BRICOLAGE IN CITY RENOVATION

STUDENT APARTMENT DESIGN
IN NIJMEGEN

Jingyu Xu
4895908

Urban architecture graduation studio
2020-2021

CONTENT

Foreword

What is bricolage

Bricolage is a interesting word. In Savage Mind Strauss explained in its old sense the verb `bricoler' applied to ball games and billiards, to hunting, shooting and riding. It was however always used with reference to some extraneous movement: a ball rebounding, a dog straying or a horse swerving from its direct course to avoid an obstacle. So bricolage here can means an unexpected result，It was later derived as a means of solving problems only using the tools at hand.
Strauss refers to those who use this way of thinking as briculeur and presents another concept, the engineer, as the opposite of it. The engineer always tries to go beyond the limits imposed by a particular state of civilisation while in which the 'bricoleur' still chooses to operate. In a sense, due to the lack of ideal tool, briculeurs are forced to combines what already exists in a new way, trying to make the most of the objects he has, or, as Strauss points out, the " bricoleur " uses already existing symbols for purposes for which they were not originally intended.

The advocacy of bricolage is in fact a form of adhocism. Charles Jenks define the term 'ad hoc' as ''for a specific purpose, case or current situation, without regard to broader application''. It may seem random, but it possesses its own internal logic for being used. For an ad hoc approach, it is purposeful, but it consists of a loose approach to a problem rather than a rigorous and systematic one. Due to its improvisational nature, it also has a temporal dimension. In Adhocism, Charles Jenks and Nathan Silver give the example of the century-old shipbuilder who went to the forest to cut ready-made subsystems into parts to be temporarily assembled into a ship. Because the parts were not tailor-made, much of the extraneous material had to be cut out and left behind.'' The idiosyncratic temporary assemblies contain a lot of unnecessary things, a lot of incidental and superfluous things''. The point Jenks is trying to make is that ad hocism as solution is neither as refined nor as precise as other types of purposive action, but it is more open, suggestive, enriching and playful in its possibilities.

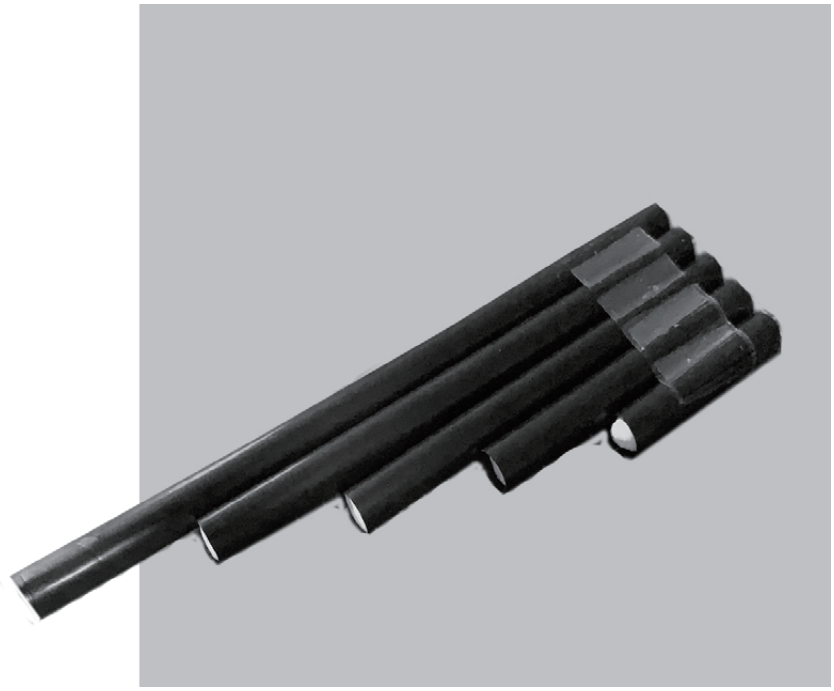


figure 1

A self prectice of bricolage

This is a bricolage music instrument. The main material are black straws which usually used for drinking. All the straws are cut into different length, and organized in a row with a sequence from short to long. When air is blowed into these straw, we can get different tones. Professional instruments do have much better sound quality, but interesting thing is the sound come from the cheap plastic is also unique. When we listen to such cheap sound, we can imagine normal public life, we can feel the city breath.

The system in bricolage

It is because this tolerant attitude towards tools in bricolage differs from that of engineers that bricolage's systems always end up with some fascinating qualities that the products of conventional logic do not have. When we try to explain this quality further, we need to find the possible factors that trigger it. One hypothesis I try to put forward here is that because bricolage's tools are all derived from the results of another system and are only roughly processed or unprocessed when used as tools, this results in bricolage ending up with the identity of many other systems, and it is the contrast of these identities that constitutes the qualities of bricolage.

To further test this hypothesis, the comparison of images for the study of perception is applied in an attempt to summarise a set of systematic rules for bricolage.

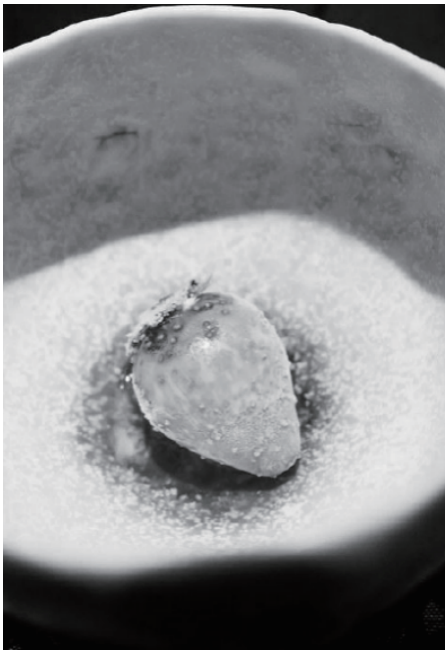




figure 2

A clear subsystem with a clear new system

We can clearly sense the logic of the subsystems in the new system put together, i.e. the purpose of the tinkerer, while we can clearly identify the subsystem by its original identity in its characteristics. As in figure 2 left we can clearly determine that it is a chair propped up in the doorway that keeps the door open. This cross-system relationship is perceived as capable of triggering a sense of surprise at the unexpected and the intelligent.

Unclear subsystems and clear new systems

We can clearly perceive the message that the overall system is trying to convey, and we can perceive that the system is made up of several subsystems, but we cannot recognise its original identity in the characteristics of the subsystems. The Ryugin strawberry(figure 2 middle) shown in the example is a dessert that uses many different ingredients to shape a realistic strawberry. The overall identity of the dessert as a strawberry exterior is clear, but the identity of the ingredients in it is missing. Such a system brings about a perception of more curiosity and confusion.

A clear subsystem and an unclear new system

We can clearly perceive the logic and identity of the various subsystems, but not the logic or purpose for which they are put together. Such systems commonly become a means of expression for an artwork because of the missing practical logic. One may marvel at the way in which different systems are combined with each other, but this marvel is more limited to the artisanal intelligence of the connections.(fighure 2 right)

figure 3

From figure 3 experiments we can see that the degree of material processing has a significant impact on bricolage. The more finely processed an object is, the more efficient it can be at the given socially expected function, but at the same time the cost of appropriating it increases. If a door is supported by a leg of a stool, then what we perceive is a stick, which can be a leg of a chair, which can be a leg of a table, which can be a light weapon.

The smaller the subsystems that make up the whole system, the more abstract and ambiguous the identity of the subsystem, and generally the more potential it has. But the absence of the stick's identity prevents one from questioning its legitimacy as a building block to support the door, so that the unexpected plot of the bricolage's intent is lost and the drama of the event is weakened. From this perspective the preservation of the original identity of the subsystem in the bricolage is necessary.

Bricolage in urban

figure 4

What is bricolage of urban

Usually bricolage is done at a scale that can be manipulated directly by people, so when bricolage is applied to the urban scale, we need to understand what this means. I have first tried to substitute the systematic assemblage of bricolage into the urban context.

The noli map of Nijmegen, the city where our research based on is shown in figure 4. From the noli map we can perceive the difference between the urban system and the conventional scale of the bricolage system. The usual bricolage is a combination of entities, stuff, but for the city, in addition to the physical system, the urban open space beyond the entities is the main approach for experiencing a city. The subsystems of the city can therefore be divided into two main categories, the visible physical system and the invisible relational system.

The visible entities are the individual buildings of the city, which are like objects from different systems, each of which can be understood as a subsystem within the bricolage. In the process of urban regeneration the existing structure of the city is constantly being reconstructed. Different periods of architecture in different social contexts necessarily contain different intrinsic needs and are full of contradictions and conflicts between them, and these contradictions are literally affecting the boundary spaces in the city.

The invisible relational system refers to the interaction between all entities, a system that physically connects all entities and can correspond to the overall system of bricolage. The meaningfulness of this invisible relationship becomes the criterion for judging whether a city is a bricolage or not. Spatially, the vehicle for this holistic relationship is usually the outdoor public space of the city, including streets, squares, etc. The invisible system is often easily overlooked and becomes a determined system.

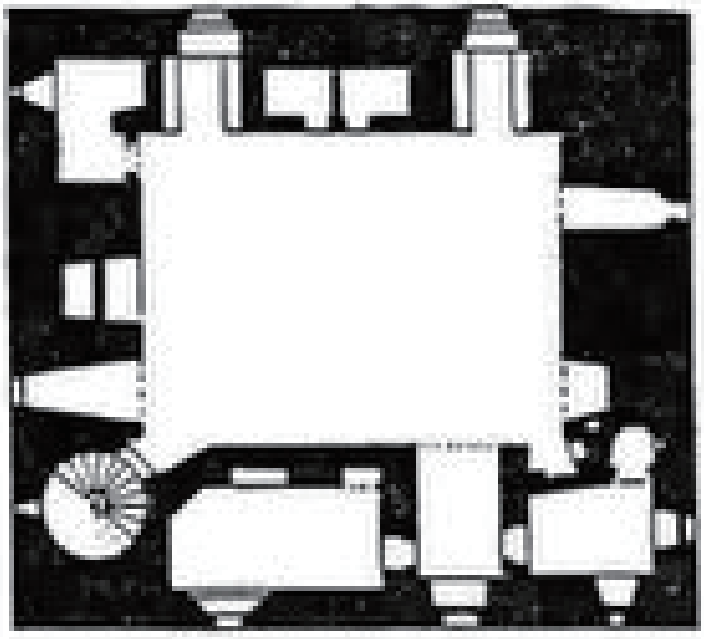


figure 5

Such leftover space is also called urban poché in the 'collage city'.The concept of poché, first derived from the Beaux-Arts or Parisian Academy system, was used by Venturi in The Complexity and Contradiction of Architecture to illustrate the 'contradiction' and 'complexity' that arises at the junction of rooms that take different shapes according to the requirements of different uses in architecture. " and "complexity". It can therefore be seen as a kind of residual space.

However, Venturi is not able to speak beyond the level of the architectural monolith about the 'fragmentation' that characterises the 'ambivalence' and 'complexity' of architecture, either in a planar or in a sectional sense "In contrast, in the case of the 'patchwork', the 'fragmentation' of the building is a very important aspect of the building. In contrast, in the 'collage city', through the concept of 'urban poché', Rowe and Cotter attempt to present the complexity and contradiction of the urban phenomenon as such.

Whereas the modern city has been reduced to a poché of public space by the proliferation of inwardly oriented systems of architecture, Rowe and Kotter seek to demonstrate that a building can be caught between different urban elements and become an 'urban poché'.

Rowe understands 'collage' as 'a method of introducing solids according to texture or generating them according to texture', in an attempt to find a balance between texture and solids and to break the boundaries of solid creation. This approach of using the space of texture as the main body of design to guide the creation of the internal system of the building, breaks down the larger urban problem into a number of sub-problems and leaves it to the building to solve. The building, as an object with relatively unified authority to operate, is more resilient to the various peripheral problems.

Limitations and breakthroughs

Bricicolage is about the assembling of various objects at hand, over which the briculeur has absolute control. But in the case of the city, all existing buildings are immovable. Apart from a few high-rise buildings that give a bird's eye view of the city, most of the time people do not have a god view. Can the collage of the city still be perceived in this context? In order to answer this question, we first need to understand the mechanisms by which people perceive the city.

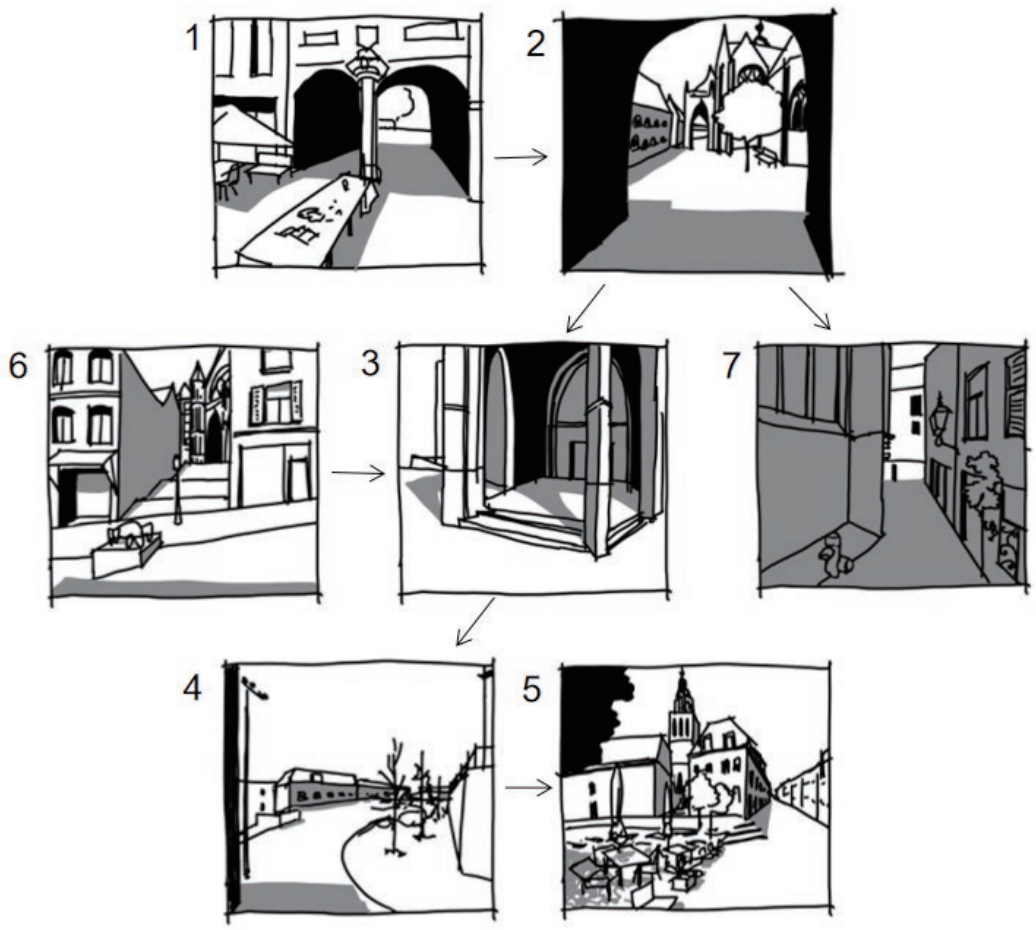


figure 6

In Kevin Lynch's Urban Intentions he refers to the fact that people's feelings about cities are often complex and also often mixed with other interesting things, and that almost every sense is at play, so that the urban impression is a synthesis of it all. This means that our perception of the city is not something like a static perception of images, but rather a synthesis of the experience of various collections of images on a timeline. The perception of the urban collage is also evident in the series of scene drawings around the central church of Njimegen(figure 6), which lies in the sequential organisation of urban space. Through the sequential manipulation of public space and the guidance of the eye, the timing and angles of the appearance of the surrounding buildings from different periods can be intentionally controlled, thus making the city a perceivable organic whole with an internal order.

Bricolage and critical regionalism

As bricolage defines it, it emphasises the use of the objects at hand, so in terms of urban architecture, bricolage values the use of and response to the existing environment and is closely linked to the context. However, this does not mean that bricolage is a traditional regionalism, which emphasises the continuation of the original fabric, whereas bricolage does not exclude the continuation of the fabric while actively changing it and creating a new order. There are more similarities with the attitude of critical regionalism.

In Towards Critical Regionalism: Six Points for Architecture of Resistance, which introduced the criticism towards both modernists and post-modernists offering an alternative way of designing, Frampton thinks how to become modern and return to sources is an By referring to regional environments, the building's architecture is a unique and unique experience. By referring to regional environments such as light, topography, context, climate and tectonic form, the designed By referring to regional environments such as light, topography, context, climate and tectonic form, the designed architecture can gain a specific relation with a place. The essence of critical regionalism is thus to emphasise a specificity of place, but this specificity is not traditional or modern, it can be established through a connection to any factor related to the place.

figure 7

Is our site a work of bricolage?

Our base is located in the city centre of Nijmegen. Nijmegen is a city in the south-east of the Netherlands, which has been established since the Roman period and is therefore known as the oldest city in the Netherlands. It has seen numerous events during its long history. The Second World War changed the city dramatically, and the complex composition of buildings from different periods scattered throughout the city gives Nijmegen the quality of a collage city.

We begin with a description of the systems in place at the base.

figure 8

Church

The church on the interior of the base is itself a product of the bricolage for historical reasons. It is made up of two parts, old and new, with a traditional church plan on the part against the altar and a modernist-leaning interior on the side near the entrance. The two spaces are clearly perceptible in the ceiling.

Originally built in the 19th century and then rebuilt after being bombed during the Second World War, the new church reuses parts of the walls of the old church, including an intact rose window. This makes the facade of the church a monumental structure. The entrance to the church has been completely rebuilt, taking the form of an ancient Roman colonnade recessed along the street to form a space for people to linger, acting as a threshold to the street.

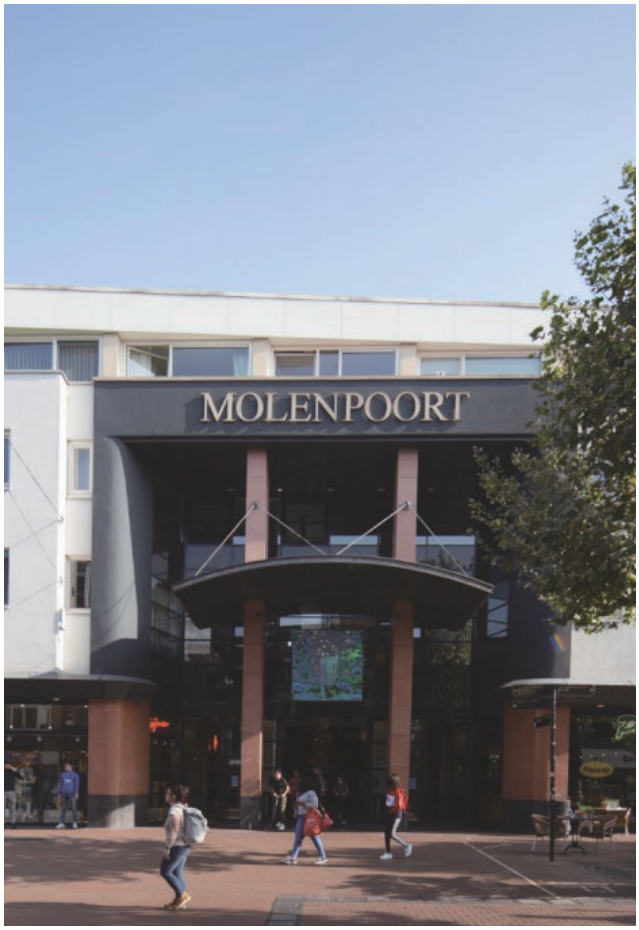


figure 9

Shopping mall

Molenpoort, a shopping mall on the site, is presented in a completely consumerist manner, recklessly occupying every inch of land within its reach in its quest for commercial gain, which has resulted in approximately half of the site being made up of it. itself is still in a poor state of operation, with little space inside for customers to linger and a high vacancy rate for the first floor shops.

The study of this building type has revealed that the molenpoort was an experiment of the American mall shopping space type in Europe. However, the original target locations for American malls were in fact suburban areas, and they often had a wide range of businesses in order to meet the shopping needs of suburban dwellers. But in Europe, where traditional outdoor shopping streets are prevalent, the mall typology has lost its competitiveness. In particular, the malls in the base are located in the city centre, where the density of the streets and the population base of the Netherlands do not allow them to reach the volume of commercial malls in the USA. The size of these malls has reduced the variety of retail offerings within the malls. This reduces the competitiveness of the malls.

On the other hand, the molenpoort has a clear indoor-outdoor boundary like the American malls, which perceptually transforms the mall into an individual against the outside. While customers passing through a traditional shopping street have a clear idea of what they can buy inside, in the case of molenpoort this perception is missing, which largely prevents customers from entering.

figure 10

Shophouse

These buildings are typical of the nijmegen local commercial and residential system, they are usually grouped together in clusters, seamlessly alongside each other, so that there are only two façades, inner and outer. The external façade faces the street, with the ground floor used for commercial purposes and the upper floors for residential purposes. The neat arrangement makes each block resemble a complete wall, with few structural protrusions on the façade other than decorative dents and bumps, further enhancing the feeling of integration in the block façade. The internal facades often face each other, mediated by spaces of a different nature depending on the specific circumstances of the block.

