MSC 4
Reflection

De
Starterskas

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This document is part of the research booklet. For sources, please refer to the sources mentioned in the research booklet.

Aspect 1
The relationship between research and design.

Before the design phase of my graduation project started I had done a sufficient amount of research. The research phase started with a general research we did together with the group. The goal of this research was to investigate what the relevant challenges are for Amsterdam nowadays and how to deal with these challenges in the future. The challenges we studied were not necessarily directly related to architecture. Together we selected a set of subjects and divided the subjects over the students in the group. During this general research I studied food in the city and the built environment. While studying the food topic I became more interested in the problems we are facing with our food system, how this affects cities and how we can (try) to improve or solve these problems. Quickly I decided that starters would be the right target group to design for. Especially starters have a hard time finding a suitable place to live in Amsterdam. Next to that, I'm an inhabitant of Amsterdam and a starter myself. In general, young people that are living in Amsterdam are also becoming more interested in improving the sustainability of our food system. Being a starter in Amsterdam made researching and designing for this target group extra relevant. By analyzing the current problems of starters on the housing market my interest in compact apartments rose. Firms like ARCAM and Synchroon also recently researched the trend of compact apartments and this turned out to be a good base for my research.

Roughly, the research I have done until the P2 is divided into the following subjects: compact apartments, urban food systems and a site analysis. Because of the interesting but time consuming course Research Seminar at the start of MSC3, there was however less time to focus on the design concept during the research. This caused a clear division between the research phase and the design phase. Although I found the results of the research done very useful, it would have been more sufficient for my design to work on the research and design concept parallel to each other. I stress this need because I realized only during the design phase how crucial the research is for (housing) architecture. While designing, it is also easier to be specific on what aspects are essential to research in order to contribute to the design.

Compact apartments

For the research on compact apartments and urban food I did literature studies and case studies. As mentioned earlier, ARCAM and Synchroon have done some decent research on compact apartments in the urban context, which was really valuable for my research and design.

The literature study on compact apartments for starters resulted in the following conclusions. For each research result I will explain how I may have researched it further in my design and how it is incorporated in the design. First of all, it is important to design for like-minded people. Instead of a target group selection based on family composition, the target group must be selected on their similar interests. By designing a compact apartment complex for starters with a specific interest in food, I designed a building for like-minded people. Together with the public functions in the building the inhabitants can propagate their ideas about food and how to improve the food system. In that way the building raises awareness on the food topic.

The literature research showed that (collective) amenities contribute to the experience and appearance of the entire residential complex. Collective amenities, which can also be seen as shared luxury, are also used to save space in an individual apartment. Laundry facilities and a living room for instance can be shared in order to make it possible to design compact apartments. In the design for de Groenmarkt several amenities are integrated. The amenities are partly focused on the food theme. The collective kitchen garden on the rooftop, the greenhouse with aquaponics, the cooking studios and the living room are designed in such a way that people are stimulated to cook, eat, relax and work together. The shared amenities stimulate the interaction between like-minded people. Some case studies I did confirmed that (collective) amenities are often integrated in compact apartment complexes for starters. The case studies also showed what kind of collective and public amenities are relevant to integrate in the design in order to benefit the concept of living compact. Looking back on the research on amenities it would have been useful to study the needs and experiences of inhabitants living in a compact apartment complex. By just performing literature and case studies it is hard to determine if the (collective) amenities really function as intended by the developers and architects. It would have been valuable to visit reference projects, interview inhabitants of a compact apartment complex and get to know how inhabitants experience the collective amenities. Unfortunately it is hard to get in touch with inhabitants of a specific building.

According to ARCAM the entrance is also part of the shared luxury as I mentioned above. A luxurious, spacious and eye-catching entrance adds value to the overall experience of the complex. Despite the fact that the apartments are small, coming home in a luxurious and comfortable entrance benefits the living experience of a compact apartment. In my design I located the entrance on the most prominent corner of the building. According to the urban plan the location of the entrance is also located on the most visible side of the design. The entrance has a double high ceiling of 6,8 meter. *(Image 1)* The entrance not only functions as a way

to enter the building, it also functions as a lobby, with places to relax and enjoy the view on the water or square. When I was materializing the entrance I visited some buildings and studied some plans digitally. During this research I realized that it would have been useful to study the entrances of residential complexes earlier in the design process in order to get inspired by it and to use it for the spatial design of the entrance.

What also came out of the literature research on compact apartment complexes is that it is desirable to design a building with a sustainable construction, in order to make changes in dwelling sizes if desired in the future. Living small is a trend now, but the preference for the way of living might change in the future. It is often advised to use a load-bearing façade with a solid core in order to create a flexible layout. When the demand for affordable and small apartments decreases, a flexible construction makes it possible to transform the building into a complex with bigger apartments. I studied the possibilities of a load-bearing façade with load-bearing corridor walls, but that configuration made it impossible to design a parking garage in the narrow building. Instead of a load-bearing system from façade to façade I used load-bearing walls with a wide bay width of 7,8 meter. The wide bay width made it possible to design two compact apartments within one bay width. When the situation may occur that the building needs to be transformed into a complex with bigger apartments, the apartments can be designed within the bay width of 7,8 meter.

Often compact apartments are designed with an extra high ceiling. A higher ceiling does not only provide more daylight and a spacious experience, it also makes it possible to sleep on top of the bathroom for instance. In the Dutch case studies I did this design tool is not used, but in projects abroad it is often used. Initially I did not design any dwellings with an extra high ceiling. During a studio session I discussed the idea of designing apartments of one and a half floor high with my tutors. After the discussion I was more aware of the benefits of apartments with a higher ceiling for my project. Next to the fact that it creates more variety in my plan, it also created interesting opportunities for the façade design along the water.

Urban food systems

With the research on urban food integrated in architecture it was more difficult to use very specific and concrete results from the research in my design. While researching I found out that there is a lack of reference projects in which urban food and housing is combined. I expected to find more relevant projects that I could use for my research, but I mostly found projects that are not related to housing

Image 1
Visualization entrance
(Own image)

or concept designs. The lack of relevant projects to study resulted in a research document that is more focused on the social aspect of urban food and the diversity of different initiatives. Although this research was not as satisfying as the research on compact apartments, it was still inspiring to study all kinds of urban food initiatives.

