



De Wever - A Textile Community Lab

Material research and textile production laboratory with integrated residence

What is the Intimate City?

light



Passage at Palais Royal

width



Passage des Panoramas

height



People waiting outside Gare de l'Est

light



Passage at Palais Royal

width



Passage des Panoramas

height



People waiting outside Gare de l'Est



Jewish Museum - Salons of the 19th Century



Antwerp & Het Eilandje

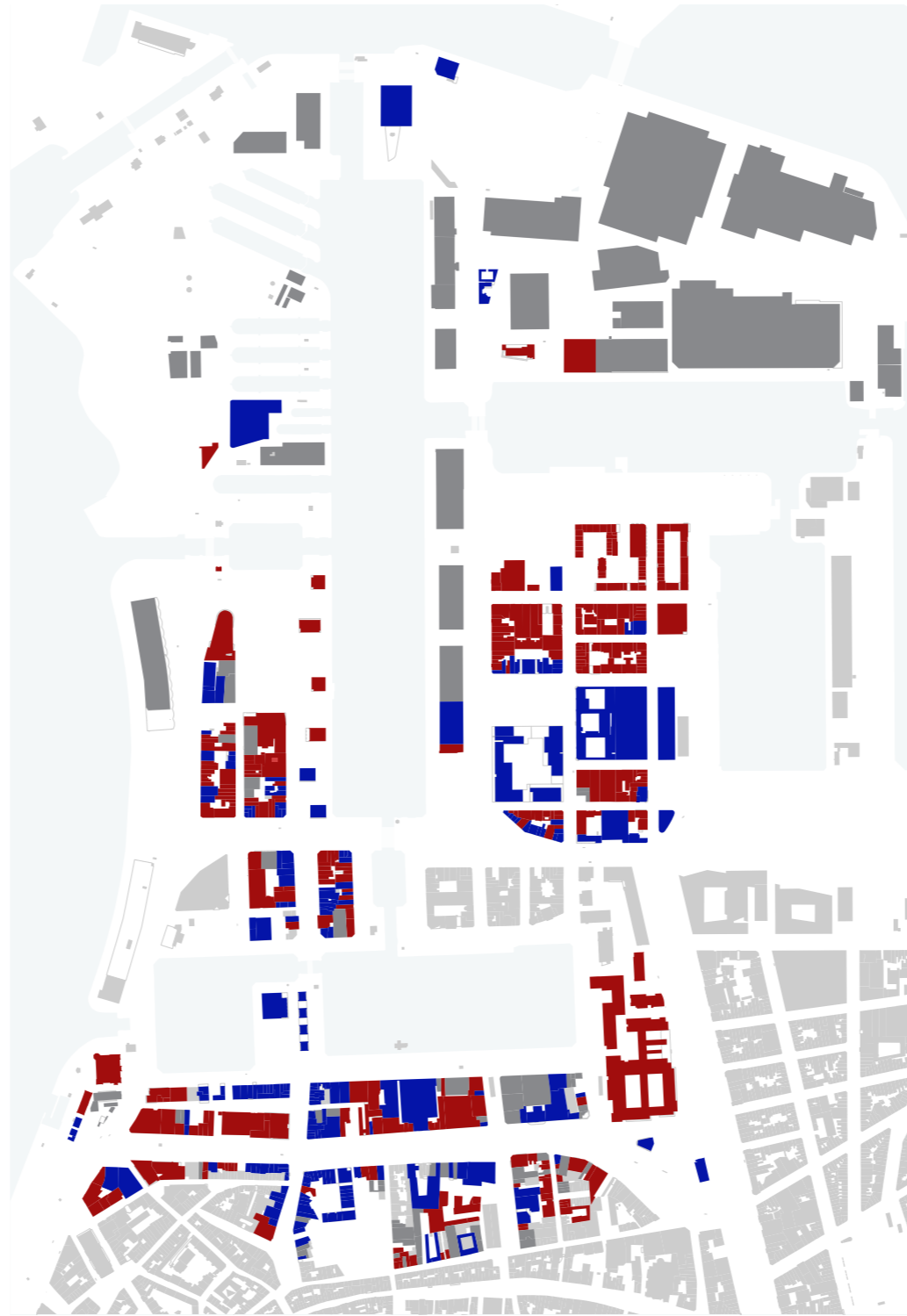




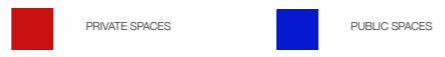


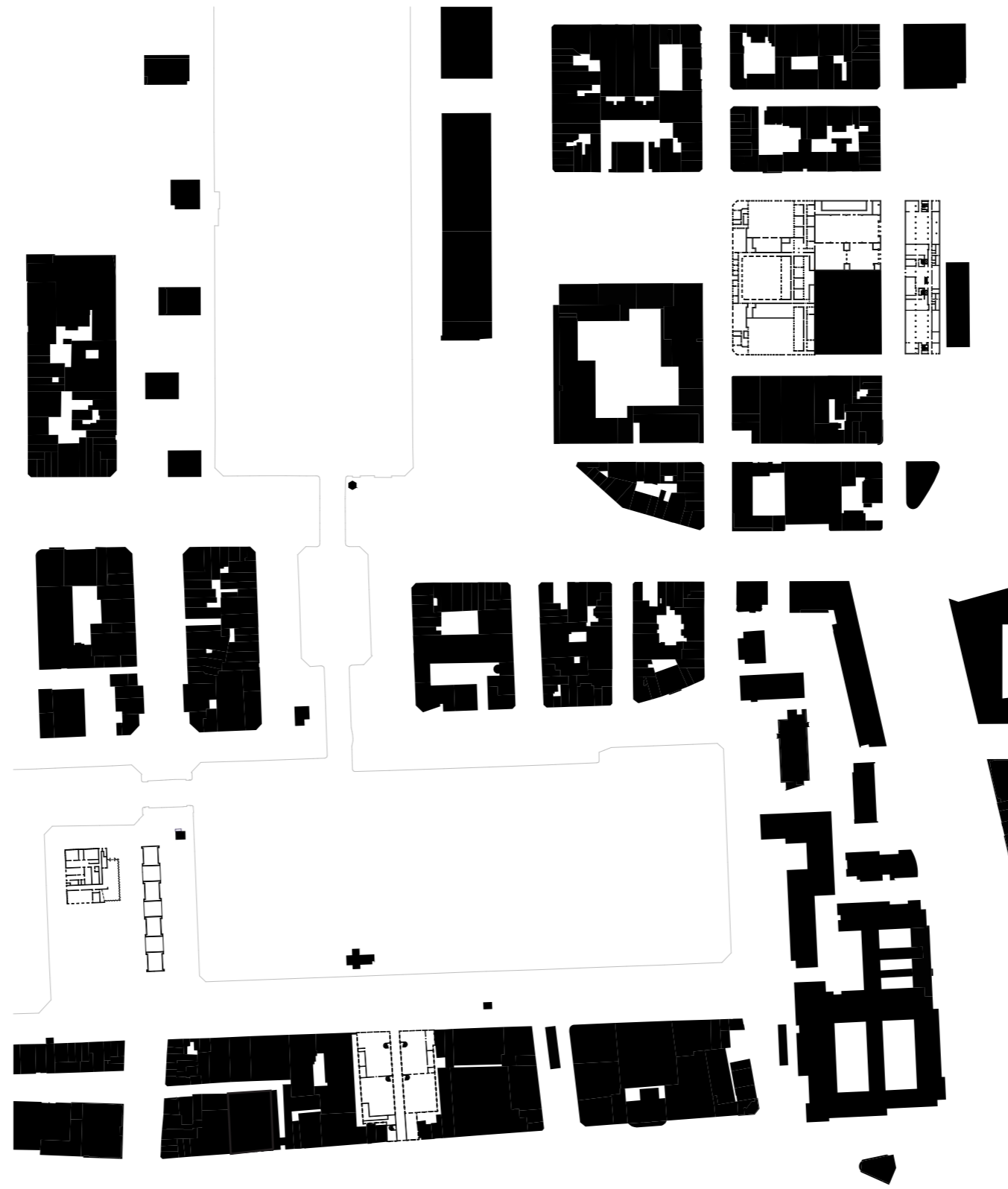


Het Eilandje Figure Ground Plan 1:10000



Public & Private Functions Ground Floor 1:10000





Nolli Plan of the Southern Part of Het Eilandje 1:2500







View from Oudeleeuwenrui



View from Oudeleeuwenrui eastwards



STAD ANTWERPEN STAPELHUIS RUBENS

