

the Grammar

Documentation of types and systems that make up the “logic of architecture”, constructed within the context of chosen architectural theory as well as a personal (dynamic) understanding of Liège, the site and its people.

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By using the theoretical framework provided by Rossi and Vandenhove, an autonomous reading of an element can be composed. Simultaneously a reading of the element as part of a social ecology shows what makes the element dynamic, as opposed to the fixed situation portrayed by the autonomous reading. Both readings are based on the initial observations done in **the Vocabulary**, however a greater understanding of the element is obtained in this phase, due to the increased importance of theory and through the act of drawing and designing a lot of variables of the element. This phase of the process is called, defining **the Grammar** and ultimately it translates into design proposals that are tested in the design, revisiting this process until the findings from the first phase can be translated into design solutions on multiple scales that serve the purpose of the design brief of the spatial strategy.

This booklet serves as the documentation of the above mentioned process, defining a Grammar on the scale of the city (spatial strategy) as well as on a scale of elements (architectural language). In places where scale intertwines, the relation between city and elements can be investigated, addressing the question: Can elements give meaning to the city, making the ordinary become meaningful?

Each chapter begins with a short hand drawn conclusion, showing the types and systems discovered during the research and design process. The rest of the chapter contains photo's of models and drawings that have been instrumental to the formation of these definitions. Within the chapters products are documented chronologically, however as they are all experiments, its important to note, that they all have equally contributed to understanding Liège, the site and its people - the logic of architecture.



- 4.. Spatial Strategy
- 21. Architectural Language
- Elements
- 23. window
- 42. entrance
- 53. structure

SPATIAL

STRATEGY

NETWORK OF URBAN ARTIFACTS = DWELLING + PRIMARY FUNCTION

AND FROM THE CITY

TYPE

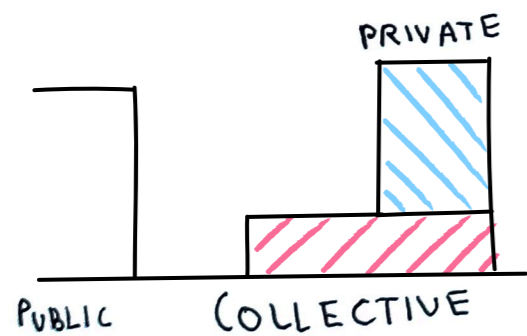
LEARNING FROM ROSSI TO MAKE ARCHITECTURE THAT ADDRESSES A CURRENT PROBLEM: THE SCAR OF URBAN FRAGMENTATION

+ SOCIAL ASPECT

DICTATES A NEED FOR COLLECTIVE SPACE

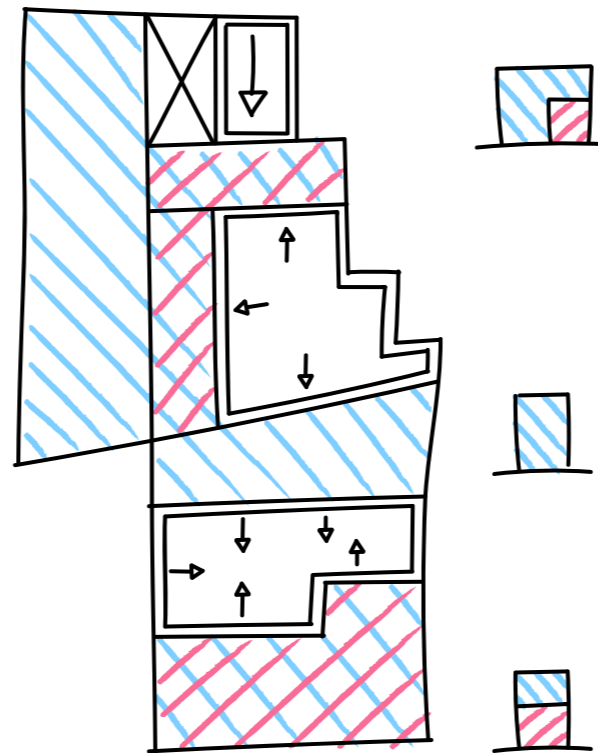
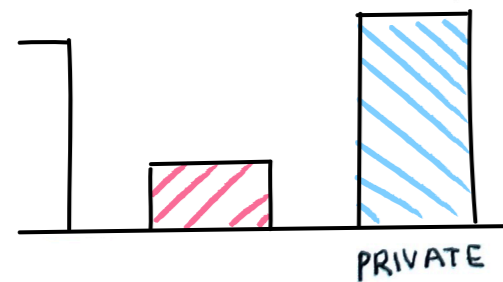
INVESTIGATING RELATION

PUBLIC → COLLECTIVE → PRIVATE
in SPATIAL DESIGN



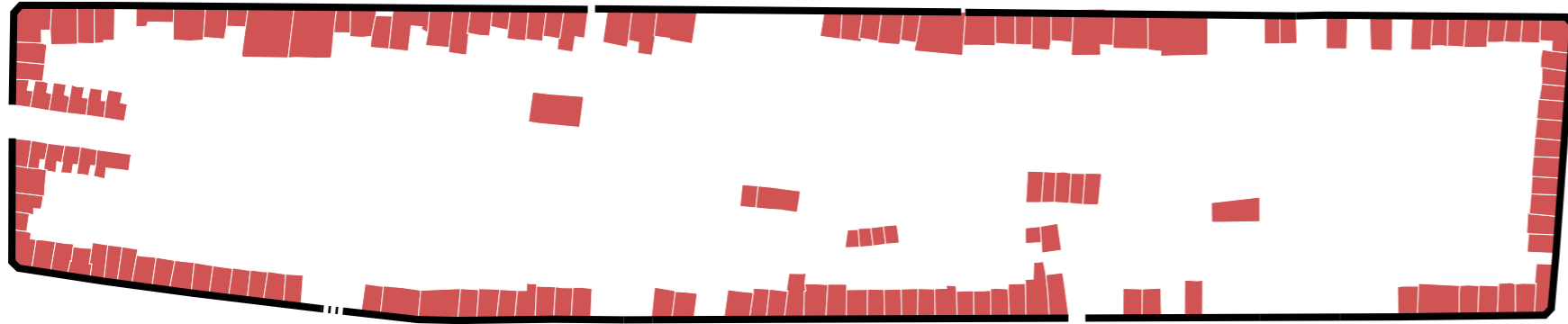
WHERE IS PUBLIC?
WHERE IS PRIVATE?
HOW DOES COLLECTIVE PLAY A ROLE?

AND WHAT ABOUT THE SPACES IN BETWEEN?

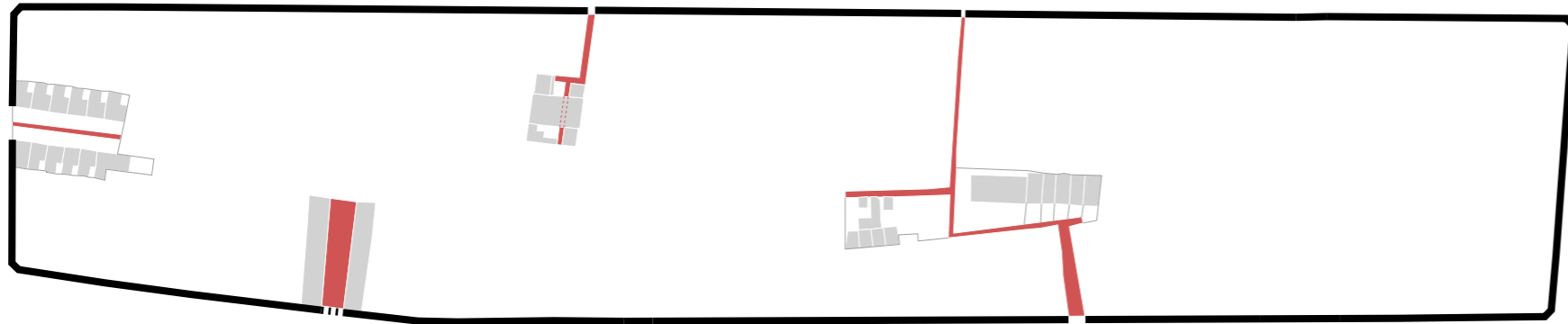




The design site is located in Liège, on Avenue de la Croix Rouge 268/270, and has entrances on both Avenue de la Croix-Rouge and Rue du Moulin. The plot consists of a currently unoccupied building and an empty space which total at approximately 3318 m².



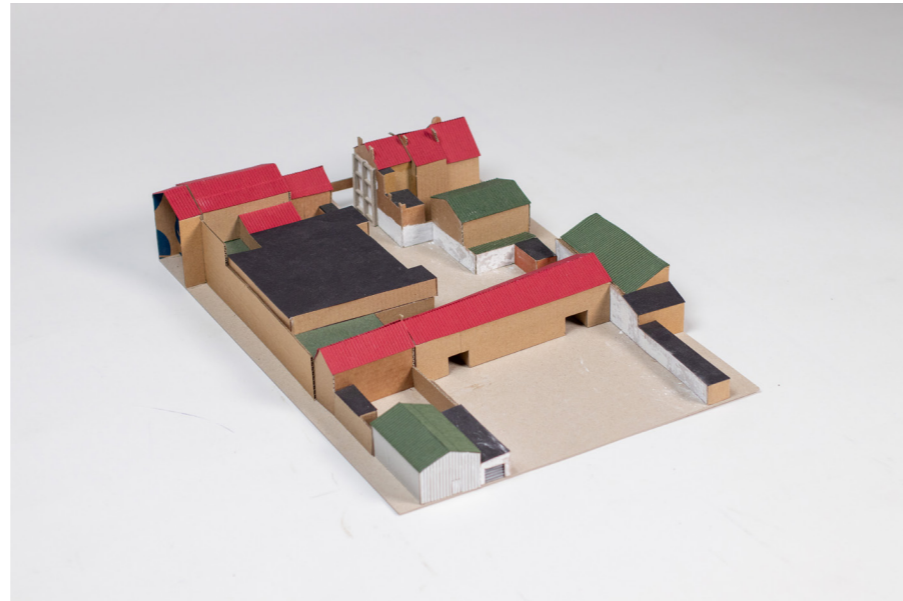
The perimeter of the large building block consists of an often impenetrable row of dwellings, varying in height and form, but bound by commonalities found in their composition.

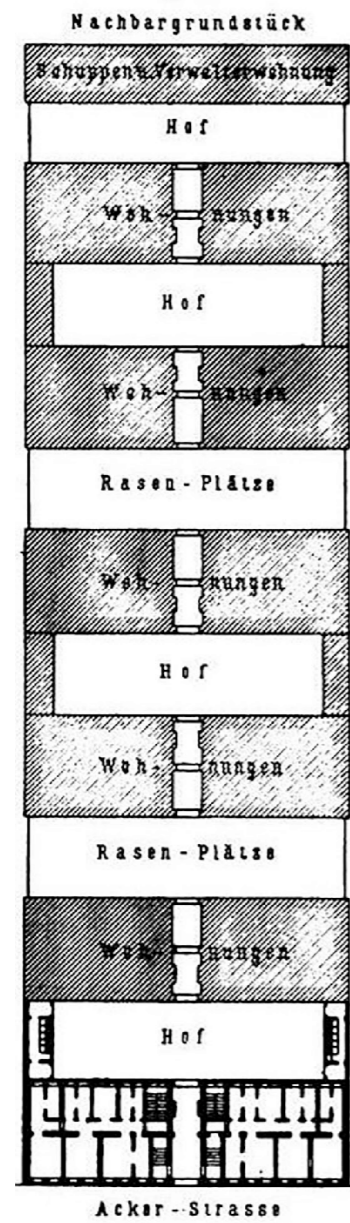


In some places, where the sequence of dwellings stops, an, often narrow, alley leads to the inner parts of the building block, where new types of dwelling have arisen. Here the dwellings don't have a dictated front and back and can be placed wherever they want to. However, still they seem to have a distinct front and back facade, now with the addition of gardens, something invisible from the street side.

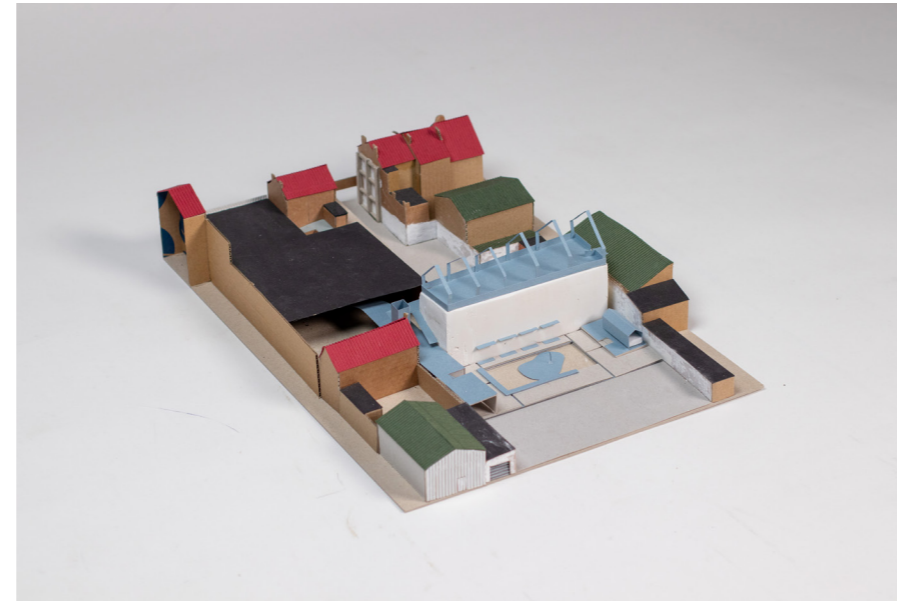


Looking at the plot as an archeological excavation, what can we learn from the site before adding something new? This model has been the base for the spatial design throughout the whole graduation year, it has been a place of discovery but also a vessel for new design ideas.

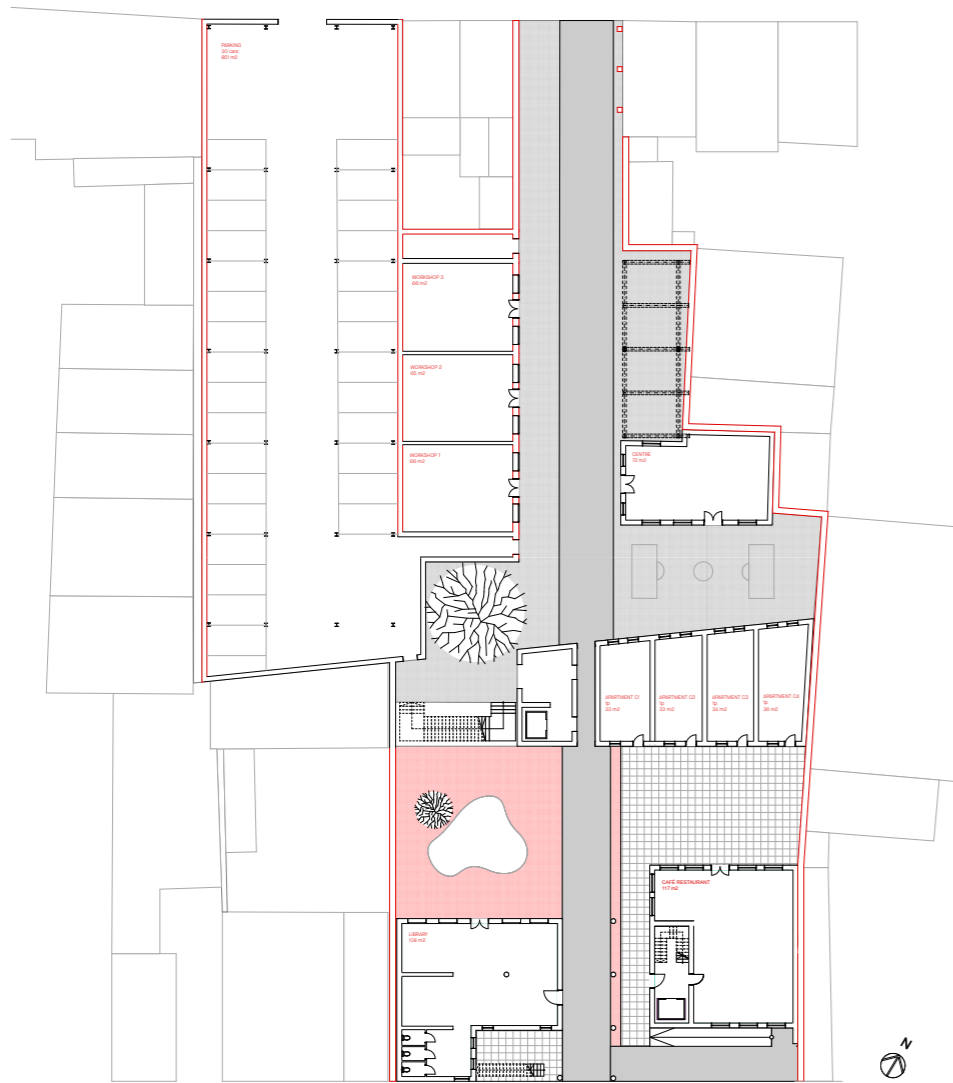




Plan of Meyers Hof. Reprinted from Joseph Stübben, Der Städtebau, 1907: 28.



