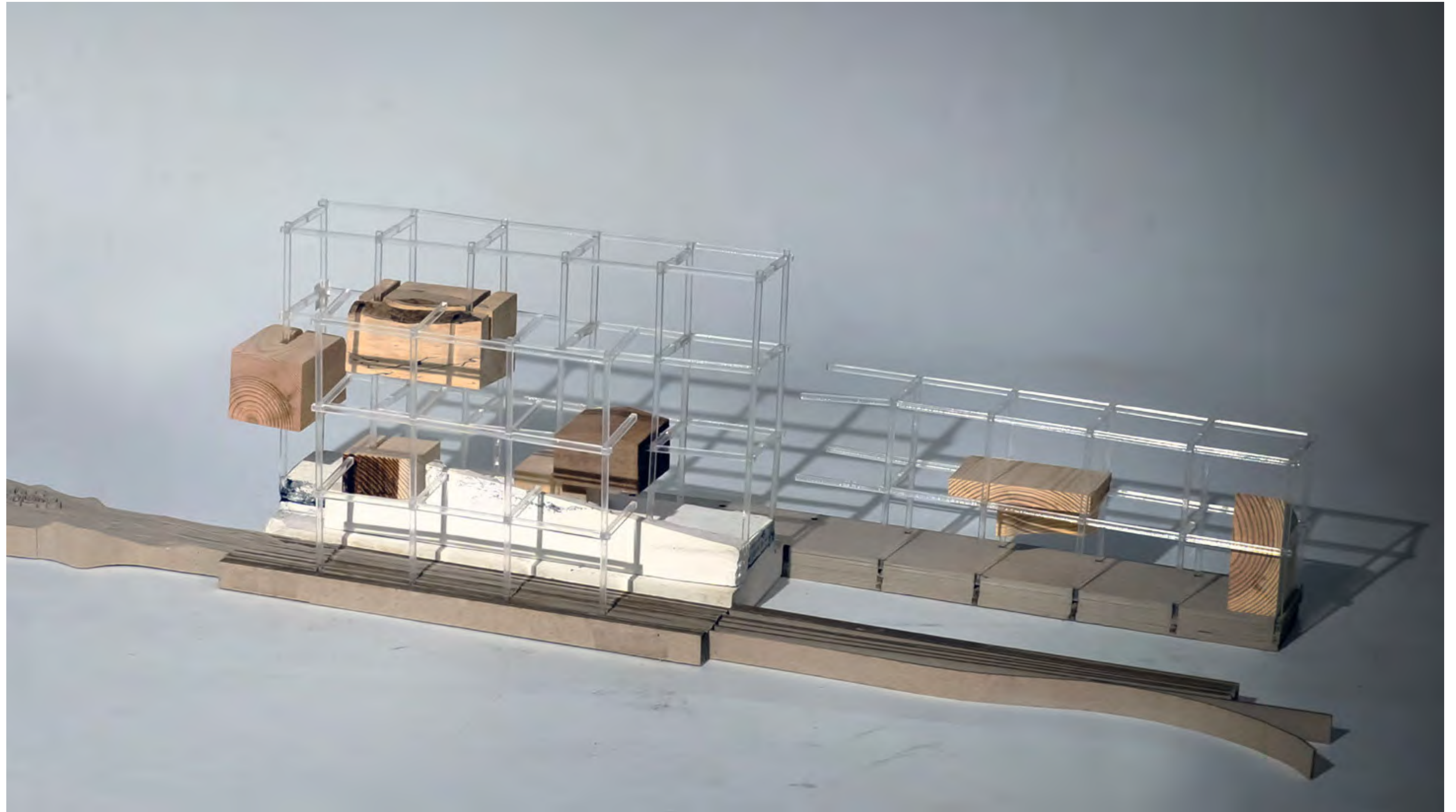
Unpacking Drawing Exploration

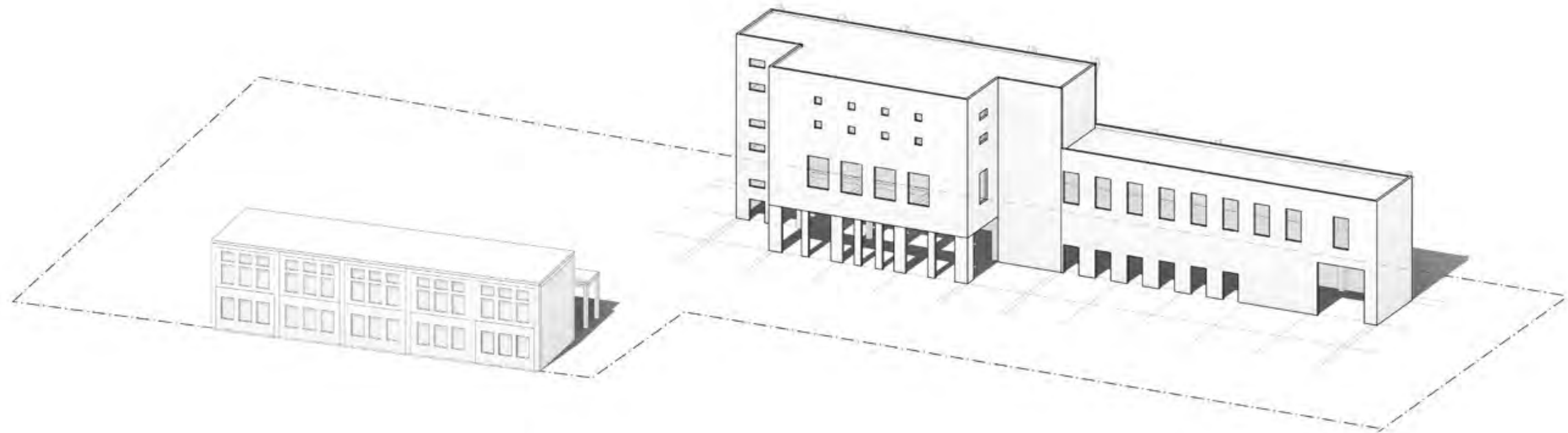
For these iterations, I continue to explore "unpacking" drawings to project individual volumes onto what's adjacent, in