TE HUUR
Kantoren

TE HUUR
Kantoren

1-046-033

1-6KL-638

1-154V-220



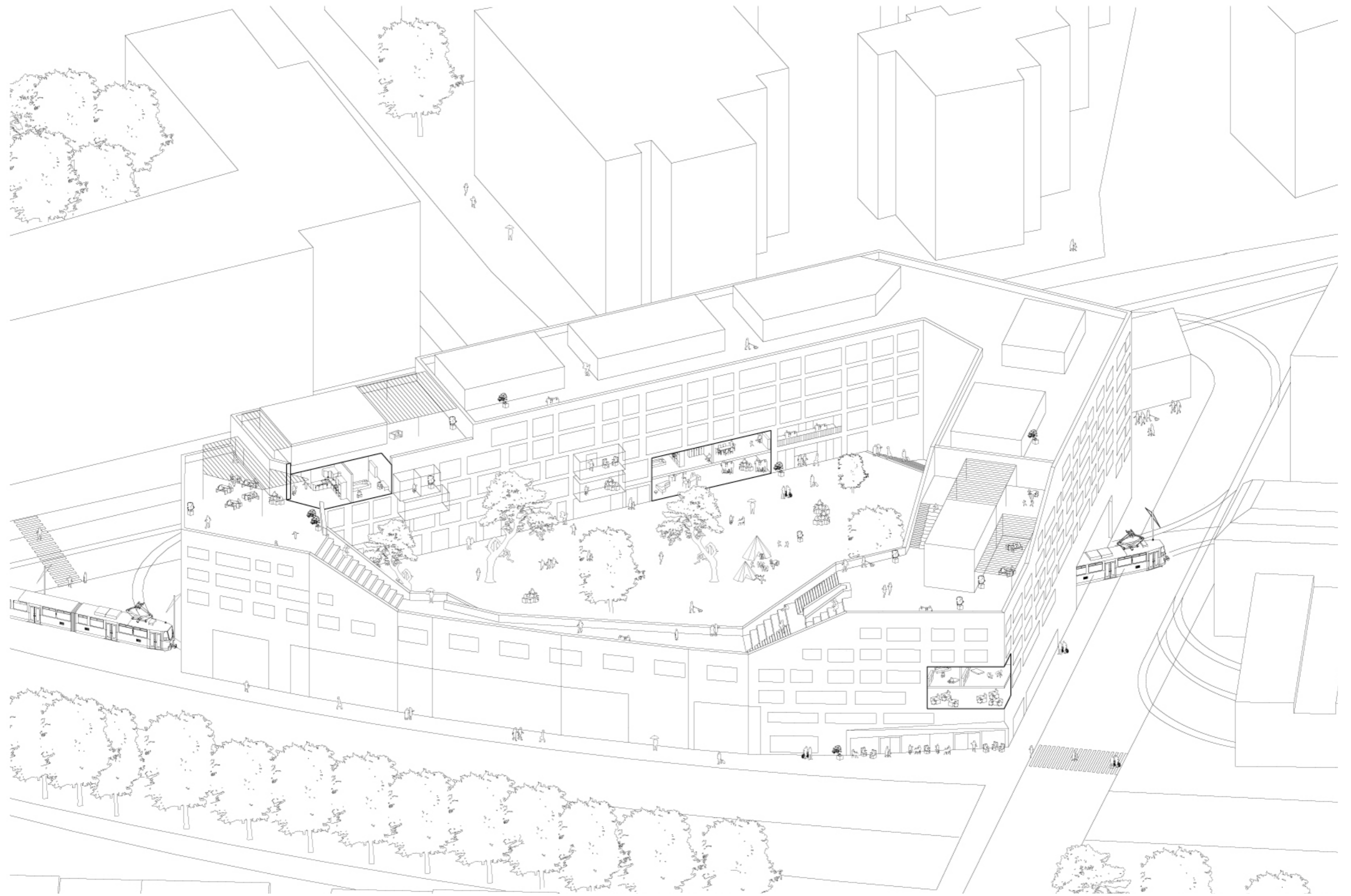
View into Spanjaardsteeg

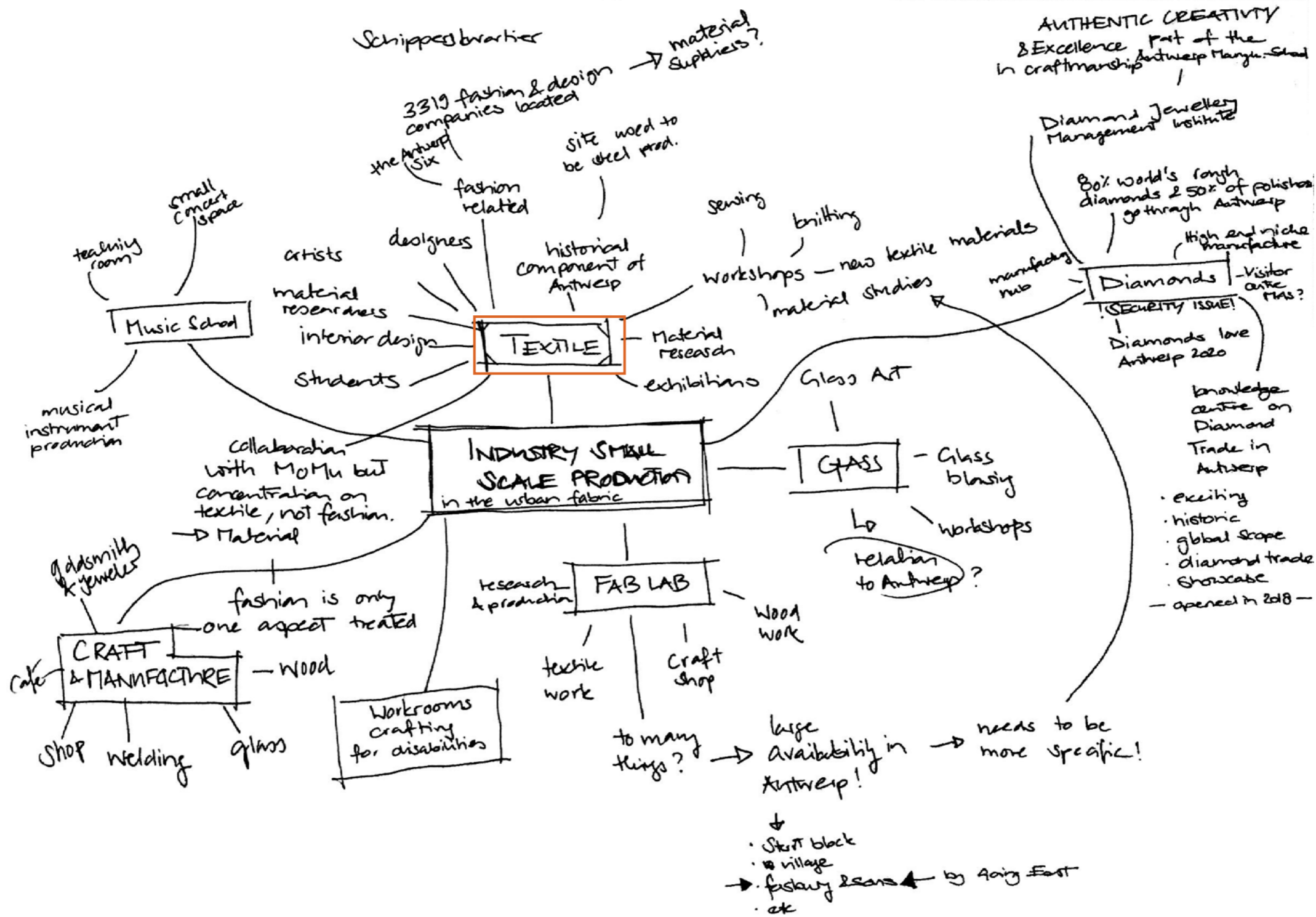


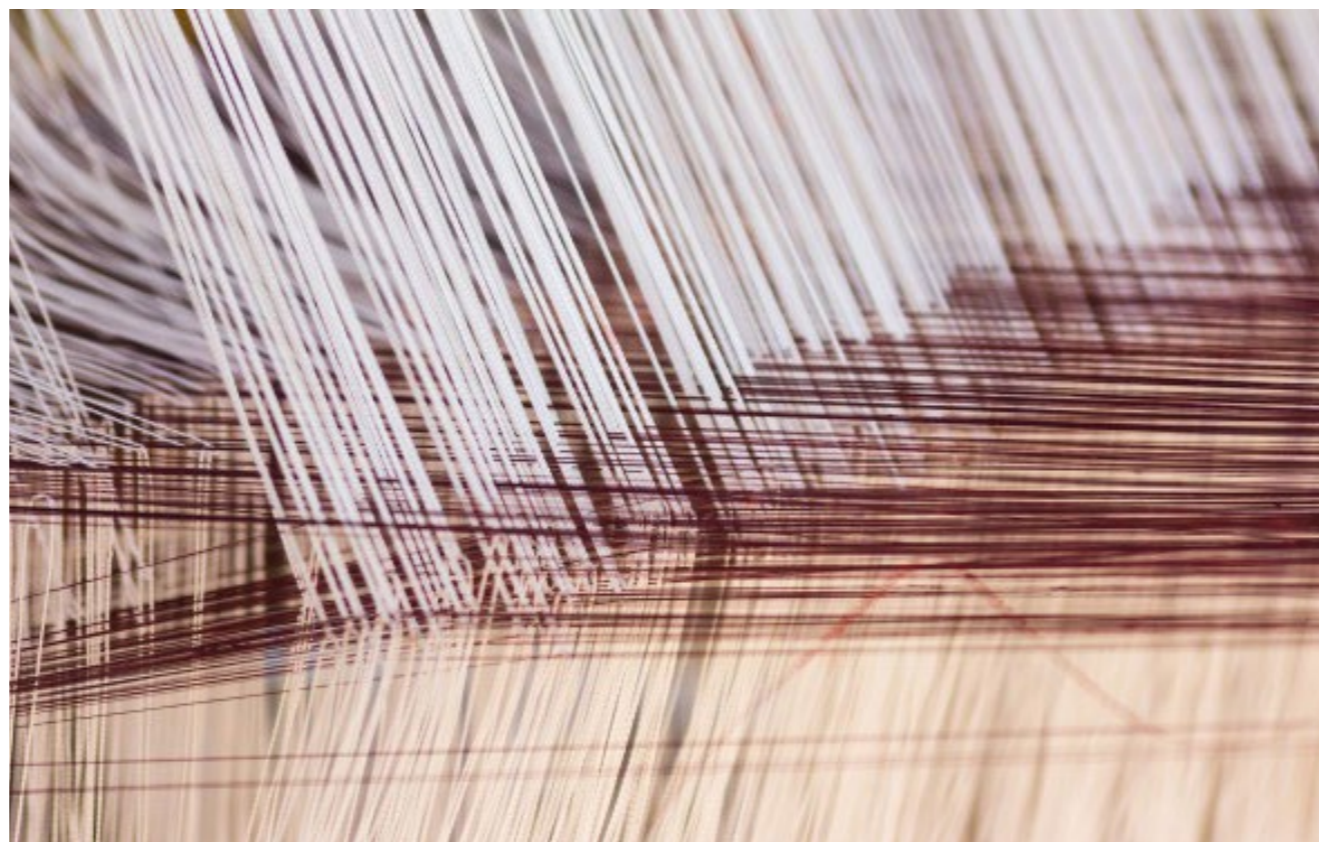


Oudeleeuwenrui | Northern Side

The Productive City
where producing industry and housing can coexist

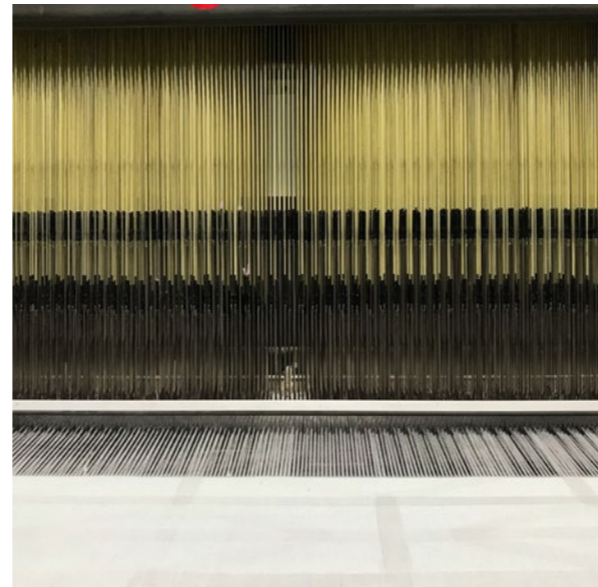
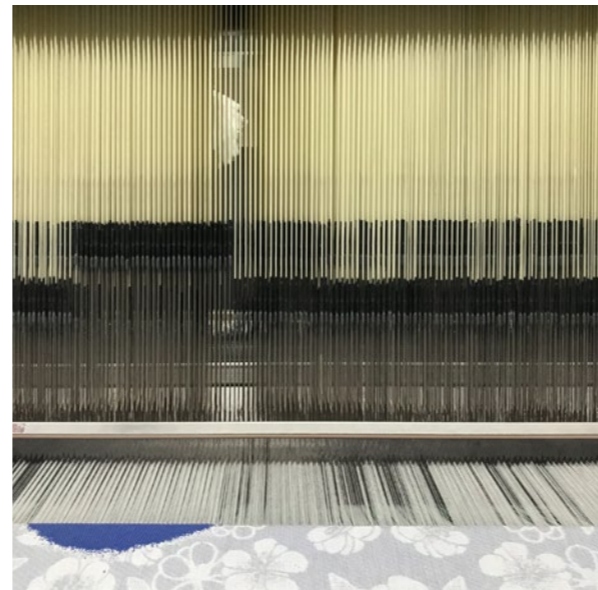
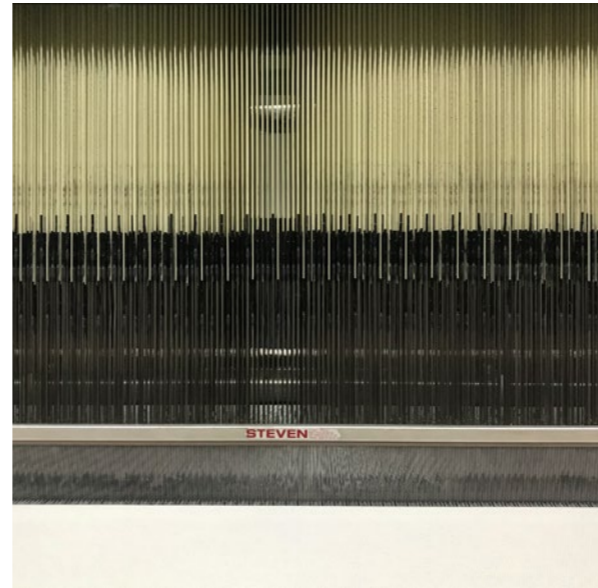




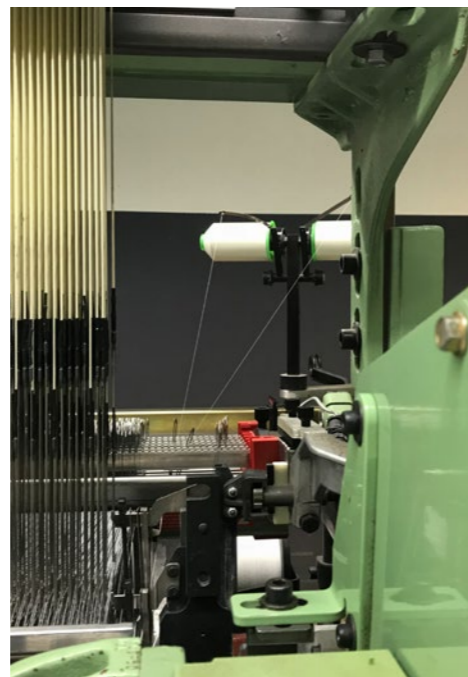


“Today, textile is much more than just producing fabrics!”

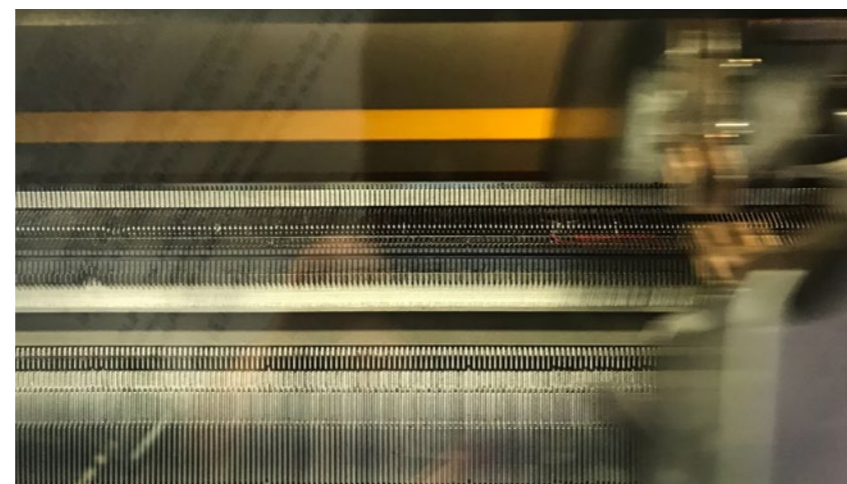




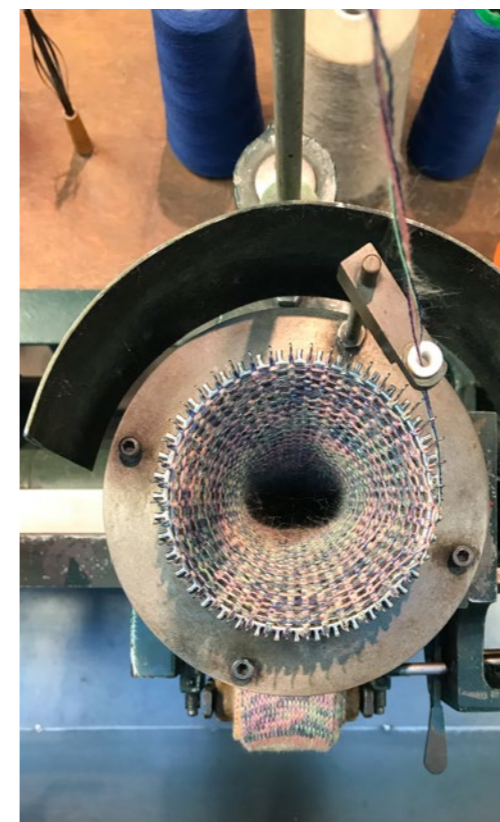
Weaving Machines



Knitting Machine



Circular Knitting Machines



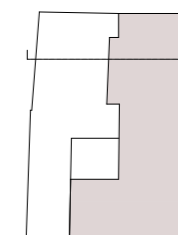
Where is the intimacy in a textile production space?





