AN ALTERNATIVE TO THE SMALL DWELLING

RESEARCHING SOCIAL AND SPATIAL BENEFITS WITH CO-HOUSING

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CHALMERS
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THANKS

This is a master thesis done at the department of architecture at Chalmers University of Technology by Malin Nilsson. It has been done during the spring semester from January to June of 2017 and comprises of 30hp. This is the final part of my master program Architecture and Urban design.

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ABSTRACT

We have a housing shortage in Sweden that is acute, especially for young adults. The trend within housing is to build smaller and cheaper in order to remedy this situation. While most people value their private space many young people report that they feel lonely in their life.

The National Board of Housing, Building, and Planning (Boverket) recently changes their rules now allowing for some essential functions to be shared amongst several single person households in a residential building.

The question for this thesis work has been; how can a shared living increase the spatial qualities and the social dimensions? This thesis looks into what spaces people are willing to share and with how many other people? It also looks at what functions need to be private, what can be in different degrees of semi-private and what would those areas contain and if there are parts that could be entirely public.

The methods used in this thesis is theoretical studies, analyses of reference projects and research by design. Testing out solutions both physically and digitally has been the main design tool. The main design goal of the project is to develop strategies and design that promotes common and private space in residential situations and also to design dwellings that through common spaces can provide spatial qualities not found in the small dwellings.

The result is a residential building that is designed for young adults where many of the functions in a typical apartment are now shared. This is meant to be an alternate housing typology that aims to provide its residents with more functions and qualities than living in a private 30m^2 apartment would. A question this thesis has been trying to answer is; how can a shared space or even an entire building become more useful, activated and flexible when the functions are shared?

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INTRODUCTION

BACKGROUND

Lack of housing historically in Sweden

Historically the availability for housing has varied greatly in Sweden. After the second world war more and more people started to move from the smaller farming communities into the cities. In 1946 the estimation was that there was a need for 600 000 new residents during the next 15 years, almost all of it in the expanding cities. Despite the fact that they not only built this but actually expanded the number of new residents built to 800 000 between the years of 1946 and 1960 this was still not enough.

In 1960 it was estimated that there was an acute need for another 300 000 new residences. In 1965 the government made the decision that one million new residences would be built until the year 1974 in order to fix the housing situation. This was one of the biggest housing programs in the world per capita and not only was new residences built but many of the existing ones were refurbished to raise the general standard.

Image over the one million housing program area of Rinkeby in Stockholm
Source: Allmännyttan, 2017

In 1970 there was no longer a lack of housing and due to changes in the national economy there was even an excess of housing. During the 1980's the building of new houses stayed relatively low and the availability of housing was good.

At the very end of the 1980's and the beginning of the 90's the building of new residences took off again. This was due to a deregulation of the property market. This only lasted a few years until 1991 when the building of new residences plummeted due to a recession and stayed low for the rest of the 90's. After the millennium there was a small raise but it quickly evened out staying relatively low for the next ten years. In recent years the building has increased starting from around 2013 (Allmännyttan, 2017).

Lack of housing today in Sweden

Despite the fact that construction of new residences has increased Sweden still has a dire lack of available housing. According to the national board of housing, building and planning (Boverket) there is currently a shortage of about 160 000 residences nationwide and they estimate that we would need to build about 700 000 new residences until the year 2025. This is an urgent problem as housing shortage constrains the future growth, expansion and development for municipalities and regions (Boverket, 2015).

Young people have especially hard finding a residence due to lack of financial means and the low availability of small rental apartments. In a nationwide study from the rental housing association (hyresgästföreningen) from 2015 they estimate that there are about 350 000 people in the ages from 20 to 27 that currently don't have their own residence but would like to. Their estimation for the current lack of housing is even higher saying that Sweden currently lacks 220 000 residences (Hyresgästföreningen, 2015-a).

The rental housing association also published a separate study for the region of Gothenburg in 2015 where they had interviewed 4400 young adults in the ages of 20-27 years. They estimate that 42 200 people in that age group are currently lacking a resident of their own. They also conclude that it would be necessary to build 27 800 residents, mainly rental apartments just to satisfy the current needs (Hyresgästföreningen, 2015-b).

How we live in Sweden today

In Sweden we tend to like our private space where the average living space for each individual just becomes bigger and bigger. The current average in Sweden is 42 square meters per person. That figure can however vary depending on which part of the country you are talking about. In the cities of Stockholm, Gothenburg and Malmö the average living space decreases with about 5-7m² per person mainly due to lack of available space (SCB, 2014).

37,7% single-resident households in Sweden
Source: SCB, 2014

Many people live alone in Sweden. Out of the approximately 4 million households 37,7% of them consists of only one person. That is the highest percentage in the world (SCB, 2014).

This is a number that has increased over the years as the average number of residents per household has fallen since 1960 and the start of the one million residents program that increased the number of available residents. To the side is a diagram showing how the average number of residents per household in Sweden has fallen drastically starting from 1960 and declining until around 1990 where it has stayed relatively stable and low ever since.

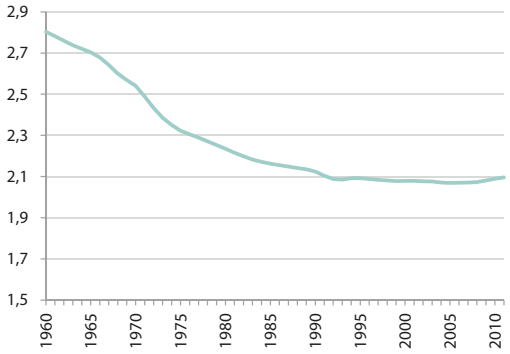


Diagram over the average number of residents per apartment in Sweden over time.
Source: SCB, 2015

Looking at the housing situation for Gothenburg in particular the rental housing association's survey showed that 21 percent of young adults said that they lived at home with their parents. Out of that group 86% of them say that they would like to have their own place if they could. 51% of them say that they think they could afford it if they found a place (Hyresgastforeningen, 2015-b).

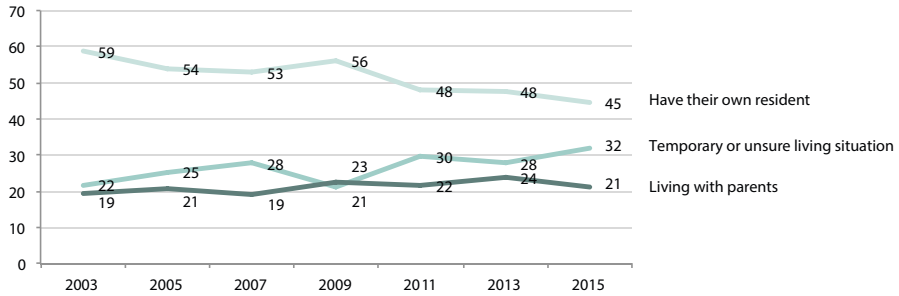


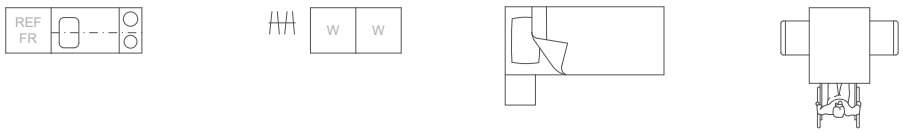
Diagram over the living situation for young adults in gothenburg over time
Source: The rental housing association in Gothenburg, 2015-b

BACKGROUND

The small dwelling

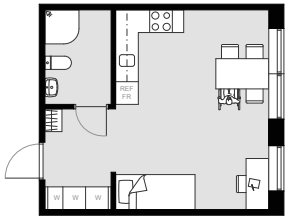
As of July 2014 the national board of housing and planning (Boverket) decided on new rules as to what functions and furniture had to be fitted into an apartment that is less than 35m² big. Unlike previously the functions for resting and socializing could overlap meaning it was no longer necessary to fit both a sofa and a bed into an apartment but only a sofa-bed. The same goes for the functions of dining and studying, before the changes a floor plan ha to be able to fit both a dining table and a desk but with the rules from 2014 the desk was no longer a requirement. The size of the kitchen and storage also became smaller. All functions except for the bathroom can be fitted in one room and there is no requirement for being able to divide the space (Boverket, 2014).

In addition to a handicap-adapted bathroom these functions and furniture need to be fitted in an apartment all while maintaining enough space around them to adhere to handicap-adaptation:



While the average living space in Sweden is 42m² per person today that same number goes down if you only look at the category of young adults. The average living space for university students is 26m² according to a nationwide study (Studentbostadsföretagen and University of Lund, 2013). The rental housing association did a study looking at the living conditions for people age 20 to 27 living in Gothenburg. The average living space there was just over 31m². This includes both the students, people living with their parents and those living in their own apartment (Hyresgästföreningen, 2015-b).

Here are two example floor plans for the two averages of 26 and 31m². Both have all the functions required. There is a bathroom, a small kitchen, storage space, a bed and place for socializing around a dining table. There is not room for both a sofa and a bed in either of them but you could have a sofa-bed.