Another more common phenomenon is that the upper residential floors are often not as deep as the commercial ones, which results in the upper floor occupants often being served by additional outdoor spaces, i.e. the roofs of the ground floor commercial ones, but these are currently mostly abandoned or stacked with debris for reasons of ownership, etc.


Google Earth


From above, yes. Sometimes they look at me through the window.

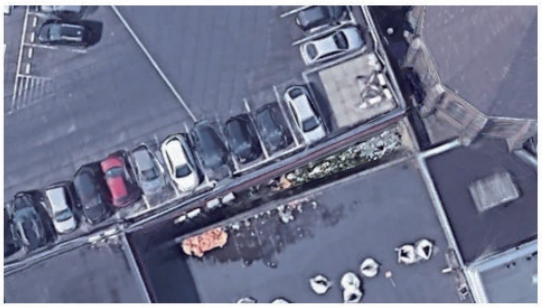


figure 11

As described earlier for the various building groups, the response of these buildings to the fabric mostly rests on their response to the main street, which results in buildings that seem to have a good relationship with the city street on the street front façade, but on the back façade the collision of various systematically inherent claims takes place. The backs of traditional shophouses are often residential terrace spaces that exist as a kind of private outdoor space for the residents themselves, but the commercial logic of the molenpoort makes it seamless to these residences, with tall, enclosed walls interrupting the view of the occupants' terraces and the pedestrians on the roof of the mall having a serious impact on the privacy of the occupants. In the case of the church, the direct contact between the straighter-than-straight plan of the mall and the curved plan of the church altar also creates a lot of unusable space, and the church garden faces a similarly awkward situation as the residential terraces. Due to the brutal attitude of the molenpoort, the ornamental value of the church façade is buried, and in practice the only place where these façades can be seen is on the roof terrace of the mall. This means that the roof terrace of the mall is a potential site, while in reality this space is now occupied by a car park.

At this point we see that almost all of the building systems within the site have a core intrinsic purpose, and each has great potential for shaping the external space, but in the present situation all of these possibilities are buried, and there is no healthy symbiosis between the various building systems, which, using the classification of the combined systems in the previous chapter, is a state where the subsystems are clear, but the new system as a whole is vague. It is more like they have been simply placed together to fill an urban site than bricolage.

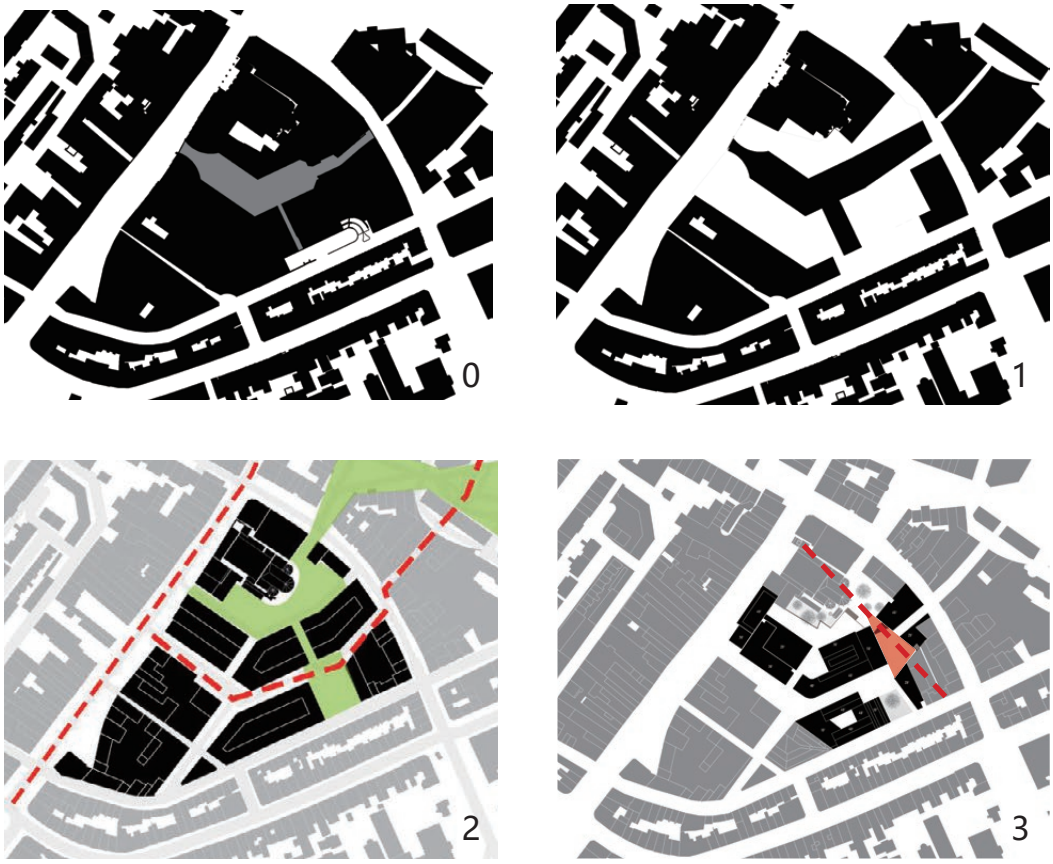


figure 12

Reorganising the urban order

1 By reversing the relationship between the bottom of the map of the mall, the squeezed state of the mall and the surrounding system is freed, releasing the city poche, forming two loops inside and outside, and reserving space for new relationships to be shaped.

2 The outer ring is intended to be a continuation of the existing commercial flow through the city centre, a busy, bustling street with a strong commercial atmosphere. The inner ring is adjacent to the church and makes use of the existing church garden to create a relaxed and leisurely commercial atmosphere. The two rings are connected by spatial nodes, and the difference in atmosphere between the inner and outer rings enriches the shopping experience. The church bell tower is also used as a backdrop for the connection point, forming a landmark for the area, a spiritual leader.

3 The relationship with the existing urban public space is further optimised by the inclusion of a triangular plaza, which echoes the existing urban spatial axis. The buffering of the triangular plaza allows the commercial flow of the z street to interface with the new system of the outer ring of commerce. The final intervention of the clock tower reinforces the sense of place of the square and suggests the leisure atmosphere of the inner ring. The surrounding existing urban fabric is thus linked together, creating a continuous experience in the shopping flow of the customer.

figure 13


CLOTHING
FOOTWEAR
COSMETICS
DAILY NECESSITIES
SPORTS GOODS
PHARMACY


VAPORWARE
VoorlinDen
SALE
70
GREE
DON'T BELIEVE THE LIBERAL MEDIA!

figure 14

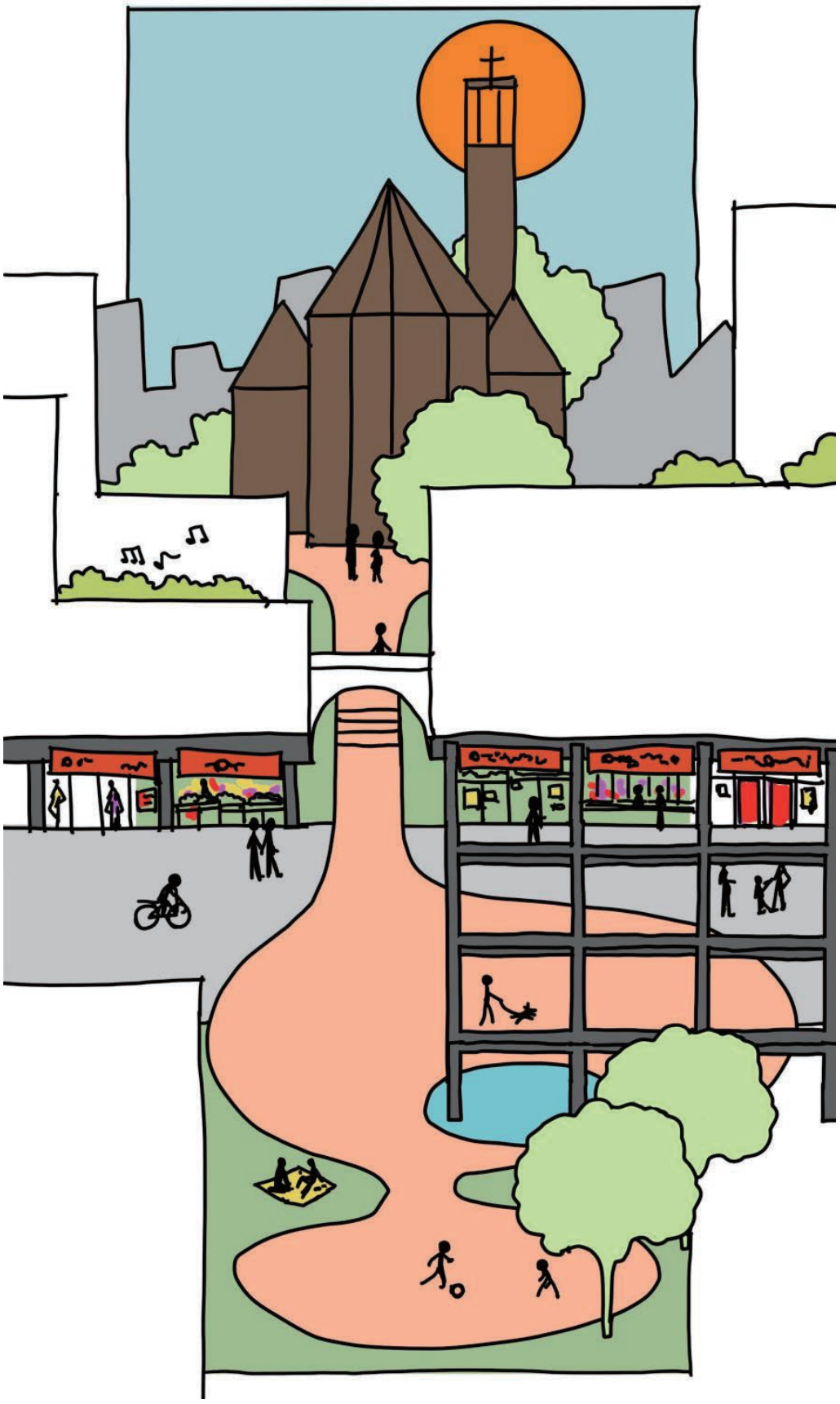
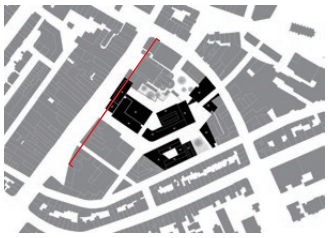
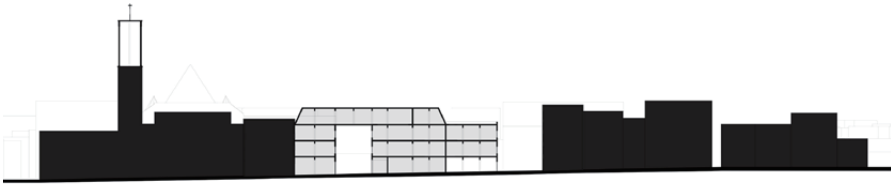
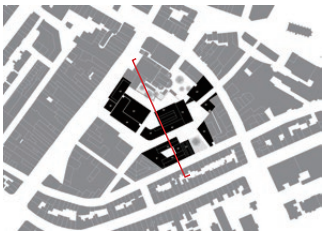
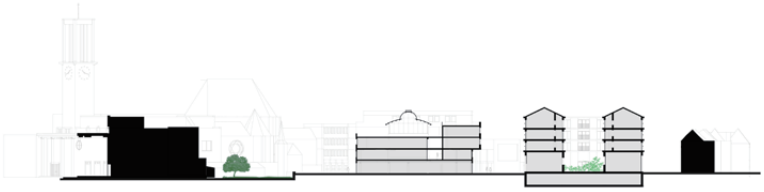


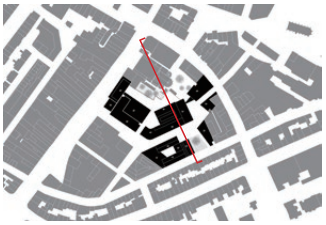
figure 15











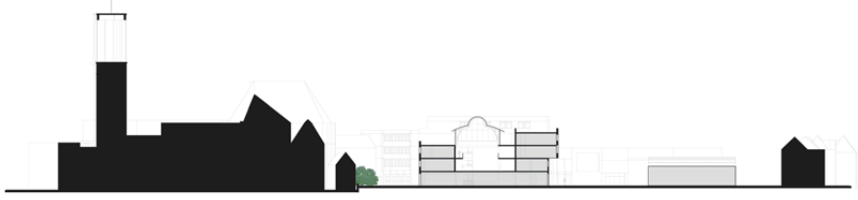


figure 16

Reprogramming

Commercial program

nijmegen is a medium-sized city with a large number of commercial projects. By interviewing shoppers in the city centre I was able to find out where they come from and draw figure 17, which shows that the commercial offer in the city centre of nijmegen does not only serve the city, but also many of the surrounding satellite towns, so I will keep the commercial function within the base.

Housing program

Through a series of social surveys, we found that nijmegen, like other Dutch cities, is facing a housing shortage. By analysing the density of the buildings in the city centre (figure 18), we found that most of the buildings around the site are above 4 storeys, whereas the mall in the site is not only a large area but also only 2 storeys high, so by increasing the density of the buildings in the site we can offer more housing possibilities.


Doesburg
Bennekom
Rheden
Velp
Arnhem
Wageningen
Westervoort
Duiven
Huissen
Zevenaar
Didam
Beuningen
Nijmegen
Wijchen
Pleve
Malden
Grave
Schaijk
Cuijk
Gennep
Goch
Uden
UDE
Boxmeer

figure 17

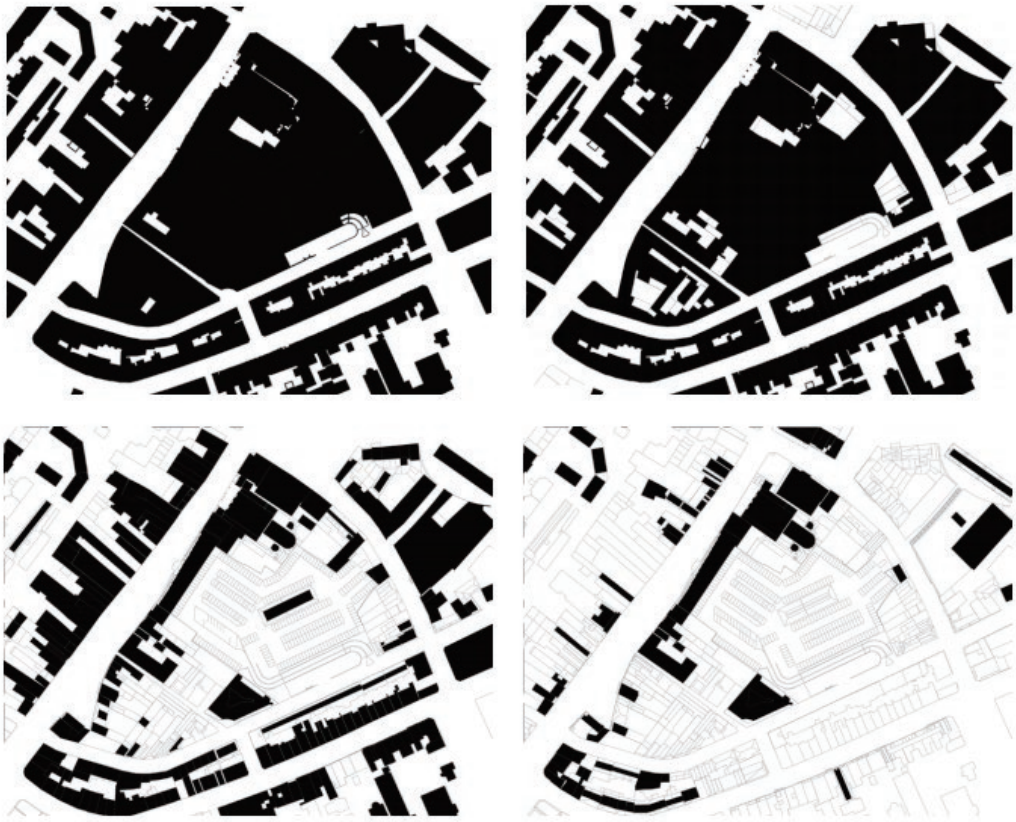


figure 18

Bricolage in architecture

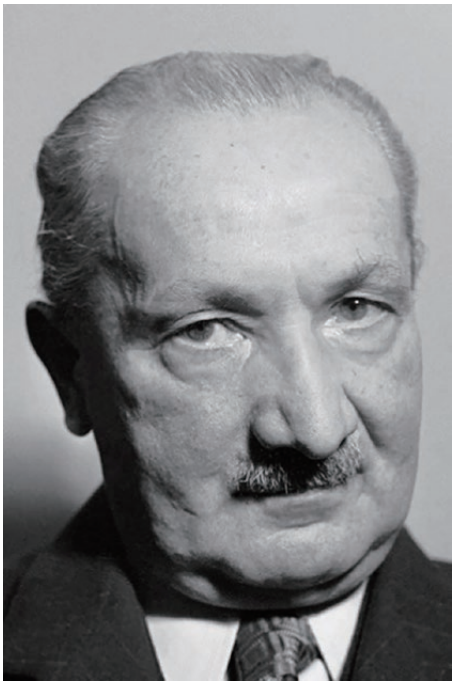


figure 19

An object becomes a thing when it can no longer serve its common function.

The particularity of things seems to depend completely on their space and time. Space and time are generated in the encounter between man and the things

What a "this" is does not depend upon our caprice and our pleasure. What "it" is does depend upon us, but “it" also equally depends upon the things

Bricolage and thingness

In fact, philosophically, bill explains the bricolage of architectural scale in terms of a more descriptive theory of things, which can be understood as the process of objectifying architectural components. This theory of things gave rise to what became Kazuo Shinohara's thingness

Thing theory is a branch of critical theory that focuses on the interaction between people and things in literature and culture. It draws on Heidegger's distinction between objects and things, arguing that an object becomes a thing when it no longer serves its usual function. When an object malfunctions or is misused, it assumes its socially encoded value and is presented to us in a new way through the suspension of habits.1 Heidegger notes that the particularity of things seems to depend entirely on their space and time. If two things are similar, but this one is not the same as that one, it is only because it is here now and the other one is there, or will appear here later. This view also shows that form is independent of space and time, and that the same form will acquire different meanings in different space and time conditions.

From the above description we can see that the particularity of a thing lies in the preservation of its original formal characteristics, and that an object should not become unique directly in order to become a thing, but needs an inner reason to guide it to become a thing. The case study is an attempt to discover the meaning of the transformation of objects into things. Through case study I try to discover the inner logic of the transformation of objects into things.

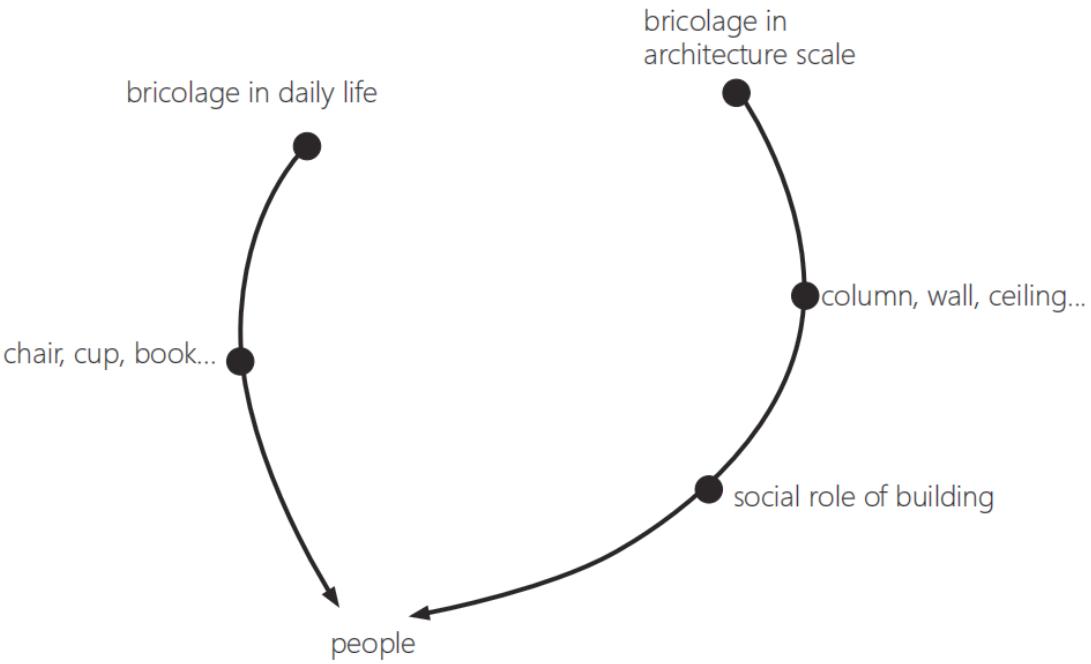
figure 20

Thingness in architecture

In terms of thingness, a typical architect is Kazuo Shinohara.
In Kazuo Shinohara's White House, there is a pillar of round cedar wood in the centre of the living room. The white walls and ceiling blur the identity of the pillar with the rest of the furniture. You can sense in this image that the pillar, like the other furniture, has become an object of some kind, but its own scale and position still strongly distinguish the pillar from its surroundings in terms of its identity.

