

STUDENT HOUSING FOR A BETTER FUTURE

Exploring the student living in an experimental way according to their needs

Master Thesis

Master Program in Design for Sustainable Development, MPDSD

Chalmers University of Technology

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CHALMERS

THANKS

This Master Thesis, Student Housing for a better future (30p), autumn 2017, is made by Gabriela Stojanovska at the Department of Architecture at Chalmers University of Technology.

I want to thank all people that have been involved in my Master Thesis, teachers and stakeholders from outside. Special thanks to my examiner/tutor, who has been a wonderful support during my Master Thesis with great feedback and inputs. Also thanks to my boyfriend, my friends and my family for the support!

ABSTRACT

The lack of housing has increased rapidly in Sweden, especially in the larger cities. All the different groups of people are affected by the lack of housing and one of them is the group of students. Every semester there is a high pressure on the student housing, because there are a lot students but not enough housing. In Sweden 27 out of 30 universities can't guarantee the students a place to stay even if they are admitted to the university. (*Sveriges Förenade Studentkårer, 2017*)

This Master Thesis investigates the students' needs and their behavior in context to the student housing. How the students are affected by their student living in their studies. How to create the sense of belonging in a collective and shared area but at the same time have the possibility to choose to be private.

I want to investigate the aim of living in a student dorm. To see it from the students' perspective and take action on their needs. To actually break down the boundaries of the paradoxical meaning of dorms, to live in a shared accommodation with other students and instead of that the students live isolated in their unit.

The dorms nowadays are private and isolated than collective and most students see them as small cages and this is why I want to investigate the dorms in depth.

It's important for the student to have housing where they can be able to study and perform for their studies without any stress. Innovative spaces where they have different facilities which they are sharing.

The research and the design part are done in parallel, having the work done as effective as possible, but also being able to go back to the previous work, it's working in a loop. The typology research for the design are reached through literature studies and surveys.

The new way of creating a student housing will help the students' living throughout their studies, but also living in smart and innovative spaces that are required for sustainable living. This is important for their wellbeing and motivation for further on and also for the sense of belonging.

This could be implemented everywhere in Sweden, but I have focused specifically in Gothenburg and have been taking advantage of reference projects outside Sweden.

Keywords: | Shared spaces | Innovative spaces | Sense of belonging | Education | Student housing |

BACKGROUND INFORMATION



My path in becoming an architect has been very enriching. I graduated in June 2014 at the University American College in Skopje, Macedonia, with a Bachelor Degree in Architecture and Design. Straight after that I was admitted to the School of Architecture in Umeå, and in 2016 graduated at Umeå School of Architecture with a Bachelor Degree in Architecture and Fine Arts.

The last application on my path in becoming an architect was in 2016 when I was admitted at the Master Studies in Design for Sustainable Development, at Chalmers University of Technology, which was my final goal in my education of becoming an architect.

My experience of studying at two different Universities and countries have given me a lot of knowledge and different point of views.

It also shows my capacity in working in different scales and the complexity of the projects. My skills are to work in different ways and to be flexible. I appreciate working in AutoCAD, but I can also be sitting and doing handmade sketches with a touch of interesting way of doing it. My curiosity in learning new software has widened my world.

THE SUBJECT

My Master Thesis project will be addressed to my previous knowledge and of course with added knowledge which I have received from Chalmers University of Technology. Studying at Chalmers University of Technology, at the department for Design for Sustainable Development has given me broader perspective in the knowledge of sustainability. In my previous studies I just touched this topic, and did not investigate it thoroughly as now, which I appreciate and which will help me in my future work as an architect.

My theme of the Master Thesis has the sustainability in focus, where students share and live together in a sustainable way and by transferring the knowledge of sustainable living to the younger generation, we will be a part of saving the environment

Courses at Chalmers University of Technology
-Sustainable Development and Design Professions
-Design and planning for social inclusion
-Sustainable architectural design
-Academic Writing

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INTRODUCTION

BACKGROUND

The lack of housing has increased rapidly in Sweden, especially in the larger cities, Malmö, Gothenburg, Lund and Stockholm. A lot of companies are involved in building new apartments, but it's not enough and they are running out of time.

The inhabitants are suffering, living in too small apartments with too many people, paying a higher rent than they should. All the different groups of people are affected by the lack of housing and one of them is the students. Every semester there is a high pressure on the student housing, because there are a lot of students but not enough housing. *(Studentbostads företagen, 2016)*

There are around 27 out of 30 universities that cannot guarantee students a place to stay even if they are admitted at the university. They have to solve the housing by themselves, by staying in a hostel for a while, crashing into someone's sofa or even in camping cabins. This is probably not the best start for a student and it's exhausting when you are a foreign student. *(Sveriges Förenade Studentkårer, 2017)*

This varies each year and it all depends on what time of year it is and in which city, but in general the whole country has the same problem. For some cities it is worse than others, in some cases the students are changing universities because of the housing problem. *(Boverket, 2017)*



Sketch of Sweden

In Gothenburg the pressure is higher during the fall semester than the spring semester and unfortunately some students end their studies for this reason

Another reason for this has also been that during the last three years there are more foreign students than before and this has affected the pressure of finding an accommodation. *(Borén, 2015, 25 Augusti)*

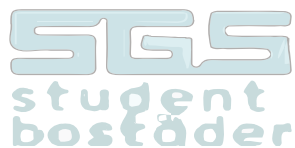
According to various studies, the increase of students will be going on in the close future. The lack of housing does not have to mean a negative situation, if you see it from another perspective it's a positive situation.

The students need to be seen as a resource of the future, because they are doing more than we think. They increase the value of the country, by visiting attractions, leading to increased cash flow and increased employment. The municipal equalization system means that individuals with low income, contribute with lower amount of money to the municipality, but contribute more through income equalization systems. This benefits the municipality and the students are one of these stakeholders with a low income. It's a win win solution. *(Studentbostads företagen, 2016)*

BACKGROUND

The students are valuable during their studies and not only after their studies as most people think. This is one of the reasons to correct the housing shortages. Being an attractive campus that offers good opportunities for education, accommodation and good living conditions for the student becomes an important part of the city's ability to grow and develop in a local, regional and global perspective. (*Studentbostads företagen, 2016*)

In 2014 the national board of housing and planning changed the regulations about the design and planning of the student housing. The functions of a student apartment were much better in this way, they had the opportunity to have flexible spaces, the dinner table could be used as a desk as well. Previously it was necessary to have separate spaces. Even the size of the kitchen became smaller, almost every function had some small changes except the bathroom, and it had the same requirements as before. (*Boverket, 2014*)



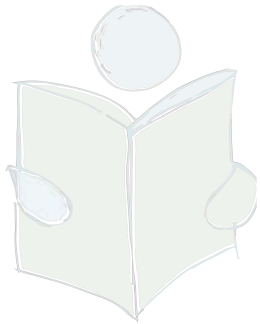
In the same year the architect agency White Architects and Student Housing Association started a discussion and survey of how the students lived and how they wanted to live in the future. Their plan was to find solutions that corresponded to the preferences of the students. (*Framtidens studentbostäder, 2016*)

They started the journey with a well detailed survey, and this was for the whole country. A lot of students attended the survey; it was in different steps, online survey, interviews and meetings. All different categories had their own target to focus on, which helped the Student Housing Association in the designing of the student housing. (*Framtidens studentbostäder, 2016*)

In 2016 in Gothenburg there was a high demand of student housing, there was an average of 99 weeks queuing for housing. It depended on which kind of housing it referred to, the corridors didn't have that long time of queuing, and they had about 15 weeks. (*Framtidens studentbostäder, 2016*)

SGS Student Housing Association and Chalmers Student Housing Association have completed 600 student housing units since 2013 and with the new association Prime Living and Urban Cribbs, 300 more units have been added. It's still not enough and at least 1000 more units will be needed for the next season, but it's in process. They have a vision to build 7000 new student housing units until 2026. The constructors in Gothenburg want to build more than they currently do, but there is lack of land, long planning process and construction costs that stops them. (*Studentbostads företagen, 2016*)

PURPOSE AND AIMS



Sketch of a student

WHAT?

The aim of the project will be to see how the students are affected by their living conditions in dorms. How the functions can adapt to their needs in order to have better conditions of living, but also to have the possibility to feel safe and comfortable. The living space is important to be yourself, feel secure and being able to perform.

My focus point for the project will be the dorms. I want to know about the needs of the student. How they live in a shared accommodation what do they share and how? Are the dorms really collective or more private, in case of the arrangements? What do the students want to share and how much? What does not work in a dorm?

The social aspect of the student housing will be the focal point, because today it is lacking in the dorms and the definition of living in a dorm, is to have a social interaction. The arrangement of the functions will have the affect of social feeling. The spaces are also creating a feeling of comfortability and security, to motivate the student to continue his education. If the functions and spaces are not inviting and embracing the home feeling, the student will feel insecure and try to avoid the housing.

The strategy is to find a solution for the different needs of living together and having the opportunity to choose between private and shared facilities. This will also be a sustainable way of living, shared facilities, better economy and also sharing the things.

WHY?

It's important for the students to have housing where they can be able to perform for their education without feeling stressed about their accommodation. It's important to create space where they are sharing different facilities, not only the kitchen with a variety of facilities. The need is to see it from the students' perspective and take action on their needs. To actually break down the boundaries of the paradoxal meaning of dorms, to live in a shared accommodation with other students and instead of that the students live isolated in their unit.

The dorms nowadays are private and isolated than collective, the most students see them as small cages. The dorms should be as inviting as the apartments, and have the same qualities.

The dorms have potential of being better in many ways, because they have qualities from the social interaction, the economy, being sustainable and saving area.

This is also a way of improving the sense of belonging because it's difficult when you leave home and don't feel part of the society, which can take a while. To live collective with new people can make you feel one of the society and being able to absorb the new opportunities the city has to give you. To have a place they feel at home and be proud of it. Today's students are tomorrow's future.

FOCUS QUESTION

How can student housing improve the student living through their needs?

METHODS AND TYPOLOGY



Sketch of literature studies

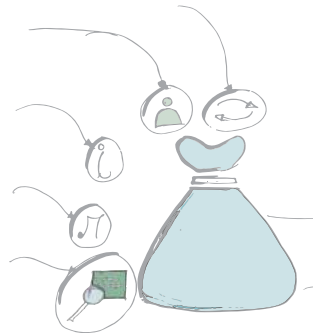
The investigating part is based on literature studies, study cases and surveys. I have used the typology research for design.

To achieve my outcome of the project I had to process through literature studies, and scan them in order to see what has been done and what can be used in the future.

I have focused on the social interaction of the student housing and how to integrate it? The aim is to have inviting meeting places with a feeling of home. A balance between private and public has been a main factor that has to be integrated with the needs of the students.

During my literature studies I had contact with the SGS, Student Housing Association, to have more knowledge of student housing, what they see as a problem and how the student housing is today.

This gave me a better understanding of my aim in my project, what kind of things I could focus on. I visited the different student areas so I could see on site what issues came up, and what worked well.



Sketch of information

I had a vision of having surveys with the students and letting them participate, but I found a more detailed survey from Student Housing Associations from White Architects that I could base my material on. Their surveys are very explanatory, and include both student apartments and dorms.

While working with the literature studies, the designing phase started in parallel, to define how everything could work together. The process worked in parallel, but the designing phase took somewhat longer time.

Vallastaden has likewise been a strong reference to me, because of their highly unique and interesting concept of student housing. Their model of student housing has been seen in different countries, but not in Sweden.

Their concept has a strong focus point on the social interaction and this was appealing to my project. Hopefully they are bringing in new ways and thinking about student dorms. I have always wondered why we have the traditional student dorms in Sweden, only by crossing the border to Denmark, Copenhagen you will see a magnificent and student housing, Tietgenkollegiet.

DELIMITATION AND STAKEHOLDERS

FOR WHOM?

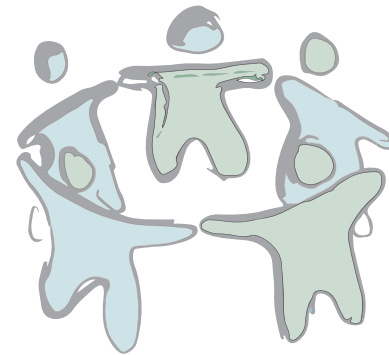
The target group will be the students, of different ages with different experience. They will be divided in three categories, new students, experienced and international.

This means that the new students are the younger ones who have recently moved from home, probably their first housing they are having. The experienced students are the older ones and who have lived in student housing before. The last ones are the international students or exchange students, who are living in the student housing for a short period.

This mixture of students is common, because everyone is different and has started studying at different age. The exciting thing is how to collaborate with each other under the same roof and share common rooms, without any issues. The solution is to create spaces and guidelines that they can follow, by the design you are creating their behaviors.

DELIMITATION

The delimitation will help to follow a line and not losing the line to go broad with the theme. The types of the student housing will only be dorms and not apartments. The sustainability in the project is mainly the social sustainability, but also the water usage, green structure and material as secondary. The economy of the project will be excluded.

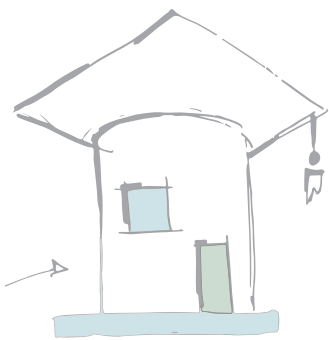


Sketch of community

STUDENT HOUSING

BACKGROUND OF THE STUDENT HOUSING

A student housing is a residential apartment for the people who are enrolled at the university. The housing has different conditions unlike the ordinary rental housing. In the student housing you have limited rental time that is, you are only allowed to rent while you are studying and being enrolled at one of the universities. The rent is also different, and should be lower depending on the ordinary rental apartments, but it depends on the conditions of the apartment and also of the location. *(Studentbostad, 2016)*



Sketch of student housing

Student housing is the only housing that's especially adapted to the needs of the students during the study period. With a student housing on the market, the universities and the city will be more attractive, which will lead to even more students applying in the forthcoming semesters. *(Studentbostad, 2016)*

It's a new beginning to move from home and the student housing is a good starting point in the study life, where you can get acquainted with the society, make new friends which means that the student housing is offering you more than just housing.

SGS Student Housing Association is one of the larger housing companies in Gothenburg, which provides housing in 55 different areas. There are different types of rooms, but the focus of the Master Thesis will be the dorms. There are more student apartments than dorms in Gothenburg, than in other cities in Sweden. *(SGS studentbostäder, 2017)*

There are 15 areas which consist of dorms, Andra Långgatan, Dan Broströmmhemmet, Dr Lindhs gata, Gårda Fabriker, Kjellmansgatan, Medecinarberget, Olofshöjd, Ostkupan, Rotary, Stensturegatan, Tredje Långgatan, Viktor Rydberg, Kviberg, Rosendal and Kustgatan. *(SGS studentbostäder, 2017)*

The dormitory has different meaning all around the world. In the United States the dormitory is providing sleeping for many people, huge buildings and this is often a college or a boarding school. It's also very common that sexes are accommodated on separate floors. *(Dormitory, 2017, 20 November)*

In the United Kingdom the dormitory is more like a hostel containing several beds where people who are unrelated can accommodate. This is common at the boarding schools or the military, but not for the university students. The building where the university students are sleeping is called a hall of residence, and has the same concept, providing sleeping for a large amount of people. *(Dormitory, 2017, 20 November)*

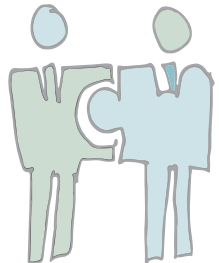
In Sweden it's called dormitory or corridor and it's also just providing sleeping. The dormitories are not separated by the sexes and they are not so many students on a floor or in the building.

-The word dormitory comes from the Latin dormitorium.

REFERENCE PROJECTS

REFERENCE PROJECT, THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

BACKGROUND AND CONCEPT



Sketch of students

BACKGROUND

It's a report which is still in progress of development, it's about the future student housing in Sweden.

The Student Housing Association the architect agency White Architects and Stockholm Student Housing Association are collaborating for this project, but also SGS Student Housing Association in Gothenburg is involved.

The report consists of different surveys of student housing: what kind of housing the students want, what the students are able to share and how they can change the housing in the future, how they are affected by the different types of student housing and the difference between living in a dorm or an apartment. (*Framtidens studentbostäder, 2016*)

CONCEPT

The architect agency White Architects has surveys that are divided in different categories with broad and detailed information. Their research is based on three target groups: newcomers to the town, younger students, who have moved out from their parents' home and the experienced students, who have been studying for a couple of years. (*Framtidens studentbostäder, 2016*)

Their concept is based upon their surveys with the students, and they have three units called: UniBo, DuBo and MultiBo. The students prefer the individual housing which is single room and this is called the UniBo. A third of the students are willing to live in shared housing, that is living together with 2-3 people in a shared apartment and this is the DuBo housing. The last one is the MultiBo and here you share the housing with more people. The concept of the three categories above fulfills the needs of the students. (*Framtidens studentbostäder, 2016*)

REFERENCE PROJECT, THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

ANALYSIS OF THE DIFFERENT TYPES OF UNITS

UNIBO

This is one of the most built single room apartments between 20-27m², which has more or less the same design, with an open plan room. The focus on this kind of housing has been the privacy as well as the flexibility, seeing it from the students' point of view, of what functions can be public or private. The most private in the housing is the bathroom, followed by the bedroom, the study area, the living room and the kitchen.

There are possibilities to close with sliding doors between different areas, giving the students opportunity to choose having an open plan or closed plan depending on the function. There are also natural flows of movement, from the entrance which is the most public area, further into the apartment is the most private area.

The entrance to the apartment is through sliding doors, but there are also sliding doors separating the living room from the kitchen and by opening those you get an open area. There are also possibilities for the dining room to extend to the balcony, where it becomes more of a meeting place for the students when they are passing by because they have a common entrance from the balcony.

In the bedroom there is lack of direct light, but through the sliding doors there is partial light. There is some storage in the bathroom and the rest is in the bedroom.



REFERENCE PROJECT, THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

ANALYSIS OF THE DIFFERENT TYPES OF HOUSING

DUOBO

According to the survey, a lot of students want to live in shared accommodation with 2-3 people, this refers to people who don't know each other from before. The thought of the DuoBo is the social interaction but with clear boundaries, to be private when it's needed. The DuoBo has the same concept as UniBo, from public to private, and the most private area is the bathroom, followed by the bedroom, the kitchen and the dining room.

The DuoBo consists of two units of UniBo but with a larger bathroom and kitchen. The bathroom is divided in two areas, one area consists of a shower, a sink and a toilet and the other one of a sink and a toilet. They are separated by a sliding door and this gives the students an opportunity to have their private toilet but at the same time share bathroom.

The apartment has the same concept as the UniBo as the sliding doors and all other facilities. The sliding doors have the option to enclose the whole area, so it becomes two separate units. The whole apartment consists of two living rooms, two bedrooms, two toilets but one common kitchen with a dining room. This means that they can enclose the areas between the kitchen and the living room so it becomes private.

Some of the walls in the dwelling consist of wood fiber boards, given the opportunity to put up personal items and color them if wanted. This gives the personal touch to the dwelling, having the feeling of being at home, which has been missing in the previous student housing. When moving it's easy to repair the damage you have caused from the wood fiber boards.



REFERENCE PROJECT, THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

ANALYSIS OF THE DIFFERENT TYPES OF UNITS

MULTIBO

This type of dwelling is also a shared accommodation but for more people, it's for 6 students. It has the similarity as a student corridor living, but with less people sharing the common areas. To achieve stronger cohesion between the students, they have less people sharing.

The 6 students share 117m² on two floors. The concept is still the same with public and private zones, but it differs from the arrangements. The private area is on the second floor, where the bedrooms and the toilets are, and the social and public area is on the first floor.

The kitchen is placed in the center of the dwelling, and it is of double height, which gives a more open area. The area does not only function for preparing food and cooking, it's the heart of the dwelling where the social interaction happens. On the first floor which is aimed for the social interaction, they have different small areas, which can be closed and opened with sliding doors. The area consists of a study, a playroom, and leisure.

From the kitchen there are 6 stairs which lead to the different units. The small units consist of a bed, a bathroom and storage. The socializing of the students happens in the kitchen area, wanting privacy you have your private unit to go to.



Sketch of multiBo, ground floor



Sketch of multiBo, first floor

- Bathroom
- Sleeping area and living room
- Kitchen and dining

- Private
- Public

REFERENCE PROJECT, THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

FOCAL POINTS

INVITED SPACES - HOME FEELING



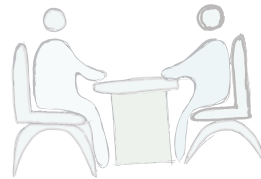
Open and bright spaces, that are welcoming with the kitchen on the common floor. It is open and visual contact across the floor. The entrance in the dwelling has sliding doors that change the space depending of the need..

PERSONAL TOUCH



Personal items or furniture that makes the space of your own. There are movable wooden boards where the students can have their private items or color them they have them in their private units and in the common areas.

COMMON AREA



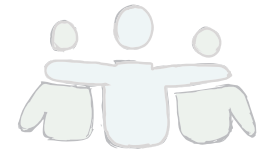
The common room in the UniBo and DuoBo is the kitchen, while in the MultiBo it is on the ground floor with the kitchen and the dining room. There is also a study area and a leisure area, whereas the whole bottom floor is aimed for common activities.

STORAGE



The storage in the dwellings is well organized. In the private units the storage is both over and under the bed and in the bathrooms. In the common areas there is no storage, but the kitchen is well equipped.

SOCIAL INTERACTION



Social interaction is important in the shared accommodation. They social interaction takes place in the common areas, kitchen, living room, play room, study area and balcony. The common areas are well organized for new people to meet, with the ability of the sliding doors, the area can be both private and common.

REFERENCE PROJECT, THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

WHAT AND HOW THE FUNCTIONS ARE SHARED

FUNCTIONS SHARED BY THE BUILDING



ENTRANCE
Shared by: Students on the same floor



STAIRWELL
Shared by: All the students



CORRIDOR
Shared by: Students on the same floor, connected with the entrance



PARTY ROOM
Shared by: All students



BIKE STORAGE
Shared by: All students



RECYCLE ROOM
Shared by: All students



LAUNDRY
Shared by: All students



GAME ROOM
Shared by: All students

FUNCTIONS SHARED BY THE DWELLING



STUDY ROOM
Shared by: Individual



ROOM
Shared by: Individual



BALCONY
Shared by: 2 students



LIVING ROOM AND KITCHEN
Shared by: 1-6 students

The functions that are shared by the whole building are necessary, like recycle room, laundry and bike storage. The functions are aimed for the students to share and also have their spontaneous meetings, where they can feel relaxed and enjoy each other's company.

The different functions are arranged in a way to have the possibility to meet each other, like the entrance which is in connection with the balconies and the corridor, you have to pass there to come to the private unit, in this way you meet students on the way. There are possibilities to be private by dividing the area with the sliding doors.

The single rooms have their own, study room, living room, kitchen and balcony since they have everything in their room they are not sharing it with the whole building.

While in the shared accommodation the living room and the kitchen are shared with 2-6 people, depending on which type of housing you live in.

The kitchen and the living room are divided with sliding doors and making the space flexible depending on the needs.

The bathroom is considered to be the most private area in all dwellings is the bathroom, since it is not shared with anyone.

REFERENCE PROJECT, THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

CONCLUSIONS

CONCLUSIONS

The three different types of dwelling have the same ground concept but they differ depending on the dwelling. The concept of the public and the private is when entering the dwelling you reach the public area and the further into the apartment you reach the private area. The sliding doors make it possible to have open areas or closed areas depending on the needs of the students.

The survey gave a lot of answers on all different questions, but they have been working on some factors that they saw as issues, common areas, material, sense of belonging, social interaction, flexibility, personal touch and public/private.

They have been showing it well in the different types of dwelling and by creating three types they are covering the different types of students as well. By having the wood fiber board it makes the environment more personal and inviting, creating the home feeling.

These small thing in the dwelling mean a lot for the student. There is a good balance between the private and public zones, there are always possibilities to be private in the shared area. The common area is meant to be social, but there are options to be divided in smaller areas.



Section of multiBo

WHAT TO TAKE WITH ME

- The different zones of public and private.
- Socializing in the shared accommodation.
- The common areas as kitchen, dining and living room are shared by less students.
- The small interventions in the dwelling, as wooden boards that can be colored or put your personal items, to have the personal touch in the dwelling.
- The storage that grows in vertical, on top of the bed, under the bed. To have smart solutions for storage.

REFERENCE PROJECT, VALLASTADEN

BACKGROUND AND CONCEPT

BACKGROUND

It started with an architectural competition for the new student housing in Linköping, Vallastaden. The competition was conducted by student housing association Linköping AB and Swedish Architects and it was for all architect students in the fields of urban planning, architecture, landscape and interior. *(Juryutlåtande,2015)*

The aim of the competition was to have the students' point of view, their own experience and to create accommodations with the conditions for sense of community and good study environment. The ideas from the competition were the basis for the student housing and also a good basis for the future student housing around the country. The goals for the housing were to create a unique accommodation that attracts both international and native students. *(Juryutlåtande,2015)*

The student housing association owns approximately 4200 dwellings in Linköping, and it's owned by AB Stångåstaden. Linköping and the company have a vision to create more student housing in the attractive locations, around 200 new dwellings. *(Juryutlåtande,2015)*

The task for the competition was to create highly effective, collective student housing for 10-20 students with a total area of 20-30m². They proposal did not have to follow the regulations of today. *(Juryutlåtande,2015)*

The jury evaluated the proposals by: innovation of how student housing can be renewed and developed, how the proposal can be developed over time, how well the proposal can be realized and implemented and the impact and clarity of the proposal. *(Juryutlåtande,2015)*



Picture of common area

REFERENCE PROJECT, VALLASTADEN

ANALYSIS OF THE DIFFERENT PROPOSALS

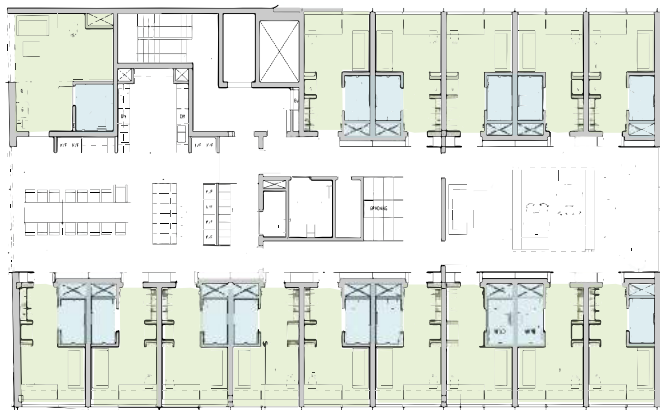
The first price

Name: *"Trapprum" Staircase*

The proposal had all the qualities the competition was asking for, they had analyzed the students' needs and transformed them into innovative spaces.

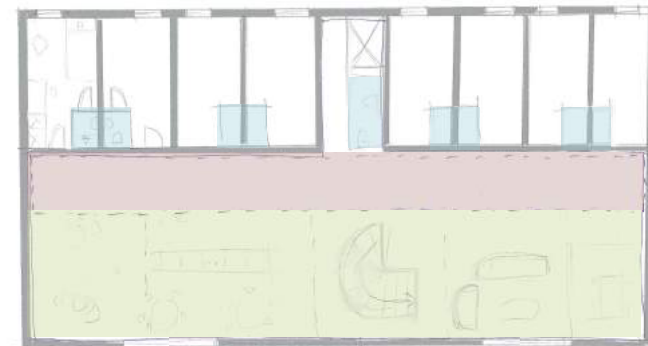
The housing is very exciting and attractive, this will make the students feel at home. In the common areas there are public and private zones where socializing or being private is possible. The space between the public and private creates a buffer zone. There is a good variation of activities in the common area, divided in different zones. There are good possibilities to study or to be social.

The private units are space efficient, they accommodate a bed, that is on a loft, a desk and a bathroom. The space is well organized with the storage, that's rationally placed in the room. The storage is well needed in this type of dwelling.



Sketch of "Trapprum" ground floor

Private Public



Sketch of "Insyn/Utblick" ground floor

Private Public

The shared second place

Name: *"Insyn/Utblick" Insight and outlook*

This collective living has a vision of attracting both residents and native and international visitors. This type of housing offers the possibility to be private in the public area. The private units are reached from the common area, by a corridor that divides the public area from the private one. In this way you can reach your private unit without passing through the common area.

The proposal shows a transparency between the inside and outside in the huge common area, creates socializing. The proposal is an interesting way of showing the collective living and could be an attractive way of living for the students. The jury thinks the proposal should be more developed in the private units and the common area. The staircase is not integrated in the common area and it's divided from the common area.

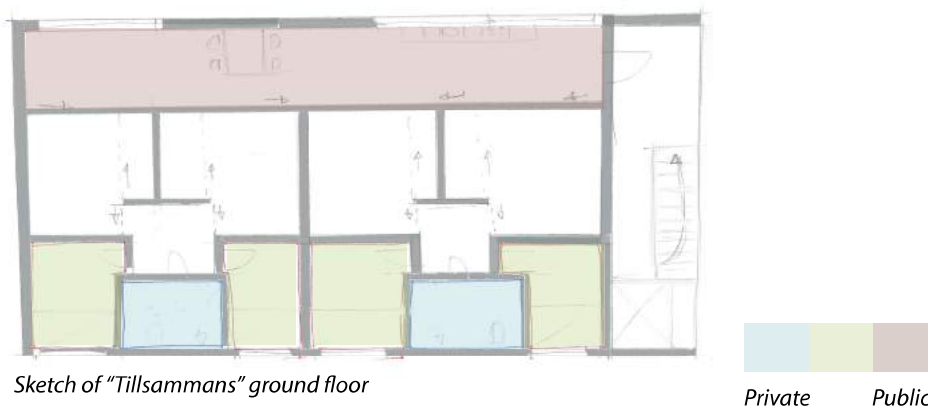
REFERENCE PROJECT, VALLASTADEN

ANALYSIS OF THE DIFFERENT PROPOSALS

Name: *"Tillsammans" Together*

The proposal is based on a collective living, that is to show how it works to live together and how the community works. The housing is attractive and well organized between the zones, which are private, semi-private and common areas.

The private unit has many smart solutions, which are appreciated by the student as: smart storage, French balcony and private bathroom. The modules have the possibilities to develop in the future, from four to eight, which is flexible. According to the jury there is a lack of collective area, whereas the kitchen is not enough. The common area should be more developed with different functions and having more students sharing the common area.



Name: *"Verandan" The porch*

The proposal has a focus on the in-between spaces, from semi-private and semi-public. It shows different zones of the public and private and how the corridor in the building is withdrawn. It's created in a different way for different functions. The bathrooms are shared by two students, which is space efficient.

The jury thinks the proposal has a strong concept that needs to be worked on the implementation, regarding the study environment.

REFERENCE PROJECT, VALLASTADEN

FOCAL POINTS

INVITED SPACES - HOME FEELING



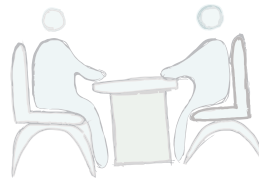
Inviting common areas with innovative space. The open floor plans and the brightness make the whole area inviting and pleasant. In the private units the high ceiling has the power of creating openness and home feeling.

PERSONAL TOUCH



Personal touch is in the private units, with personal items on the shelves or in the storage. There are enough of smart storage solutions. No possibilities to have your own furniture, because the furniture is integrated to the unit.

COMMON AREA



Common rooms are arranged in the center of the dwelling. The common areas consist of a kitchen, living room, playroom, study room, bathrooms and leisure room. They are divided in different sections with movable furniture, but it there is still an open area.

STORAGE



Storage in the dwellings is well organized. In the private units the storage is both over and under the bed, and in the bathrooms. Some proposals have storage outside the private unit in the common area, this storage is also used to divide different areas.

SOCIAL INTERACTION



Social interaction is important in the shared accommodation. The social interaction happens in the common areas, kitchen, living room, play room, study area and balcony. Because of the placement of the shared spaces, you need to go past it, to go to your private unit.

REFERENCE PROJECT, VALLASTADEN

WHAT AND HOW THE FUNCTIONS ARE SHARED

FUNCTIONS SHARED BY THE BUILDING



ENTRANCE
Shared by: Students on the same floor



STAIRWELL
Shared by: All the students



CORRIDOR
Shared by: Students on the same floor, connected with the entrance



PARTY ROOM
Shared by: All students



BIKE STORAGE
Shared by: All students



RECYCLE ROOM
Shared by: All students



LAUNDRY
Shared by: All students



GAME ROOM
Shared by: All students

FUNCTIONS SHARED BY THE DWELLING



STUDY ROOM
Shared by: Individual



ROOM
Shared by: Individual



BALCONY
Shared by: 2 students



LIVING ROOM AND KITCHEN
Shared by: 1-6 students

The functions that are shared by the whole building are necessary, like recycle room, laundry and bike storage. The functions are aimed for the students to share and also have their spontaneous meetings, where they can feel relaxed and enjoy each other's company.

The different functions are arranged in a way to have the possibility to meet each other, like the entrance which is in connection with the balconies and the corridor, you have to past there to come to the private unit, in this way you meet students on the way. There are possibilities to be private by dividing the area with the sliding doors.

The single rooms have their own, study room, living room, kitchen and balcony since they have everything in their room they are not sharing it with the whole building.

While in the shared accommodation the living room and the kitchen are shared with 2-6 people, depending on which type of housing you live in.

The kitchen and the living room are divided with sliding doors and making the space flexible depending on the needs.

The bathroom is considered to be the most private area in all dwellings is the bathroom, since it is not shared with anyone.

REFERENCE PROJECT, VALLASTADEN

CONCLUSIONS



Picture of the private unit

CONCLUSIONS

The different proposals have many interesting solutions for a student housing.

They have created a different way of living collective, than the traditional way of dorms. The concept with the common area integrated with the private hubs, and placed in the center of the units, leading to spontaneous meetings by the students, which is the aim of the collective living.

They have solutions being private or public. In the proposals the social interaction and the innovative spaces are the main factors, which are visible in the projects.

In-between spaces are well used in the proposals. Most of the proposals don't have any long corridors, they are integrated it to the common area, which creates the sense of belonging and inviting space. The common area is only divided with furniture, no walls, of the living room, kitchen, study area and leisure. (*Juryutlåtande, 2015*)

WHAT I TAKE WITH ME

- The placement of the common area, in the center of the dwelling.
- Compact living in the private units, storage, shared bathrooms.
- Integration of the corridor and the vertical communication.
- Small things make big things in the end, like French balcony, storage in the private unit.
- Balance of private and public.

REFERENCE PROJECT, ROTARY AND VIKTOR RYDBERG, JOHANNEBERG

BACKGROUND AND CONCEPT



Picture of Rotary

BACKGROUND

The student housing Rotary is owned by the student housing association SGS. Rotary has a good location, close to the university but also close to Avenyn and the city center. The area is surrounded by green areas and it's on a higher level, which enables the students to an appealing view. (SGS studentbostäder,2017)

In a close distance to the student housing there are supermarkets, restaurants and a pharmacy. Wanting to visit different parts of the city, there is an excellent public transportation, which enables them to reach different destinations without any problems. (SGS studentbostäder,2017)

The buildings are from 1968, but have been renovated during the years. They are made of bricks and are not higher than five levels. There are dorms, single room apartments and two room apartments. Most of them are dorms, where there is also less queuing. In the building they have shared kitchen, laundry, bike storage and study room. The common rooms are cleaned once a week. (SGS studentbostäder,2017)

The first student housing in Gothenburg was built on a street directly linked to the academy - Viktor Rydbergsgatan. During the first year as a student housing it was also used as a hotel in the summer period, when the students were on vacation. (SGS studentbostäder,2017)

The student housing Viktor Rydberg is close to Rotary, both are located at Johanneberg, which is close to the Chalmers University of Technology. (SGS studentbostäder,2017)

Viktor Rydberg is older than Rotary and was built 1953 and renovated 1992 but it was also extended the same year when they built 36 new units. (SGS studentbostäder,2017)

The building is made of bricks and has four floors. The dorms do not have showers in their rooms, they are placed in the common corridor, where they also share a common kitchen and in connection to that a glazed balcony.

The students also share the laundry room, bike storage and play room. (SGS studentbostäder,2017)



Picture of Viktor Rydberg

REFERENCE PROJECT, ROTARY AND VIKTOR RYDBERG, JOHANNEBERG

ANALYSIS OF THE DIFFERENT DWELLINGS

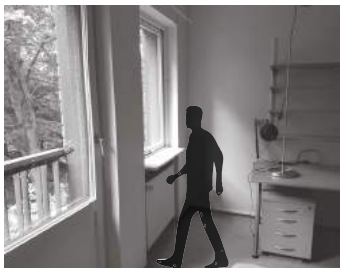
Rotary:

There are three types of dwellings in the student housing Rotary, dorms, single room and two room apartments. The areas of the dorms are 19.5m² and there are furnished and unfurnished rooms giving the students possibility to furnish with own furniture.