The reference of the Berlin Mietskaserne gave a new insight into aligning the corridor with the transition from public to collective (outside) courtyards. While already translating my ideas on elements into the spatial design, seen in the absence of windows on the south side for example, this model represents the experiment with public (gray), collective (blue) and private space (white). Aiming to define a system in which they can coexist.



Architect: de la Cour Rouge 268-271, Liège
 Drawing name: Drawing Scale
A. 0 1:200
 Basile van Vliet | UK graduation studio 2022-2023

Further iteration shows that the corridor becomes more obvious, a clear entrance to the site on both sides. Building blocks are placed in a way that outside spaces with different characters can be developed, the in between spaces act as individual rooms. The notion of level difference is introduced in the form of the terrace on the right side en public entrances to collective spaces are placed on the inside of the courtyards rather than on the street side.



The final spatial design combines all of the above principles into one, creating a city in microcosm where collective strength strengthen the community and introduce a new way of living together within the building block.



The entrance on the south side presents two large volumes, the one pushed back a bit more than the other, and between them a gate inviting to cut through the building block.



The entrance on the north side is kept intact, highlighting the natural interruptions in the sequence of dwellings that forms the border of the building block.

Archetype



Bio based



Co-living

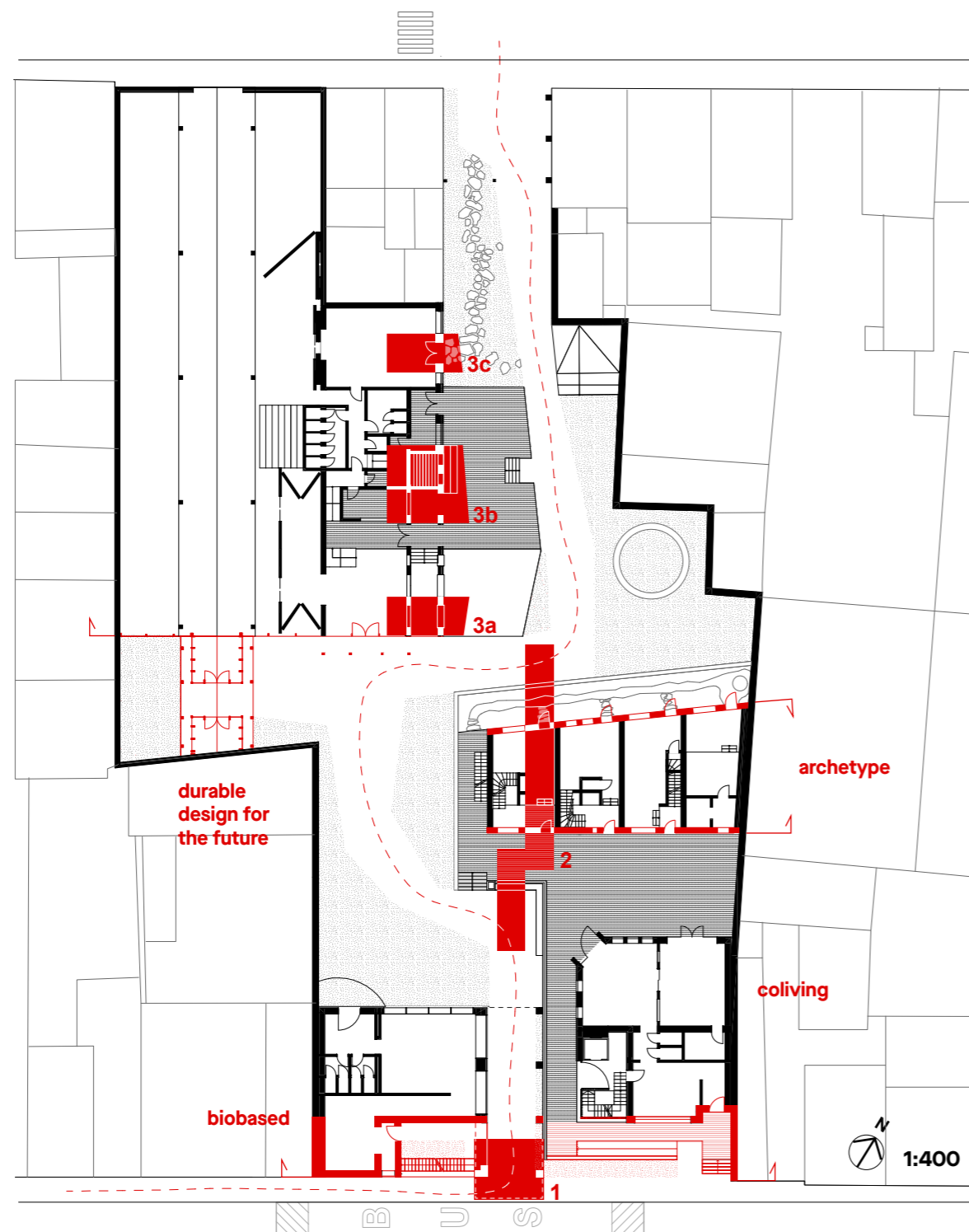


Durable design for the future



The design consists of four different interventions, representing four different themes within the design. The **archetype**, representing the new type found within the building block, exploring the type of dwelling found in the context as well as showcasing its autonomy almost as one would with a monument. Building **bio based**, a theme central in all of the design, but detailed mostly in this building, using breathable wooden construction to show the simplicity of dry connections and thus enabling a light construction that could easily

be assembled by inhabitants themselves. Exploring the realistic possibilities of **co-living** that can benefit the creation of a community on this site alone, but also spaces that can serve the community of the whole neighbourhood. And last a **durable design for the future**, where the reuse of materials, elements but also more ambiguous concepts such as consciousness and memory of elements lies central, creating a space that introduces a new way of thinking about abandoned structures, and is equipped to adapt in the future.



Those same four themes are represented and further developed in the Story, the final research product combining multiple scales to tell the story of the design as if recreating a memory of someone venturing through the site. By showing a series of views, as if appearing in imagination - the design is telling the story of my personal understanding of Liège, one based on human interaction with common elements,



Using the model makes it possible to investigate the spaces in between the building blocks, something that is hard to imagine in plan.



By constantly moving around building blocks, the green, other elements in space I've tried to capture moments in the design that can be read as outside rooms.



Some more inviting, some more closed off, making use of the multiple nooks and corners the site has to offer.

ARCHITECTURAL LANGUAGE

CONSISTING OF **ELEMENTS**
CONNECTED IN COMPOSITIONS

↳ FOLLOWING RULES / SYSTEMS
/ CLASSIFICATION

FORMING A BUILDING

AND TOGETHER :

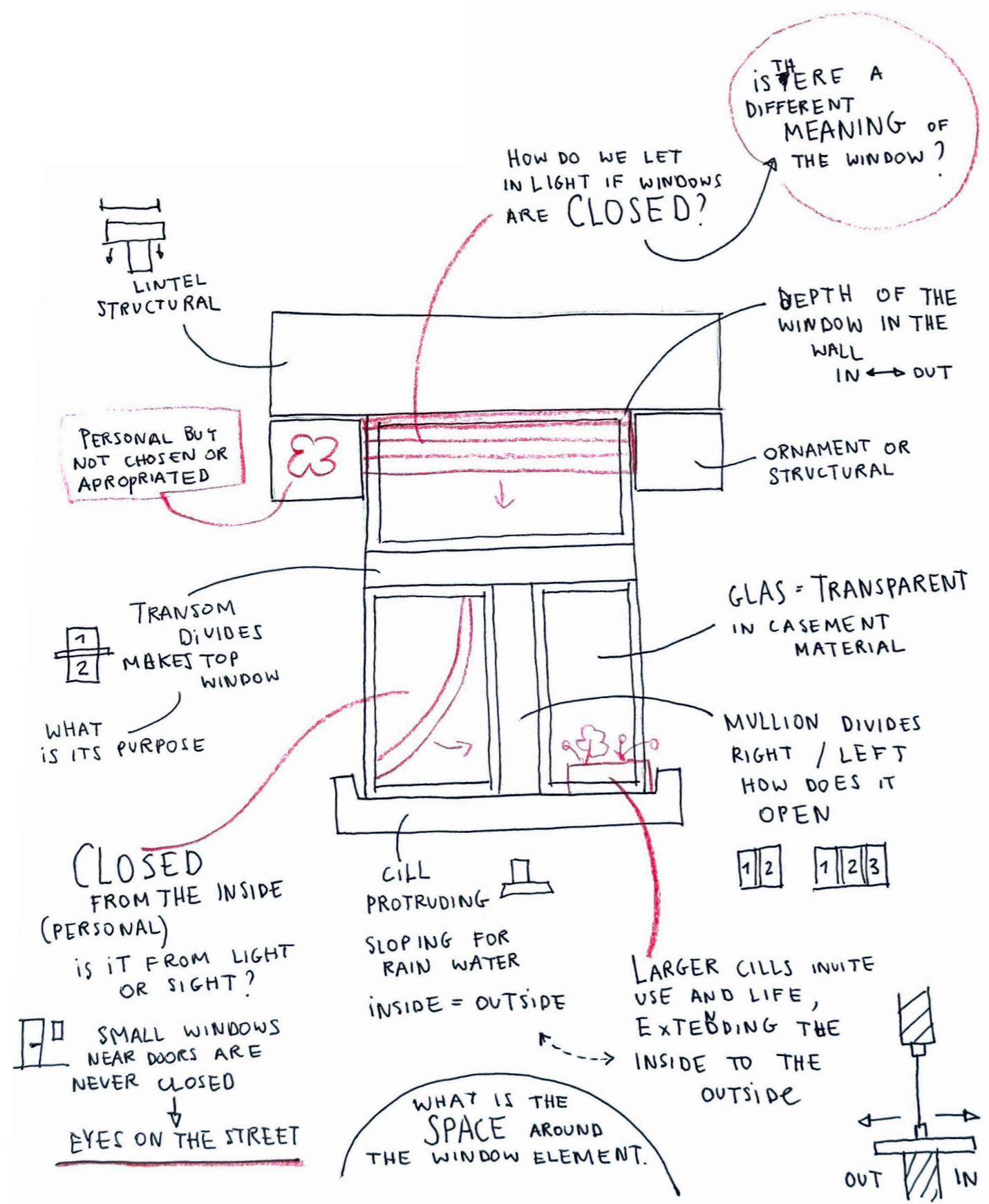
A CITY IN MICROCOSM
WHERE FOLKS ON COLLECTIVE SPACE
REIGNITES THE INTERCULTURAL DISCOURSE
BETWEEN DIFFERENT CULTURES IN BRESSOIX.

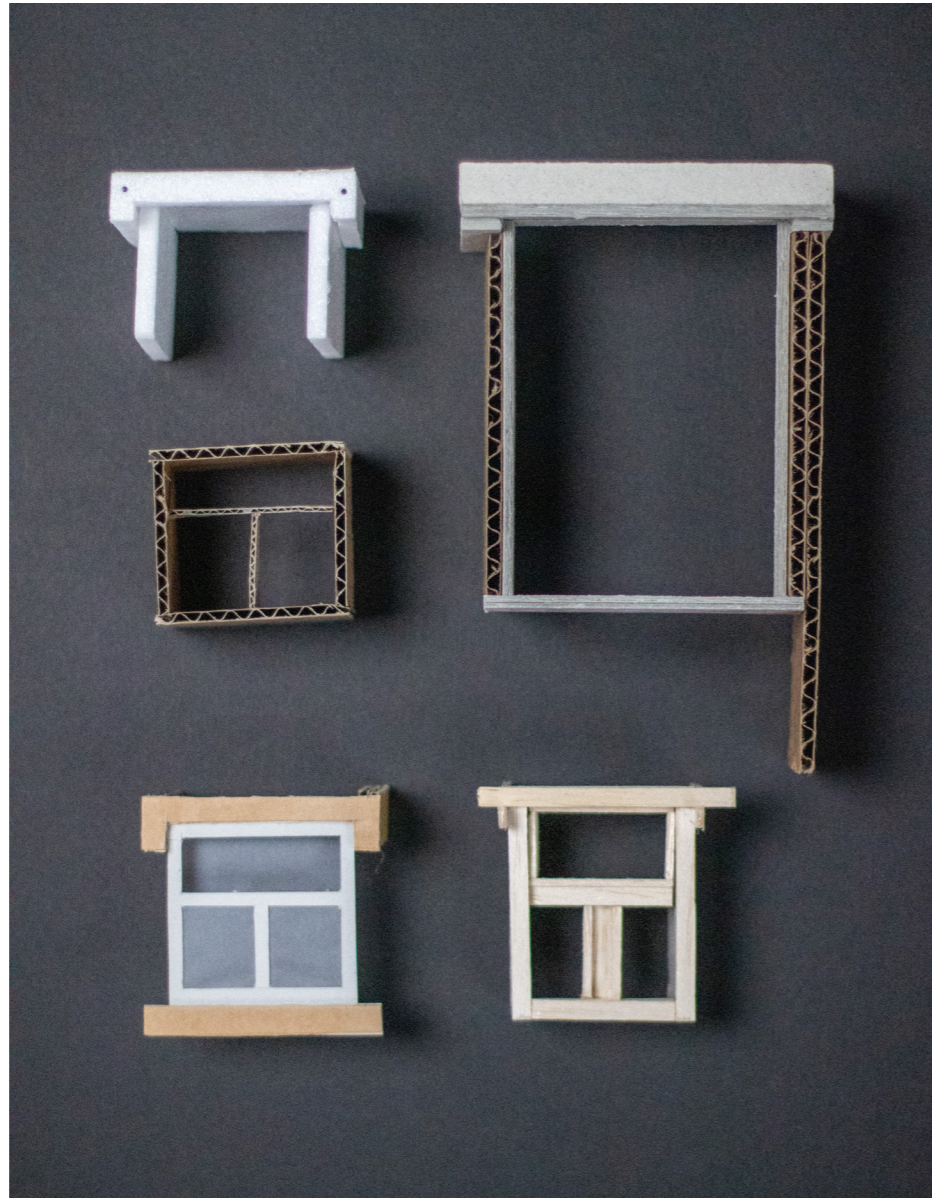
↓
ELEMENTS ARE DEFINED BY :

- THEIR AUTONOMOUS READING
(FIXED ELEMENTS)
 - OBSERVATIONS OF THEIR "LIFE"
(DYNAMIC ELEMENT)
- GIVING INCENTIVE FOR THEIR
MANIPULATION