searching for direct or subtle relations.



3

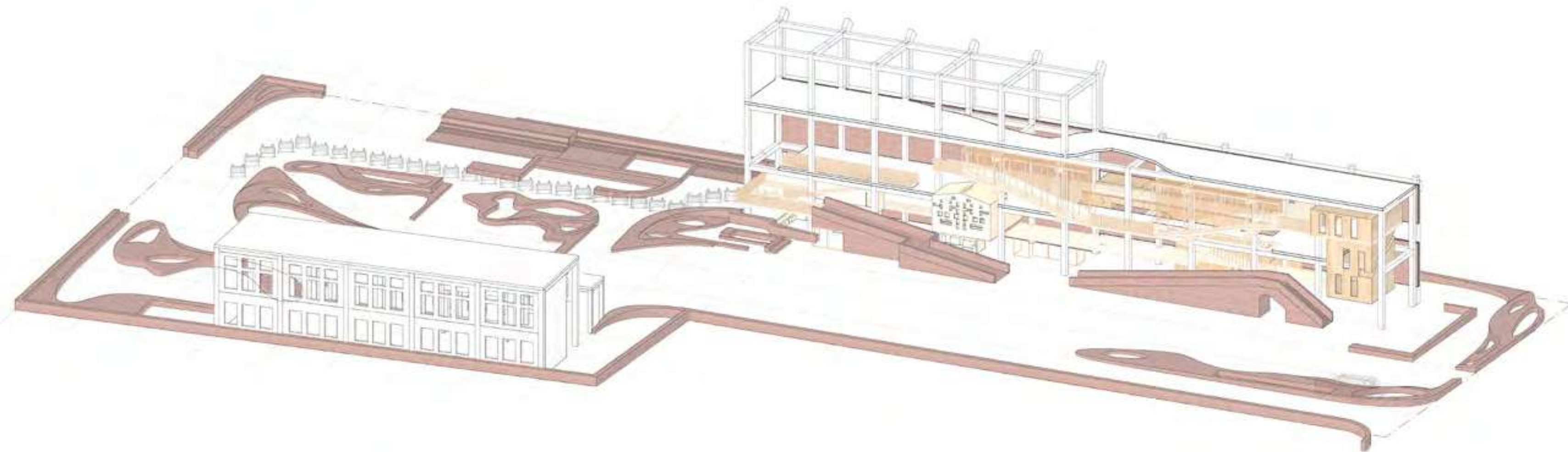
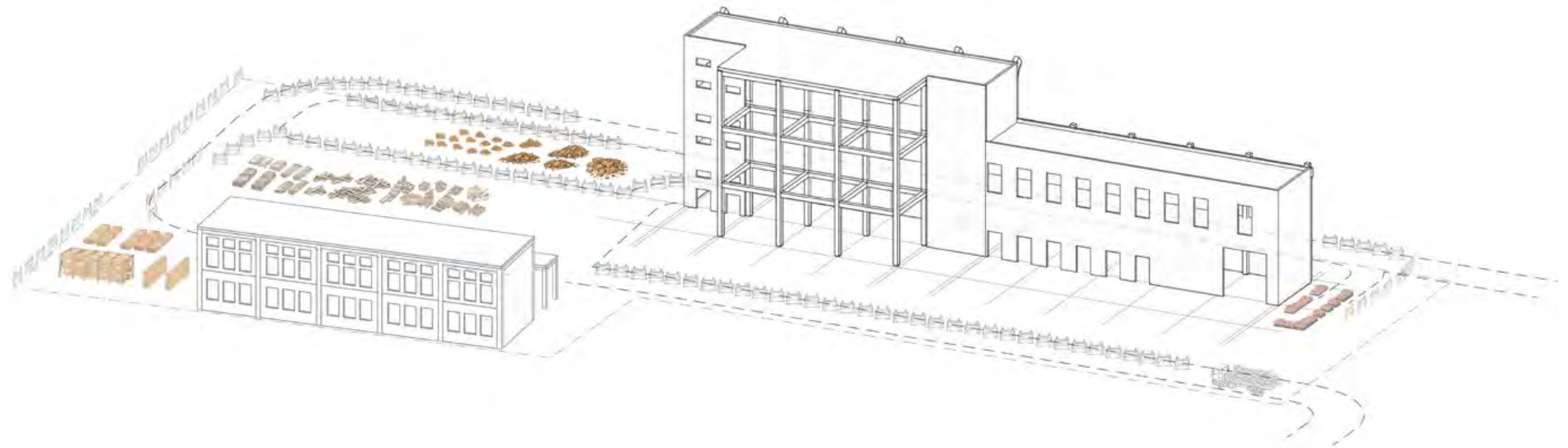
1&3. Totem with Leftover Structure , Process Models, 1:150
2. Unpacking Drawing for Wood Cut Iterations