Example floor plan of 31m²

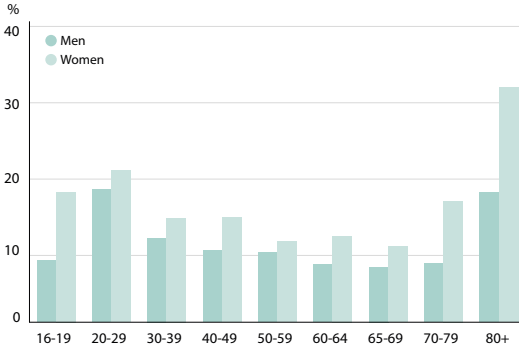
While these apartments have everyone one would require there is not room for much "extra". Both kitchens are small and preparing a larger meal could be difficult. There is space for having friends over but the area around the dining tables are tight and not too many people could fit there in either apartment. There is not room for a sofa in either of them that could fit a group of friends for socializing. Everything within the apartments with the obvious exception of the bathroom is in the same space and the room can not be divided or used effectively for different function at the same time.

Example floor plan of 26m²

Loneliness in sweden

Just because you live alone does not mean that you necessarily feel alone, many people choose this type of living and are very happy with it. However Statistics Sweden (SCB) conducted an investigation in 2013 where they looked into the question of perceived loneliness.14% of the people asked reported that they felt lonely in their life. The figure was slightly higher amongst women compared to men in all age categories. The people who reported feeling lonely in their life was as high as 30% amongst people living alone. For people living at least two together that same number dropped to about 6%.

Looking at the age categories it can be see that there is about 18% of the people in the age groups of 16-29 that feel lonely. That number then decreased as you get older only to start rising again around the age of 70. The fact that so many young people feel alone may be surprising. This is also the age categories where single-resident households are the highest (SCB, 2014).



Percentage of respondents who report feeling lonely sorted by age and gender.
Source: SCB, 2014

In the psychology guide they describe how loneliness can be something positive and necessary when it is voluntary and only for a limited time however the forced and involuntary loneliness is something that can be directly harmful to the individual over time. Most people wish to have a sense of belonging, closeness and community. For some people the fear of being rejected, different or excluded may lead to them not wanting to seek contact with others. This fear then leads to a greater feeling of exclusion which is a negative spiral.

For some this feeling lasts over time maybe their entire life but for some it is over a limited time and in special circumstances such as being new to an area or new at work. As a start to fixing this problem they recommend slowly start reaching out to others, maybe talk to an old friend or someone you just met or possibly take up a new hobby where you could meet new people (Psykologiguiden, 2010).

New rules from the national board of housing, building and planning

The Swedish national board of housing, building and planning (Boverket) recently changed the rules and recommendations for housing. As of July 2016 it is allowed to design housing where "multiple single-persons households share certain functions like kitchen, dining, living room and hygiene room" (Boverket, 2016-b).

Before this change their rules clearly stated that each household had to have the functions for personal hygiene, food preparation and space for socializing fitted within every residence. Some exceptions were made for student and different types of assistant living residents where these functions could be shared.

In their consequence investigation, BBR 23, published in June 2016 they describe the purpose of these new rules as "these changes in building rules is meant to provide to opportunity for multiple single resident households to live together as a group with shared functions, for example; personal hygiene, kitchen and dining area. Consequently this creates the conditions for production of single resident households with shared spaces" (Boverket, 2016-a).

Why now?

The recent changes in Boverkets rules and recommendations for shared space in housing outside of student apartments is an interesting aspect to explore. The reports of how many young people may feel lonely as well as the always relevant question of housing shortage especially for young adults makes this proposal for a new typology especially relevant.

PURPOSE AND THESIS QUESTION

Purpose

This is a residential building for young adults who may be looking for an alternative to the very small living space that most young people are limited to living in due to economic reasons. In this housing typology some functions such as the bed, bathroom and storage are entirely private. Some areas like the kitchen and dining are shared amongst a small group and then functions such as socializing are shared by more residents.

Many single household apartments are smaller than 35m^2. The most basic functions can be fitted into that space but there are not room for much socialization or anything "extra". I have been looking into what the benefits of sharing functions between multiple single persons-households and how that could enlarge the individual living space and enhance social interactions.

Objective and question

This thesis aims to challenge the idea of how young people can live instead of living in the minimal type of residents that many people are limited to. This has resulted in a building that aims to provide an alternative to the small dwellings where parts of the living space are in different degrees of shared spaces, either shared by few or by many people. The hope is that this can be seen as an alternative and addition to our current housing market. This is meant to show how one can redistribute the living space and provide other qualities for the residents by providing an affordable and realistic residential building.

? *Question: How can a shared living increase the spatial qualities and the social dimensions?*

DELIMITATIONS AND METHODOLOGY

Delimitation

The main focus is on the spatial qualities in the building, its immediate surroundings and the residential life and interactions within it. The thesis does not focus on the technical aspects of the building and its systems.

Methodology

A big part of this has been to investigate what functions need to be private, what can be in different degrees of semi-private and what would those areas contain and also if there are parts that could be entirely public. I have been looking into what spaces people are willing to share and with how many other people? How would the building affect social interactions, economic and social values of the residents and how can the issues of safety and privacy be solved? I have been investigating what kind of housing typology can be designed using this way of thinking.

The project involves both a theoretical research part in the form of case studies and literature studies as well as a design proposal implementing what I have learned. The design proposal is the result of the investigation into how sharing functions across different households can lead to a building that gives its residents more than it would if everyone had their own minimal apartment to live in. The design proposal focuses on the different degrees of private and shared space and how they would be utilized, by whom and how those spaces look like.

This project started out by being developed through research for design. Using literature studies into the fields of shared housing and the living situation for different groups in society. I also did case studies into the implemented examples of the combined housing that exists today. I also based part of my work on a study done by White Architects where they had interview people who are currently living in different forms of co-housing or student dorms to get their perspective on what works and what they would like to change. When it comes to the building's design the method is more research by design by experimenting with volumes and shapes using models and studies.

CO-HOUSING

HISTORY OF CO-HOUSING
IN EUROPE AND NORTH AMERICA

Co-housing means "semi-communal housing consisting of a cluster of private homes and a shared community space" (Dictionary, 2017). Throughout history the reasons and goals for co-housing have varied from different practical reasons as well as utopian views on how to improve living standards.

Utopia in 1506

One of the earliest descriptions of a collective community is described in the book "Utopia" published in 1506 by the British politician Thomas More. In his vision the people were all organized into groups consisting of a city block who shared cooking and dining facilities as well as generous recreation spaces. The idea being if more people shared these spaces one could get more than they would have on their own. The book was very much a critical text against the sparse living conditions at the time (Vestbro, 2010).

Parallellogram in the early 19th century

In the early 19th century the industrialism had turned Europe into a more production driven society with little focus on the individual's well-being. A Scottish factory owner by the name of Robert Owen was very interested in his employees living conditions.
He envisioned a society he called "parallellogram" where the positive aspects of both the farming and industrial society would be combined and a group of approximately 1000-3000 people would own everything collectively. Here the private resident would be small and only include the most basic functions but the society would also share facilities such as large dining halls, library's, preschools and recreational areas. One of Owen's followers, George Rapp and Owen himself emigrated and started a new society named "New Harmony" in Indiana, USA in 1825. Here anyone who wanted was welcome to join into this new idea for a society. Unfortunately the city was plagued with conflicts over ownership and how to manage the communal facilities. The communal city was later dissolved in 1827 (Versluis,1999).

A painting of Robert Owen's vision for his parallellogram community.
Source: Versluis,1999

Falangstär in the late 19th century

One vision that took it even a step further was that of the Frenchman Charles Fourier who described how the workers could all live in palaces like the Versailles if they pulled their resources together. He called it "falangstär" and described how functions such as dining halls, schools, theaters and many other recreational facilities would be collectively owned and shared. He even imagined that the residents would do their household purchases collectively for a better deal (Vestbro, 2010).

One of Fourier's followers, Jean André Baptiste Godin, actually built several communal residential building called familistär with a glazed and heated courtyard in the city of Guise in France. The residential buildings were all connected to a factory where the residents worked. Due to unemployment especially amongst the women more and more families started to build their own kitchens and the building becomes less collective over time (Vestbro, 2010).

A picture from one of the glazed courtyards in a familistär during a meeting.
Source: Vestbro, 2010

Co-houses during the 20th century

Sometimes the purpose of the collective home was a little bit more restrictive and particular. In 1896 the church of St. Vincent de Paul set up a home called "Jeanne D'Arc Home" in New York, USA. This was aimed at providing young girls who were new to the city and separated from their families with a safe home. The home provided the girls with food, shelter and communal spaces but was also highly restrictive in that no men were allowed in the building and a curfew was imposed. One of its residents, Sylvia Plath, described it as being populated by well-to-do "girls" whose parents "wanted to make sure their daughters were living in a place where men couldn't get at them and deceive them" (Stout, H, 2009).

During the early 20th century the idea about a central kitchen building started to develop. For the upper-class it was common to have servants for both cooking and childcare. A middle-class family could not afford this but the idea with the central kitchen was that several families could share their food services and order their meals up to their apartment from the kitchen via a food elevator. Several of these types of buildings were built around Europe with the first one in Copenhagen in 1903 (Vestbro, 2010).

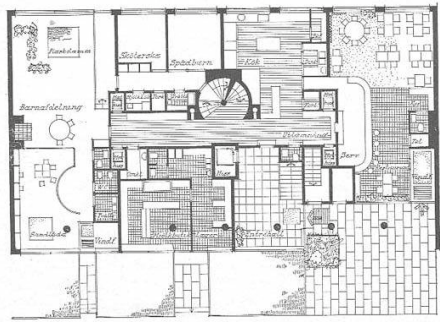
HISTORY OF CO-HOUSING
IN SWEDEN

From 1800 to 1920
In Sweden the author Carl Jonas Love Almqvist was inspired by the utopian thinking going on in Europe and wrote a paper in 1835 where he proposed something he called "universal hotels". In his vision he described how all household work would be taken care of collectively to save time in order for women to work outside the home. This was almost unheard of at the time but Almqvist imagined that this would not only increase productivity in society but it would also strengthen marriages when women got a more equal role in the household (Vestbro, 2010).