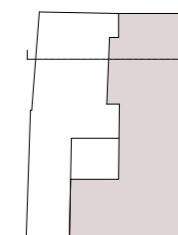


The Production & Textile Lab Space



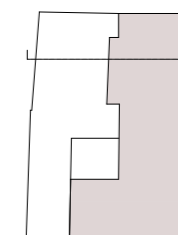


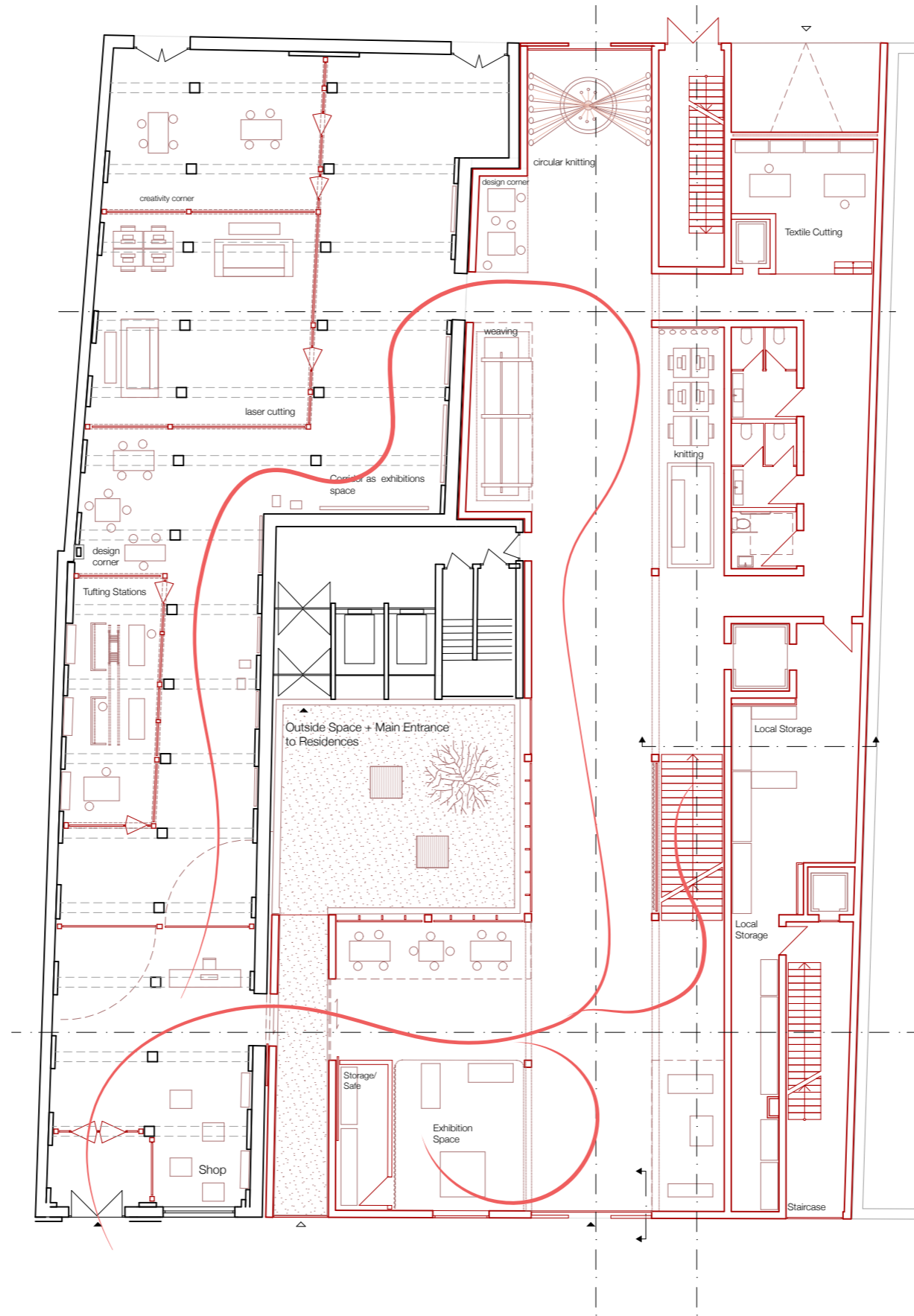
The Communal Spaces + Residence



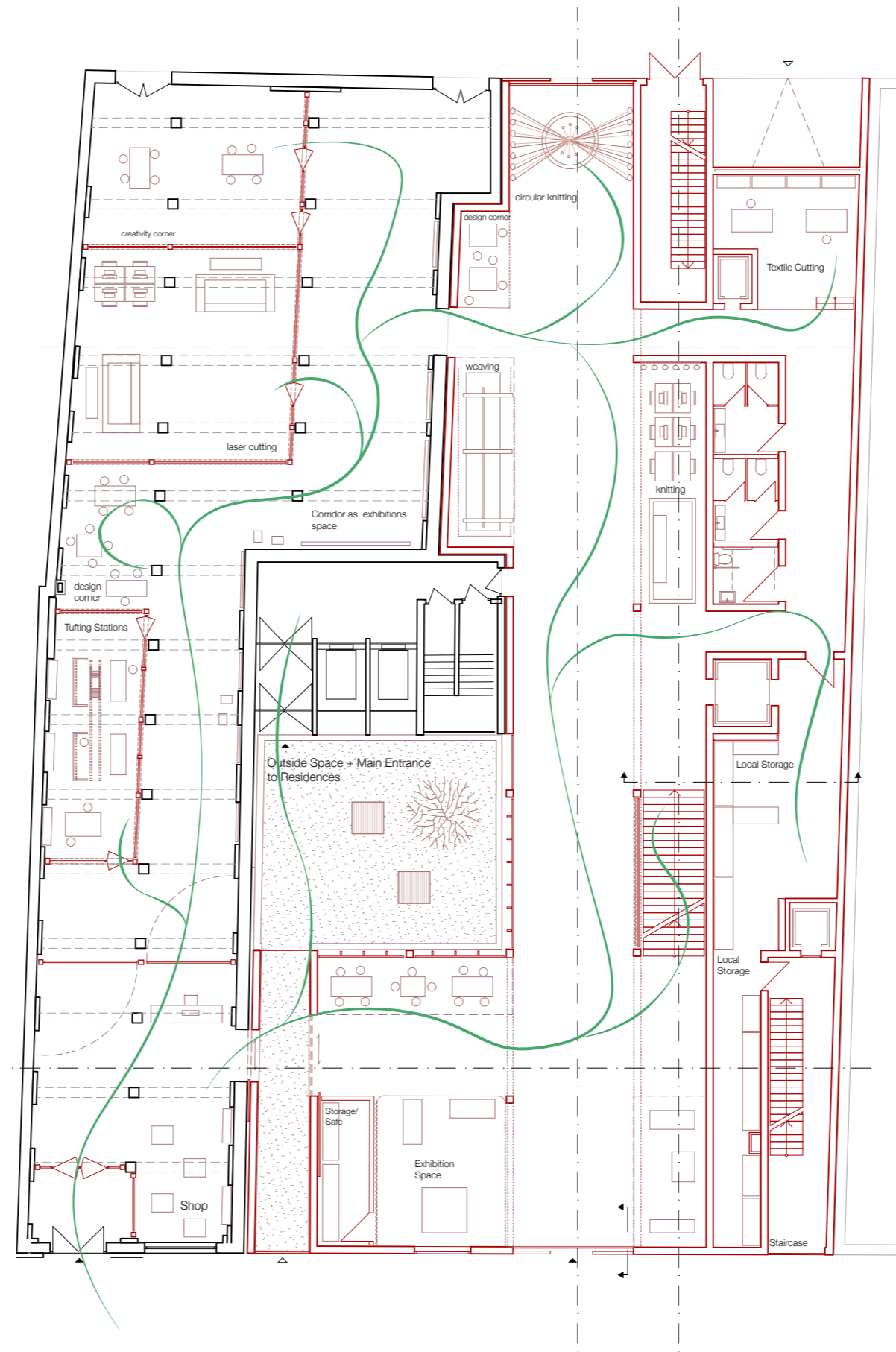


Residence

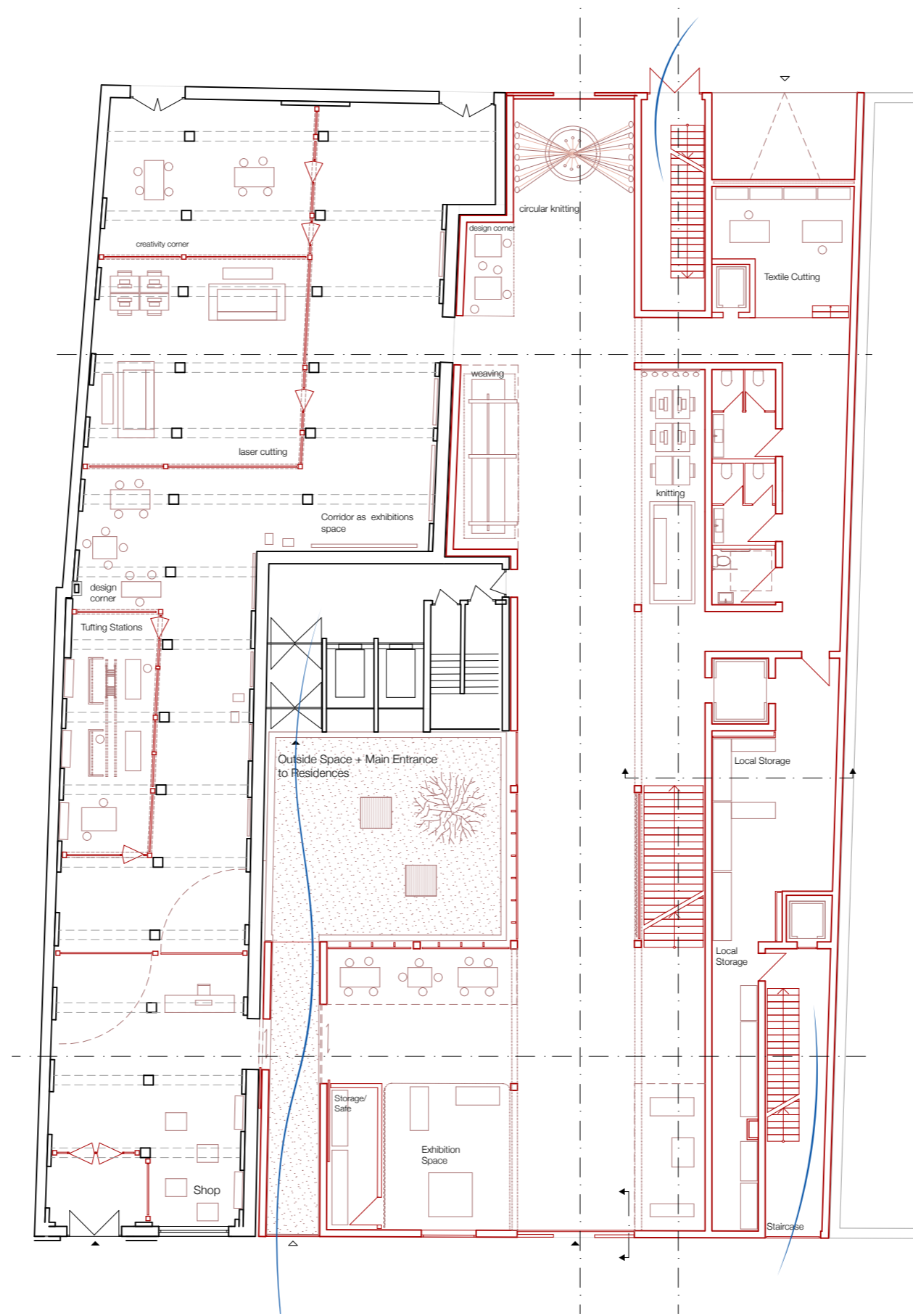




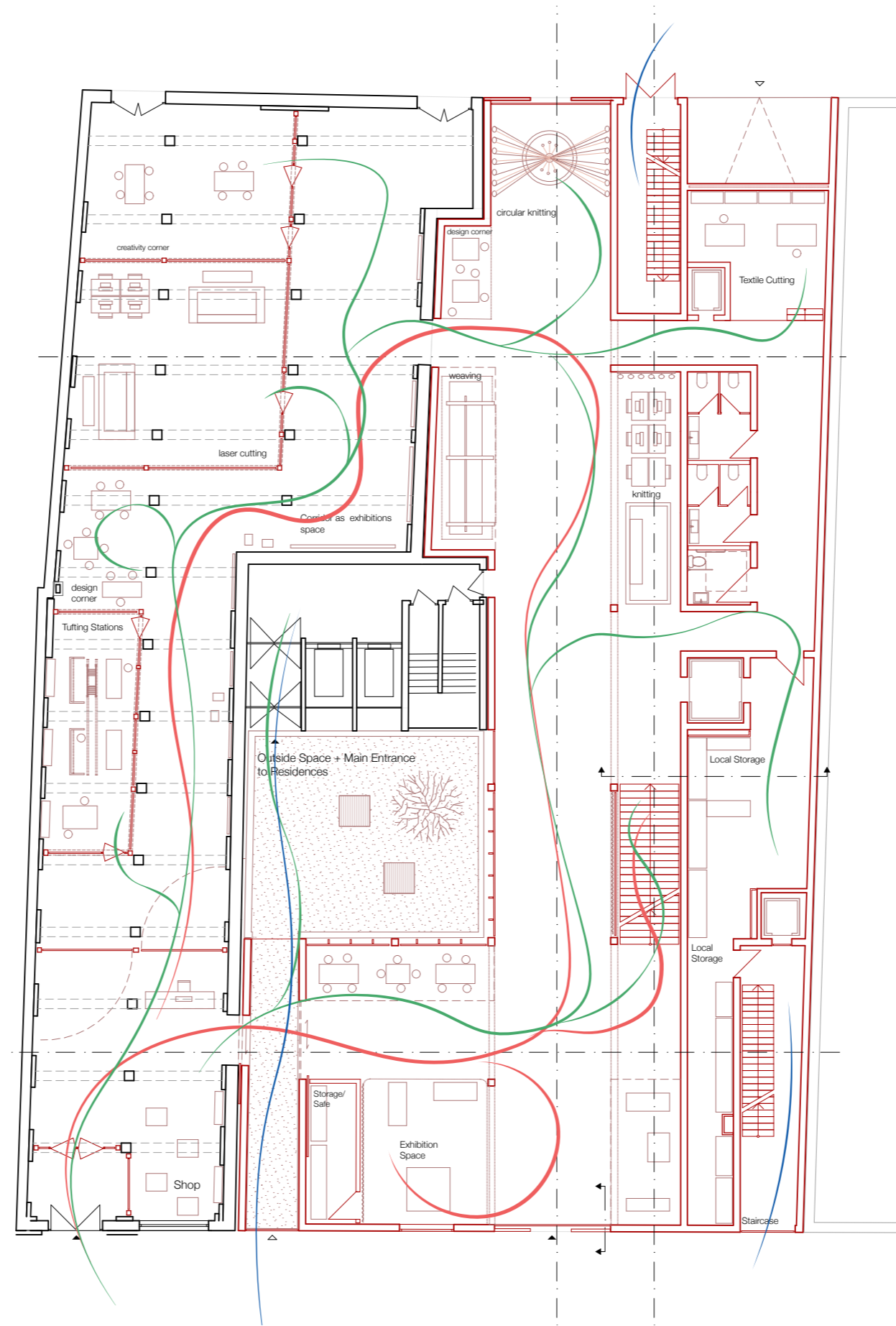
The Visitor



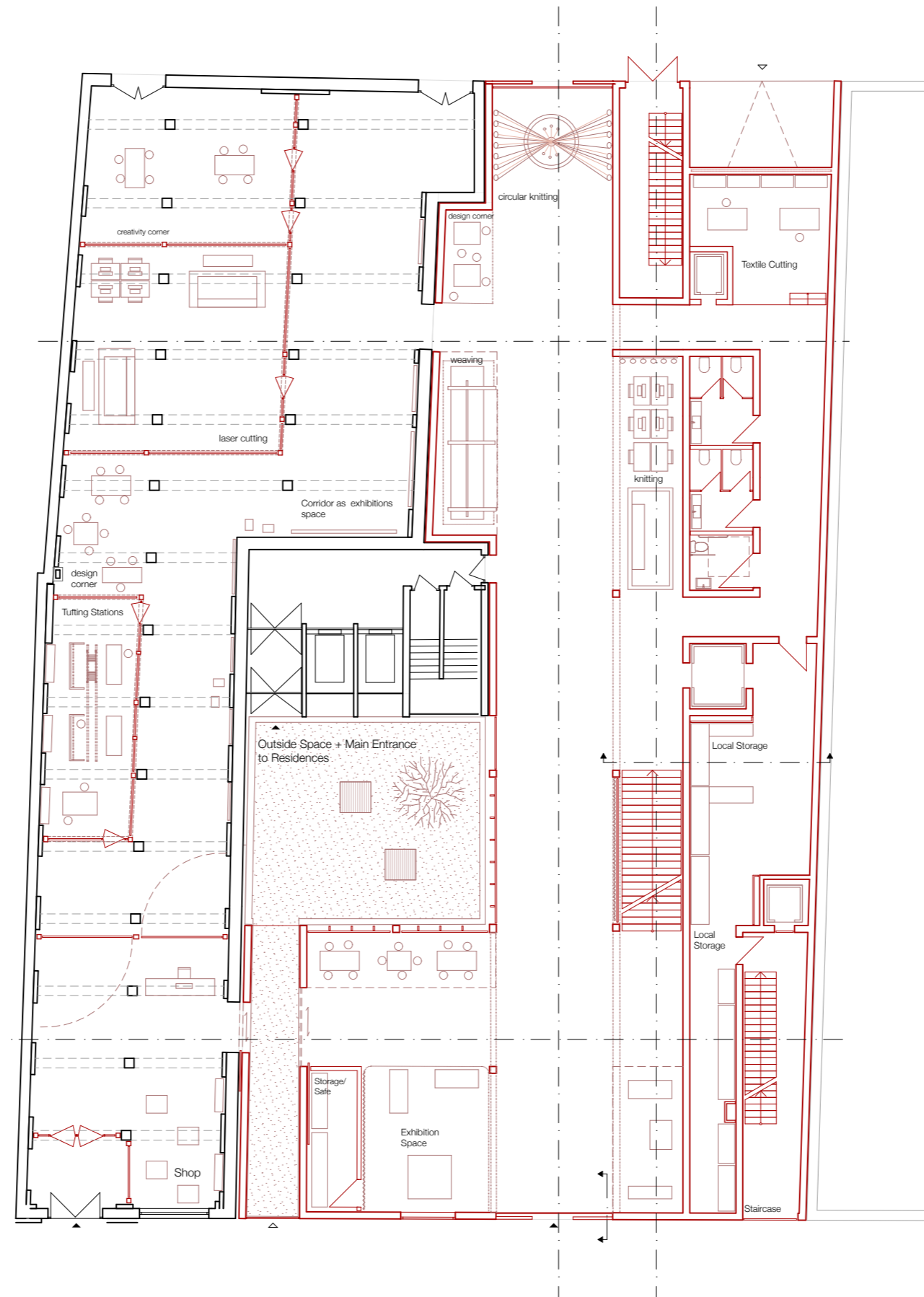