A Leftover Structure

The main existing building starts with 1000 m² on the ground floor, xxx 1200 m² on the first floor and second floor. The remaining structure on site are two concrete and masonry buildings, which served as the annex for the previous coal plant, standing in isolation from the residential and educational space around.



From Existing to Reassembling

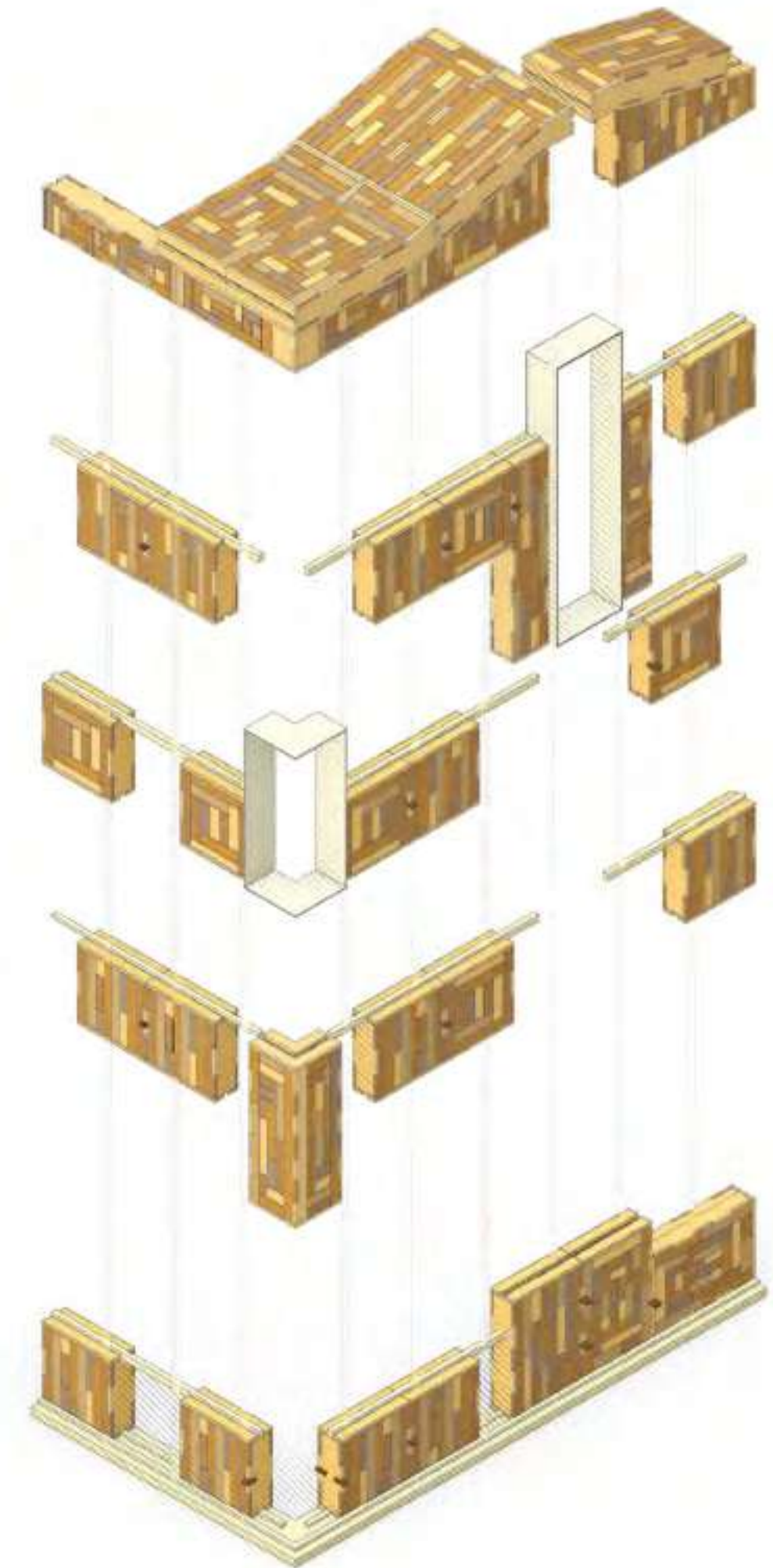
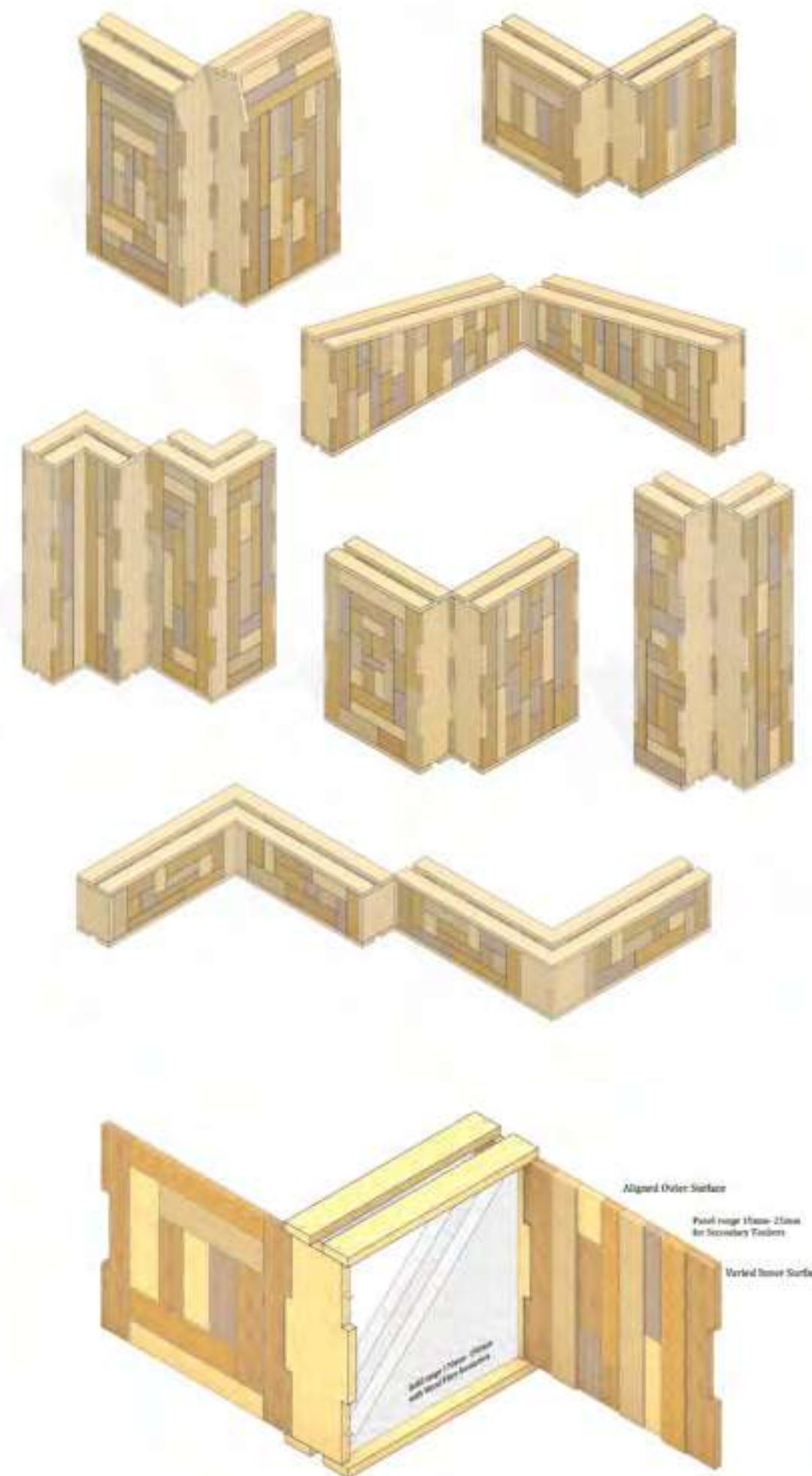
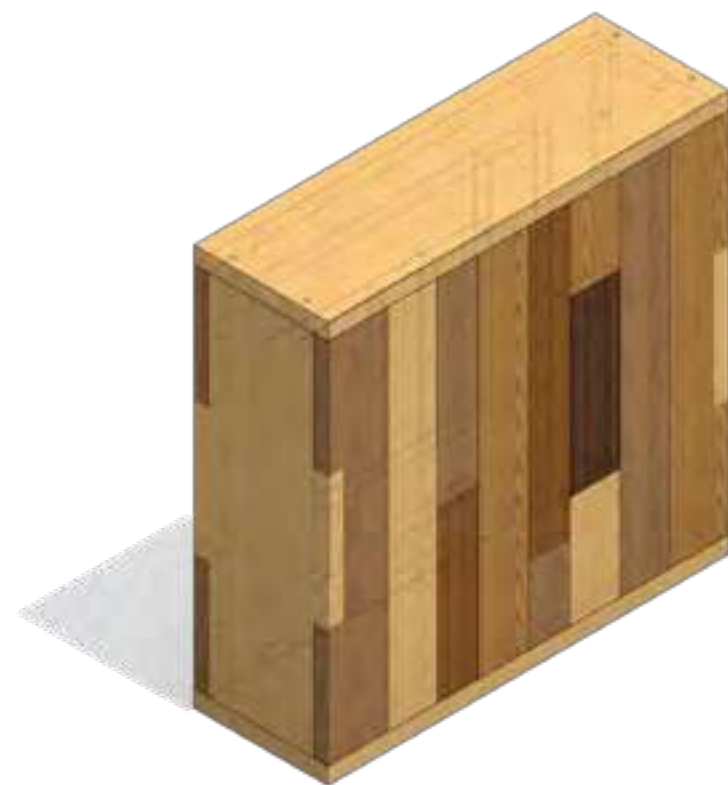
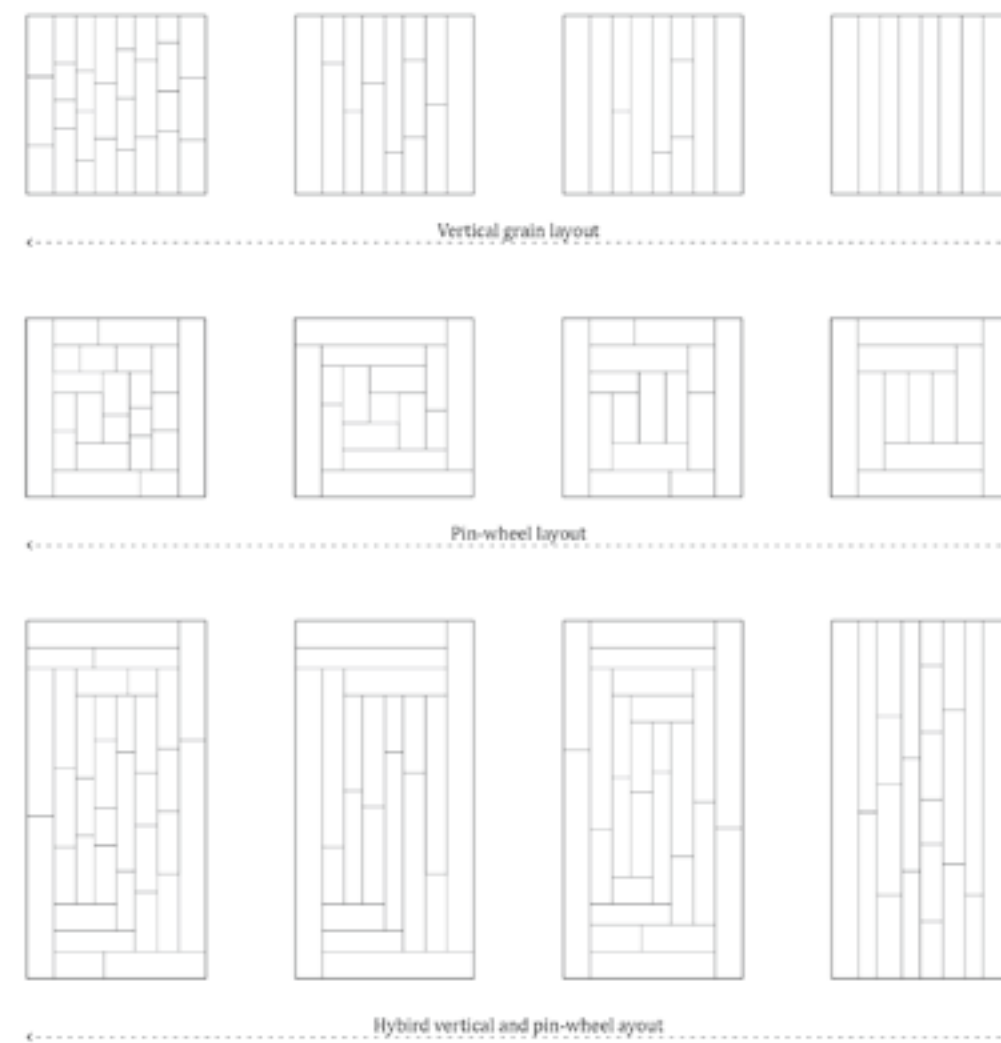
Excessive building volume gradually being disassembled, while wood waste from domestic renovations in the nearby neighbourhood being delivered to the site, sorted and organized as the site going through a reconstruction timeline. Carefully dismantled bricks began to being sold at the front yard of the site.