It is also worth mentioning that this layout shows the Japanese symbolism (a large black pillar in the middle of a traditional Japanese house). The symbolic operation is that the partition walls in the room are slightly off-centre from the square plan, while the white ceiling hides the structure above, so that the white walls and ceiling become the backdrop for the central column, creating a new order that is different from the traditional Japanese architecture and expresses a new meaning in the interaction with the body. We can therefore see the production of a new order as the operation of turning an object into a thing.

But from another critical point of view, Shinohara's column is simply a perceptual departure from the original system, allowing us to detect the presence of the column, but we will find that it still does not provide the sense of surprise of bricolage.


bricolage in
architecture scale
bricolage in daily life
column, wall, ceiling...
chair, cup, book...
social role of building
people

Bricolage in architecture scale
vs
Bricolage in daily life

When we look back at conventional bricolage, we see that most of its subsystems had a direct interaction with people, such as chairs, bicycles, straws and so on. The reason behind this is obvious, because conventional bricolage is an ad hoc means of solving problems in our everyday lives, we discover tools from random everyday objects, and I am the direct object of dispatching and using tools in this process. In general, the subsystems of conventional bricolage are in direct service to people, which makes it possible for their identity to be preserved in a way that evokes something of the truest and most beautiful yearning for everyday life within people.

When we look at architecture, on the other hand, all the subsystems of the building (columns, beams, walls) are often in direct service to the building itself, and their identity is therefore abstract to the human being. It is the identity of this whole building, the function, the social role that the building as a whole produces in the life of the person, that is the concept that really creates emotion with the person. It is therefore difficult to create a strong emotional impact on the human being when the object of our bricolage operations is only the building's components.(figure 21)

figure 21

Location is crucial

How then can the identity of the whole building be mapped through its components?
I believe that the physical location of the components is an important element of the identity of the building, it reflects the territoriality of the building, and that physical location is an important parameter in the consciousness of the building's existence, and that this consciousness of location is often a memory of relative rather than absolute location. If an anonymous supermarket is demolished next to an iconic church, every time we walk past the church we will feel that the supermarket where I came out of the church to get my groceries is gone, but if the church is also demolished we may not perceive any emotional fluctuations.When a component is in its original position in relation to the building, its presence maps the presence of the original building, and this is an important reason why archaeological remains need to be preserved in situ. Once a building element is liberated from three-dimensional space, it loses its connection to its parent body, and a column simply represents a pillar.

Project processing

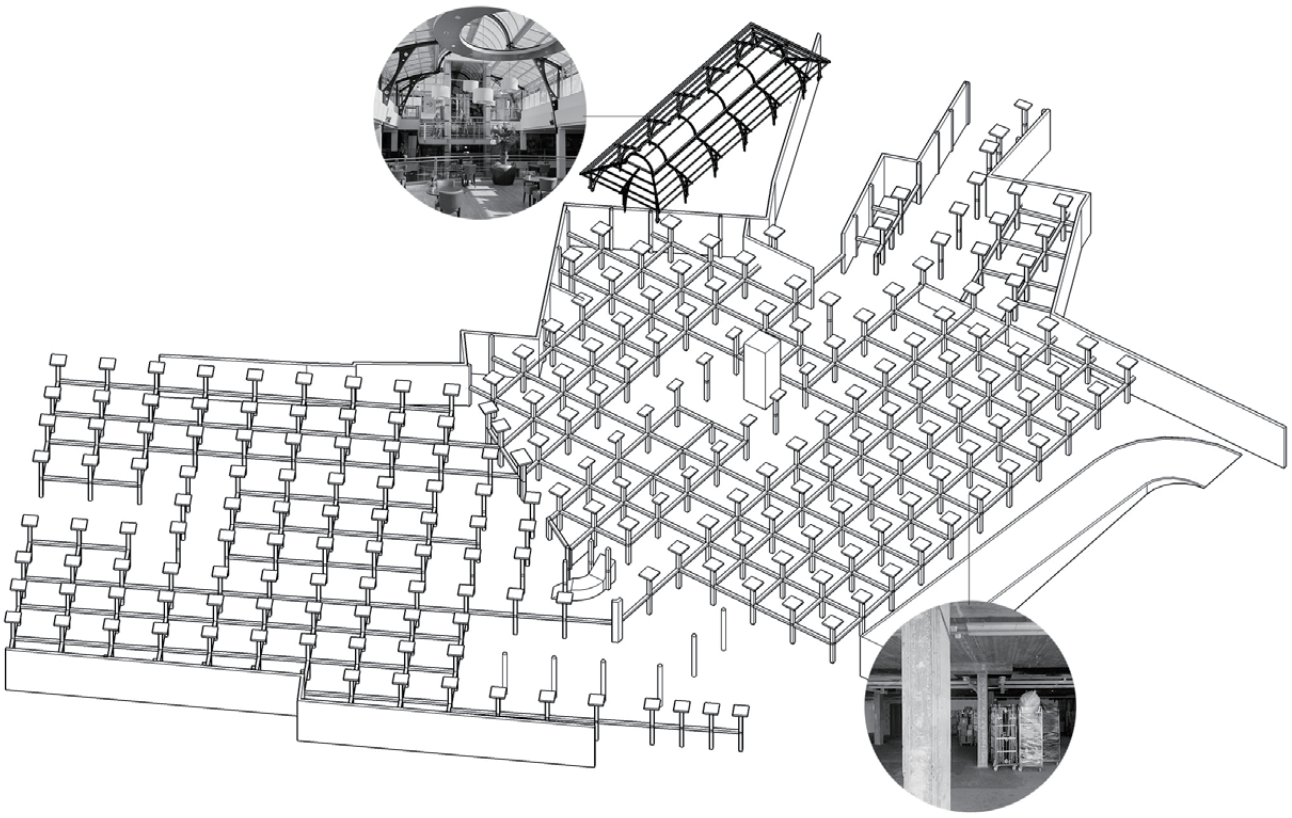


figure 22

What do we have on hand?

Atrium

Originally used as an atrium for the commercial mall, it provides good natural light to the centre of the mall and connects the upper and lower levels, becoming the core of the mall's spatial sequence. It also serves as the core of the spatial sequence of the mall. It is also the necessary way to enter the mall from the roof parking. The roof is supported by a curved steel structure with a distinctive period character. These steel structures are screwed to the concrete frame on the 2nd floor, with the possibility of dismantling.

Structure frame

The column grid is the most operational system of the mall. The columns are essentially distributed on a 6m x 6m grid and have the potential to create rhythm. Then because the whole of the mall is supported by a two-storey monolithic concrete frame structure, this means that these columns cover almost the entire base following the spacing of the column network. 0 storey concrete floor slabs are cast with beams, and the beam and column system at level 1 is removed and replaced by a car park floor slab that supports the roof through the mushroom-shaped capitals of the columns. These mushroom capitals give each column an unconventional image and become a feature, as well as a visualisation of the technical, structural system of the period.

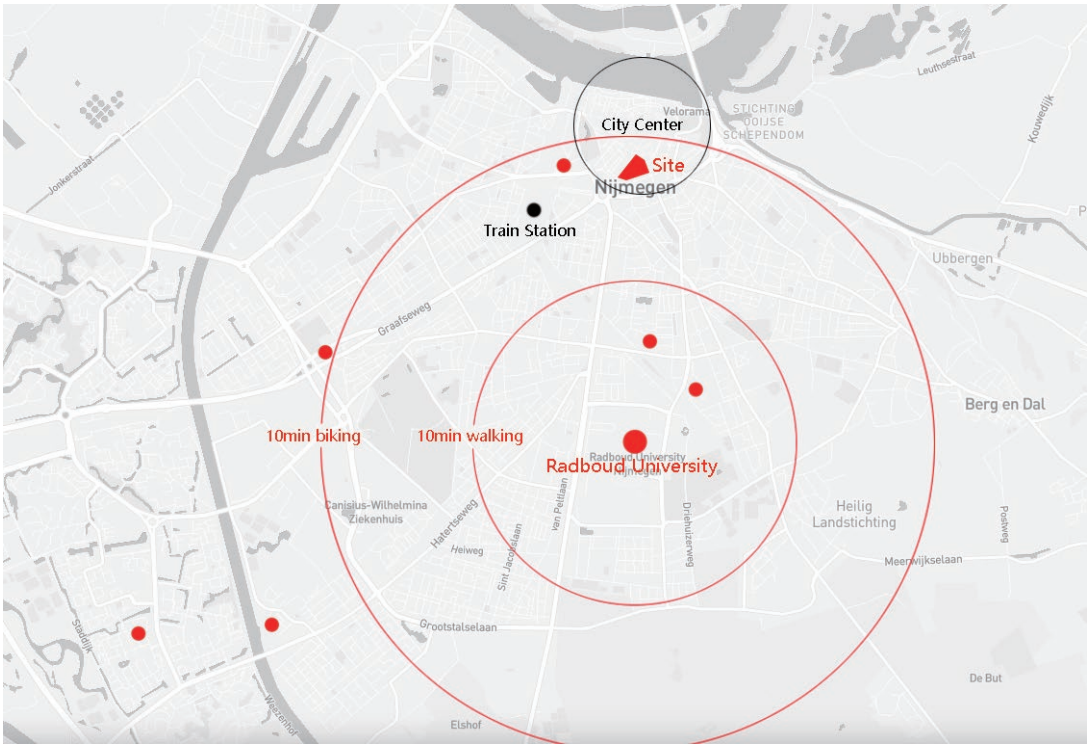


figure 23

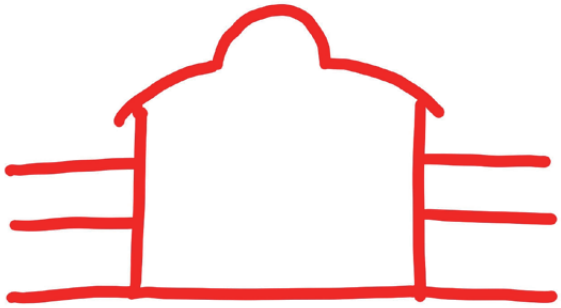
figure 24

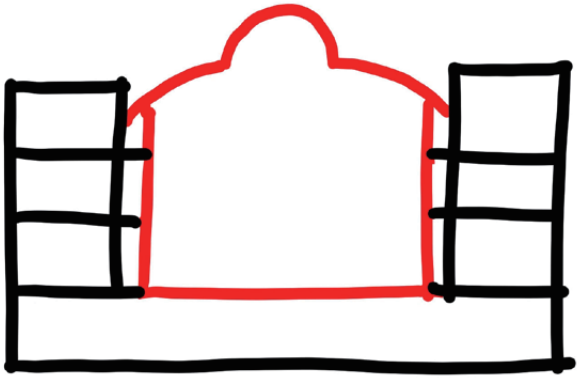
Why is it a students apartment?

In terms of social development, the radboud university in nijmegen is a globally renowned university and with globalisation, more and more international students are flocking to nijmegen for their education, which puts a strain on the already inadequate housing resources. Secondly, the site is ideally located in the heart of nijmegen, 10 minutes' walk from the train station and 10 minutes' bike ride from radboud university, which is perfect for students' needs. The mall is a two-storey commercial building, but it takes up a lot of land in the city centre, and the surrounding buildings are mainly 4-5 storey shophouses.(figure 23)

In terms of matching the theory to the building type, as I am trying to explore how to objectify the old building structure and make it an identity this requires sufficient time for interaction between people and the preserved structure, unlike the public building type, the collective housing type as the first space is a building type that the occupants keep coming and going, it is a building type that people have a sense of belonging to, the objectified structure can become a The structure of the object can be a vehicle of identity.

In addition, the collective house tends to have a sequence of multiple levels of space, from external spaces to shared semi-public spaces within the community, to each individual private bedroom within, with a decreasing scale and an increasing number of spaces. This helps to provide several different levels of space to create interaction between people and the established structure. For each occupant, this small bedroom at the end of the sequence is the home of their personal life, and by spatially limiting the scale of the bedroom, I can create a one-to-one relationship between the columns and the bedroom, allowing for the maximisation of thingness at the end of the sequence.



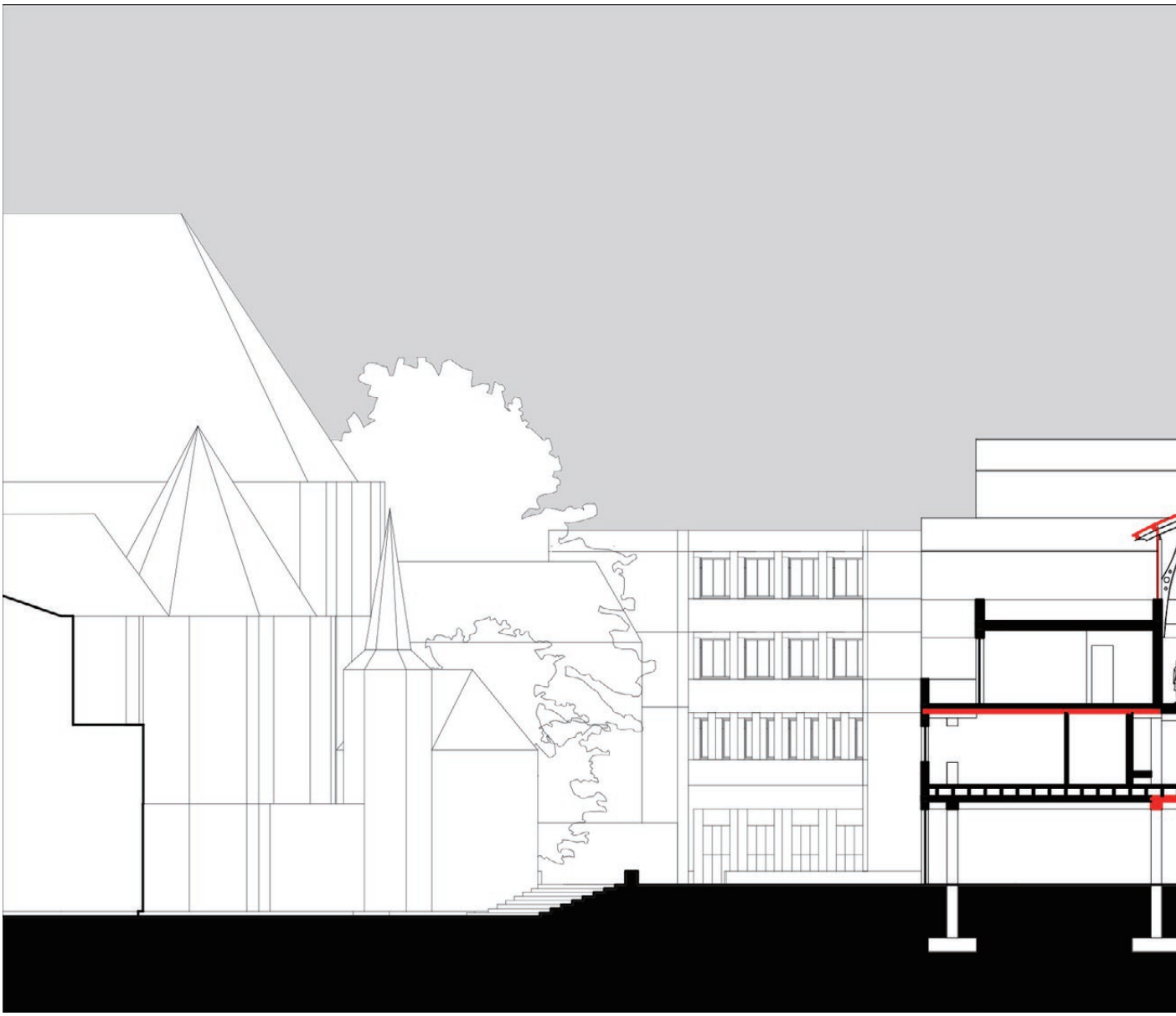


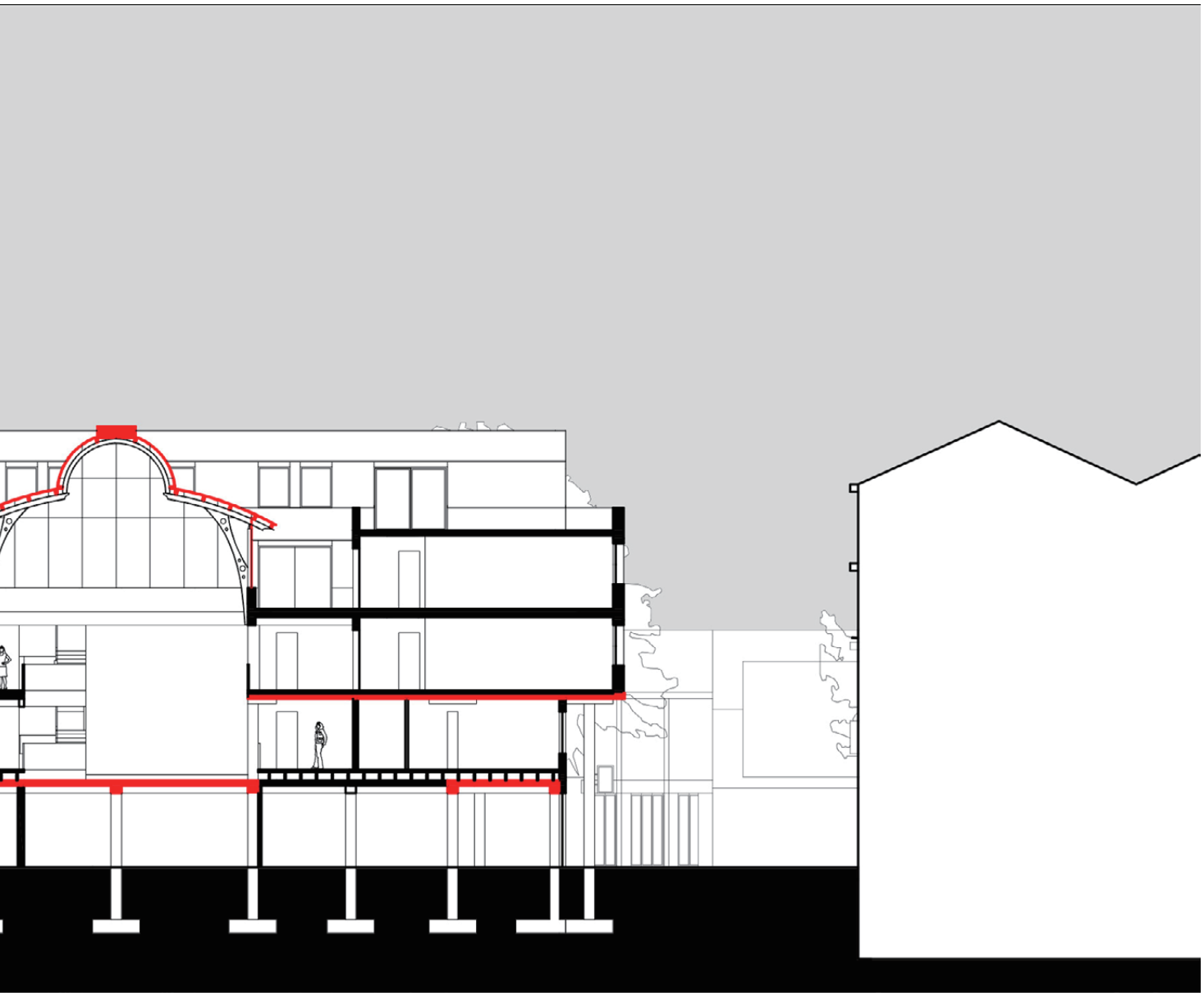
Atrium

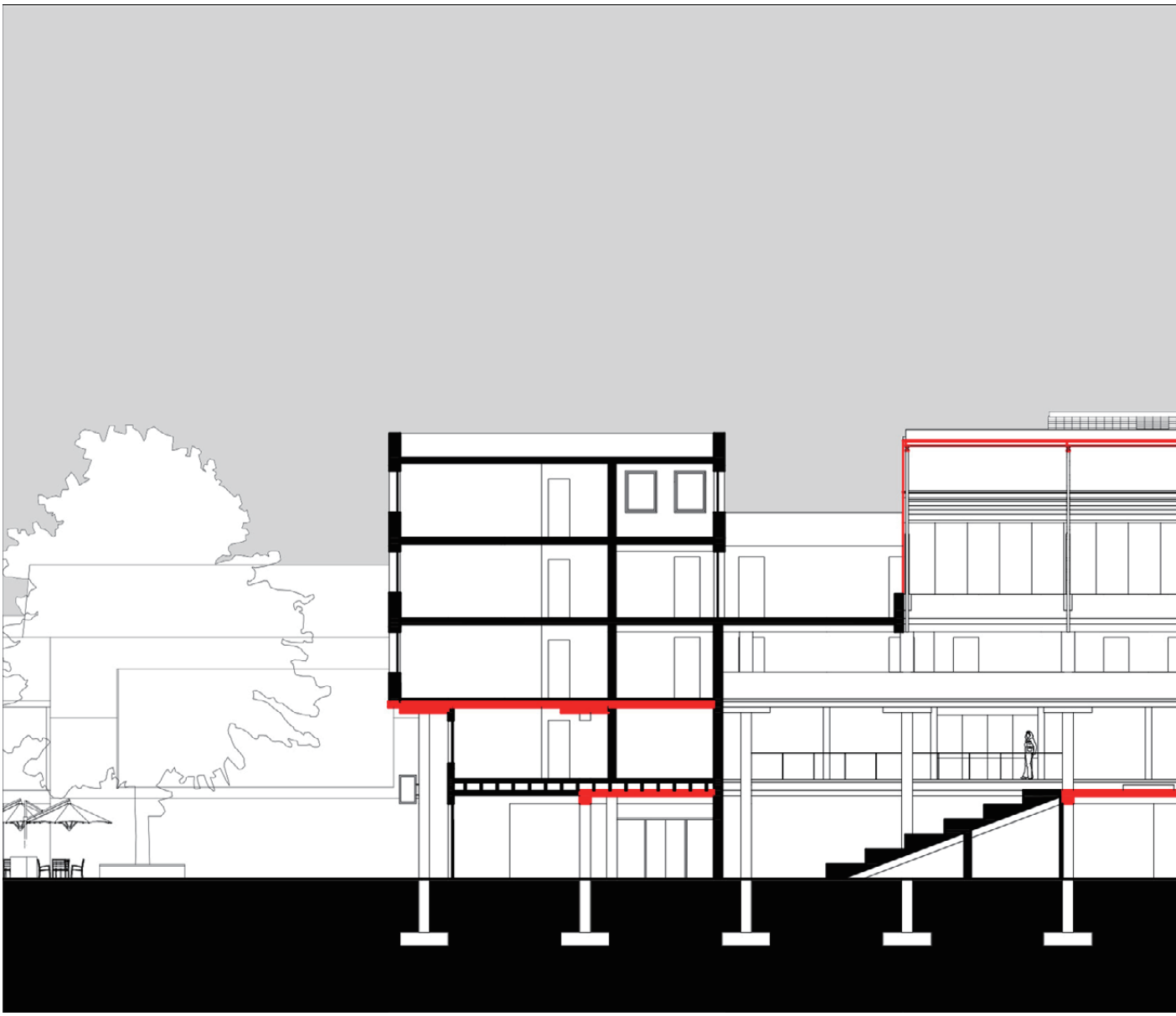
The atrium as a whole is a finely crafted element and has a large volume, which makes it difficult to appropriate. The particular arch form, however, has a certain symbolic quality, so I have tried to retain its specific form and only modify the interior space somewhat.