The Artist



The Resident



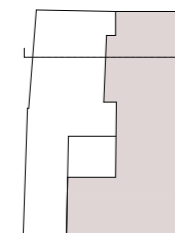
All Users

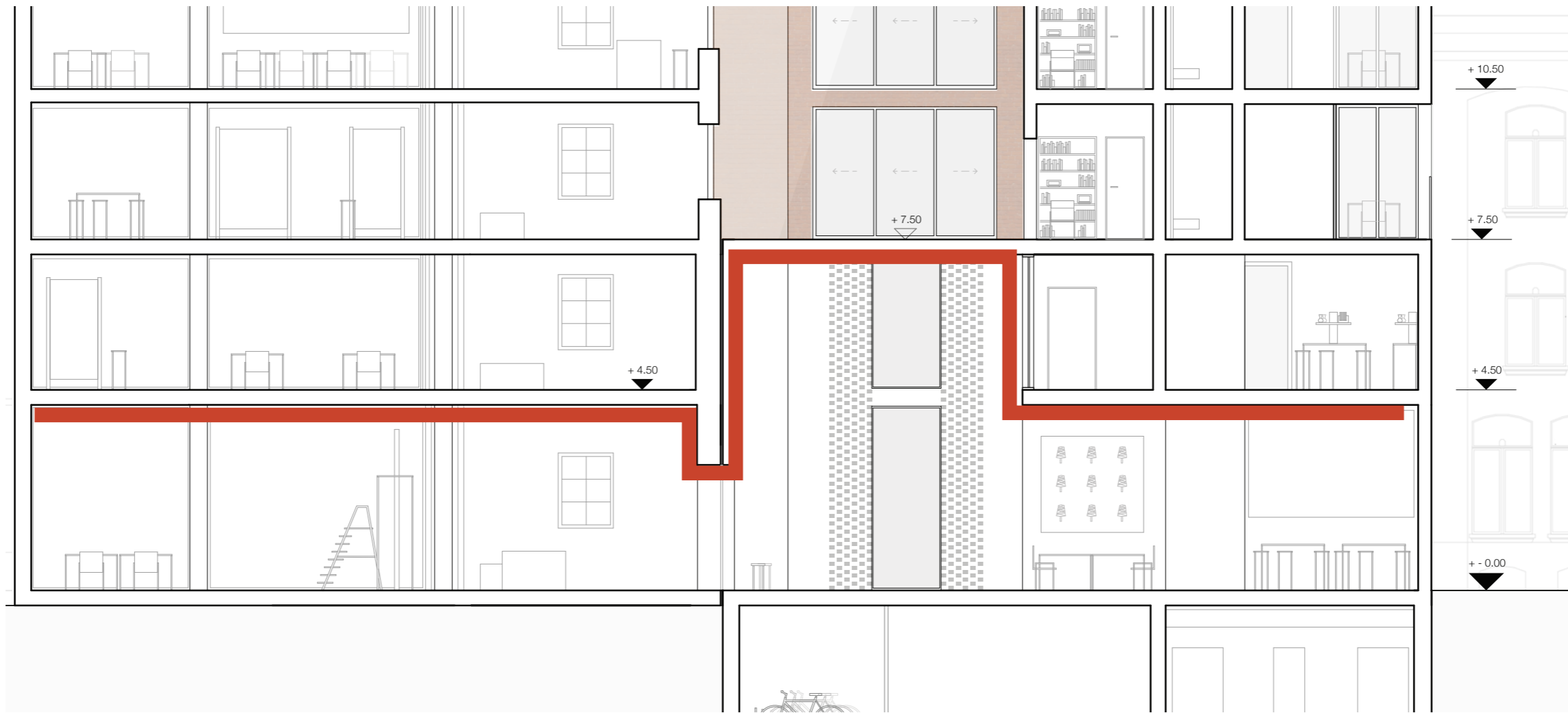


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Ground Floor | 1:200

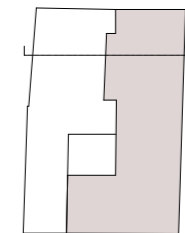


Section C | 1:200





Section C





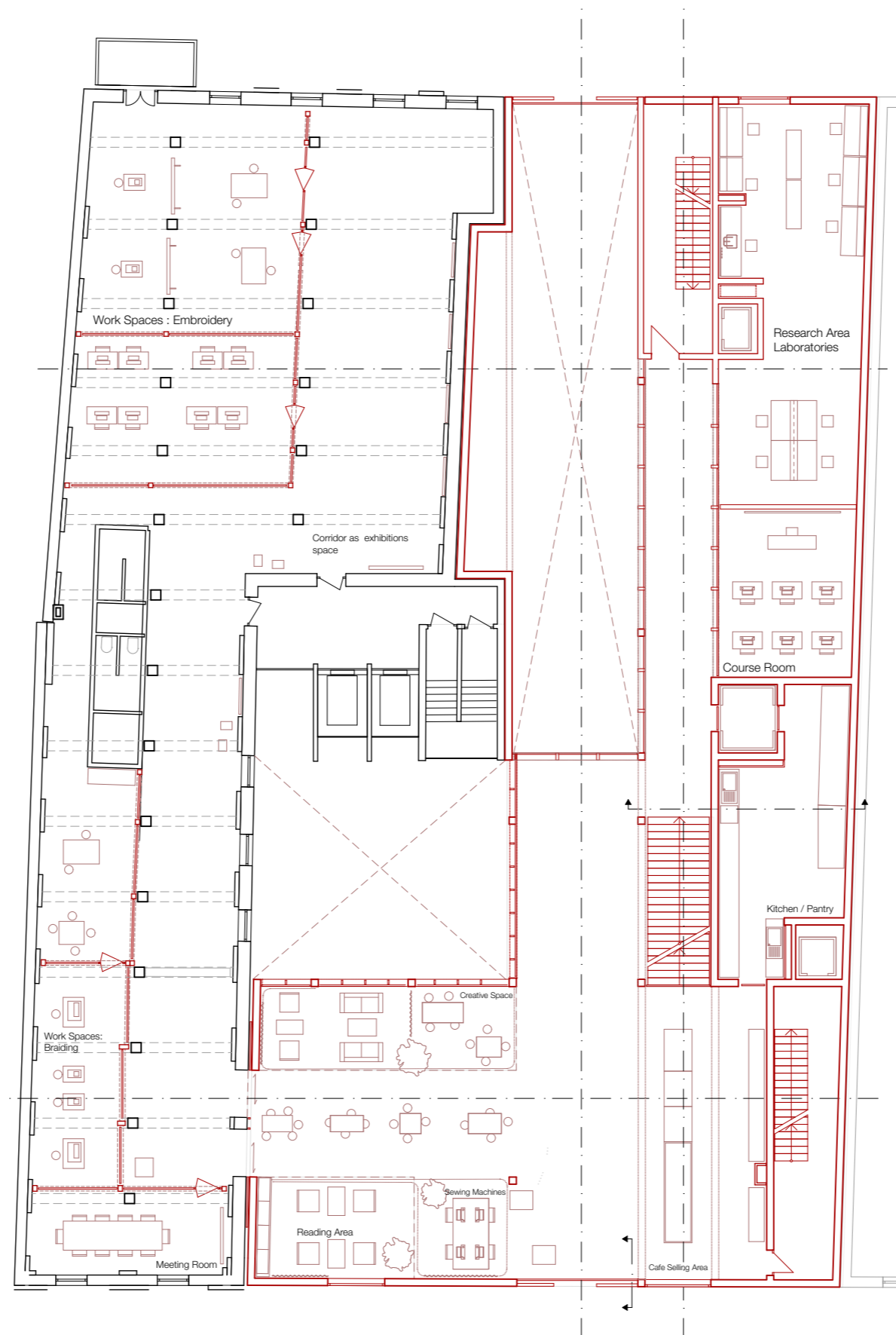
View from Existing Area towards the bew built