Roughly dismantled bricks are mixed with crushed aggregates to make landscape planting pods. Panelised dismantled brick panels are reinforced to make ground-scape like ramps on going up into the mezzanine level above the ground.



From Existing to Reassembling

As the landscape emerges, so as the hanging ramps and workshop volumes by new timbers and library volumes by secondary timber cassettes. The site leaves its construction timeline and enters into semi-operational phase. Being a threshold on an ecological passage, the site is a testbed for recirculating end-of-life building materials.



Fabrication 1:1 Prototype: Secondary Timber Cassette

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This page: Diagrams Extracts from author's Thesis "Circulating Timbers: Prototyping Experimental Fabrication for Building Components Using Secondary Timbers"
Next 7 pages: Secondary Timber Cassette, author's photographs





Fabrication 1:1 Prototype: Secondary Timber Cassette

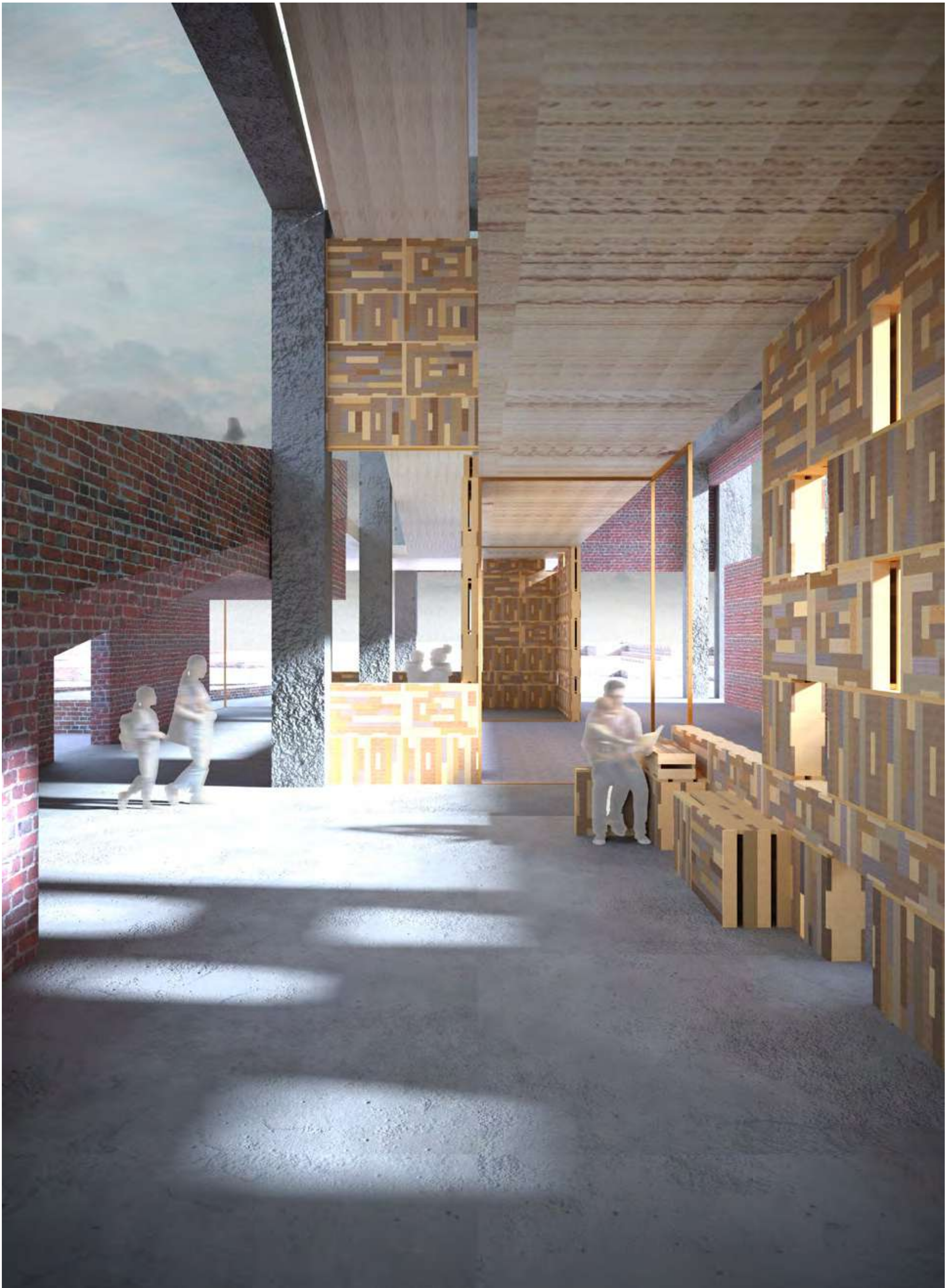
It aims for designing for disassembly by keeping all the joining methods as dry connection through a minimal trimming process.