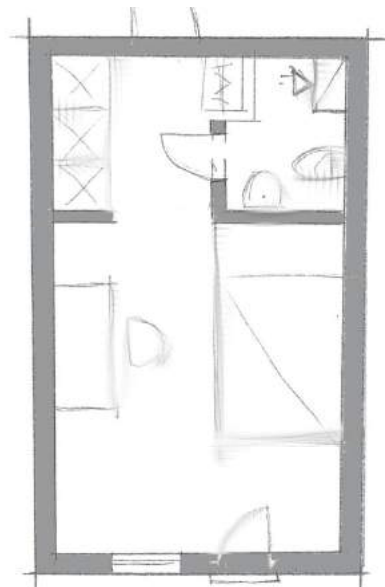
The entrance to the building is from the inner garden, but the long and dark corridor makes it precarious. The common kitchen is shared by 8-12 students and the kitchen area is 25m². The private unit is bright because of the large windows, but also the French balcony, that makes the room look larger than it is. In addition to the room there is a well-equipped bathroom. The common areas in the building are the kitchen and the laundry room, there is no living room.



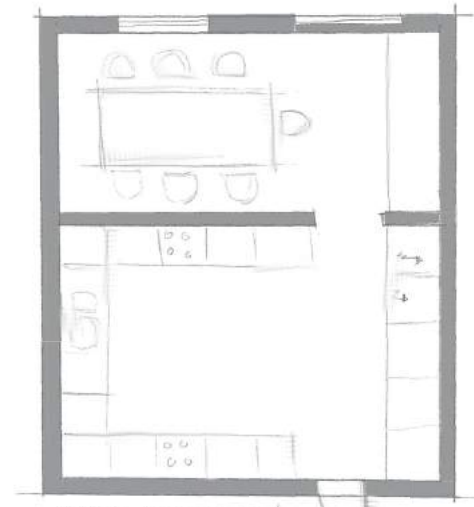
Picture of the room at Rotary



Picture of the room at Rotary



Sketch of Rotary of the room



Sketch of Rotary of the kitchen



Picture of the kitchen at Rotary

All the social interaction happens in the kitchen, which is a small area and not suitable for many students. There is also a lack of light which makes it unpleasant. The laundry room on the other hand is situated in the inner garden together with the recycle room, is an inviting space, with a lot of lights, windows and music. All the machines are placed in one place, without any borders which makes the space secure and pleasant.

The common study room is for the whole building, and it has a booking system. It's a huge space with a meeting table that occupies the whole space. All the furniture is made of wood, which makes the room monotonous, but with the light coming from the large windows and the balcony, brightens the room.

REFERENCE PROJECT, ROTARY AND VIKTOR RYDBERG, JOHANNEBERG

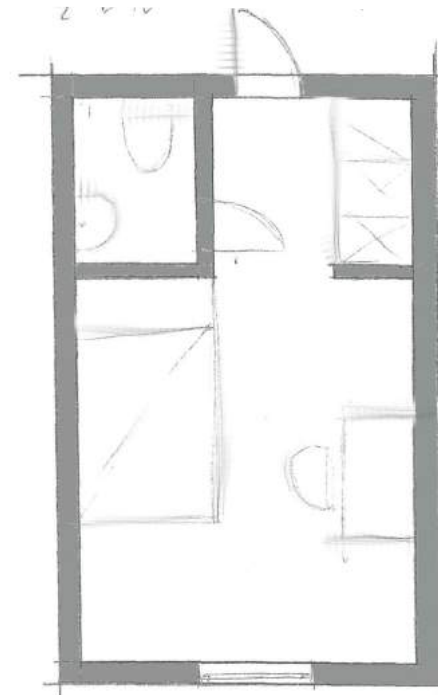
ANALYSIS OF THE DIFFERENT DWELLINGS

VIKTOR RYDBERG

There are six different types of dwellings in this building, two dorms with different square meters, single room apartments, two room apartments, four room apartments and single room apartments with a kitchenette. The dorms are 16,4m² and 20,4m², with a toilet but no shower, the shower is shared in the common corridor with the other students.

The larger unit has a balcony and a little larger window, while the smaller unit has just one window. When entering the building, you are welcomed by the wooden walls, some parts of the building are very old. In the long and narrow corridors they have all the common mailboxes. In one corridor there are 12 with shared kitchen and showers. There are 5 showers in the corridors, with lockers of course.

The common kitchen is in connection to the glazed balcony, which has a beautiful view. The balconies are meeting points to the students and these places can be used during the whole year. It has a visual connection, because of the glazing which makes the space more pleasant. On the other hand we have the laundry room down in the basement which is not so pleasant as the laundry room at Rotary's.



Sketch of Viktor Rydberg of the room



Picture of the room at Viktor Rydberg

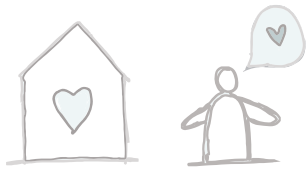


Picture of the common balcony at Viktor Rydberg

REFERENCE PROJECT, ROTARY AND VIKTOR RYDBERG, JOHANNEBERG

FOCAL POINTS

INVITED SPACES - HOME



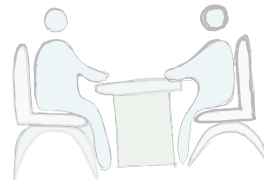
Open and bright spaces, that are welcoming and the kitchen with the glazed balcony. The private unit has a large window and a French balcony which makes the space inviting and homey.

PERSONAL



Personal touch is in the private units, to put your personal items or to have your own furniture

COMMON AREA



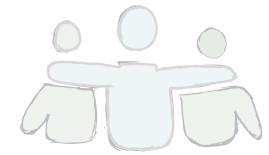
The common rooms are the kitchen, laundry and study room. The kitchen is the main one because the others are with a booking system. The spontaneous meetings happen in the kitchen. In one of the housings there is also a glazed balcony that's also a space for common activities.

STORAGE



The storage in the private units is not enough. There is a basement of 1,5m2 to store things, but all personal items do not fit in the private room.

SOCIAL INTERACTION



Social interactions take place in the kitchen but those are not spontaneous meetings because the kitchen is too small to socialize with other students.

REFERENCE PROJECT, ROTARY AND VIKTOR RYDBERG, JOHANNEBERG

WHAT AND HOW THE FUNCTIONS ARE SHARED

FUNCTIONS SHARED BY THE BUILDING



ENTRANCE
Shared by: Students on the same floor



STAIRWELL
Shared by: All the students



CORRIDOR
Shared by: Students on the same floor, connected with the entrance



STUDY ROOM
Shared by: Individual



BIKE STORAGE
Shared by: All students



RECYCLE ROOM
Shared by: All students



LAUNDRY
Shared by: All students



BALCONY
Shared by: 2 students

FUNCTIONS SHARED BY THE DWELLING



ROOM
Shared by: Individual



LIVING ROOM AND KITCHEN
Shared by: 1-6 students

The functions that are shared by the whole building are necessary, like the recycle room, laundry and bike storage. The functions are aimed for the students to share and also have their spontaneous meetings, where they can feel relaxed and have fun. Some common areas have a booking system, so there are no spontaneous meetings, like the laundry and study room. The kitchen and the balconies area without booking system which makes it easier to socialize spontaneously.

The private units are individual, they consist of a bedroom and a toilet. In Viktor Rydberg they have shared showers, but private toilets in their units. This makes the living somewhat different. In Rotary the units are more inviting with their French balconies and large windows, while at Viktor Rydberg they don't have large windows or balconies in the rooms. At Viktor Rydberg they also have a common balcony in the kitchen.

REFERENCE PROJECT, ROTARY AND VIKTOR RYDBERG, JOHANNEBERG

CONCLUSIONS

CONCLUSIONS

The types of collective living are the traditional dorms, with long and narrow corridor, rooms on each sides and a common kitchen. Today we see it as a problem, because of less pleasant spaces, not enough of space, unsecure and depressed spaces.

In Rotary they have small things that cheer the students up, as the French balcony, which is appreciated and does a lot to the tiny room. The private bathroom is also very appreciated, while the shared showers make the living more complicated. The laundry is often placed in the basement, and can be a scary and unsecure but being placed in the inner garden with a lot of light and music makes it pleasant.

The common kitchen in Viktor Rydberg is more appreciated than in Rotary, and the reason is the glazed balcony, that's inviting and pleasant to be in. The kitchen in Rotary is small and there is no space for leisure or socializing, just the function of a kitchen.



Picture of the corridor at Viktor Rydberg



Picture of the study area at Rotary

WHAT I TAKE WITH ME

-French balconies and large windows to let the sunlight in.

-Rearrange the placement of the grey zones.

-Inviting space, material and light.

-To do the corridor more attractive



Picture of the laundry at Rotary



Picture of the laundry at Rotary

SURVEY

THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

SURVEY

THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

BACKGROUND

A survey made by White Architects, Student Housing Association and Stockholm's Student Housing.

The well detailed survey was answered by more than 2000 students throughout Sweden, about how they live today and how they want to live in the future. (*Framtidens studentbostäder,2016*)

The thoughts of the project were to be financed by National Board Of Housing and Planning (Boverket) to have opportunity to broad the boundaries about the finance. The three main parts in the project are to map the housing preferences, housing concept based on the results and a broad calculation of the cost and the rent.

The student housing is associated with functional aspect, as: low rent, less surface area, and simplicity. The social aspect on the other hand is associated with the sense of belonging and conflicts. The student housing is for many the first home and this is a huge step in life, with a feeling of freedom. (*Framtidens studentbostäder,2016*)

The social life is the main factor in the dorms, being important at the beginning of the studies, meeting new people, and feeling a part of the society. (*Framtidens studentbostäder,2013*)

This is especially important for the international students, who have different backgrounds. To live in a dorm is a life experience during the study period. (*Framtidens studentbostäder,2013*)

There are benefits to live in dorms, as the low rent and shorter queuing to the dorms. The students' needs change over time, they are much more in need of belonging in the beginning of their studies, than later. (*Framtidens studentbostäder,2016*)

SURVEY

THE FUTURE STUDENT HOUSING "FRAMTIDENS STUDENTBOSTÄDER"



Sketch of the housing situation in Sweden

The Student Association has done a mapping across the whole country to see the outcome of the shortage of student housing. They have taken the shortage, the balance and the surplus throughout the whole year into consideration, in order to get the correct picture of the situation.

They have to take into consideration the location and the time of the year, as the summer period is the release period where they need to cover the costs and not have too many empty housing during this period.

The shortage of the student housing has been a popular theme on the market, but what does the lack of student housing actually mean?

There is a high pressure on student housing at the beginning of each semester, and finding a student housing during this period is almost impossible, but does this mean that there is a lack of student housing?



Sketch of an apartment



Sketch of a dorm

The need of student housing can vary depending on what type of housing is required. Apartments being more wanted than corridors, lead to longer queuing for apartments than dorms.

Overviewing the map of Gothenburg, the need of student housing is evident. Having a queuing time of 99 weeks in average of getting housing. SGS Student Housing Association and Chalmers Student Housing Association have since 2014 completed 600 apartments and there are more to go. GBG 7000+ has a vision of building 7000 student apartments until 2026 but has encountered difficulties as: not having enough of plot area, long planning process and costs.

SURVEY

THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

Focus groups

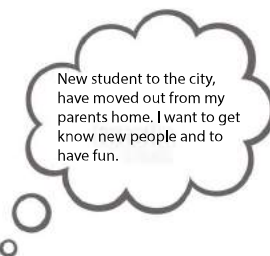
The students being of diverse types, may be classified in various groups. The survey is focusing on three different target groups: new arrived students, experienced and international students. An engaging combination, all of them having different needs.

The newly arrived students are younger and it is probably their first time moving out from their parents' home, the student housing being their first home of their own. This target group is also more energetic, being more for partying, and not having the housing as a focus point, they are more opened to live in different types of housing.


The other target group of experienced students means they have been living a couple of years at a student housing, are a little bit older than the newly arrived. This group of people is also the ones who want a more peaceful environment.

The international students are the ones who stay for a short time with the desire to explore as much as possible during this period of time.

This group of people is more interested in the social aspect compared to the others, due to their background but they also strive to integrate with the new environment.



New student to the city, have moved out from my parents home. I want to get know new people and to have fun.




Certainly there are more types of students but these where the most relevant ones. How can the needs of a young student, who is more into the going out life, to a student who wants a more peaceful environment, to the international students whose aim is to get new acquaintances and their longing to be a part of the society, be combined?


They can be combined through different arrangements in the housing as multifunctional use of them, possibilities to socialize or being private and having a peaceful area in their own hub.

It is difficult to satisfy the different needs of all students, but at least to have the opportunity to choose and not only have one option. The variety of choices is having a broader perspective of the needs.

As a student you are moving a lot during your studies. The move can depend on different factors as: not being pleased with your housing, different stage in life, too small apartment etc.



International student who is new to the city. I will stay here for a semester, it will be interesting to get know new people.



I have lived in student housing for 5 semesters and I want to have a quiet and peaceful environment.

SURVEY

THE FUTURE STUDENT HOUSING "FRAMTIDENS STUDENTBOSTÄDER"

It's much easier to get a dorm in the beginning of the studies, due to a shorter queue for the dorms than the apartments. The students stay in the dorms for a short period because they are not comfortable with the accommodation. They just see it as a transition housing. In the meantime they are trying to find an apartment to live on their own or collective with others, but most of the students are aiming for a private apartment.

The flexibility of moving can also depend on which stage of life you are in, being young and in the beginning of your studies makes you more flexible, open to different solutions and more adapting to changes. If you are in the middle of your studies, your focus is on the studies, wanting to be more alone or to live with a partner which makes it more difficult to be flexible or to adapt.

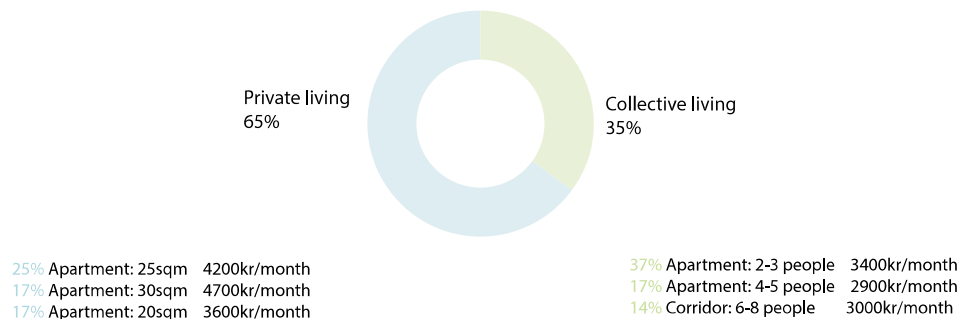
Most of the students who live in apartments live in single room apartments, being completely private and not sharing. The distribution of the different types of housing depends on the location in Sweden.

In Gothenburg there are 75% apartments and 25% dorms. In Lund and Stockholm there are 50% apartments and 50% dorms. We can conclude that today's housing is more single accommodation than shared and it strives for single accommodation in the future, but why not change this trend?

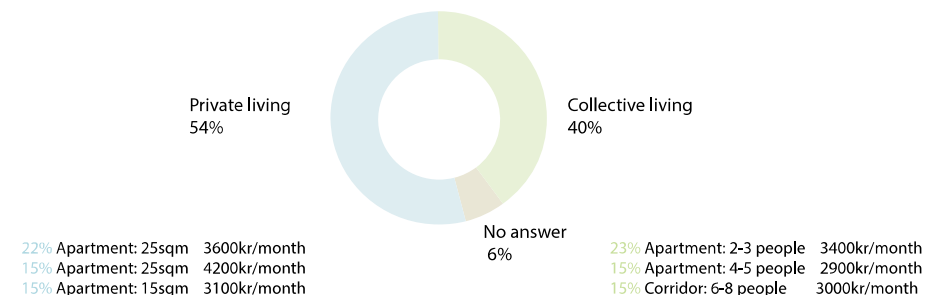
A change can be seen at Vallastaden as a concept, and even if it receives a lot of negative reactions from the start due to its too public and open areas, we still have to pursue.

There is a lot of negativity about living together in shared accommodation in dorms and the reason is due to several factors: environment, location, dirty, small areas, pleasant, no home feeling.

WHAT TYPE OF LIVING DO THE STUDENTS PREFER?



WHAT TYPE OF ACCOMONDATION DO THE INTERNATIONAL STUDENTS PREFER?



SURVEY

THE FUTURE STUDENT HOUSING "FRAMTIDENS STUDENTBOSTÄDER"

What is positive and negative living in a dorm?

It's partly linked to functional aspects such as less surface area, hard wearing, simplicity and low rent. But even things like life or social life, movement, community, stress and conflicts are things mentioned.

The location is one of the main features of the student housing, a good location is connected to a positive housing settlement, which is close to the university, city center, supermarkets, good infrastructure and close to the nature. The student housing with an attractive location is a huge plus for the students.

The meaning of close can vary depending on the size of the city. In Stockholm there is more acceptance for longer itineraries.

The location is important for several reasons. Students live an active life and moving between lectures, home, hobbies, friends, etc is their daily routine. Biking, walking or public transport are the most common means of transportation, which makes short travel distances very important.

The rent is actually low but taking into consideration what you get from the housing, it is considered to be relatively high among the students, but it has still a low impact on overall satisfaction. The Swedish students have the right to housing allowance, which several indicate as the reason to live in more expensive housing. The main reasons for wanting to pay more are: better location and single room apartments.



What is a good location?

A calm area, close to the gym, close to university, close to city center and close to public transportation.

What is a better standard?

Larger area, shape up the common rooms, no shared bathrooms and a better kitchen.

Why is it less pleasant?

Boring spaces, no personal spaces, too small spaces, unmotivated and uninviting.

The rough difference between living individually or collective is about the sharing. If you live individually you are not interested in sharing facilities and it's the opposite when you live collective.

SURVEY

THE FUTURE STUDENT HOUSING "FRAMTIDENS STUDENTBOSTÄDER"

WHAT ARE THE STUDENTS ABLE TO SHARE?

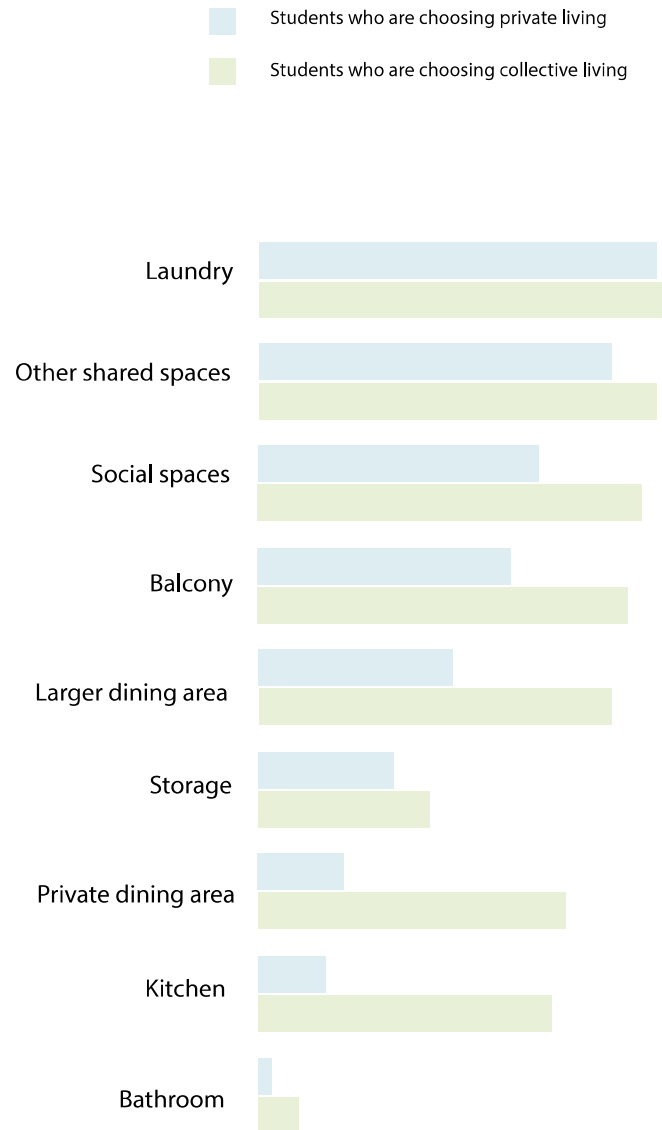


Figure from student housing association

The common areas can be divided into functional and social spaces. The functional spaces should be practical functions like laundry or bicycle parking, while the social areas are for social gatherings like pool room or common living room. In some cases, the areas may fill both social and functional needs, but this depends on which type of accommodation.

In collective living the common kitchen is a social space, while in the individual apartments it is functional. The importance of the apartments is the private sphere more central and all socializing happens in the units. While the social interactions in the dorms happen outside the private hubs.

SURVEY

THE FUTURE STUDENT HOUSING "FRAMTIDENS STUDENTBOSTÄDER"

A kitchen of your own and larger area are more attractive

Single room apartments attract many students primarily because of the ability of having a kitchen of your own and the larger area of the apartment. The kitchen has an important function in the housing and most students see the kitchen as a problem in the shared accommodation, due to the conflicts with cleaning and the kitchen area being too small.

New collective solutions create interest

The students don't want the traditional corridor housing, they like the layout of a shared accommodation. They prefer the shared accommodation because of the reduction of conflicts, but still having the social aspects. In a traditional corridor the common areas are shared by many students and in shared accommodation there are less people.

PRESENTAGE OF HOW THE SEE THE RESIDENCE AS A HOME



Figure from student housing association

Do you see your accommodation as your home?

Students associate the home with security, freedom, stability and an opportunity to put a personal touch. The sense of feeling at home is less obvious among students living in corridors and some factors that correspond to this are: the feeling of being yourself and feeling relaxed. The design, the space and the possibility to put a personal touch in the corridors, reduces the feeling of being at home, instead the students have a feeling of temporary residence.

Student housing is by definition a temporary residence, even if the apartments have the sense of being more permanent, than the dorms. Even if it's a temporary or a permanent accommodation, you should feel at home, secure and be proud of your living. By having the possibility to put your personal touch to the housing, like your own furniture, paintings, shelves will create the sense of feeling at home and making it a more permanent home.

Those who want to live in corridors and other shared accommodation solutions want it mostly because of the social aspects. The arrangements of the functions in the housing enables this social exchange. The traditional student corridors do not fulfill this purpose, this is one of the reasons why the students prefer self-contained accommodation.

SURVEY

THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

HOW SATISFIED ARE YOU WITH YOUR HOUSING?

■ Satisfied ■ Neither nor ■ Dissatisfied ■ Not applicable

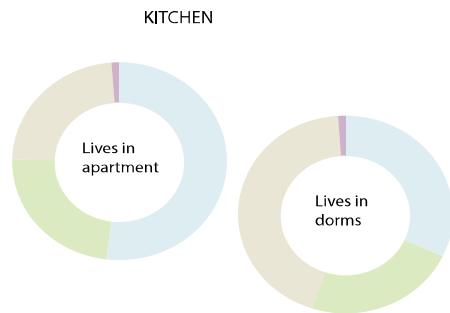


Figure from student housing association

The common kitchen

No less than 45% of those who live in today's corridors are dissatisfied with the kitchen. Actually the dissatisfaction is about the lack of space for several people to cook at the same time and the limited storage facilities.

The purpose of the kitchen is to prepare and cook all food there, but in the corridors the kitchen is as a social hub as well. You get to know your roomies in this common area, because in many of the traditional corridors there are no other common areas except the kitchen.

The social meeting areas in the corridor accommodation are the kitchen and the dining room, where you spontaneously meet other students. The areas get a lot of negative criticism because of the lack of space, but also because of the aesthetics, it's not sufficiently inviting, which leads to an area where the students don't want to be. This affects the entire idea of living in a corridor and having a meeting place.

Kitchen for/in the future?

From previous experiences and from different surveys, the conclusion of the future kitchen is: larger space, the ability for more students to cook at the same time, enough storage for groceries and more utilities as fridge and freezer. By fulfilling all the needs above enables the student to do a grocery shopping which will last for a couple of days instead of shopping every day. The will also be a sustainable way of living, and positive for the finances of the students.

Today's common kitchen is shared by 8-12 students, which often leads to conflicts about cleaning. To avoid conflicts future kitchen should allow less student sharing the kitchen.

Another problem in today's kitchen is not having enough of facilities as fridge and freezer and the lack of space in the kitchen due to chairs and tables, there should be a change in solving this problem. The future kitchen must also be inviting both in functionality and atmosphere. The dining area should be adjacent to the kitchen, though not necessarily in completely open plan. An open floor plan between the kitchen and the dining area creates social atmosphere between those who cook and those who eat, but it can also be too messy for those who want to have peace and quiet.

SURVEY

THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

HOW SATISFIED ARE YOU WITH YOUR HOUSING?

■ Satisfied ■ Neither nor ■ Dissatisfied ■ Not applicable

Shared bathroom

There is a low interest in sharing bathrooms with others, more people are willing to share bathroom in a shared accommodation with less people.

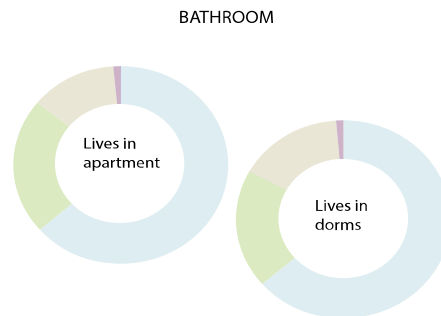


Figure from student housing association

The reason to why shared bathroom is unpopular is the same as having a common kitchen, that is, they share almost the same problems as: factors of conflicts, cleaning, accessibility and queuing in the morning. This can make the living more difficult than it should be.

The bathroom is the most private space in the residence and the most holy one, in this case the hygiene factor appears to be extremely important.

Common living room

The function of the common living room is to be like a social hub. It's a place where you can socialize, watch TV, play games and party. In today's corridors there is not enough space for all students in the living room, and some students housing don't even have a common living room, which is unfortunate.

For the future living room there should be a large space to fit all students, possibility to move around and more inviting spaces. An inviting common living room is warm and welcoming through color choices and furnishing. The living room may also be connected to the dining area which increases the sense of space and openness.

HOW SATISFIED ARE YOU WITH YOUR HOUSING?

■ Satisfied ■ Neither nor ■ Dissatisfied ■ Not applicable

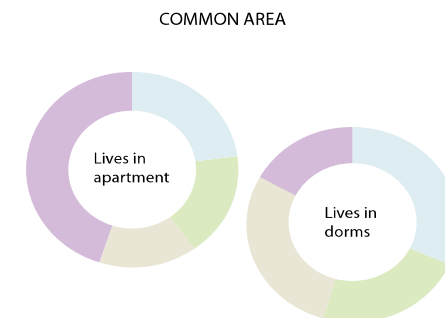


Figure from student housing association

SURVEY

THE FUTURE STUDENT HOUSING "FRAMTIDENS STUDENTBOSTÄDER"

The social aspect

The social aspect is the main factor and the most positive one for those who prefer shared accommodation. The social aspect is most important at the beginning of the study period and among the students who move to a new city from Sweden or from abroad.

The design of these homes is to capture and encourage social belonging. Larger living rooms or common areas are important for the social aspect, because it's in these areas the socializing among the students happen.

There is also a difference of the needs of common areas among the students. The international students and the first-year students consider the common area to be very important, while for the rest of the students it's of less importance.

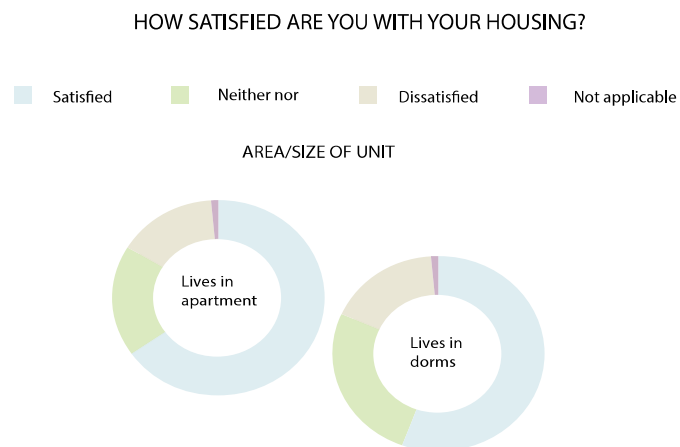


Figure from student housing association

HOW SATISFIED ARE YOU WITH YOUR HOUSING?

■ Satisfied ■ Neither nor ■ Dissatisfied ■ Not applicable

Storage in your home

As mentioned in the sections about the kitchen and the bathroom, storage is a central issue for those living in student housing.

BOSTADENS CHARM, THE ATTRACTION OF THE UNIT

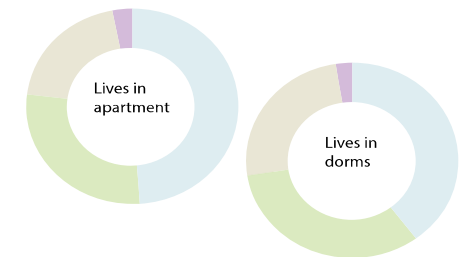


Figure from student housing association

Storage is not only needed for kitchen and bathroom equipment but also for personal belongings, as clothes.

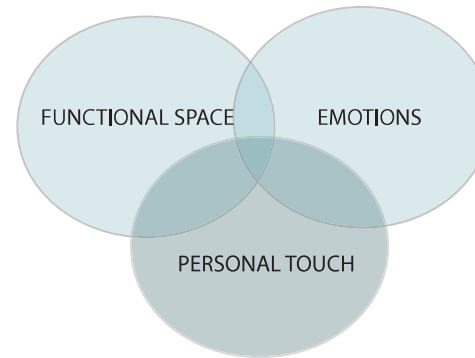
The area should be more rationally utilized, for example by using walls vertically as well. Nowadays it is common to have two large wardrobes, which is not enough for students of today. By not having enough to storage for your personal belongings contributes to the students not feeling at home. If on the other hand they would have the possibility to storage their private items they would make it temporary from the beginning.

Most of the student housing have storage in the basement, but that's for items you do not need for your daily life. The storage in the units is for the daily use.

SURVEY

THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

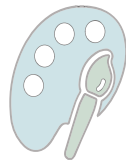
WHAT IS A PLEASANT HOME ACCORDING TO THE STUDENTS



LIGHT
Bright and light in the units.



SAFE
To feel safe and secure in the housing.



COLOR
Colorful environment, playful.



FREEDOM
Opportunity to be private or public.



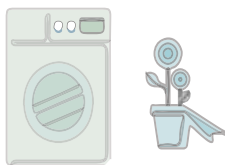
PRIVATE ITEMS
Have enough of space for their private items.



FURNITURE
Possibility to have their own furniture in the units.



CLEAN AND FRESH
Fresh spaces and to take care of them.



COMMON AREAS
To have the common areas invited and visible.



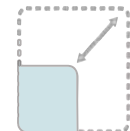
LOCATION
Close to university, city center and good public transportation.



PRIVATE UNITS
Rationally used the space.



EMOTION
The environment is reflecting on the emotions.

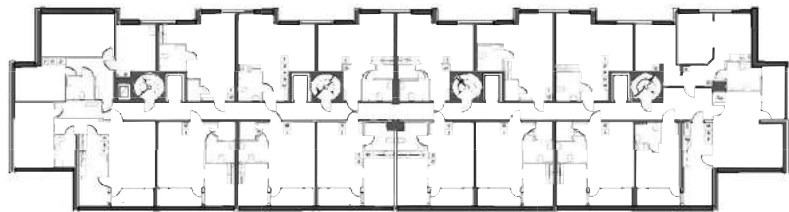


SPACES
To have the possibility to do more activities in the housing.

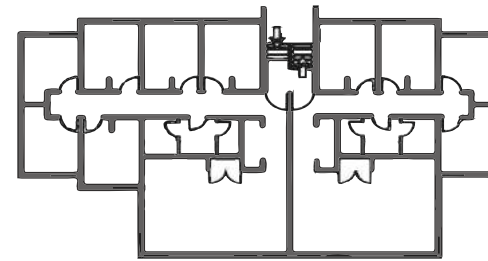
SURVEY

THE FUTURE STUDENT HOUSING "FRAMTIDENS STUDENTBOSTÄDER"

BENEFITS IN A COLLECTIVE/INDIVIDUAL LIVING



INDIVIDUAL HOUSING



COLLECTIVE HOUSING



CALM AREA
Calm and peaceful
place, no stress.



FREEDOM
You have freedom of
doing whatever you
want.



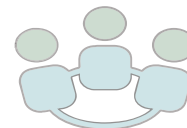
OWN KITCHEN
Cooking without sharing
the kitchen, no conflicts.



FRESH AND CLEAN
No conflicts about the
cleaning.



**OWN THEIR OWN
BELONGINGS**
You take care of your
own items.



COMMUNITY
To be apart of the
society, to have the sense
of belonging.



SHARING KNOWLEDGE
Learn from each other,
instead of media. It can be
cooking, farming, laundry
etc.



MAKING NEW FRIENDS
Easy to make friends, to not
feel alone in your housing.



SUSTAINABLE
Sustainable way of living, sharing
kitchen, less water usage.



SAFE
The safety is higher, because
you know each other.



LESS MONEY
It's cheaper to live collective,
sharing stuffs instead of
owning everything.

SURVEY

THE FUTURE STUDENT HOUSING “FRAMTIDENS STUDENTBOSTÄDER”

CONCLUSIONS

The summary of the survey shows us well equipped facilities are needed and solution for the storage is highlighted. The location and rent are the attractive points in the project and in collaboration with the limited area for the homes.

As mentioned before the aim of the dorms is having social interaction, which is a positive feature but living with less students, to feel a sense of belonging and have more trust to each other. The boundary of common and private areas in the dorms is important for all students, having the freedom to decide if you want to socialize or not.

The kitchen and the dining room are the most exposed areas and also the ones with issues. The kitchen should be well equipped, have enough storage and space. This will give make it possible for big grocery shopping and cooking together.

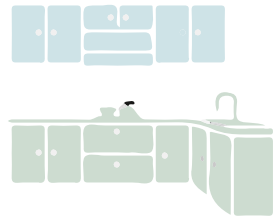
The kitchen is the heart of the building where the social interaction is happens, but to prevent conflicts in the kitchen, it can be a solution to extend it with the dining room or a living room.

SUMMARY OF REFERENCE PROJECTS

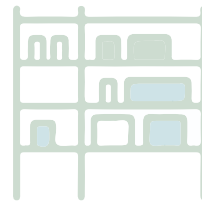
CONCLUSIONS



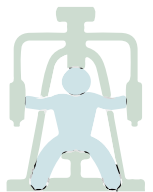
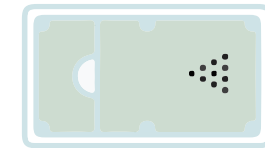
Atractive locations, close to supermarkets, university and public transportation.



Full equipped kitchen with enough of space for all students.



Enough of storage in the private units, to fit all the private items.



Variety of common areas, for all needs.