One of the central kitchen buildings was opened in Stockholm in 1907. The building was mainly aimed at young women that worked and did not have time to cook or clean on their own. The building also had some larger apartments for families where the woman may not have work but by centralizing functions such as cooking, dish-washing, laundry and bakery could have a better quality of life and more time for the family. The building had financial problems and was closed down in 1918 and the converted into traditional apartments with kitchens (Idun, 1905).

During the 1930's
During the 1930's the socialist politician Alva Myrdal and the architect Sven Markelius published their ideas for the functional collective building. The main goals were to rationalize household work and allow women the opportunity to keep their jobs even after having children. That idea was highly controversial at the time and not very well received. Despite of this Markelius and Myrdal started working and developing several projects with the ideas of a highly functional co-house to assist working families and particular the women.

In 1935 the first house opened at Kungsholmen in Stockholm. Here there were 54 smaller than average apartments with connecting food elevators that carried the meals from the central kitchen on the ground floor. There was also a child care unit, a restaurant for the residents and a small grocery store. In the basement there was a staffed laundry room where you could send your laundry to get cleaned. At the most there were over 20 people working in the building (Markeliushuset, 2017).



Ground floor plan of the collective house at Kungsholmen with childcare, a central kitchen, a grocery store and dining hall.
Source: Vestbro, 2010

Alva Myrdal and her husband Gunnar who was also a politician within the socialist party published a book in 1934 called "Kris i befolkningsfrågan" (the crisis in society) where they emphasized the importance of dividing child care between the parents and educated specialists. She also described how to reform Swedish child care with new ideas within the field of child psychology. In 1936 a school was started where Myrdal became the principal. The goal was to educate child care specialists within the field of psychology, hygiene, pedagogy and medical child care. In cooperation with the housing cooperative HSB she started several child care units within their residential buildings (HSB, 2013).

A picture from the child care unit in Kungsholmen
Source: Vestbro, 2010

Another example built in 1939 according to the same principles was the so-called YK-house, an abbreviation from "yrkeskvinnornas klubb" or in english "the working women's club". In order to move in here you had to be a working person with an academic degree. This building also had a child care facility on the ground floor as well as a breakfast and dinner restaurant for the residents. On each floor plan there was a small apartment for a housekeeper that would clean the apartments on the floor and do the laundry while the residents were away at work (YK-Huset, 2005).

The yk-house seen from the outside
Source: Y.K. Huset, 2005

Despite the fact that there was a societal interest and need in getting women to work it was difficult to get any political support for the development of co-houses on a broader basis. The co-houses that were built were all built by private developers, especially by a man named Olle Engkvist who built six co-houses around Stockholm during 1935 to 1955 (Vestbro, 2010).

From 1940 to 1976

The main purpose for the co-houses of that time was to aid working women and not make them "work double" by handling both a paying job and the household. The idea of having the men help out in the home was not even considered at the time (HSB, 2013). The development of co-houses was controversial at the time. In 1948 however a committee was appointed by the government to investigate the social problems and benefits of co-housing in order to decide if this housing typology should get public support. During the 1950's the ideal was still that women should stay at home and take care of the home, the family and their husband. The committee's work was extensive were they discussed questions like "the male and female roles in the workforce", "how urbanisation is changing the previous work division in the home" and "the households workload within the home" where they discuss technical developments in the home such as the freezer, washing machines and how canned food could help the households. In the end they decided that co-houses should not get public support (Socialdepartementet, 1956).

Some of the reasons for the lack of political support were the fact that very few women at the time was politically involved. The main reason for that was that many women simply did not have the time or opportunity to engage in the political life and as a result of that most of the people in power were men who did not have a vested interest in issues like child care units and household help (Vestbro, 2010).

During the 1960´s however it became more accepted for women to work even after having children. In 1968 a government investigation was launch with the purpose of looking into the future and development of child care. In 1975 a new law was passed giving all six year old's the right to one year of pre-school for free as well as the development of child care in all counties for or studying working parents (Lärarnas Historia, 2014).

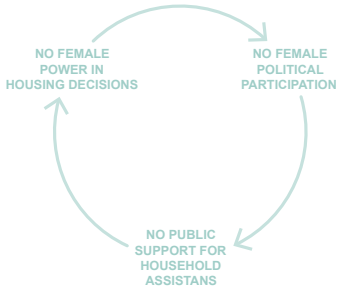


Diagram over the negative circle for lack of female participation
Source: Vestbro, 2010

HISTORY OF CO-HOUSING
IN SWEDEN

When child care became public and for everyone the need for co-houses for practical reasons declined. One of the existing co-houses was Hässelby family hotel built in 1956. Originally this was one of the co-houses that helped working women with services however as the need for that became less and less the services within the building was cancelled in 1976. The residents however decided to start cooking meals together in the previous staffed restaurant kitchen. The ideas were to create a "bigger family based on community and collaboration". Here each resident only had to cook once every second week for everyone and the rest of the days they could come and just get the meal served.

Developer Olle Engkvist next to a model of Hässelby family-hotel
Source: Vestbro, 2010

From 1977 to 1990

These types of co-houses were not aimed at only families where women worked but anyone regardless of age and relationship status could partake. However one of the people who was most positive to this was the housing expert Brita Åkerman who described how "service houses" should be built on a larger scale. These should be based on a sense of community, be open to everyone and include many different types of apartment sizes. The services provided would be limited to shared meals unlike the service houses in the 1930's. In the end of the 1970's it was called "live in community". Once again this became a women's issue when the "live in community" movement pushed for the ideas that household work should not be done by one woman in each family but rather as a group task including men and women where you only had to participate every couple of days (Vestbro, 2010).

In 1979 one example of this "live in community" building was started in Gothenburg. "Stacken" was an existing residential building that due to the housing market at the time was half-empty. The owner, Göteborgshem, decided to turn it into a co-house as an experiment. The entire fifth floor was turned into shared spaces such as kitchen, dining room and play room. The ground floor also housed spaces for a café, a sauna and a workshop. In 1980 it was ready to house the new residents after an extensive remodelling. Here the residents shared tasks like cooking and cleaning the public spaces. In 2002 the owner decided to sell the building and it was the bought by the newly started co-operative rental association. Stacken is still functioning as a co-house in 2017 with monthly meetings for all the residents, shared meals, activities for children and a group that makes sure new residents share the values of the co-housing spirit (Stacken, 2017).

A picture from the shared kitchen in stacken.
Source: Stacken, 2017

Co-houses today in Sweden

In Sweden today there are about 50 co-houses around the country. The association "kollektivhus.nu" describes a co-house as "a regular building with apartments but with shared spaces for cooking and dining as well as socialization". On their web-page they have a quote from Dick Vestbro saying "Living community - a way of saving by sharing". In the text he lists the benefits of sharing such as environmental, social and functional (Kollektivhus, 2016).

A picture from the shared kitchen during dinner time in the co-house "Fiolen" in Lund.
Source: Kollektivhus, 2017

SOCIAL DIMENSIONS OF CO-HOUSING

One of the main reasons why someone may choose to live in some kind of co-housing situation is the social aspects of it. You have others there to socialize with and you don't have to live alone.

A Dutch research team looked at the social contacts principles in common areas of co-housing communities. They described the interaction of individuals and their environment as a very important aspect of co-housing. These interactions can be enhanced by creating opportunities for daily contact by daily casual meetings as well as providing spaces to interact. They also conclude that "the closer people are brought to each other, the greater the chance of meeting one another and the greater the chance of the formation of friendship and social interaction" (Hanze, 2014).

This very factual description of the social aspects of a co-house is also something residents themselves have discovered. Speaking to the newspaper "the local" architect Ingela Blomberg who works with promoting co-houses and is a resident of one herself explained it as "It's all about making life easier and meeting new people". She then goes on to say "the idea is not to live with each other 24/7 but to share common spaces and have the option to socialize with your neighbours when you want to" (The local, 2011). This is the very basis of a co-house that residents can socialize together when they want to as a part of daily life but can also be alone in their own space when they want to.

A co-housing solution isn't just for single people. In the same article Lina Wendt-Rasch, a resident of another co-house in Stockholm and mother of two calls it the "perfect solution" if you have children. "That was the main reason for moving here. In addition, my husband and I get the chance to talk to adults every day and having dinner ready and served definitely makes life less stressful," she adds (The local, 2011).

These are opinions that are also shared by a large percentage of young people in Sweden. In a survey done by White Architects where they interviewed 2000 students 35% of them said that they preferred a co-housing type of living before having their own apartment. The main reason for this was the social aspects of this kind of living. This type of living is seen as an experience that they don't want to miss (White architects, 2016).

That kind of social connections is especially important in the beginning of their study time. This could also of course apply to someone who may be new to a city or the country for other reasons than studying.

A similar study that focused on people in the age of 18 to 35 living in Stockholm was done by the analyzing company United Minds. In regards to the questions about socializing within their residential building 38% of people asked said that they wished there were some shared spaces within their building where residents could meet. Over half of the people asked said that they would like to socialize with their neighbours if they shared interests and 40% said that they wished they knew their neighbours better than they do today (United Minds, 2014).