Fabrication 1:1 Prototype: Secondary Timber Cassette

Through iterations of physical experimentation, the fabrication methods attempts to reach a structural integrity with lightweight machinery and hand-based crafting process.



Entering Remade Matters

Upon entering the building, the ramps by remade bricks flows into the library circulating point that's made by secondary timber cassettes as partition wall and bookshelves, which filtering natural lights through the cutout on the southeast facades. Hanging timber ramps in between existing levels frame the double height vertical space.

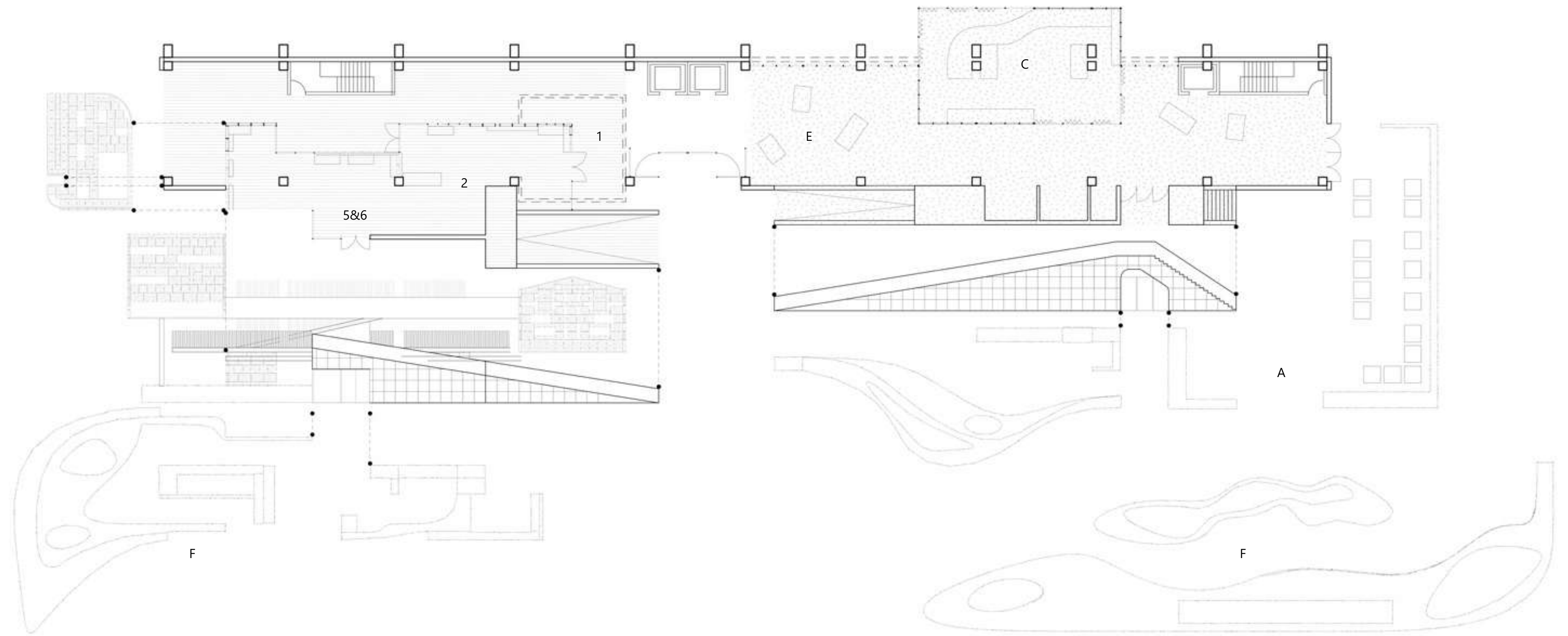
A View Looking at the Community Library on the Public Ground



Co-existing of Community Life and Material Second Life

The north edge opens to a community orchard, which is connected to Millfield Park on the ecological passage. The south edge links to Mandeville Primary School, where an ongoing initiative-Hackney School of Food- is. The east edge shares a driveway with the council waste collection for sorting materials by conditions.