CONTEXT

CONTEXT

THE SURROUNDING AREA



Sketch of Sweden

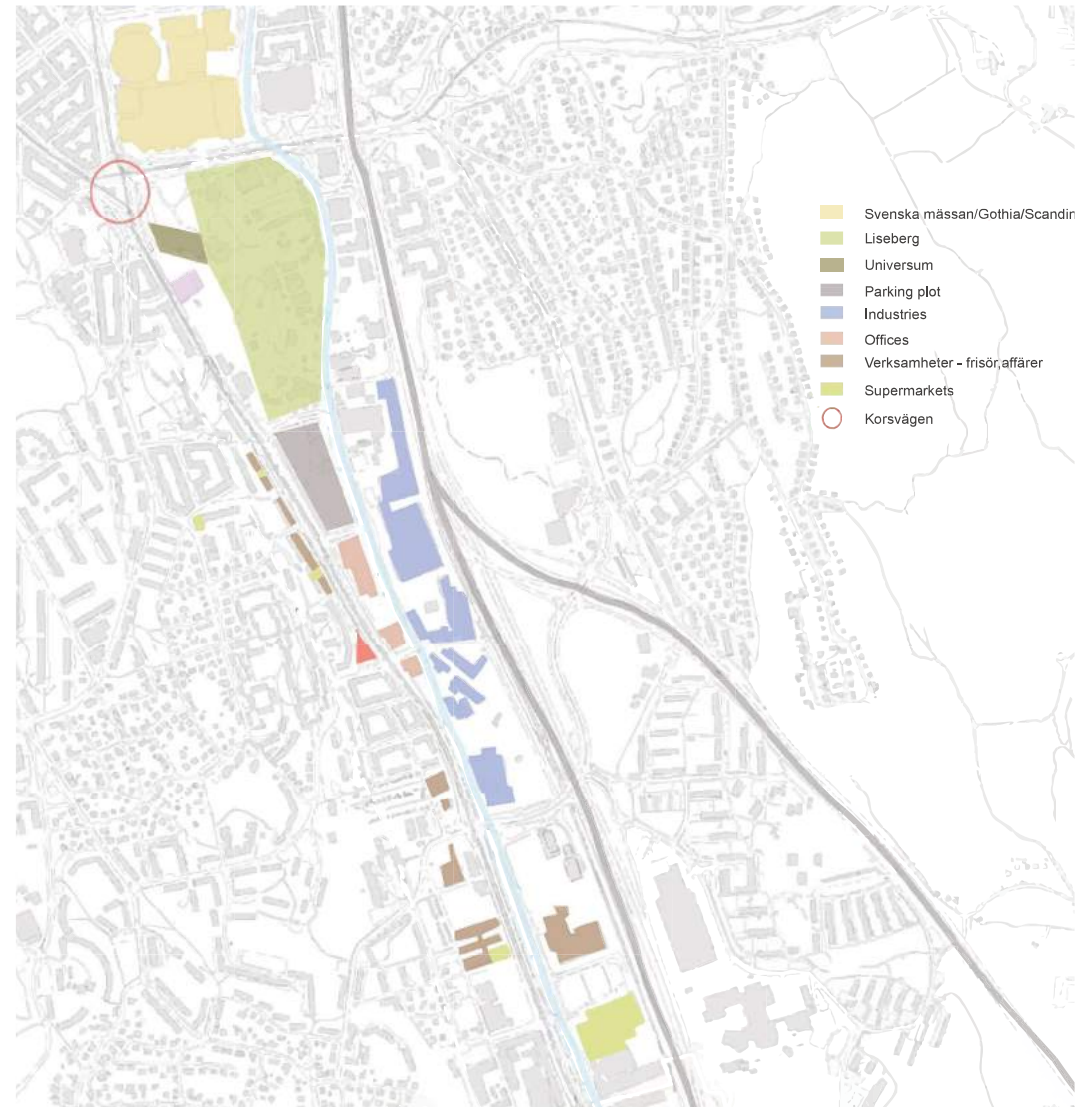
The site is located in the center of Gothenburg. Mölndalsvägen is a frequent main road with a lot of happenings.

The city plan has already started with projects and more is planned for the future, so the area is in a developing process.

The placement of the site is somewhat in the middle, between Korsvägen and Mölndal. Korsvägen is the focal point, where you can find Liseberg, Gothia Towers, Swedish Exhibition and Congress Centre and the public transportation.

Along the Mölndalsvägen there are different facilities, for all ages, as, Scandinavium, shops, supermarkets, offices, and industries.

The site has all facilities needed and the most important one is the distance to the Chalmers University of Technology, at a walking distance of 10 minutes. The connection to Lindholmen is also good, having a tram stop right in front of the site.



Overview map of Mölndalsvägen and surrounding

THE SITE

INFORMATION

The current use of the site is a parking plot. The purpose of the detailed plan is to create a student housing with 100 units and public premises on the ground floor. All accommodation is in the form of a room with a kitchenette up to 32 square meters. (Göteborgs stad, 2017)

The new building can be up to 12 floors and have an area of 1300m². Today the property is a traffic-affected open space, not well used. The site is reinforced by the fact that adjacent houses are on a higher level in a curved shape. A new building in this exposed location means a lot of the experience at the street at Mölndalsvägen. (Göteborgs stad, 2017)

The area consists of offices, residential buildings and student housing. Olofshöjd is the closest neighbor, which is a student area with a lot of different types of student units



The site- current parking plot

THE SITE

INFORMATION



THE SITE

PICTURES



The surrounding buildings with different color



The site with a residential building in the back



The site from the walking path



The site facing the main road



The site from the other side of the road

THE SITE

ANALYSIS

PROGRAM



The area consists of different types of housing, office buildings, industries, residential buildings and block houses. All these are facing the site, and they are working well together. The buildings characterize their charm with their different heights, colors and materials.



HEIGHT



The different heights of the buildings are creating an interesting view of facades. The height of the buildings is from 3 up to 12 floors, whereas the older apartment buildings are 3-4 floors and the newer buildings are up to 12 floors.

THE SITE

ANALYSIS

TRANSPORTATION



It's easy to reach the site, because of the placement. The tram and bus station is in front of the site. It takes around 6 minutes to Korsvägen by tram or bus. Framnäsgratan leads you to Johanneberg, where Chalmers University of Technology is and it is also possible to go by car or by bike. The site is offering all different transportations but the fastest way to the university is by walking.



APPEARANCE



The different facades make the whole area interesting and there is cohesion between them. The appearance of the buildings is important, and has to follow the guidelines from the existing buildings.

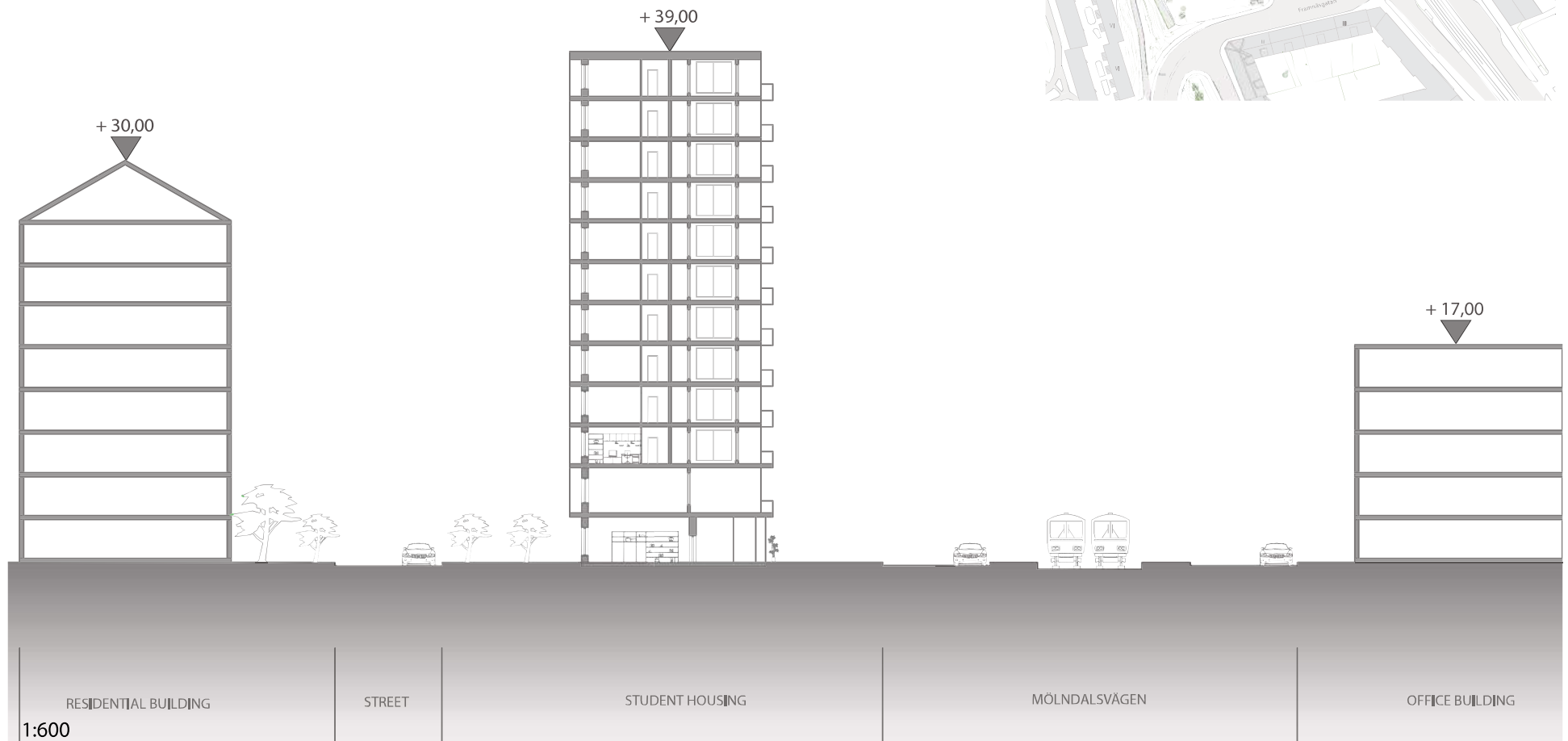
THE SITE

STREET SECTION



The current site is a parking plot and it is not elevated, but if you continue on Framnäsgratan, then it is elevated and it is a significant .

The main road can be a challenge with the noise in the background, but its strength is the appealing view and having the bottom floor of the building offering public facilities as restaurant and shops, which reflects on the street life.



THE SITE

CONCLUSIONS

The site offers different benefits. One of the main factors is the location of the site, which is an important factor to the students. According to the survey the students will be close to the university, the city center, the supermarkets and have a good public transportation. This will benefit the students since their finances are low and they won't need a car of their own.

Mölnadalsvägen is a trafficked road and there is a lot of movement in the neighborhood. The city planning has already projects going on there, and more are to come. It is a popular location of all different ages. It offers both the dynamic life and the peaceful life. The dynamics is comes from the closeness to Korsvägen and the city center. The peacefulness can be found in the green area which is also is in the close radius.

The threat of the site is the noise from the traffic. One of the facades is facing the road which can be a problem . There are solutions for that as well, protecting glass or different positions of the building. Noise levels and restrictions of a student housing are more tolerant than for other residential buildings. The façade facing the road can have a maximum of 60dB, which is acceptable for placing bedrooms on that side.

The maximum height of one of the buildings is 12 floors and the other one is 8 floors. The height is generous and is enough for a student housing, and can provide home for 100 students. The existing buildings are housing: residential buildings, offices, industries and student housing.

THE SITE

SWOT

- Location (Close to school and city center)
- The zoning (Private/public)
- The groundfloor with public functions
- Good connections with public transport
- Easy accessible
- Lot of movement
- Different types of buildings
- Different target groups

S

- The noise from the road
- One facade is facing the road
- It's a visible building, with no private areas.
- The position of the building

W

- Possibilities to blend the students common areas with the public area
- To be social engage with the the students
- To choose how public you want to be
- The position of the building

O

- Threats of the cleaning of the common rooms
- The organization of the common area in the groundfloor
- Threats of insecure places in the groundfloor
- Noisy facade

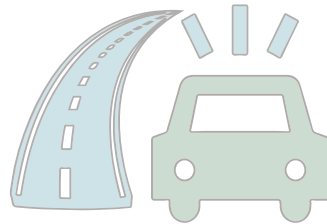
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THE SITE

SUMMARY OF CONCLUSIONS



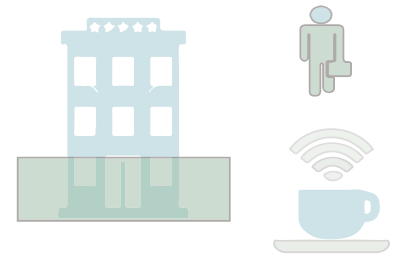
Location
Close to city center and university.



Noise
The site is facing a noisy road.



Building heights and types
The site is surrounded of different building heights and building types



Groundfloor
The groundfloor is open up for the public

THE HOUSING PROJECT

THE HOUSING PROJECT

The final outcome of the project consists of different proposals. The main idea is based on the survey, from the needs of the students and developed through the different proposals. The proposals are different from the final outcome.

The plot had some guidelines that were needed to follow and which helped me through the project. The road was a challenge as well as the area of the site. It helped me arrange the functions in the building.

The building is divided in two parts by the corridor, the private units on the west side and the common area on the east side. The corridor is not completely straight, it has some extensions, which are making it less long and more interesting. With the large windows against the farming area, the corridor is a more inviting space.

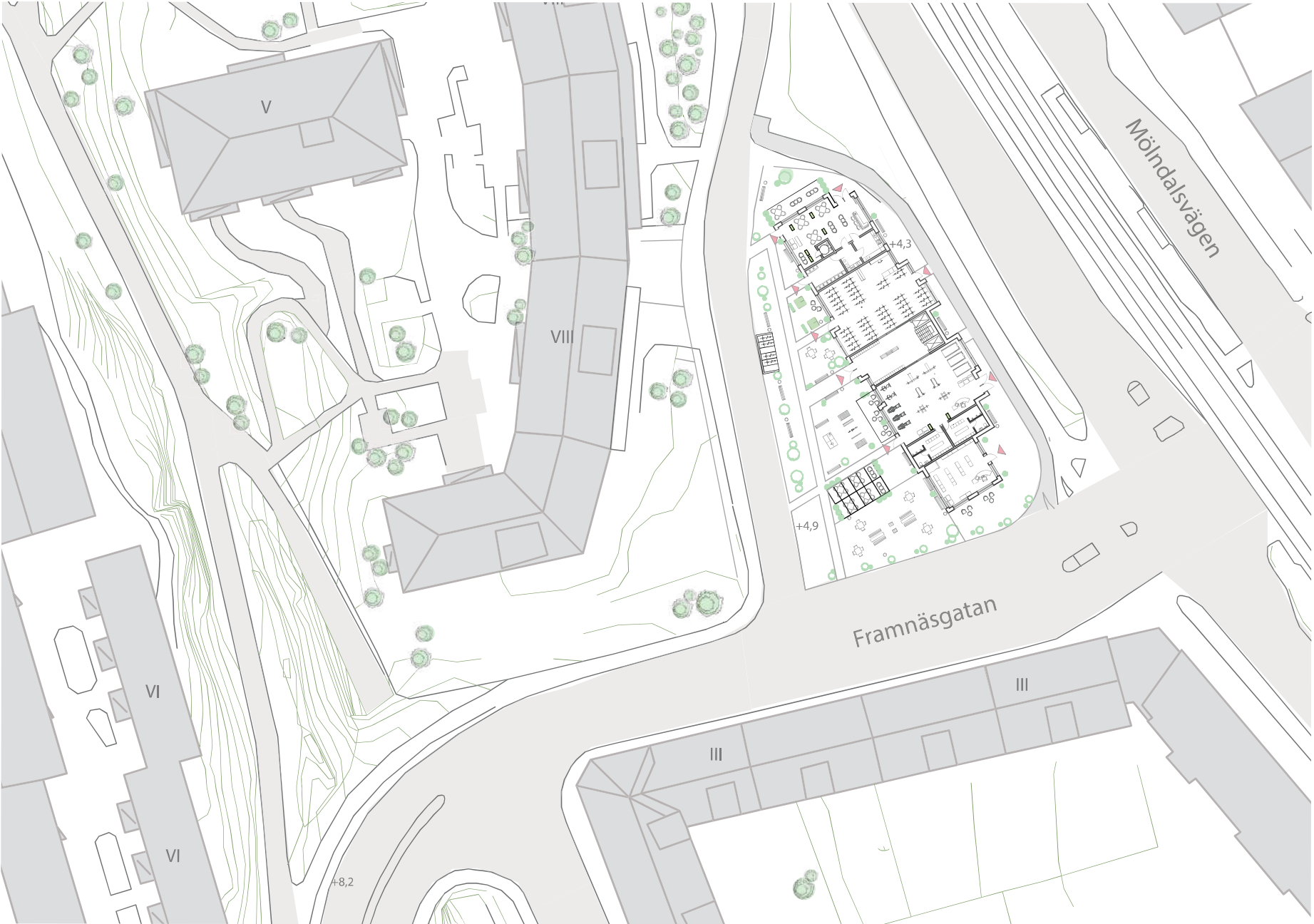
The common spaces are well defined from the students' needs and have the possibility to be exposed and enclosed.

In the private units there is a lot of storage space to have the sense of home feeling and put the personal touch on it. This makes the private unit inviting, personal and pleasant for the students to stay.



Sketch of the laundry, a place to meet

THE SITE



THE SITE

The area consists of offices, residential buildings and student housing. Olofshöjd is the closest neighbor, which is a student area with a lot of different types of student units.

The floors of the students start at level two. The ground floor is a public one and the first floor is aimed for offices.

The building has 12 floors and a roof terrace on the top and a public ground floor. The east facade is facing Mölndalsvägen, which is a busy road. There are excellent public transportations to the site. The tram and the bus stop is in front of the site and there are opportunities to bike or walk to different locations.

On the west side of the site the student housing has an inner garden, which is aimed for the students and the public. This side of the building is not as frequent as the other one, this one is also facing the residential building.

The different heights of the buildings are creating an interesting view of facades. The height of the buildings is from 3 up to 12 floors, whereas the older apartment buildings are 3-4 floors and the newer buildings are up to 12 floors.

The different facades make the whole area interesting and there is cohesion between them. The appearance of the buildings is important, and has to follow the guidelines from the existing buildings.



Picture of the site from Mölndalsvägen

GROUND FLOOR

The ground floor is aimed for the public but there are some facilities for the students. Both entrances for the different facilities are on the east and the west side from Mölndalsvägen. The main entrance for the students is located on the west side from the inner garden.

On the main entrance there are mail boxes and large windows that are separating from the bike storage and the gym. The windows make the space inviting and secure, because it is visible.

The bike storage is a large area because the focus is on the sustainability and by using the bike instead of other transportations we are saving the environment. There is also a small area for a bike workshop, especially as students are known for biking.

Next to the bike storage, there is the recycle room, which is shared with the kitchen of the café.

The café has an outside sitting area on the north side, with a nice view, but there is also the possibility to sit in the inner garden if wanted.

On the south side of the building there is a gym and the second hand shop. The gym has a paying system and it is possible for the students to use it, if wanted.

In the second hand shop, the students are able to hand in stuff they do not need anymore and even buy things when they cannot make ends meet.

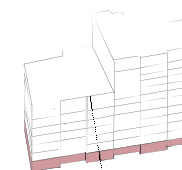




MÖLNDALSVÄGEN

- 1 CAFE
 - 2 RECYCLE ROOM
 - 3 BIKE STORAGE AND WORKSHOP
 - 4 ENTRANCE
 - 5 GYM
 - 6 SECOND HAND SHOP
- | | |
|------|---|
| 70m | 2 |
| 16m | 2 |
| 115m | 2 |
| 50m | 2 |
| 160m | 2 |
| 50m | 2 |

1:300



FLOOR PLAN

FROM FLOOR PLAN TWO TO FLOOR PLAN EIGHT

The floor plan consists of student housing and it begins from level two. This floor plan is from level two to level eight, because the height of the building has a maximum of eight levels.

The floor plan is somehow divided into two parts, the private units and the common area. The common area is located on the east side, facing the road, while the private units are on the west side facing the inner garden.

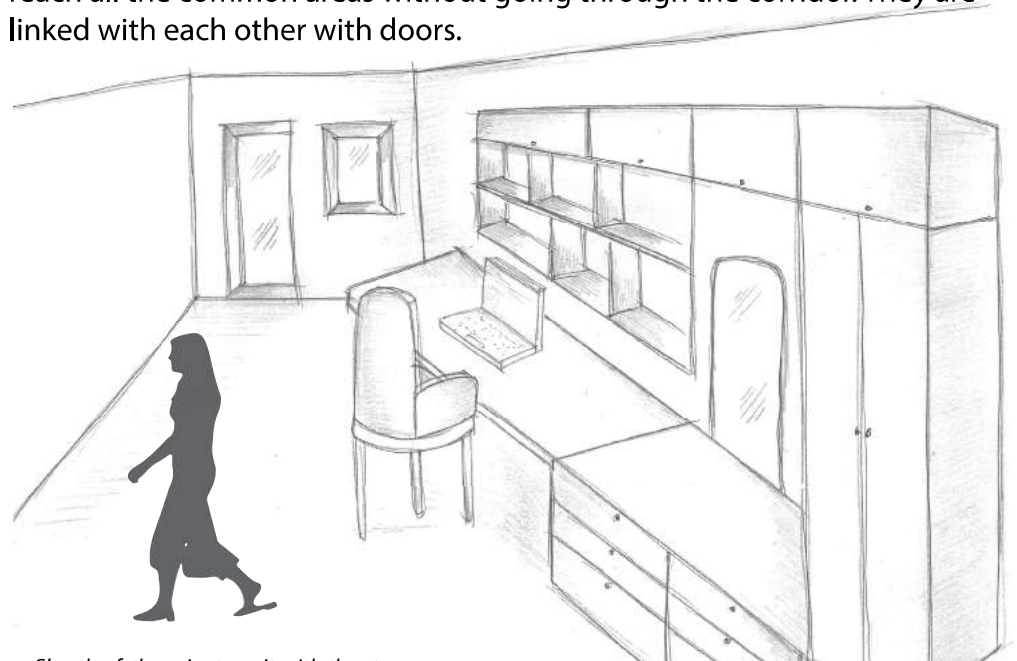
The corridor is dividing the common area from the private units. The corridor is not completely straight it has some parts that are extended, this creates an illusion of a playful and not so long corridor. There is light in the corridor, coming from the windows of the farming area.

The private units are following the shape of the corridor with the extended parts. This reflects the facade. The units consist of private bathrooms and a French balcony. The balcony makes the unit larger than it is, which is needed because of the small area in the unit.

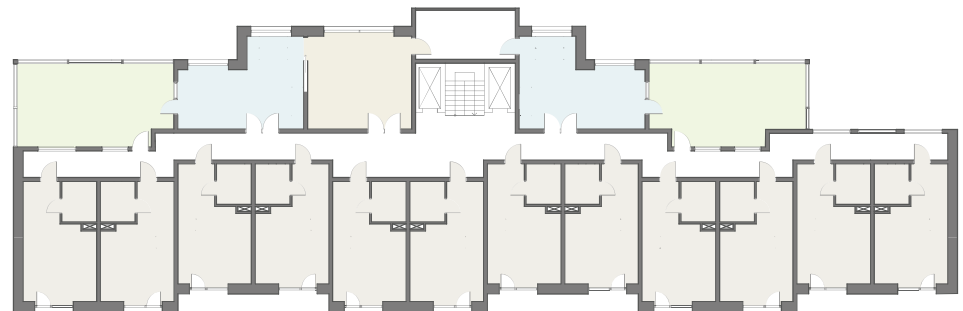
The common areas which are facing the road are: kitchen, living room, farming and balcony. The whole floors consists of twelve private units and are divided into two kitchen and farming areas, which means six private rooms on each kitchen area. This depends on the socializing, because the students are comfortable with less people. The conflicts will then be reduced because of this arrangement.

They have a common living room and a balcony. These spaces are secondary in comparison to the kitchen and the dining room. The kitchen is a holy area which is constantly used by the students, while the living room is not used very often.

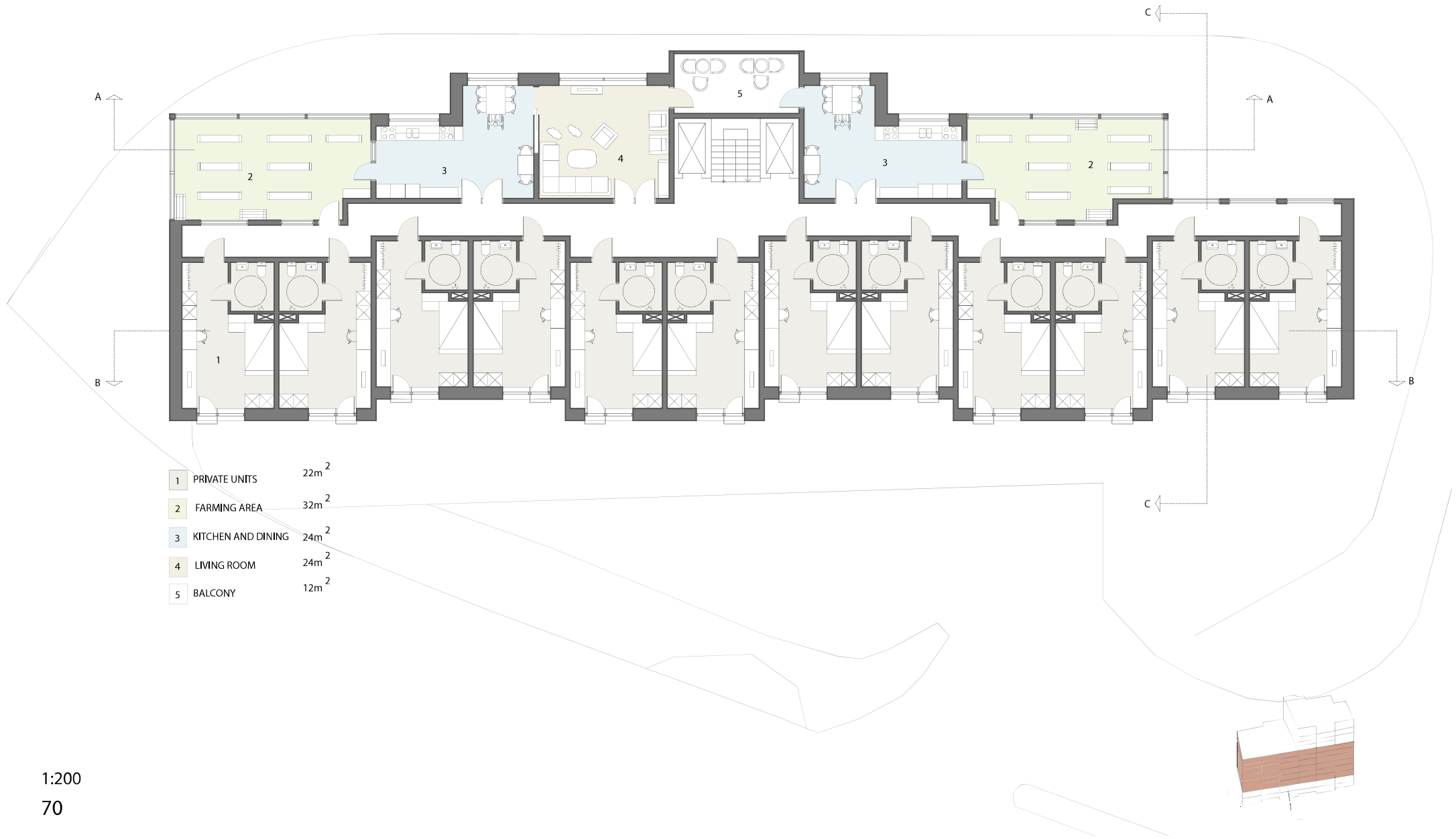
The common areas are also linked to each other, there are possibilities to reach all the common areas without going through the corridor. They are linked with each other with doors.



Sketch of the private unit with the storage



- SHARED BY ONE
- SHARED BY 6 PEOPLE
- SHARED BY 6 PEOPLE
- SHARED BY 12 PEOPLE
- SHARED BY 12 PEOPLE



FLOOR PLAN

FROM FLOOR PLAN EIGHT TO FLOOR PLAN TWELVE

The plot consists of two different heights of the building, which means there are different floor plans. This floor plan is from level eight to level twelve.

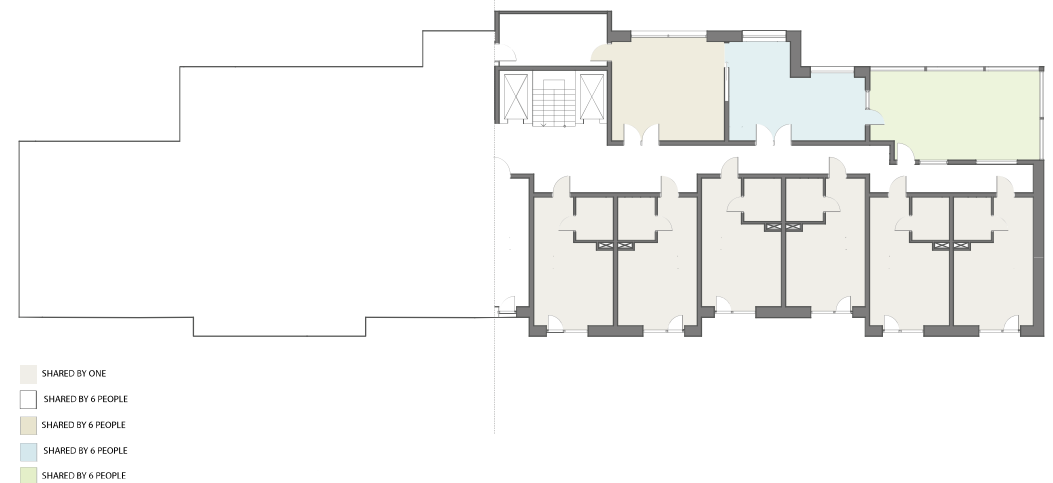
They have the same facilities and concept as the previous floor plan. The difference between them is that there are only six units on one floor, which means that there is only one kitchen, one dining room, one living room, one farming area and one balcony.

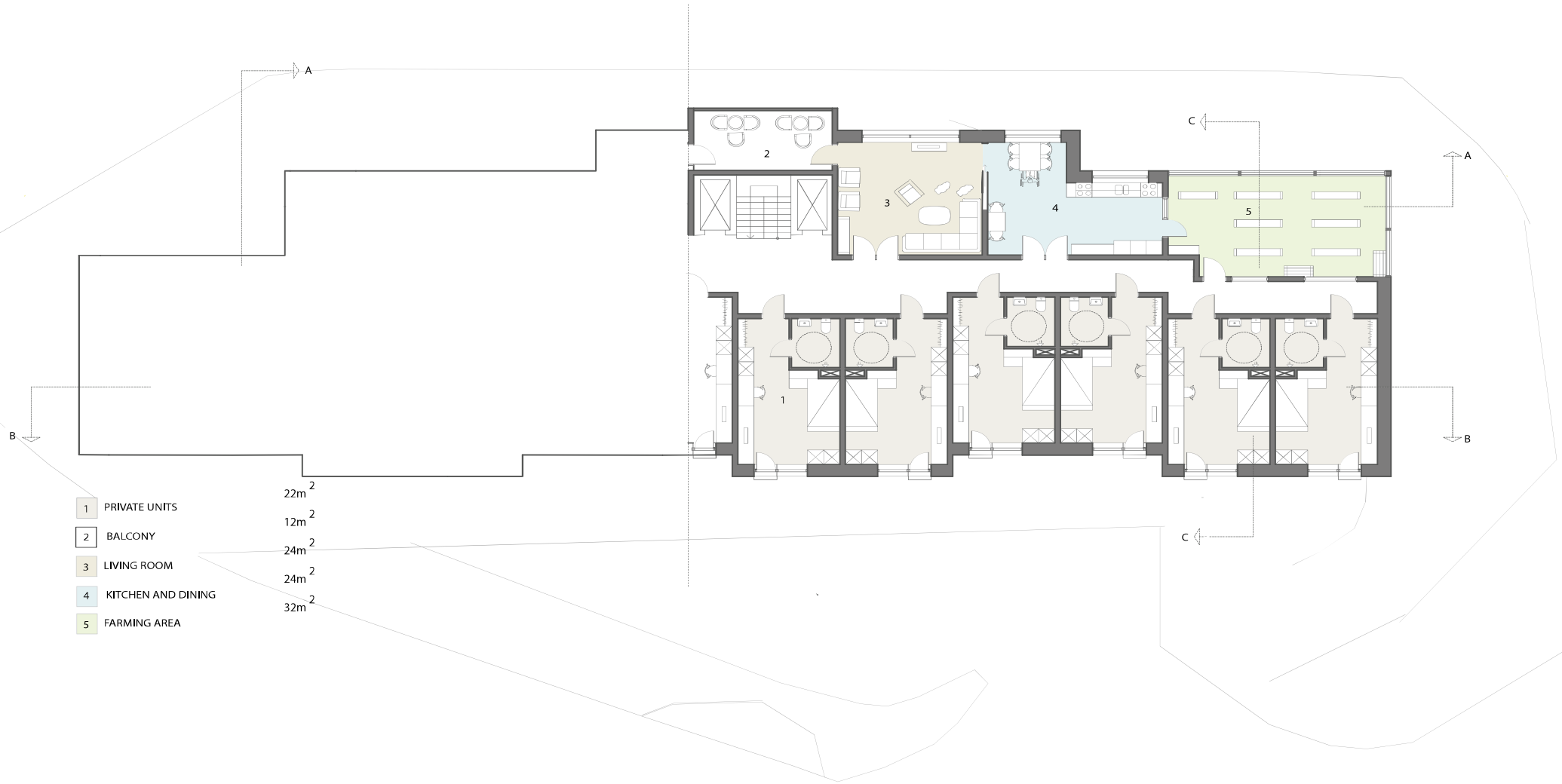
The common rooms consist of large windows allowing as much sunlight as possible, creating an inviting area, but they are also separated by a wall to the corridor with no large windows, due to the level of privacy. The students have the opportunity to choose if they want to be private or not.

In the common areas there are possibilities to socialize, to prepare food, to cultivate the food and to exchange knowledge.



Sketch from the dining room, with a view of the vertical farming





ROOFTOP FLOOR

ROOF TERRACE

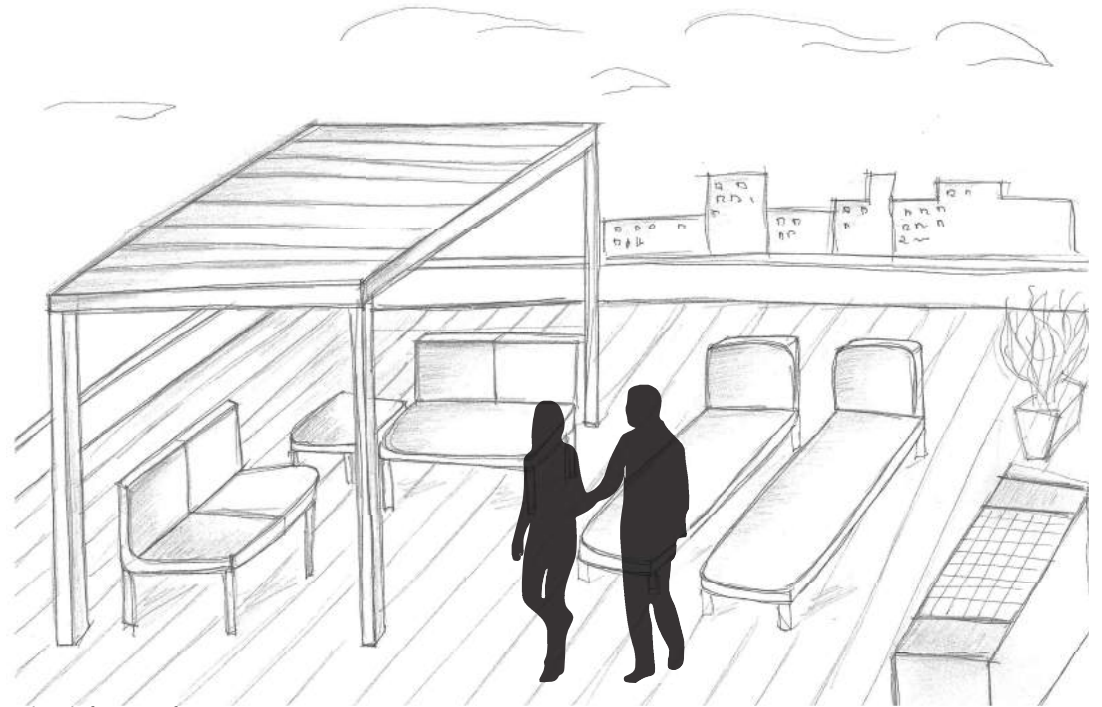
On the eight floors there is a roof terrace which is only aimed for the students. There is a laundry and a green house on the roof terrace. In the laundry there are possibilities to socialize, there are seating places and a table board.

The laundry is working by a booking system, but there are possibilities for more students to do their laundry at the same time. By having the laundry on the roof top with, large windows, it makes the area comfortable and safe, because the laundry is usually placed in the basement, and by placing it on the roof, I'm highlighting the area to feel secure. In the summer period there are possibilities to dry the clothes outside, which is a better way than using the dryer.

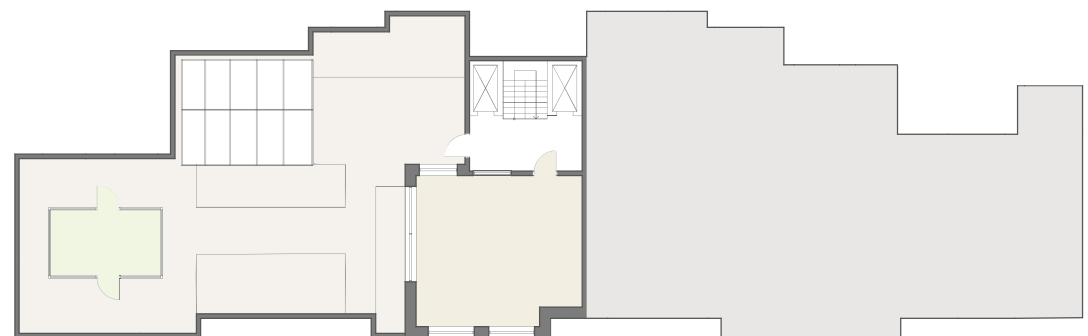
The roof terrace is an area to socialize but also to cultivate the food. There are different sitting areas, covered area, area where they can sunbathe and benches on different places. The whole roof is closed by the fence.