View from Existing Area towards the new built



First Floor Corridor with Lignotrend ceiling



First Floor 1:200



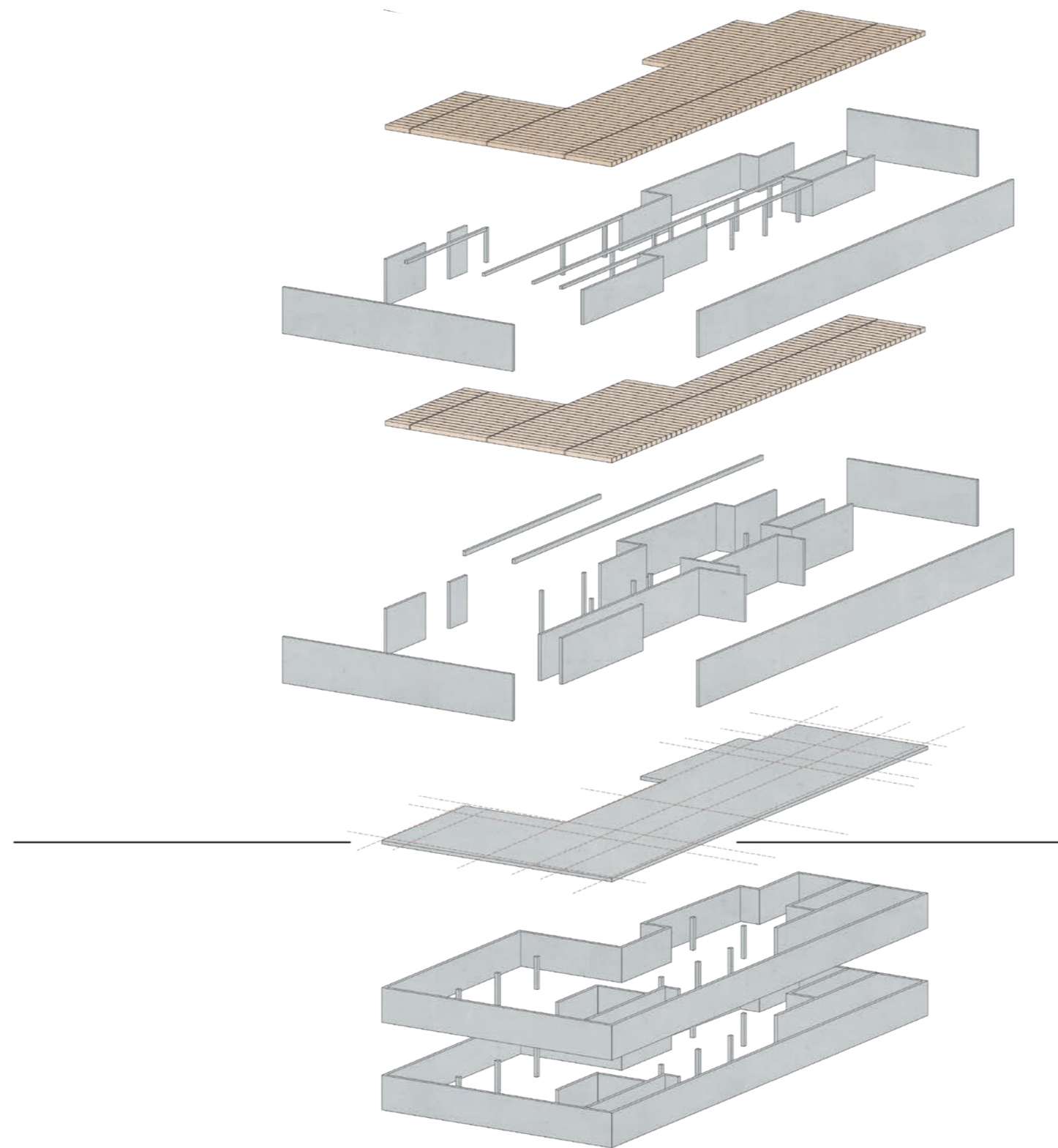
Cafe Space | First Floor



Cafe Space view towards the production space | First Floor

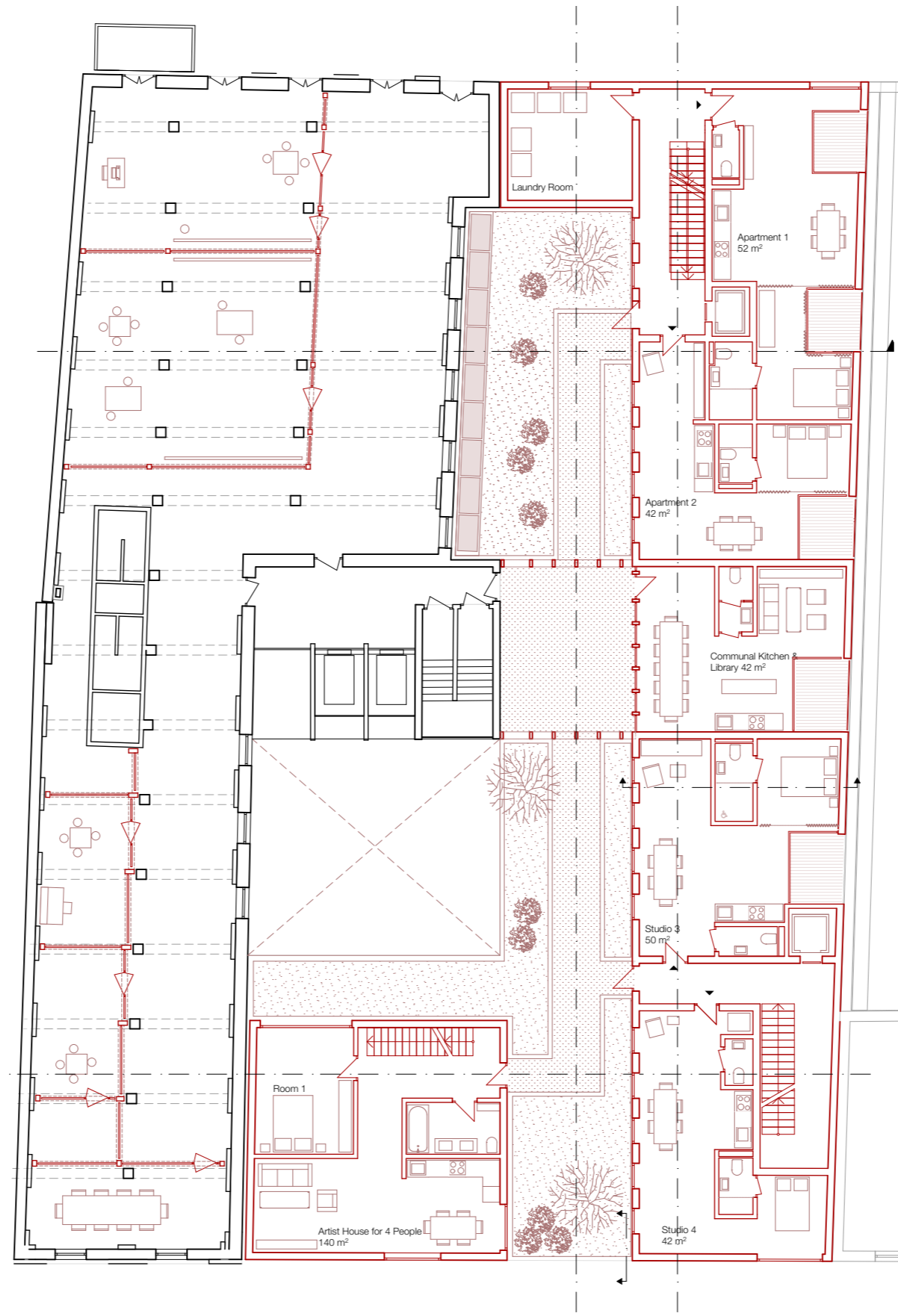


View from Cafe towards the existing artist spaces | First Floor





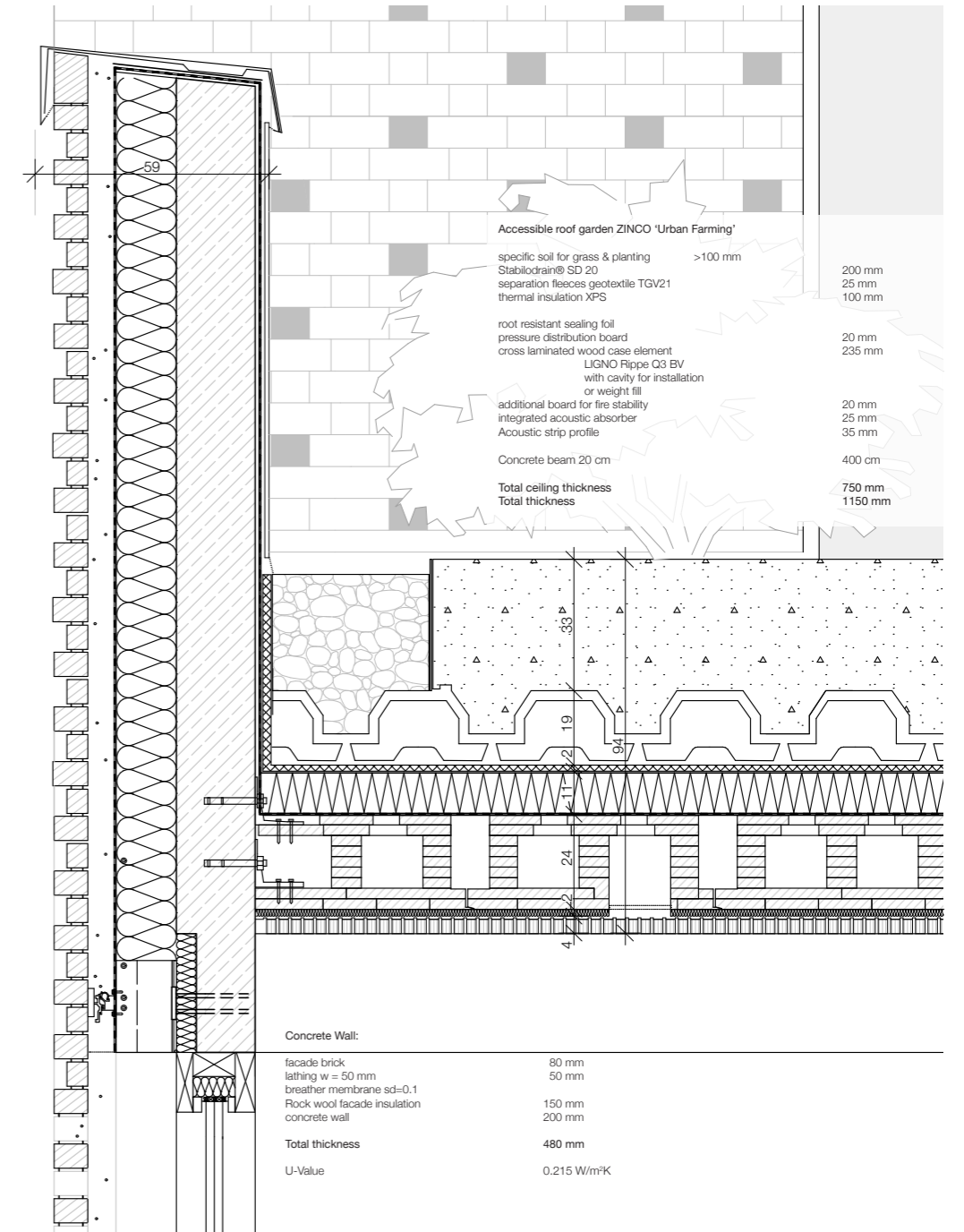
First Floor Corridor with Lignotrend ceiling



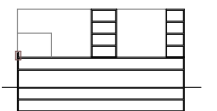
Second Floor 1:200

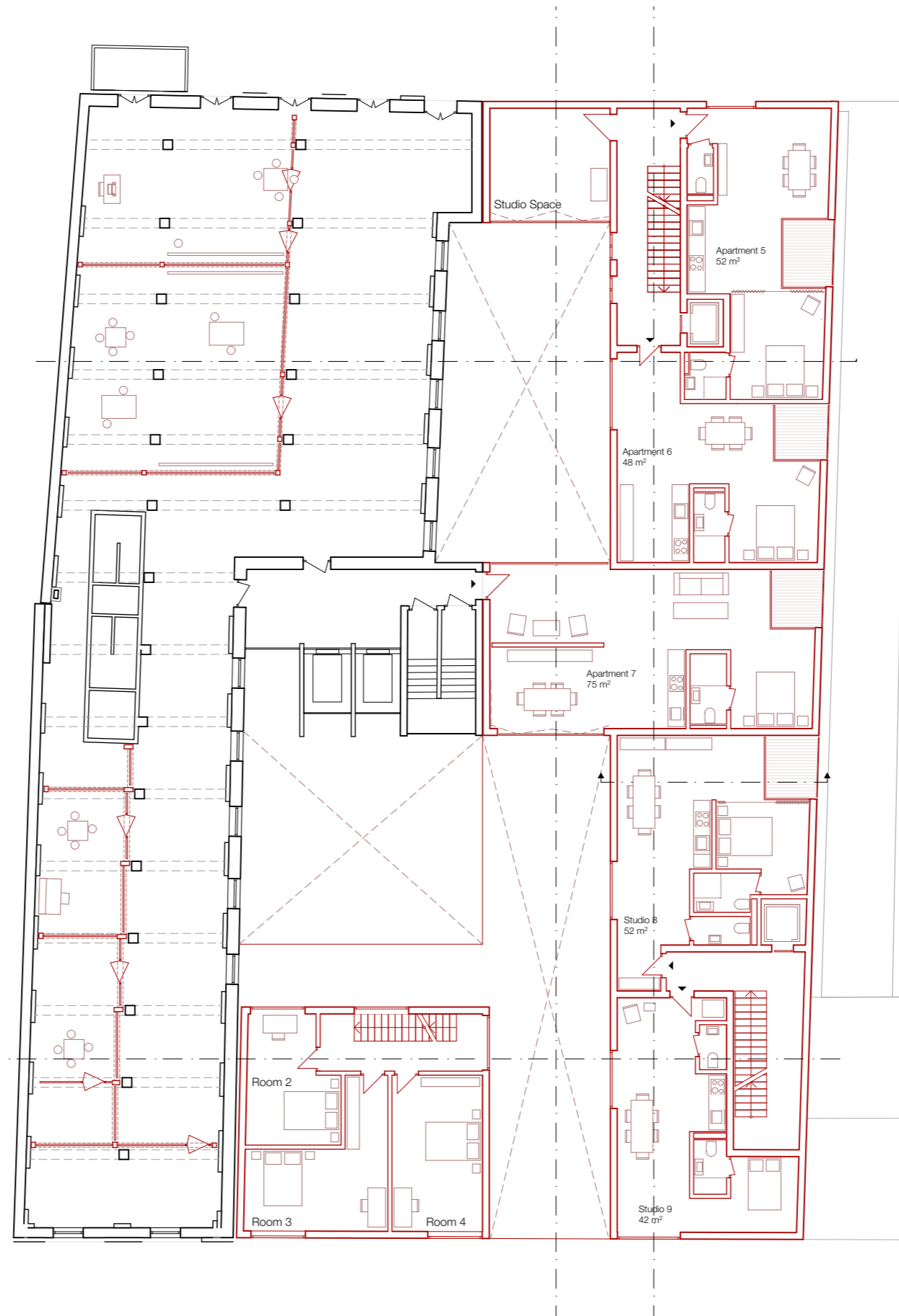


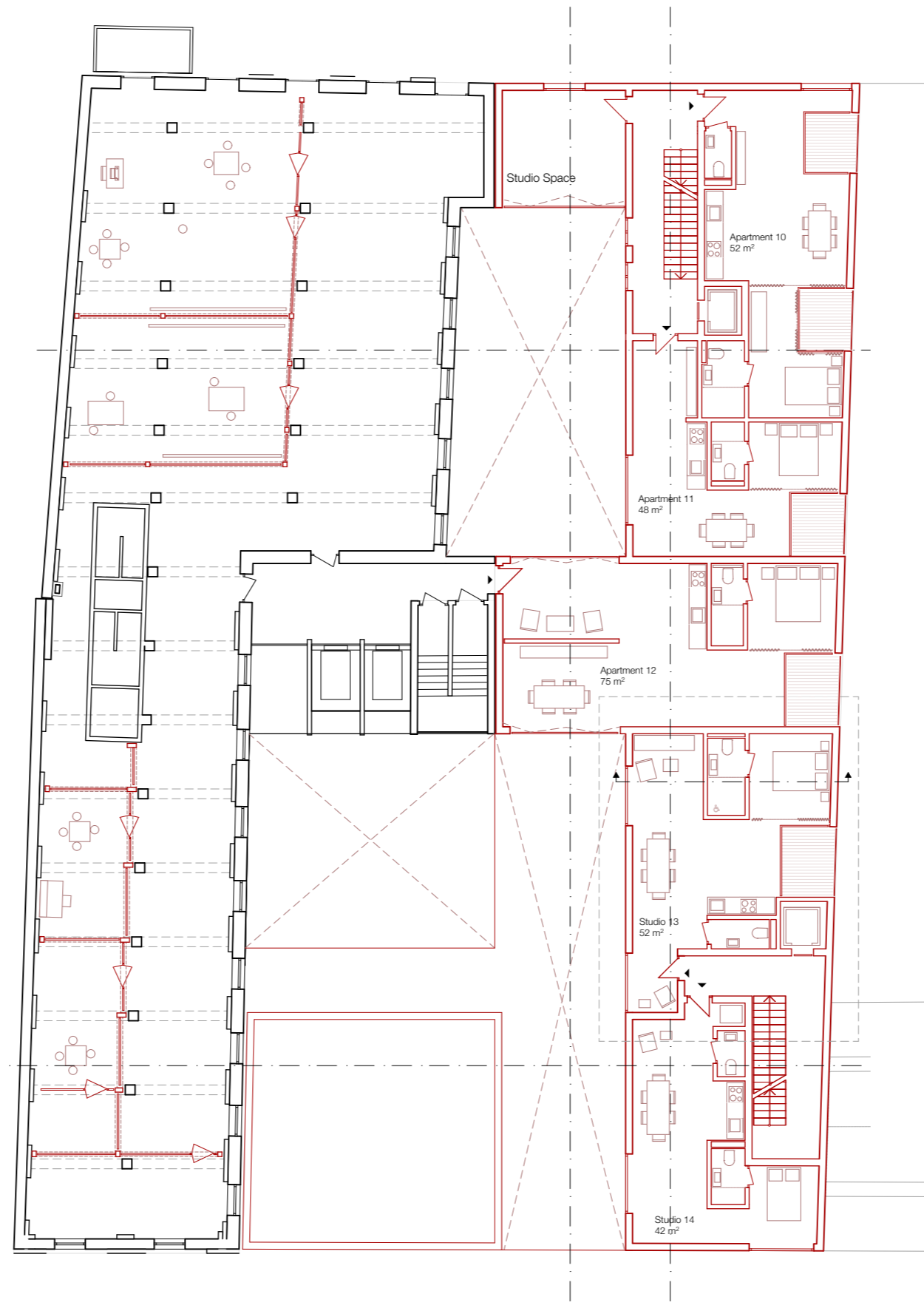
Roof Garden

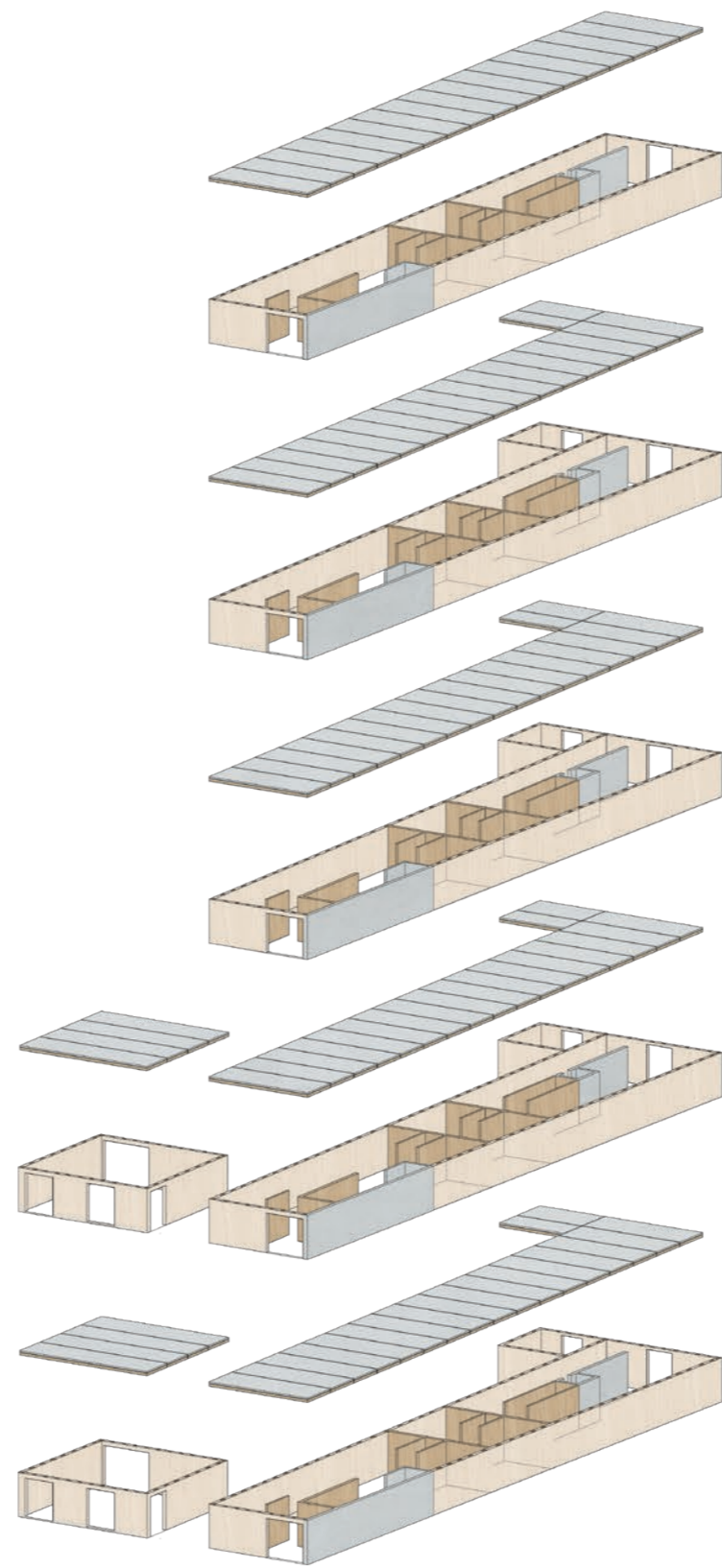


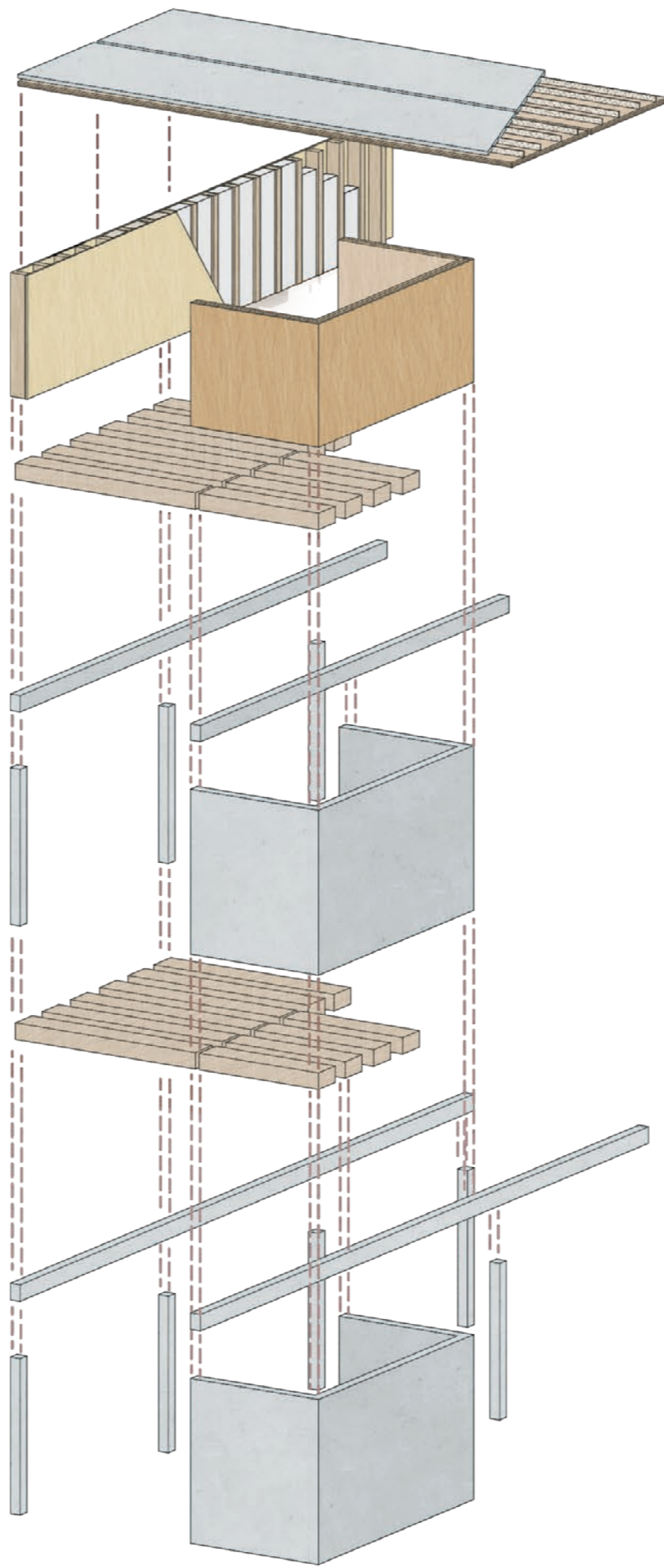
Detail | Wall to Roof connection











Wood-Concrete Composite Floor
 uses benefits of timber and concrete in their span
 directions enabling larger spans as well as in terms
 of fire protection and excellent acoustic insulation