The mixed age type of collective living that are usually referred to as a co-housing building is relatively unusual in Sweden today with only about 50 of them nationwide according to the web page of the interest group for co-housing in Sweden (Kollektivhus, 2016). However another concept directed at the elderly is the so-called "trygghetsboende" which roughly translates to "safe or secure housing". Here all the residents have to be at least 70 years of age to move in and while everyone has their own elderly-adapted apartment there is also different types of common rooms shared between the residents. The purpose of these types of housing is to provide the elderly with a secure living that is something in between living on their own and moving into a staffed nursing home (The government, 2009).

The social aspects for the residents of this type of living are one of the main points. Many of them may have a partner or some of their friends that have passed away. In an article for the local newspaper in Sidsjö a small town outside of Sundsvall, Sweden they interviewed the employed organizer Gunnar Tjelldén about the newly opened elderly secure housing. He describes the hardships of growing older as "the most difficult thing is the loneliness and not feeling needed" and to "not have any friends or neighbours that stop by for a visit". He also explains that the hope from him and the county are that they can create "nice meeting-places for all residents" in the buildings shared spaces such as a dining room, living room and library. He then describes the concept as "it's still a private residence and the shared activities are entirely voluntary. The point is to meet others and participate when you feel like it" (Sidsjö Newspaper, 2011).

SURVEYS ON LIVING AND REFERENCE STUDIES

SURVEY

STUDENT HOUSING IN THE FUTURE

A survey done in 2014/2015 by White Architects and Stockholm Student Housing Association.

Over 2000 students from all over Sweden answered an online survey and 30 people were interviewed regarding their views of living (Student Housing Association and White Architects, 2016).

What type of living do you prefer?

25% Apartment: 25 sqm 4 200 SEK/month
17% Apartment: 30 sqm 4 700 SEK/month
17% Apartment: 20 sqm 3 600 SEK/month

37% Apartment: 2-3 people 3 400 SEK/month
17% Apartment: 4-5 people 2 900 SEK/month
14% Corridor: 6-8 people 3 000 SEK/month

Satisfaction with their living situation

Of the students who live in a private apartment 84% said they were satisfied with their living. Of the students who live in a student corridor 76% said they were satisfied with their living.

Views on collective living

The view on collective corridor living can be quite polarizing. It is associated with both life-long friendships as well as conflicts. The most positive aspect is the often central location. Students living in a collective is often times more satisfied with the location than those living in a private residence. The most negative aspects have to do with personal space, kitchen and storage.

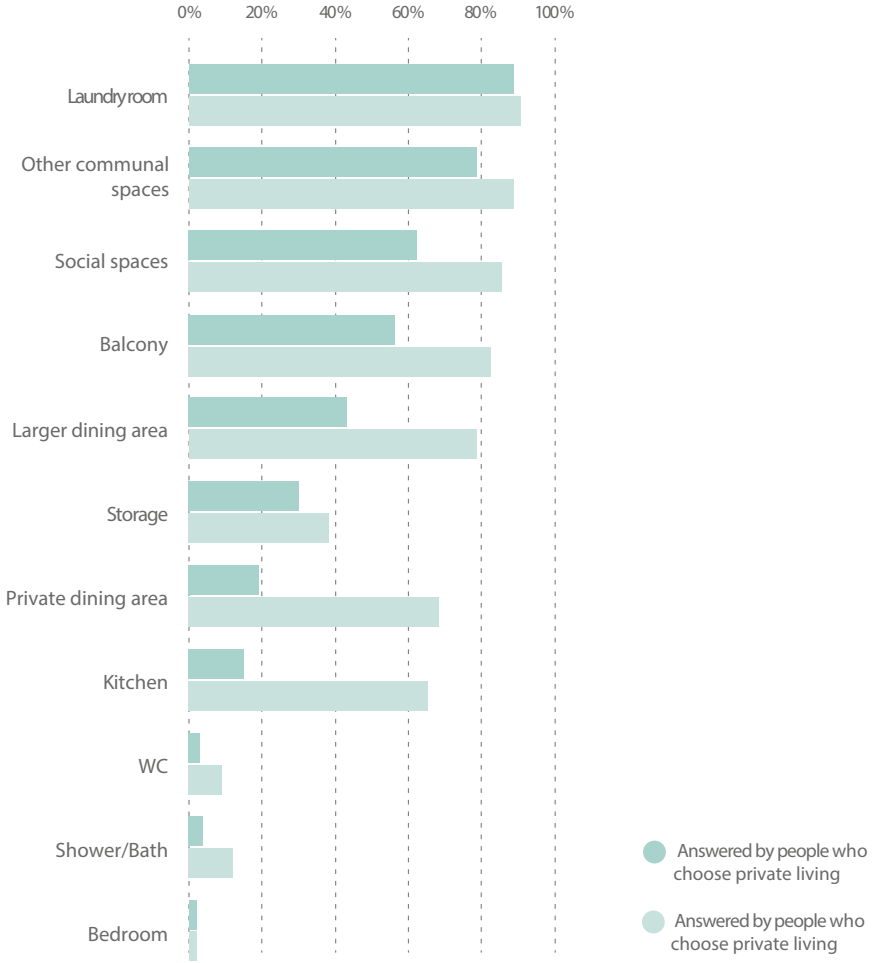
Social interactions

Those who would like to live in a collective mainly do so because of the social aspects. Therefore it is important that the residence functions and floor plan support social interactions. This is something the students feel is lacking in the traditional corridor living.

Apartment like living

There is also a clear pattern where many would like to live in a collective but not in a student corridor. What is requested is a more apartment-like type of living where only a few people share the central functions.

What could you consider sharing in your living?



Feel like a home

The students say that in order for a residence to really feel like a home it is important that you have the ability to add your personal touch to the residence as well as the ability to socialize with friends.

Private bathroom

Regardless of where you are from or if you prefer private or collective living very few people could consider sharing a bathroom with someone. Only about 10% said they would be okay with that.

Study space

Most students say that they do their studying both at school and at home. The possibility to read and study in your residence is also very important regardless of if you live in a private apartment or in a collective.

Activity rooms; From ping-pong to sauna room

As an idea these kind of facility's are very attractive as they contribute to giving the residence a feeling of community. Students without shared social spaces often request them however a large part of those who have access to that say they seldom use them. The main reason is that they are not natural meeting places but rather something that needs to be planned and scheduled in advance.

SURVEY

YOUNG PEOPLES LIVING IN STOCKHOLM

A survey published in February 2014 by the analysis company United Minds.

A survey answered by over 1000 people in the ages from 18 to 35 living in Stockholm. The people were asked questions about their views of living today and in the future (United Minds, 2014).

38 %

Would like to see that there was some shared spaces within their building where residents could socialize

52 %

Would like to socialize with their neighbours if they share interests

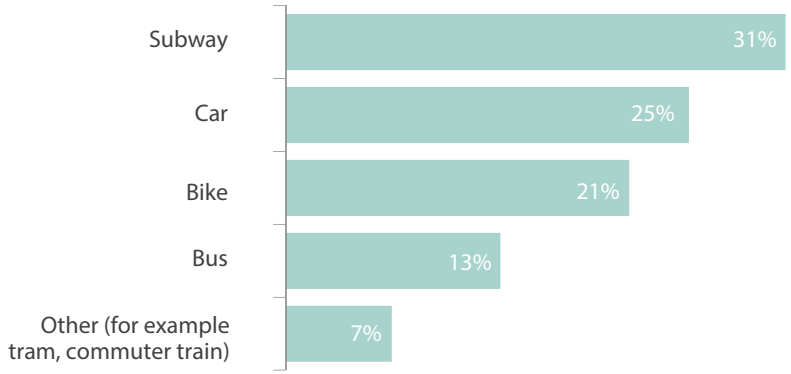
40 %

Whished that they knew their neighbours better than they do today

47 %

Would like to live with friends today or in the future

Question: If you could choose your preferred way of transportation to and from work/school what would you choose?



SURVEY
CONCLUSIONS

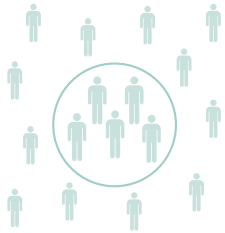
From the two studies you can clearly see that there is an interest in sharing living within the target group of young adults. Most of the people who want to live in some type of co-housing situation do it because of social reasons. There is also an interest in getting to know your neighbours. At the same time the most negative aspects have to do with lack of privacy and the conflict area that is the kitchen. Of the people asked in the survey about student housing many people lived in a student corridor where many people may share one kitchen. Many of those people asked were much more positive to sharing some type of apartment-style of living.

Studying the diagram of what students are willing to share it is evident that sharing a bathroom or bedroom is out of the question. This is very intimate and does not make the space feel like a home but rather a temporary living situation. It is also important that the private room can be personalized in order to feel like a home and that it can be furnished to have friends over.

From the study one can see that there is a big interest in sharing social spaces, communal spaces, a balcony and a larger dining area. The students say that these spaces need to be easily accessed and not have to be booked as well as having them be natural meeting places.

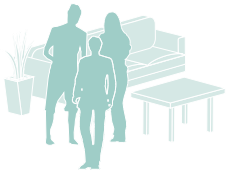
For the target group of young adults it is also clear that they are not that interested in owning a car but rather rely on other forms of transportation like biking or public transportation. What is however important is to have a central location within the city as to be close to school, work, shopping or the night life.