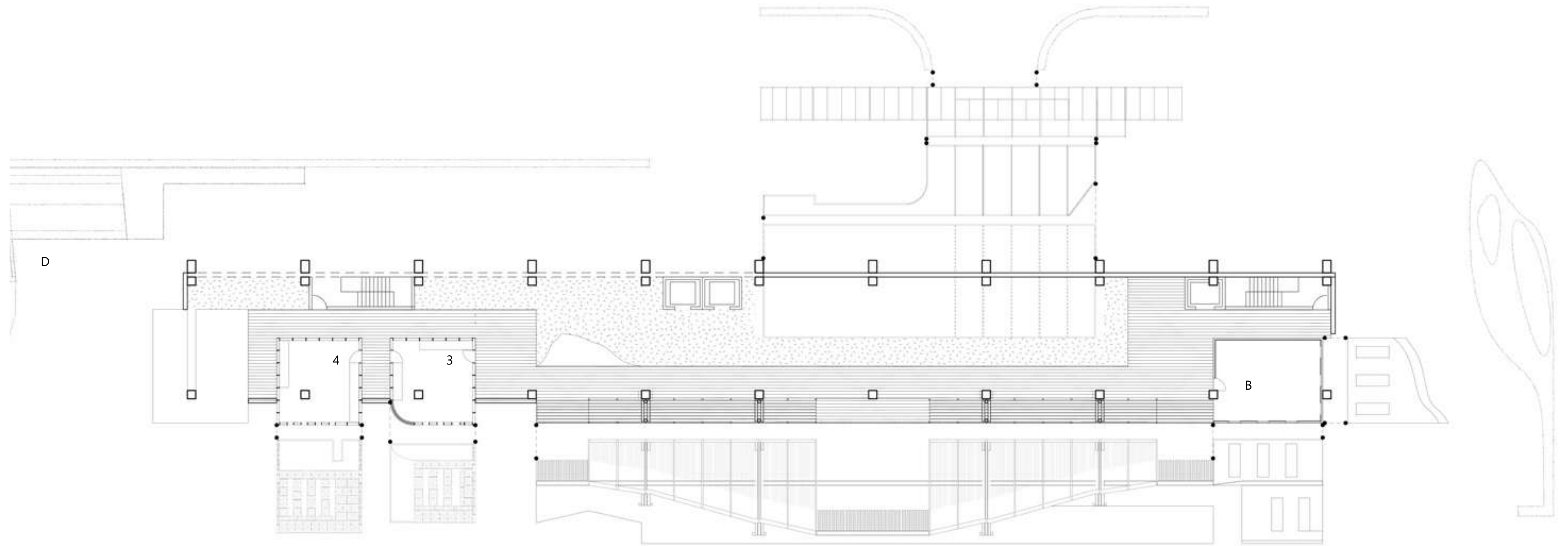
Ground Plan
1:300 @A1



Material Re-Circulate Hub

The Material Re-Circualte Hub leaps into a future practice of learning, recovering and playing with materials removed from existing building on-site and the surrounding neighbourhood. Collaborating with local contractors while testing the market scale for these materials and remade products, This is the bustling part of the building.

- A Material Re-Circulation Point (Retail)
- B Workshops: Wood and Timber
- C Workshops: Brick and Ceramics
- D Storing: Bricks and Rubbles
- E Displaying and Pop-up Show
- F Remaded Promenade with Vegetations



Community Library

The Community Library provides multiple reading rooms for different age groups, and a children's playground on the ground base, reaching out to the community orchard and Millfield park, serving as a mini-oasis for urban inhabitation. This is the quieter part of the building.

- | | |
|-------------------------------------|----------------------------------|
| 1 Book Library Circulation Point | 5 Journals, Cuisine |
| 2 Children's Books, Craft book | 6 Public Cafe/ Lunch |
| 3 Youth Literature, Natural Science | 7 Library Workstations for Staff |
| 4 Social Science, History | |

Unpack Building Plan and Elevation, First Floor, 1:100@A0



Elevating through Remade Matters

As the timber ramp rises to meet the mid-level concrete slab, the children's reading room is carved into the floor, lit by roof cut-outs. This level hosts workshops to the south and reading spaces to the north. Secondary timber cassettes contrast with new CLT, revealing different lifecycle stages and degrees of material processing.

A View Looking at the Wood Workshop and Displaying Space on the First Floor



Reflecting on Remade Matters

What does REMAKING means to a city? What is the line between a construction site and a building? The ending of the elevational sequence looking back at the existing building which previous materials have been removed, and proposed a back-of-future momentum where new fabrications of old materials being introduced.

A View Looking Back at the Spatial Sequence on the Mezzanine above First Floor



Remade Matters

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