During the research on urban food I did however learn about the several types of urban agriculture and urban farms. Urban farms are often related to a community or school, these farms are (semi) public. The 'institutional farm' is the type that was most suitable to incorporate in a compact apartment complex. In general, the goal of this type of farming is in not the optimization of food production, but achievements of urban agriculture like education, awareness and health. I integrated the institutional kind of farm in the design, both as a collective urban agriculture for the inhabitants as well as an urban agriculture on the square for the cooking studio and the restaurant.

Since the results from the research on urban food were not as concrete as the results from the research on compact dwellings it was difficult to really integrate the research into the design. The case studies I did were definitely useful in order to define what kind of collective and public functions are suitable to create a food conscious and awareness-raising environment. Besides the greenhouses I visited for the design of the greenhouse I did not do any (further) research that was food and architectural related.

Site analysis

Just before the P2 I also started with the research method 'research by design'. I did a mass study in a 1:500 model of de Groenmarkt and its surroundings in order to research the possibilities on the site. *(Image 2, 3, 4 & 5)* Even though it was a rough study in the initial phase of the design process, it gave me a good insight in the dimensions of the site and the surrounding buildings.

Research by design

After the P2 I continued using the method 'research by design'. I made several models, drawings and sketches in order to define the best solution within my theme. Some of the studies I did are a bay width study, a study on the corridor, a façade study and I researched the façade materials of the site and the possible materials for my design.

With the bay width study I tried to find the most suitable bay width for the design of compact apartments, but also to find the best way to align my design with the surroundings buildings. *(Image 6, 7 & 8)* Next to that, it was part of my concept to design a cascading volume with three equal roof surfaces. In the beginning I was really focused on aligning the design with the surrounding buildings along de Marnixstraat. The alignment resulted in one bay that didn't fit in either 7,2 meter, 7,4 meter or 7,8 meter. While designing the outlines of the floor plans with the staircases I quickly found out that the devious bay width caused more problems and difficulties than it added value. Looking back, I spend too much time on finding the right bay width, with or without one deviant bay. For a while I was too focused on aligning the design with its surroundings. Initially I stated that the alignment was an important aspect of my concept. I have learned a lot from the process of finding the ideal solution compromising either the bay width or the concept. In the case of the bay widths, I had to rethink the importance of the alignment to come to a good solution.

When I started designing the corridors of the building I stated that the corridor should not be a typical corridor, as we know it from hotels. I was searching for more spaciousness in the corridor by adjusting the angles of the walls. Although I had designed several options, I had a hard time choosing the most suitable option. During a tutoring session I was advised to do a model study in order to simplify the decision making. With the models I was able to criticize the different options on more aspects compared to only using floor plans. *(image 9, 10 & 11)* In the models I could define the quality of the designs based on light, spatial qualities and rhythm. Even though I really like to make models, I'm often hesitant making study models, being afraid wasting valuable time. With this study I learned that it really can be of high value to do a (quick) model study. I prefer to work precise and neat, but the corridor models showed me that a study model can be made a bit messy too.

For the materialization of the facade of my design I studied the masonry facades of the buildings around de Groenmarkt. *(image 12, 13, 14, 15)* When I tested a dark red/brownish stone on the facade of the design I quickly decided that the aesthetics became too formal. The target group and overall design of the building needed a more informal expression in my opinion. Experiments with a yellow brick immediately gave more satisfying results. I tested a yellow brick because the brick facades of the surroundings have fragments of yellow bricks. The first yellow stone with some random green bricks in it was just the right choice when I tested it on my façade fragment. I decided to not look further for other stones and to experiment with joint colors. By testing several joint colors, ranging from yellow to dark and light gray, I discovered what a huge impact the color of the joint has on the aesthetics of the façade. The yellow joint gave a too 'flat' expression to my opinion, while the light gray joint gave the façade a lighter expression. The light and informal expression fits the target group very well and is in a good contrast with the formal grid of the façade.

After the P4 I will focus on fine-tuning all the documents that I have made. To give a good impression on how the building looks and functions I want to make visualizations that give a good impression of the interior and exterior of the building. The spatial qualities of the square and waterfront need to be visualized in such a way that the qualities in relation to the surroundings become clear. Next to the visualizations I will make a model on scale 1:100 or 1:50 in order to experience spatial qualities from several perspectives. Finally, I need some time to adjust drawings according to the feedback of my tutors.

Aspect 2
The relationship between your graduation topic, the studio topic, your master track and your master programme.

The graduation studio I took part of during my graduation is the Dutch Housing studio, part of the Dwelling Chair. The studio focused on the city of the future and how to densify the city of the future, with the city Amsterdam and its Singelgracht as location. The studio is part of the assignment of the graduation studio to react on the challenges Amsterdam is facing nowadays.

In my case I reacted on current challenges by designing compact apartments within a food conscious environment. The design of compact apartments, also known as micro-apartments, fit well in the theme of the city of the future. Compact apartments can be part of a solution for the housing shortage in Amsterdam, but it is also a reaction on the rising housing prices and the needs of the 'new city dweller'. The new city dweller is a growing target group that fits in the idea of living compact, sharing facilities and using the city as its living room.

The food conscious environment that raises awareness, which is incorporated in my design, is inspired by the global food system that drastically needs to change. In the last decades it became clear that our current food system is not sustainable. The population is growing and it is becoming more difficult to feed everyone with healthy food. By designing a housing complex for food conscious starters, with the ability to grow food, a showcase is developed. The design shows the possibilities of growing food in the city for both inhabitants and neighbors.

Aspect 3
The relation between the research method and approach and the graduation studio methodical line of inquiry, reflecting thereby upon the scientific relevance of the work.

After the research we did in groups, my topics of interest, compact apartments and urban food systems, needed more specific research. Literature research and case studies were the methods used during the research phase before the P2. Literature research and case studies are methods that are commonly used at the faculty, especially in the Dwelling Chair.

Since the trend of compact apartments and urban farming is a recent development, sources for the literature study where mostly found online and in magazines. After collecting all kind of digital sources, I felt the necessity to visit an actual compact apartment. Luckily I was able to visit one of my case studies, the project North Orleans in Amsterdam. Although I collected a lot of data and made drawings of all the plans of the case studies, it was hard to imagine the spatial experience of a compact apartment. When I visited the project North Orleans it was easier for me to relate a floor plan to an actual space.