Not share a kitchen with too many people



Apartment-style living shared by a smaller group of people

Not share a bathroom with other residents



Shared spaces where residents can meet that are easily accessible

Support social interactions with shared spaces centrally located

Central location within the city with access to public transportation

REFERENCE EXAMPLE, TIETGENKOLLEGIET

ABOUT THE PROJECT

Info

Location:	Copenhagen, Denmark
Typology:	Student housing
Opened:	2006
Floors:	Entrance plus six residential floors
Rooms:	360 rooms varying from 26m^2 to 44m^2

Background

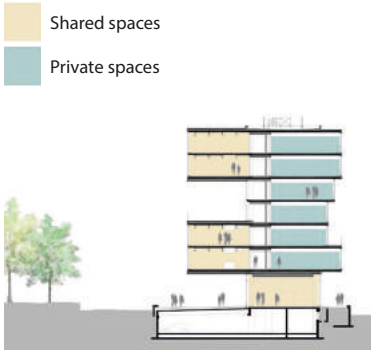
Tietgenkollegiet is a gift from the Nordea-fond which at the turn of the millennium decided that they wanted to build the "residence hall of the future". The project had no upper financial limit because Tietgenkollegiet had to be something special and they were willing to pay whatever it cost.

Concept

The residence hall was created by the practice Lundgaard & Tranberg Architects and in its main concept it is arranged as a circular building in seven stories where all of the private rooms are located towards the outside and all the facilities of the residence hall are encircling one big, planted courtyard in the centre. The cylindrical shape is transected by five vertical stairwells that visually and functionally divide the building into sections open both to the street and the inner courtyard. The buildings circular shape provides a great visual connection between the shared spaces along the inner facade and the courtyard.

Ground floor

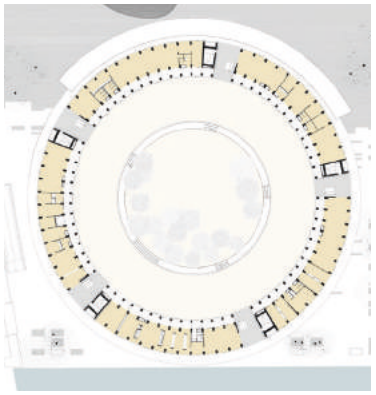
You enter the building from one of the five entrances from the surrounding streets. Almost the entire ground floor of the residence hall is dedicated to common facilities that benefit all residents. There is an assembly hall, a party room, a computer room, a quiet reading and studying room, a gym and a music room. In addition to that there is also functional rooms like a laundry room, three heated biking garages, restrooms and the mail boxes for all residents.



Building section

The rooms are located between the stairwells meaning you can choose if you want to pass by them or not on your way to your private room. The shared spaces are all open both towards the street and the corridor surrounding the courtyard.

The inner courtyard can be seen from all the common rooms above but it also has a great view to the life within those rooms.



Ground floor plan

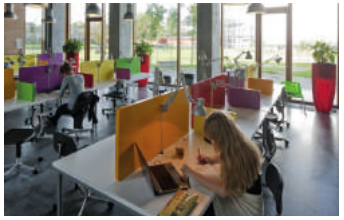
Residential floor

Between each of the five stairwells 12 private rooms are fitted creating a unit. In addition to that each unit also has a shared kitchen with dining area, a common room and a utility room. You enter each unit via a stairwell area into a corridor and depending on where your room is located you pass by one or all of the shared rooms.

The kitchens have an open plan between the cooking area and the large dining table. Here you have a great view both in and out to the other areas of the building. In connection to each kitchen is a small utility room for storage or drying clothes.

For each unit there is also an extra common room that the residents have decorated themselves. Some rooms are more living room like with a sitting area and a TV and some rooms are more theme rooms such as a game room with a pool table.

Even though the 30 common rooms are linked to a residence group the rooms are open for all residents and thus they invite the residents to move around in other places than their own unit. As each room has its own theme and function, it also provides the opportunity for access to a more varied selection of facilities.



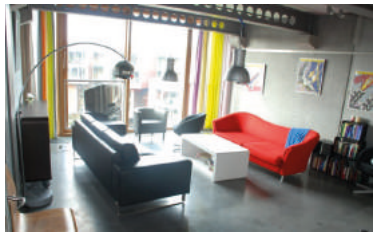
Study room and one of the shared balconies

Residential floor plan

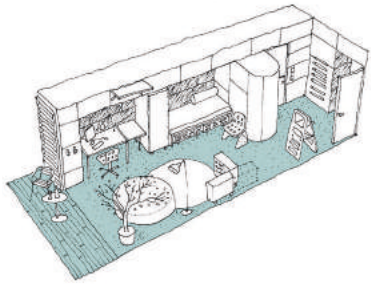
On levels four and six there is also two balconies per unit going all around the circular building always providing the possibility for a spot in the sun.

The private room

The rooms all run along the outer facade and have a more narrow shape by the entrance and then a wider shape by the window. A shape that the architects called a "piece of the pie". The rooms all fit a bed, lots of built in storage, the ability for a socializing space as well as a private bathroom.



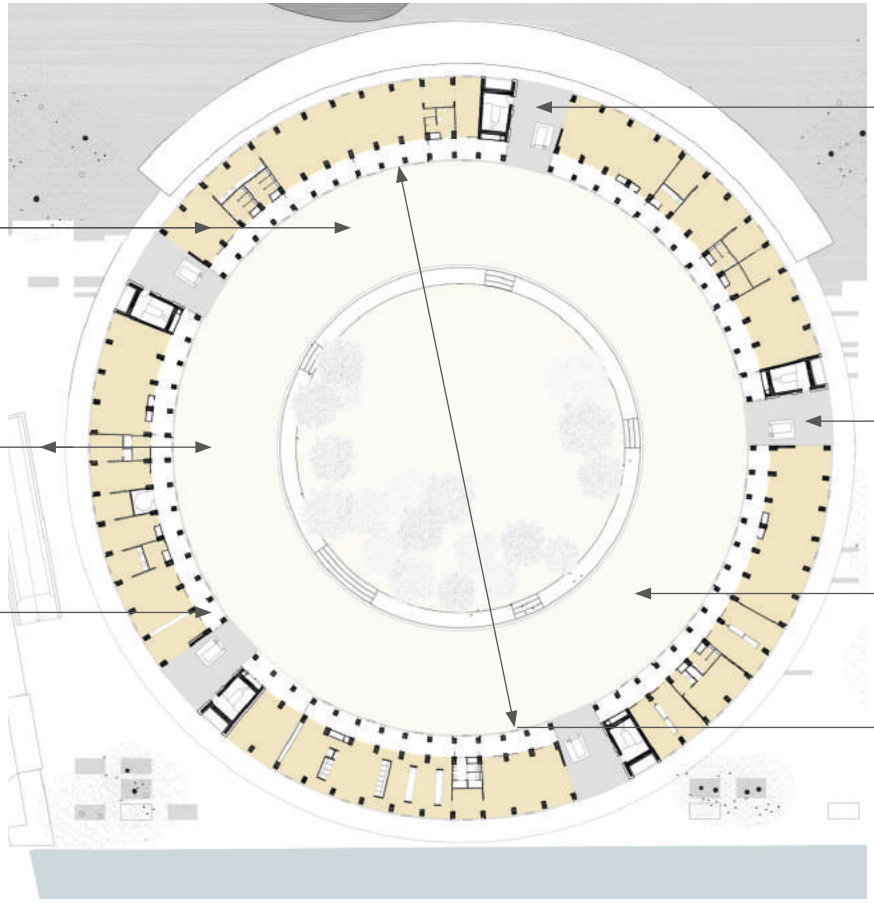
One of the shared kitchens and living rooms



The private room

REFERENCE EXAMPLE, TIETGENKOLLEGIET

ANALYSES OF THE GROUND FLOOR PLAN



Five equally important entrances making all rooms equally central within the building.

Only shared spaces on the ground floor increasing social interaction as you pass these spaces daily.

Always a direct view from all entrances to the shared courtyard.

Open and glassed ground floor providing both out and in-looks between the streets and the courtyard.

Enclosed courtyard only for residents making it more intimate.

Circular corridor with no dead-ends. Open both to the courtyard and the shared spaces increasing natural social interactions.

View from the corridor and all shared spaces across the courtyard and to spaces in the building.

Shared spaces

Shared courtyard

Entrance stairwells

Scale 1:1000 0 10 20 30 40 50 (m)

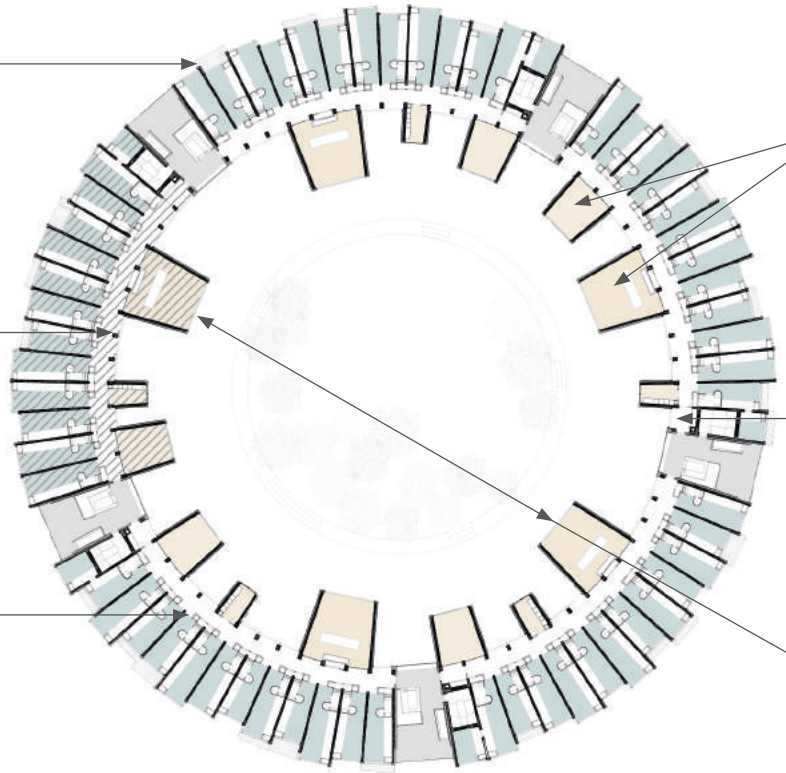
REFERENCE EXAMPLE, TIETGENKOLLEGIET

ANALYSES OF THE RESIDENTIAL FLOOR PLAN

All private rooms located to the exterior increasing the sense of privacy when you want to be alone.