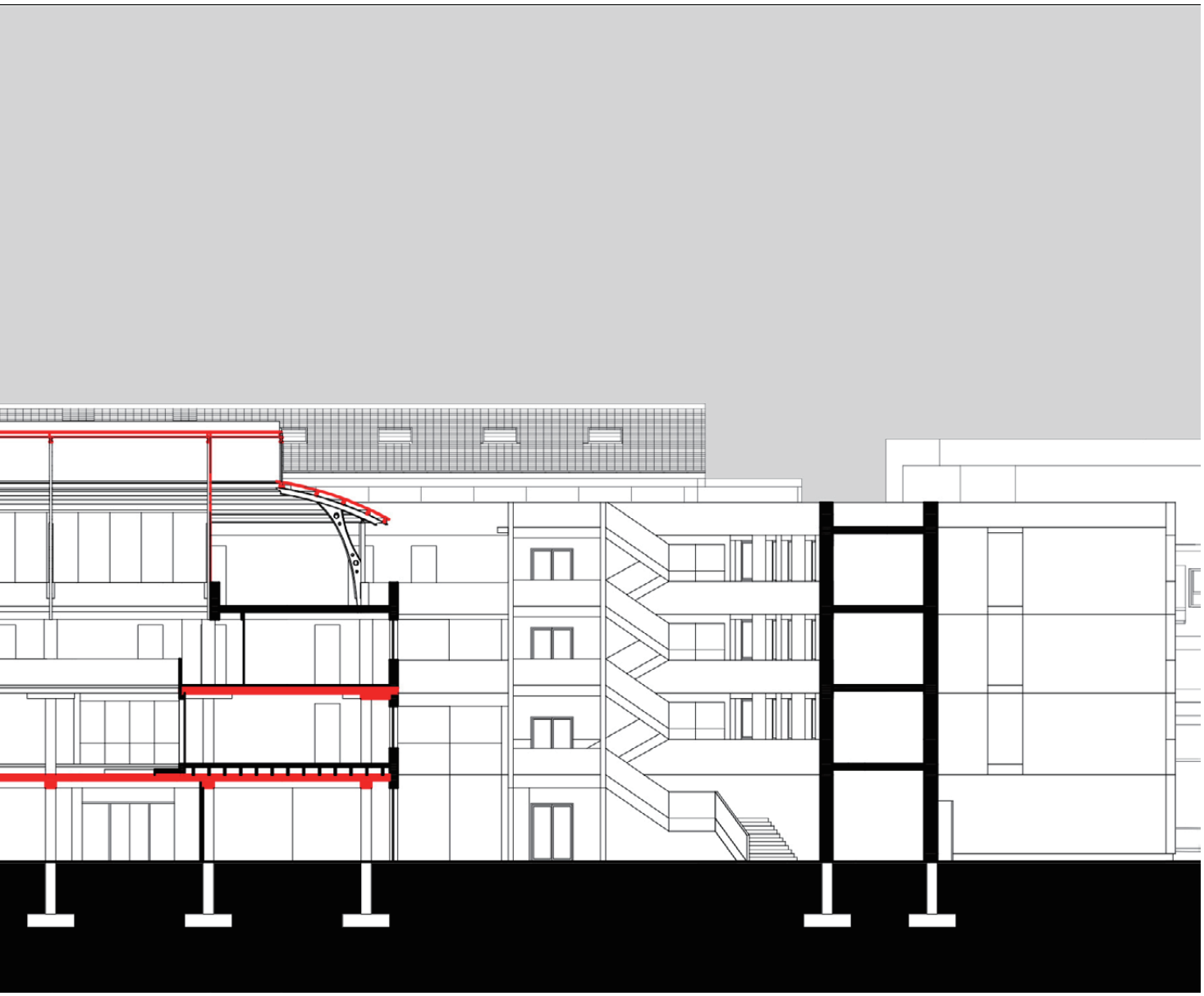
Because the interior of the atrium is well lighted and is a large space without columns, it is well suited to be shaped as a central public space for a student residence that accommodates a variety of activities.

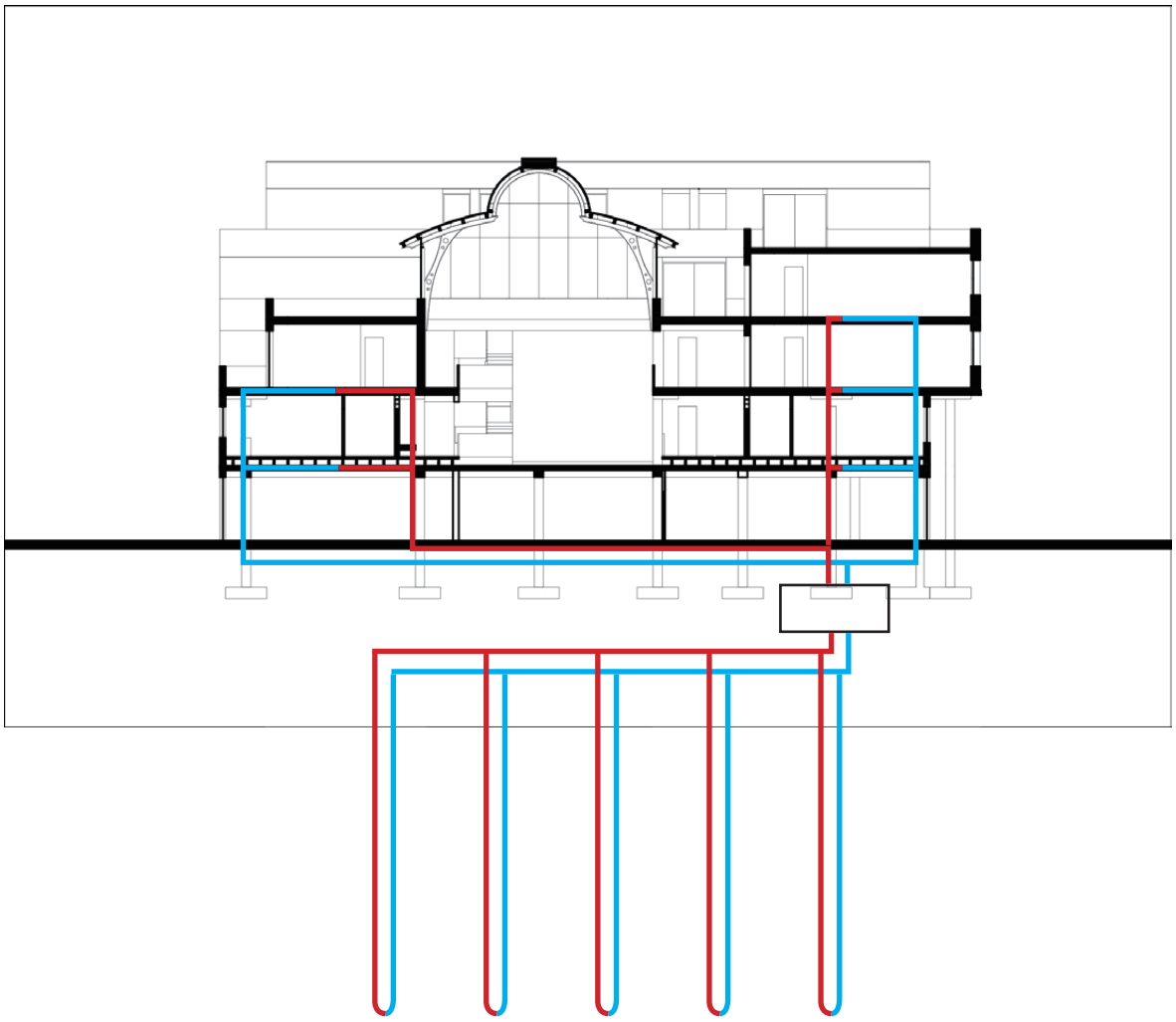
However, the original atrium was only 3 storeys high and, after densifying the surrounding housing, could not be perfectly connected to its surroundings. Therefore, taking into account the principles of the previous study, I have raised the atrium and its ground level by one storey while maintaining the original horizontal position, ensuring the public nature of the atrium and providing a larger and more flexible space for the ground floor retail.











Atrium as climate controller

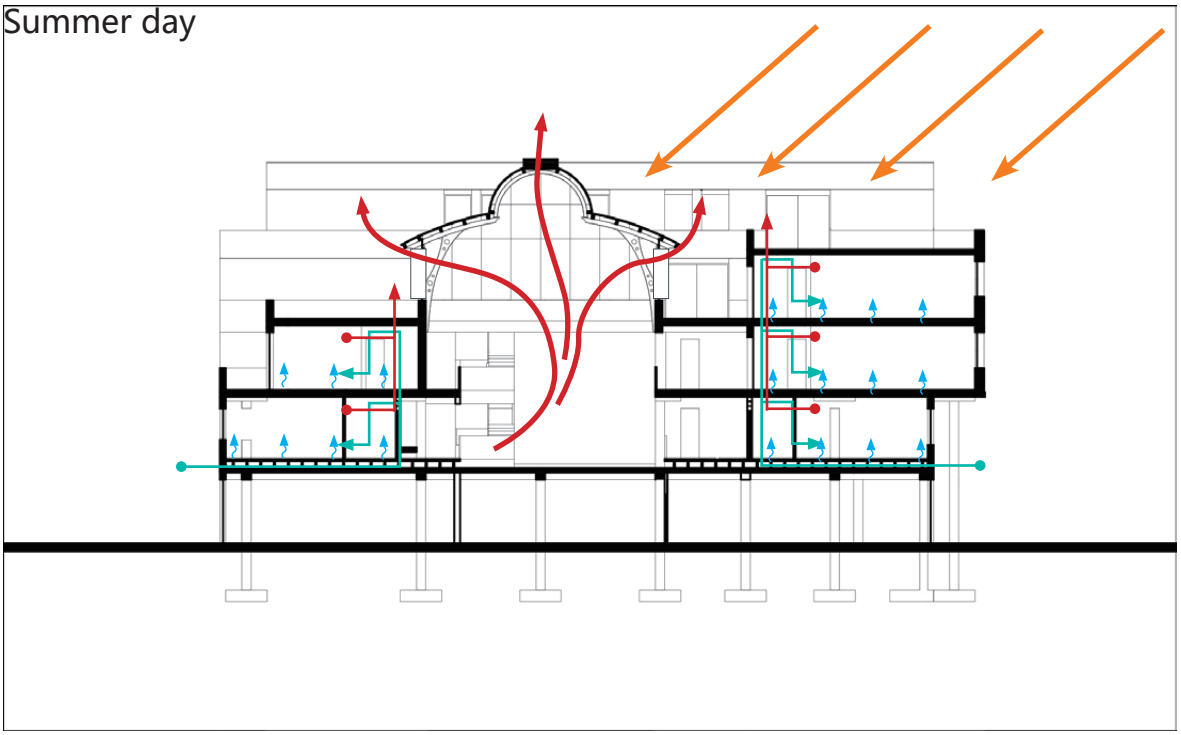
The atrium space is a semi-outdoor space that relies mainly on natural ventilation. The dwellings on either side are full conditional space with internal mechanical ventilation.

During the summer daytime, the windows on both sides of the atrium top floor can be fully opened, allowing the entire atrium space to be connected to the outdoors. Ventilation of the ground floor foyer and the common areas on the 1st floor allows for a constant flow of cool air in from the bottom and out from the top, preventing the interior of the atrium from overheating. The dwellings on either side then close the natural vents, allowing the southern dwelling to lower the external shade and the rooms to maintain internal temperature matters through mechanical ventilation. At night when the external temperature drops, the dwellings on either side open up the natural ventilation, allowing cooler air to pass through the building.

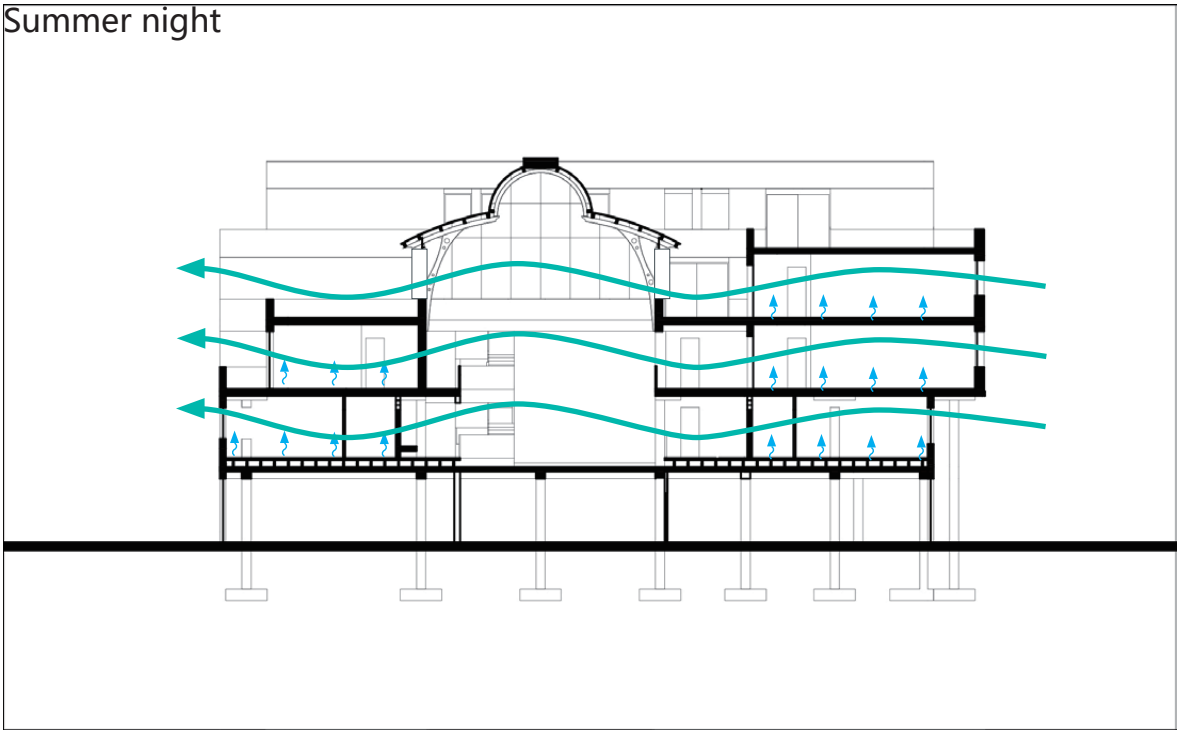
The windows on the top floor of the atrium are kept closed in winter, creating a winter garden that constantly absorbs sunlight to heat the internal air during the day.Inside the dwellings, the windows are closed and the shading is withdrawn, reducing heat loss through the heat exchange of mechanical ventilation.

In addition, ground thermal heating/cooling pipes constantly balance the internal air temperature. Relatively cold water is provided to cool the rooms in summer and vice versa in winter.