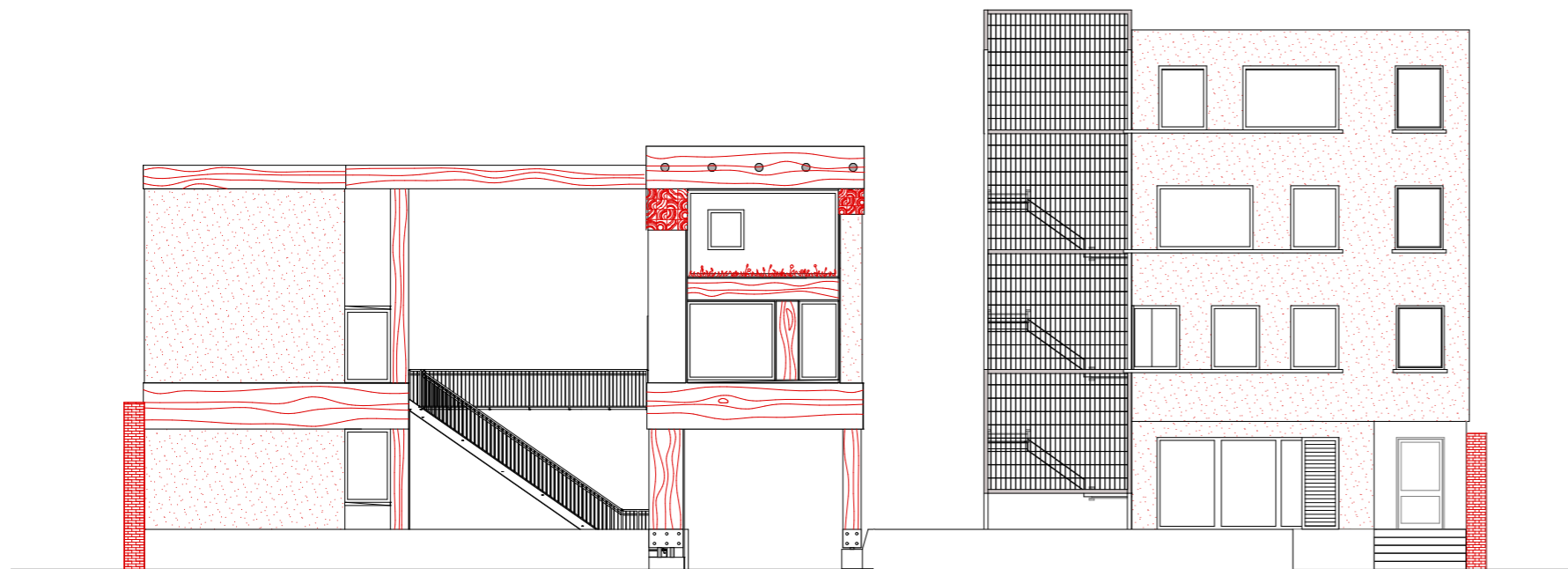
ELEMENT

WINDOW



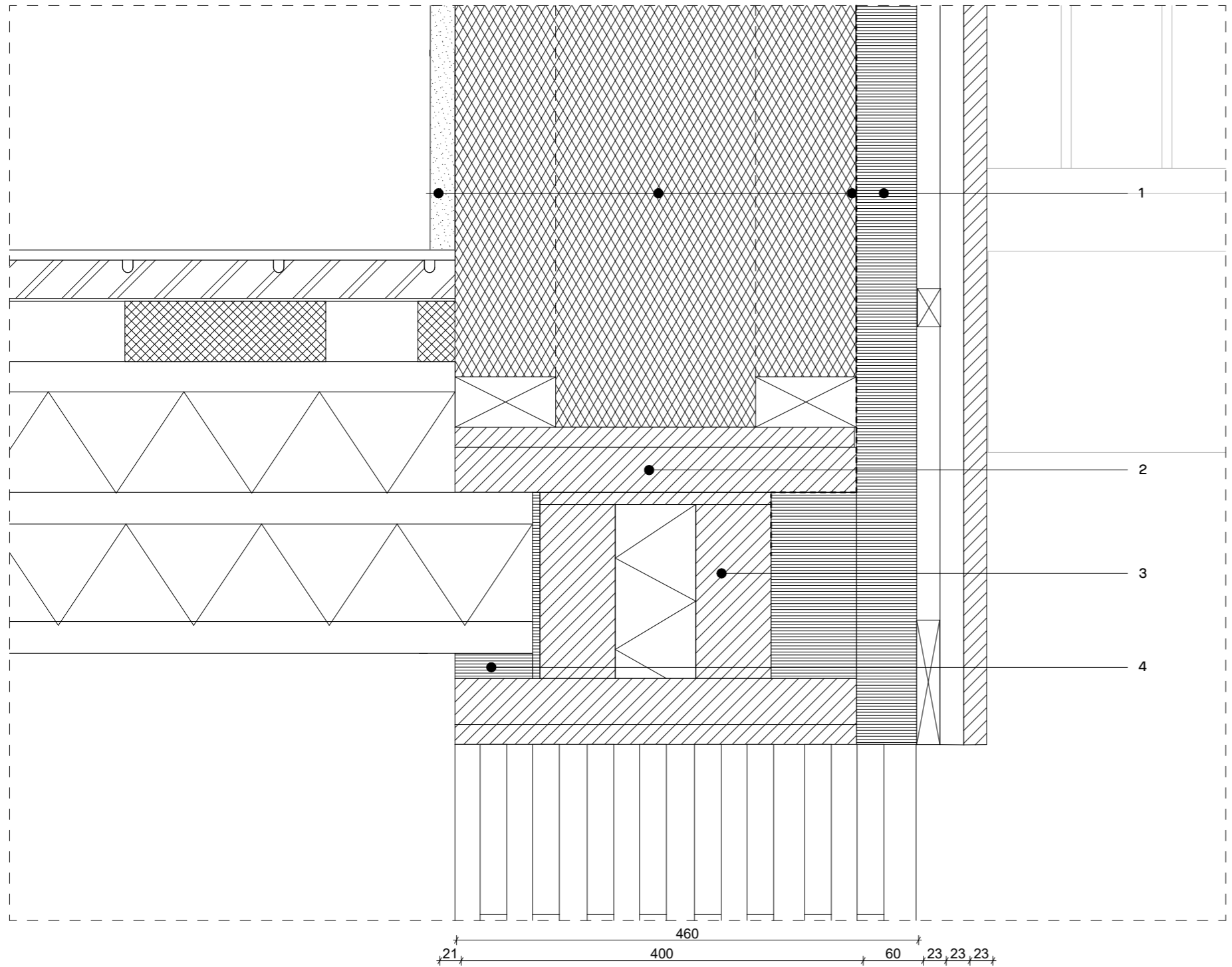


The window is the first element that grabbed my interest when wandering through the streets of Bressoux. All of these beautifully ornamented windows, no one alike the other, tainted by those ugly plastic shutters that are all closed, making the window lose its personal identity. Why even have windows if they are so shut all of the time? This led to an exploration of what the window could be within the confines of the current use, while working with the structural elements which could be dissected from an autonomous reading of the window.



scale 1:130
facade B + C

The facade of building B has been a testing ground for these explorations, telling the story of how elements can be manipulated both by their autonomous reading and their appropriated use.



1. EXTERIOR WALL

vapour permeable certified BioLime render system 21mm
 BioLime Finish Coat Carrara White 3mm
 BioLime Brown Coat 6mm
 BioLime Scratch Coat with embedded Mesh 6mm
 BioLime Bond Coat 3mm

straw/wood Ecococon panel 400x800

airtight breather membrane

STEICOprotect Typ H woodfibre board 60mm

ventilated timber facade Platowood Spruce 3x23mm

2. TOP BEAM STEICO LVL X (top beam)

3. PREFABRICATED RINGBEAM STEICO LVL R

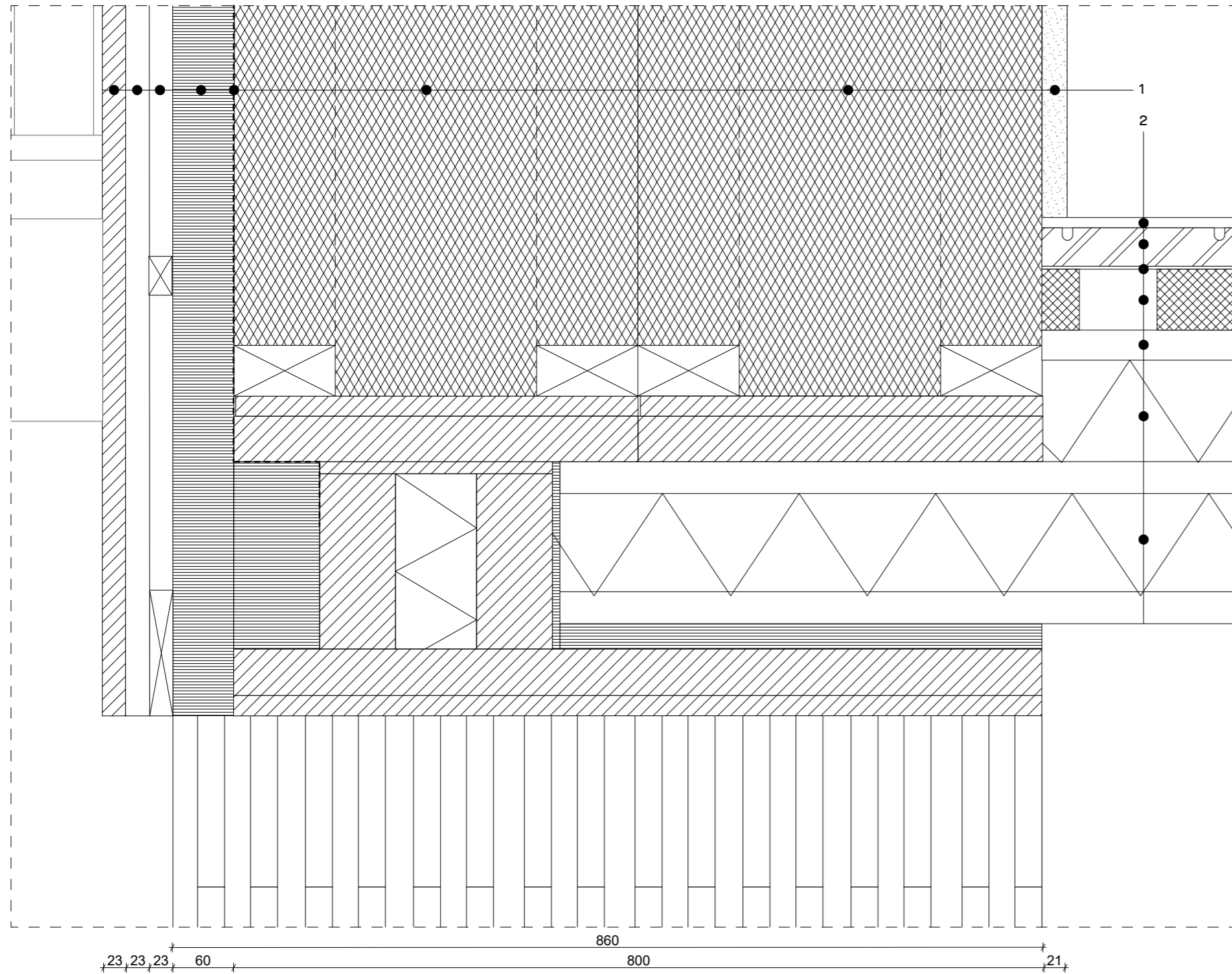
4. ACOUSTIC SEPERATION Rothoblaas Xylofon

B1

Drawing Scale

Detail 1:5

Av. de la Croix-Rouge 268/270



1. EXTERIOR WALL

vapour permeable certified BioLime render system 21mm
 BioLime Finish Coat Carrara White 3mm
 BioLime Brown Coat 6mm
 BioLime Scratch Coat with embedded Mesh 6mm
 BioLime Bond Coat 3mm
 straw/wood Ecococon panel 400x800
 straw/wood Ecococon panel 400x800
 airtight breather membrane
 STEICOprotect Typ H woodfibre board 60mm
 ventilated timber facade Platowood Spruce 3x23mm
 wooden plank 200mm horizontal

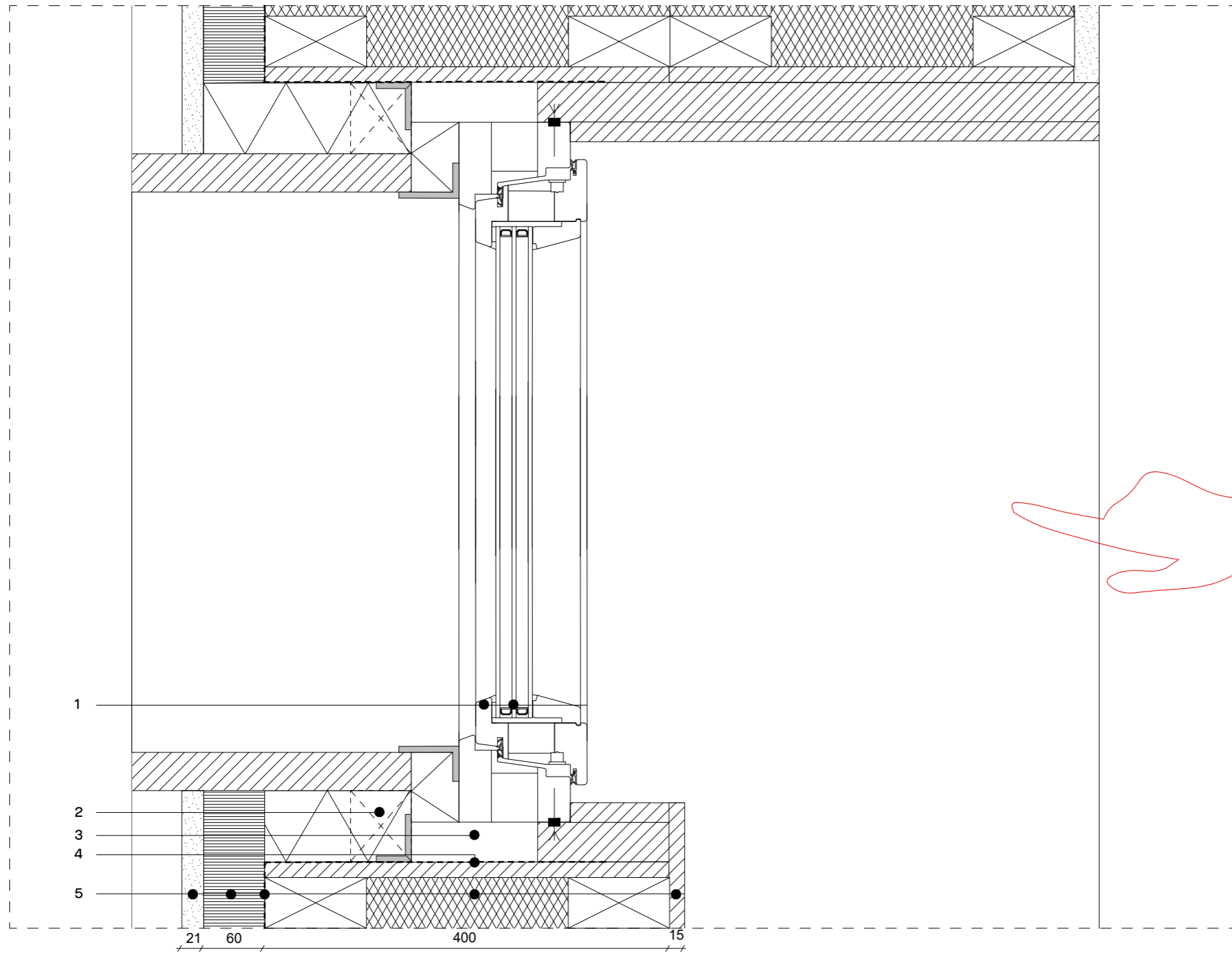
2. FLOOR

Marmoleum
 Knauf GIFAfloor Klima with heating 38 mm
 Landolt TS Silent 3 mm
 concrete flags 60 mm
 Isover EP 2, 30 mm, $s' \leq 15 \text{ MN/m}^3$, on the edge Thermofloor
 wood fibre 100 mm
 LIGNATUR surface element (LFE 200)
 insulated