Each floor is divided into five units with twelve private rooms, a kitchen, a living room and a utility room in each. This increases social interactions when you see and talk to people in your unit daily.

From the entrance door of each room you always either step directly into or visually see the shared spaces and other residents.



Only shared spaces facing the courtyard increasing the communal feeling within the building.

The many entrances and circular corridor make it natural for residents to pass by units and shared spaces that they may not directly belong to which increases daily interactions.

The circular shape and large glassed areas make it possible to see what is happening anywhere in the buildings shared spaces.

Shared spaces

Private spaces

Stairwells

Scale 1:1000 0 10 20 30 40 50 (m)

REFERENCE EXAMPLE, TIETGENKOLLEGIET

WHAT FUNCTIONS ARE SHARED AND WHAT IS PRIVATE?

Functions shared by the building

- Balcony
- Computer room
- Music room
- Quiet study room
- Assembly room
- Bike garage
- Gym
- Laundry room

Functions shared by the unit

- Kitchen
- Living room
- Dining area
- Game room
- Storage

Functions that are private

- Resting
- Study area
- Bathroom
- Socializing area
- Personal storage

The shared spaces and functions provided for the building are very generous. Outside of the necessary ones such as biking garage and laundry there is also a gym, computer room and music room. While the shared functions are certainly a positive aspect and make for a very interesting ground floor they sometimes feel almost oversized. I would think this is because of the high visions from the developer and the non-existing budget restraints. I'm not sure how realistic all of this is outside of this particular project.

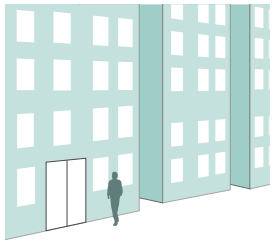
The unit consisting of twelve rooms share a kitchen and dining area which I think is positive because it increases the daily social interactions. Whereas the kitchen needs to be used by most people daily the living rooms are more optional and can be visited when you want company outside your room. I would think the kitchens are mainly used by the people in the unit but that the living rooms are more freely used from people from the entire building. What I would question here is the extra shared space called the utility room that can be used for storage and drying clothes. This seems like some extra space that can be used more efficiently.

The private rooms are rather spacious and include all the essential functions of an apartment except for the kitchen. Not sharing a bathroom is something that I think many people really appreciate. I think the generous rooms gives the residents a valid alternative to the shared spaces and the ability to study, watch TV or have a small gathering of friends within the room.

REFERENCE EXAMPLE, TIETGENKOLLEGIET

YOUR WAY FROM PUBLIC TO PRIVATE

The street entrance



Entirely public
Shared with: Everyone

Moving in a public space. Anyone has access. Few familiar faces.

The stairwell

Semi-public
Shared with: The entire building

Locked door where only residents have access. Still seen from the street and courtyard. Passing by familiar faces and friends.

The corridor

Semi-private
Shared with: Twelve people and possibly passers-by

Entered from the stairwell. Mainly residents from the 12 apartment unit. Many familiar faces and friends. Other residents and their guests may pass by.

The shared spaces

Semi-private
Shared with: Twelve people and possible guests

Open and seen from the corridor as well as the courtyard. An area you pass by via the corridor on your way to your room. Mostly friends that you greet as you pass by.

The private room

Entirely private
Shared with: Only you

Locked door where only you have the key. Only your things in the room. Guests need to be invited. No one can see or hear you and you can be alone.

Levels of privacy

The general idea in terms of privacy seems to be "relatively closed off from the outside yet very open and inclusive within the building itself".

You need to be a resident (or invited guest) to be let into the stairwell. From there you can stay at the public ground floor that is open visually to the outside, move into the slightly more private courtyard or make your way up in the building.

After the stairwell you enter a floor and a unit. Depending on the location of your room you may pass by other units and shared spaces on your way. I would imagine that the communal feeling would be stronger within a floor than it is for the entire building. Partly because of the daily natural interactions and partly because of a smaller number of people.

The next step would be the unit shared between twelve residents. Here the level of privacy and belonging increase even more. This would be people that you not only see but talk to daily. Here you share common spaces and dinners together. The residents also have a say in how the spaces are decorated and used increasing the sense of belonging and ownership.

Along the corridor all private rooms are located. Despite the fact that they open to a very public corridor they in themselves are very private. The rooms only windows open up to the outside and the cylindrical shape makes it impossible to look into another room within the same building. Here you can really be alone and not be seen or heard. The fact that the rooms are relatively spacious and with their own bathroom means that they can be furnished as you like. This contributes to the sense or privacy and belonging but also means the resident don't really need to leave to room if they don't want to other than to eat.

REFERENCE EXAMPLE, TIETGENKOLLEGIET

SPACES IN THE BUILDING

Tietgenkollegiet had the very interesting goal of creating "the student residence hall of the future" at any cost. The architects had no budget which is something that can be seen looking at the generous spaces in the building. The private rooms are large enough to be a small private apartment with a kitchenette. All the private rooms can be furnished with a bed, sofa, tv and a desk to give the resident all they need to feel like a home.

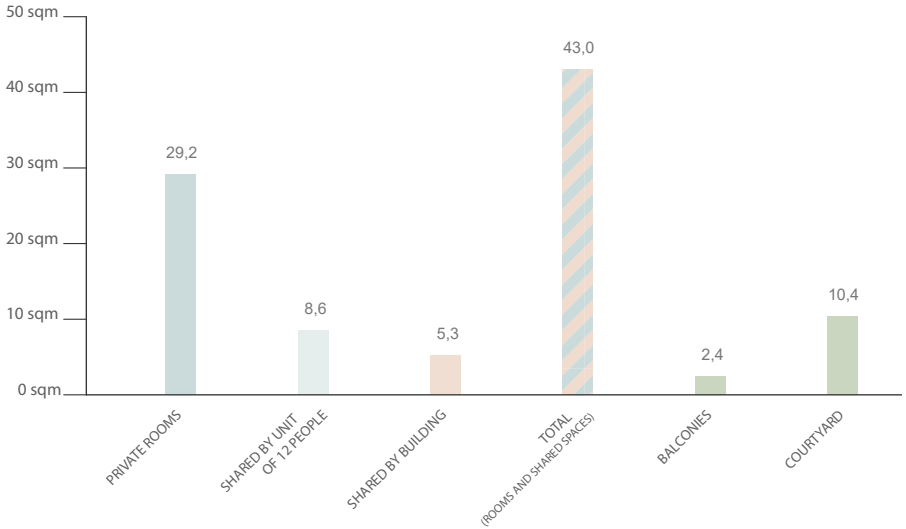
The shared kitchens are also quite spacious at about 60m^2 shared by a unit of 12 people. Here they have an open floor plan between the fully equipped kitchen and the dining area that can fit everyone in the unit. The shared living room and utility room bring the total shared areas per unit to over 100m^2.

In addition to this there is also the ground floor which is entirely shared functions, both practical such as laundry and bike storage as well as entertainment like music room and assembly room. The ground floor is almost 2 000m^2 big and that gives each resident an average of 5,3m^2. This is also quite generous given that the units and rooms already are big enough for a small apartment and have all the functions within it. In total each resident has an average of 43m^2 if you count the private and shared spaces to live in.

There is also outdoor space in the form of 15 balconies with a total area of almost 900m^2 as well as the enclosed courtyard which is about 3 700m^2 big. The outdoor spaces are also spacious and generous like the built areas in this project.

Number of private rooms:	360
Space for private rooms:	10 500 m^2
Space for shared kitchen areas:	3 090 m^2
Space for shared areas for the building:	1 900 m^2
Space for corridors and stairwells:	6426 m^2
Space for other rentable functions:	0 m^2
Rentable building area (BRA):	15 490 m^2
Total building area (BTA):	24 937 m^2
Ratio number (BRA/BTA):	0,62
Space for balconies:	880 m^2
Space for courtyard:	3 760 m^2

AVERAGE SPACE PER PERSON:



REFERENCE EXAMPLE, TIETGENKOLLEGIET

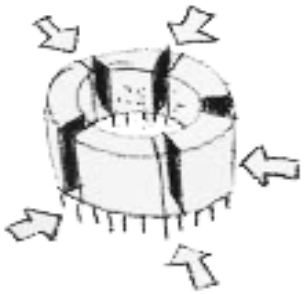
CONCLUSIONS

A student housing building is not something new, even the ideas of shared kitchens have been done many times before. What's unique here is the high ambitions to build "the residence hall of the future" no matter the cost. This ambitious goal can be seen throughout the building in its high-quality materials, the spacious private rooms as well as all of the shared spaces.