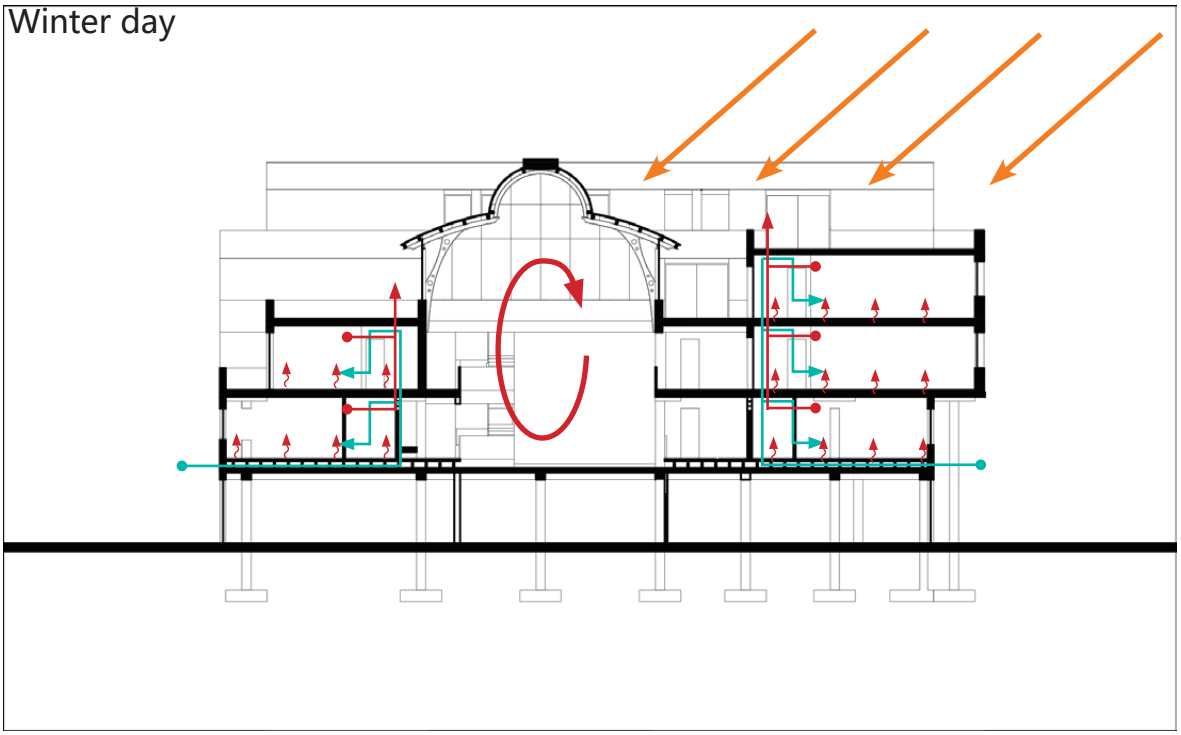
Summer day



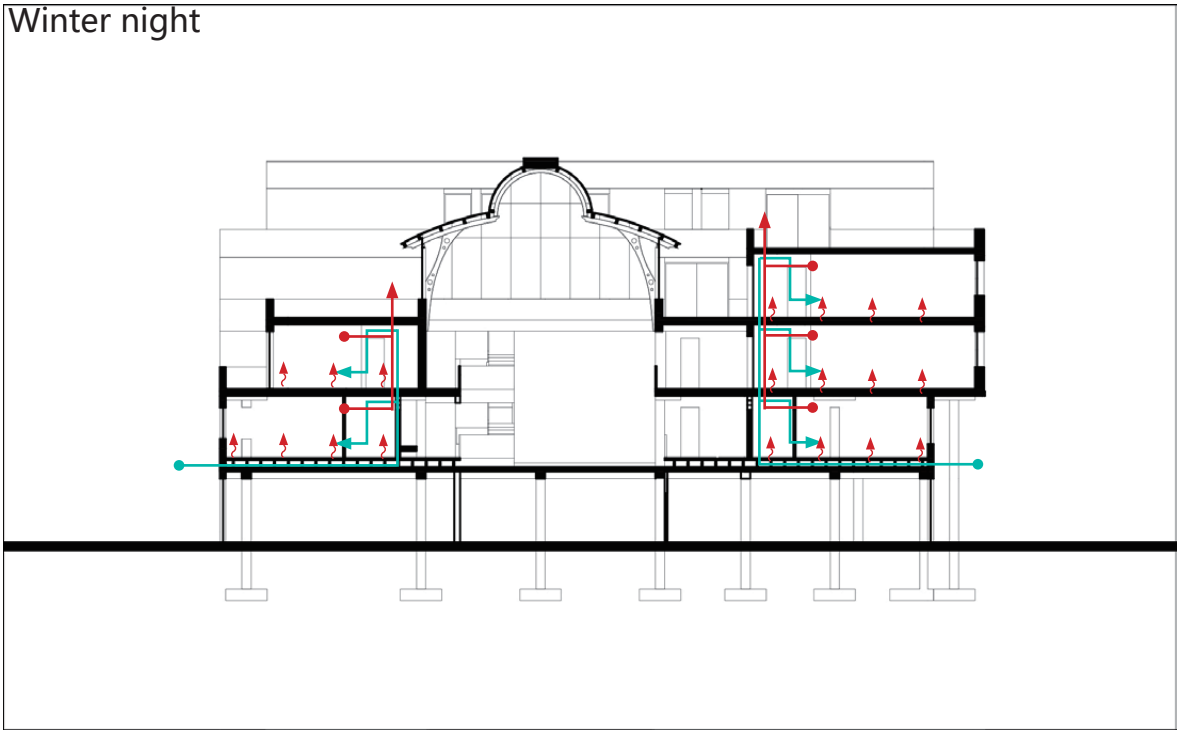
Summer night



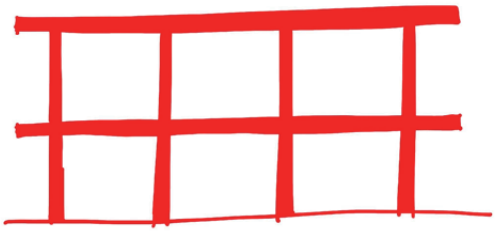
Winter day

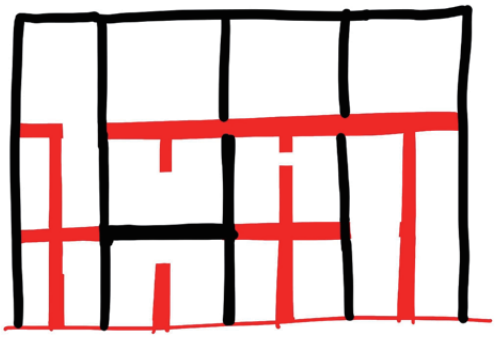


Winter night




Flyttlåda
Mellan





Structure frame

Through the previous study of thingness, we will find that thingness has a great deal to do with scale. To perceive an object as a thing, it needs to be within the range of human perception, beyond which it will extend from the space in which the thing is weakly extended.

At the same time the temporal and spatial properties of things imply a uniqueness, or at least an irreducibility within a restricted space. And revisiting the network of columns within our base, which are diffusely distributed throughout the base in an almost homogeneous state, is beyond the scope of individual perception. I have therefore attempted to deconstruct the overall framework.

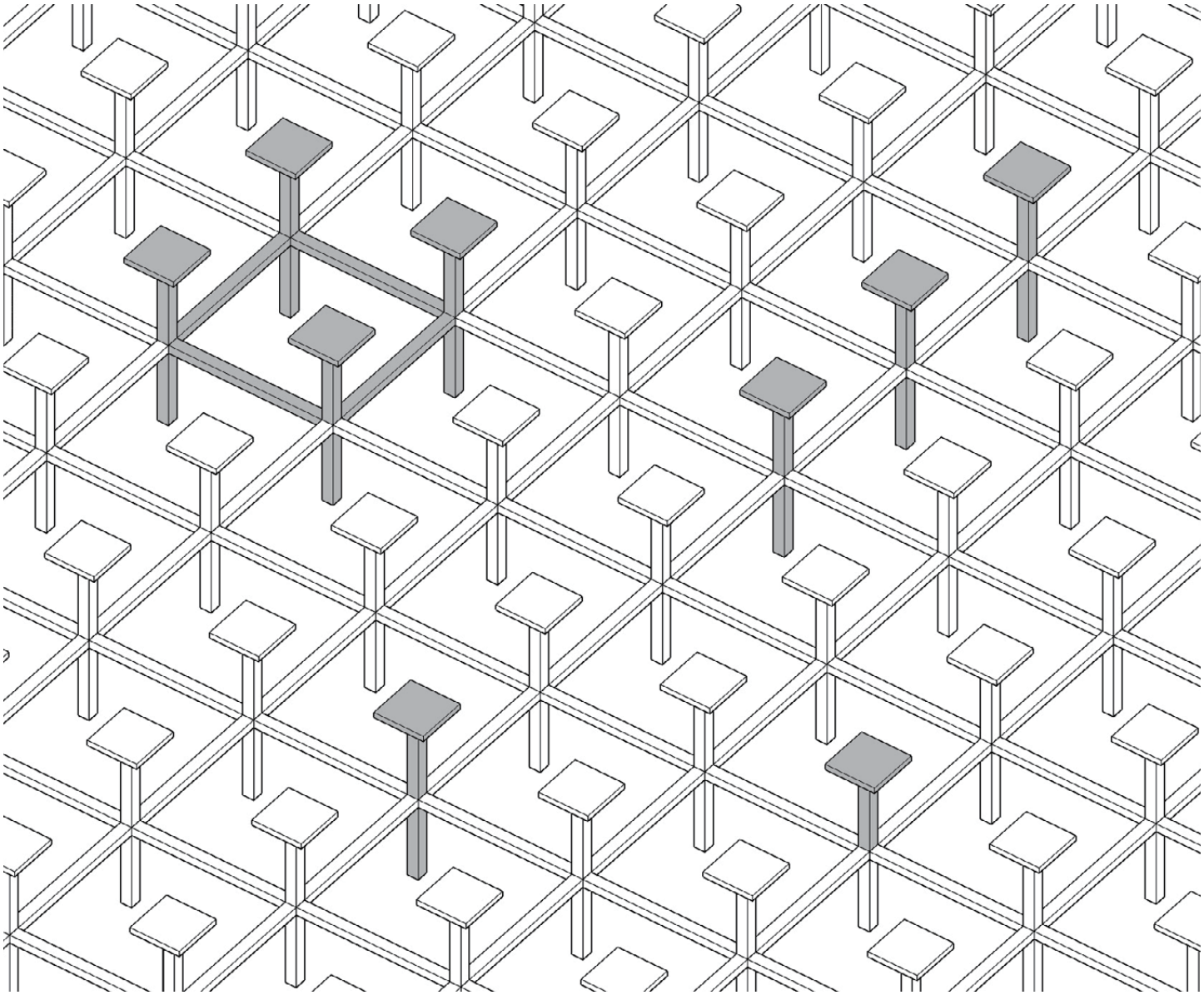


figure 25

Partial frames

Has the same high degree of properties as the overall frame, showing the presence of links between columns, the only difference being that the frame system is reduced to a perceptible scale.

Columns

Reduced from a spatial structure with an emphasis on three dimensions to a two-dimensional form, the identity of each column itself is made clear by the loss of the horizontal beams, but because of the sense of replication of the same form of the column column column, the columns themselves still do not jump out at the senses, but the 6m high column column as a whole embodies the majestic intent of an ancient Roman colonnade.

Single Column

A relatively autonomous unit within the overall framework, a one-dimensional element compared to the previous two. When only one column is present in a field, the linear character of the column makes it stand out from the context with a certain monumentality. However, this is still relevant to its relationship with its context.

Semi-columns

By dividing space in vertical space, the one-dimensional column can be further decomposed, opening up another scale of perception. By further adjusting the relationship between man and the network of columns and shortening the distance between man and the mushroom column head, the sculptural sense of the column head is made more perceptible.

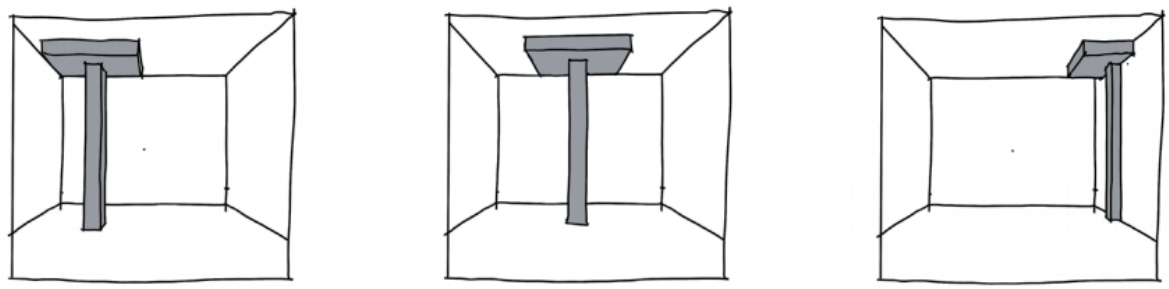


figure 26

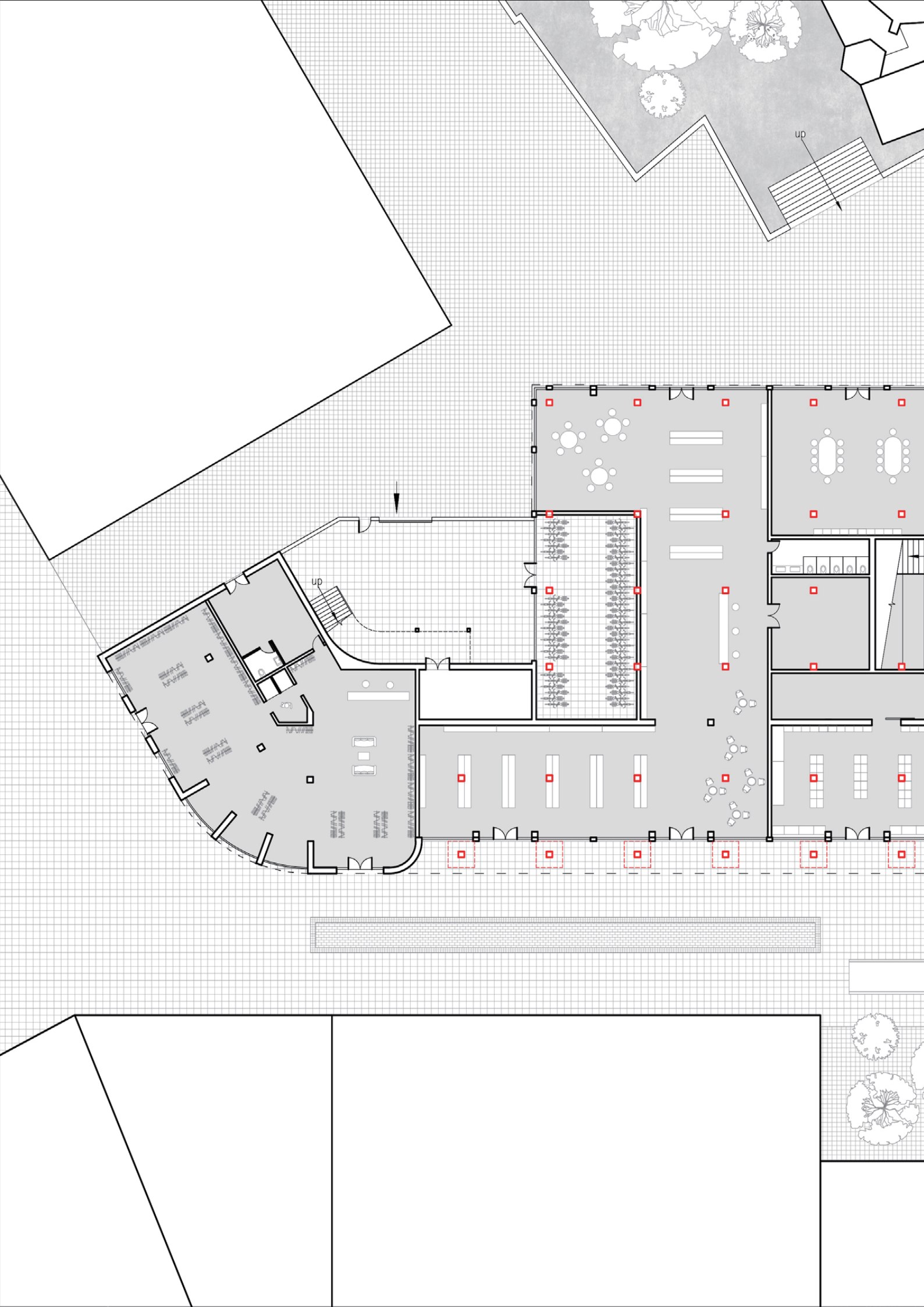
New scale

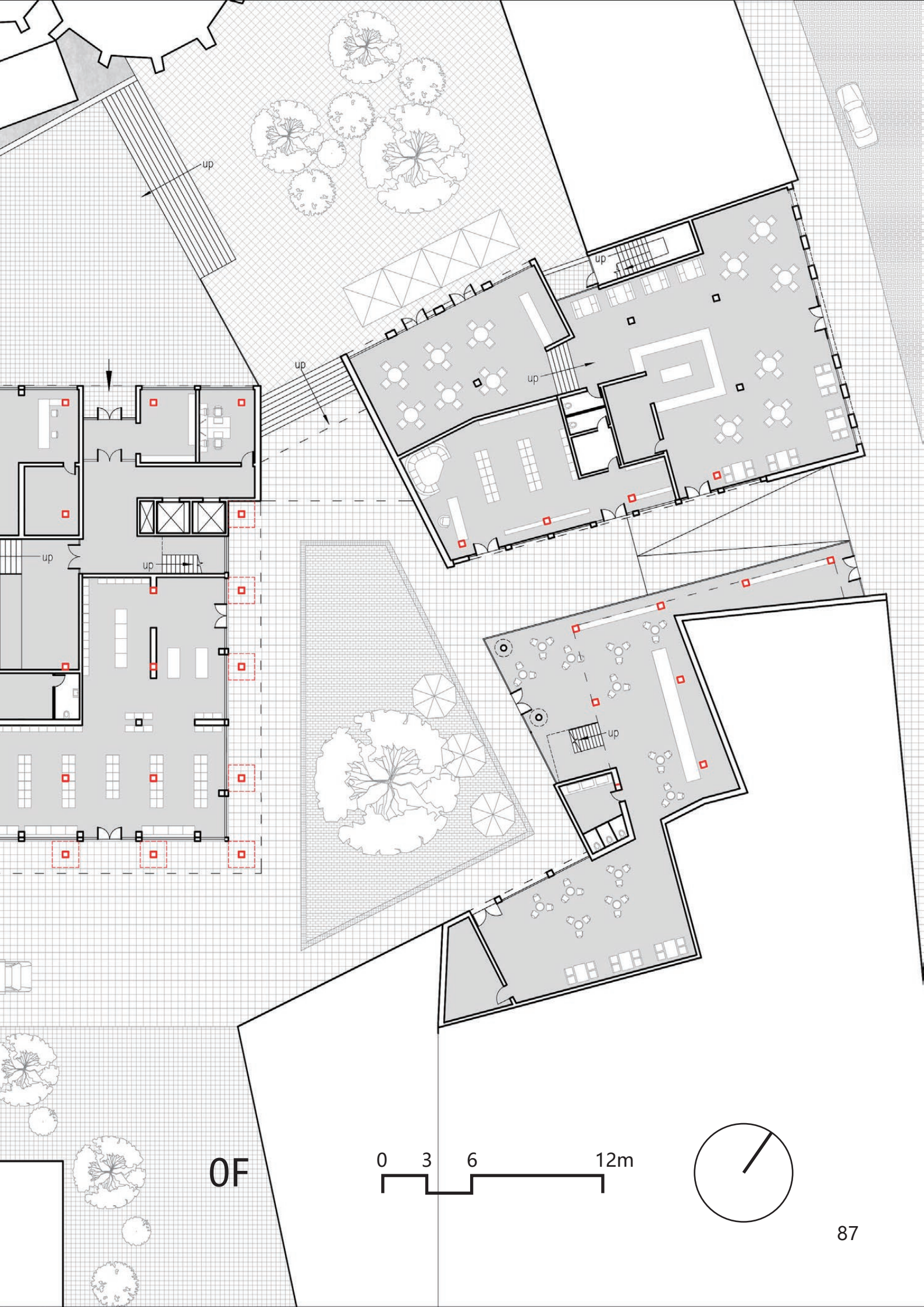
The original grid of columns was a 6m by 6m grid, but 6m was too extravagant a width for student flats, but splitting it into two was too narrow, so I ended up taking 4m as the width of the student flats, which also allowed for a variety of relationships between the new walls and the existing columns.

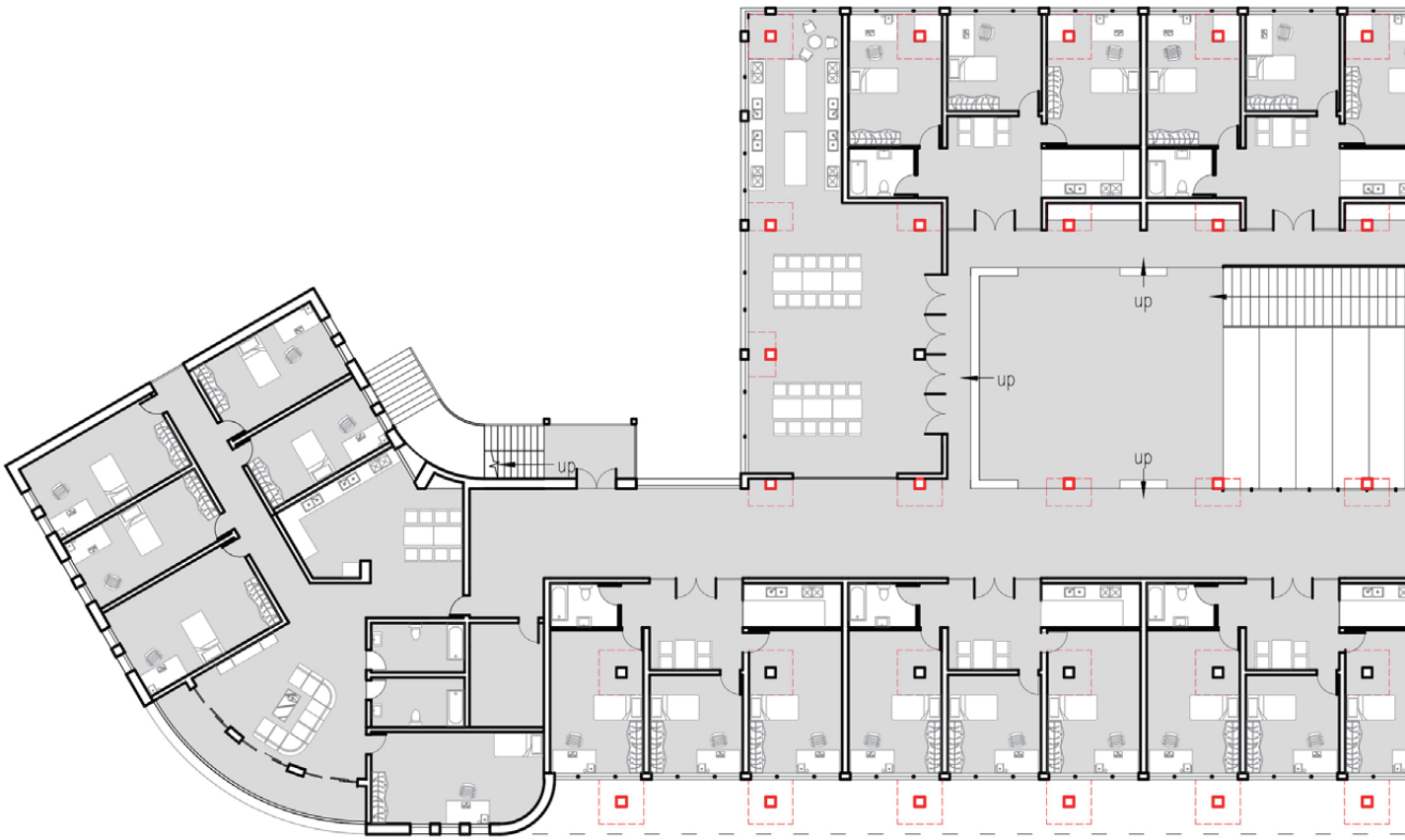
Figure 26 left: The column is located on one side of the room, without the seriousness that would be present if the column were in the centre, but still stands out as a vertical element in a horizontal box space. There is a definite impact on the practicality of the space, especially in the corner spaces.