The roof terrace is a place which is used both during the summer and the winter period, because the laundry and the green house can be used all around the year, and even if there is a snow period, the area can be an appealing area to socialize.

There are solar panels placed on level twelve, to absorb the sunlight and use it for electricity.



Sketch from roof terrace



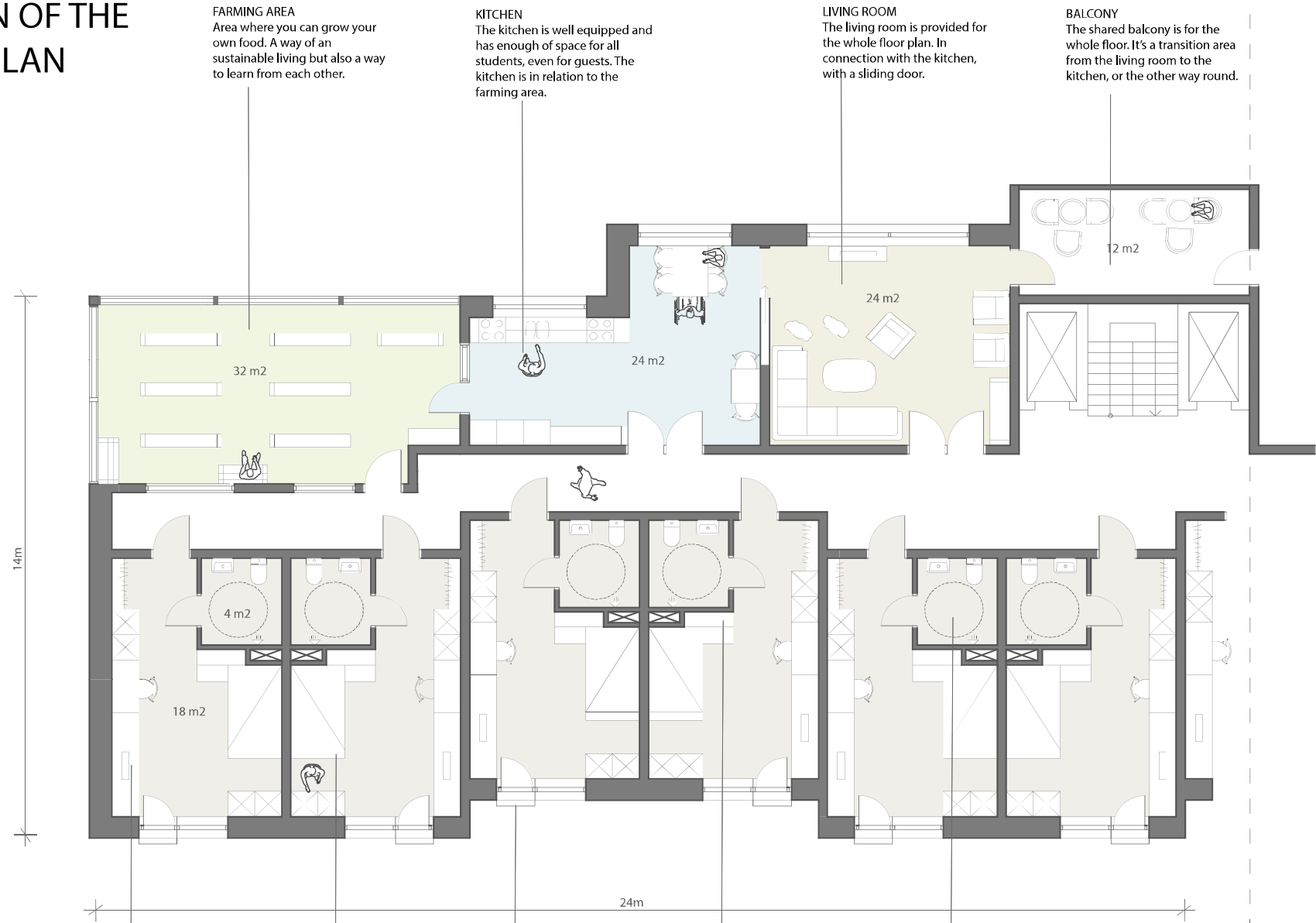
SHARED BY ALL STUDENTS
SHARED BY ALL STUDENTS
SHARED BY ALL STUDENTS



- 1 GREEN HOUSE
 - 2 ROOF TERRACE
 - 3 LAUNDRY
 - 4 SOLAR PANELS
- 15m²
200m²
50m²
265m²

1:200

ZOOM IN OF THE FLOOR PLAN



FURNITURE
Integrated furniture in the room, the storage is placed vertically on the walls. There is space for storage, desk and tv.

FURNITURE
Shelf in front of the bed that's possible to move. Between the wall and the shelf there are wardrobes.

WINDOW
French balcony, to have the opportunity to open up and have fresh air but also the need of sunlight. The balcony creates an illusion of a larger room.

FURNITURE
Different shelves are placed behind the bed, they are integrated with the shaft and covering it.

BATHROOM
All the bathrooms are adapted for people with special needs.

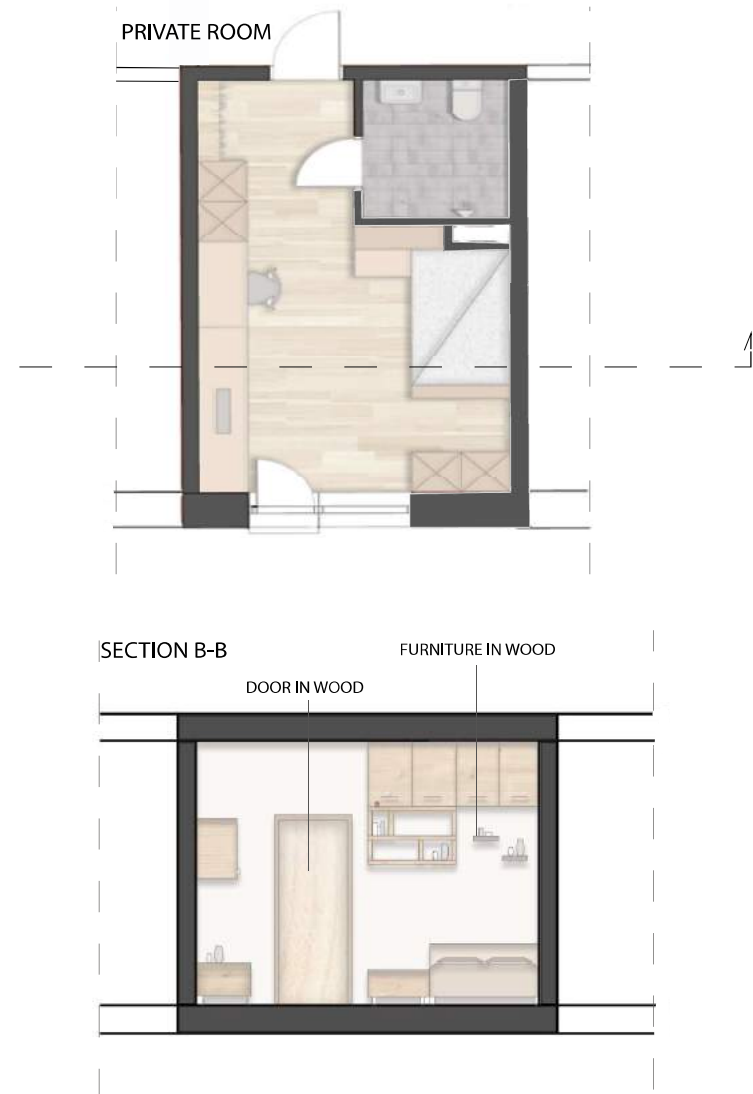
MATERIALS AND FUNCTIONS IN THE UNITS

In the private units there is integrated wooden furniture from the material CLT. The students have the possibilities to rearrange the room according to their needs. The wooden furniture is hard wearing furniture, is easy to clean, easy to move, and is sustainable. (*Apa wood, 2017*)

According to the survey from the students, the need of storage in the rooms is necessary. In the private units there is a lot of storage made of wood with smart storage solutions, over the bed that is growing on the walls. The area of the units is a standard area, and with the French balcony and the smart solutions of storage, makes the unit compact to live in. (*Studentbostads företagen, 2016*)

There are many large windows in the building and this is to get as much sunlight as possible, to have bright rooms because the students feel more comfortable in that kind of areas.

The farming area is completely glazed, to absorb the sunlight to the crops. This area is highlighting the building as a cultivate building because of the visibility from the road. It is also visible from the corridor and is separated with large windows instead of a wall.



MATERIALS AND FUNCTIONS IN THE UNITS

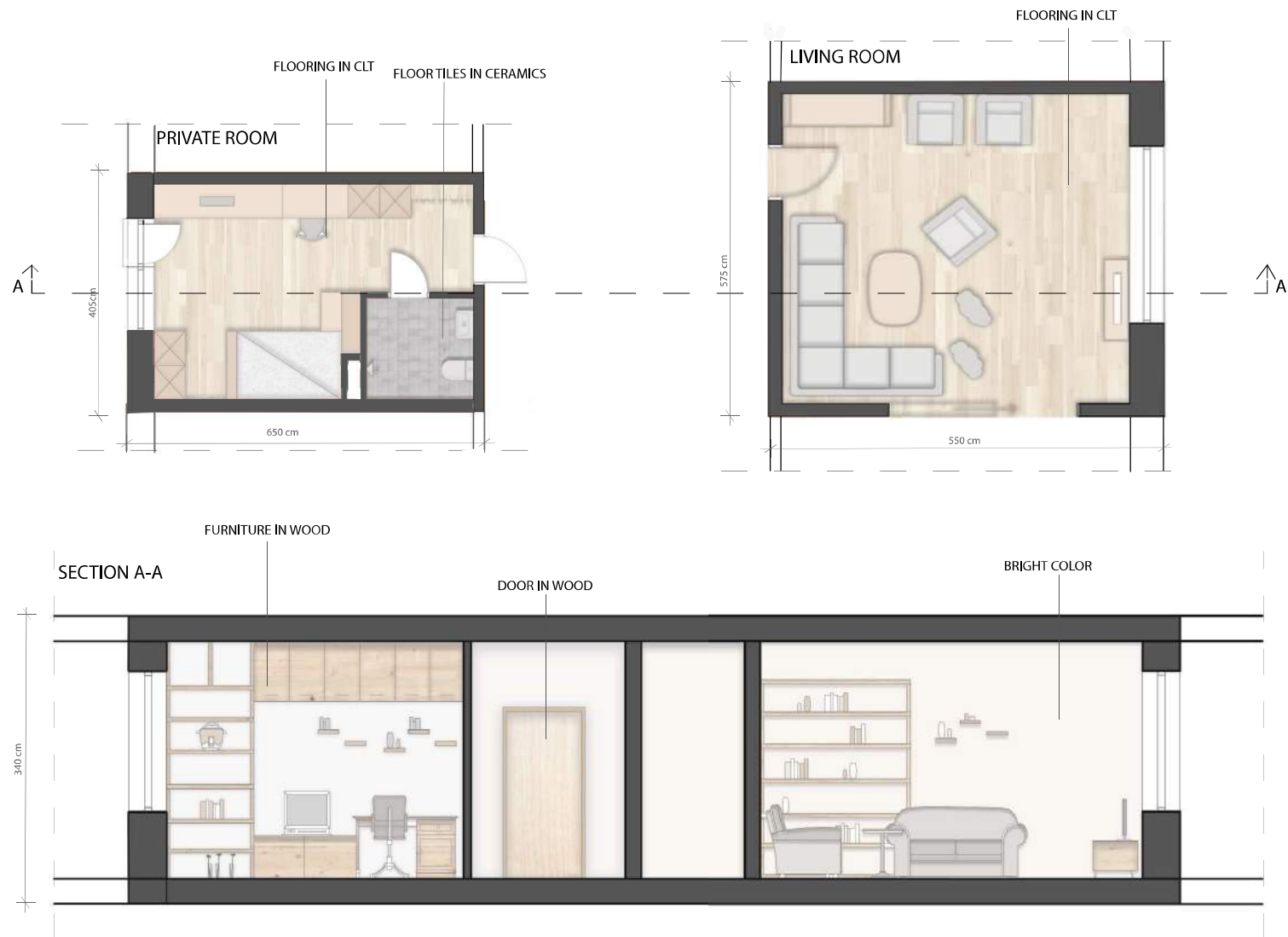
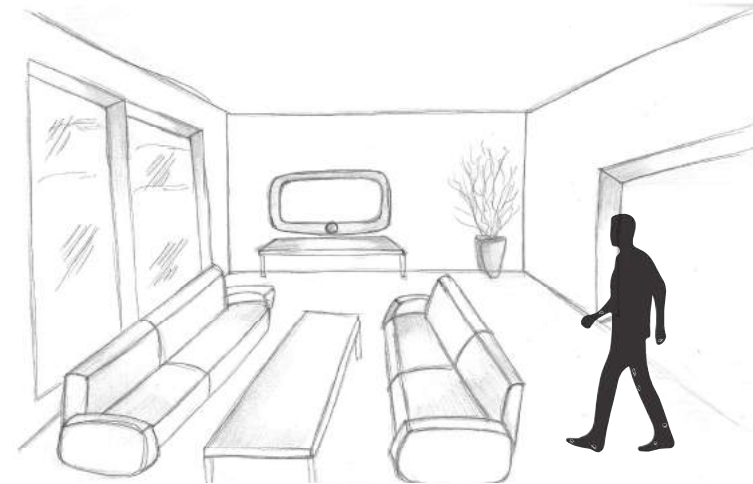


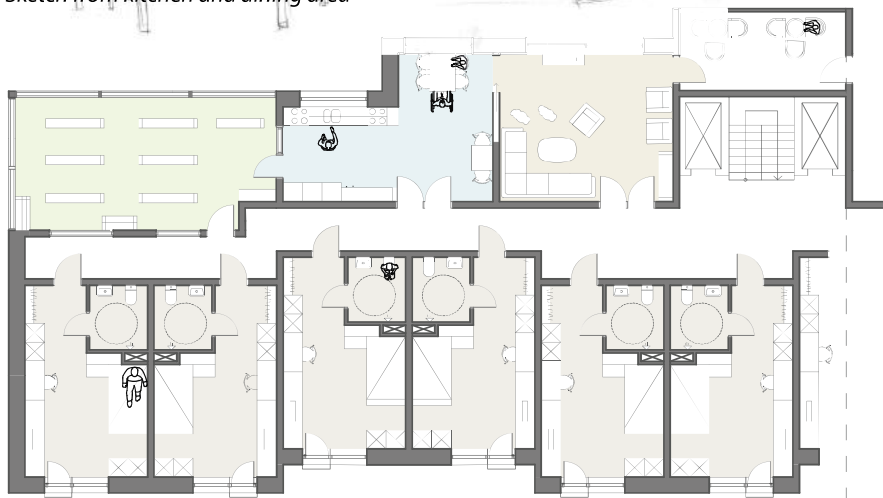
DIAGRAM OF THE USE IN THE UNITS



Sketch from kitchen and dining area

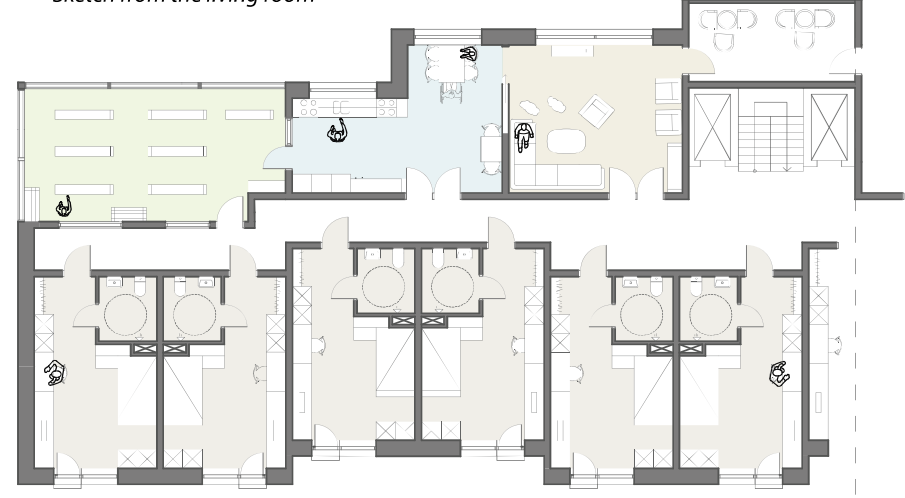


Sketch from the living room



MORNING

The building is used in different ways depending on what time of day it is. The usage in the morning and at night is very different, because the students go to the university in the morning, which means a lot of movement in the kitchen.



EVENING

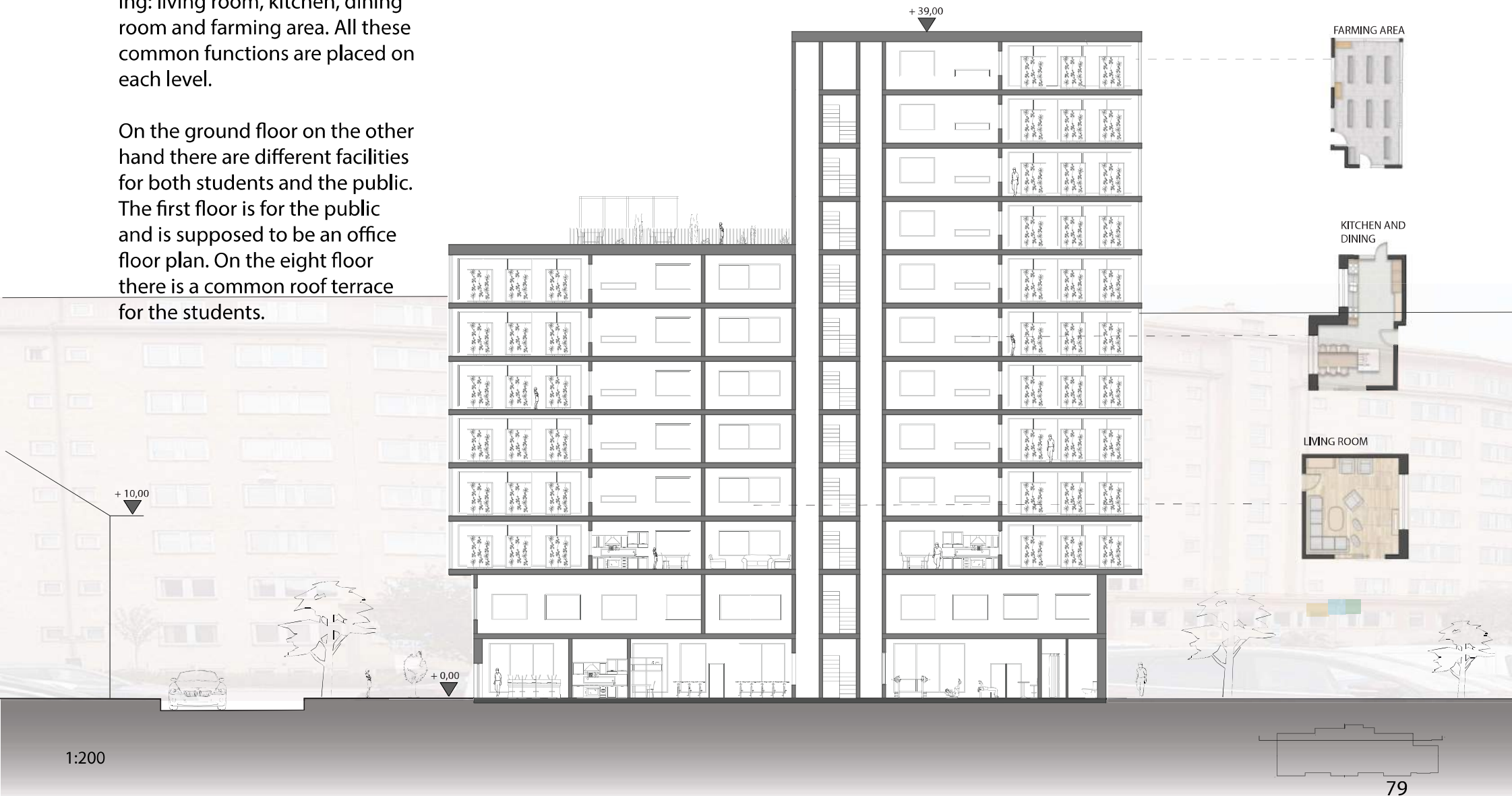
In the evening the students are back from the university, and need to prepare food or study. Some of them are doing the laundry or having friends at their place. On weekends they are back from discos at night and need to prepare a small meal before going to bed.

SECTION A-A

DIFFERENT UNITS

The section shows the different common functions in the building: living room, kitchen, dining room and farming area. All these common functions are placed on each level.

On the ground floor on the other hand there are different facilities for both students and the public. The first floor is for the public and is supposed to be an office floor plan. On the eight floor there is a common roof terrace for the students.

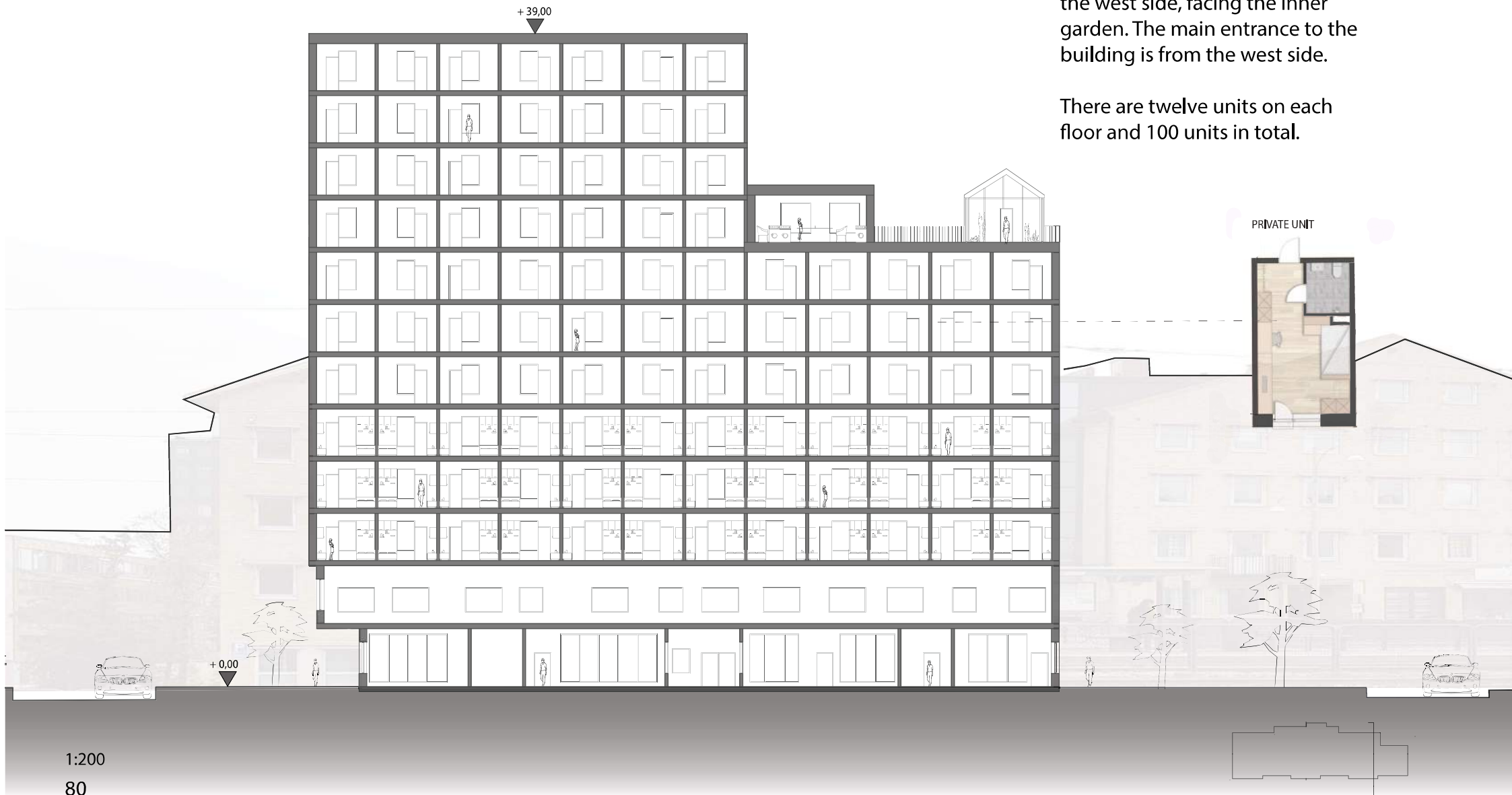


SECTION B-B

DIFFERENT UNITS

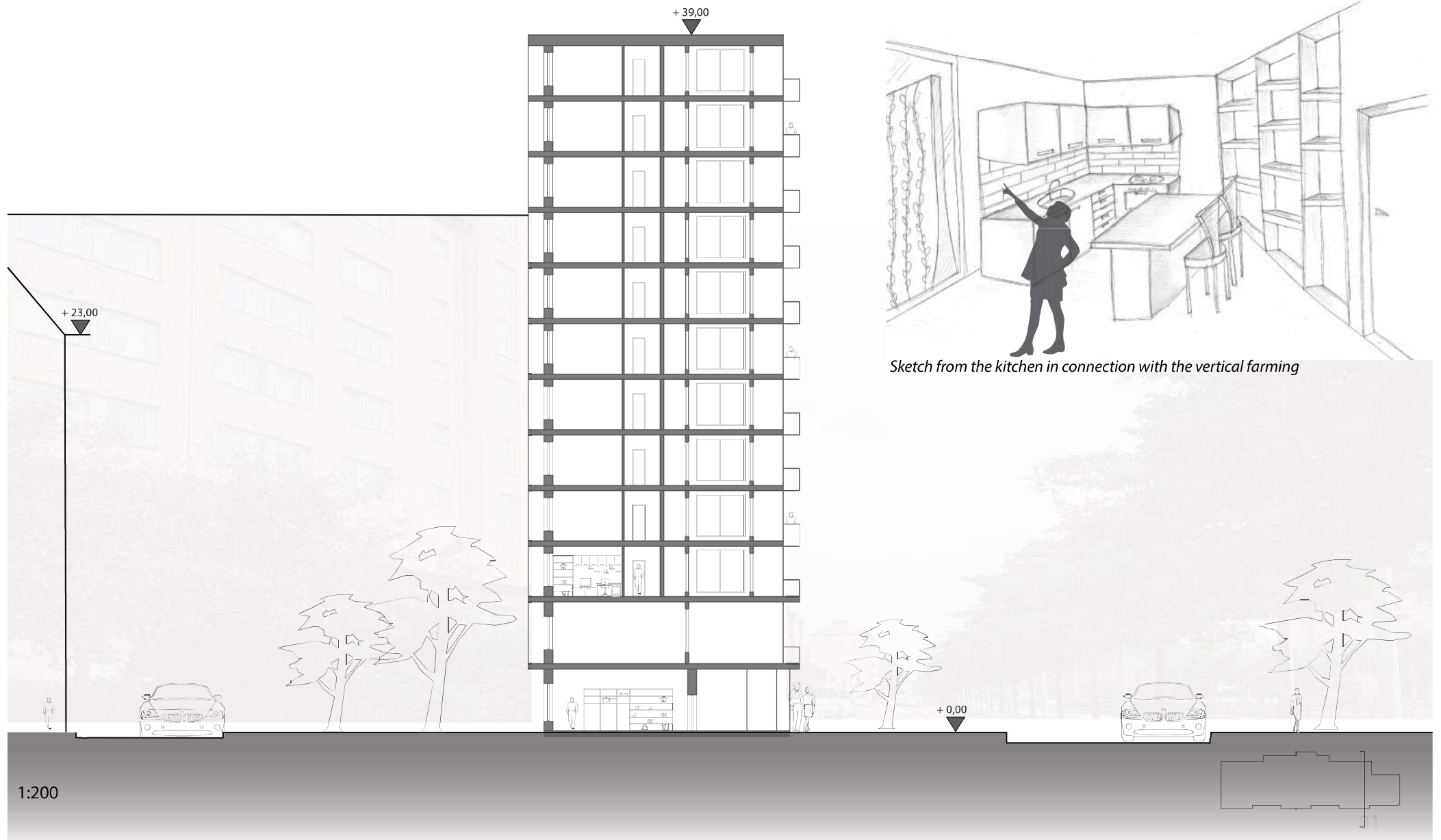
The section B-B shows the private units which are placed on the west side, facing the inner garden. The main entrance to the building is from the west side.

There are twelve units on each floor and 100 units in total.



SECTION C-C

DIFFERENT UNITS



ZOOM IN OF THE INNER GARDEN

The inner garden is located to the west of the building, towards the residential building. It can be reached both from Framnäsgratan and Mölndalsvägen and it is a visible inner garden without enclosed area, with fences or large trees.

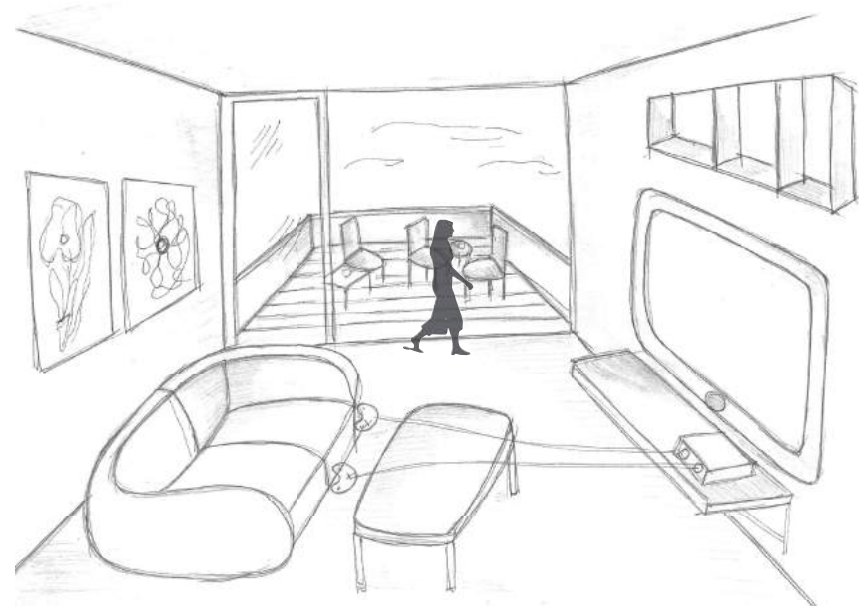
The area is for the students and the public to have a social interaction and there are different spaces with different functions.

There are paths that divide the different spaces, the paths are made of wooden panels, while the different spaces are: grass, stones and wooden panels. The paths are not only dividing the spaces, they are also guiding you to the different entrances. There are entrances on both sides of the building.

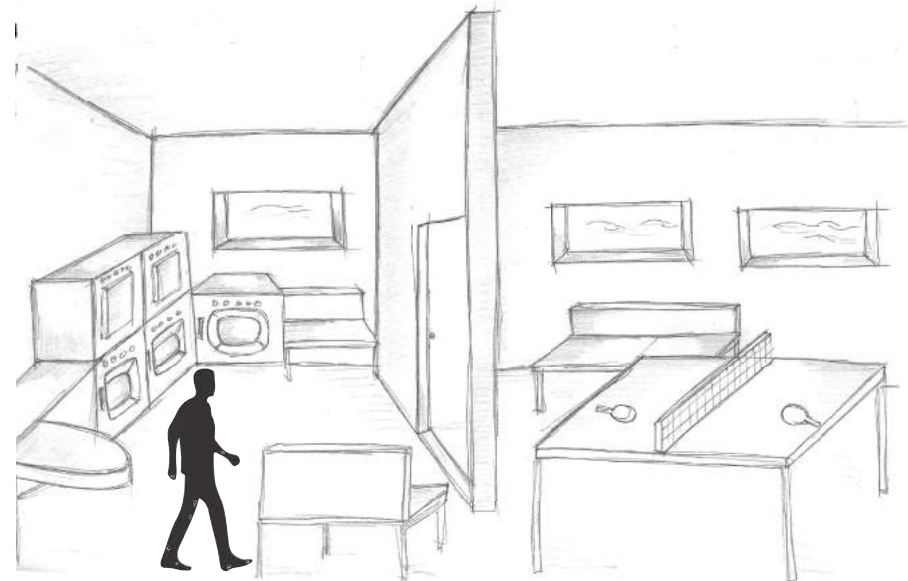
The large area in the south is a barbecue area, with covered sitting area and benches that are not covered. Next to the area is the gym, which can be extended to outside. In the summer period there are possibilities to be outside and exercise, there are different equipment for that, but these can also be used for the children as in climbing.

Next to the entrance there are tables and chairs where you can relax and maybe have a cup of coffee. There is also an area with allotments, where you can grow different crops.

The area is also provided with a bike shell for visitors and benches all over the whole plot. The benches on the front of the building are placed close to the facade. There is also a lot of green structure, different bushes, plants and trees.



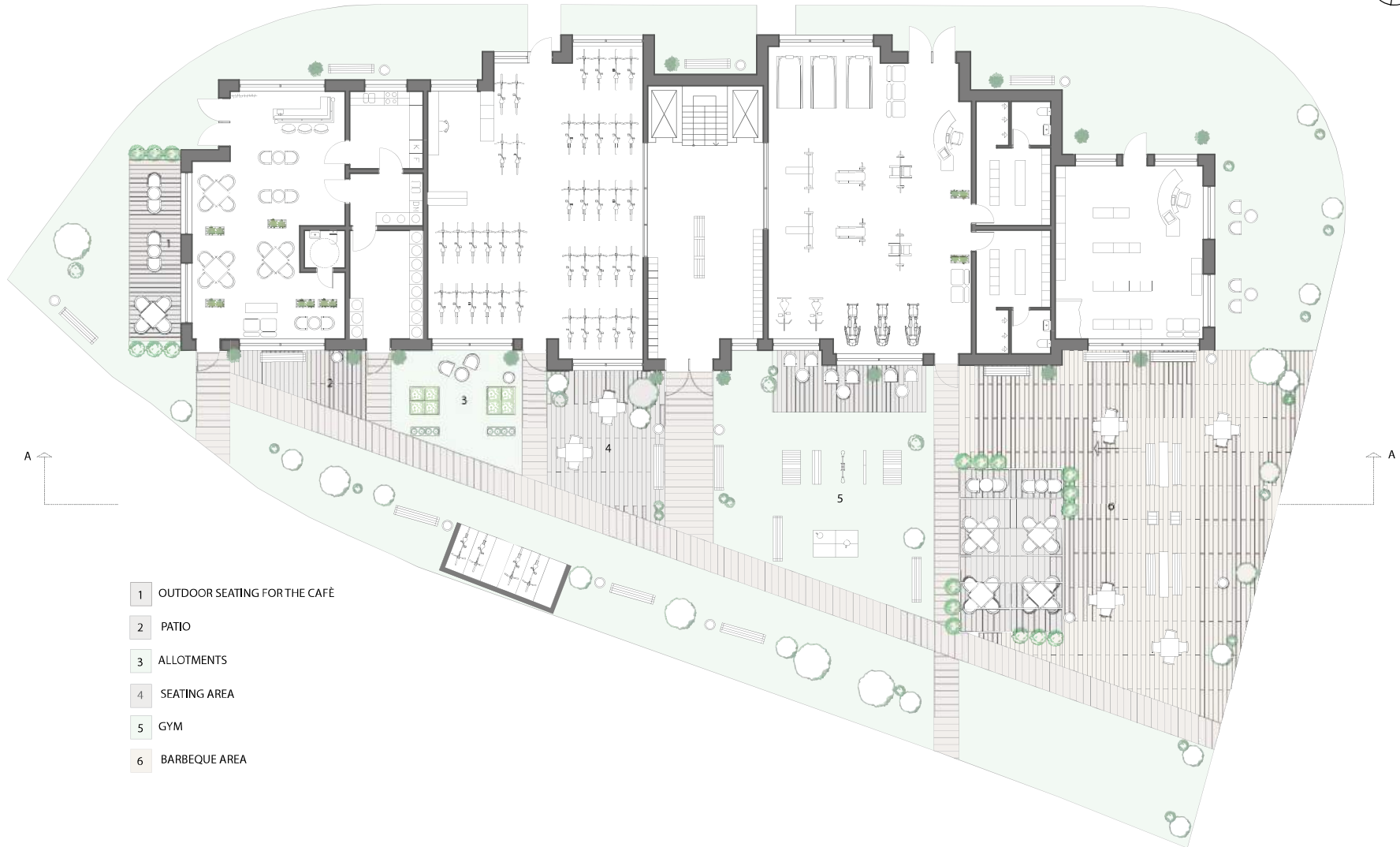
Sketch from the living room where the students can play games



Sketch from the laundry with a play area in the next

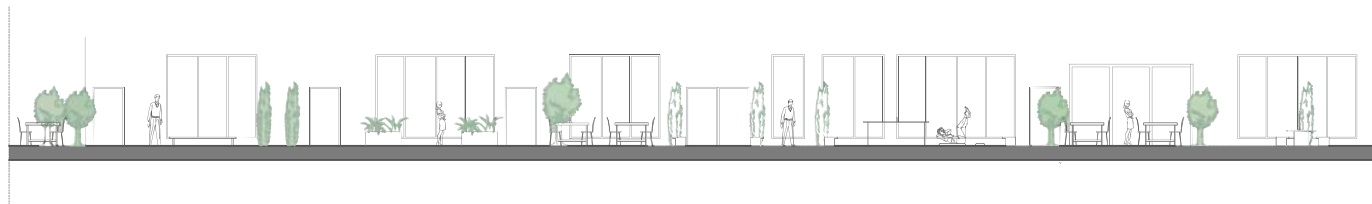
ZOOM IN OF THE INNER GARDEN

MÖLNDALSVÄGEN



- 1 OUTDOOR SEATING FOR THE CAFÉ
- 2 PATIO
- 3 ALLOTMENTS
- 4 SEATING AREA
- 5 GYM
- 6 BARBEQUE AREA

1:250



ZOOM IN OF THE ROOF TERRACE

The roof terrace is only for the students, who have the opportunity to use it whenever they want. The laundry is placed on the roof and has a multifunction, it is both used for the laundry but also for socializing. The large windows from the both sides make the environment comfortable and secure.