After the P2 I mostly used the research method 'research by design'. This method is also commonly used in the dwelling studio. Testing designs in physic models, digital models or drawings stimulates the creativity, but it also makes it easier to sum up the pros and cons of certain options.

Aspect 4
The relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results.

The main topic of my graduation project, compact apartments for starters, is in line with various trends that are currently going on. Various developments in society ask for new ways of living. First of all, in the last couple of decades Amsterdam is known for a severe housing shortage. At the moment the availability and prices of houses reached its peak, with several consequences. Worldwide, globalization is a trend. In the Netherlands people are moving towards bigger cities as well. It is expected that the population of Amsterdam will grow enormously, what will increase the problems on the housing market. Next to the housing shortage, the composition of households is changing as well. Families are getting smaller and the amount of single and two person households is growing.

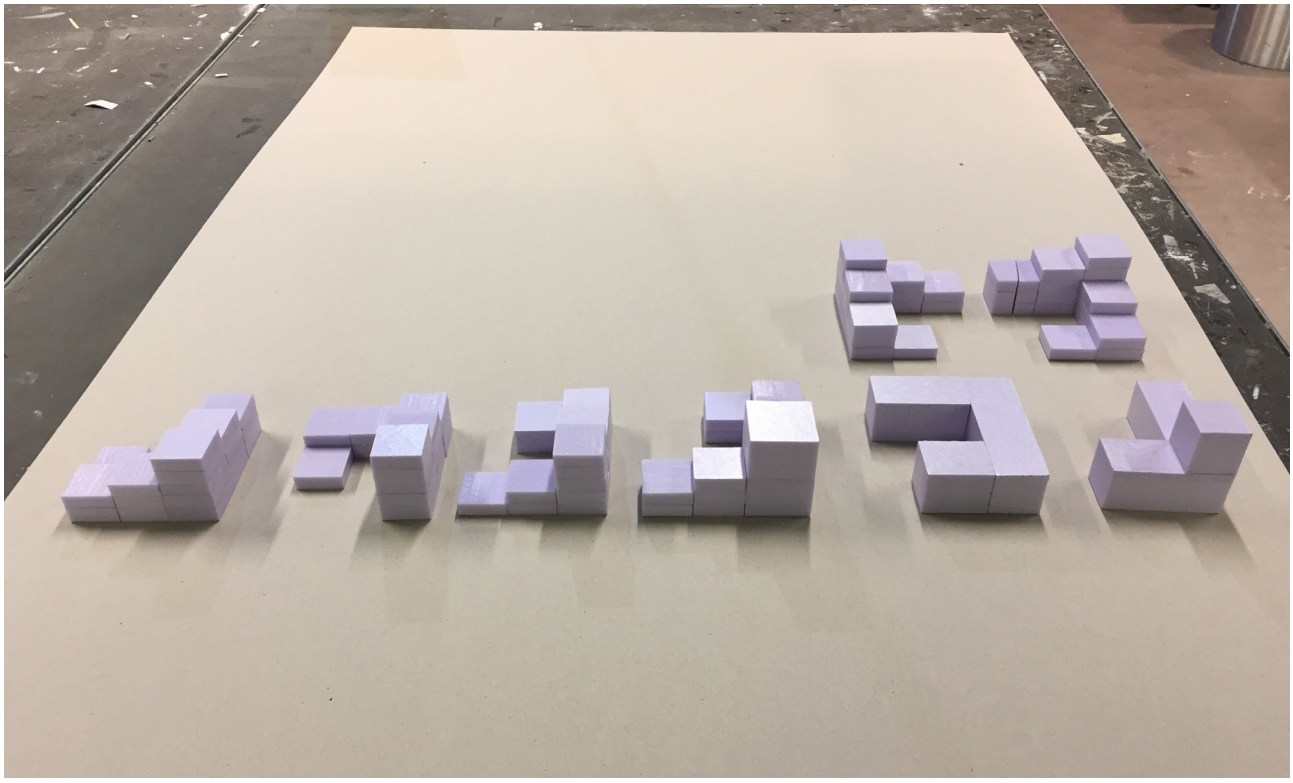
Despite that the research I have done and the design I made are focused on Amsterdam and designed for a specific location, the results of the researched can be used for other designs in cities that are facing similar challenges. The challenges that our current food system is facing are also partly caused by a growing global population and urbanization. In order to keep Amsterdam healthy and livable, an improvement of the food system is needed. Urban farming is based on the idea that the logistic chain of food drastically decreases when food is produced in the city. Next to that, raising awareness is an important factor

when growing food within the city. For the research and design of urban food initiatives incorporated in architecture also applies that it is not bound to a specific location.

Aspect 5
The ethical issues and dilemmas I have encountered in doing the research, elaborating the design and potential applications of the results in practice.

As architects we have an ethical responsibility to protect the health and welfare of the users of architecture. By proposing a design that takes into account solutions for housing shortage and high housing prices and the critical food system we are currently using, I made an attempt to take the responsibility to improve the living circumstances for inhabitants of the design I made in Amsterdam. Although I proposed a design that is in line with an upcoming way of living, it is obviously questionable if it is ethically and morally justified to impose a certain way of living. For now the design I made is focused on people that do have a specific interest in living in a compact apartment within a food conscious environment. Although it doesn't fit our liberal way of living, in the future it might be necessary to impose people a specific lifestyle in order to make a serious attempt to change our way of living in the interest of our living environment.

This document is part of the research booklet. For sources, please refer to the sources mentioned in the research booklet.