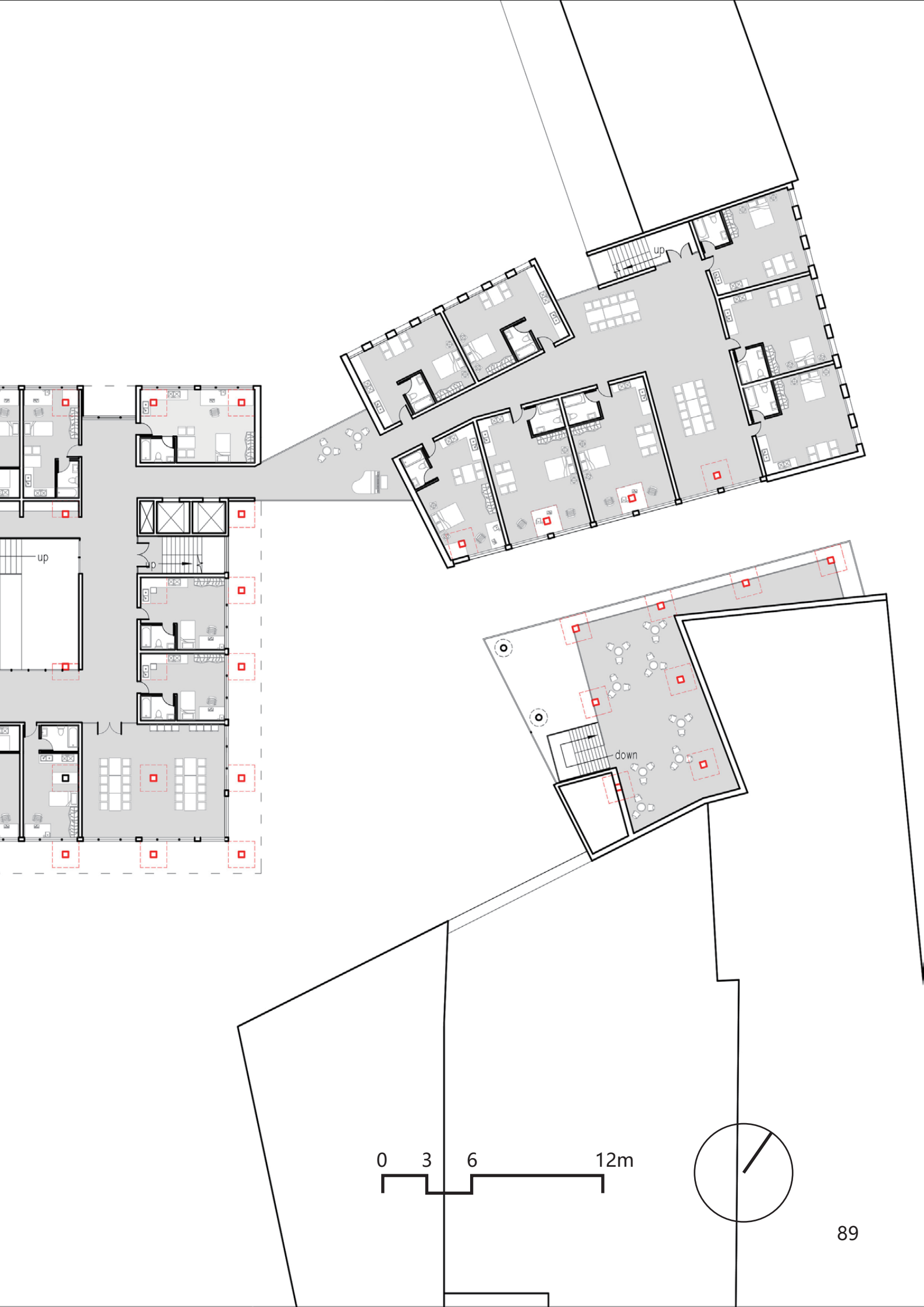
Figure 26 middle: The column is located in the middle of the room and has an extremely dominant force, while reinforcing the symmetrical properties of the room, which has a certain oppressive force on people and has a greater impact on the practicality of the space.

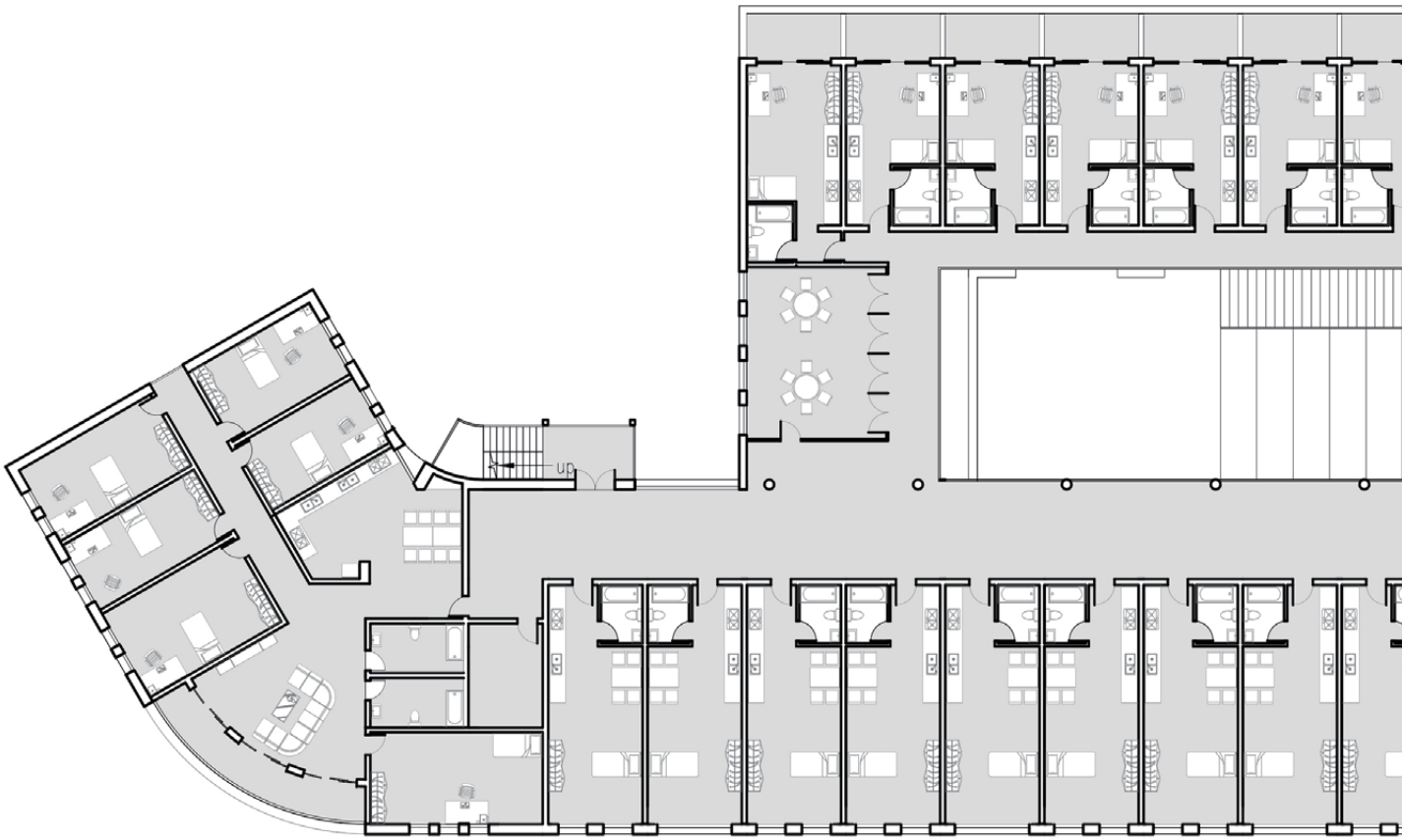
Figure 26 right: The column overlaps the wall, the relationship between the column and the wall becomes ambiguous, the collision of the two reinforces the perception of the junction, and the disappearance of the column suggests the presence of other spaces behind the wall. However, the relative impact on the practicality of the space is minimal.