The roof terrace is divided in different spaces of seating places one covered space, area for tanning, seating area together or separated. Benches are placed in different corners and in front of the green house.

There are both exposed and hidden places on the roof terrace.

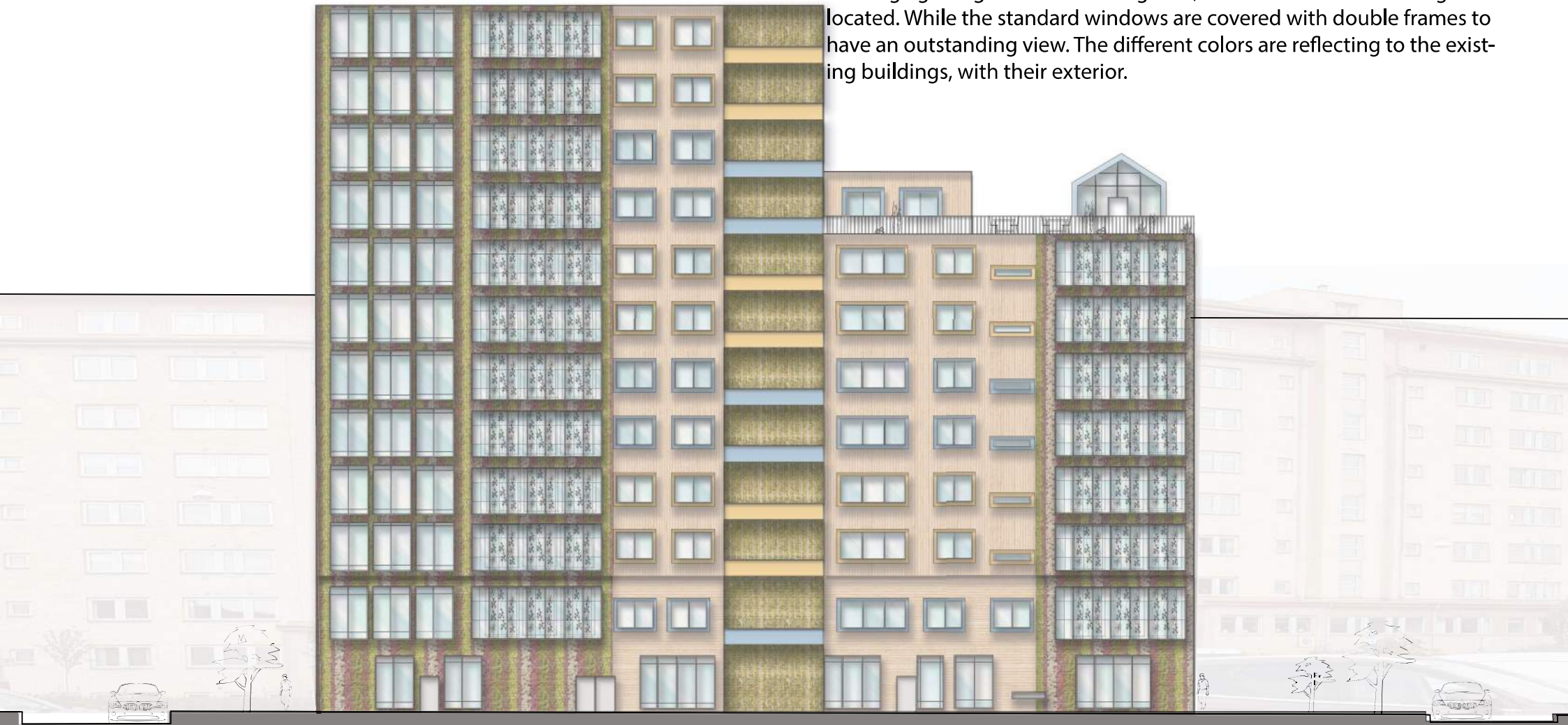
The different seating areas are made of wood while the rest is tiles. There are different plants or plant boxes on the terrace to divide the different space.



EAST FACADE

The facade is made of wooden panels of CLT, which are easy to use, almost no waste on site, with superior acoustic, fire performance with a low environmental impact. *(Apa wood, 2017)*

The large glazing is for the farming area, where the vertical farming is located. While the standard windows are covered with double frames to have an outstanding view. The different colors are reflecting to the existing buildings, with their exterior.



FRAMNÄSGATAN

1:200

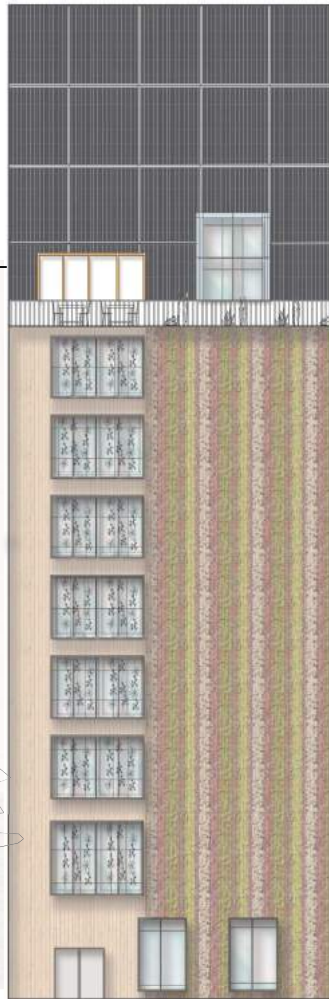
MÖLNDALSVÄGEN

85

NORTH AND SOUTH FACADES

NORTH FACADE

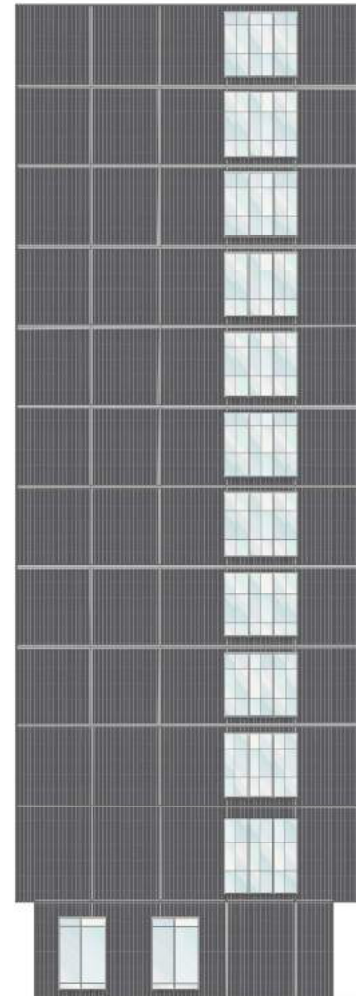
The facade is not completely covered with solar panels or solar collectors because it is on the north side. Only one part is covered, from the roof terrace up to the twelfth floor.



1:200

SOUTH FACADE

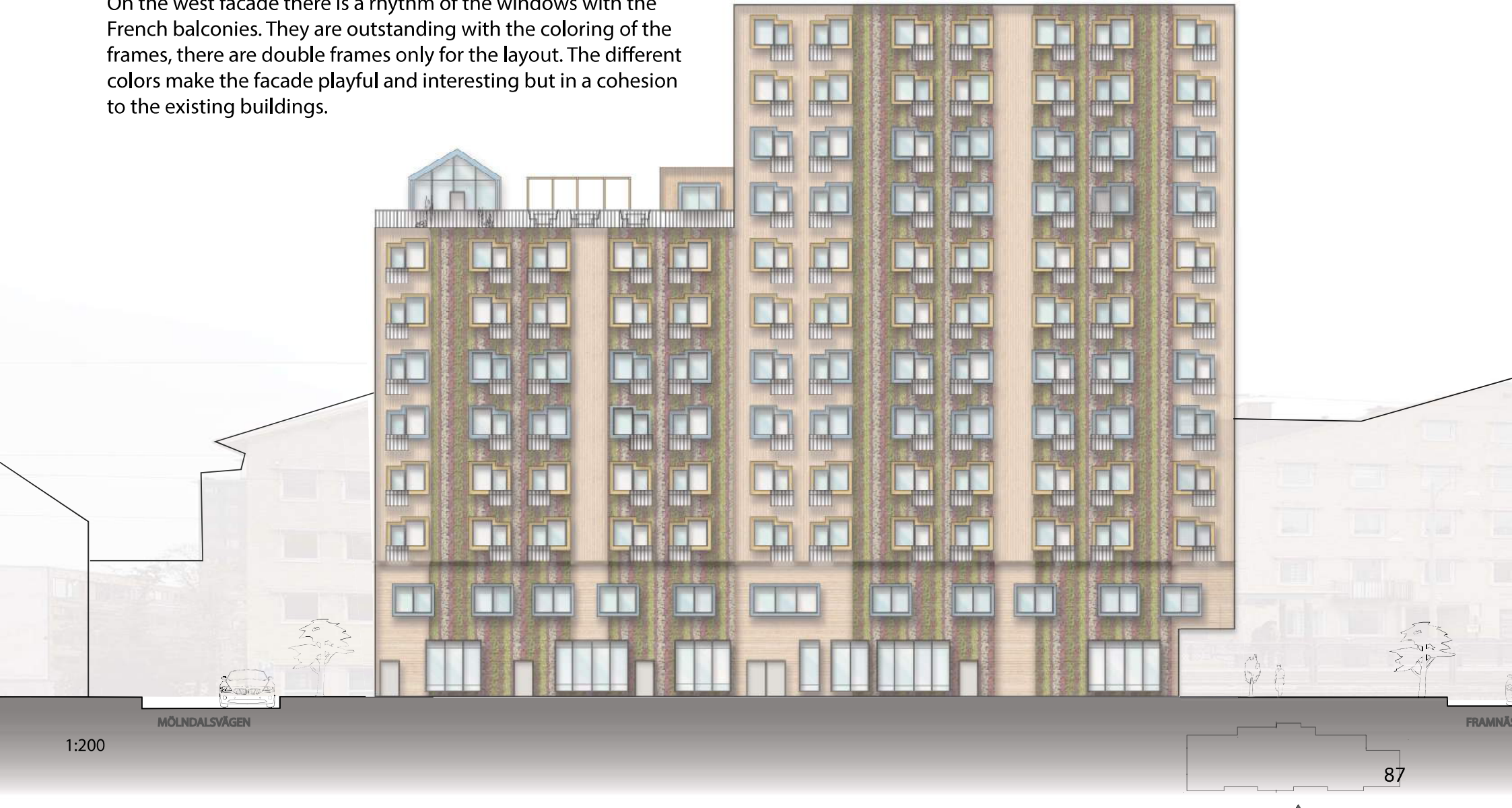
The south facade is completely covered by the solar collectors.



MÖLNDALSVÄGEN

WEST FACADE

On the west facade there is a rhythm of the windows with the French balconies. They are outstanding with the coloring of the frames, there are double frames only for the layout. The different colors make the facade playful and interesting but in a cohesion to the existing buildings.



ZOOM IN OF THE FACADE



CORRIDOR

Large windows in the corridor, to have a nice view and to get sunlight in the area. With the large windows the corridor is not so claustrophobic. The windows have the same size to have order in the facade.

FARMING

The curtain wall is placed on the farming area, because the plants need a lot of sunlight. The frames are made of wood to blend in to the facade, but also as a sustainable factor. These huge glazing makes the facade outstanding and is highlighting the farming.

KITCHEN

The opening in the kitchen consists of a standard room, with larger dimensions. The extra frame of the window is the special detail for the facade. This extra frame makes the whole facade interesting and extraordinary. The different colors correspond to the existing buildings, and the frames are also made of wood (CLT).

BALCONY

The central placed balcony is made wood (CLT). It has the same color as the rest of the level. The balcony does not have any windows because the staircase is on that place. The balcony is placed in front of the stairwell.

FACADE

The facade is made of CLT wood, which is easy to work with and is sustainable. The material has different layers to choose between and they are glued together. There is a factory in the north of Sweden, which makes the transport much easier.

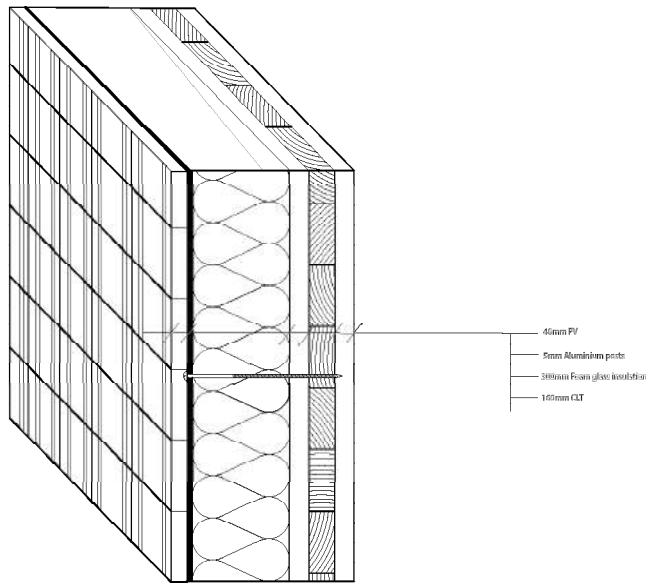
ROOF TERRACE

The roof terrace is made partly in wood and ceramics, the floor is made of tiles, and some seating areas are made of wooden panels. The fence is made of wood as well.

GREEN HOUSE

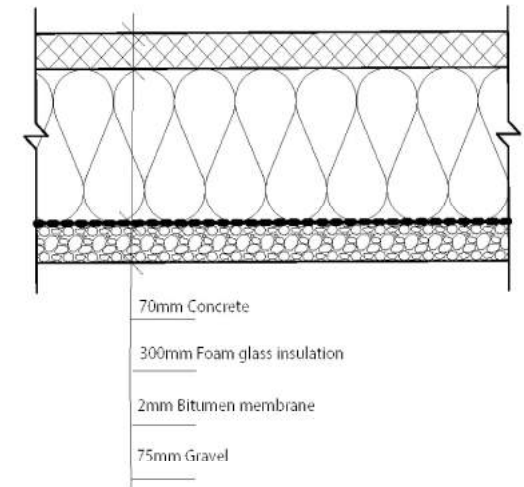
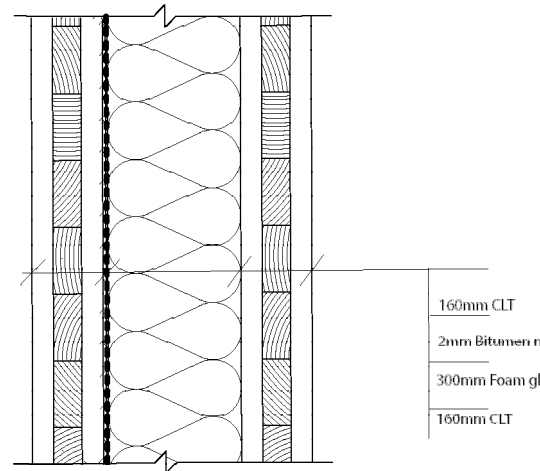
The green house has the same concept as the farming on the levels. There is a curtain wall on all four sides, to get as much sunlight

DETAILS



The solar PV or as they are called solar cells, have the power of converting the sunlight into electricity. PV comes from the name photons, the process of converting light to electricity voltage. The PV is usually known as modules or panels where they are connected with each other. This is an opportunity to build at any scale, small or large scale. (Energy, 2013, 16 Augusti)

The solar cells are made of different materials, the traditional ones are of silicon and are generally most efficient. The other ones are thin-film solar cells which are non-silicone and they use layers of semiconductor materials, because of the flexibility. (Energy, 2013, 16 Augusti)



CLT, Cross-laminated timber is a large-scale, prefabricated, solid engineered wood panel. The benefits with this material area: superior acoustic, fire, thermal performance, easy to install and almost no waste onsite. CLT offers design flexibility and low environmental impacts. (Apa wood, 2017)

A CLT panel consists of several layers, bonded with structural adhesives, and pressed to form a solid, straight, rectangular panel. Finished CLT panels are exceptionally stiff, strong, and stable, handling load transfer on all sides. (Apa wood, 2017)



SUSTAINABILITY SYSTEMS

VERTICAL FARMING

With the hydroponics system, that attracts fewer pests, the nutritional requirement for plants can be controlled in a better way. The soilless is doing the whole farming more accessible to everyone, making it easy and simple because not everyone has the knowledge of farming. *(Vertical Harvest, 2016)*

The plants need sunlight to be able to grow, therefore the placement should be them facing the south and in indoor conditions they need to have a complement with some artificial light, the LED lights are energy efficient. *(Electronics weekly, 2016, 25 January)*

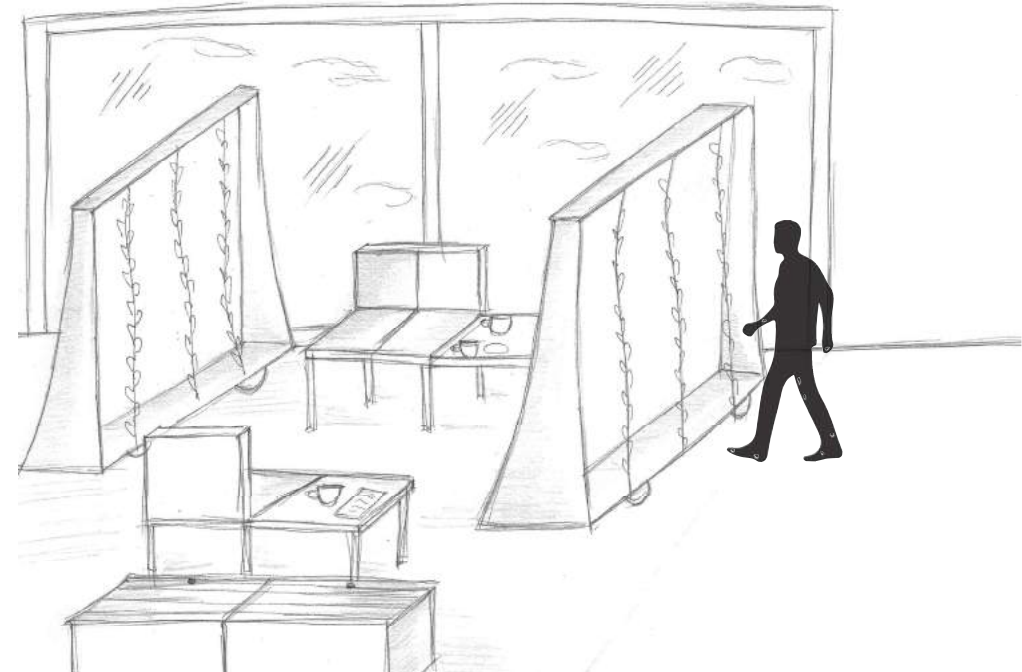
The new techniques of today with hydroponics are much easier because they are soilless and can be placed everywhere. The ZipGrow towers are designed for agricultural production. *(Powered by plenty, 2016, 27 September)*

The system is easy to take care of, but the PH level and the nutrient level have to be balanced time to time, that can be regulated with special tools. *(Supragarden, 2016)*

The roots of the plants are growing faster in the beginning of the process but then they slow down when they realize how easy they can get water, air and nutrients. *(Up growing farming, 2016)*

ZipGrow is using the vertical tower system rather than the horizontal growing. The system is more space efficient with lower operating costs. *(Refarmers, 2016)*

ZipGrow and other vertical tower systems use vertical planes to grow in 3-dimensional space rather than a single horizontal plane. These types of systems are more space efficient with lower operating costs, though upfront costs tend to be higher. *(Zip grow tower, 2016)*



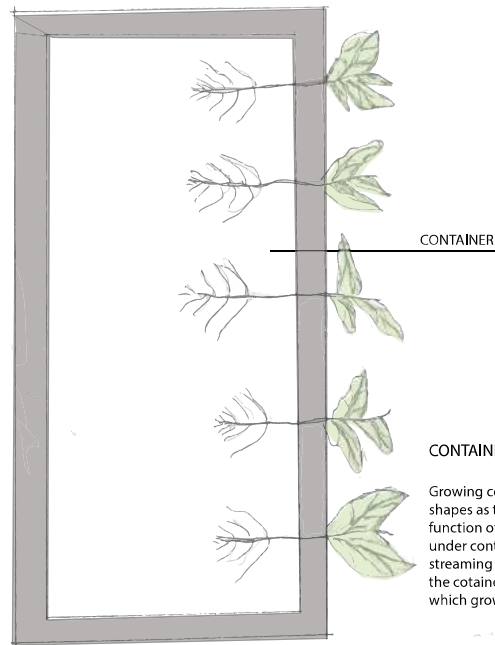
Sketch from the vertical farming

SUSTAINABILITY SYSTEMS

VERTICAL FARMING

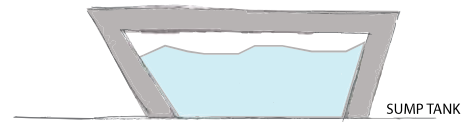
THREE ELEMENTS OF HYDROPONICS

1. Growing container
2. Sump tank
3. Water pump

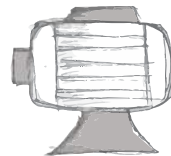


CONTAINER

Growing container can be in different forms and shapes as tower, bed, bucket and raft. The function of the container is to have the plants under control while the nutrient liquid is streaming through the plants. On the inside of the container it can soil or even foam, it depends which growing system you use.



SUMP TANK



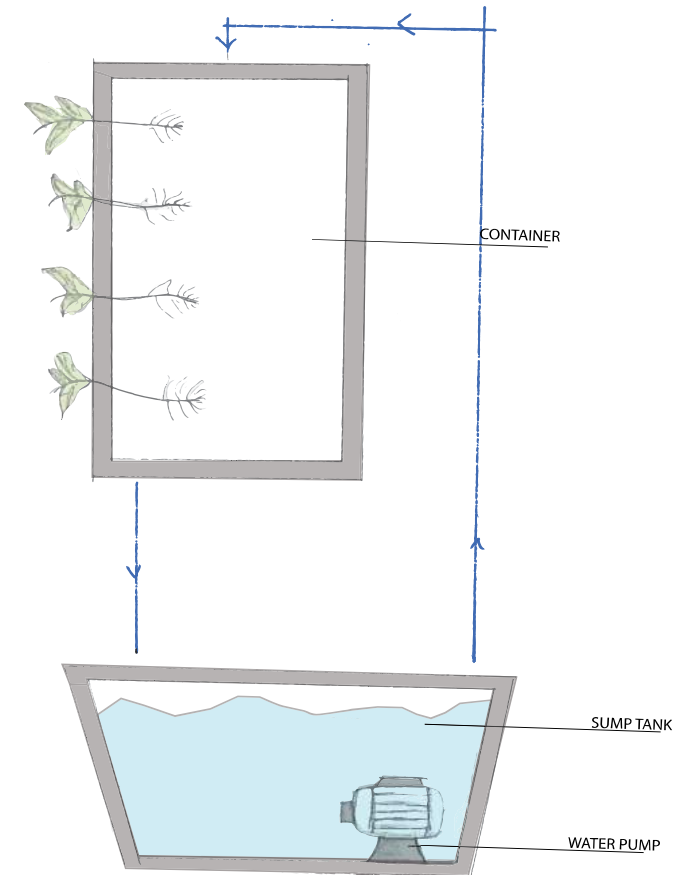
WATER PUMP

SUMP TANK

The sump tank mixes the nutrient liquids, which is then transported to the crops. There are different types of tanks, some have two separate tanks, one sump tank and one mixing tank, these are used in the commercial scale.

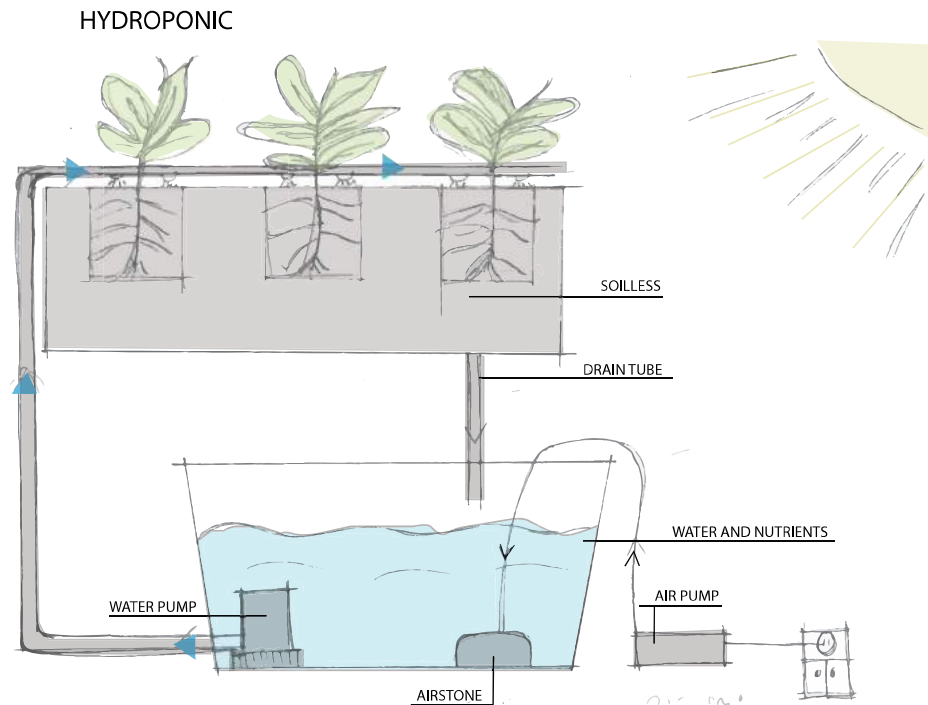
WATER PUMP

The water pump and the air pump are the ones that are relevant to have in the hydroponics system.



SUSTAINABILITY SYSTEMS

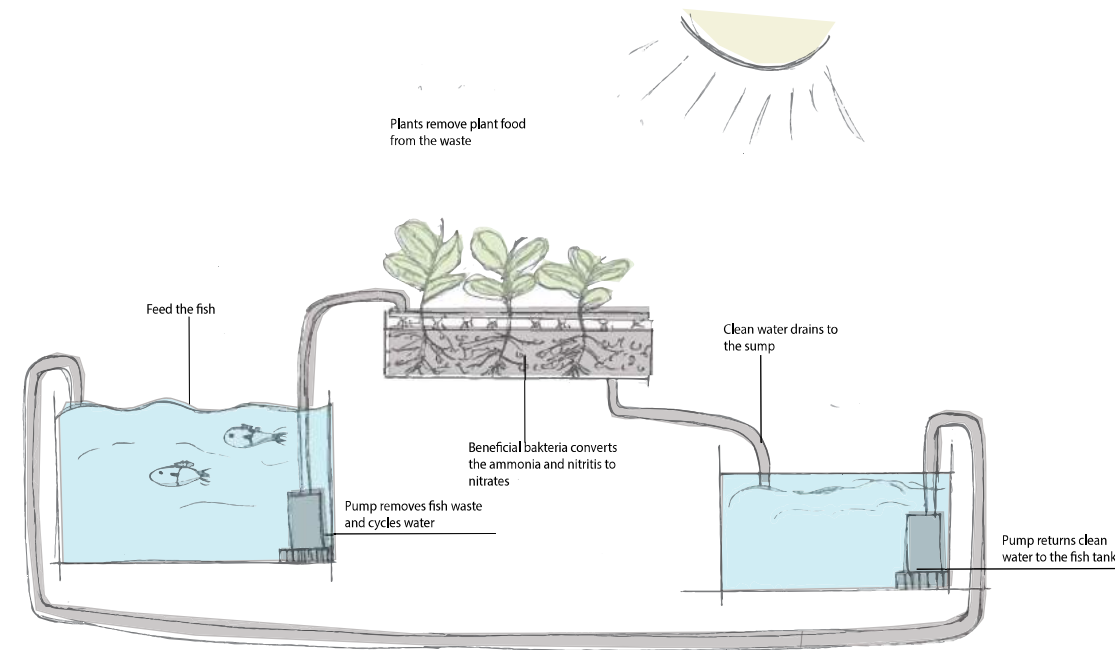
VERTICAL FARMING



Growing with hydroponics is productive, environmental an efficient with spaces. The system of growing the plants without any soil, instead nutrient solutions are used that are transported to the plants in irrigation. (Vertical Harvest, 2016)

The usage of water is in a loop system, it's reused, which means that the water is transported thorough the plants and into the tank and with the help of the water pump, the water is delivered to the plants again. Some of the crops can grow twice as fast as the traditionally farmed crops. With the recycled hydroponics, the usage of water is less, no soil is used, it is saving time and it is good for the environment. (Vertical Harvest, 2016)

AQUAPONIC



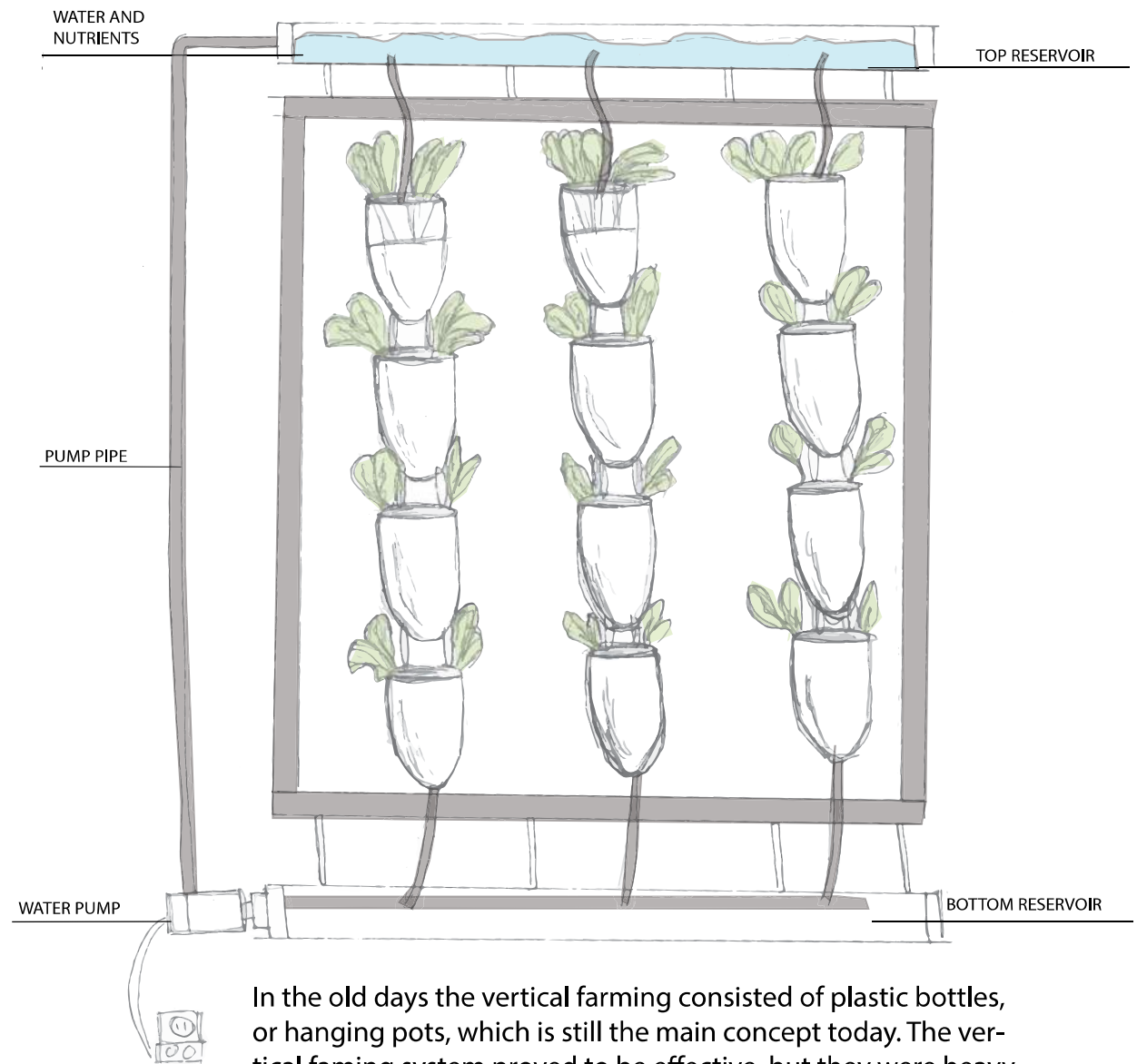
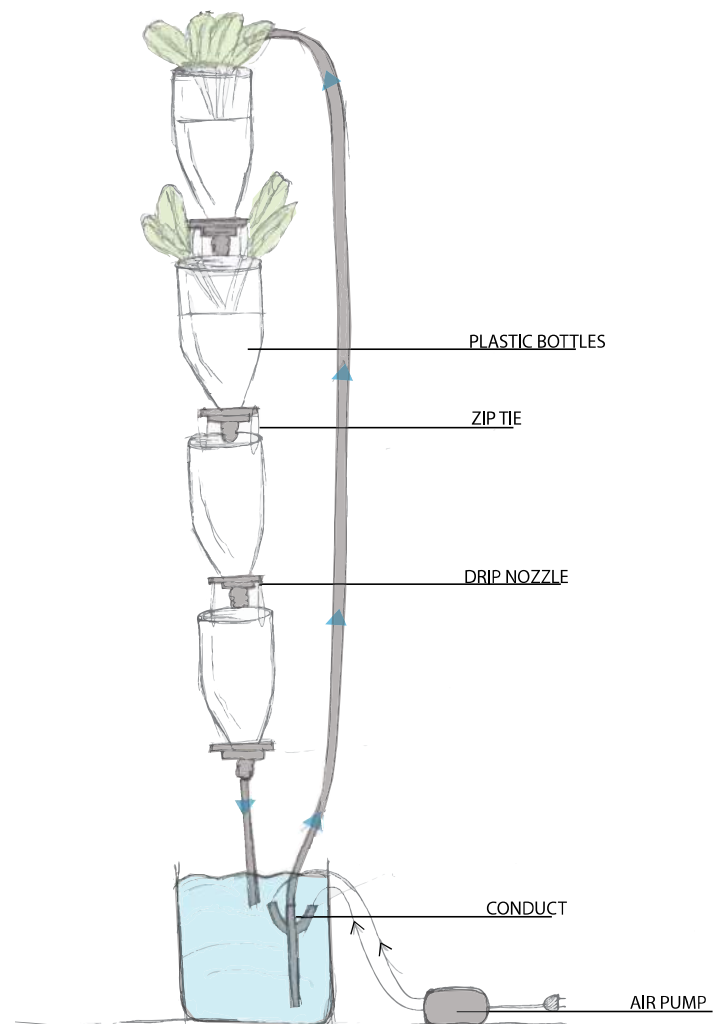
The aquaponic system has the concept of circulating water from a fish cultivating tank to vegetable grow beds. The water system is a self-contained that continually recycles.