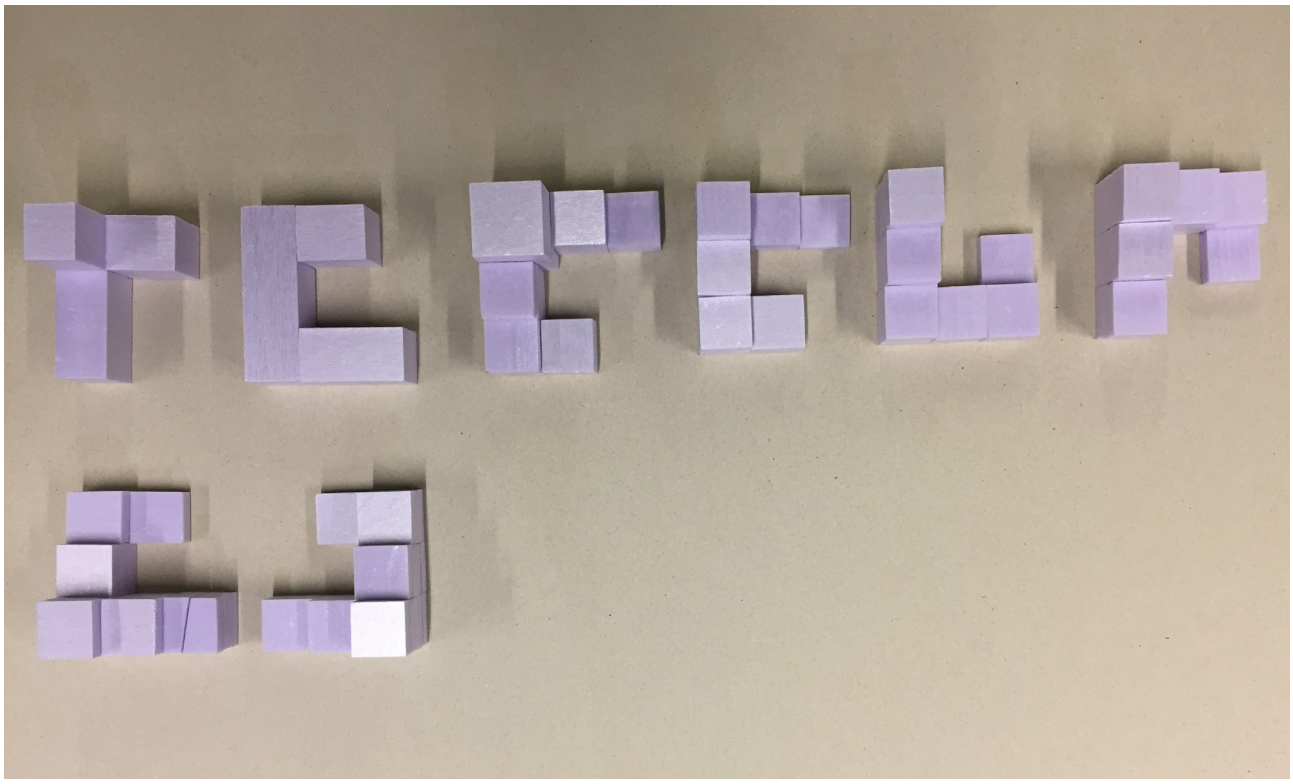


Image 2 & 3
Overview mass study
(Own image)

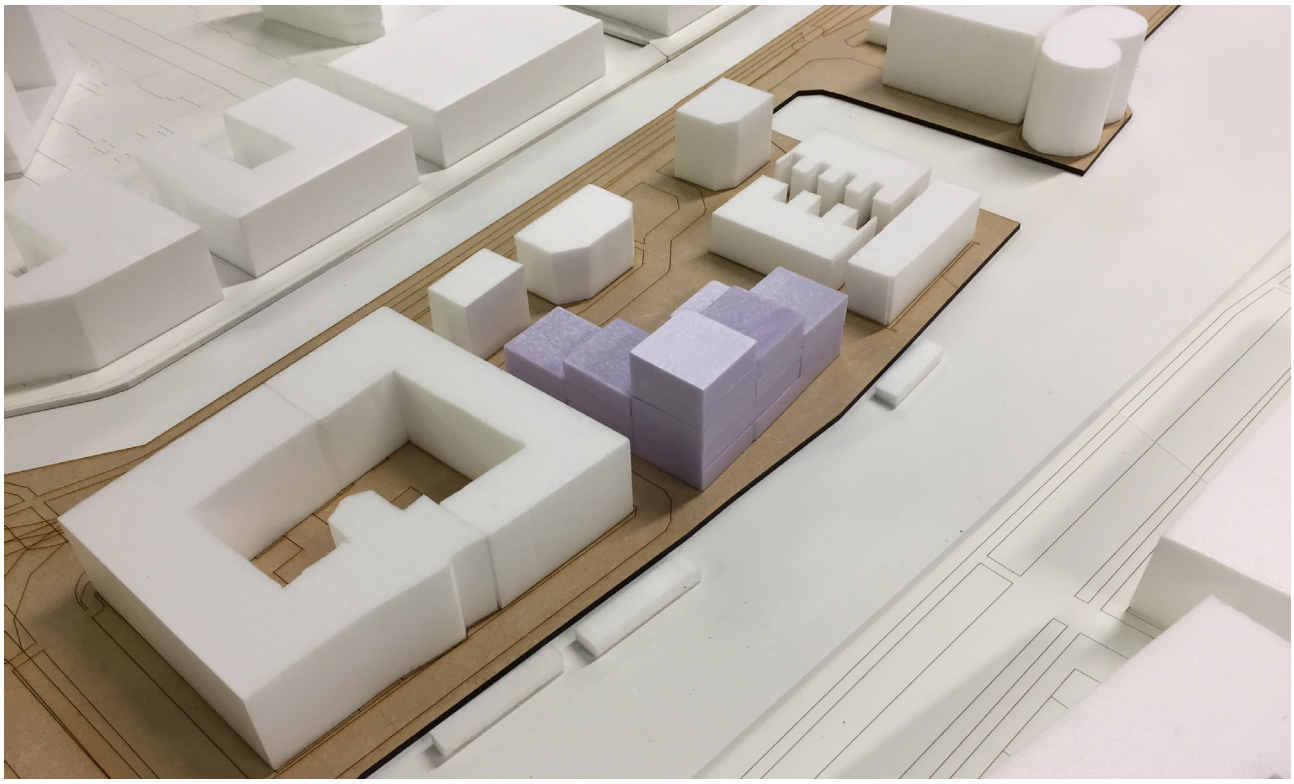


Image 4 & 5
One of the studies in the 1:500 model
(Own image)