B2

Drawing Scale

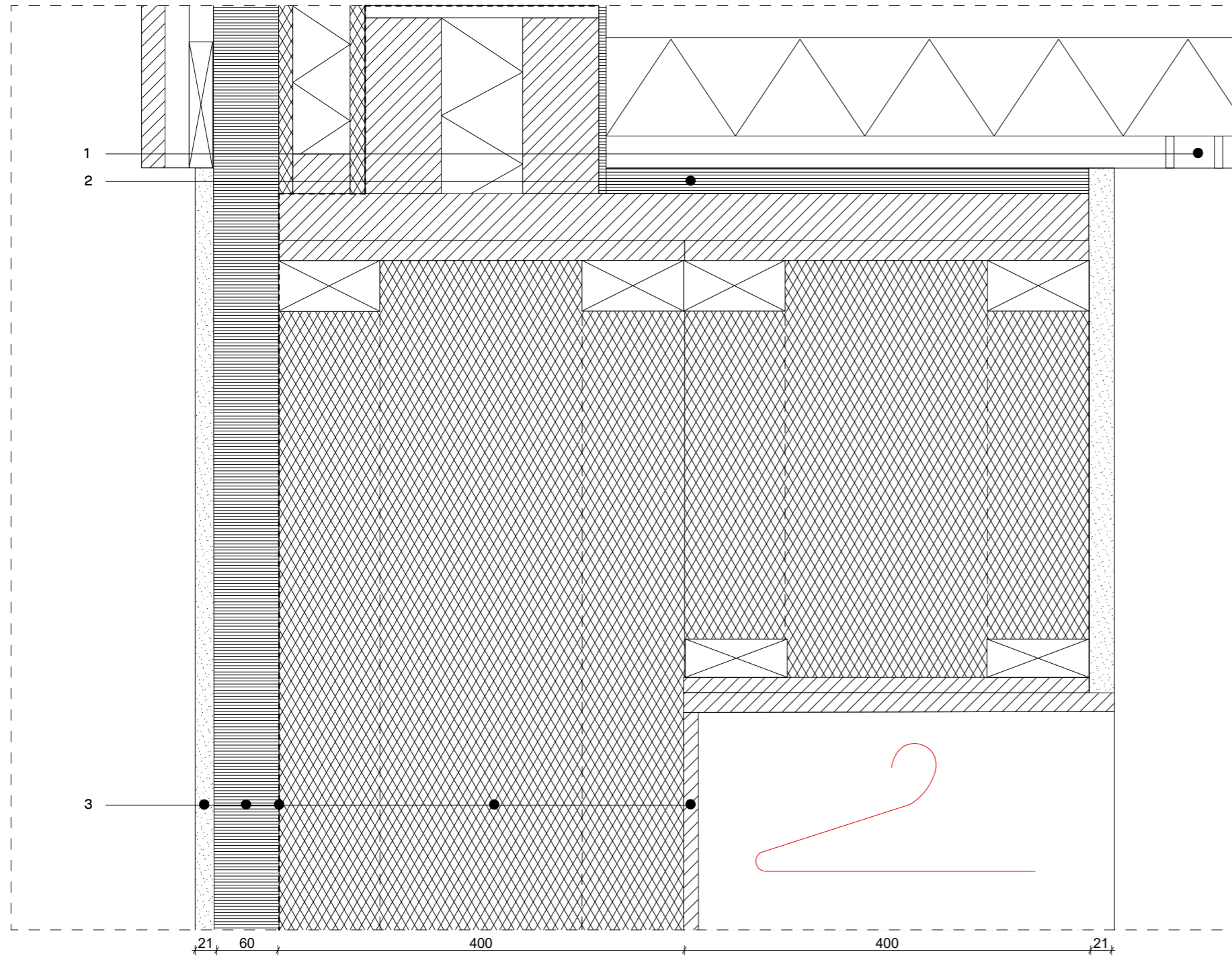
Detail 1:5



- 1. WINDOW**
passive airtight window frame ENERGATE 1042+
triple HR+++ glass
- 2. LINTEL ACHORING** wood 60×70mm
- 3. INSTALLATION GAP**
- 4. AIRTIGHT BREATHER MEMBRANE**
- 5. EXTERIOR WALL**
vapour permeable certified BioLime render system 21mm
BioLime Finish Coat Carrara White 3mm
BioLime Brown Coat 6mm
BioLime Scratch Coat with embedded Mesh 6mm
BioLime Bond Coat 3mm
STEICOprotect Typ H woodfibre board 60mm
airtight breather membrane
straw/wood Ecococon panel 400×800
plywood 15 mm

B3 Drawing Scale

Detail 1:5



1. ACOUSTIC CEILING LIGNATUR surface element (LFE 200) acoustics type 3.1

2. ACOUSTIC SEPERATION Rothoblaas Xylofon

3. EXTERIOR WALL

vapour permeable certified BioLime render system 21mm

BioLime Finish Coat Sienna 3mm

BioLime Brown Coat 6mm

BioLime Scratch Coat with embedded Mesh 6mm

BioLime Bond Coat 3mm

STEICOPROTECT Typ H woodfibre board 60mm

airtight breather membrane

straw/wood Ecococon panel 400x800

plywood 15 mm

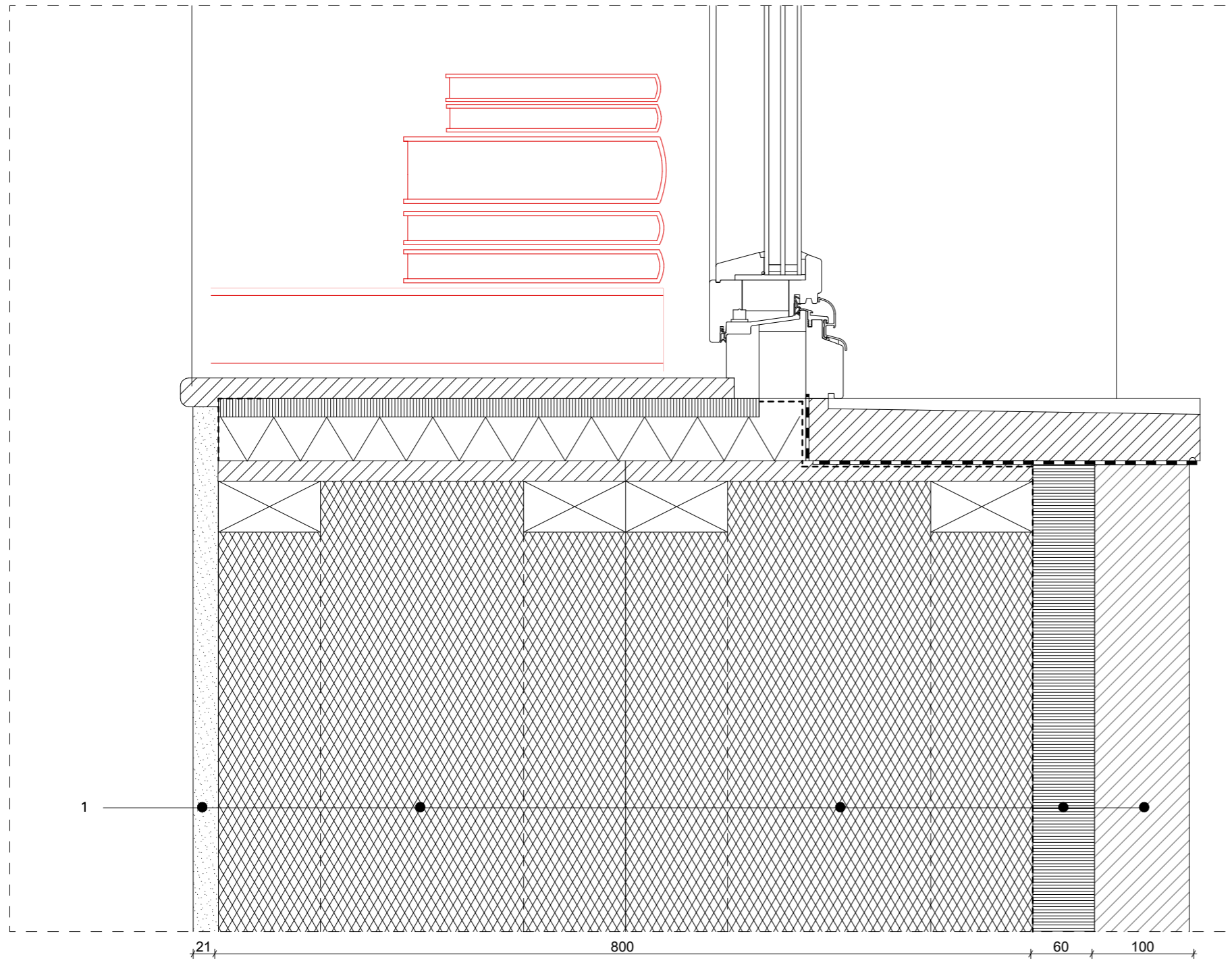
B4

Drawing Scale

Detail 1:5

Av. de la Croix-Rouge 268/270

30



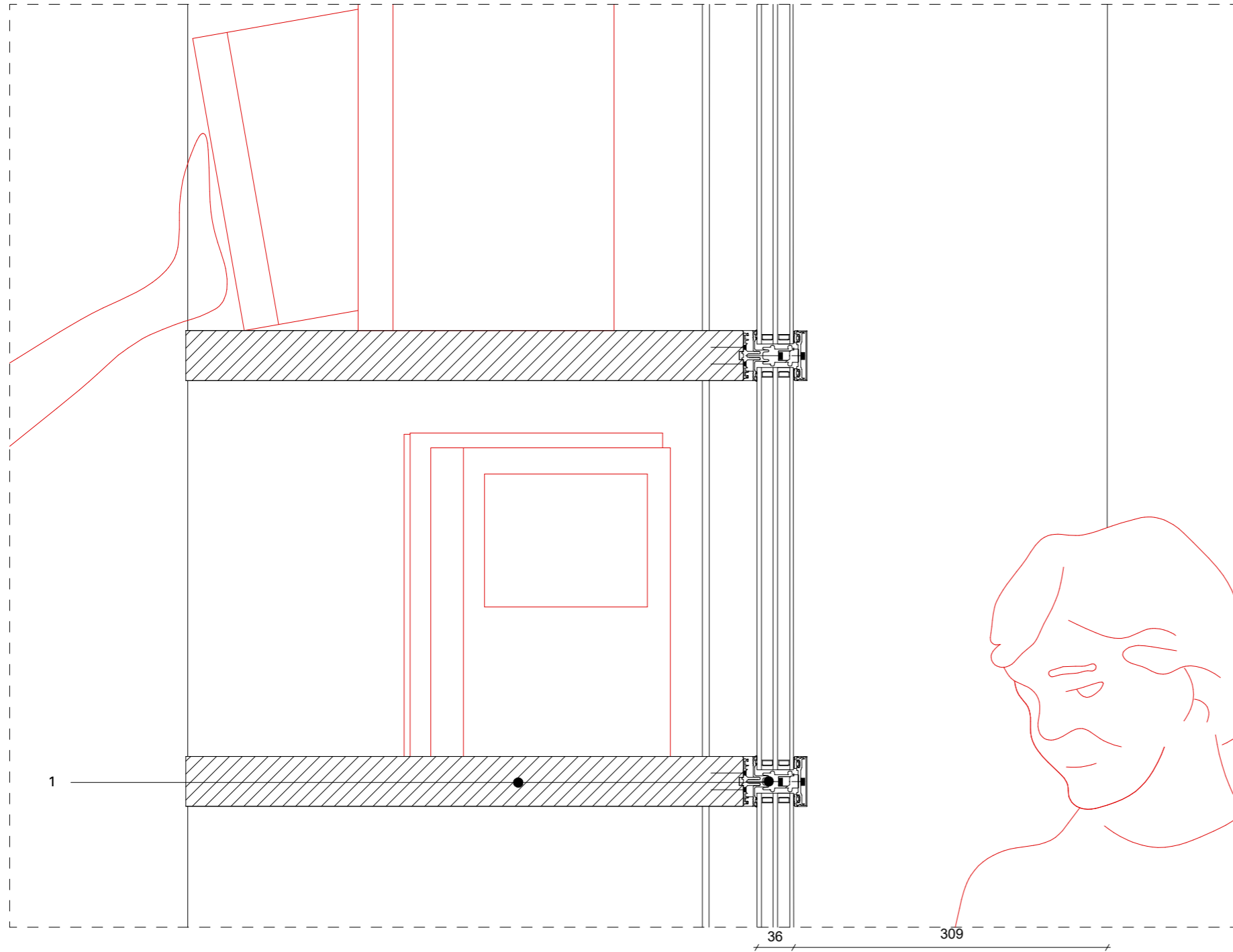
1. EXTERIOR WALL

vapour permeable certified BioLime render system 21mm
 BioLime Finish Coat Sienna 3mm
 BioLime Brown Coat 6mm
 BioLime Scratch Coat with embedded Mesh 6mm
 BioLime Bond Coat 3mm
 straw/wood Ecococon panel 400×800
 straw/wood Ecococon panel 400×800
 airtight breather membrane
 STEICOprotect Typ H woodfibre board 60mm
 limestone 100 mm