The tank with the fish is filtering the water and adding nitrogen to the plants. The nitrogen feeds the plants that are placed in gravel beds. The water is going through the plants and down to the sump tank, where it filters and goes back to the fish tank. Aquaponics uses less water than traditional farming, and it saves time. (Do it yourself, 2016)

SUSTAINABILITY SYSTEMS

VERTICAL FARMING

The vertical farming is not a new way of growing, it has been used since the hanging gardens of Babylon. Nowadays the vertical farming has been upgraded with new techniques. (Refarmers, 2016)



In the old days the vertical farming consisted of plastic bottles, or hanging pots, which is still the main concept today. The vertical farming system proved to be effective, but they were heavy and difficult to maintain. They were often in need of a structural reinforcements to the building. (Refarmers, 2016)

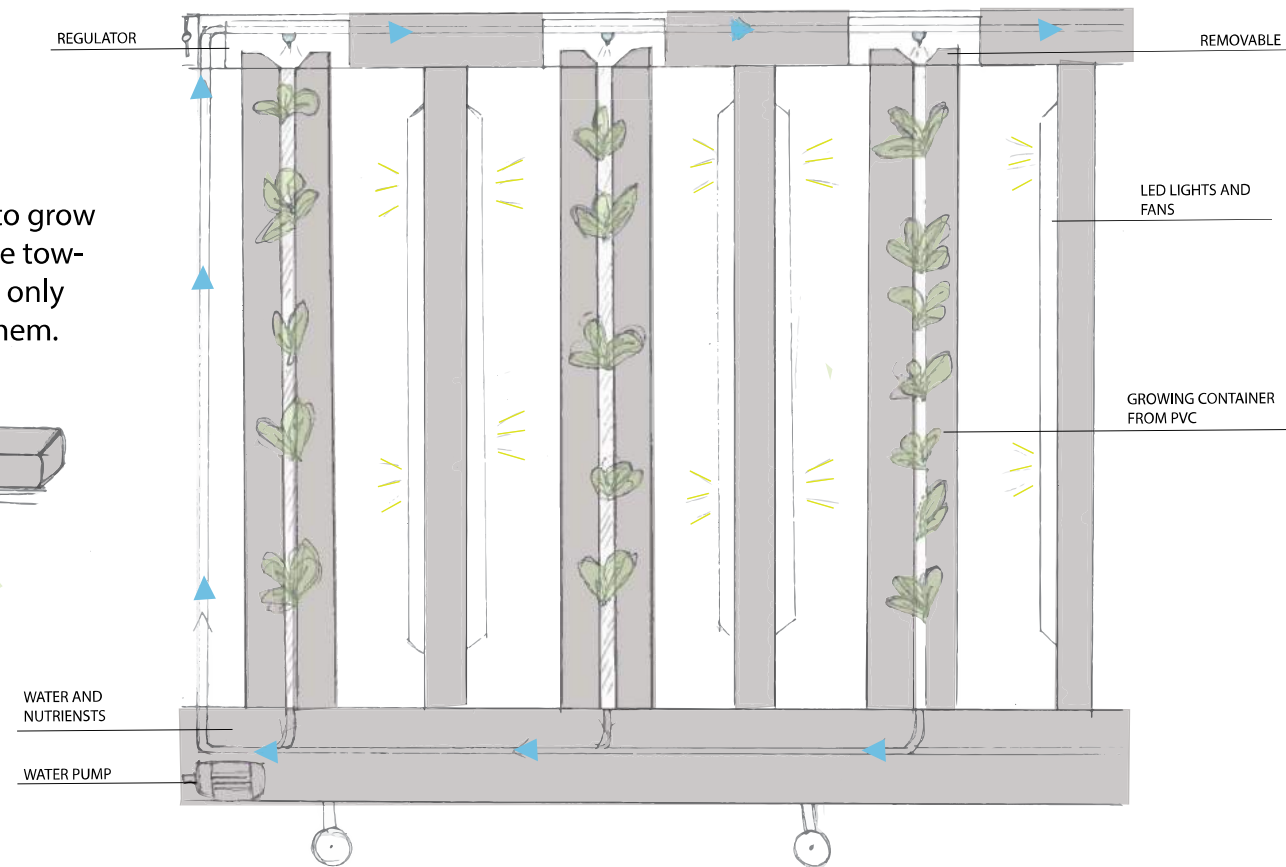
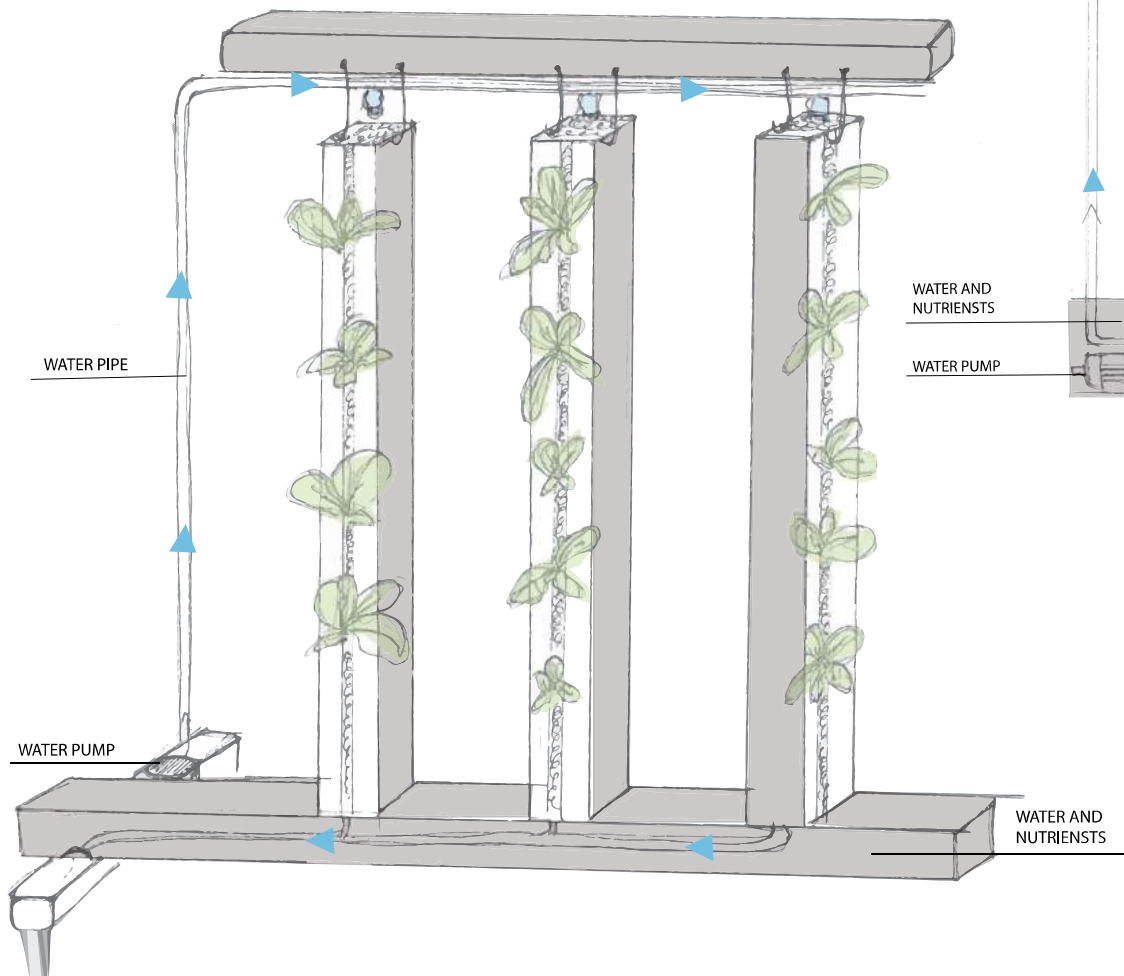
SUSTAINABILITY SYSTEMS

VERTICAL FARMING

How does it work?

A lot of herbs can be planted at the same time. It's simple to grow with the vertical towers, you are planting the seeds into the tower, the water and nutrients are working by themselves, the only responsibility you have is to watch them grow and clean them.

(Refarmers, 2016)



What is a Farm Wall?

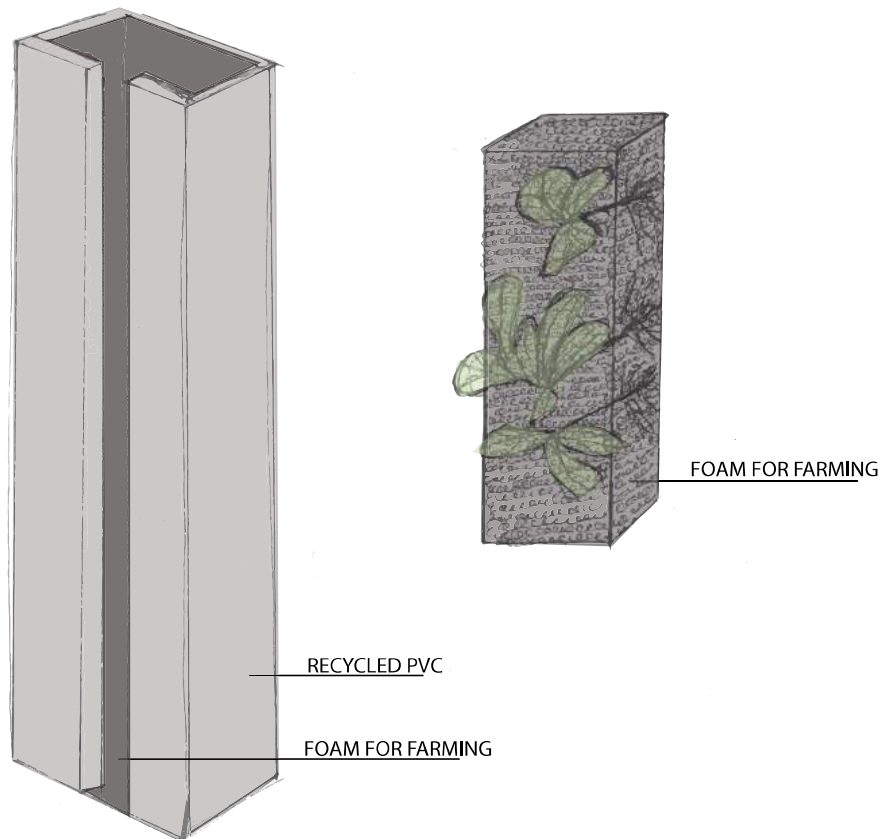
The farm wall use a vertical tower system that comes with different dimensions, 4 or 8 towers and the towers are also moveable, so you can easily take them out to grow new crops.

Hydroponics is most commonly used in these vertical towers, they are soilless and provide healthy nutrient, this provides a quick process rather than traditional farming. (Refarmers, 2016)

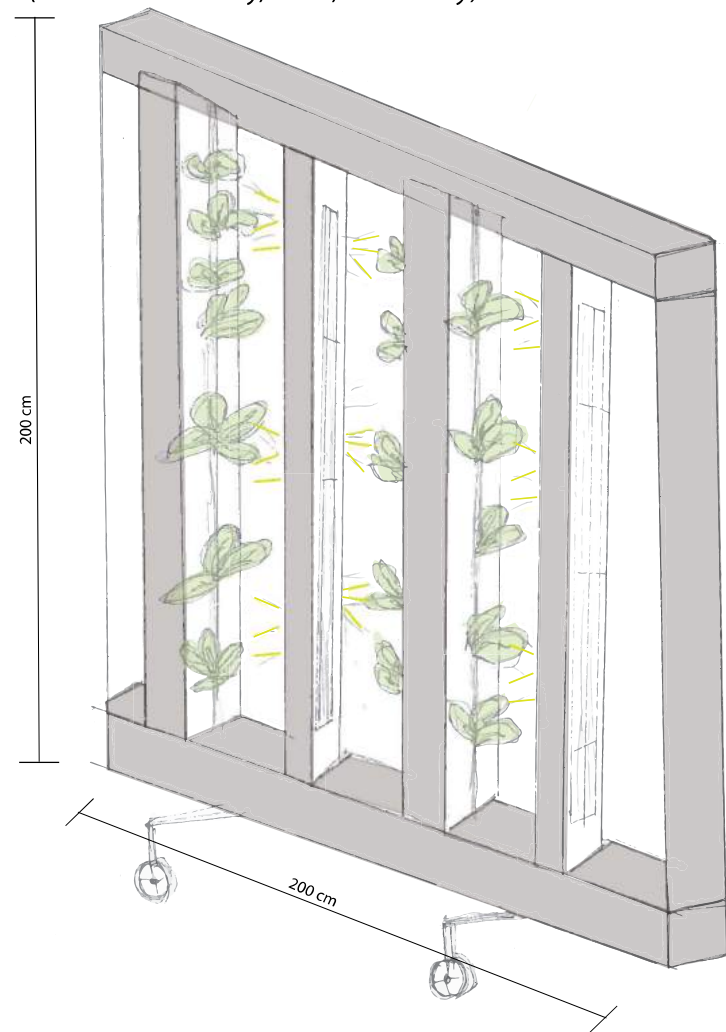
SUSTAINABILITY SYSTEMS

VERTICAL FARMING

ZipGrow is highly productive, high density, modular, and functional in a variety of plant production scenarios, from commercial greens production to landscape design. ZipGrow towers are designed to increase productivity and reduce costs for hydroponic and aquaponic growers. *(Electronics weekly, 2016,25 January)*



There are several benefits with the towers, they are 2-3 times more productive per square foot compared to traditional horizontal farming, without increasing the costs. The easy and smooth way of taking care of the crops, with the movable towers and also the whole system of moving it to different space because of the wheels. Manufactured from high quality, food-safe and outdoor-safe materials. It is built for long-term durability. *(Electronics weekly, 2016,25 January)*



SUSTAINABILITY SYSTEMS

VERTICAL FARMING

WHAT CAN I GROW?

HOW DOES A GREEN WALL WORK?

The plants are using the natural light from the sun facing the south facade, to have as much sun as possible. The nutrients and the water are helping the plants to grow. (*Up growing farming, 2016*)

HOW DO THE PLANTS GROW?

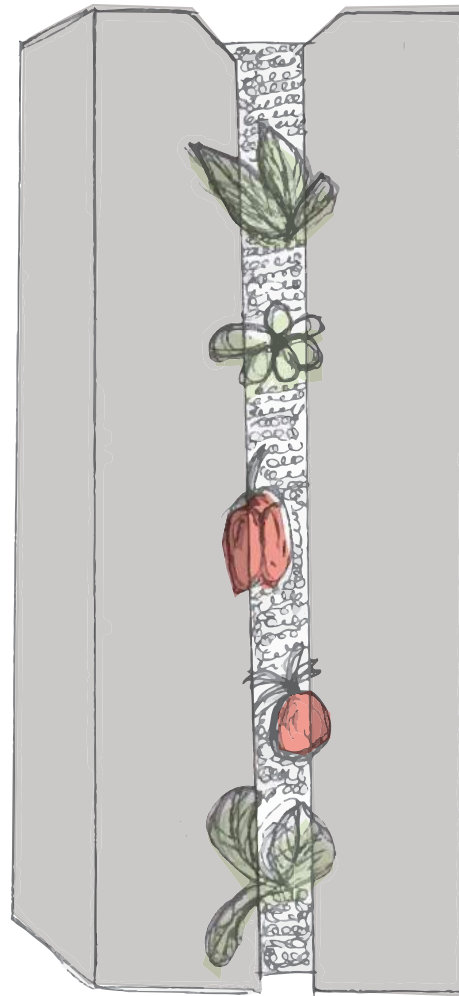
The plants are growing with help of the water and nutrients, which are circulating through the system. It's a loop system with help of the air pump and the water pump. (*Up growing farming, 2016*)

WHERE CAN I MOUNT THIS?

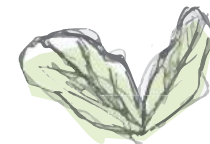
It can work everywhere facing south or with help of artificial light. It can be on a wall, outside or inside, on a fence or at your backyard. (*Up growing farming, 2016*)

WHAT ARE THE TOWERS MADE OF?

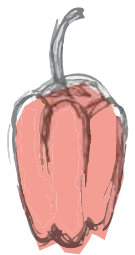
All materials are environmentally safe. They are from recycled pvc and water bottles. (*Up growing farming, 2016*)



TOMATOE



LETTUCE



PEPPER



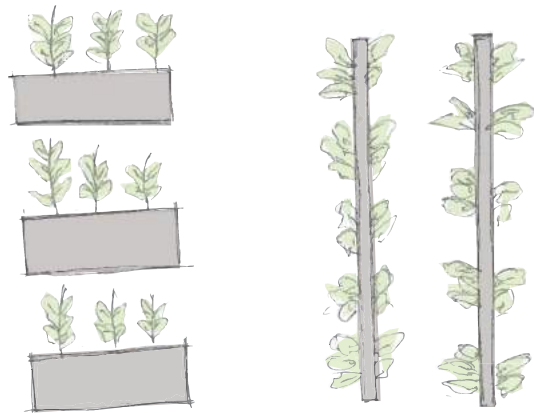
HERBS



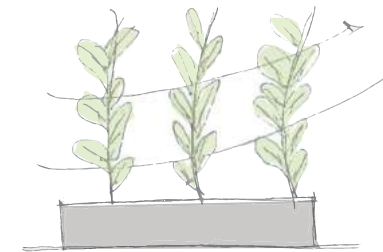
FLOWER

SUSTAINABILITY SYSTEMS

VERTICAL FARMING



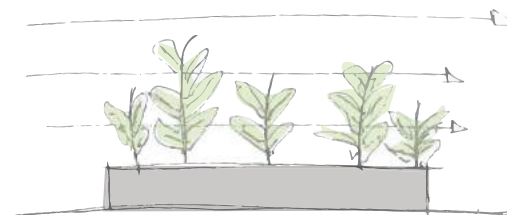
Too much humidity is harmful because it creates a favorable environment for pests, so air movement through crops is necessary to the removal of humidity.



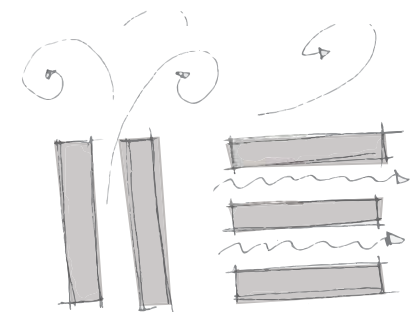
- SPACE EFFICIENCY
- BETTER AIRFLOW
- VISUAL ACCESS

The airflow of the horizontal and vertical farming is different, and the space between the plants is one of the reasons. The tighter you build the construction of the system, more difficult it is for the air to get thorough. The visual access of the crops is another factor that makes the horizontal farming difficult. It is difficult to take care of the crops on a higher level. (*Vertical Harvest*, 2016)

With the vertical planes it's reachable to the crops and it's visual from the ground to the top. The airflow is moving from all different directions and it lowers the risk of having boundary layers. The fans and the artificial light move the air efficiently and quickly than it would through horizontal planes.

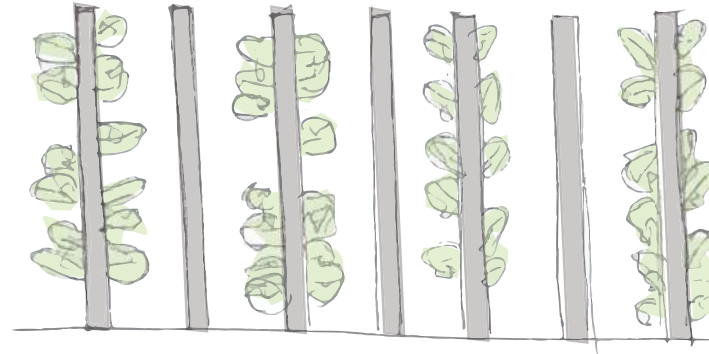
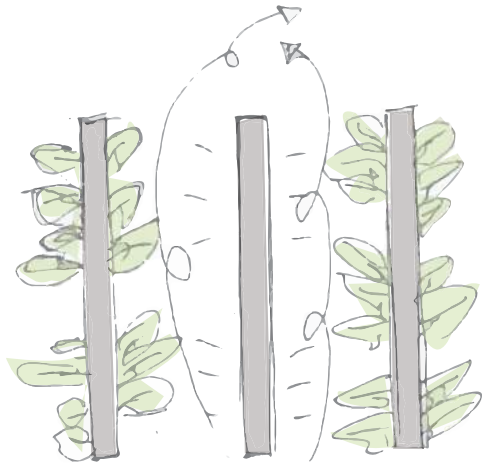


The air inside an intense indoor growing operation does not move and get replaced. Not without intentional pushing and pulling, anyway. Outdoors or in an open greenhouse, the wind is a fairly constant force moving air around.



SUSTAINABILITY SYSTEMS

VERTICAL FARMING

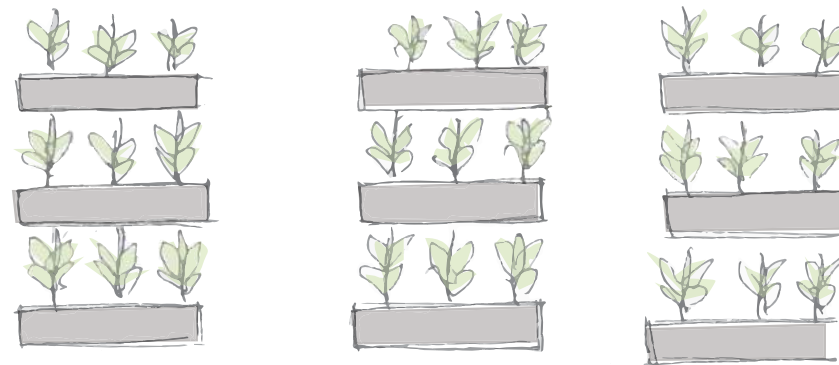


The airflow of indoor and outdoor farming is different, whereas the air of the indoor farming does not move and is replaced, while of the outdoor farming the wind is fairly constant force moving around. (*Vertical Harvest, 2016*)

The airflow is important for the plants to survive, because with too much humidity there is a risk for pests. Air movement through crops is necessary for the removal of humidity.

The balanced temperature is important for the growth of the plants, the reduction of temperature can slow down the growth and overheating can stress the plant and can easily be affected by pests. (*Vertical Harvest, 2016*)

The direction of the airflow can cause boundary layer effects. The boundary layer is the friction of the air on the surface and this arises in the horizontal farming.



SUSTAINABILITY SYSTEMS

MECHANICAL VENTILATION

Mechanical ventilation is used to control indoor air quality, excess humidity and contaminants can often be controlled via dilution or replacement with outside air. However, in humid climates specialized ventilation systems can remove excess moisture from the air. *(The green age,2015)*

The mechanical ventilation can be adaptable to almost every site and house, whereas the natural ventilation doesn't have the same possibilities. It depends on the openings and the layout of the building, how the natural ventilation can work. The mechanical ventilation doesn't have to think about these factors, it is adapted to almost all different kinds of housing. Mechanical ventilation is the only option when the building is located in noisy areas or in areas where the local air quality is poor, and therefore the use of opening windows for natural ventilation is not a practical solution. *(The green age,2015)*

The mechanical ventilation is mostly used in the Passive House with heat recovery. It provides fresh air all year around, healthy indoor environment and high levels of heat and energy recovery. It's also very good regulated with the amount fresh air in to exhaust air out to the entire building. This reduces the space heat and cooling requirements, while providing a good comfort. *(The green age,2015)*

Mechanical ventilation with heat recovery

The benefits with the mechanical ventilation with a heat recovery are the reduction of heat loss and improvement of energy efficiency. It provides the perfect amount of air indoors, fresh air which is important for the health and the wellbeing. The right ventilation removes moisture and replaces it with fresh air to. *(Passive house,2017)*

As mentioned before the natural ventilation is used by simple openings and using extractor fans to have a flow of the air. Even if this is working well, an average of one third of the space heating energy at home, extracts warm air outside. *(Passive house,2017)*

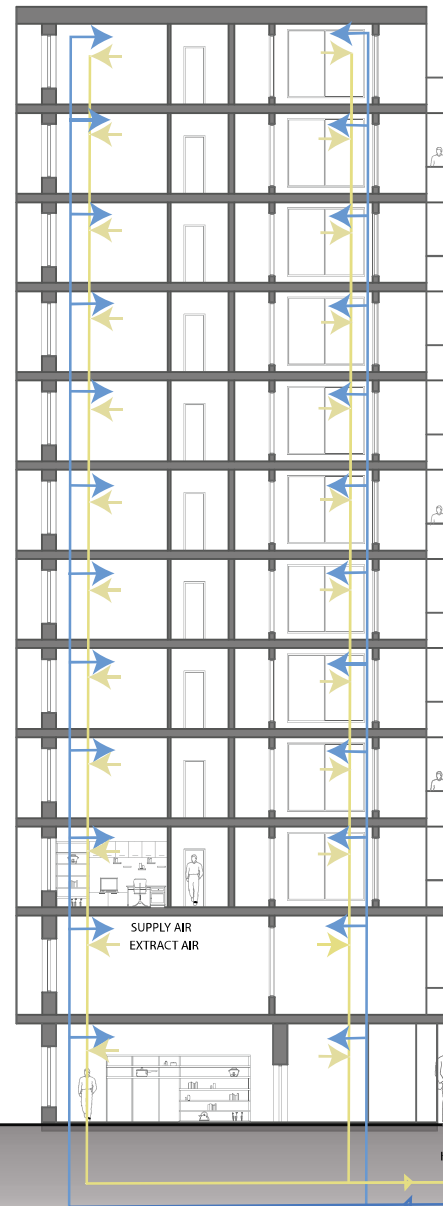
The modern housing is more airtight than the older buildings, because they have to follow the building regulations and is updated all the time. The mechanical ventilation heat recovery is retrofitted for the new buildings. *(Passive house,2017)*

SUSTAINABILITY SYSTEMS

MECHANICAL VENTILATION

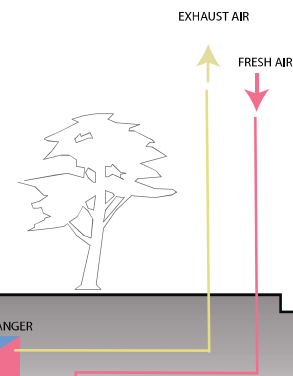
In the summer period the ventilation is important for the indoor comfort. The big issue for the natural ventilation is the glazing part, where the sun direction can cause warm and hot area inside, which leads to discomfort. *(Center for sustainable energy, 2015)*

The mechanical ventilation creates a more comfortable environment because of the distribution of the air. *(Center for sustainable energy, 2015)*



The system extracts warm and damp air from inside to the outside. The air is passing through the heat exchanger to recover the heat before it goes out. *(Center for sustainable energy, 2015)*

The air which comes from the outside is also going through the heat exchanger. These systems can be placed on the roof/attic or the bottom floor and some can have manual or automatic boost setting. *(Center for sustainable energy, 2015)*

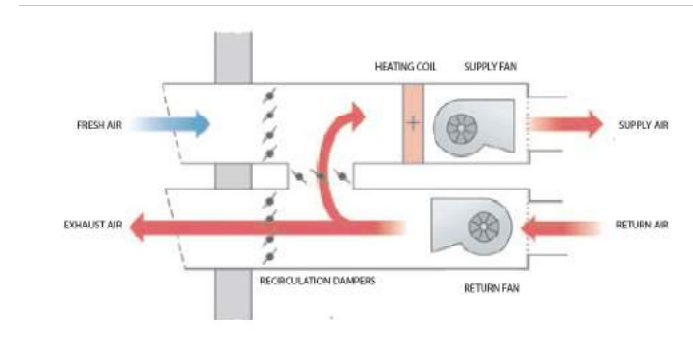


SUSTAINABILITY SYSTEMS

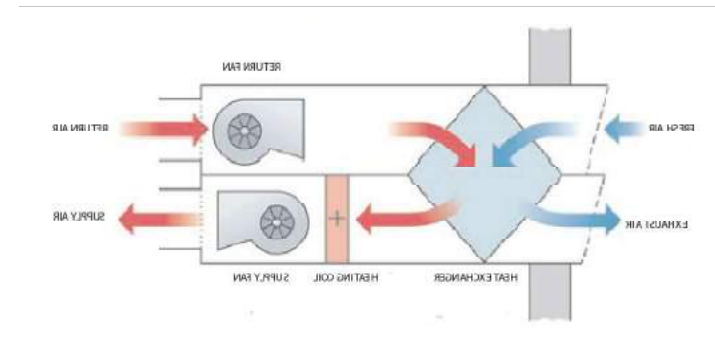
MECHANICAL VENTILATION

There are different solutions of mechanical ventilation. One of the simplest solutions is to have the air circulating through the roof with help of fans, so the cold air enters the house and the warm air extracts. The roof ventilators can also be solar assisted to enhance the stack effect by increasing the air temperature on the top of the house. *(The green age,2015)*

This principle is similar to the stack effect which was used in the natural ventilation. The roof ventilator is used as solar assisted and the air of the space moves upwards to the higher level and then extracts, new air comes in to the lower level. Ducts can be used to supply air to different levels of a multi-storey building, using ventilation that provides fresh air. *(The green age,2015)*



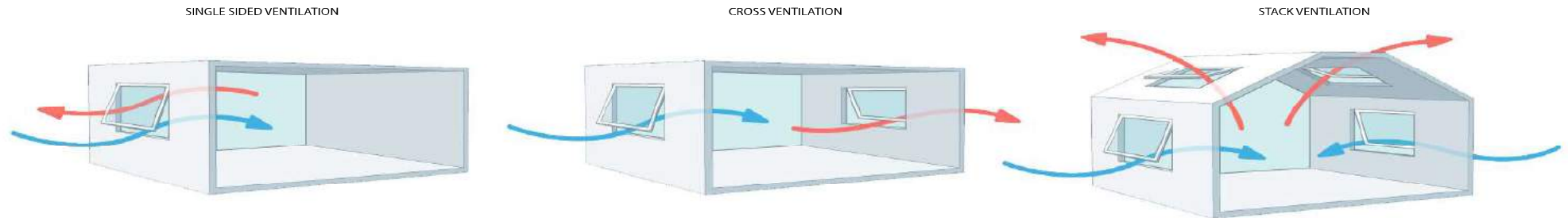
The fans of the mechanical ventilation are enhancing air movement to exhaust the air when the internal temperature is high. Mechanical ventilation systems can have both supplier and extract vents assisted by fans. *(The green age,2015)*



Mechanical extract is when the air becomes contaminated such as in kitchens, bathrooms etc – where there is a need for constant extraction of air. Supply systems are suitable for houses and offices that need to be supplied by fresh air when the air movement needs to be controlled. *(The green age,2015)*

SUSTAINABILITY SYSTEMS

NATURAL VENTILATION



Natural ventilation

The natural ventilation can be based on different principles, single-sided, cross ventilation and stack ventilation. All the principles are depending on the healthy and comfortable indoor climate and having minimal energy consumption. (Window master,2016)

Single-sided ventilation

In the single-sided ventilation principle the room has windows on one side. This means that the air is streaming in and out from this window. In the winter period the air is cold which means that the window can't be open for a long time. To solve this problem, the window is open for a short period, to cool down the room.

(Window master,2016)

Cross ventilation

For the cross ventilation there are windows on two sides of the room, and there is a current of air across the room. It's not recommended to have both windows opened because of overpressure on the side of the building where the wind comes from or low pressure on the opposite sheltered side. (Window master,2016)

Stack ventilation

Stack effect is a principle from the temperature differences, the warm air is rising because it's less dense than cold air. The warm air is then rising to the roof, and out through the roof window and on the lower level comes the fresh air in. This creates a natural flow of the air. (Window master,2016)

SUSTAINABILITY SYSTEMS

GEOTHERMAL HEAT PUMP

Is placed in the building because of the production of the solar PV. The geothermal pump is the most efficient for making heat out of electricity. The liquid is pumped through underground pipes and is heated up by the surrounded ground. The heat pump exchanges heat to hot water for the heating system. The heat is then distributed to the building through floor heating or radiators. *(Building design guide, 2016)*

Geothermal heat pumps have the concept of using the groundwater as a heat source. Specific of their configuration, these systems are referred to as ground-coupled heat pumps, groundwater heat pumps, and surface water heat pumps. They use less electricity than conventional heating or cooling system and they are not depended on the outside air. *(Building design guide, 2016)*

The geothermal heat pump is a loop system, with pipes buried down in the ground. Fluid is circulating through the pipes in the ground to absorb or relinquish heat depending on the period of the year. In the winter the heat pump removes the heat from the pipes and transfers it to the building and in the summer, it's the opposite. *(Building design guide, 2016)*

HOW DOES IT WORK?