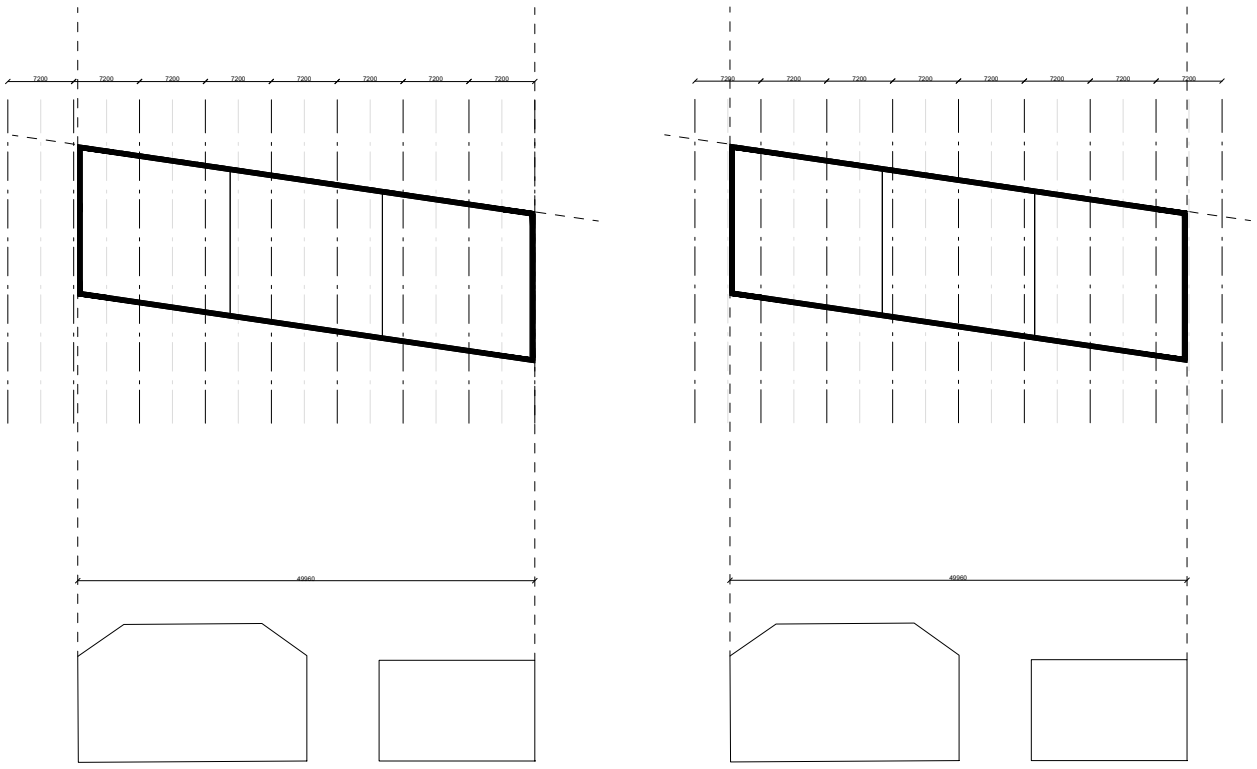


Image 6
Bay width of 7200 mm
(own drawings)

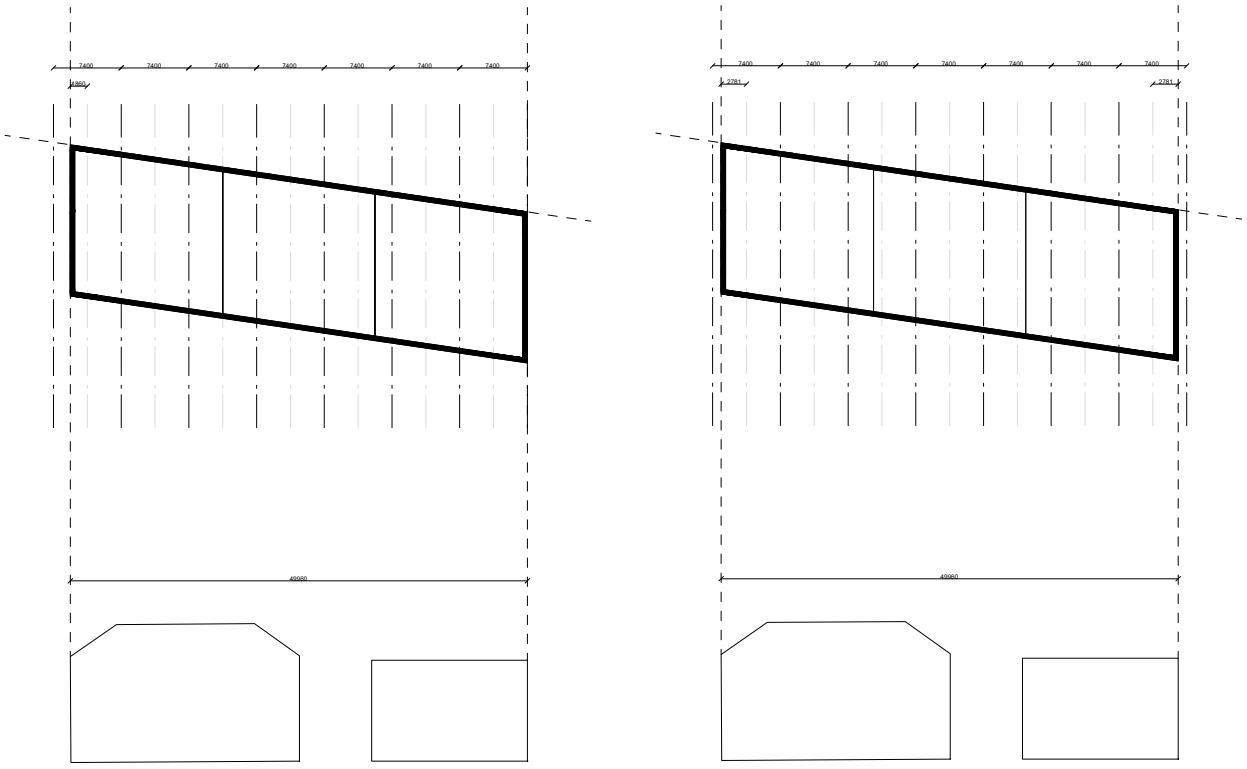


Image 7
Bay width of 7400 mm
(own drawings)