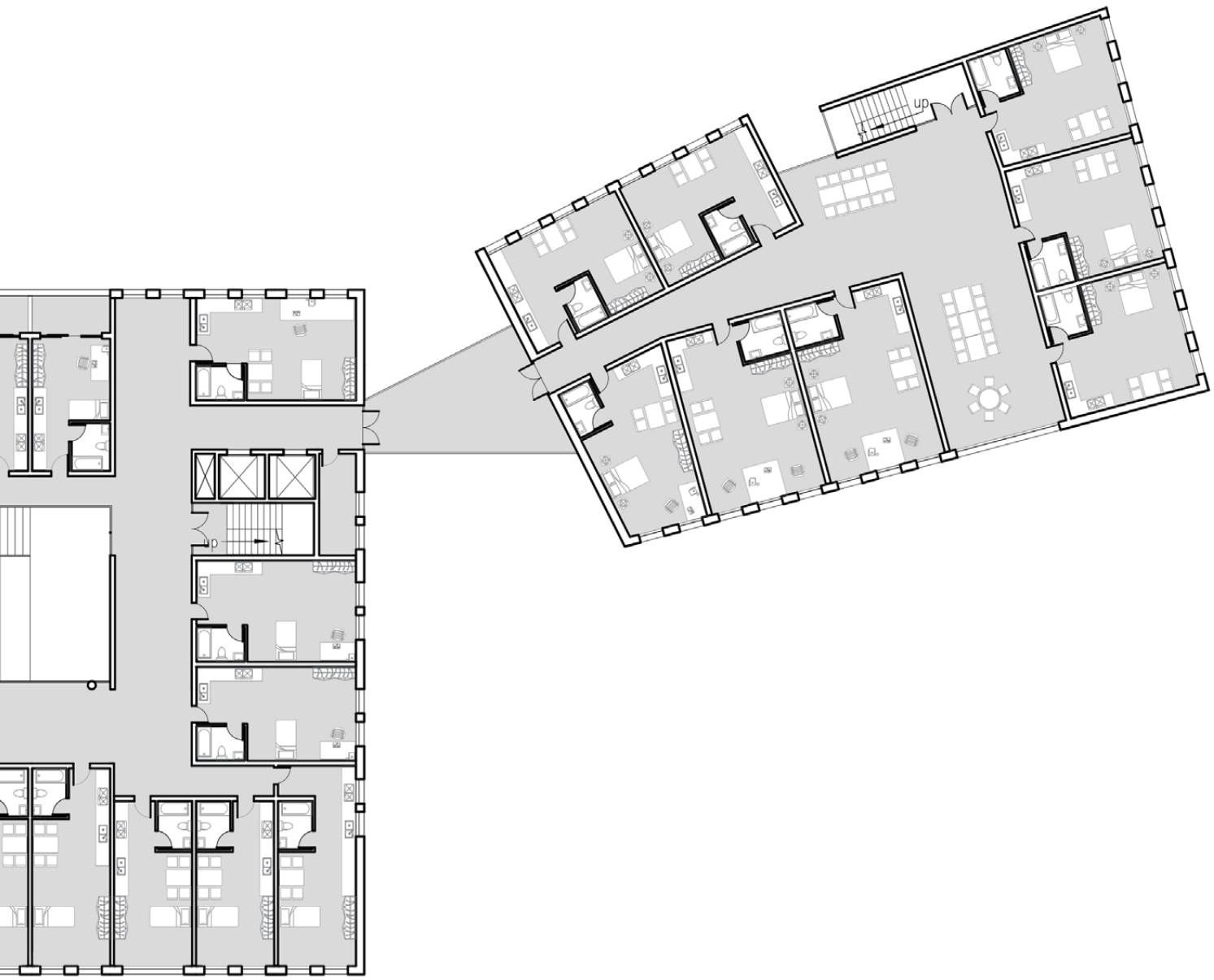

up
up


up
up
up
up
up
up
0F
0 3 6 12m

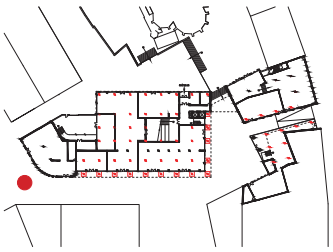

up
up
up
up


up
up
up
down
0
3
6
12m

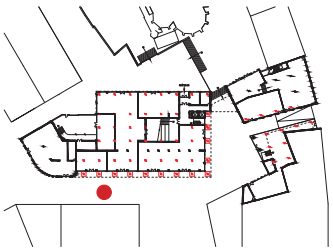

UP



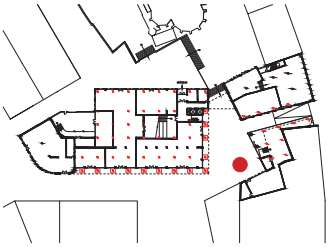
0 3 6 12m

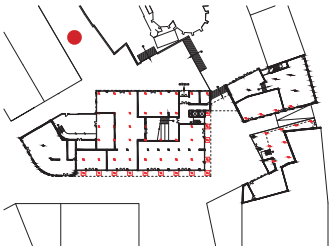


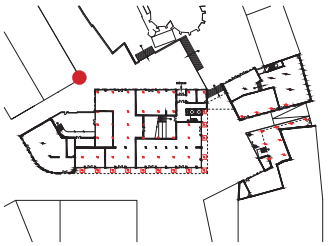

Welch's
Welch's
Welch's
Welch's

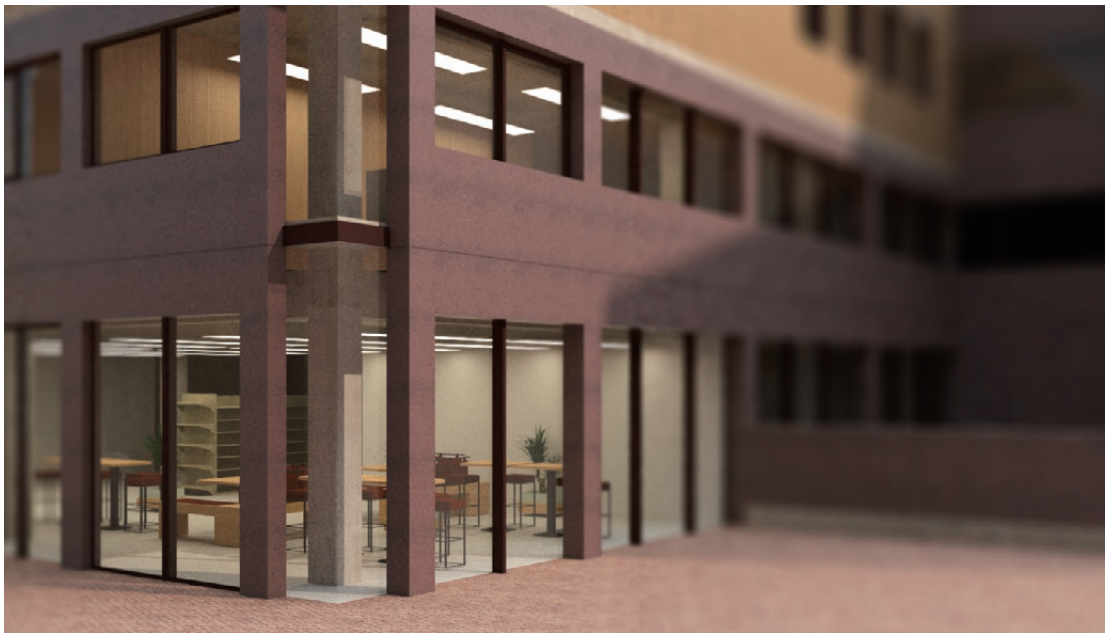


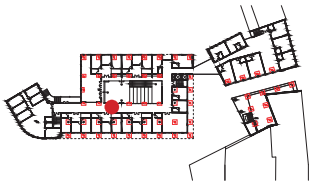

Welch's
Welch's

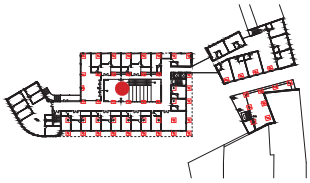


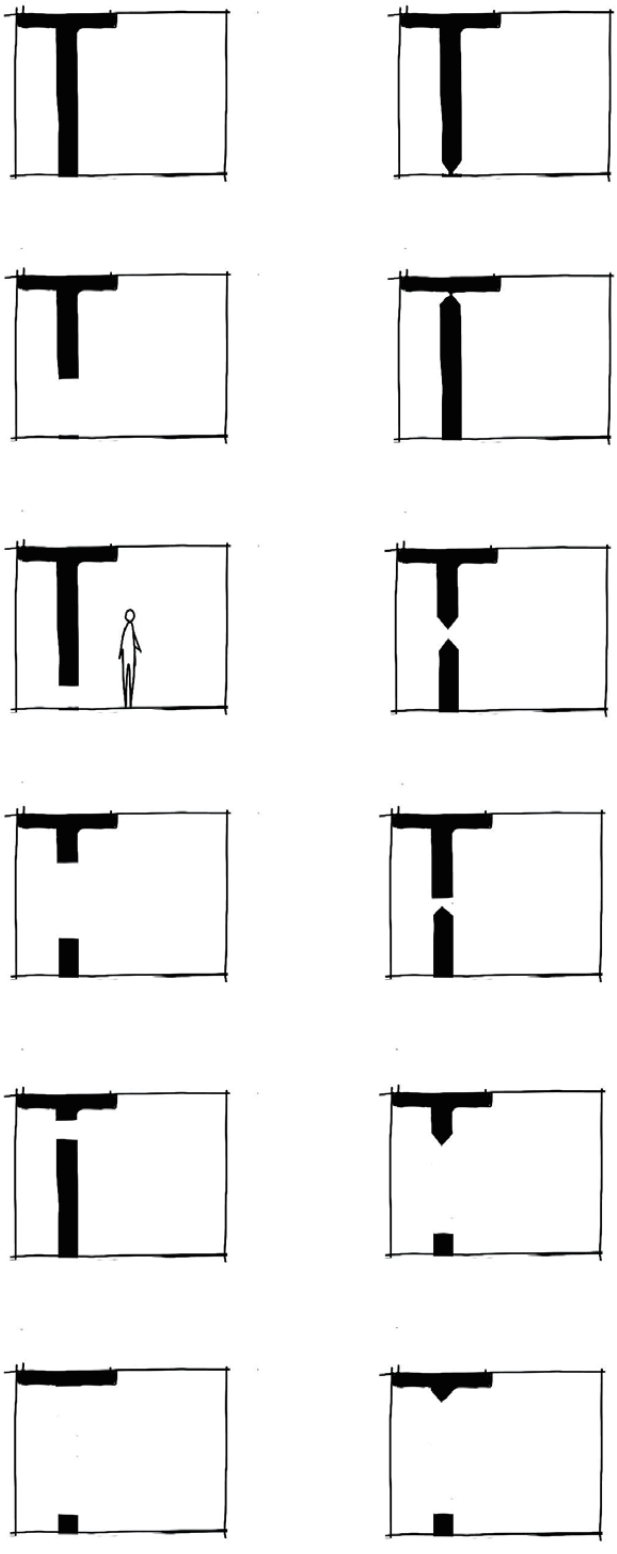






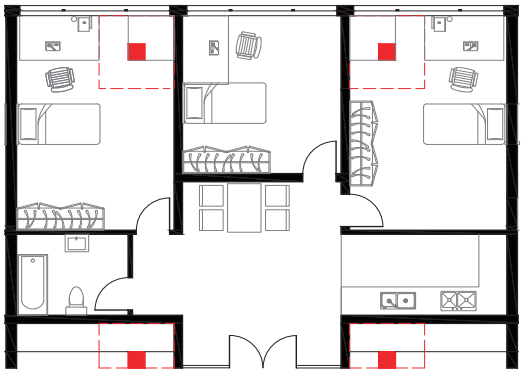


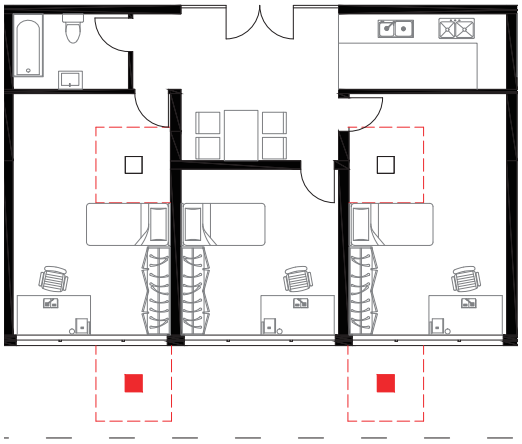


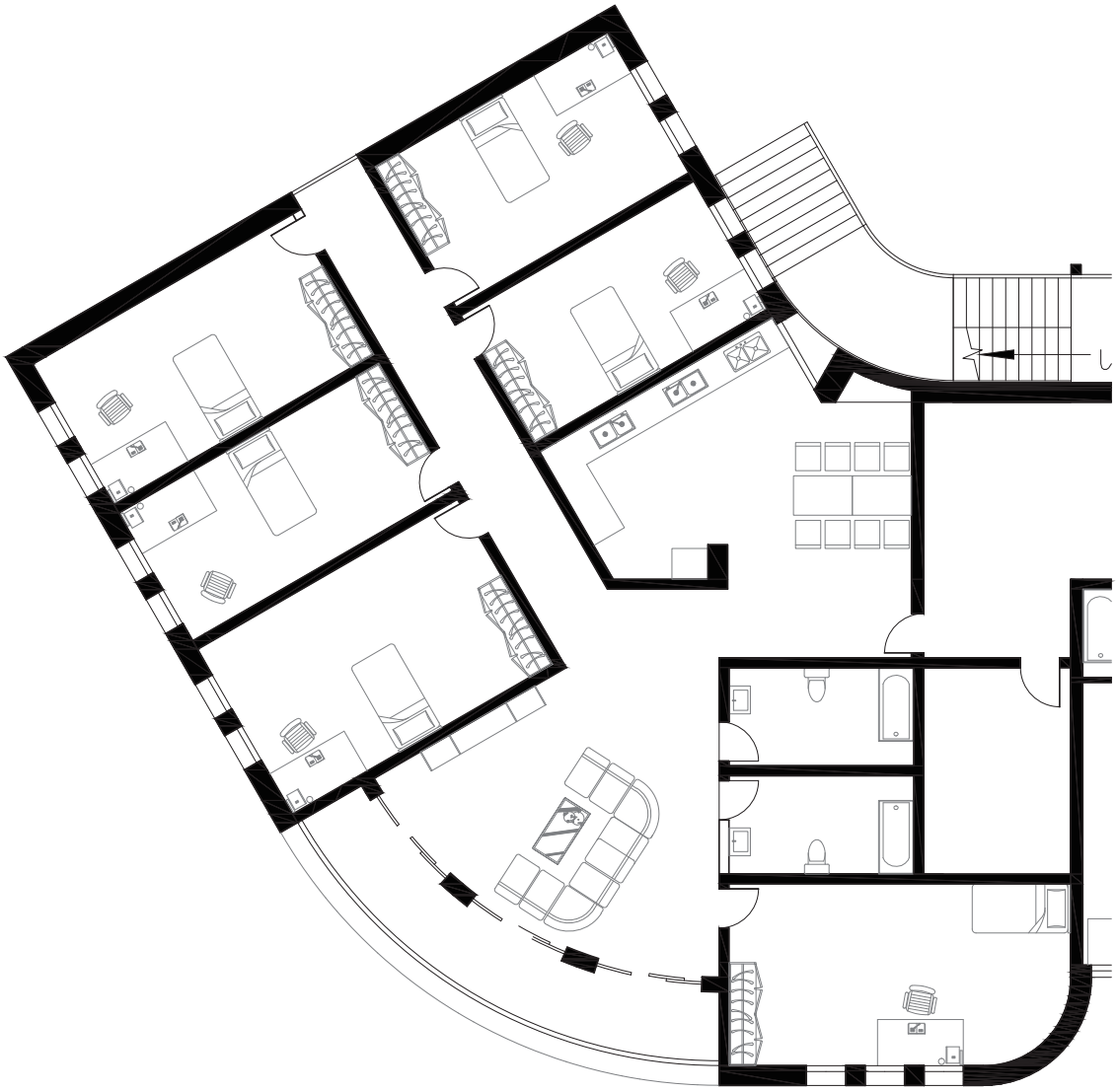


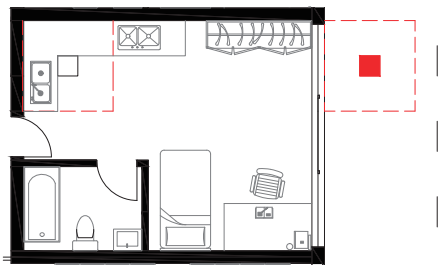
Blurring of identity

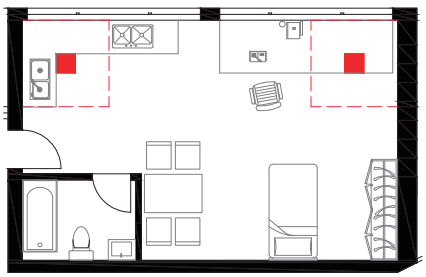
By creating new structural supports, the old columns are freed from their original structural system. This is when we begin to confront the thingness of the column head-on. When the whole column is kept completely, on a perceptual level, one tends to believe that the column has some kind of support, which is the stereotype one has of the column, even if the column does not have a structural role. When I keep most of the column form, but break it in the middle, it creates a shock to established expectations. One is taken by surprise, but on reflection one realises that this is all because the wall is now the load-bearing element. The broken column reveals a quality of honesty, not only about the fact that it is no longer load-bearing, but also in acknowledging its own history, that it was once a column that stood here. When I remove most of the body, leaving only the head, the identity of the column becomes extremely ambiguous and one only perceives a wide flat protrusion on the ceiling, which is difficult to associate with the column.

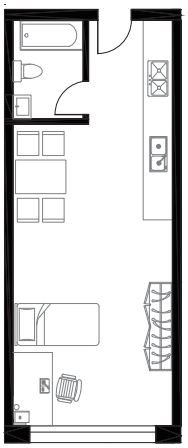


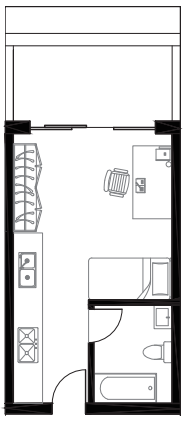


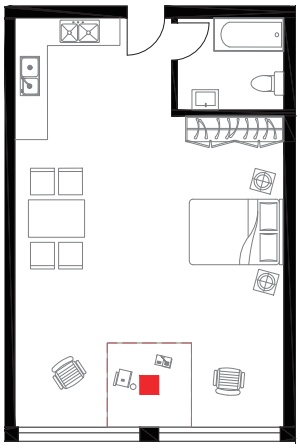


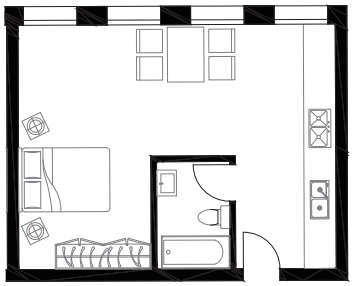






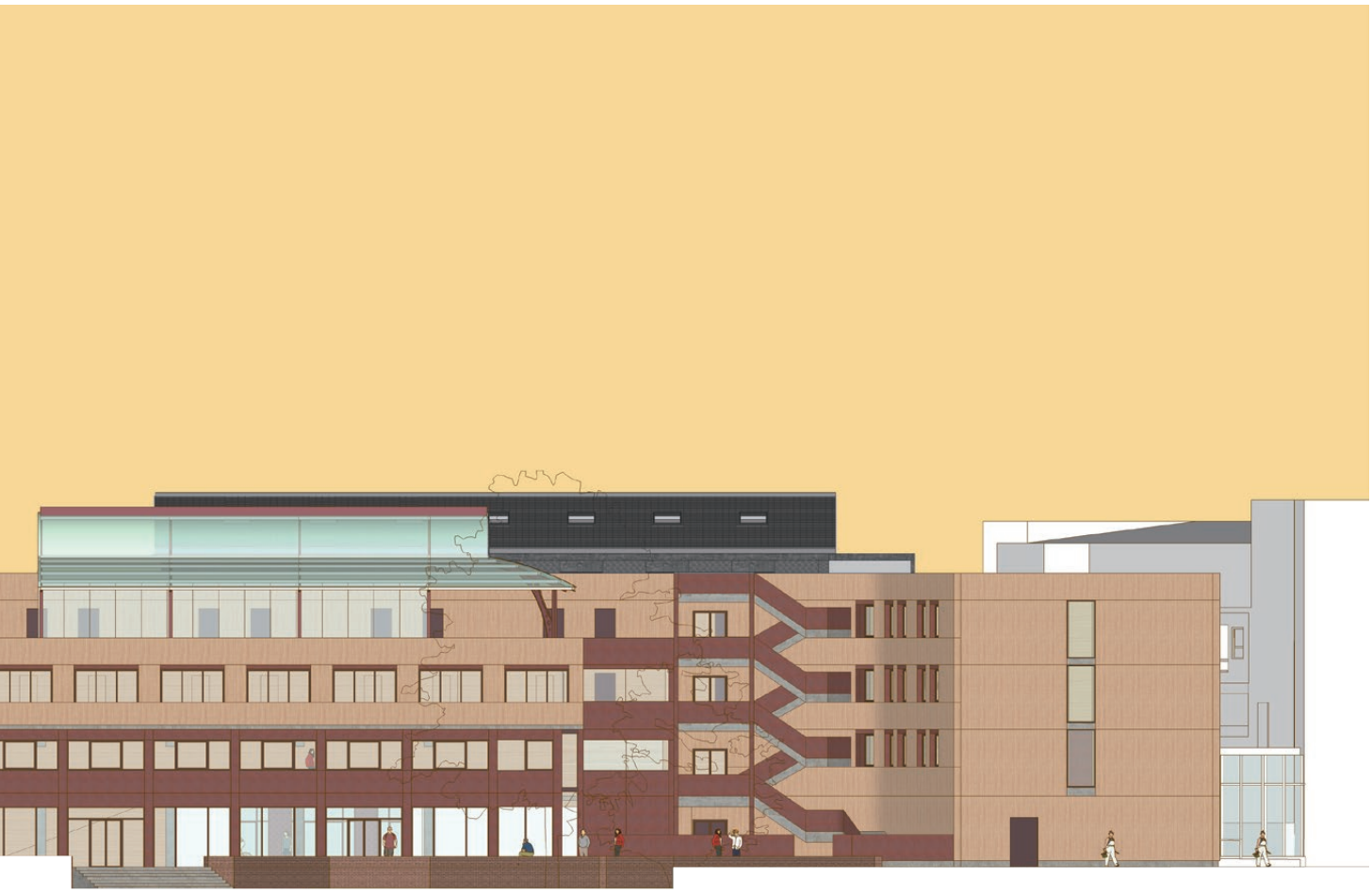


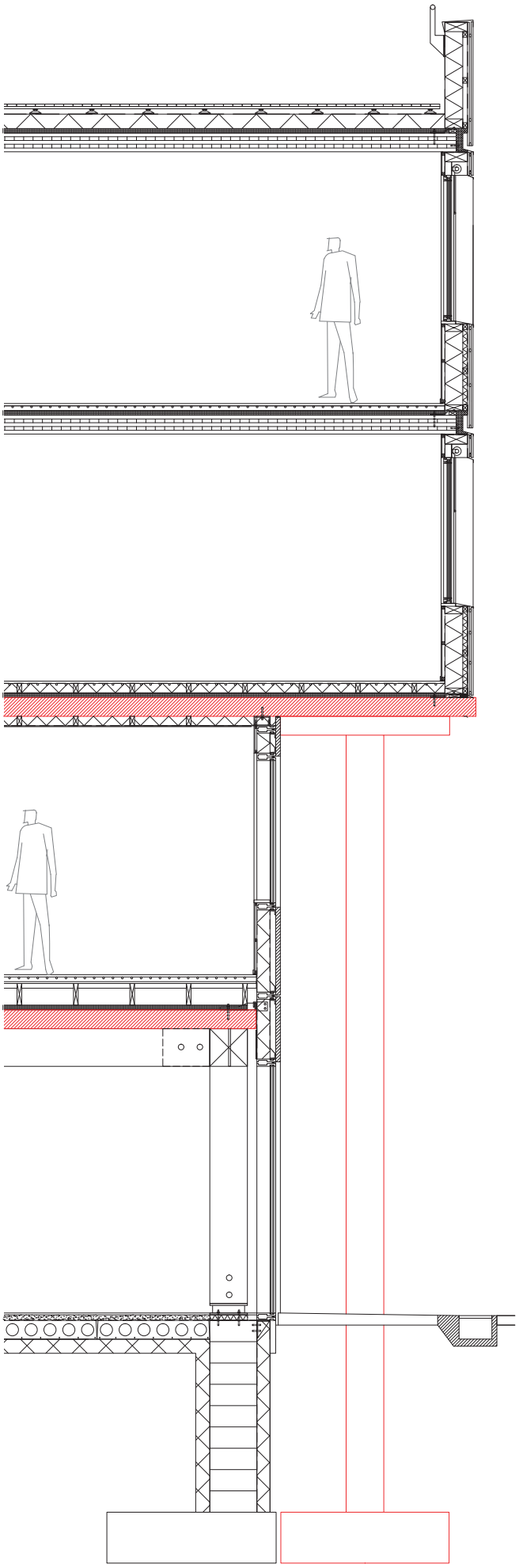


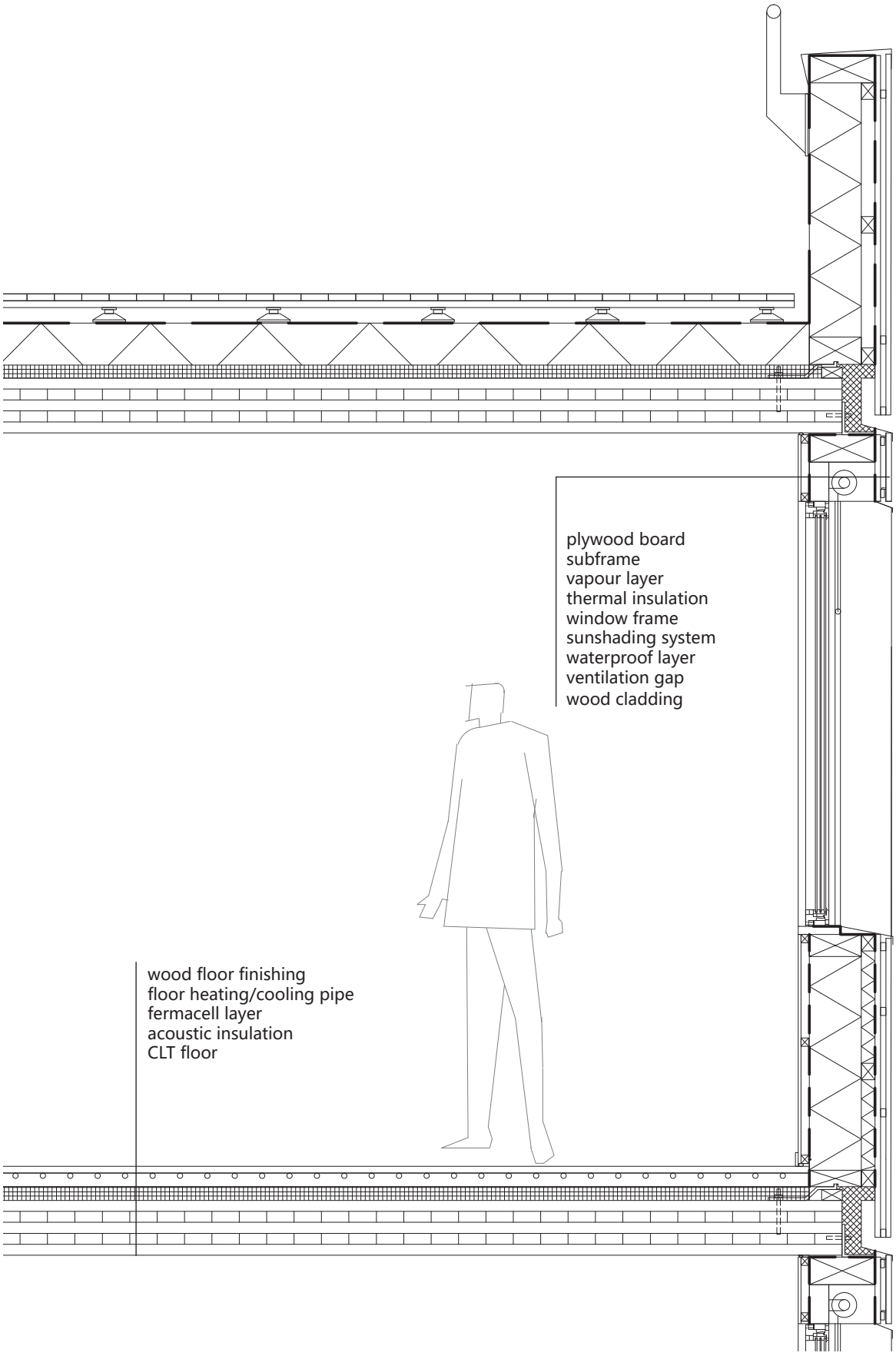


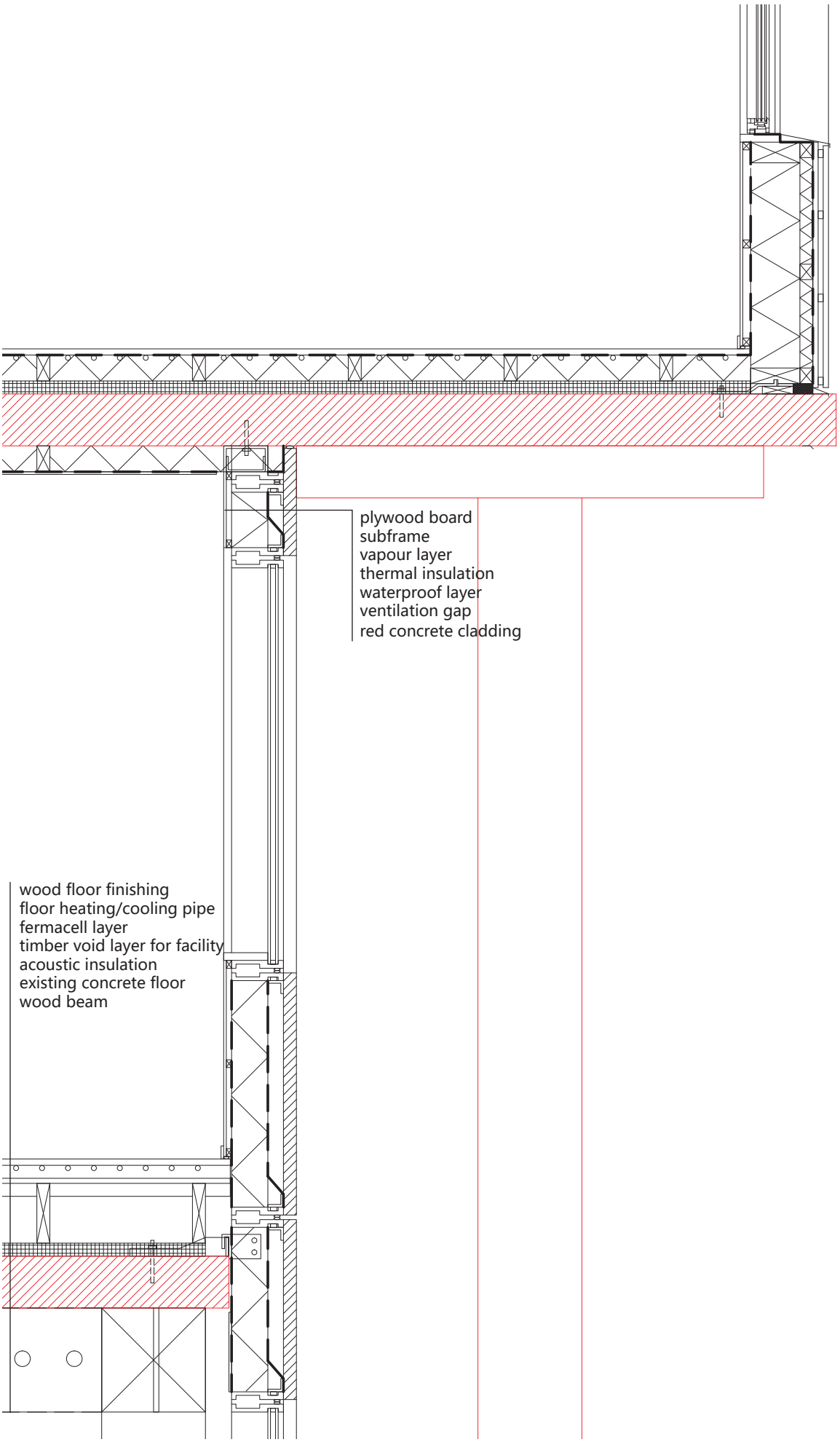
Facade design

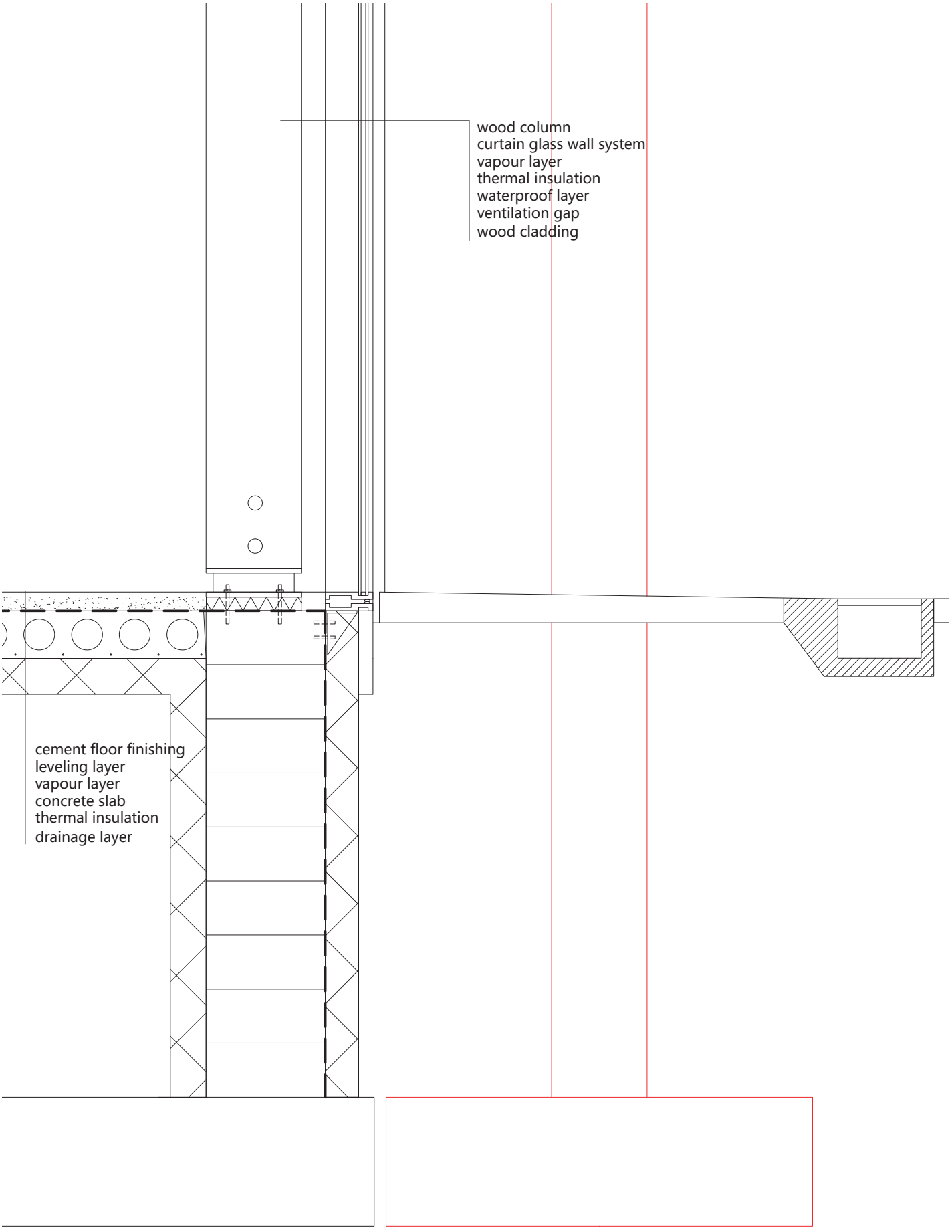
In a rebellion against functionalism, the logic of the building's façade expression is not divided by form in terms of function, but in terms of old and new structural forms. This approach and position allows the building's function to change as society develops, without being limited by the functionalist division of form, returning to the essential perception of form and to the thingness of form. The wall elements used in the buildin are prefabricated products, reducing the time spent on site and at the same time providing a means of recycling materials.