B5

Drawing Scale

Detail 1:5

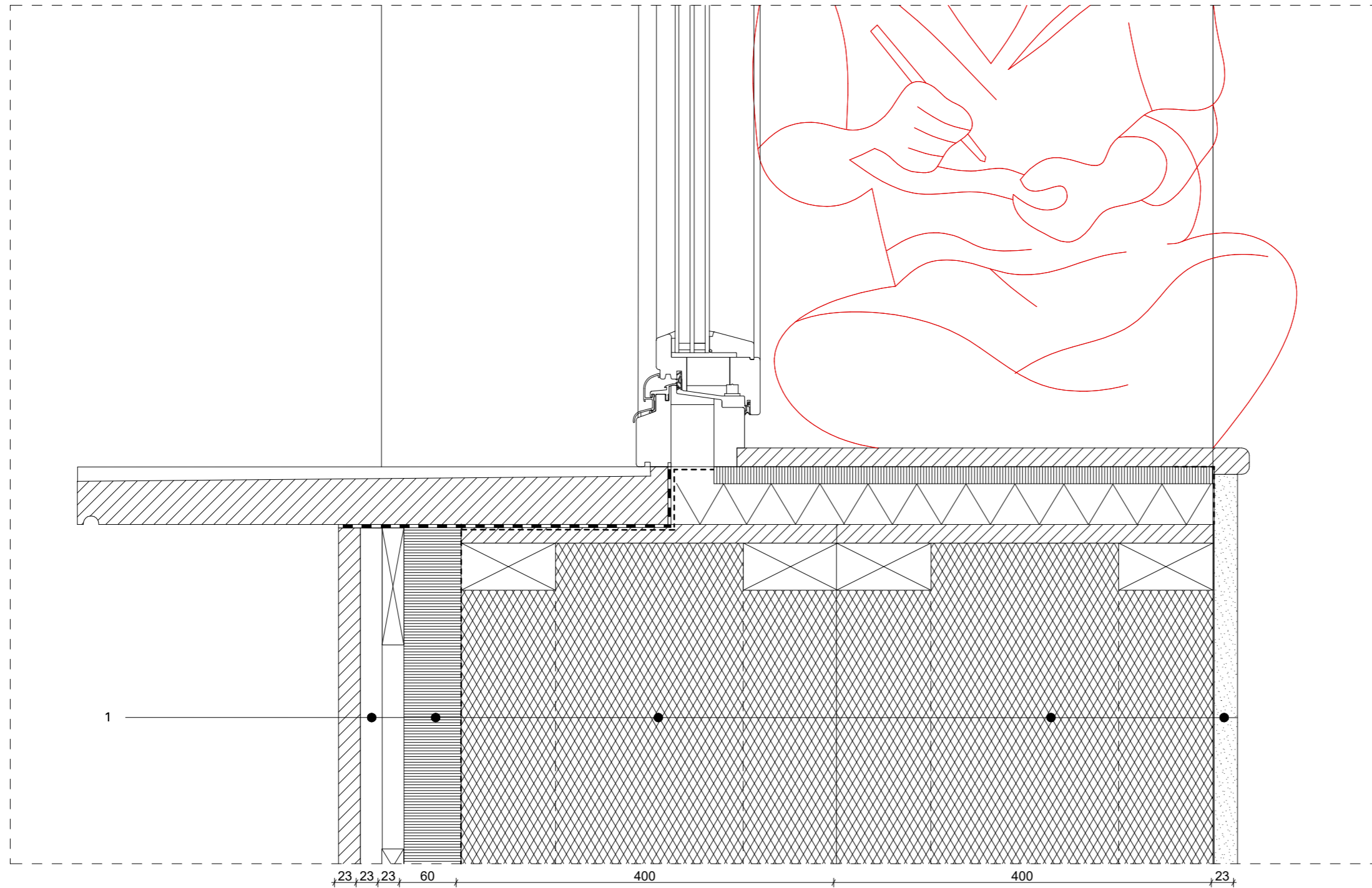


1. WINDOW
 wooden shelve 50 mm
 Wood-Aluminium Curtain Wall batimet TM60 SE

B6 Drawing Scale

Detail 1:5

Av. de la Croix-Rouge 268/270
 32



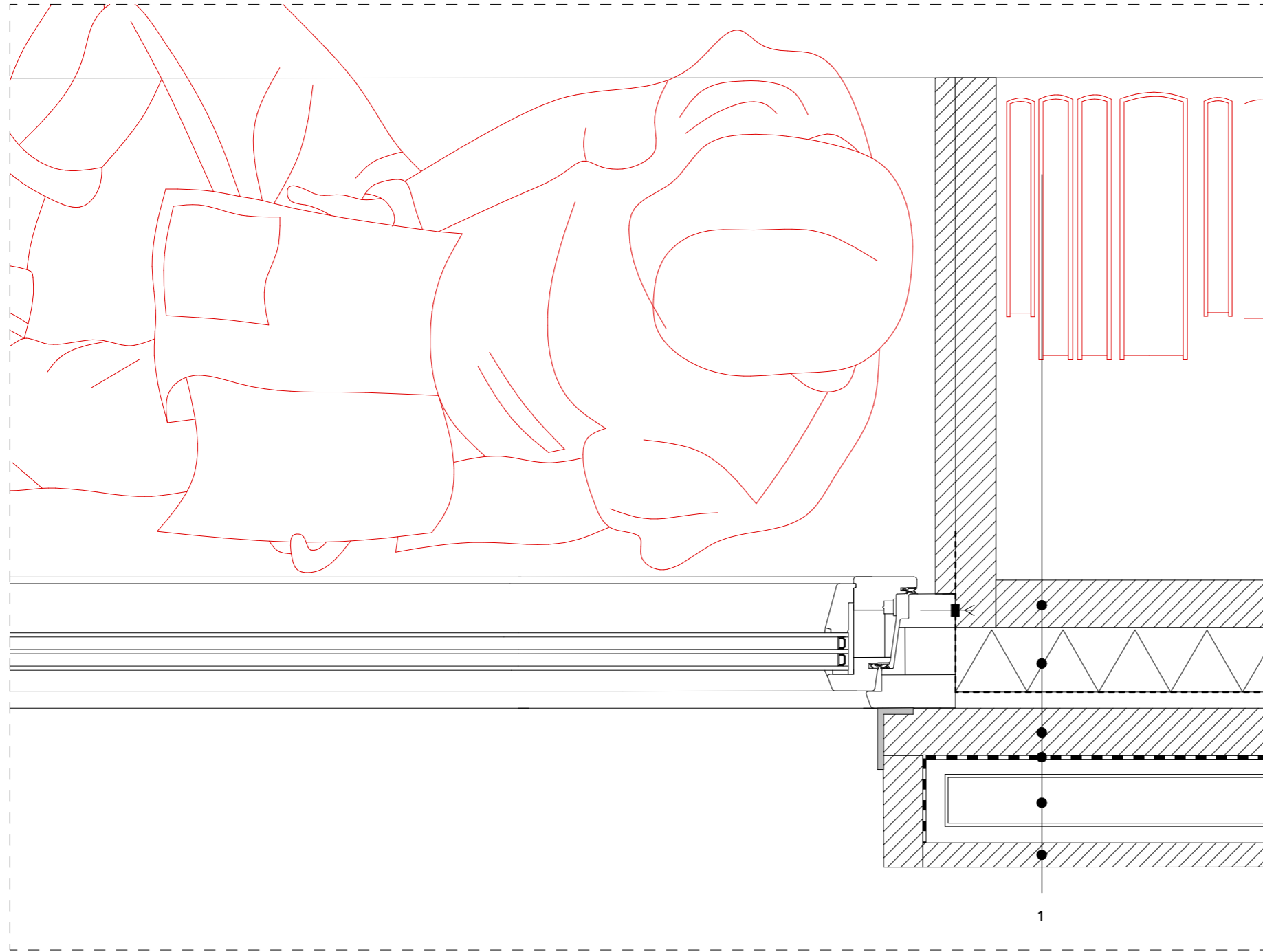
EXTERIOR WALL

ventilated timber facade Platowood Spruce 3×23mm
 STEICOpact Typ H woodfibre board 60mm
 airtight breather membrane
 straw/wood Ecococon panel 400×800
 straw/wood Ecococon panel 400×800
 vapour permeable certified BioLime render system 21mm
 BioLime Bond Coat 3mm
 BioLime Scratch Coat with embedded Mesh 6mm
 BioLime Brown Coat 6mm
 BioLime Finish Coat Natural White 3mm

B7 Drawing Scale

Detail 1:5

Av. de la Croix-Rouge 268/270

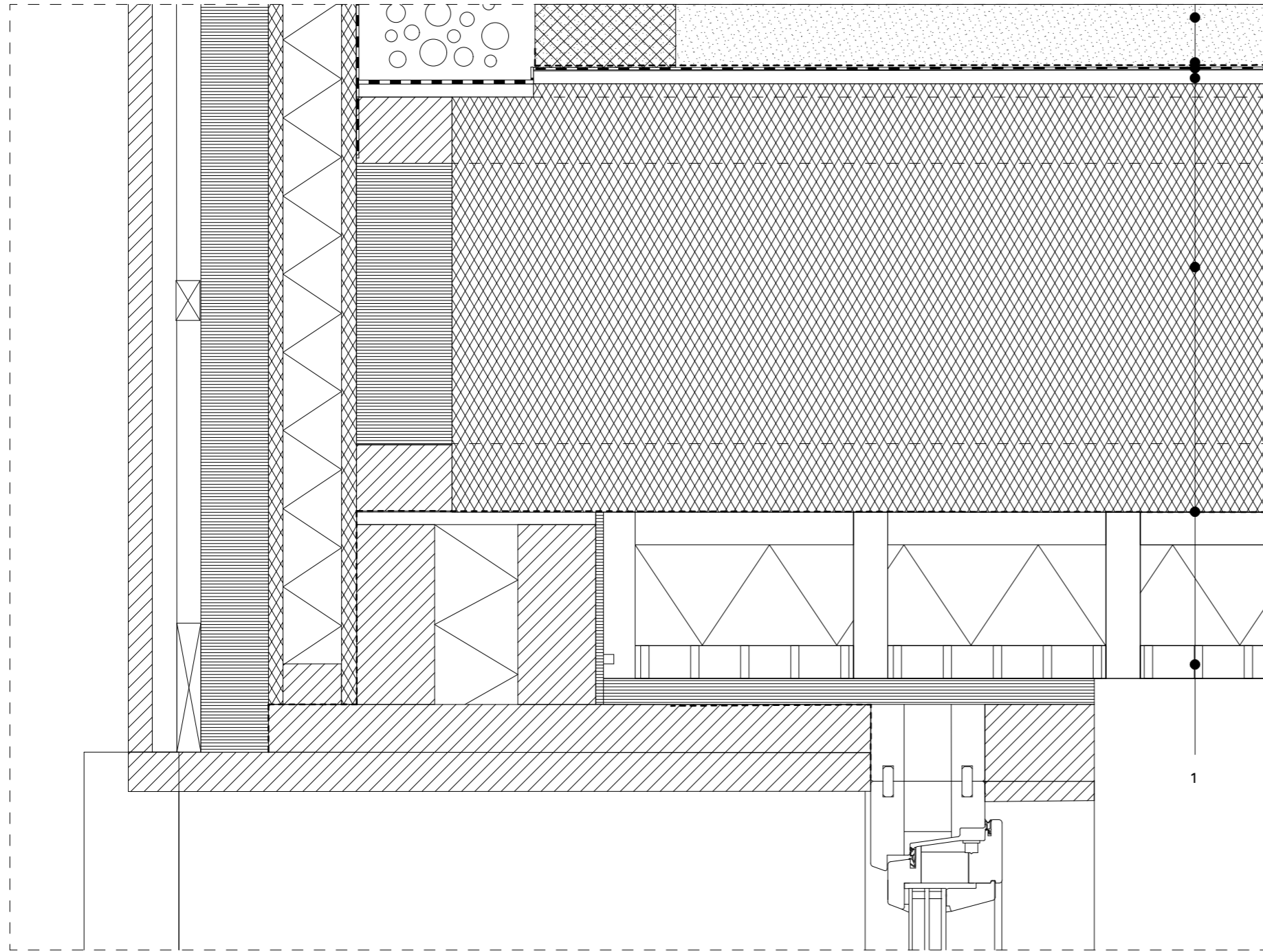


1. MULLION
 Plywood 40 mm
 EPS isolation 60 mm
 airtight breather membrane
 STEICOprotect Typ H woodfibre board 60mm
 EPDM membrane
 rectangular steel pipe
 ventilated timber facade Platowood Spruce 23mm

B8 Drawing Scale

Detail 1:5

Av. de la Croix-Rouge 268/270
34



1. EXTENSIVE GREEN ROOF

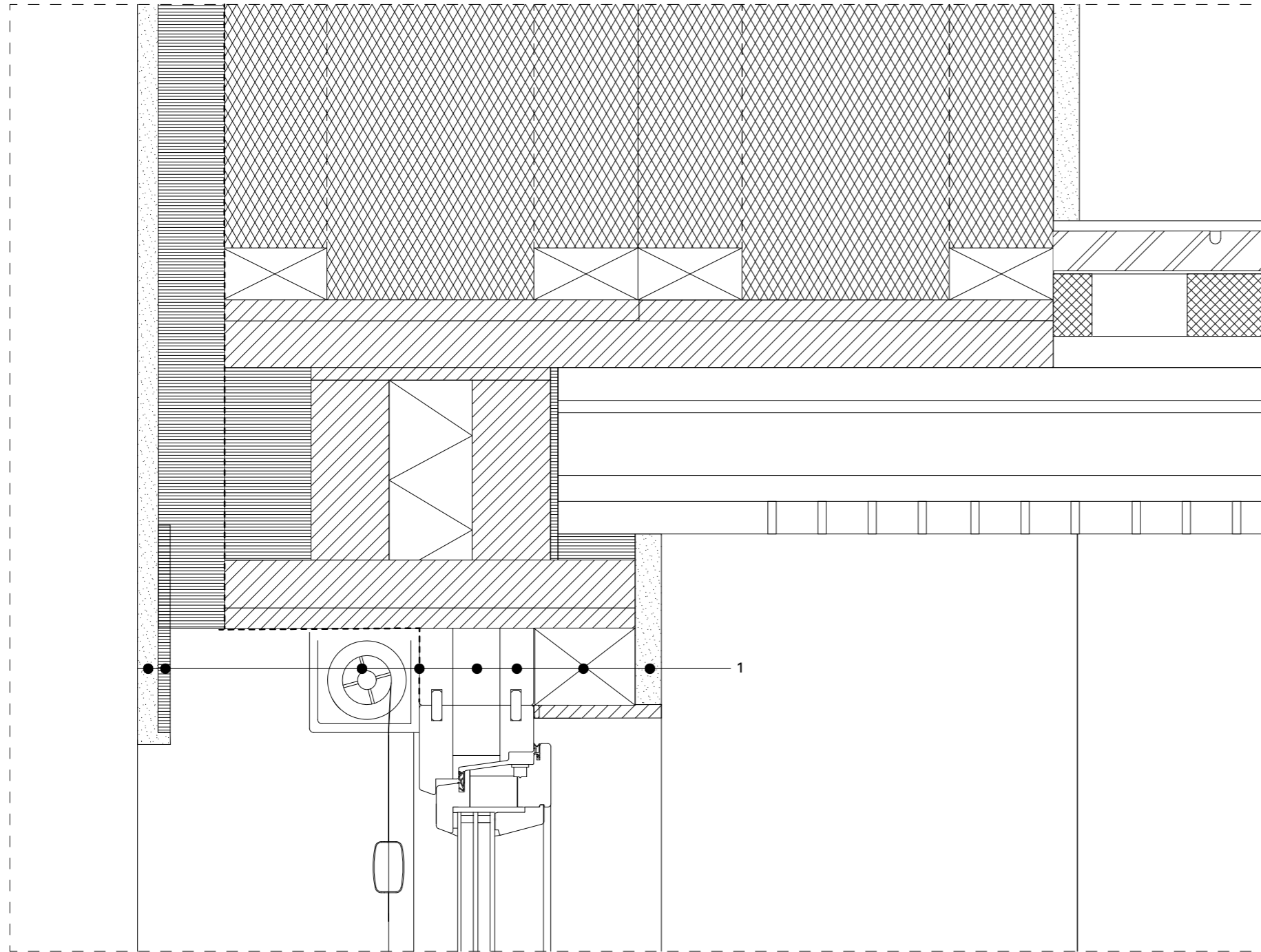
roof substrate 60mm
 geotextile for drainage
 EPDM membrane
 STEICO I-beams (Insulated with blown cellulose) 400mm
 Airtight vapour barrier
 LIGNATUR surface element (LFE 200) with fill 50 kg/m²,
 acoustics type 3.1

B9

Drawing Scale

Detail 1:5

Av. de la Croix-Rouge 268/270



1. EXTENSIVE GREEN ROOF

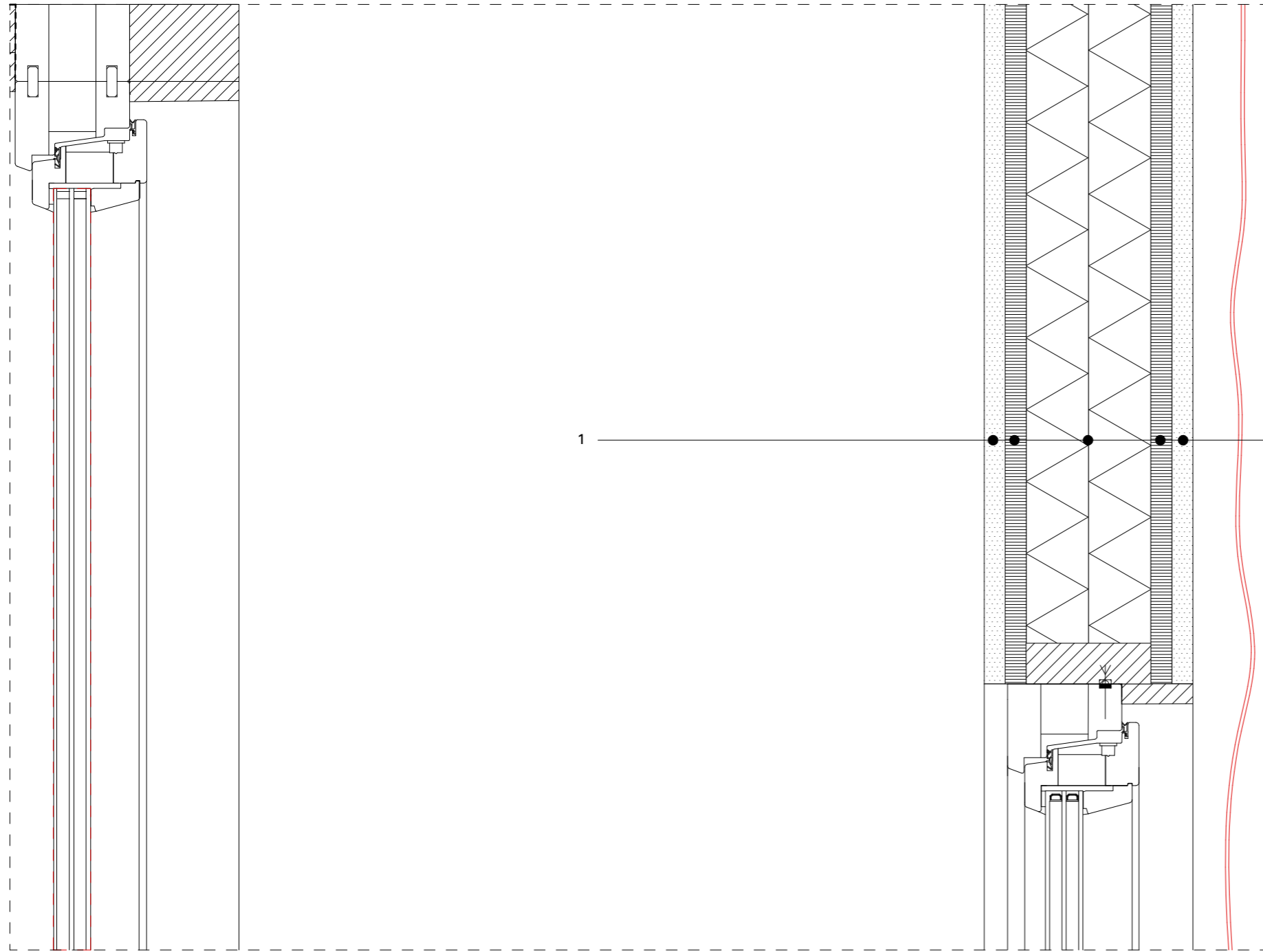
vapour permeable certified BioLime render system 21mm
 BioLime Finish Coat Carrera White 3mm
 BioLime Brown Coat 6mm
 BioLime Scratch Coat with embedded Mesh 6mm
 BioLime Bond Coat 3mm