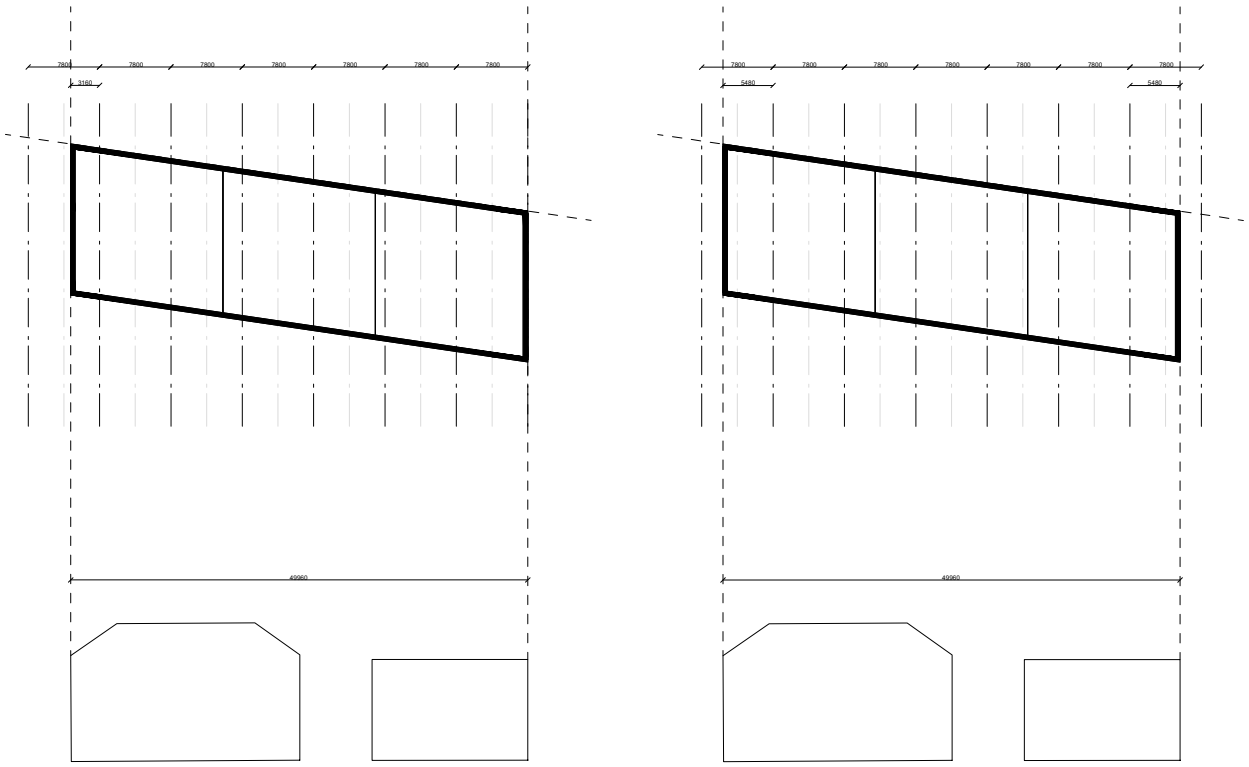
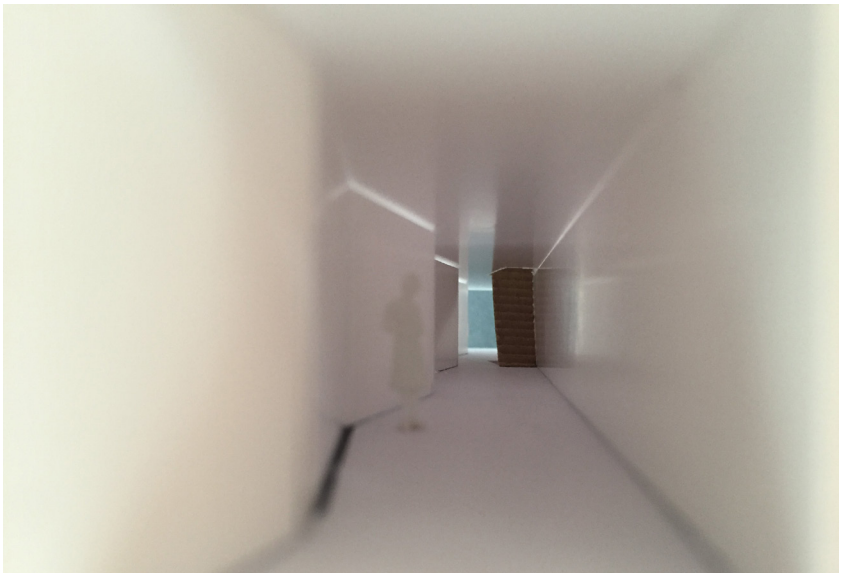
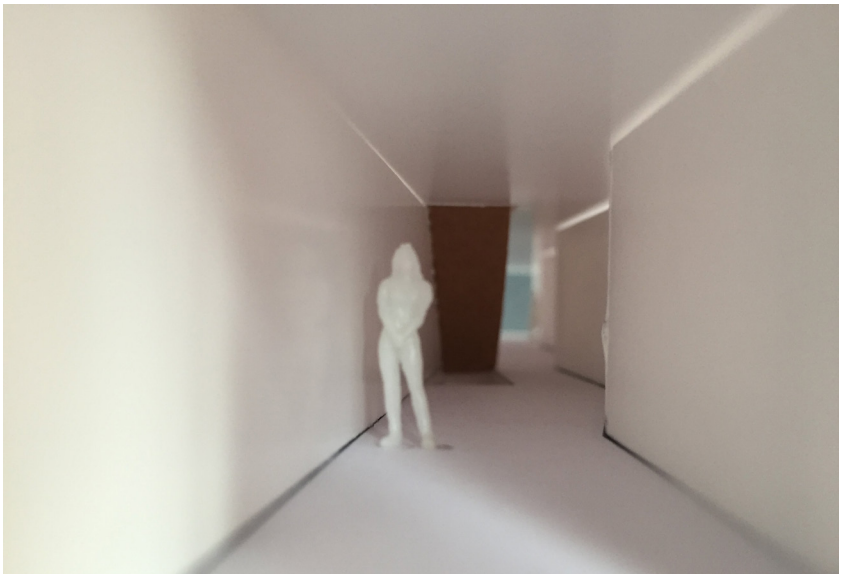