Exterior Timber Frame Construction Walls

Interior cross-laminated timber walls

Lignotrend Acoustic Ceiling System - horizontal
 load transfer

Concrete Beams - horizontal load transfer

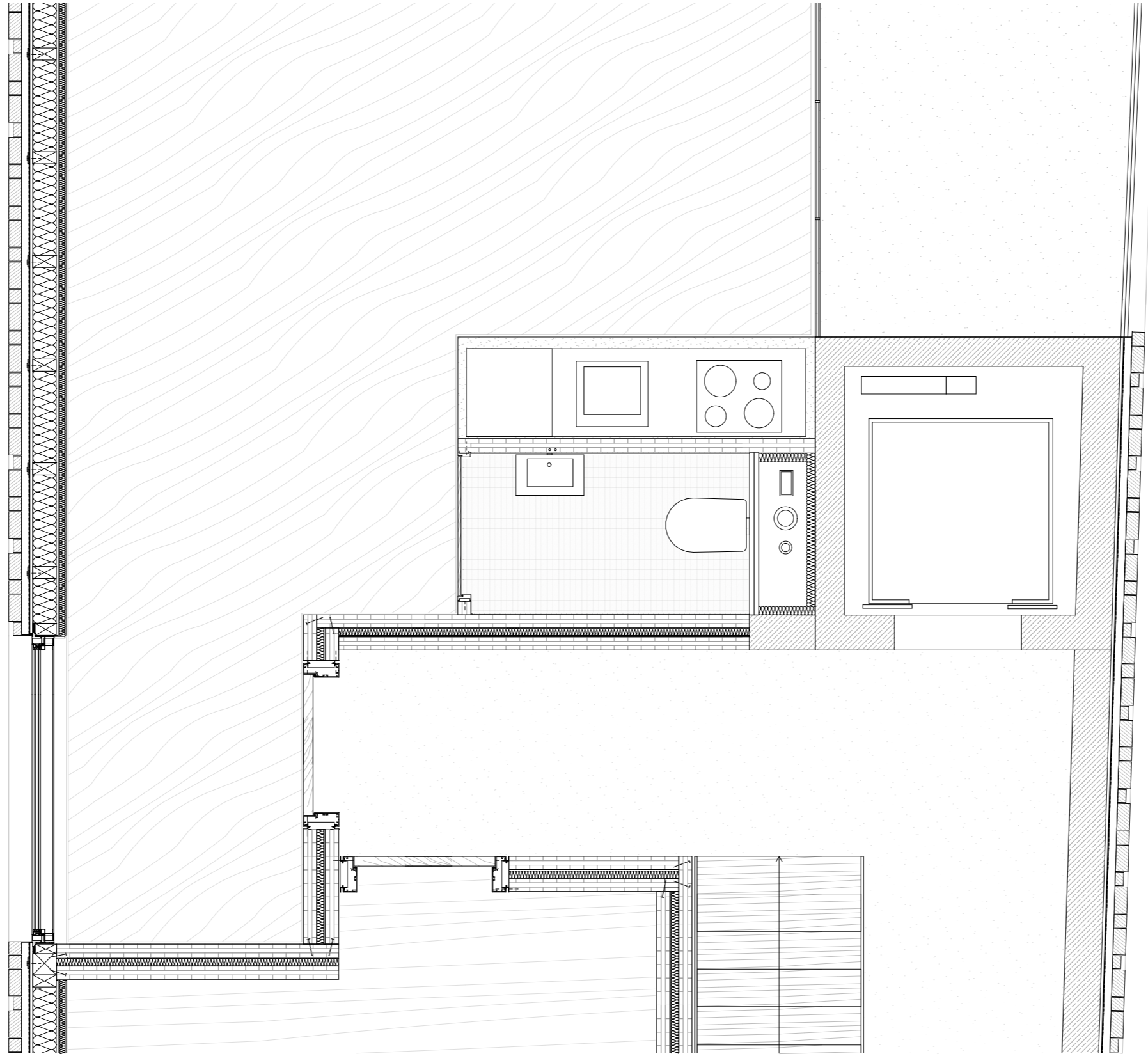
Concrete Walls - horizontal load transfer
 Concrete columns - vertical load transfer

Lignotrend Acoustic Ceiling System - horizontal
 load transfer

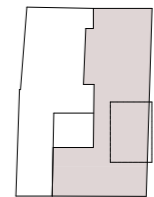
Concrete Beams - horizontal load transfer

Concrete Walls - horizontal load transfer
 Concrete columns - vertical load transfer

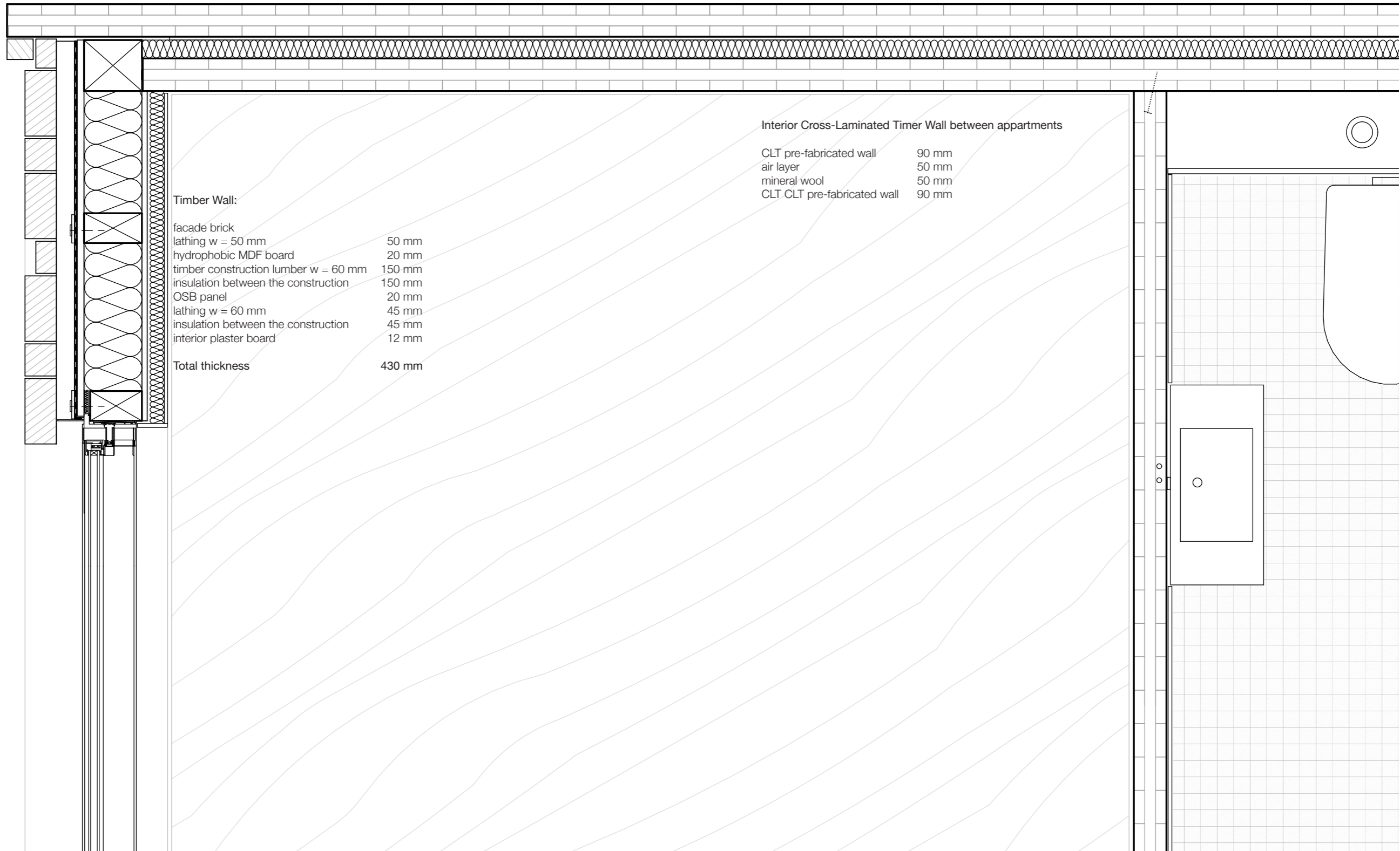
Load Bearing Materials Diagram



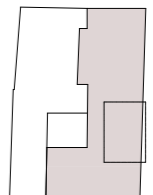
Detail | Horizontal | Apartment Entrance with exterior Wall 5th Floor







Detail 1:10 | Horizontal | Apartment Entrance with exterior Wall 5th Floor







Elevation South 1:200



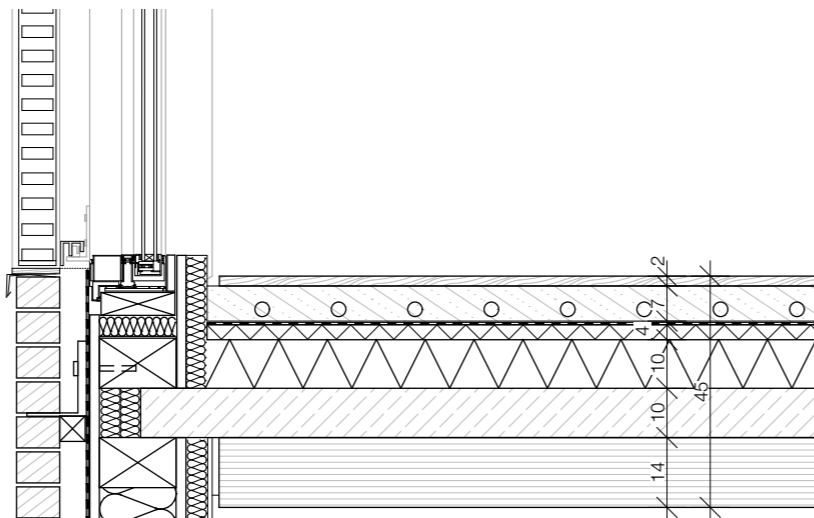
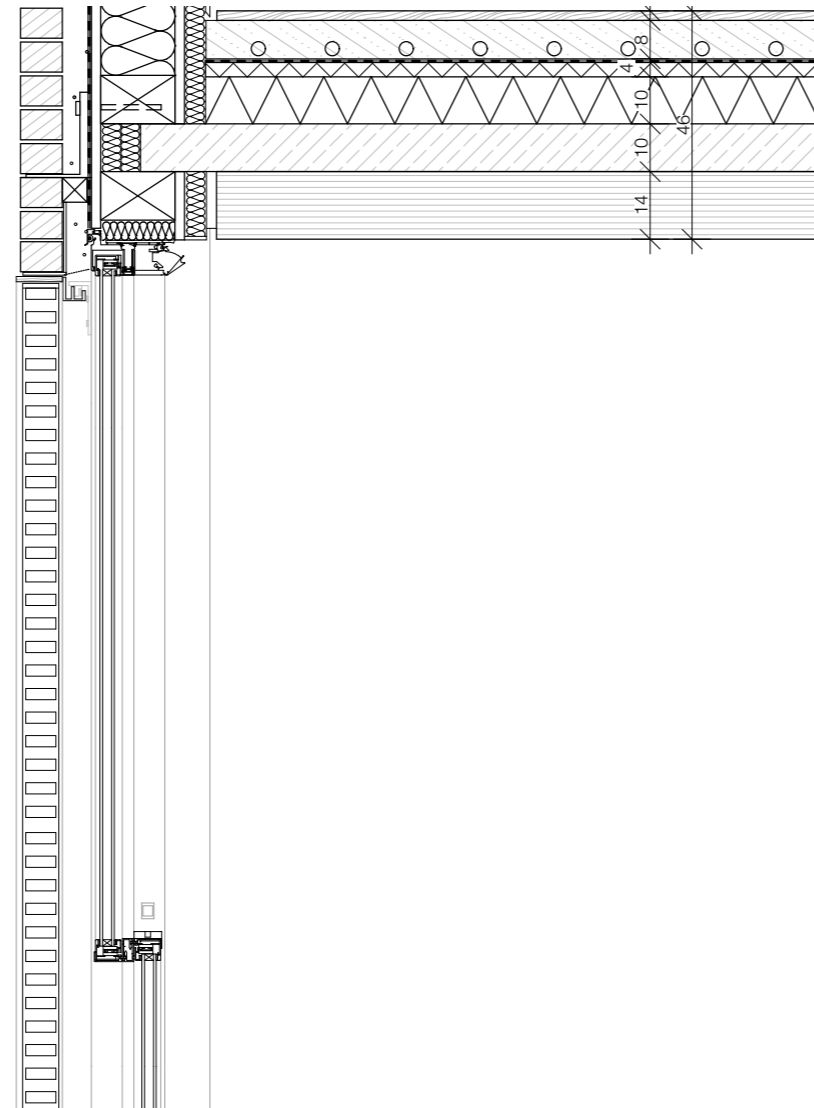
Elevation North 1:200