EPS 100mm
 passivehouse window frame
 Installation gap
 airtight breather membrane
 screen

DHF board
 vapour permeable certified BioLime render system 21mm
 BioLime Finish Coat Sienna 3mm
 BioLime Brown Coat 6mm
 BioLime Scratch Coat with embedded Mesh 6mm
 BioLime Bond Coat 3mm

B10 Drawing Scale

Detail 1:5

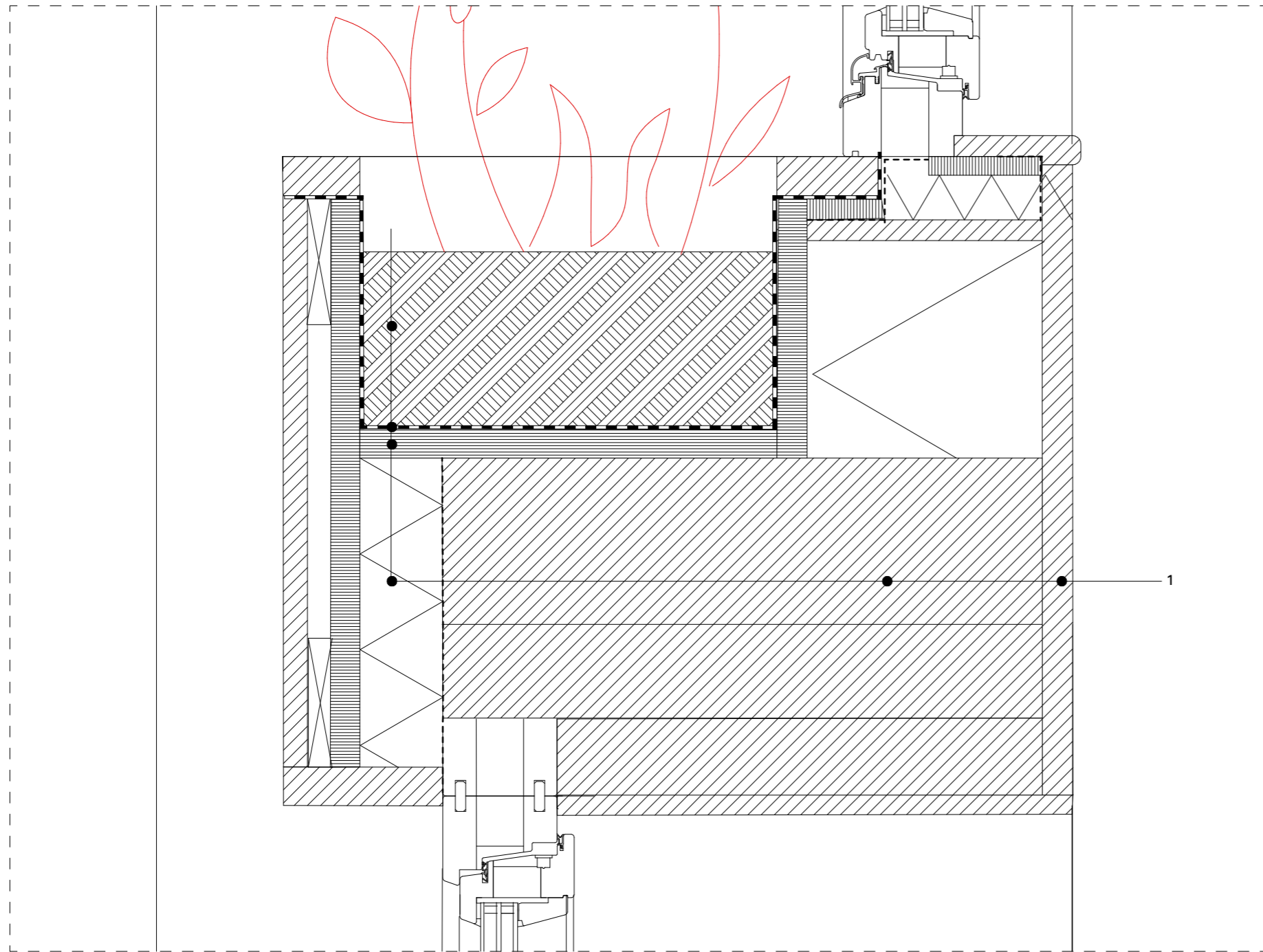


1. INTERIOR WALL
 plasterboard 21 mm
 OSB 20 mm
 timber 60×120 + acoustic insulation
 OSB 20 mm
 plasterboard 21 mm

B11 Drawing Scale

Detail 1:5

Av. de la Croix-Rouge 268/270
37



1. TRANSOM
plywood 20 mm
timber beam 160x590mm
EPS 100 mm
woodfibre board 20 mm
EPDM foil
geotextile for drainage
roof substrate 60mm

B12 Drawing Scale

Detail 1:5

Av. de la Croix-Rouge 268/270
38



There are more places in the design that show examples of experiments with the element window. One such example is in building D, where the actual window is pulled apart from its lintel and sill, the latter fulfilling a new function, that of seating furniture, within the opening in the old facade. Also the half rounded ornament, usually found in the brickwork above windows, is translated into a new material, the metal cladding, giving this rigid industrial material a new look.



The window can be perceived both as a frame for the view as a etalage of whoever will take in it. Going back to the topic of room with a view, which one is the room and which one the view?



Another example of designing with the element window is in building A, where windows are used to showcase the use of the element. In this case by protruding the sill into a table people can sit at and eat at, both inside and out. The window itself establishes a visual connection between the function inside and out.

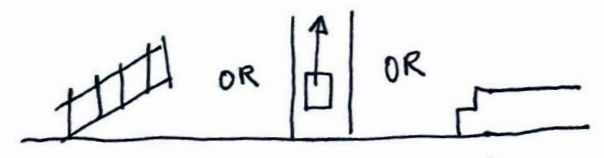
ELEMENT

ENTRANCE

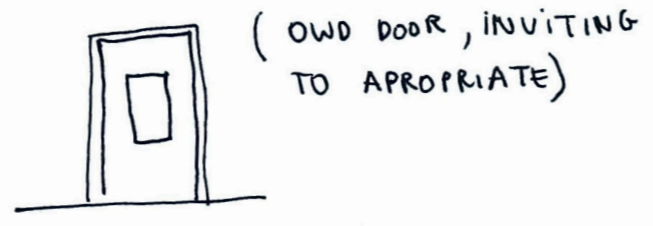


HOW DO WE ENTER? WHERE ARE THE DOORS?
 WHAT ARE THE TRANSITIONS? HOW DO THE
 ELEMENTS PLAY A ROLE?

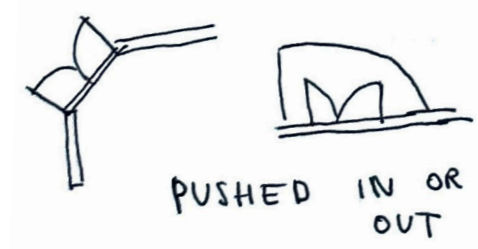
COLLECTIVE
 ENTRANCE



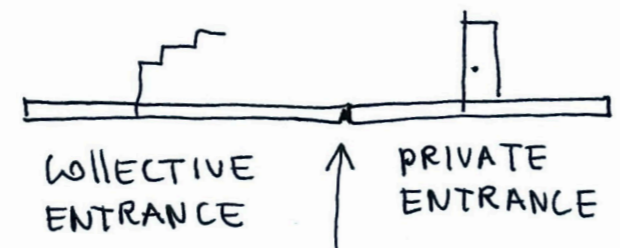
PRIVATE
 ENTRANCE



PUBLIC
 ENTRANCE



PUSHED IN OR
 OUT
 ESTABLISHING A
 CHARACTERISTIC PLACE
 IN THE MICROCOSMIC
 CITY
 AND THUS IN
 MEMORY



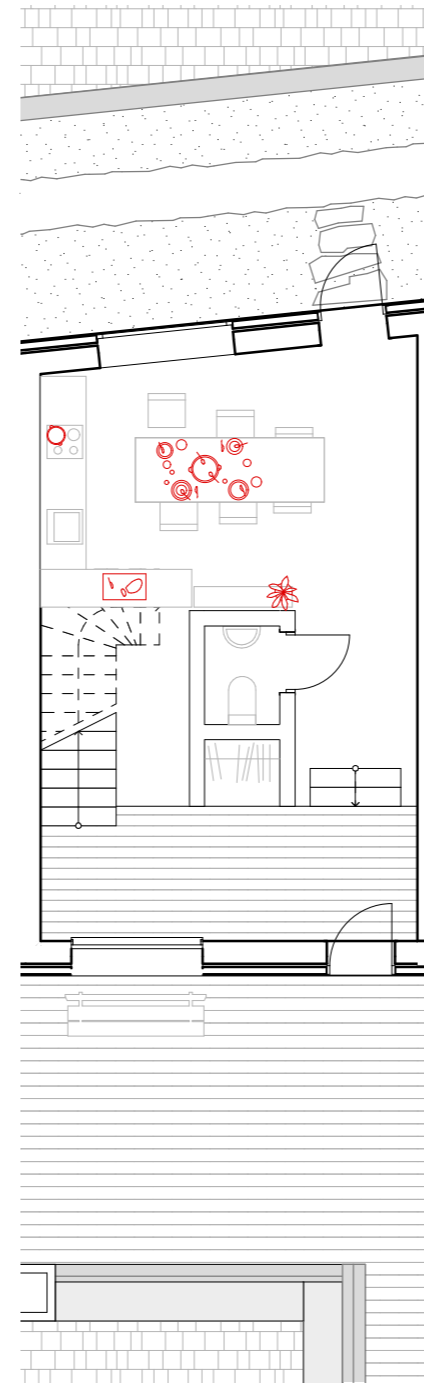
WHERE IS
 THE TRANSITION?



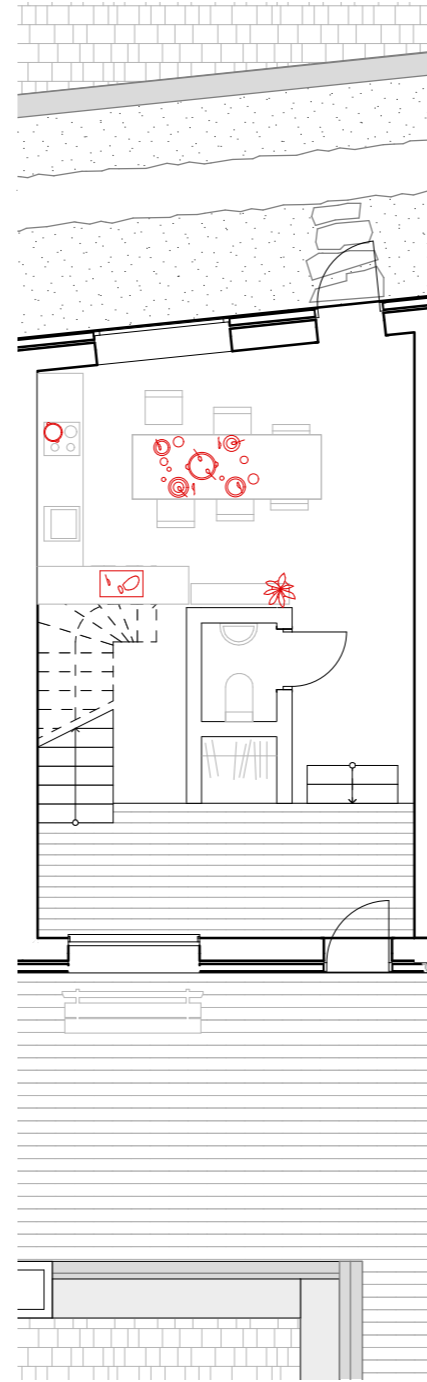
The element entrance is very important, especially in a design where there is a transition from public, to collective, to private space. While wanting to create a space for all, where do we make the transition into a place for some and subsequently into a personal place for one (or more)? And how do we materialize these transitions. In the research process I have experimented with levels (stairs, terraces, heightened slabs) as a measure to create these transitions, questioning how far these measure can go before losing their collective character and going straight into private.



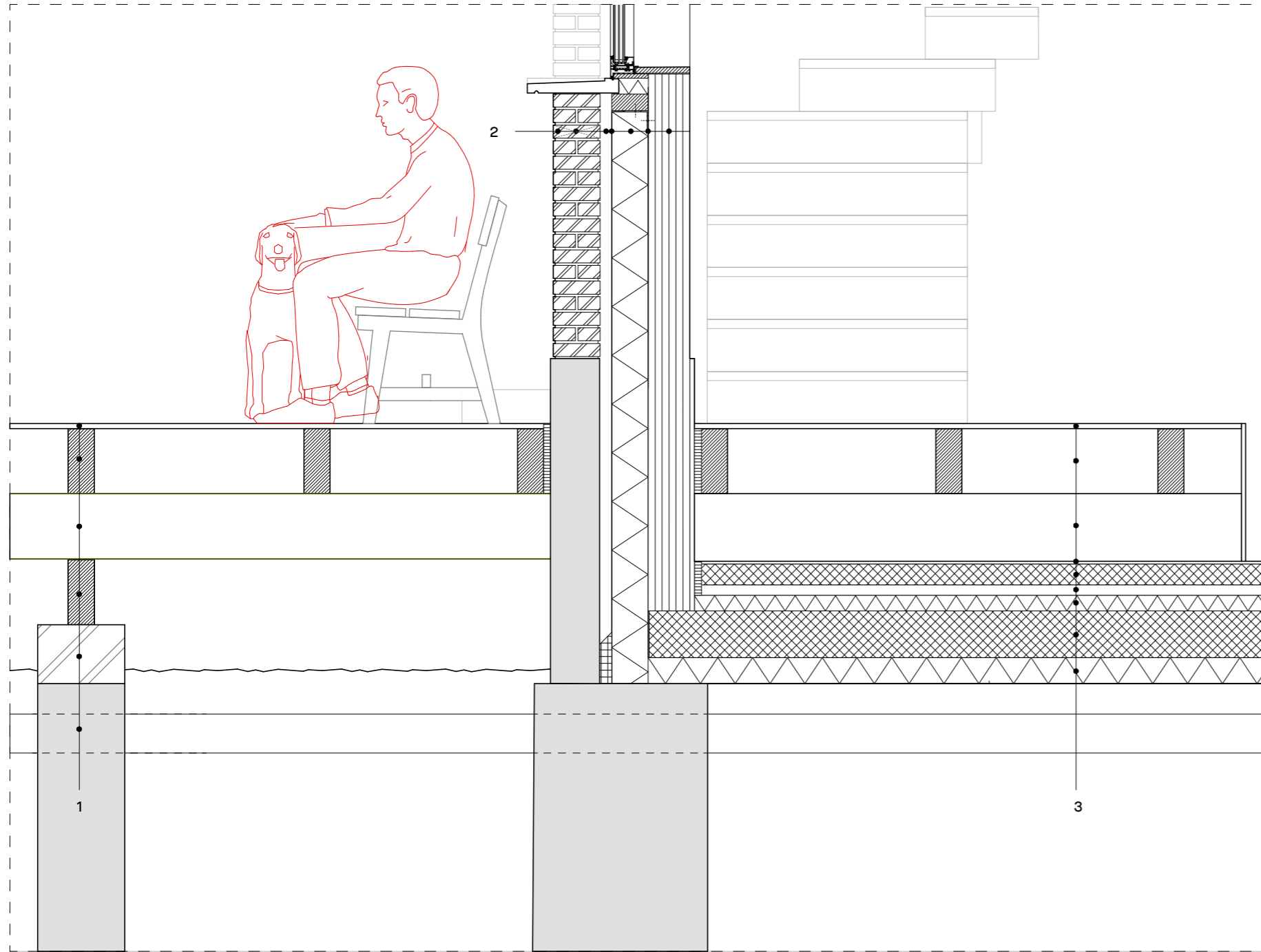
Through making various test models I have experimented with the architectural language of these transition moments from public to collective to private, and again into collective and public again. Models have helped me a lot during this process, challenging me to ask myself the question what it actually is I want to show.