The cylindrical shape encloses the courtyard completely giving it an interesting degree of privacy. The openness of the glassed ground floor makes it somewhat visible from the outside from passers-by. At the same time it is very visible from everyone inside the buildings shared spaces such as the circular corridor surrounding it but also all of the shared rooms located in boxes above. While the courtyard is very visible from above that works both ways; people in the courtyard has a great view into the extruding and very glassed boxes above. The general shape and internal location of all the shared spaces give everyone a great view into every shared room regardless of if you are moving in the corridor or inside a shared room from across the building.

The inner courtyard and the shared spaces are very visible to each other.

The building has five entrances and the buildings general shape makes all of the equal in size and importance. Which you would choose to enter through mainly depends on where you are coming from and where you are going. To not have a main entrance is unusual but it does contribute to making all the rooms, both public and private, equally centrally located within the building. The entrances and the cylindrical shape also contribute to having many of the residents passing by the other units and shared spaces that they may not directly belong to. I can imagine this contributes to the communal atmosphere within the building making people more recognizable to each other when it is someone you see regularly even if you may not have talked to that person.



Concept sketch from the architect

Positive aspects to take with me

+ The system of the unit. Creating smaller groups within the building to increase the level of privacy, socializing and belonging.
+ Public ground floor with no private rooms.
+ The ideas of passing by the shared spaces on your way to your private room in order to make them more open and a natural part of your daily life.
+ The varying shared spaces provided partly by the original design of the building but partly because they allowed the residents to contribute by creating their own spaces.
+ The openness and visual connections in the building

Negative aspects to take with me

- From the outside the building is fairly closed off and although it has a spectacular design you can not see much of the social life going on inside.
- While I can see the positive aspects of multiple equally important entrances I would like a more gathered way of letting people into the building.

REFERENCE EXAMPLE, OLD OAK

ABOUT THE PROJECT

Info

Location:	London, United Kingdom
Typology:	Residential co-living building
Opened:	2016
Floors:	Two public plus nine residential floors
Rooms:	546 rooms varying from 14m^2 to 24m^2

Background

Located about 10 km from central London in the area of East Acton is this newly opened residential building. The building is directed towards young working adults and students who may have a hard time getting an apartment in the London housing market.

Concept

The developers of Old oak describe it as a "new type of way of living". They call it co-living and the concept for the building is to have minimal private rooms where the standard room is only 14m^2 and then provide the residents with an array of different shared spaces such as themed communal kitchens, game room, spa, gym, library and roof terraces. Because of the minimal private spaces they have managed to fit 546 rooms in and even more residents given that some of the rooms are larger double rooms.

The concept is very hotel-like and the weekly pay is all-inclusive and covers not only your rent but wifi, access to all the shared spaces, a housekeeping service, clean linens, a concierge service and maintenance such as getting your light bulbs changed. On their web page they show many nice pictures of the well-designed shared spaces and describe the benefits of co-living as: "Some want to remove the hassle out of their life by paying one bill that covers everything. Others are tired of house shares that have gone wrong, fed up of bad landlords and tired of waiting months to get anything fixed. And many people move in because they want the community".

Ground floor

There are no rooms on the ground floor only shared spaces, retail space and some office space. Outside the building there is a large parking garage for bikes as well as some outdoor green space near a small creek for the residents. Like in any hotel the residents of Old oak enter the building and stairwell through a lobby area with a front desk. Here you can find sitting areas as well as desks for people with their laptop increasing the feeling of an inner city hotel lobby.

Shared kitchens and the game room

All-inclusive concept

Next to the lobby is a community space mainly working as a larger dining hall but also available for rent if you are having a party. From this space you can make your way out to the outdoor area.

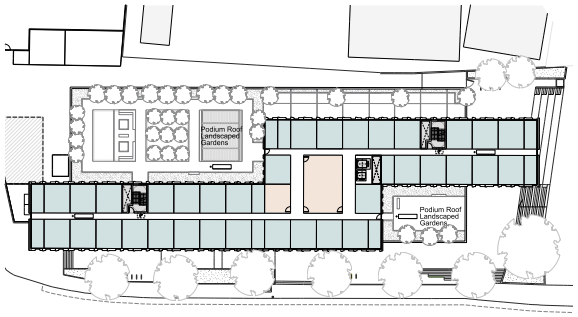
One level up is the gym available to the residents and included in the bill. The rest of this floor is office space for rent to outside actors.

The lobby with a front desk, the community space and the outdoor space

Residential floor

On the residential floors there are the private rooms running all along the facade with a corridor in the middle that all rooms are entered through. This layout also increases the feeling of a typical hotel floor. Centrally located on the floor are the shared spaces which include a communal kitchen and a theme room per floor such as the secret garden and the library. These spaces are open out towards the corridor increasing social interactions. They are also open to residents of all floors and encourages people to go to other floors than their own to socialize.

If you enter the floor via the main stairwell it opens up to the shared spaces making it a natural and daily meeting point especially for residents within each floor who may prepare meals together on a daily basis.



Residential floor plan

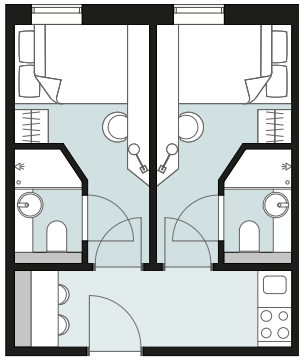
Floor 3 to 8 each contain about 70 rooms with even more residents as some rooms are double rooms. The communal kitchens are not that generous with only about 80m^2 to share.

The private room

The rooms are absolutely minimal with only essentials functions and no socializing space. Here you can fit a bed with enough room for two, some closet space and a small desk. Each room does have its own bathroom with a shower. The bathrooms are also small and not handicap-adapted.

The rooms come fully furnished complete with linens. Residents are encouraged to store their personal belongings before moving in. The ability to decorate and personalize the rooms are somewhat limited partly by their size but also because you are not allowed to hang things on the wall or make any permanent changes.

Secret garden and library



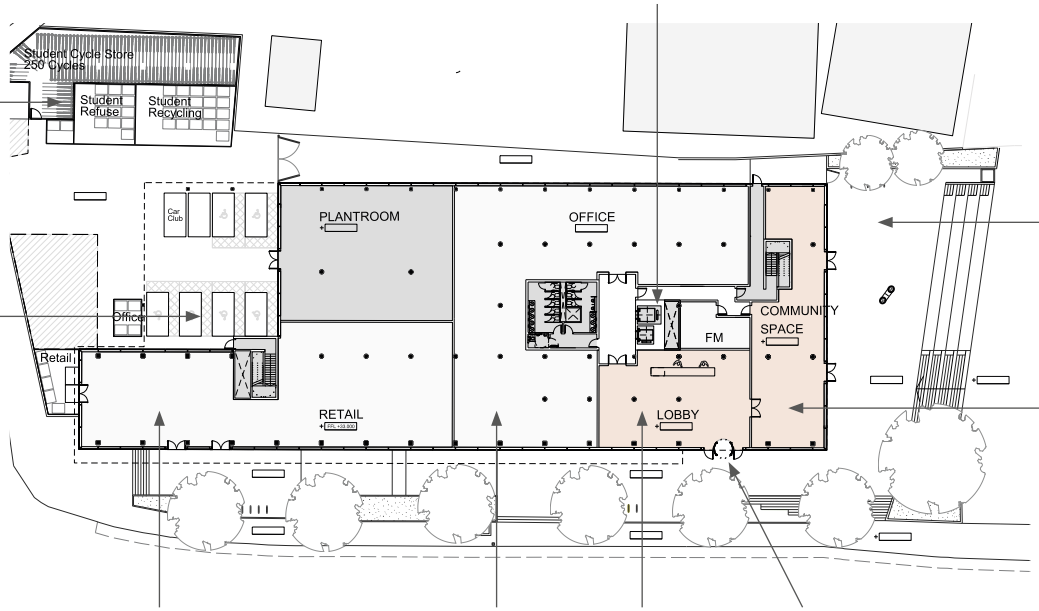
The private rooms

REFERENCE EXAMPLE, OLD OAK

ANALYSES OF THE GROUND FLOOR PLAN

Main stairwell hidden behind doors. More private for residents but may feel unsafe.

The bike parking is very much on a backside. Not easily accessible from the main entrance and not along your natural walk path arriving to and from the building.



Handicap parking located far from the main entrance.

Outdoor space for the residents in close connection to the community space. An area you may pass by on your way home. More public as it is seen from the street.

Community space for the residents close to the lobby. Creates a natural meeting place you pass by daily. More private than the lobby that is open to anyone whereas this is for residents.

Nice and open retail space located towards the front of the building. Large glassed areas along the main street.

Open plan office space located towards the front and back of the building. Glazed areas along the main street.

Lobby open to the main street. Very visible through large glassed areas.

Main entrance with a view over the lobby area, front desk and community space.