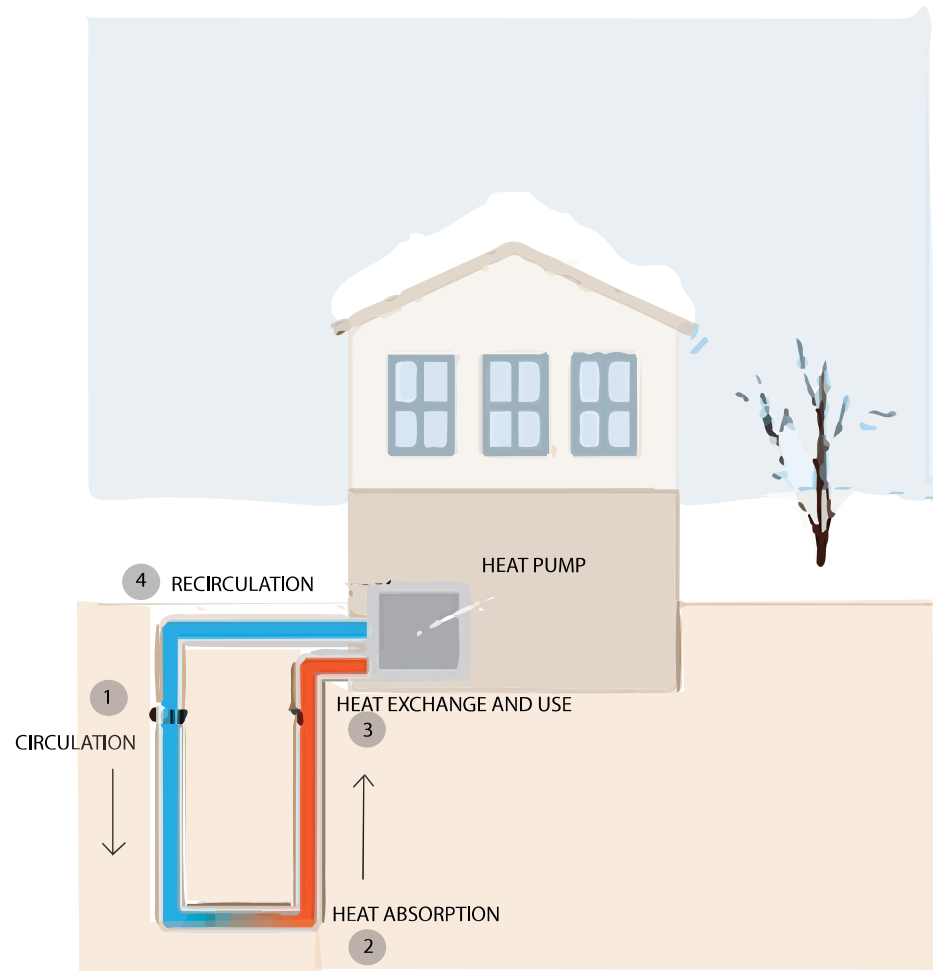
They work similar as the refrigerators and have the same concept of working. The fluid absorbs heat when it evaporates into gas and emits heat when it condenses back into a liquid. The geothermal pump can be used both for heating and cooling. The pump uses the earth as a heat exchanger. *(Energy, 2015)*

There are different types of geothermal heat pumps: horizontal, vertical and pond. All of them have the loop system. They are working in a similar way, the difference between them depends on the climate, soil conditions and available land. All of the different types can be used for residential and commercial building applications. *(Energy, 2015)*

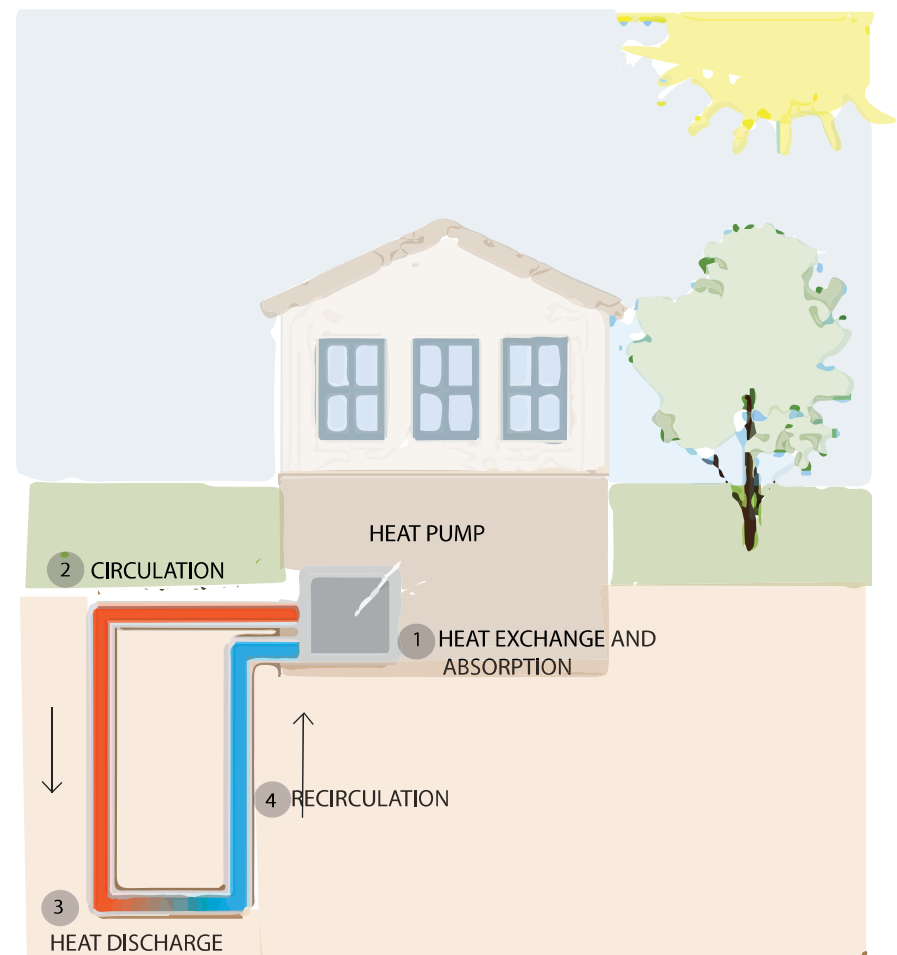
SUSTAINABILITY SYSTEMS

GEOHERMAL HEAT PUMP

HEATING MODE

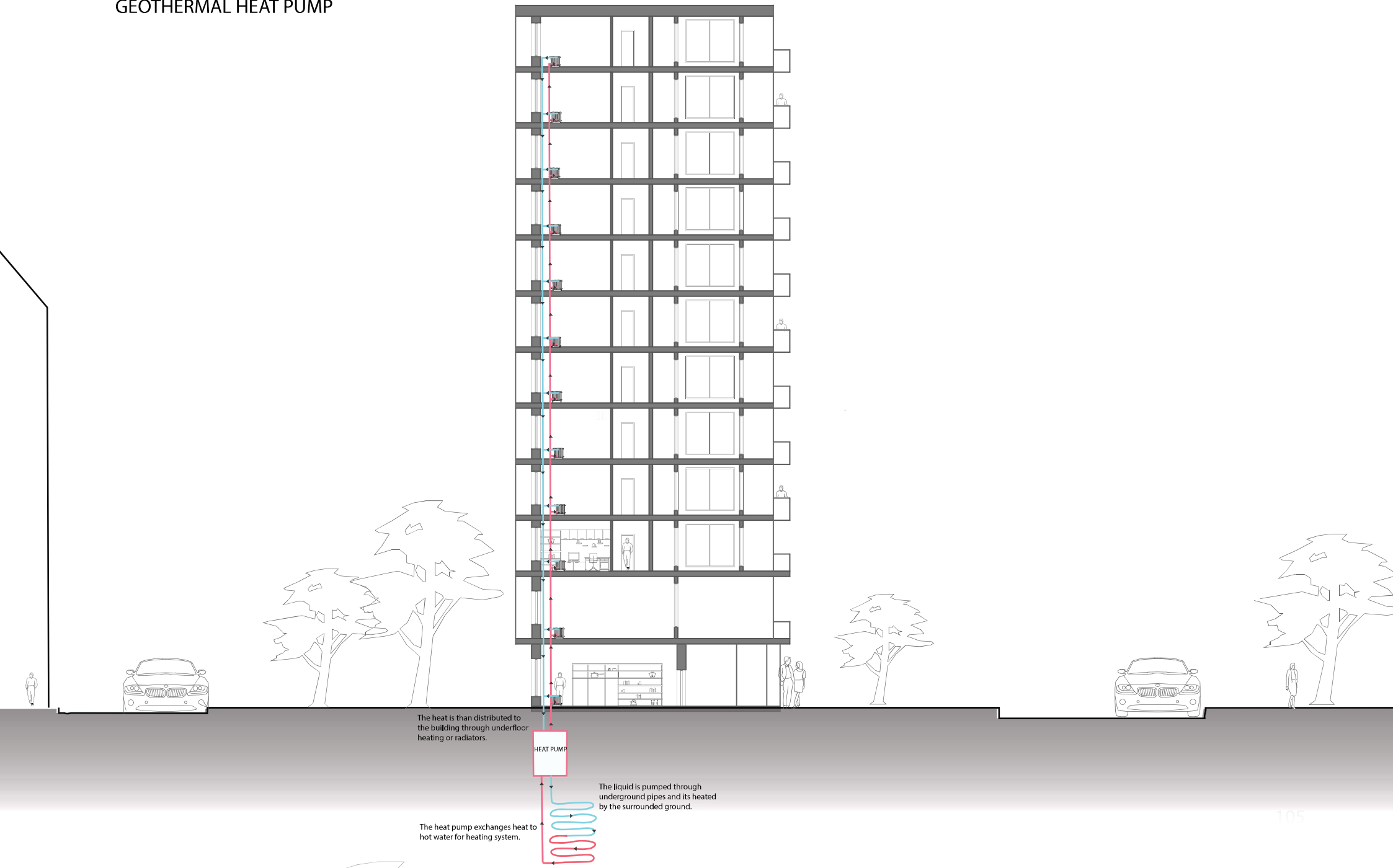


COOLING MODE



SUSTAINABILITY SYSTEMS

GEO THERMAL HEAT PUMP

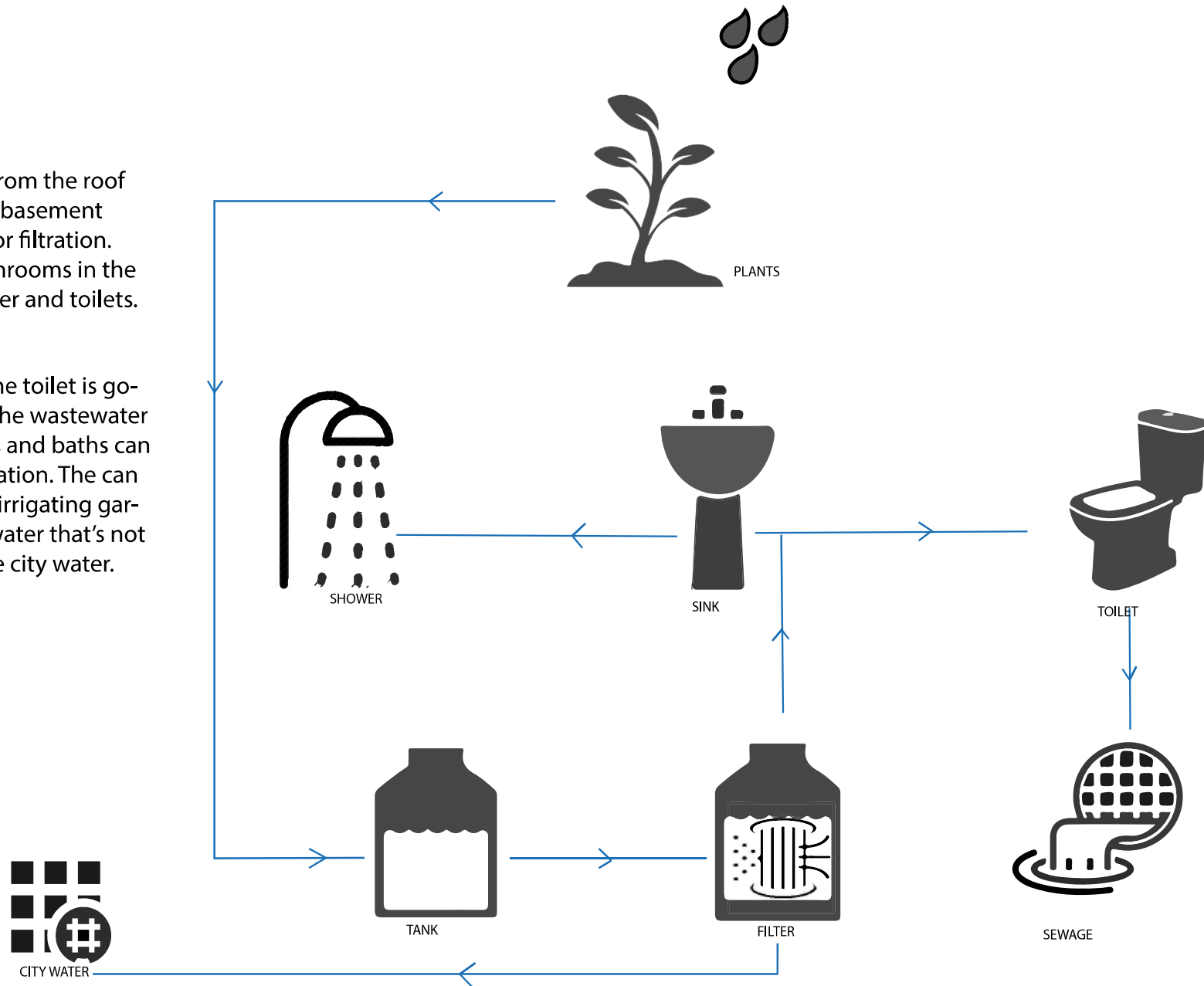


SUSTAINABILITY SYSTEMS

WATER TREATMENT

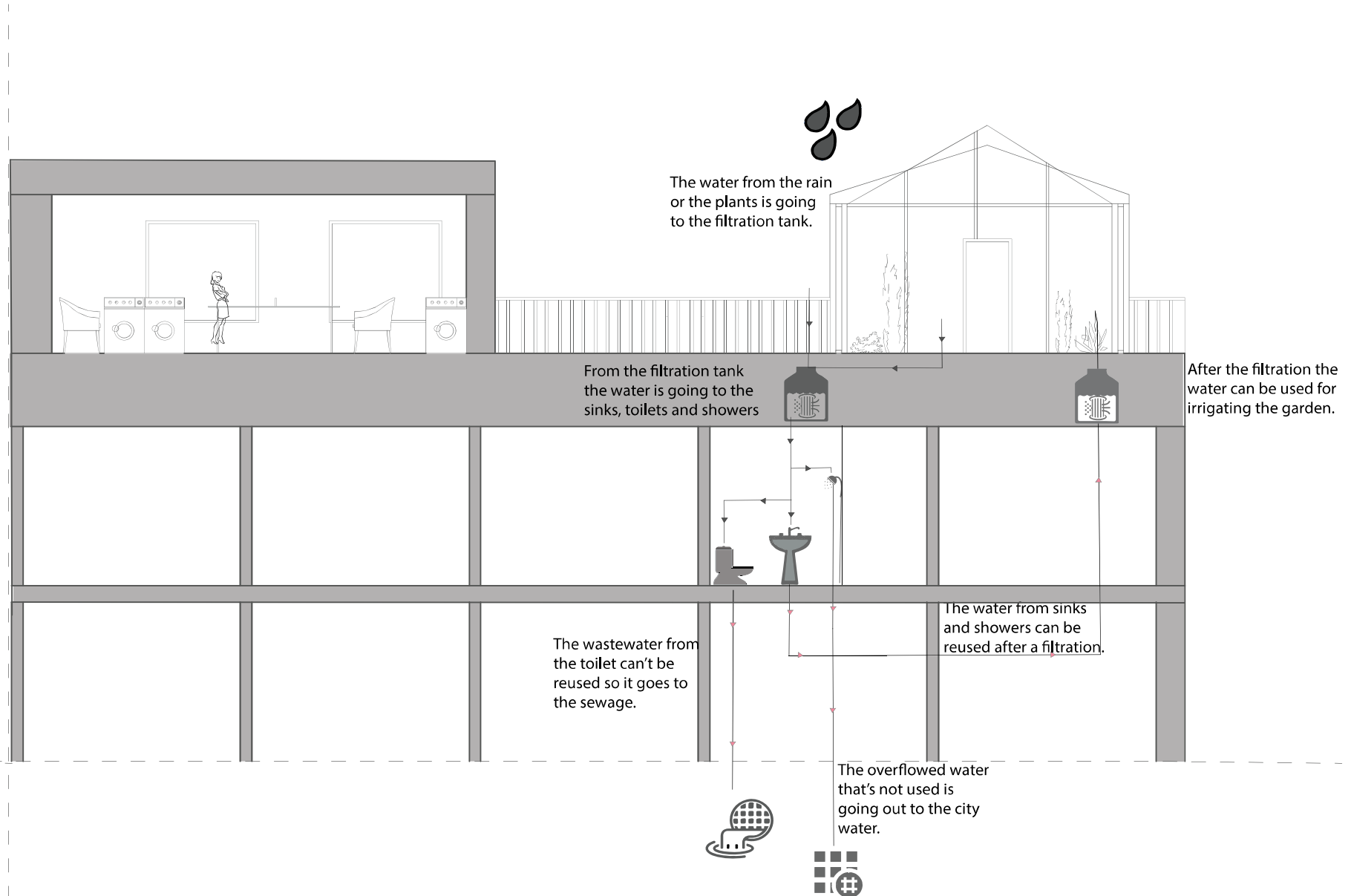
The water is collected from the roof and transported to the basement into different cisterns for filtration. Then it goes to the bathrooms in the building the sink, shower and toilets. (Waterscan, 2014)

The wastewater from the toilet is going to the sewage, but the wastewater from the sinks, showers and baths can be reused after the filtration. The can be used for flushing or irrigating gardens. The overflowed water that's not used is going out to the city water. (Waterscan, 2014)



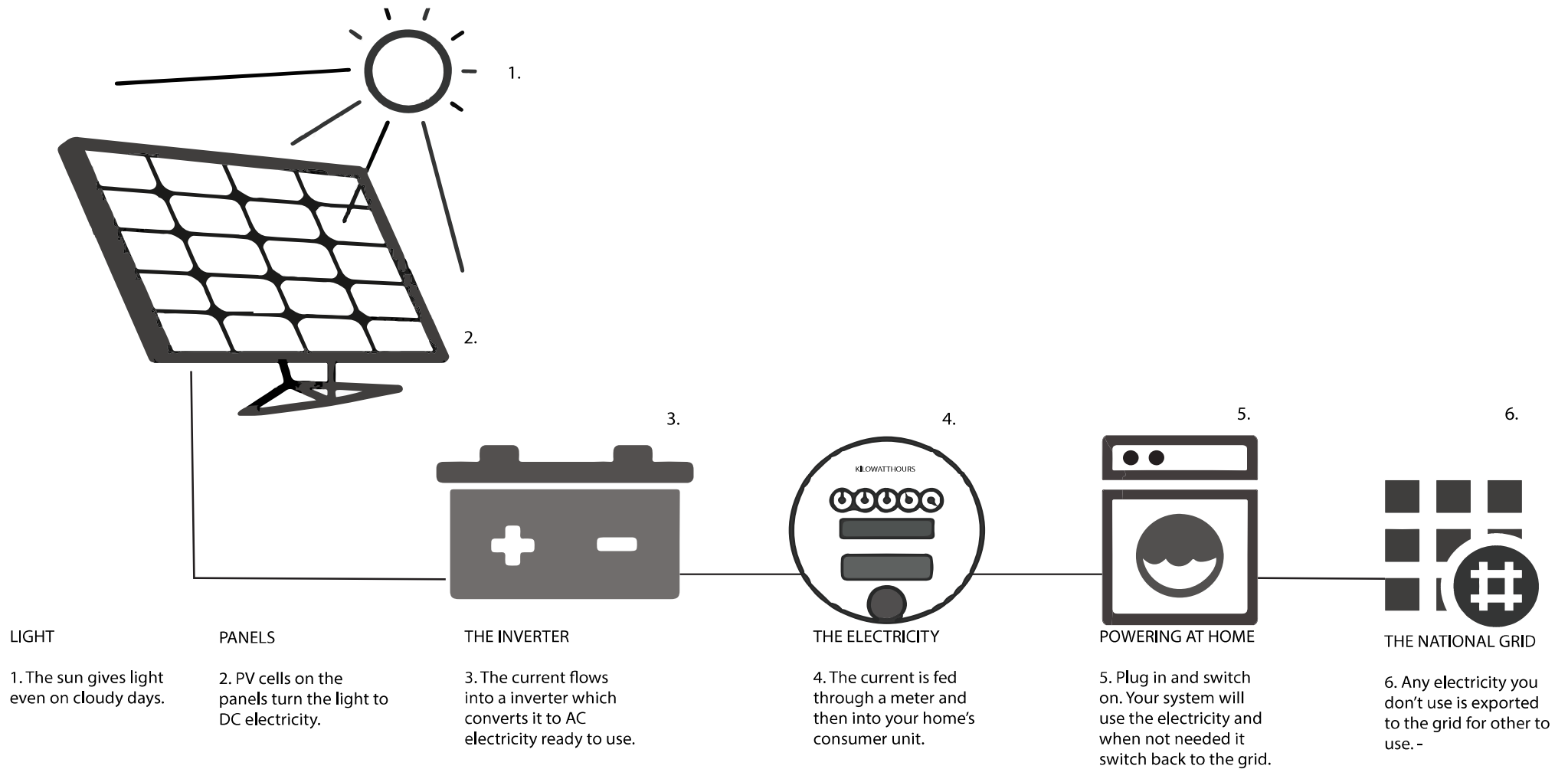
SUSTAINABILITY SYSTEMS

WATER TREATMENT



SUSTAINABILITY SYSTEMS

SOLAR PV



RATIO

CALCULATION

$N = \text{Rentable area} / \text{Built area}$

$N = 0,75 - 0,80$

94m² - Common area

12- Rooms in total on a floorplan

$94/12 = 7,8\text{m}^2$

20m² - Private unit

$20 + 7,8 = 27,8\text{m}^2$ - Total area of the private unit and the common area

334m² - Rentable area

458m² - Built area

$334/458 = 0,73$

$N = 0,73$

Example of rent

24m² - 4700kr

$4700/24 = 195\text{kr/m}^2$

$195 * 28 = 5480\text{kr}$

In total for the private unit and the common area in the building

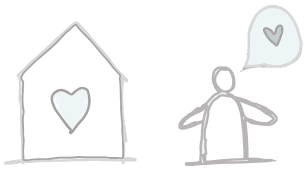
$20\text{m}^2 + 7,8\text{m}^2 = 27,8\text{m}^2$

5480kr/month

THE HOUSING PROJECT

FOCAL POINTS

INVITED SPACES - HOME



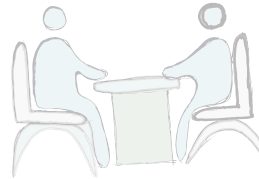
Inviting common areas with innovative space. The large windows are making the whole area inviting and pleasant. In the private units there are French balcony which is creating creating openness and home feeling.

PERSONAL



Personal touch is in the private units, with personal items on the shelves or in the storage. There are enough of smart storage solutions. The arrangements of the private units depend of the students needs.

COMMON AREA



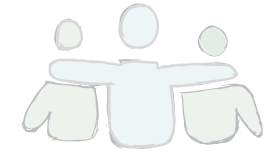
Common rooms are on each floor, kitchen, dining room, living room, balcony and the farming area. The common areas have enough of space for the students.

STORAGE



Storage in the dwellings is well organized, both over and under the bed, and in the bathrooms. There are focus on the storage, to fit the students items and to have the sense of home.

SOCIAL INTERACTION



Social interaction is important in the shared accommodation. The social interaction happens in the common areas, because of the placement. They are less students that are sharing the common areas, makes it easier to get along with the students.

THE HOUSING PROJECT

WHAT AND HOW THE FUNCTIONS ARE SHARED

FUNCTIONS SHARED BY THE BUILDING



ENTRANCE
Shared by: Students on the same floor



STAIRWELL
Shared by: All the students



CORRIDOR
Shared by: Students on the same floor, connected with the entrance



PARTY ROOM
Shared by: All students



BIKE STORAGE
Shared by: All students



RECYCLE ROOM
Shared by: All students



LAUNDRY
Shared by: All students



GAME ROOM
Shared by: All students

The functions that are shared by the whole building are necessary, like recycle room, laundry and bike storage. The functions are aimed for the students to share and also have their spontaneous meetings, where they can feel relaxed and enjoy each other's company.

The different functions are arranged in a way to have the possibility to meet each other, like the entrance which is in connection with the balconies and the corridor, you have to pass there to come to the private unit, in this way you meet students on the way. There are possibilities to be private by dividing the area with the sliding doors.

FUNCTIONS SHARED BY THE DWELLING



ROOM
Shared by: Individual



BALCONY
Shared by: 12 students



LIVING ROOM AND KITCHEN
Shared by: 1-6 students



FARMING AREA
Shared by: 12 students

The private units are sharing the study room, living room, kitchen and balcony since they have everything in their room they are not sharing it with the whole building. with 1-12 other students, depending on which type of housing.

The kitchen and the dining room have enough of space to fit all students, it is shared from less students to get along with each other.

The social interaction happens in the common areas, because of the placement, the students area going through the common area to enter the private units.

The bathroom is considered to be the most private area in all dwellings is the bathroom, since it is not shared with anyone.

PROCESS 1.0

PROCESS

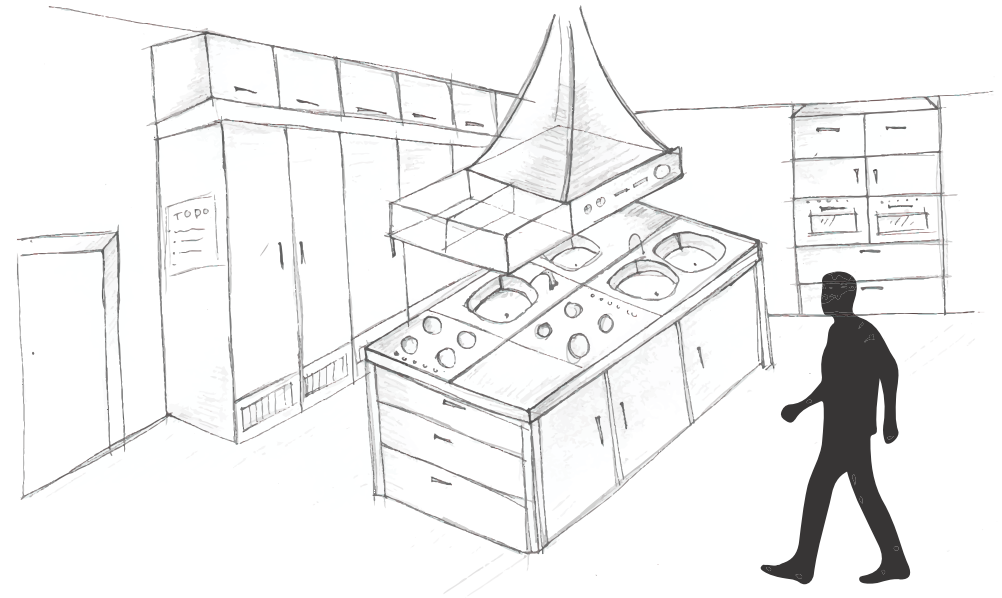
DIFFERENT SKETCHES

The process of the different plans is based on the conclusions of the survey. The aim of the project is the students' needs, and what kind of functions they need in a student housing.

The survey was detailed, and helped me through my questions. The sketching process of the plans was difficult, because of the restrictions of the noisy street. It was a challenge to manage to accommodate 100 students in the building and the maximum height of 12 floors.

The current site is a parking plot, around 1300m², and is a suitable plot for a student housing. According to the city plan the ground floor is aimed for the public. So the ground floor is both for students and the public, to combine them together.

The focus of the proposals is the common area, that is, to have enough space, enough storage, spontaneous meetings, comfortable places and different arrangements.



Sketch of a kitchen island

PROCESS

PROPOSAL 1

The plans fit 8-12 students on each floor. The guidelines for designing the plans were, the noisy area and the silent area. The noisy area is the one facing the street, and that is why the public functions are placed there. While the silent area is facing the inner garden and that is why the private units are placed on that side.

Positive/Negative of the plans

+ In example 1 within the common areas there are also separated spaces, which can be used by the students in the building.

+ In example 2 the common areas are integrated with the other functions.

- In example 2 there is a long corridor, as in the traditional dormitory housing.

- The direct light is not good in example 2 and the size of the units is somewhat tight.



PROCESS

PROPOSAL 2



The plans fit 8-12 students on each floor. There are common areas on each floor and the central staircase is also used as a common function. The building consists of two different heights of 12 and 8 floors.

Positive/Negative of the plans

- + In example 1 the study room is separating the living room from the kitchen.
- + Direct light in all functions both in example 1 and 2.
- + Central staircase is used as a common area.
- + No long corridors in example 1.
- + In example 2 there are two types of kitchen design, open and separated.
- Less private units because of the common areas.
- In example 2 the common areas take too much space.

Example 1

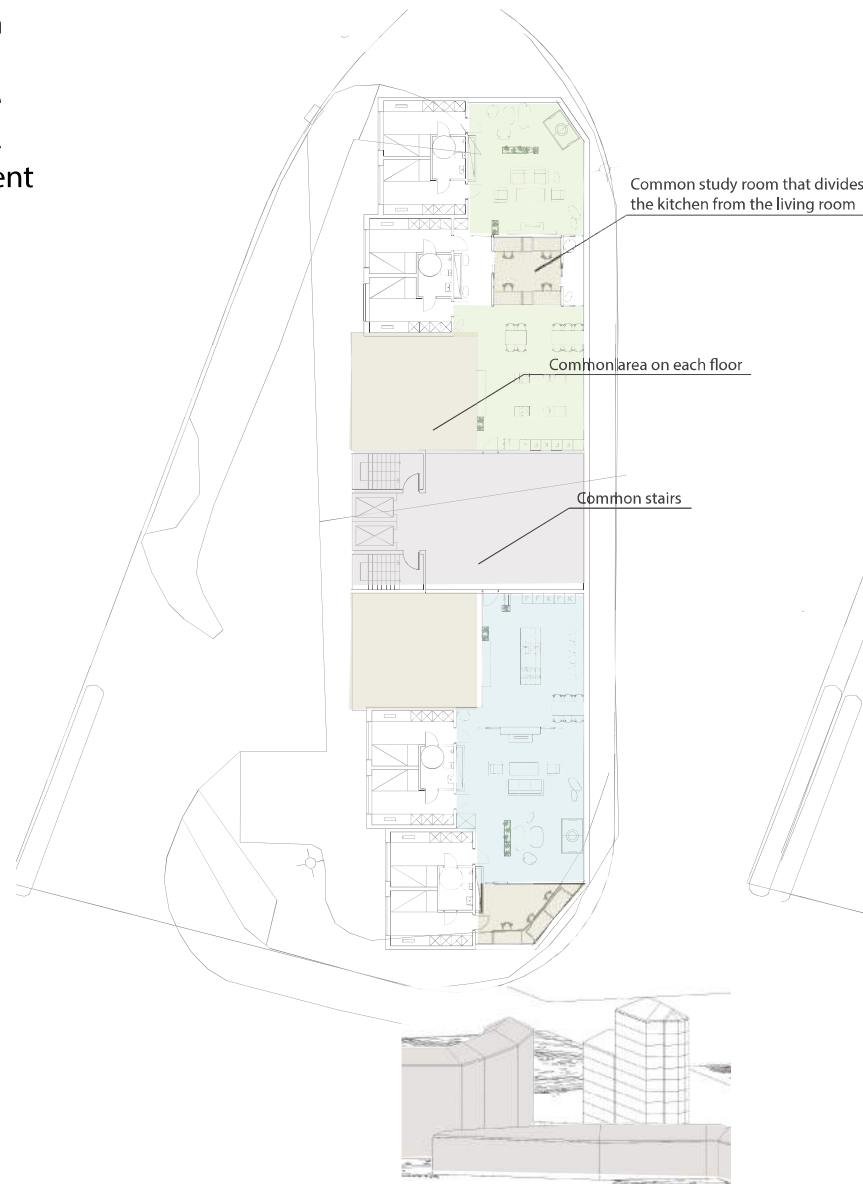


Illustration of the volume/ Shape

Example 2

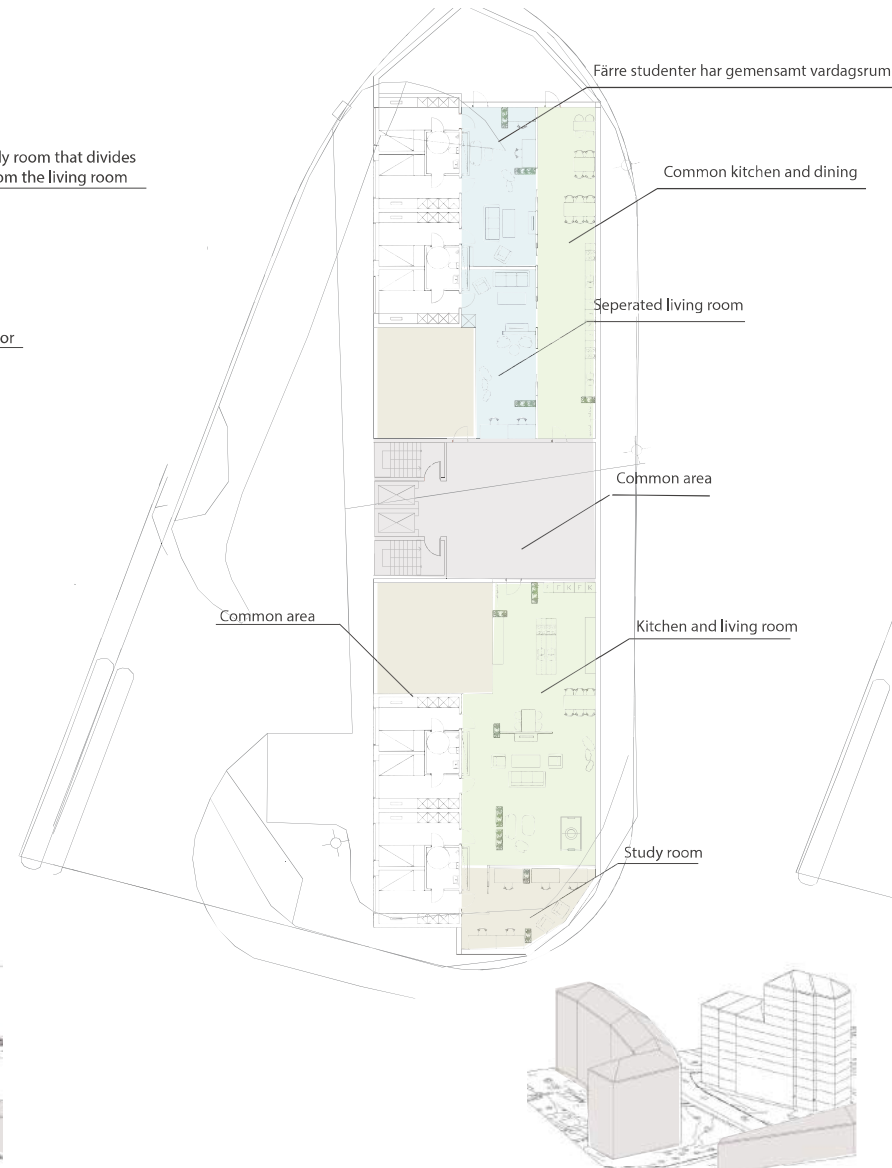


Illustration of the volume/ Shape

PROCESS

PROPOSAL 3



The plans fit 8-12 students on each floor. The proposals show different placement of the staircase, central placement and in the corners. Both examples show the public functions facing the street and the private functions facing the inner garden.

Positive/Negative of the plans

- + It is cheaper with external corridor.
- + The external corridor protects against noise.
- + In example 1 the staircase is in the corners, offer more private units.
- + In example 2 the staircase is in the center, offer common area.
- Bad with direct light, only from one side, only the private units.
- In both examples the entrance is through the public area in order to come to the private.

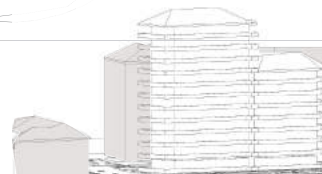


Illustration of the volume/ Shape



Illustration of the volume/ Shape

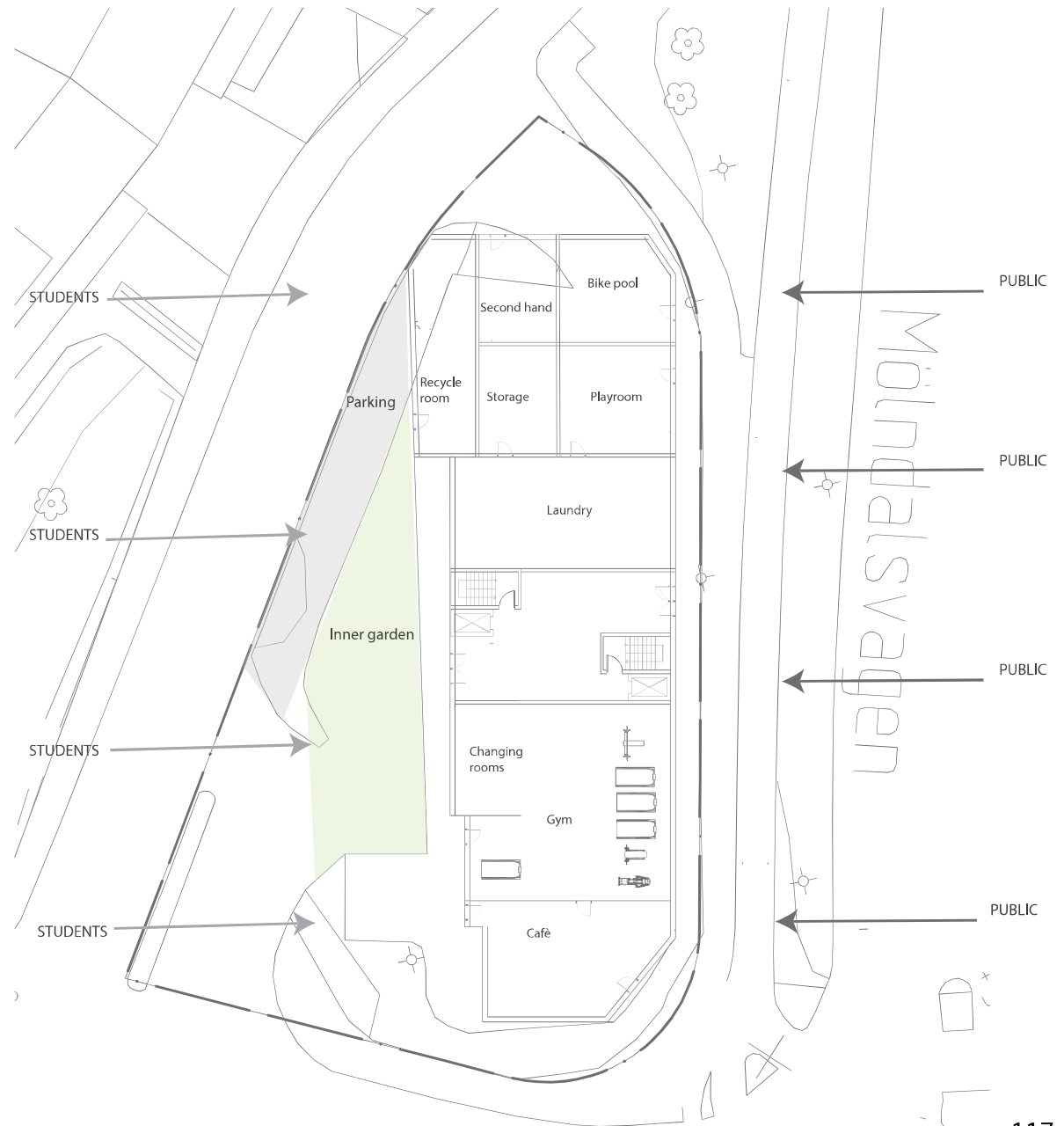
PROCESS

GROUND FLOOR

The ground floor consists of different functions, which are aimed for the public and the students. It is a combination of them both and has functions like: a café, gym, bike pool and a second hand store which is aimed for the public, but can also be used by the students.