Image 8
Bay width of 7800 mm
(own drawings)





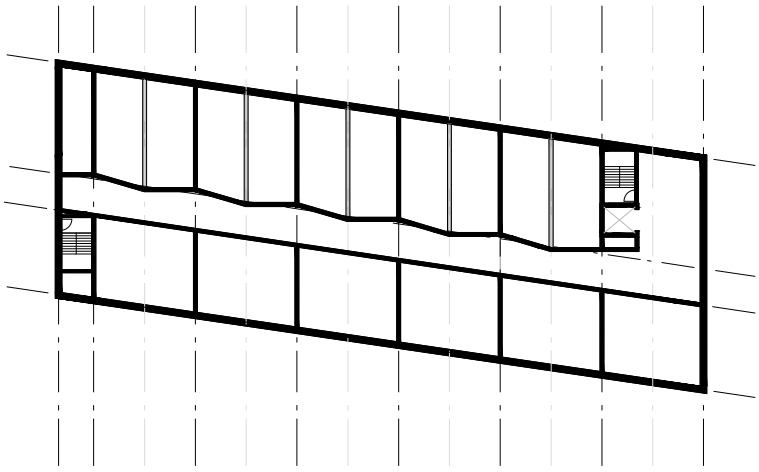
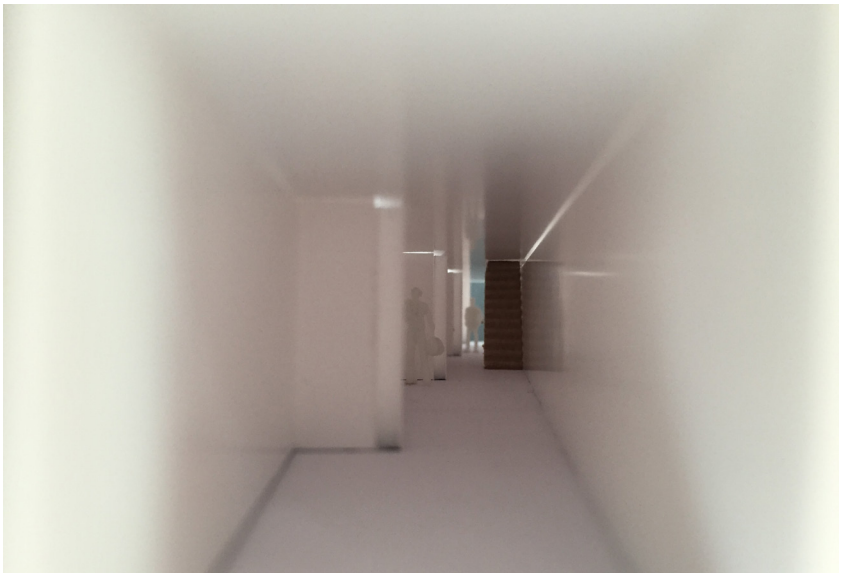
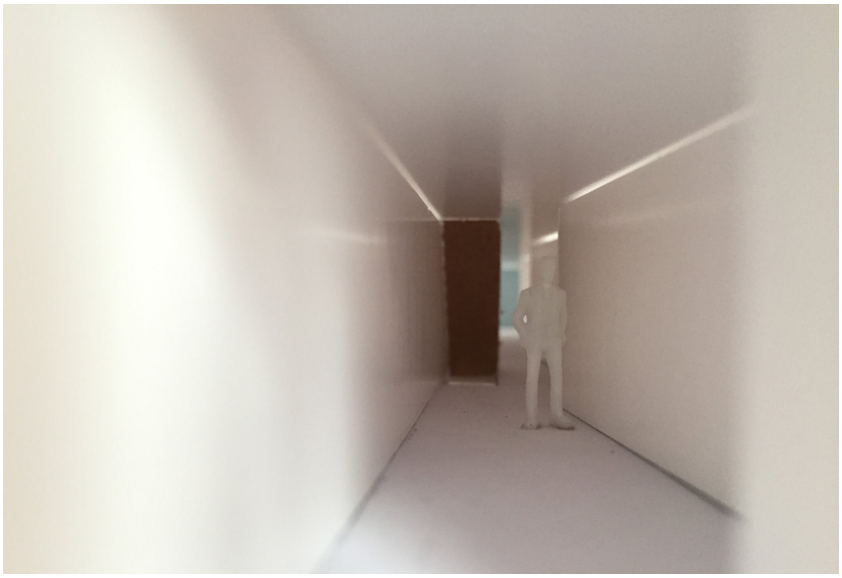


Image 9
Corridor option 1
(own drawings and photos)





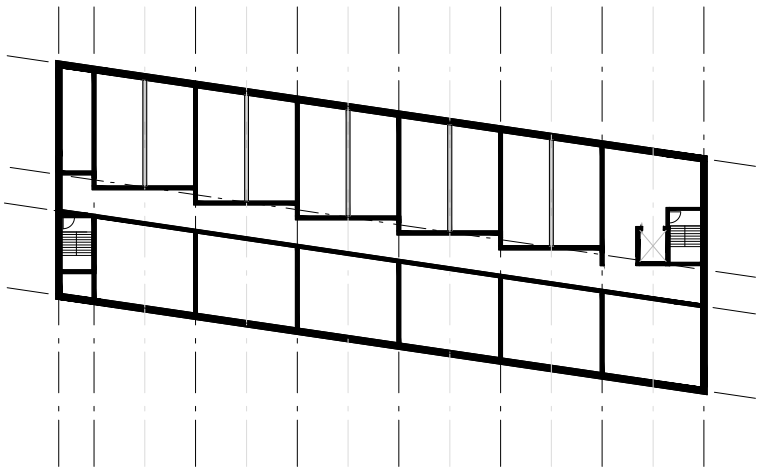


Image 10
Corridor option 2
(own drawings and photos)