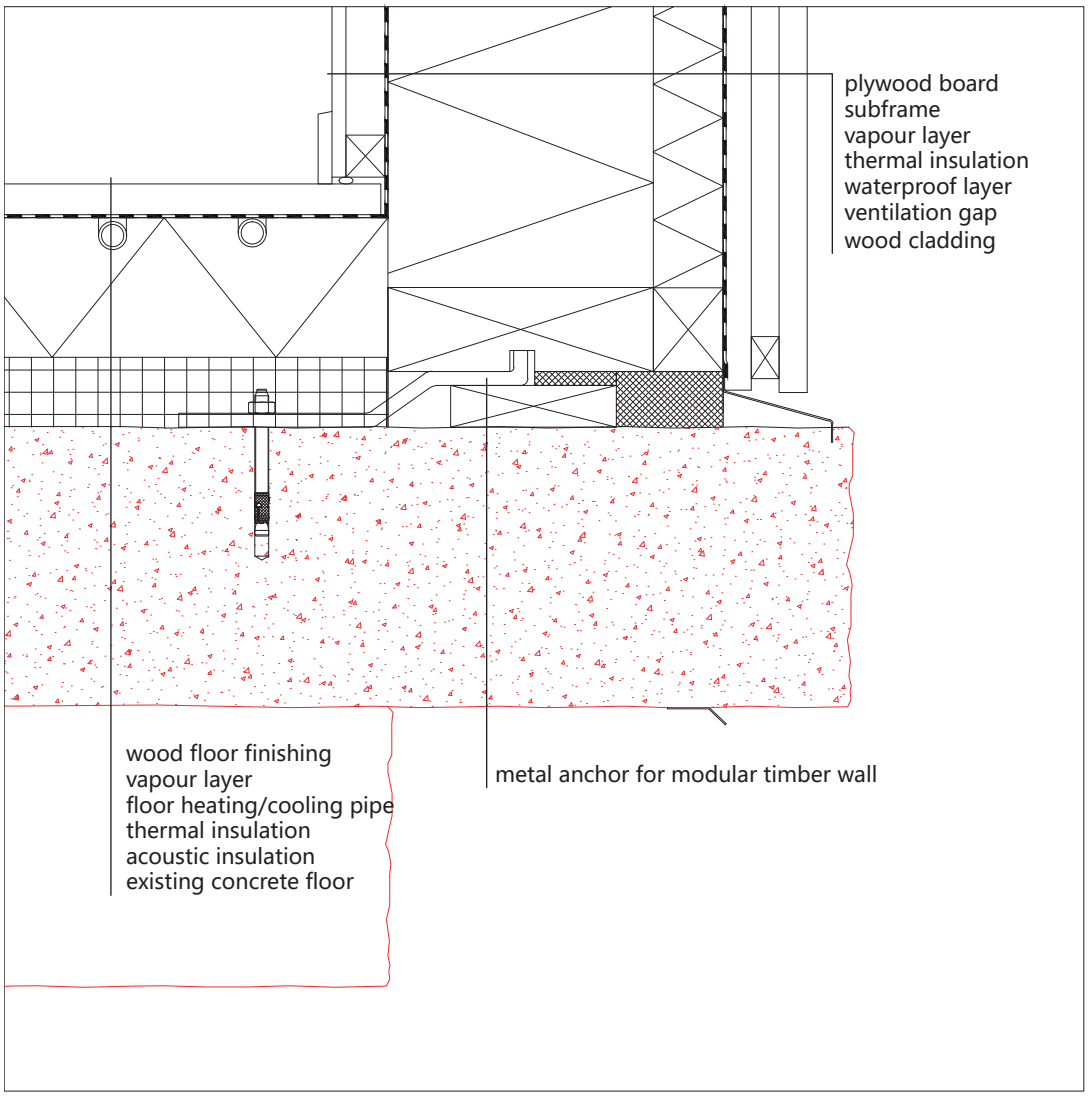


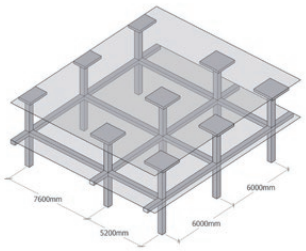


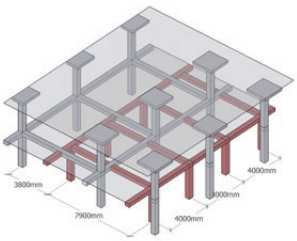

plywood board
subframe
vapour layer
thermal insulation
window frame
sunshading system
waterproof layer
ventilation gap
wood cladding
wood floor finishing
floor heating/cooling pipe
fermacell layer
acoustic insulation
CLT floor

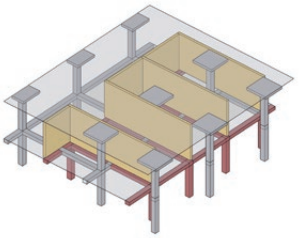

plywood board
subframe
vapour layer
thermal insulation
waterproof layer
ventilation gap
red concrete cladding
wood floor finishing
floor heating/cooling pipe
fermacell layer
timber void layer for facility
acoustic insulation
existing concrete floor
wood beam

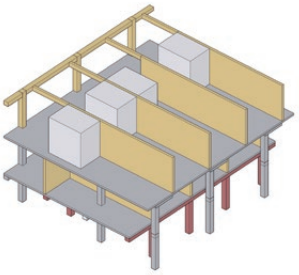

wood column
curtain glass wall system
vapour layer
thermal insulation
waterproof layer
ventilation gap
wood cladding
cement floor finishing
leveling layer
vapour layer
concrete slab
thermal insulation
drainage layer

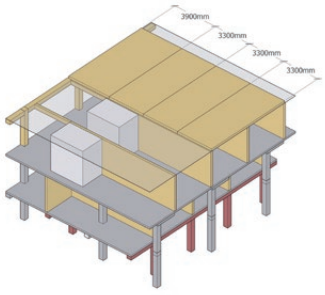

plywood board
subframe
vapour layer
thermal insulation
waterproof layer
ventilation gap
wood cladding
wood floor finishing
vapour layer
floor heating/cooling pipe
thermal insulation
acoustic insulation
existing concrete floor
metal anchor for modular timber wall

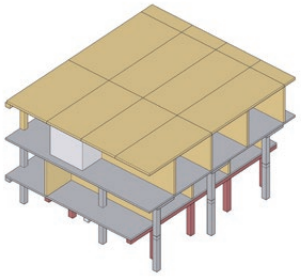

7600mm
5200mm
6000mm
6000mm

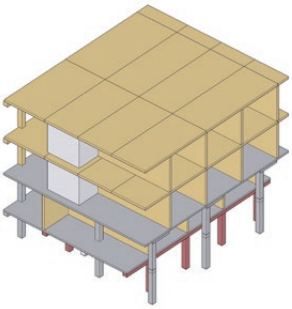

3800mm
7900mm
4000mm
4000mm
4000mm

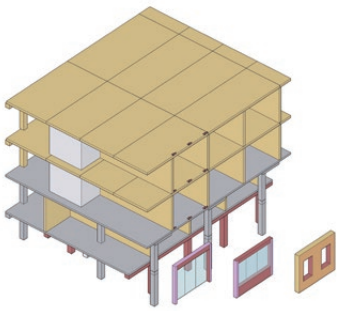


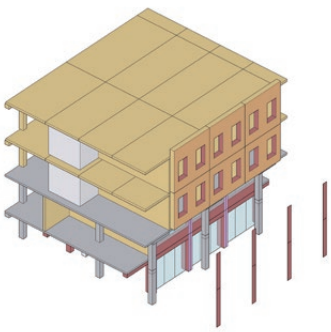


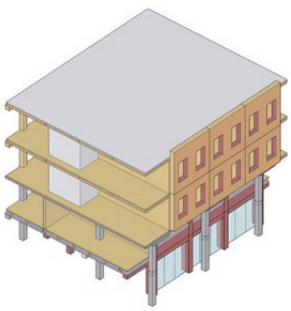

3900mm
3300mm
3300mm
3300mm

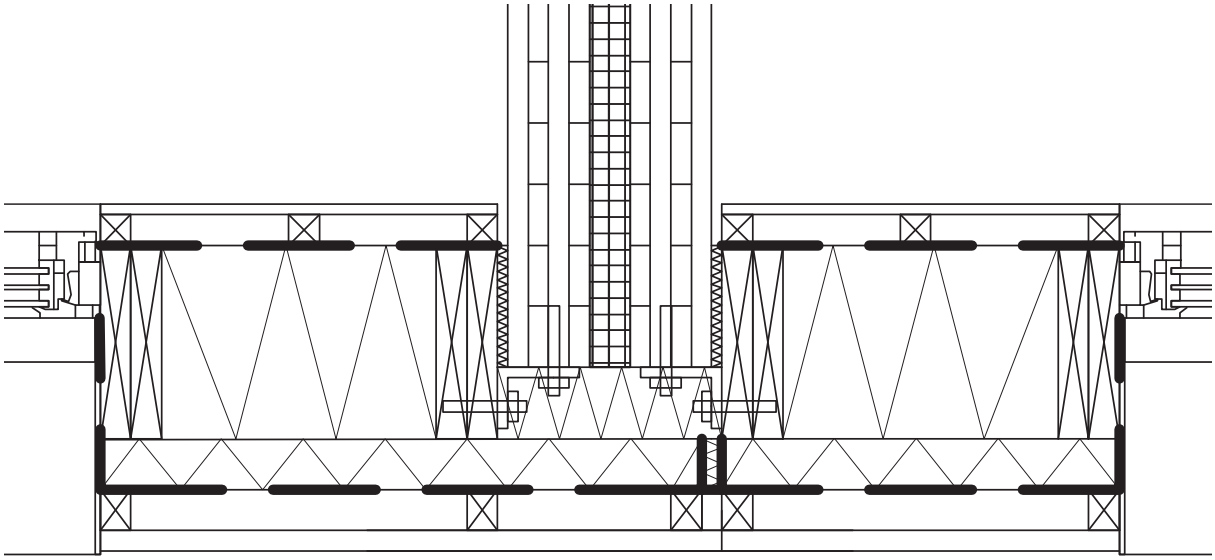


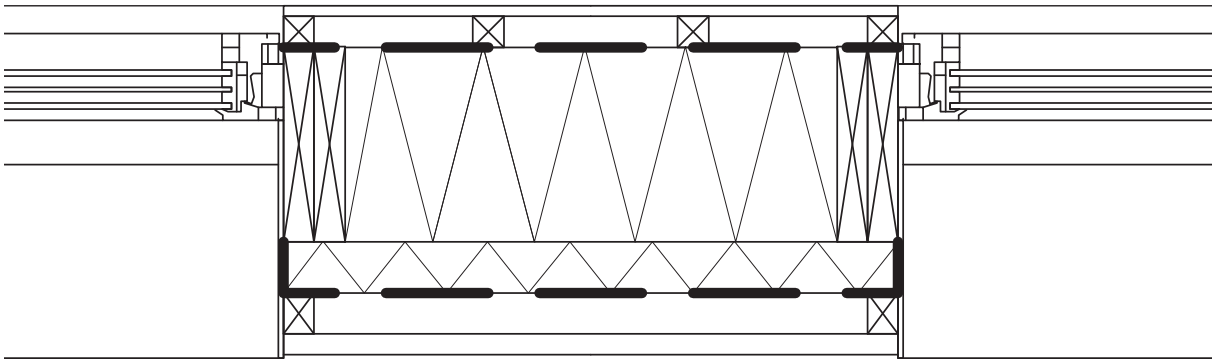


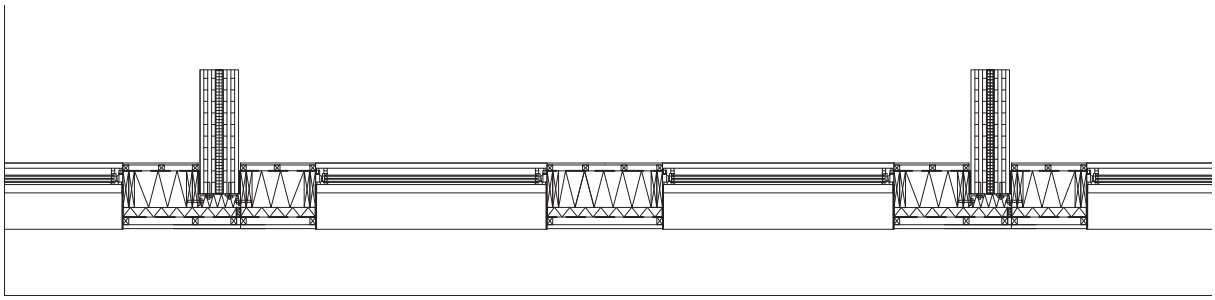












Reflection

The relationship between research and design

The theme of my research is to apply the systemic assemblage thinking of bricolage to urban regeneration, to explore the possibilities of new combinations of old and new substances. In fact the research process integrates greatly with the design process, or rather the design process itself becomes part of the research.

At first I analysed the advantages of the bricolage system by perceiving images of bricolage that occurred around us, and by modifying the collage to further understand the factors that influence the bricolage system, exploring the middle ground between the work of bricoleur and that of engineers.

At the urban scale I use Colin Rowe's discussion of objects and fabric to investigate the implications of bricolage's systems theory for urban design. I conclude that the bricolage city is a context-oriented city and that urban bricolage is the shaping of texture. Based on this conclusion, I have researched the system of the surrounding buildings, the public space system of the city, and connected them into an organic whole through urban design, by means of historical databases and on-site interviews and video production.

At the architectural level, my research turns to the study of the relationship between the structure of the old buildings and the new parts. On a smaller scale I discuss how the existing old buildings fit into the new architectural space and with what identity the old buildings should intervene in the new space. In this section I introduce Bill Brown's thing theory and Kazuo Shinohara's thingness. Through the analysis of Kazuo Shinohara's work, I explore a theory of how to transfer the architecture component into things. Ultimately, this theory is used to guide the manipulation of old building structures in the final design.

Review of Research Methodology

A number of methods were used throughout the research process. Among them was the production of a comparative collage that was able to perceive and differentiate the impact of individual factors in the system on the overall system in a way that controlled for variables. The video interviews provided first-hand information to visualise the current social situation of the research subjects, but were somewhat bulky in comparison to the other methods and took more time to process for production. Image mapping, on the other hand, serves as a way of listing types, and by mapping images, it is possible to generate many ideas that were not anticipated before the mapping, and to note issues that were not perceptible before the mapping. The study of theory provides a more sophisticated and systematic perspective on thinking. The case study is a self-interpretation of the corresponding case through theory and can be used as a training exercise in the application of theory, which can then be used in design.

Relation with stuido and track

Our studio called urban architecture，which studies medium-size urban sites that are inaccessible for the regular tools of urbanism, and where expectations of urban design can only be fulfilled by architecture. Adding a building on these locations thus means (re-)designing an environment. This studio argue that architecture is not seen as a craft of filling in blanks within an urban plan, but about articulating public, private and collective spaces. Architecture grows out of an awareness that designing a building always means creating and influencing the surrounding environment. It is about critically reading and assessing a given situation, in order to either complete or re-direct it by adding a building. This perspective is in fact an expression of critical regionalism, where established environments should not be perpetuated for granted, as they are merely representations of historical cultures and old technologies, but we should judge them in the context of a larger era, where new technologies and cultures necessarily need to find their place in the world as well. And this year's theme is bricolage, which discusses the use of the tools already at hand to solve problems. Because of the limitations of the toolset, bricolage forces us to think beyond the established social division of each tool to the possibilities above the form. From a philosophical point of view this is a process of thingifying the object, the process of rethinking the object out of its original system.

Relation to the wider professional, scientific, and social framework

With the development of society and technology, a large number of prefabricated buildings have been built in order to efficiently meet the demands of production and life, a trend that poses a great threat to the continuity of regional cultures and creates many spaces that lack identity. I hope to use bricolage to find possibilities for the coexistence of cultural materials from different times.

It is a way of thinking about how the history of human civilisation should be preserved and perpetuated in a broader context. Especially today, when virtual technology is so advanced, we are aware of the material finiteness of the human world, and as human civilisation develops, the amount of information generated by cultural iterations will inevitably grow, and one day materiality will not be able to carry these cultures. These are all questions that deserve constant reflection by a school of architecture concerned with regionalism. And I believe that when we really give up the one-to-one relationship between matter and culture, that is when we really liberate the materiality of things.

Ethical consideration

The whole process of research has made me aware of the chaotic nature of the world. This chaos is not pejorative, it means the birth of difference, diversity, interest. Exploring the chaotic order has given me a desire to critique absolute systems. This idea is not only restricted to architecture, it is a rebellion against dualism on a philosophical level.

After Modernism, too many architects became obsessed with self-narratives. This way of thinking naturally has its advantages, as it helps architects to explore their own ideas with maximum efficiency and to strengthen their own compositions and the output of new ideas. But this has also resulted in the creation of more and more introverted systems of architecture that ignore their environment, they are absolute systems. But we need to recognise that all buildings that are built will eventually have a huge impact on their surroundings and it will be the context for new buildings in the future, so we should think in a more regional perspective for all practical projects. If the engineer is the one who indulges in infinite tools, and the bricoleur is the one who can only fiddle with the materials at hand, then perhaps the truly responsible architect needs to find a balance between the engineer and the tinkerer.

Also returning to the level of urban renewal mentioned above, the use of such absolute systems is much more common, especially in developing countries where the value of old buildings is often not discovered, or if it is discovered it is overwhelmed by the forces of capital. In most cases the old building is completely obliterated and the new building rules the site with an entirely new identity. This is a neglect and avoidance of the history of the area.

There is also the dilemma of assessing the value of old buildings. Apart from those with aesthetic or special historical significance, is there no value in preserving other more mundane buildings? I believe that no matter what the building is, once it has been built, it will begin to relate to the world like a baby is born, a social relationship will be born. Even a featureless concrete box can become meaningful because a child once carved a pattern into its façade. Meaning sometimes does not come from the form of the building itself, because the meaning of the form itself is mostly given by the architect, whose translation of traditional elements is in the end an expression of personal consciousness, and it is in the interaction with people that the meaning of the building emerges.