Storage, laundry and play room and aimed for the students, and the public cannot use these functions, because of the safety, but they can still meet each other in the in-between spaces.

The inner garden is quieter, with parking plots for bikes and a sitting area. The ground floor creates more movement to the site and is a great spot to meet new people

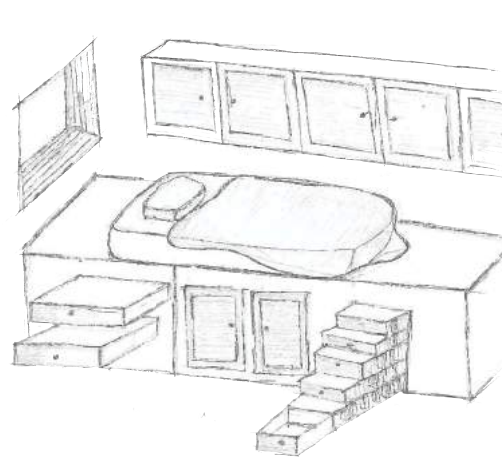
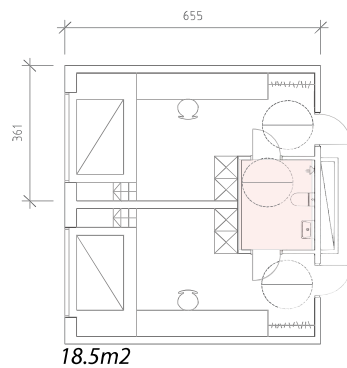


Ground floor

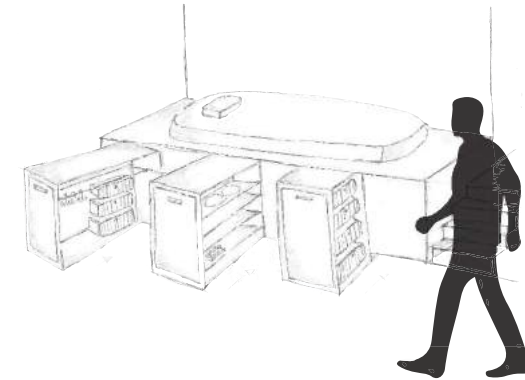
PROCESS

DIFFERENT TYPES OF ROOMS

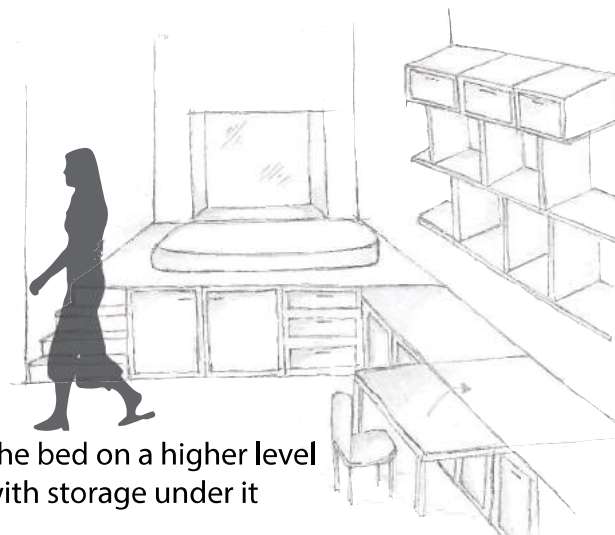
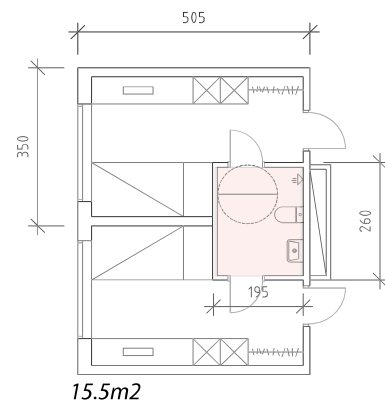
Standard room with different area and design. The two private units have a common bathroom which contributes to less area being used. The importance of the private units is the storage.



Storage under and over the bed



Storage under the bed



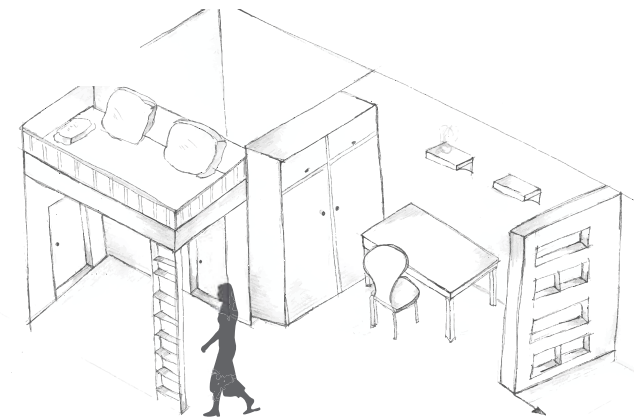
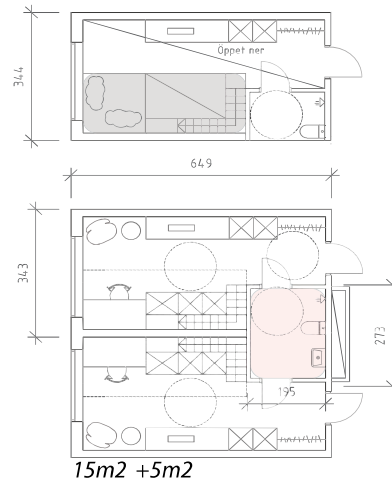
The bed on a higher level with storage under it

PROCESS

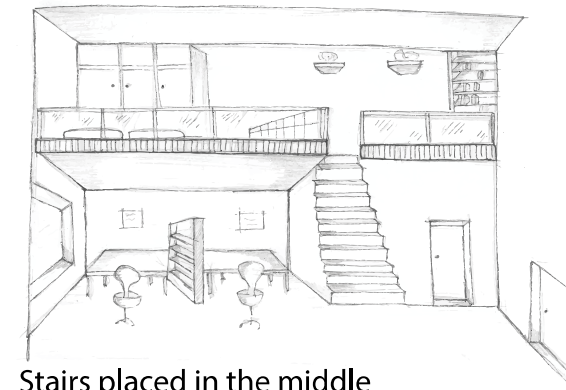
DIFFERENT TYPES OF ROOMS

Room with a loft. The bed is on a higher level and there is a high ceiling as well. The loft is offering a more compact living, but the height is important to the loft.

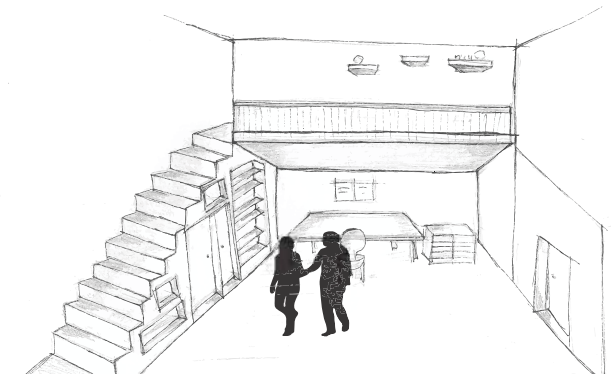
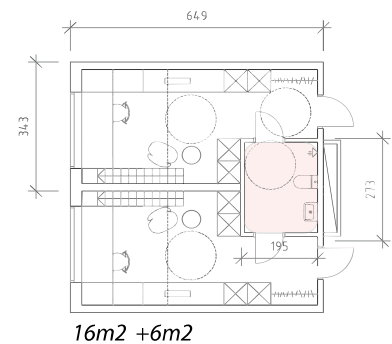
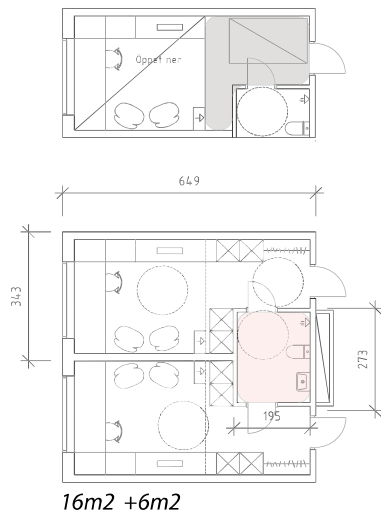
The rooms share a bathroom and have different types of arrangements. The focus is on the storage.



The bed is placed in the entrance



Stairs placed in the middle



Stairs placed in the corner

PROCESS

FOCAL POINTS

INVITED SPACES - HOME



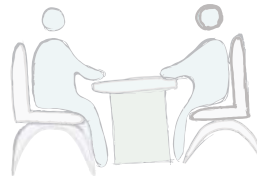
Inviting common areas with innovative space. The open floor plans and the brightness make the whole area inviting and pleasant. In the private units the high ceiling has the power of creating openness and home feeling.

PERSONAL



Personal touch is in the private units, with personal items on the shelves or in the storage. There are enough of smart storage solutions. No possibilities to have your own furniture, because the furniture is integrated to the unit.

COMMON AREA



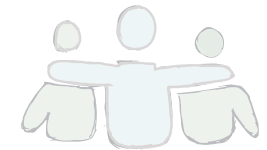
Common rooms are on each floor, like study room, playroom, study room and leisure room. The kitchen and the living room are divided in different sections with movable furniture.

STORAGE



Storage in the dwellings is well organized. In the private units the storage is both over and under the bed, and in the bathrooms. Some proposals have storage outside the private unit in the common area, this storage is also used to divide different areas.

SOCIAL INTERACTION



Social interaction is important in the shared accommodation. The social interaction happens in the common areas, because of the placement, the students area going through the common area to enter the private units.

PROCESS

WHAT AND HOW THE FUNCTIONS ARE SHARED

FUNCTIONS SHARED BY THE BUILDING



ENTRANCE

Shared by: Students on the same floor



STAIRWELL

Shared by: All the students



CORRIDOR

Shared by: Students on the same floor, connected with the entrance



PARTY ROOM

Shared by: All students



BIKE STORAGE

Shared by: All students



RECYCLE ROOM

Shared by: All students



LAUNDRY

Shared by: All students



GAME ROOM

Shared by: All students

FUNCTIONS SHARED BY THE DWELLING



STUDY ROOM

Shared by: Individual



ROOM

Shared by: Individual



BALCONY

Shared by: 2 students



LIVING ROOM AND KITCHEN

Shared by: 1-6 students

The functions that are shared by the whole building are necessary, like recycle room, laundry and bike storage. The functions are aimed for the students to share and also have their spontaneous meetings, where they can feel relaxed and enjoy each other's company.

The different functions are arranged in a way to have the possibility to meet each other, like the entrance which is in connection with the balconies and the corridor, you have to pass there to come to the private unit, in this way you meet students on the way. There are possibilities to be private by dividing the area with the sliding doors.

The private units are sharing the study room, living room, kitchen and balcony since they have everything in their room they are not sharing it with the whole building. with 2-6 other students, depending on which type of housing.

The kitchen and the living room are divided with sliding doors and making the space flexible depending on the needs.

The social interaction happens in the common areas, because of the placement, the students are going through the common area to enter the private units.

The bathroom is considered to be the most private area in all dwellings is the bathroom, since it is not shared with anyone.

PROCESS 1.1

PROCESS

PROPOSAL 1.1

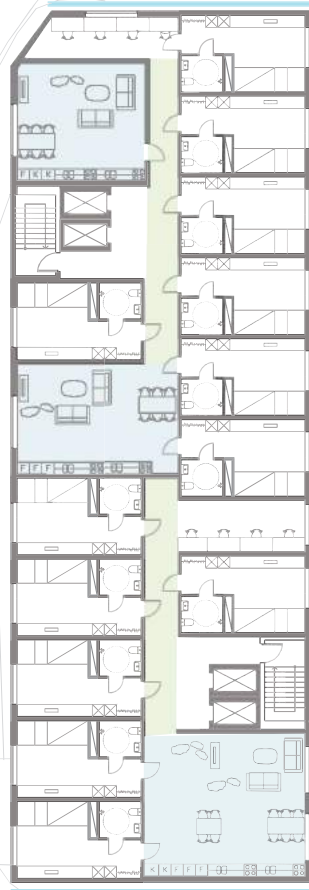


The plans fit 13-16 students on each floor. There are private units placed on both sides, the noisy and the silent side. The plans are supposed to fit as many units as possible and not having so much common area. There is less common area in these proposals.

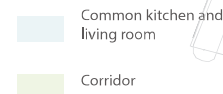
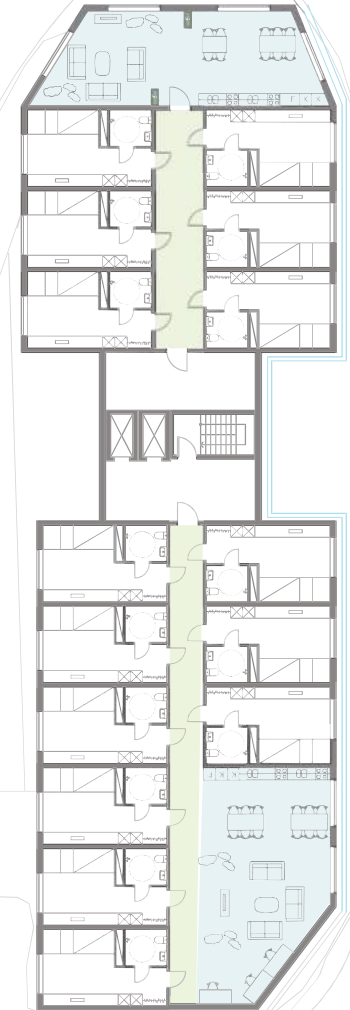
Positive/Negative of the plans

- + In example 1 there are less private units sharing a kitchen and a living room.
- In example 2 there are more students sharing the common area.
- In example 2 the staircase is not used well.
- + In example 2 a boundary between the buildings.

Example 1



Example 2



PROCESS

PROPOSAL 1.2

The plans fit 12 students on each floor. There are private units placed on both sides, the noisy and the silent side. The plans are supposed to fit as many units as possible and not having so much common area. There is less common area in these proposals.

Positive/Negative of the plans

- + In example 1 there are 4 units sharing the common area.
- The external corridor in example 1 is protecting from the noise but it is negative for the light.
- In example 2 there are a lot of corridors that take up a large area.
- + In example 2 the units are arranged like apartments.

Example 1



Example 2



PROCESS

PROPOSAL 1.3

The plans fit 13-16 students on each floor. There are private units placed on both sides, the noisy and the silent side. The plans are supposed to fit as many units as possible and not having so much common area. There is less common area in these proposals.

Positive/Negative of the plans

- + In example 1 it is separated into two buildings.
- In example 1 the common areas are large.
- + In example 2 there are inner balconies between the two buildings.
- + In example 2 there are 5 units sharing the common area, more apartment-like.



PROCESS

PROPOSAL 1.4



The plans fit 13-16 students on each floor. There are private units placed on both sides, the noisy and the silent side. The plans are supposed to fit as many units as possible and not having so much common area. There is less common area in these proposals.

Positive/Negative of the plans

+ In example 1 they have study rooms they can share.

+ In example 2 the two buildings are separated.

- In example 2 the building is too wide, and it is difficult for the sunlight to reach.

- In example 2 the common areas are large.

+ In example 2 there are corridor in the private units that get them closer to each other.

Example 1

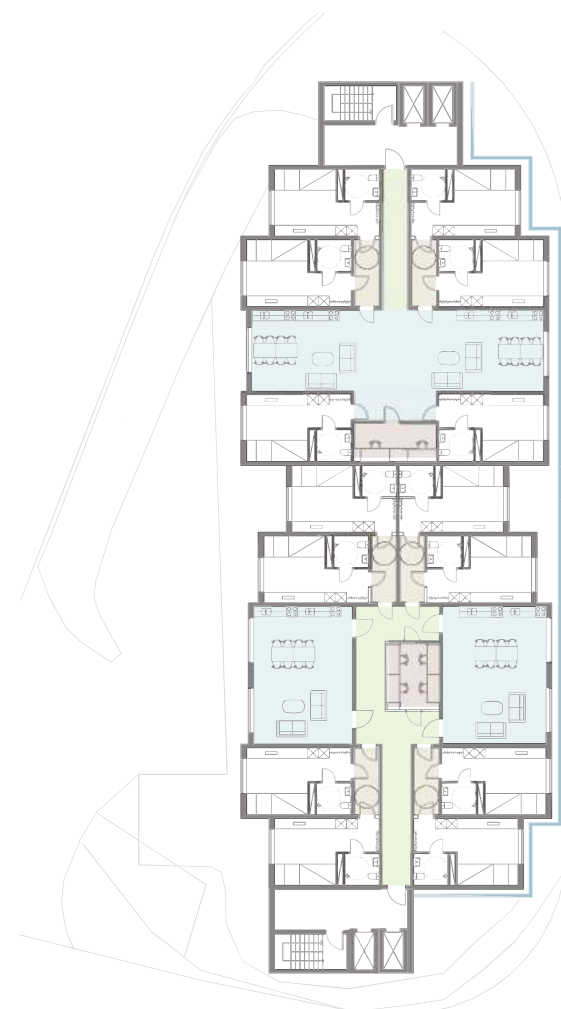


nd



Illustration of the volume/ Shape

Example 2



- Common corridor
- Corridor between the rooms
- Common kitchen and living room
- Study room



Illustration of the volume/ Shape

PROCESS

PROPOSAL 1.5



The plans fit 13-16 students on each floor. There are two types of corridors, one that runs through the whole building in order to reach all different units and the other one is between the units, which makes it more private.

This corridor also gets you closer to your neighbor and leads directly to the kitchen and the living room.

Positive/Negative of the plans

- + In example 1 there are 3-4 units that share the kitchen and the living room.
- + The private units are connected by their corridor to the kitchen.
- + There are both public and private corridors.
- The common areas are little bit large.
- The study rooms are not needed.



Illustration of the volume/ Shape

Example 1



Example 2

- Common kitchen and living room
- Common corridor
- Corridor between the rooms
- Common study room and terrace

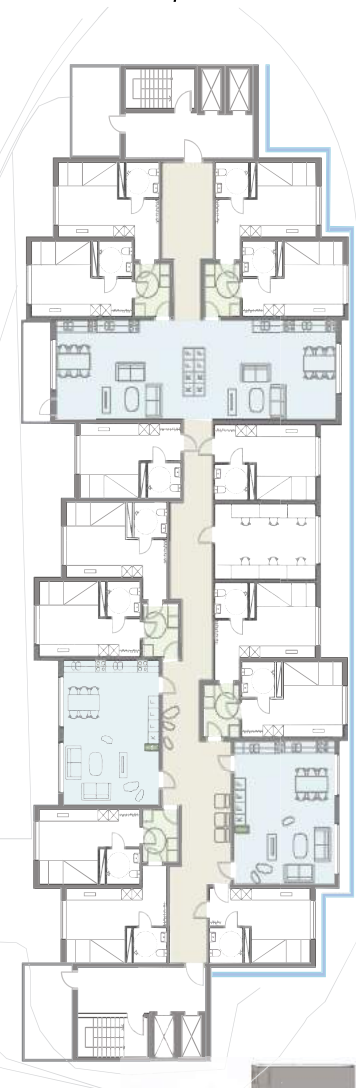


Illustration of the volume/ Shape

PROCESS

GROUND FLOOR AND ROOFTOP



The ground floor consists of different functions, which are aimed for the public and the students. It is a combination of them both and has functions like: a café, gym, bike pool and a second hand store which is aimed for the public, but can also be used by the students.

Storage, laundry and play room and aimed for the students, and the public cannot use these functions, because of the safety, but they can still meet each other in the in-between spaces.

The inner garden is quieter, with parking plots for bikes and a sitting area. The ground floor creates more movement to the site and is a great spot to meet new people.

The rooftop is aimed for the students, where they have a greenhouse, a place to hang out and a party room.



Ground floor



Roof top

PROCESS

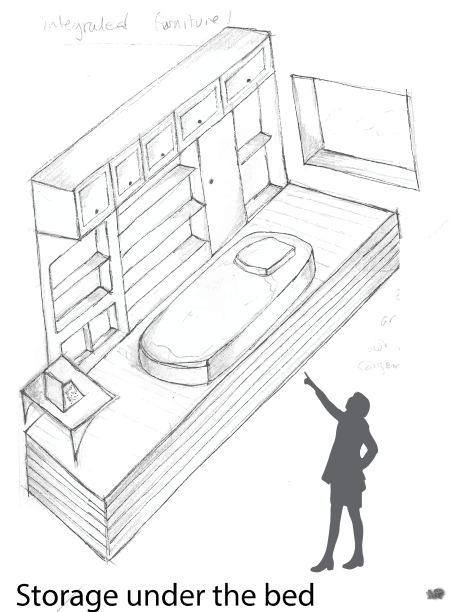
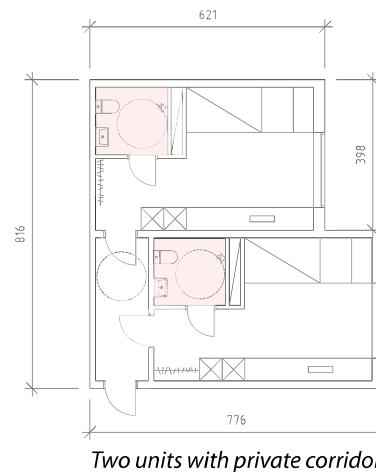
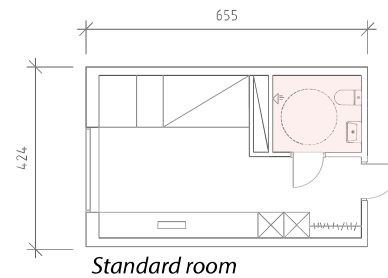
DIFFERENT TYPES OF ROOMS

The private units changed during the process, the loft room is excluded. The height of the loft is not relevant in the project, because with the height we are losing units.

The standard room is most relevant according to the site and the height. The private unit has also a private bathroom, and not shared one. The shared bathroom could create conflicts between the roommates.

The corridor between the units is for the social connections of the students, but also a direct connection to the common area, to the kitchen and the living room. They are in relation to each other, and are supposed to share the kitchen with two other units, because of the placement.

As mentioned before the storage in the rooms is the focus point, having storage above and under the bed. The storage is growing vertically, which means along the walls, this also creates the personal touch of the students.

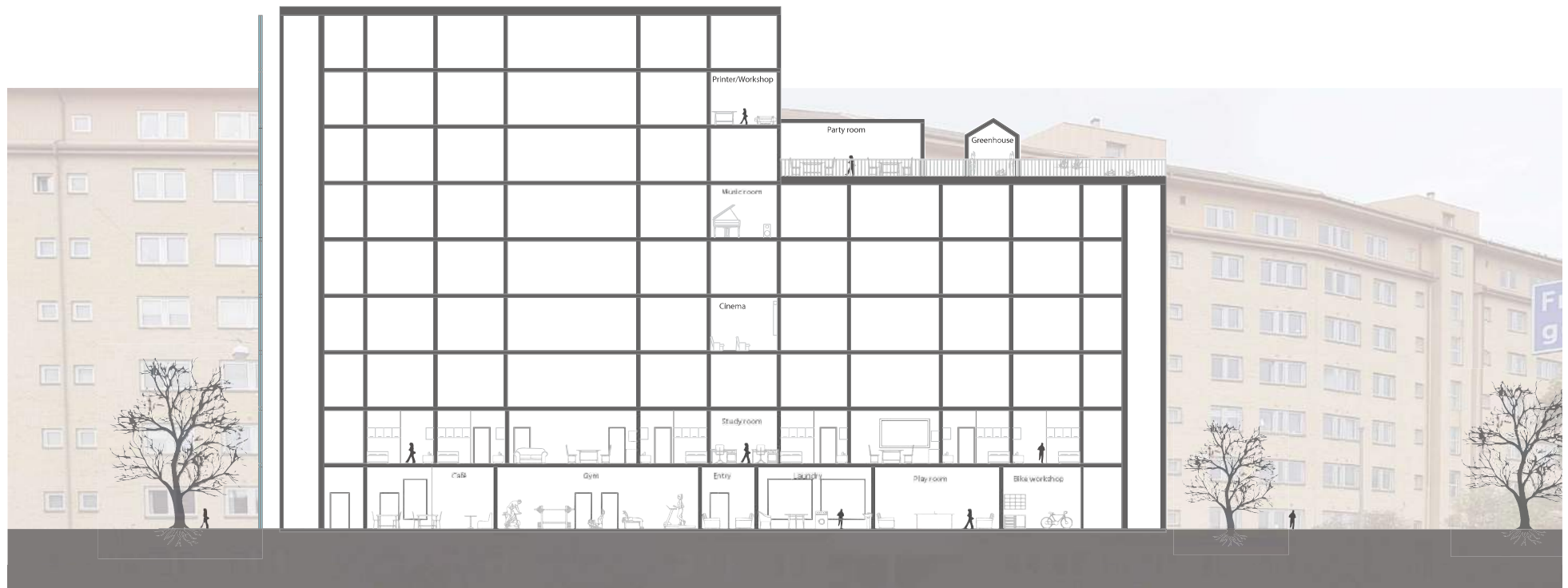


PROCESS

SECTION

The section shows the different common functions in the building. There is a common area on every second floor and on the ground floor it is both for the public and the students.

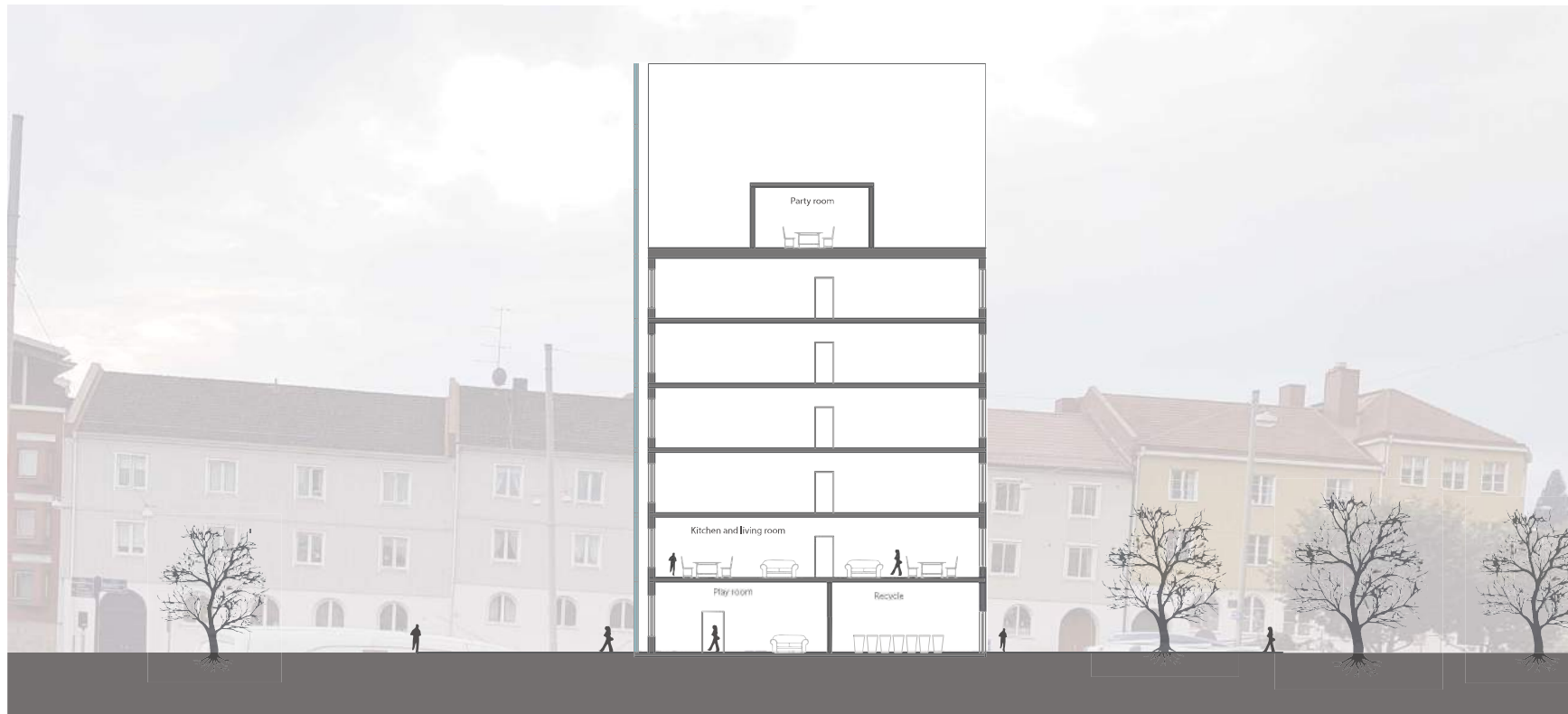
The common area that is on the private floor has: a study room, a cinema, a printer room, and a green house. This is made according to the students' needs of the survey.



PROCESS

SECTION

The section is in good cohesion with the surrounding buildings. The height of the buildings is 6 floors and 9 floors. The existing buildings are from 3 floors up to 12 floors.

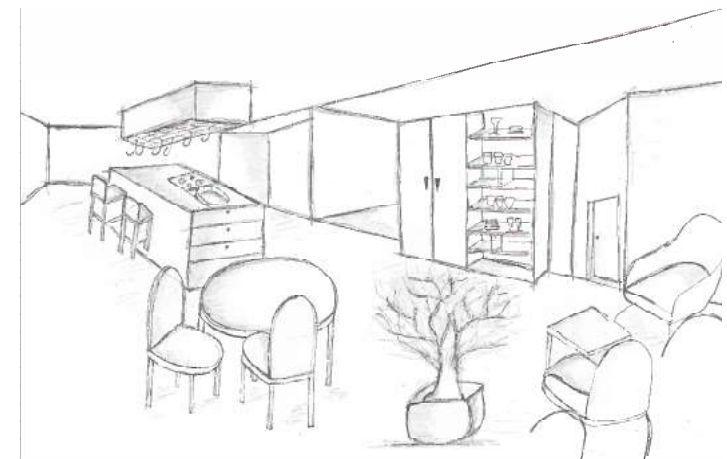
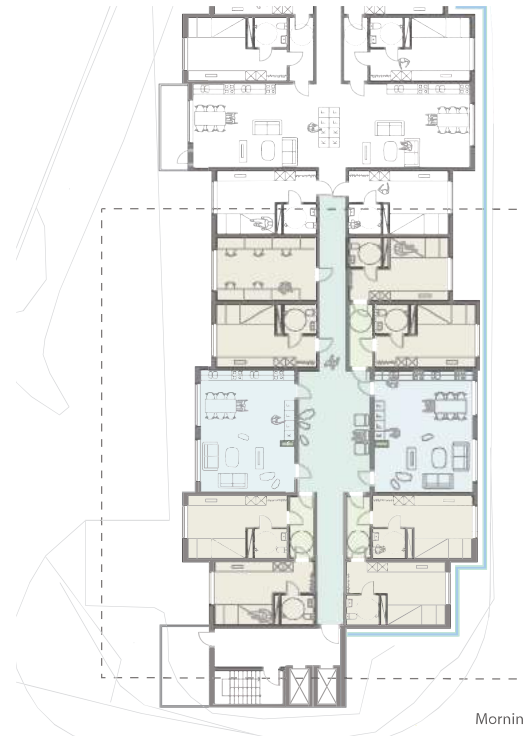


PROCESS

DIAGRAM OF DAY/NIGHT

The building is used in different ways depending on what time of day it is. The usage in the morning and at night is very different, because the students go to the university in the morning, which means a lot of movement in the kitchen.

In the evening the students are back from the university, and need to prepare food or study. Some of them are doing the laundry or having friends at their place. On weekends they are back from discos at night and need to prepare a small meal before going to bed.



Sketch from common area

PROCESS 1.1

FOCAL POINTS

INVITED SPACES - HOME



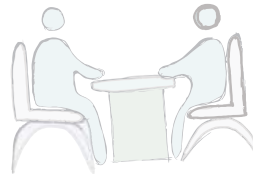
Inviting common areas with innovative space. The open floor plans and the brightness make the whole area inviting and pleasant. In the private units the high ceiling has the power of creating openness and home feeling.

PERSONAL



Personal touch is in the private units, with personal items on the shelves or in the storage. There are enough of smart storage solutions. No possibilities to have your own furniture, because the furniture is integrated to the unit.

COMMON AREA



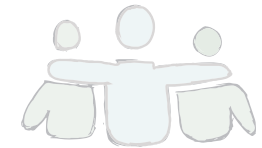
Common rooms are on each floor, like study room, playroom, study room and leisure room. The kitchen and the living room are divided in different sections with movable furniture.

STORAGE



Storage in the dwellings is well organized. In the private units the storage is both over and under the bed, and in the bathrooms. Some proposals have storage outside the private unit in the common area, this storage is also used to divide different areas.

SOCIAL INTERACTION



Social interaction is important in the shared accommodation. The social interaction happens in the common areas, because of the placement, the students area going through the common area to enter the private units.

PROCESS 1.1

WHAT AND HOW THE FUNCTIONS ARE SHARED

FUNCTIONS SHARED BY THE BUILDING



ENTRANCE
Shared by: Students on the same floor



STAIRWELL
Shared by: All the students



CORRIDOR
Shared by: Students on the same floor, connected with the entrance



PARTY ROOM
Shared by: All students



BIKE STORAGE
Shared by: All students



RECYCLE ROOM
Shared by: All students



LAUNDRY
Shared by: All students



GAME ROOM
Shared by: All students

The functions that are shared by the whole building are necessary, like recycle room, laundry and bike storage. The functions are aimed for the students to share and also have their spontaneous meetings, where they can feel relaxed and enjoy each other's company.

The different functions are arranged in a way to have the possibility to meet each other, like the entrance which is in connection with the balconies and the corridor, you have to pass there to come to the private unit, in this way you meet students on the way. There are possibilities to be private by dividing the area with the sliding doors.

FUNCTIONS SHARED BY THE DWELLING



STUDY ROOM
Shared by: Individual



ROOM
Shared by: Individual



BALCONY
Shared by: 2 students



LIVING ROOM AND KITCHEN
Shared by: 1-6 students

The private units are sharing the study room, living room, kitchen and balcony since they have everything in their room they are not sharing it with the whole building. with 2-6 other students, depending on which type of housing.

The kitchen and the living room are divided with sliding doors and making the space flexible depending on the needs.

The social interaction happens in the common areas, because of the placement, the students area going through the common area to enter the private units.

The bathroom is considered to be the most private area in all dwellings is the bathroom, since it is not shared with anyone.

PROCESS

DIAGRAM OF THE FUTURE

The buildings have the opportunity to change from private units to apartments, small apartments around 50m². The shortage of student housing will probably end after a while, so the usage of the buildings is to have the possibility to change if needed.

There will always be a need of housing in the future, so this type of housing can be aimed for both students and youths, which do not require large areas in the beginning.



PROCESS

CONCLUSIONS

The process of the plans has been a rollercoaster. It has been interesting to develop plans that are different, but some plans have been the traditional way of corridors. The sketching has been going back and forth, from traditional way of corridors, to different way of arrangements and design. The aim of the plans has been the common areas, to have enough space for all students, to have an inviting space and to fit all their friends.

In order to accomplish the plan I had to break down the ordinary way of corridors, and the common rooms and keeping the same benefits as an apartment. With different facilities in the whole building, enabling students and public to meet on the ground floor.

There is have fully equipped private units, with furniture, but the possibility to have own furniture as well. The importance of the private units is, the storage, the personal touch and the home feeling. This goes hand by hand, the personal touch is from your private belongings and if you don't fit them into your room, you won't feel at home. In conclusion you are not comfortable with your housing.

THE HOUSING PROJECT

CONCLUSION

All the different proposals and sketching have helped me thorough the project, with their help I have reached the final outcome. The final drawings have similar layout to some of the proposals, but they are much more developed in this stage. All of the proposals have the same concept in general and are based on: literature studies, survey, meetings with SGS Student Housing Association and my own experience.

The focus is on the social interaction in the housing, because I found the lack of it in the existing student housing, and by student housing I mean the dormitories in Sweden. The social interaction in the building is shown: in the common areas, and they have enough space to fit the students.

They common areas are shared by fewer students to have a closer relationship, to get to know each other, to create trust between each other and by this the conflicts are reduced. The common area becomes an inviting space instead of an area with conflicts.

The shared areas are on each floor, but also on the ground floor and the rooftop. This makes it possible for the students to meet the rest of the students in the building and not only the ones on the same floor.

By having an interesting and innovative housing, it will affect the students' studies in a positive way. They will not feel stressed of the accommodation, instead they will be comfortable and relaxed. This means that they can focus on their education without any interruptions.

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