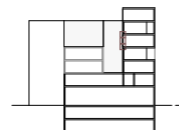




Elevation West 1:200

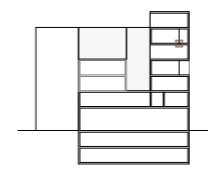
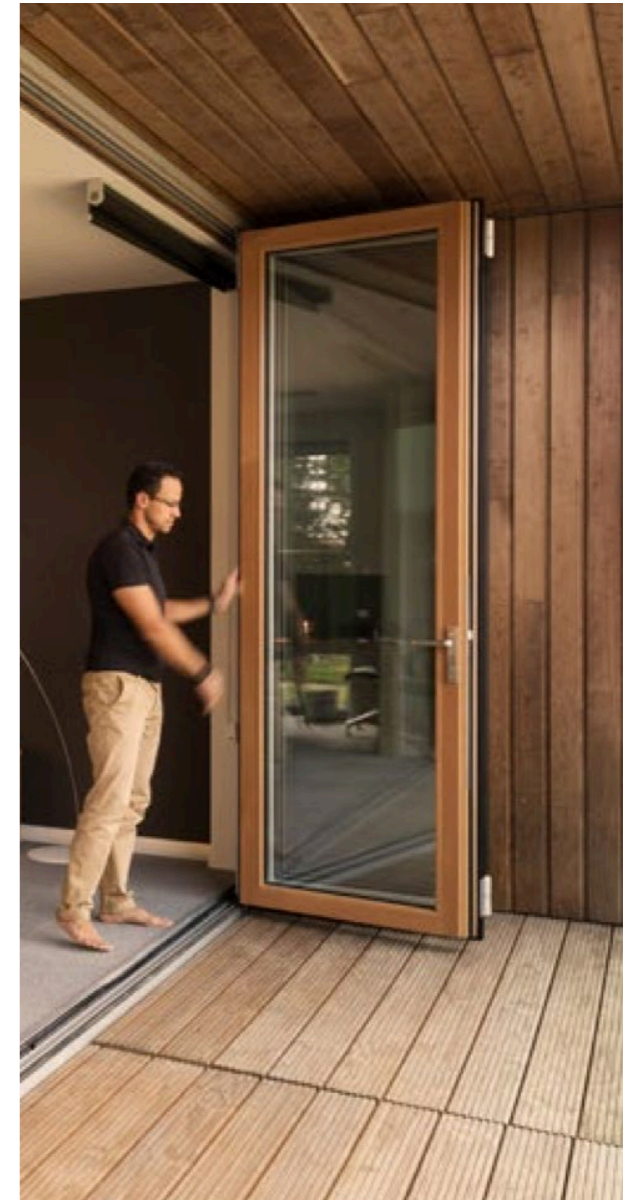
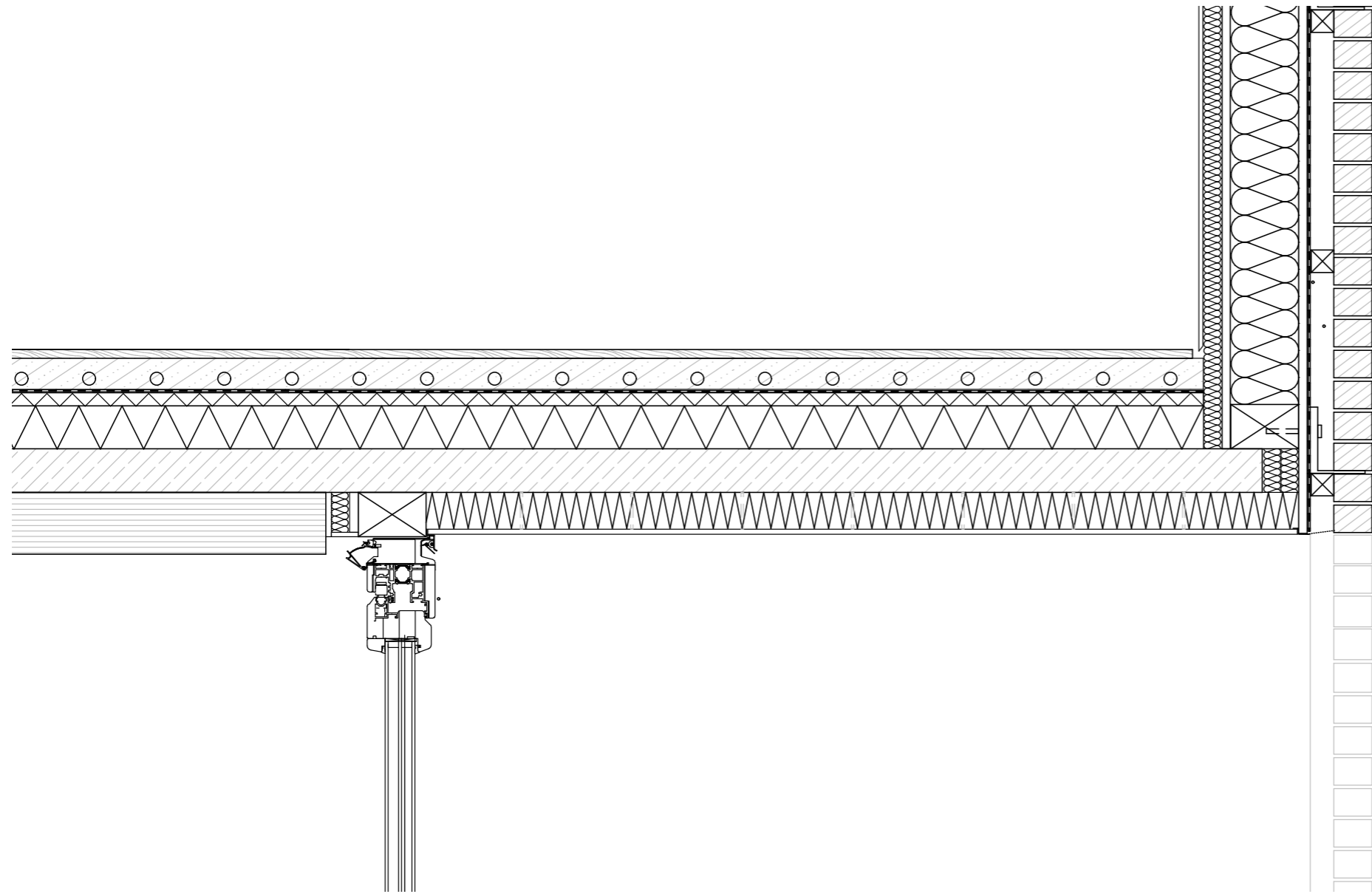


Detail 1:10 | Metatherm vertical sliding window system in timber facade connecting to wood-concrete composite floor

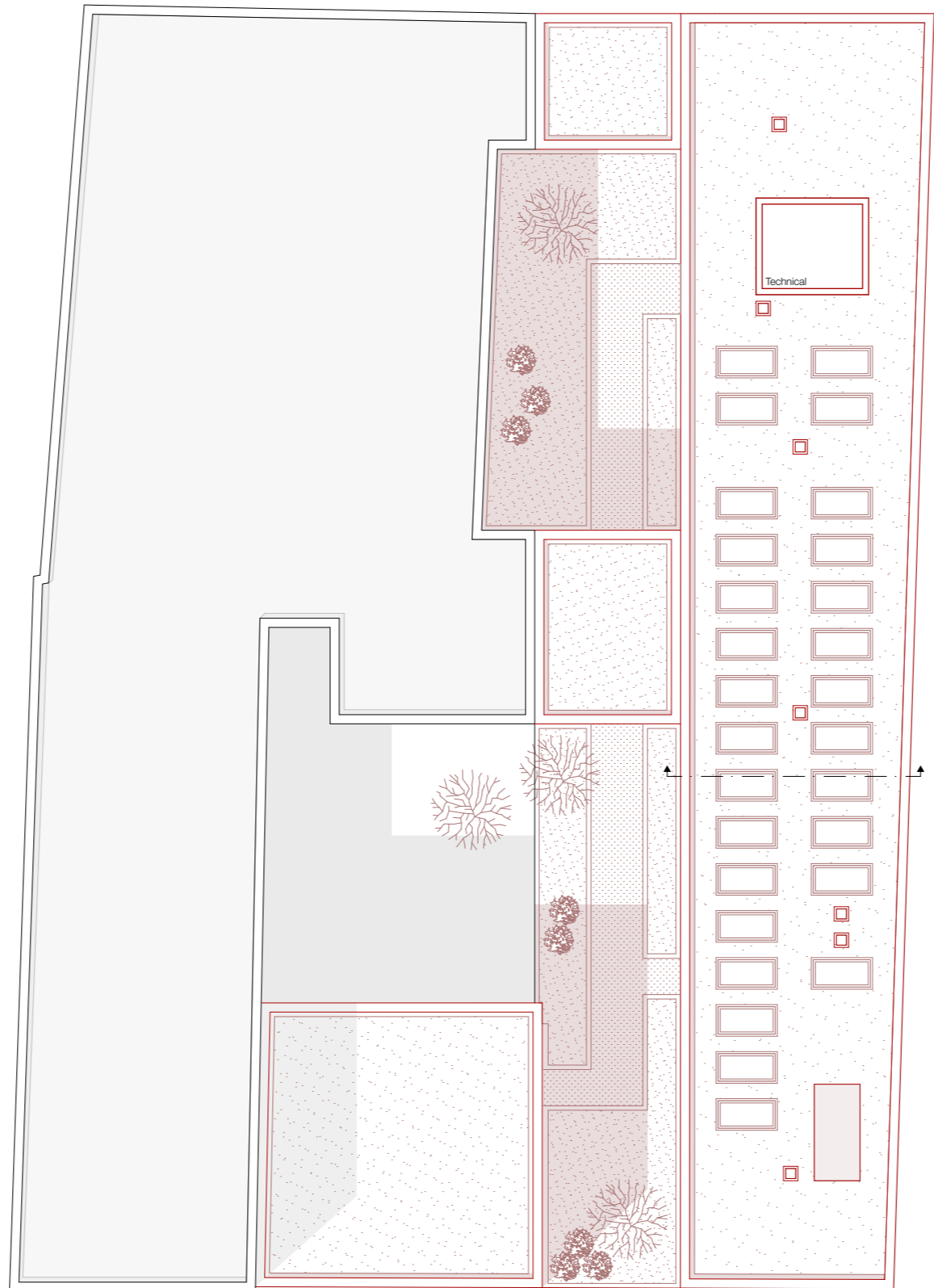




Elevation East 1:200



Detail 1:10 | Solarlux Bi-Folding Glazed Window in Wood

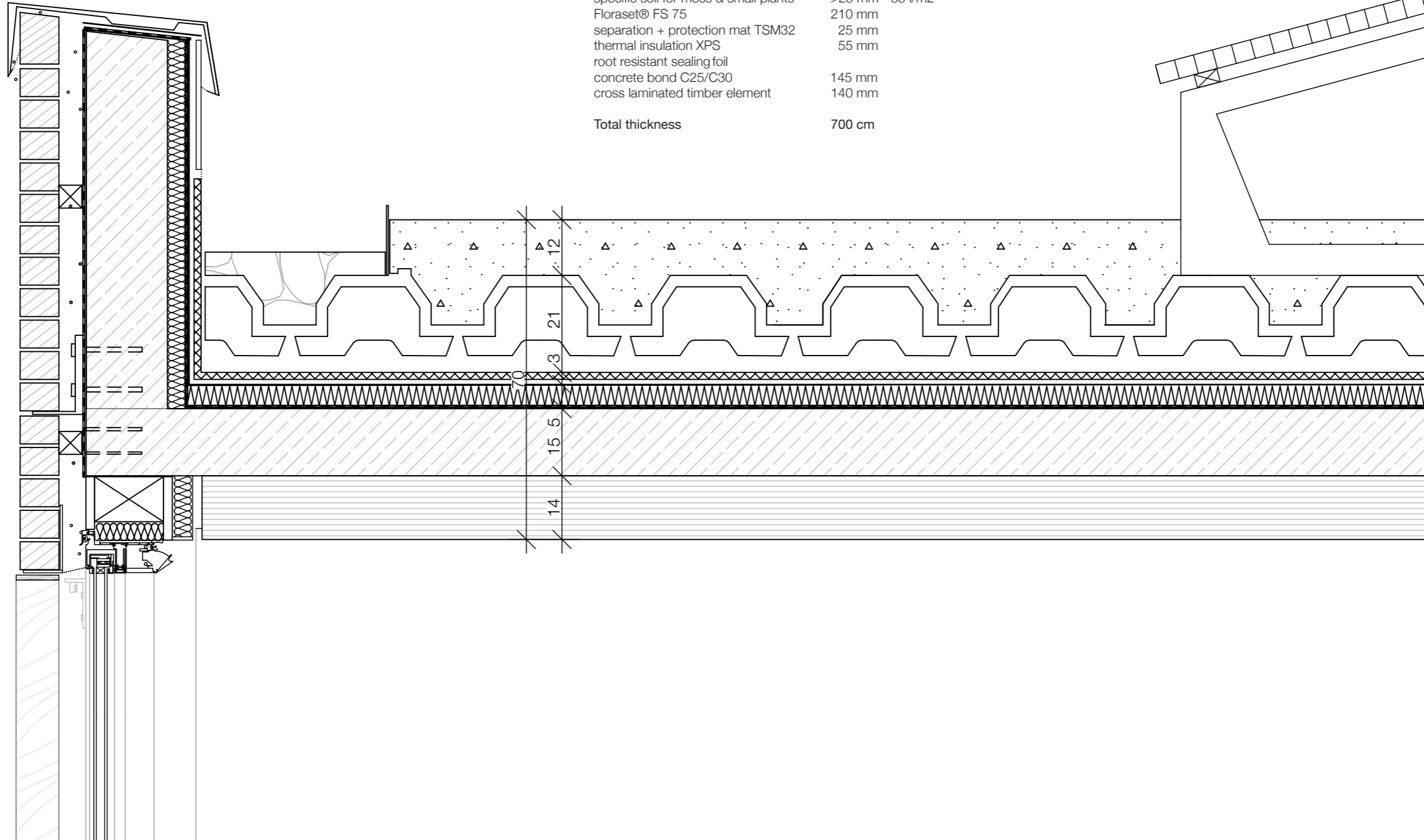


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Top View Floor 1:200

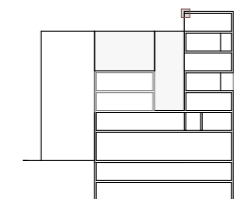
Light green roof ZINCO 'Floraset® FS75 with Solar Panels

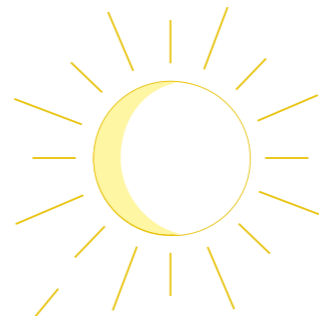
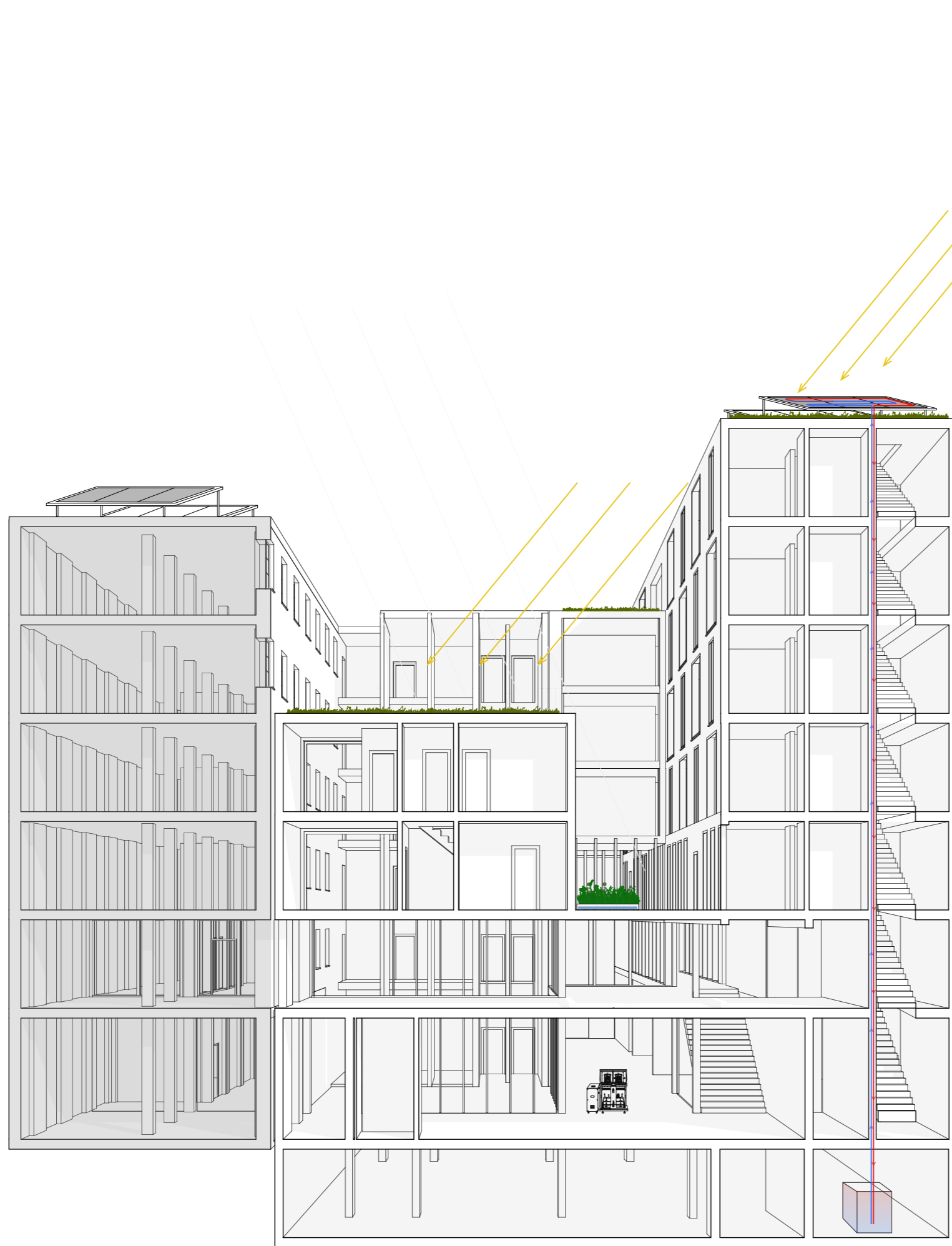
specific soil for moss & small plants	>25 mm - 55 l/m2
Floraset® FS 75	210 mm
separation + protection mat TSM32	25 mm
thermal insulation XPS	55 mm
root resistant sealing foil	
concrete bond C25/C30	145 mm
cross laminated timber element	140 mm
Total thickness	700 mm

Solar Panel attached to the Floraset® FS 75



Detail 1:10 | Wood-Concrete-Composite Roof with Zinco Green Roof build up and Solar Panel





Photovoltaik + Solar Thermal Panels
 Sunlight is used for the generation of energy and warm water. Liquid is running through cavities in the Thermal panels and is heated by the sunlight.