The final 1:20 model of the transitional elements shows the same transition but condenses it so its visualised in a more readable way. The border of the collective space is embodied by a 1 meter high limestone wall that tapers slightly to the top inviting to lean or sit against it, inviting use and interaction on the public level. The wooden terrace en collective garden act as collective spaces, serving primarily the building block they enclose, but their open character en accessibility invite the rest of the community as well. Within the private dwelling in between, a level transition occurs, shifting from the +1m level of the terrace to the +0,49 level of the garden. In order to bridge the floorheight difference inside the dwelling, a removable step is made, inviting the residents to appropriate the height difference to their liking.



The facades mimic the dwelling type found within the building block. The south facade (terrace) mimicking the street side, showcasing different translations of the same composition rules, while the slight higher spaces on the north side enjoy a more open garden atmosphere and the collectiveness of the garden is reflected in the uniformity of the facade design. Taking a closer look will show that both facades, front and back, follow the same composition and they are even connecting by it.



1. OUTSIDE TERRACE
 timber planks 20 mm
 timber beam 250 mm
 timber beam 250 mm
 timber beam 250 mm
 concrete block 225 mm
 foundation

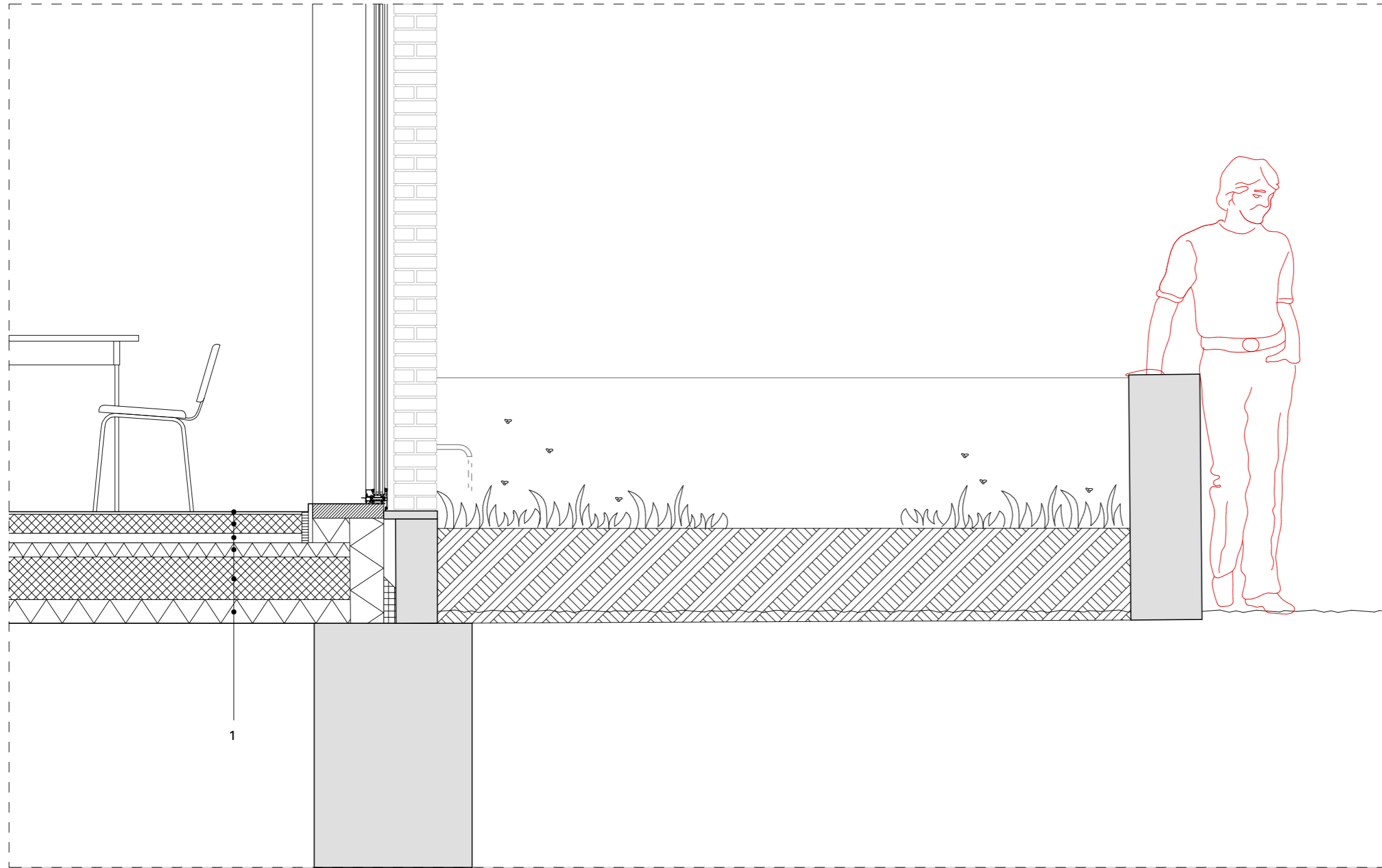
2. EXTERIOR WALL
 repurposed brickwork 180 mm
 open butt joint
 ventilated air cavity 40 mm
 Waterproof layer
 Isorooof woodfibre isolation 140mm
 vapour permeable membrane
 CLT 160 mm

3. FLOOR
 timber planks 20 mm
 timber beam 250 mm
 timber beam 250 mm
 marmoleum finishing 10 mm
 cement screed floor 80 mm
 climalevel system element with floor heating
 and ventilation 40 mm
 rigid insulation 60 mm
 cast concrete 180 mm
 rigid insulation 100 mm

A1 Drawing Scale

Detail 1:20

Av. de la Croix-Rouge 268/270



1. FLOOR
 marmoleum finishing 10 mm
 cement screed floor 80 mm
 climatelevel system element with floor heating
 and ventilation 40 mm
 rigid insulation 60 mm
 cast concrete 180 mm
 rigid insulation 100 mm

A2 Drawing Scale

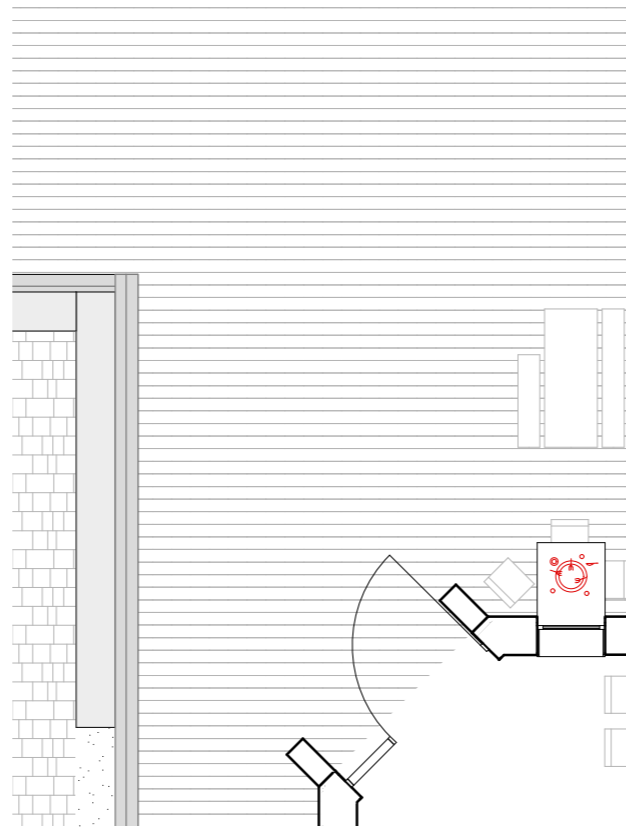
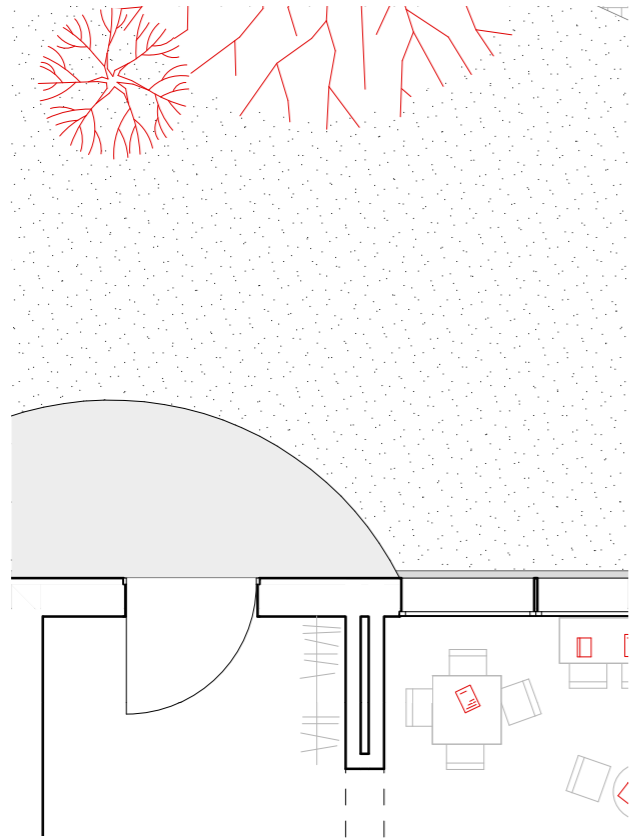
Detail 1:20

Av. de la Croix-Rouge 268/270

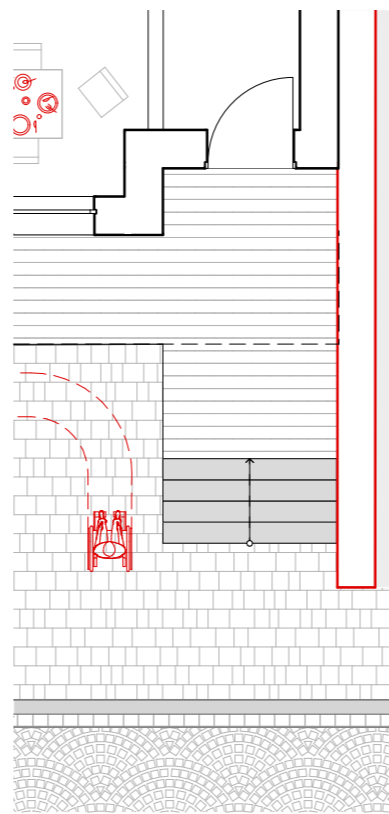
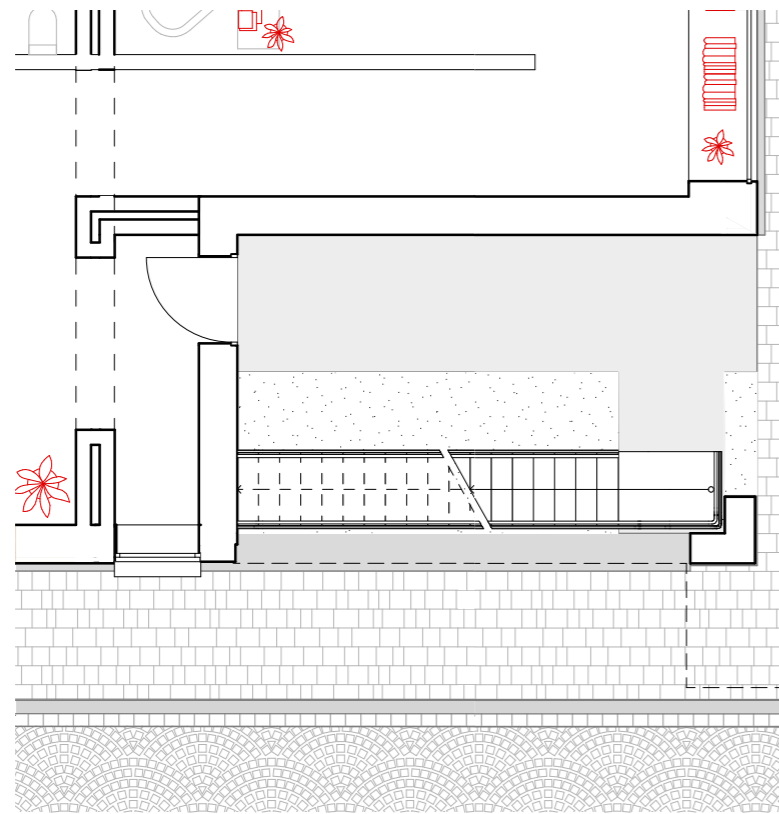


scale 1:200
facade D

Next to the collective and private entrances, attention also has to be brought to the public entrance. These have to be clear to the public, establishing a characteristic place in both plan and materialisation. In this example the arched cutout from the metal cladding act as signage, crowning the entry doors.



In plan view, a public entrance is characterized by extending the actual entrance into the collective space it is situated in. In both examples a heightened place is created, separating from the public, but its inviting due to the shape of the space (a round slab or a cut off corner). As such both entrances, with different characters can be embedded into the memory of the passerby giving character to the building and its function.

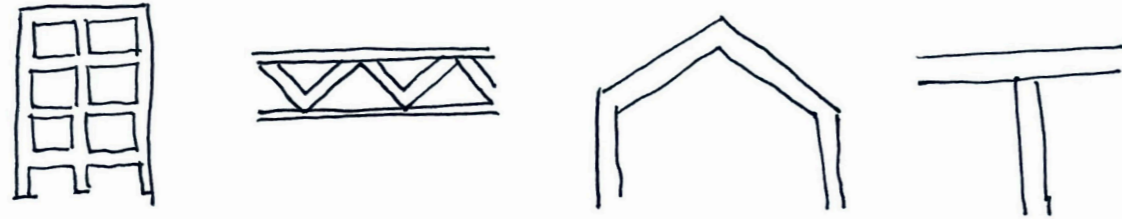


On the streetside the public entrances have a more inward character, their hidden a bit, securing their collective character from the busy street where not everyone is interested in the journey they present.