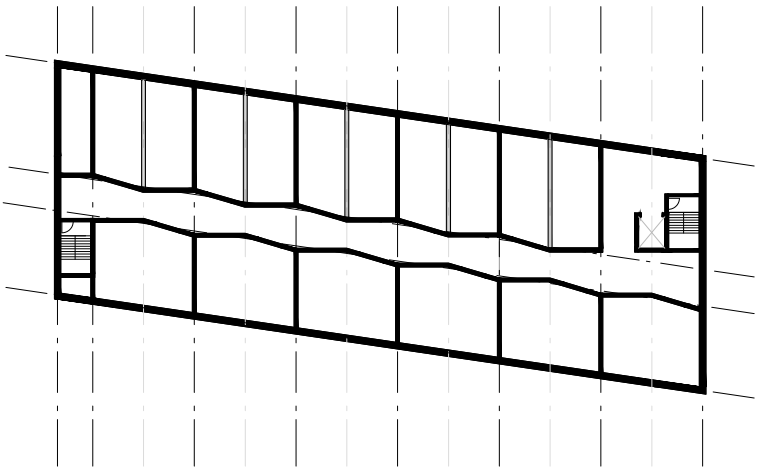


Image 11
Corridor option 3
(own drawings and photos)

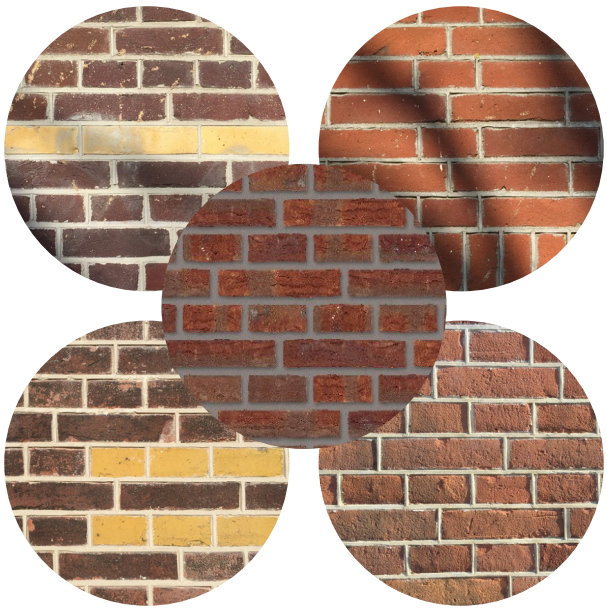


Image 12
Red/brown brick tested in facade
(own image)

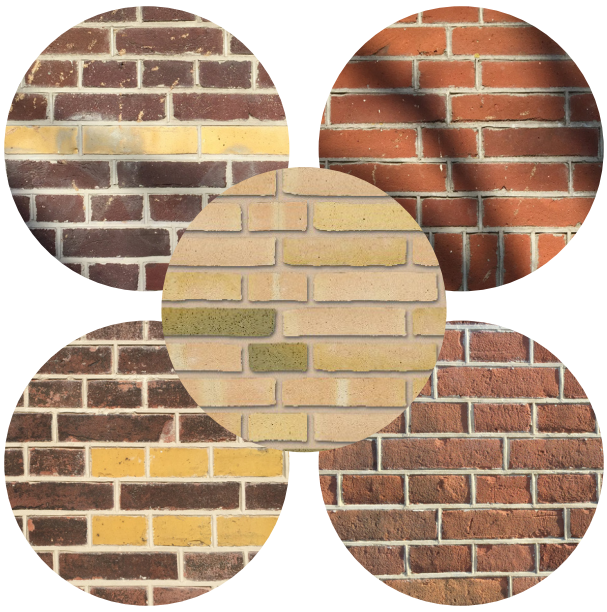


Image 13
Yellow brick with yellow joint tested in facade
(own image)

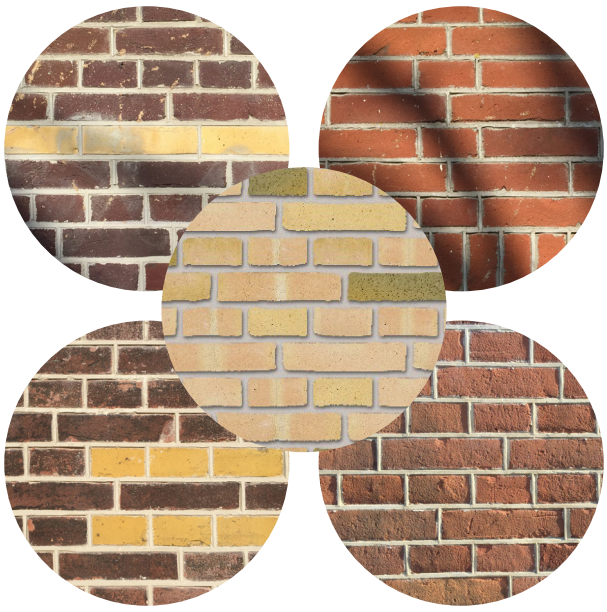


Image 14
Yellow brick with gray joint tested in facade
(own image)

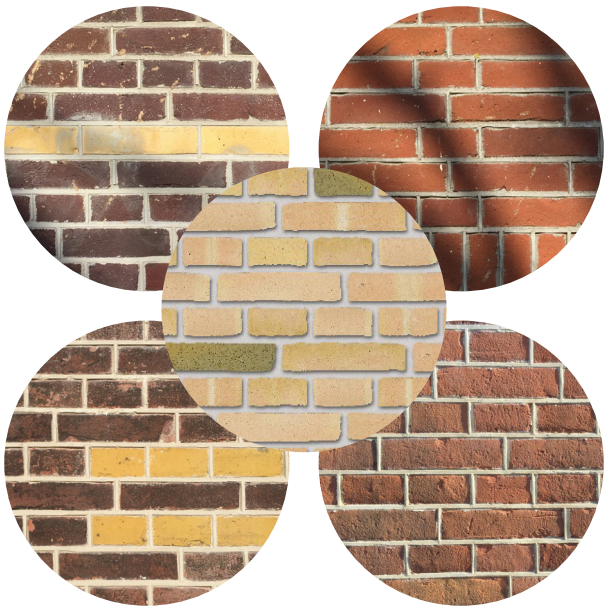


Image 15
Yellow brick with light gray joint tested in facade
(own image)