The warmed up liquid is carried through the building to the basement where the heat can be stored and simultaneously the cold liquid is transported back up to the solar panels.

Sun Protection
 The building is oriented east west, is however set between two existing buildings on the lower floors. Towards the east, the residential floors offer loggias which are set back by 1.90m due to privacy regulations. Simultaneously this also enable sun protection due to a backward inclined window position. Additionally movable sunscreen panels are located in front of the loggia that can be placed according to demand.

Additionally all facades: east, west, north and south provide movable horizontal timber panels which are located in front of the loggia that can be placed according to demand for sun and privacy protection.



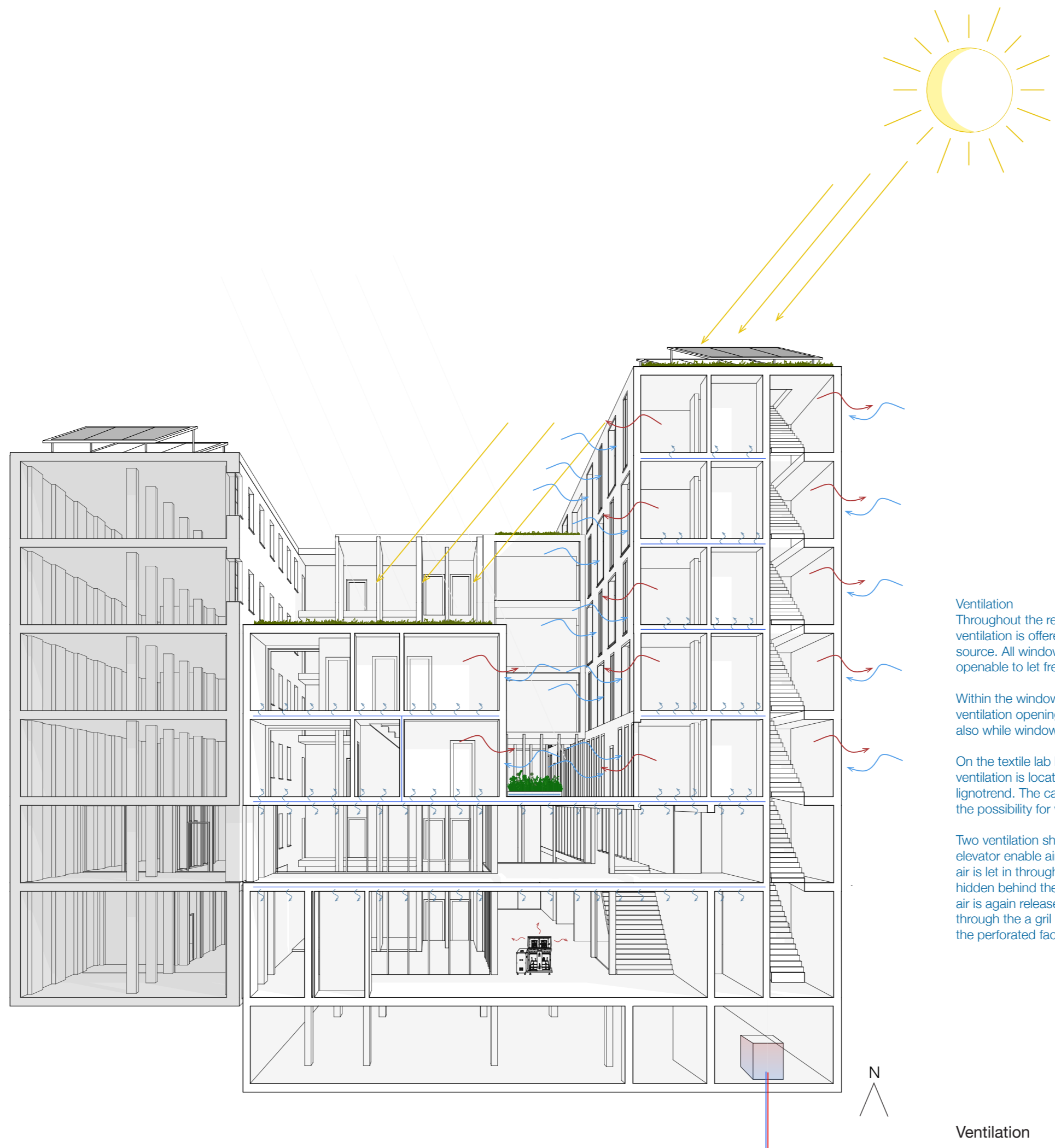
Photovoltaik + Solar Thermal Panels



Heating
 The heat generated by the sunlight is stored in the basement. Additionally to Solarthermal Panels a Heat Pump supports the heating cycle of the building. Heating tubes within the screed of the floor enable comfortable and easily controllable room temperatures.

Industrial Waste Heat
 The weaving machines located on the ground floor of the building generated a lot of energy due to their constant movement. If the cooling system of the machine is connected to the overall heating/cooling circulation the waste heat can be used in the overall heating system.

Heating



Sun Protection
 The building is oriented east west, is however set between two existing buildings on the lower floors. Towards the east, the residential floors offer loggias which are set back by 1.90m due to privacy regulations. Simultaneously this also enables sun protection due to a backward inclined window position. Additionally movable sunscreen panels are located in front of the loggia that can be placed according to demand.

Additionally all facades: east, west, north and south provide movable horizontal timber panels which are located in front of the loggia that can be placed according to demand for sun and privacy protection.

Ventilation
 Throughout the residential floors (3-6) natural ventilation is offered as a primary fresh air source. All windows on these floors are openable to let fresh air in and let heat leave.

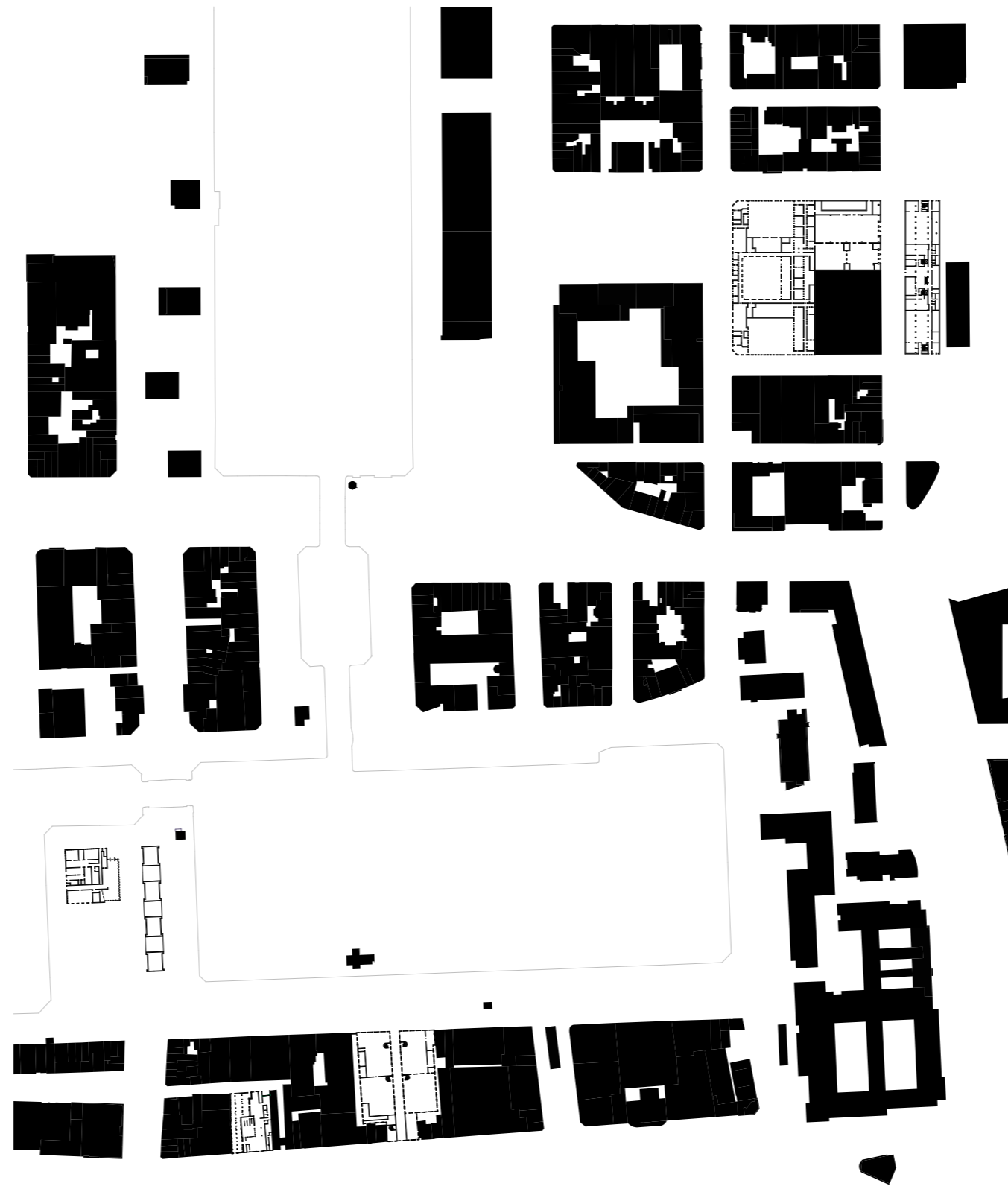
Within the window structure additional ventilation openings enable constant ventilation also while windows are closed.

On the textile lab levels (1-2) mechanical ventilation is located within the ceiling structure lignotrend. The cavities within the structure offer the possibility for ventilation tubes to be hidden.

Two ventilation shafts located next to the elevator enable air circulation. Furthermore fresh air is let in through a grid in the south facade hidden behind the perforated brick. The used air is again released in the north of the building through the a grid in the facade hidden behind the perforated facade.

Ventilation

The Intimate City - Antwerp



Nolli Plan of the Southern Part of Het Eilandje 1:2500

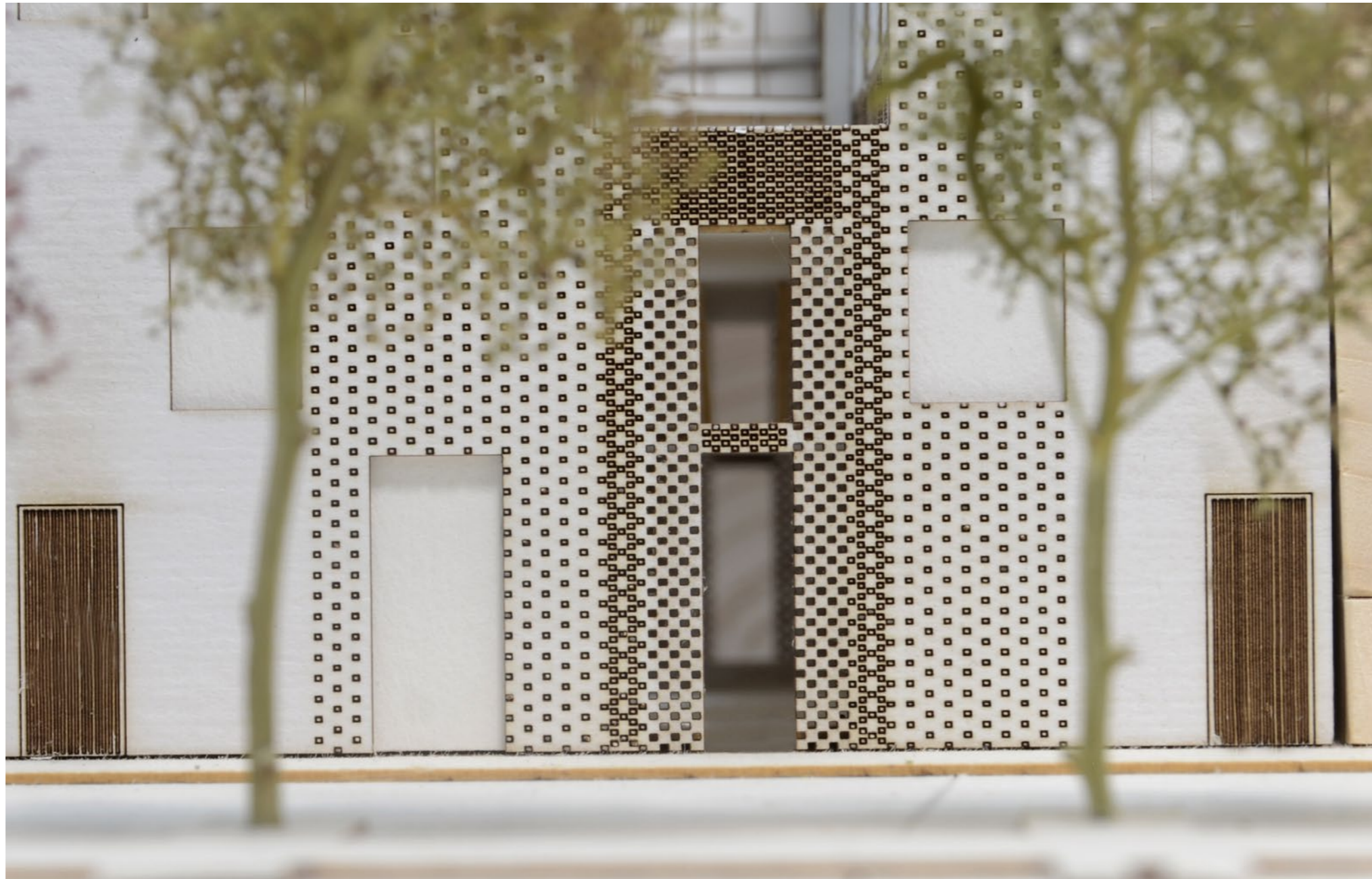


Nolli Plan of the Southern Part of Het Eilandje 1:2500



De Wever - A Textile Community Lab

Material research and textile production laboratory with integrated residence



Graduation Presentation Lea Scholze | 02.07.2019