ELEMENT

STRUCTURE

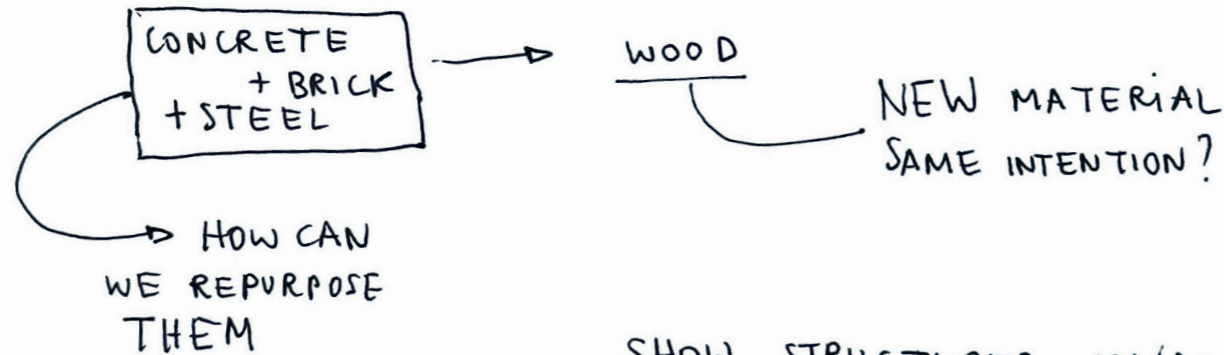
CAN STRUCTURE BE MORE THAN JUST STRUCTURAL?



HOW ARE THESE ELEMENTS ADDRESSING THE ELEMENT STRUCTURE IN DIFFERENT WAYS?

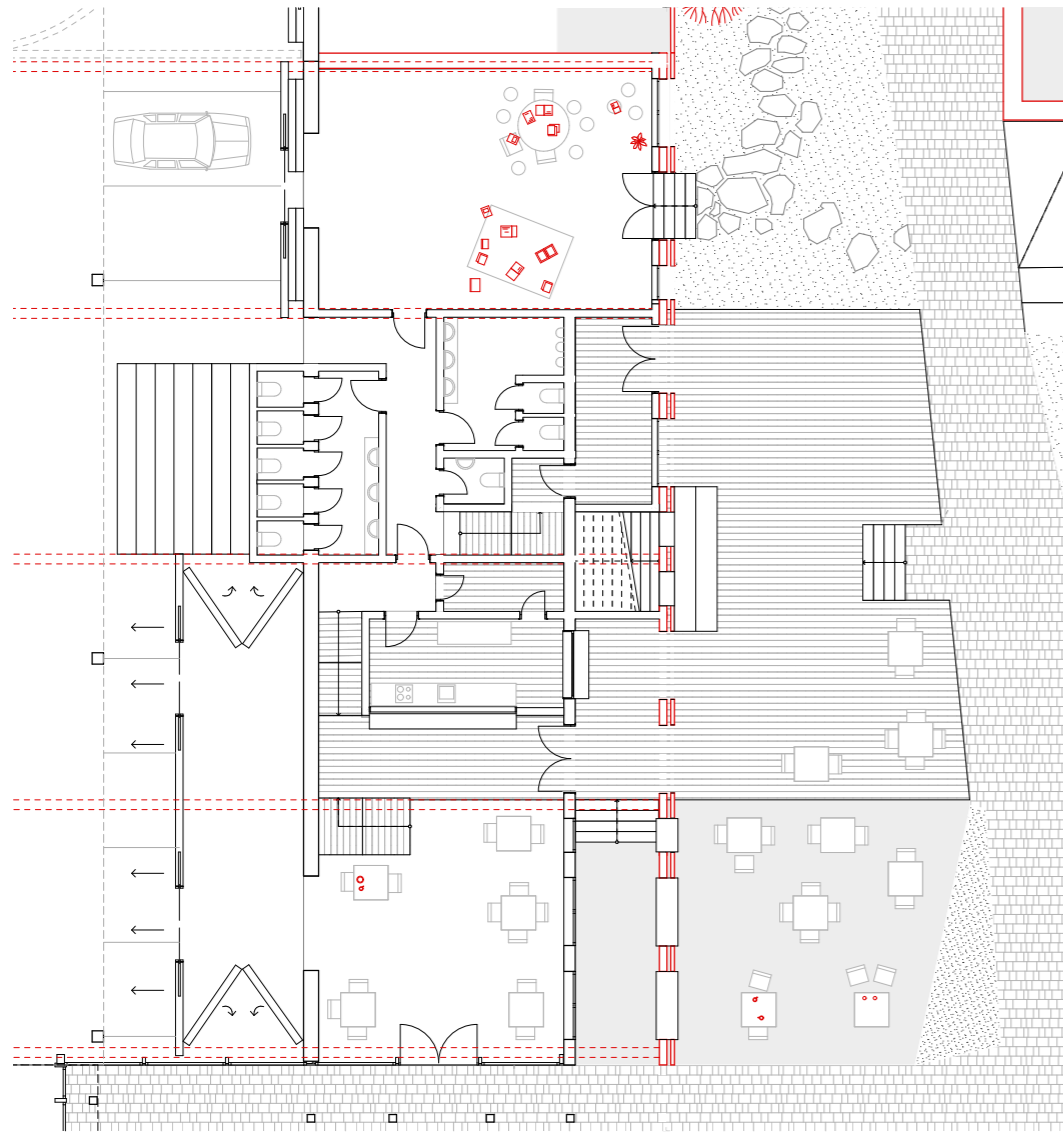
HOW CAN WE, IN DESIGN?

OLD STRUCTURE → NEW STRUCTURE

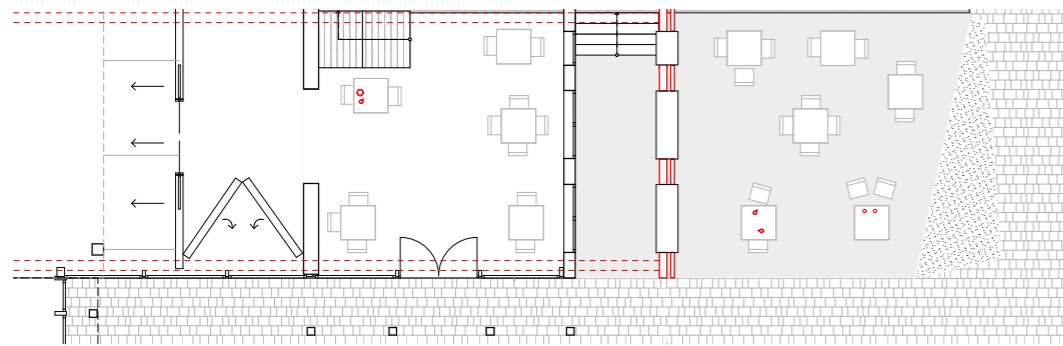


CAN OLD ACT AS A MONUMENT, WHAT CAN WE LEARN FROM OLD, WHAT MAKES IT OLD, LOSING ITS FORMER FUNCTION. ASSIGNING A NEW FUNCTION DOESN'T MAKE IT NEW, DOES IT?

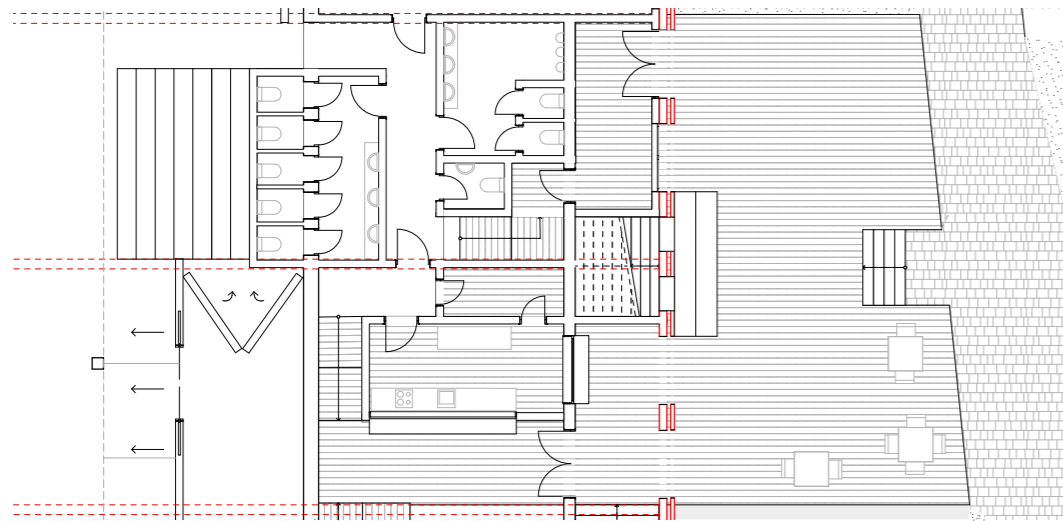
SHOW STRUCTURES IN/AS DIFFERENT FORMS AND FUNCTIONS.



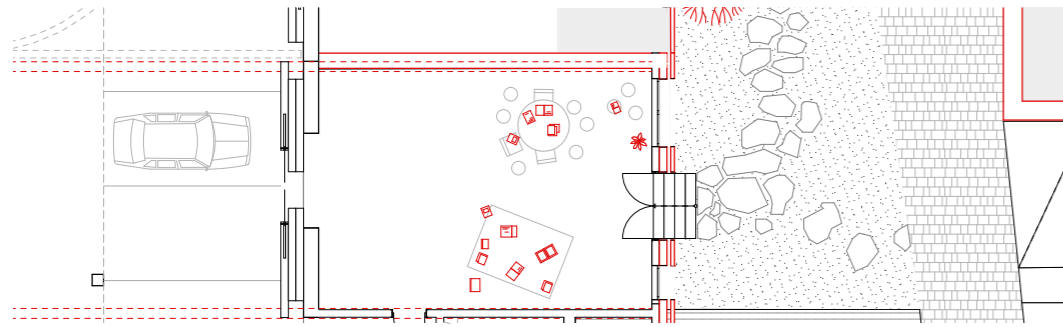
The element structure addresses the topic of time. Looking at the purpose of structural elements and wondering whether they can have more than just a constructional purpose. The first element addressed is the old structural truss that is stripped from its load bearing purpose and giving a new purpose, that of dividing space.



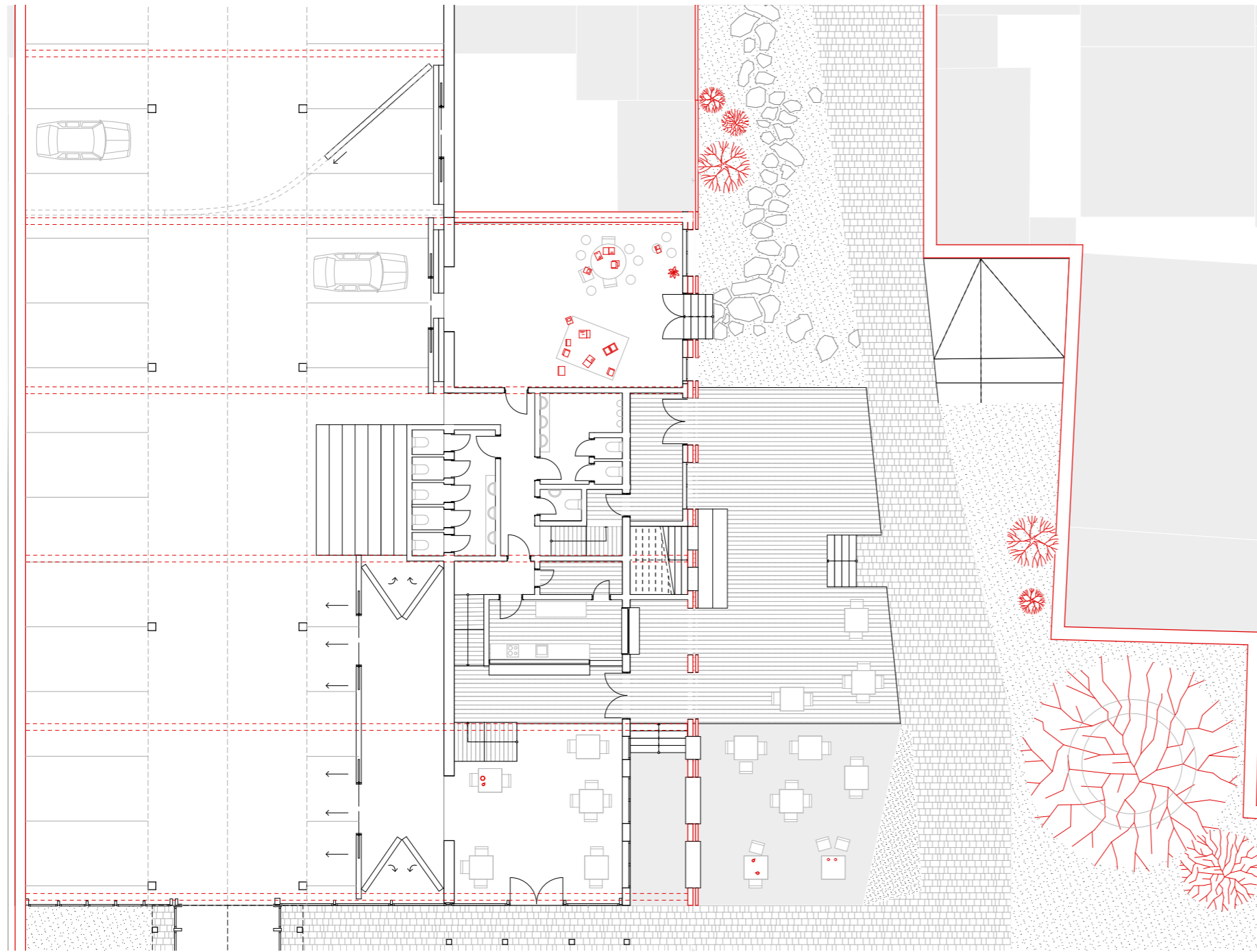
The first two trusses encapsulate a space that is on the same level of the public path. The inside space and outside space are connected with a sheltered outside space resembling a gallery type. A section shows the layer of new construction on the left (a CLT construction) versus the old construction layer on the right (concrete and bricks with repurposed metal cladding on top). The layers are pulled apart but connected by the truss, the visual relation between them and their shared function, a cafe with outside terrace. As the design of this building is about the passing of time, all of the materials apart from the wood are repurposed materials from the site. The metal cladding, comes from the roof of a demolished shed as well as the old roof of the building, while the bricks and concrete wall together with the spanning truss have been left intact and in place in order to design a shell around them.



In between the second and fourth beam, a heightened platform dictates a collective space and simultaneously the entrance into the cafe and dwellings on top of the building. The truss acts as a spatial division yet again, splitting the stairs that begin as one on the collective level, into two separate stairs as the stairs progress towards the dwellings, at this point showing the transition from collective to private. The element of the clock enforced the position of the outside public space as a gathering place, a square or market, while lightly hinting towards the theme addressed in the design.



In between the fourth and final truss a space with a separate entrance is organized, that can be used separately or in connection to the other spaces. The entrance yet again dictated by a the steps. The rhythm of the facade is a reference to the old remaining concrete structure at the entrance of the plot at Avenue de la Croix Rouge. Just as those remains are embedded in the ground with the traces of nature taking over its foundation, by letting nature take over this part of the building, the dynamic relationship between nature and the built environment can be shown. Just as structures can adapt to new situations, so can nature, their coexistence is the goals.



Five main entrances to the building, corresponding the four different functions of the building (the cafe has two entrances) as well as the four access point for the toilets. This means each space can be used separately from each other, utilizing the same facilities block in the middle, with the door in between the third and fourth truss even staying open all night, in order for the toilets to be used during the evenings as well. Next to that spaces can be expanded to a certain extent, according to the need, and the hall, that momentarily is planned to be a parking garage, can be slimmed down to only 6 (shared) car park spots in order to facilitate a market or larger size event. All these measure ensure that this design shows the passed time, but is also prepared for the passing of time of the future, a durable design for the future.



Impression inside cafe, showing the visual relation between the inside, the in between en the outside space in both use of the space as well as materialisation.



Impression inside parking garage that can accommodate a variety of function incidentally or permanently. Examples are, concerts, screenings, markets, exhibitions, social gatherings.