Shared spaces

Private spaces

Stairwells

REFERENCE EXAMPLE, OLD OAK

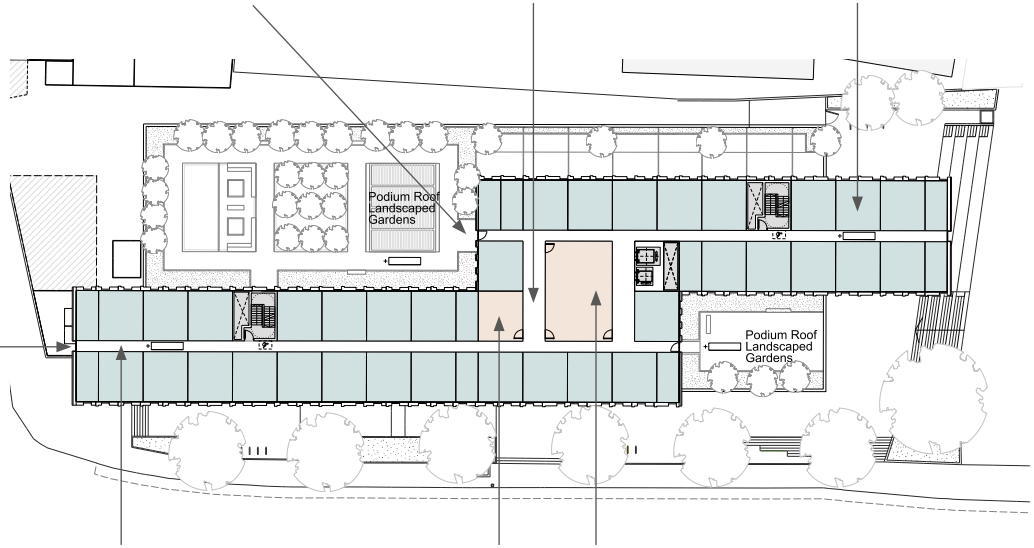
ANALYSES OF THE RESIDENTIAL FLOOR PLAN

Entrance to roof terrace closely located to the indoor shared spaces. Makes them more natural to use on a daily basis.

The shared spaces do not have any windows and only get daylight from the glasses areas at the end of the corridors.

All private rooms have the same depth and are arrayed along the facade. Makes for easy construction but is very hotel-like and repetitive.

A window at the end of every corridor bringing in daylight and makes the corridors more interesting.



Very long and repetitive corridor. Very hotel-like and impersonal.

The theme room which is different from every floor. Gives residents from other floors a reason to move within the building.

The communal kitchen for the entire floor. Close to the main stairwell which makes it a natural and daily meeting point.

Shared spaces

Private spaces

Stairwells

REFERENCE EXAMPLE, OLD OAK

WHAT FUNCTIONS ARE SHARED AND WHAT IS PRIVATE?

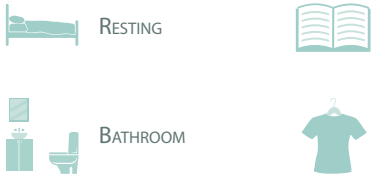
Functions shared by the building

There are many different shared spaces, themed room and functions provided for the building. While some of them seem quite small as far as the size of the rooms there is still plenty of different spaces to choose from. Outside of the necessary ones such as biking garage and laundry there is also a gym, roof terrace, spa, game room and cinema room. There is something for everyone and you can tell that they have spent a lot of time on decorating the spaces in order to make them more interesting.

Functions shared by the floor

The floor consisting of about 70 residents who share a communal kitchen and dining area. On the one hand I think it is positive to share a space with fewer people than the entire building but on the other hand this is way too many people to create any kind of communal feeling. The kitchens have different themes and are decorated differently. You could visit another floors kitchen to do your cooking and dining if you like. I would also question what the general order in the kitchen is with that many people sharing the space.

Functions that are private

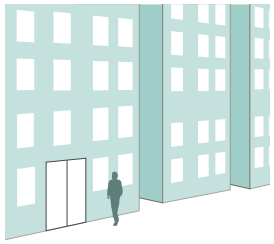


Here they have really taken the rooms to its most minimal size. You sleep here, get ready and dressed but other than that the rooms doesn't really offer anything else. There is no room for socializing or having a friend over for a private chat. The closet space is very small and I would imagine it be difficult to fit all your clothes in there.
The only thing extra that is provided is the private bathroom. Not sharing a bathroom is something that I think many people really appreciate and something that could be a deal-breaker when choosing where to live.

REFERENCE EXAMPLE, OLD OAK

YOUR WAY FROM PUBLIC TO PRIVATE

The street entrance



Entirely public
Shared with: Everyone

Moving in a public space. Anyone has access. Few familiar faces.

The lobby

Public
Shared with: The entire building and guests

Open to anyone but mostly used by residents and their guests. Supervised by staff. An area to pass by on your way up in the building. Some familiar faces and friends.

The stairwell

Semi-public
Shared with: The entire building

Locked door where only residents have access. Still seen from the street and lobby. Passing by strangers, familiar faces and friends.

The corridor

Semi-private
Shared with: Twelve people and possibly passers-by

Entered from the stairwell. Mainly residents from your floor. Many familiar faces. Other residents and their guests may pass by.

The shared spaces

Semi-private
Shared with: Twelve people and possible guests

Open and seen from the corridor. An area you pass by via the corridor on your way to your room. Mostly friends that you greet as you pass by.

The private room

Entirely private
Shared with: Only you

Locked door where only you have the key. Only your things in the room. Guests need to be invited. No one can see or hear you and you can be alone.

Levels of privacy

This building seems to make an effort to open itself up on the ground floor with a lobby area and large glazed areas in the retail, office, lobby and mainly communal spaces. Pretty much anyone has access to the areas of the ground floor. However you need to be a resident (or invited guest) to be let into the stairwell using your key card. This is a more private area than the ground floor.

After the stairwell you enter your floor and have a direct view of the shared spaces on that floor. This is more private than the stairwell shared by the entire building. Here is mostly the people living on that floor but one problem is still that the number of people that share these shared spaces is probably too big to create any kind of communal feeling. Some people may be friends but there would still be people that are just familiar faces or even strangers.

The same goes for the corridor that you move along from the stairwell or the shared spaces on your way to your room. It is mainly people from your floor but given the number of people residing there many of them are strangers. After the corridor you enter the space shared between two rooms with a kitchenette and a small sitting area. This space is a bit odd, it is very intimate to share with only one other resident especially if you are having a meal at the same time. You are forced to small talk and one should hope you get along well with the other person in general.

The next step is your private room. Here you can actually be alone and not seen or heard. All rooms have their own bathroom which increases the feeling of privacy when you don't need to leave the room for that. On the other hand the rooms are so small many people may not want to spend much time in there.

REFERENCE EXAMPLE, OLD OAK

SPACES IN THE BUILDING

Old oak clearly has a different approach than Tietgenkollegiet where no expenses were spared. Here the goal seems to be to maximize profit by minimizing the spaces for each resident.

The private rooms are minimal with an average of less than 14m² per person. That figure even includes the entrance room with a kitchenette shared by two people. This does not give room for or include much other than a bed, desk, minimal storage space and a bathroom within the private rooms. Nothing "extra" is given other than what is necessary.

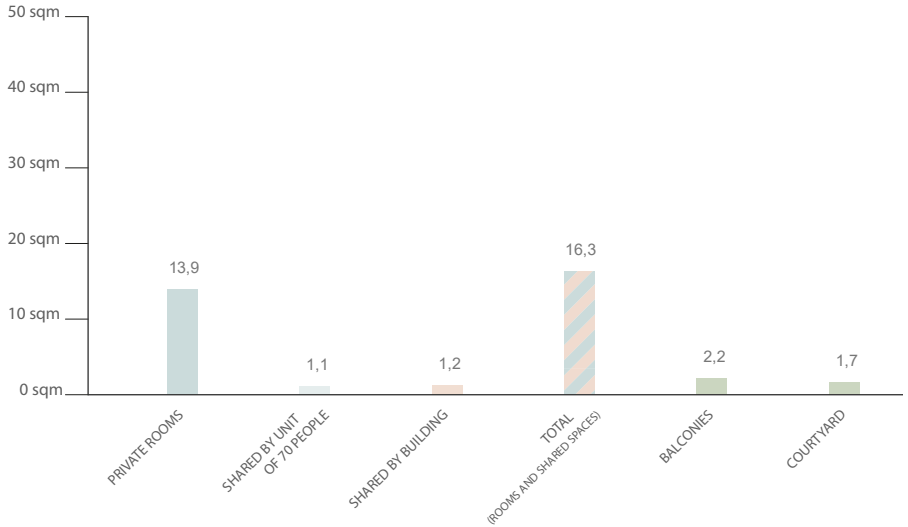
On each floor there is a shared kitchen and dining room of about 80m². This is rather spacious but that space is also shared by about 70 people living on that floor which only gives each resident just over a square meter to use.

The shared spaces for the entire building that are heavily advertised on the web page are actually quite small. On each floor there is a theme room of about 27m² and on the ground floor there is a larger association room of about 150m². There is also the lobby area as well as a gym but the average space for each resident is still only about a square meter.

There are two roof terraces located on the same floor but in two directions that in total are about 800m². In addition to that there is some outdoor space in connection to the association room of about 600m². This gives each resident about 4m² of outdoor space in total. The outdoor spaces per resident are more generous than the indoor ones by comparison.

Number of private rooms:	546
Space for private rooms:	7 617 m²
Space for shared kitchen areas:	606 m²
Space for shared areas for the building:	676 m²
Space for corridors and stairwells:	2567 m²
Space for other rentable functions:	2 961 m²
Rentable building area (BRA):	11 860 m²
Total building area (BTA):	14 870 m²
Ratio number (BRA/BTA):	0,80
Space for roof terraces:	798 m²
Space for courtyard:	600 m²

AVERAGE SPACE PER PERSON:



REFERENCE EXAMPLE, OLD OAK

CONCLUSIONS

Here the developers are really trying out a new concept in a hybrid between a hotel and having your own small apartment. Their hope is to create a "community" within the building and that this will make up for the minimal private rooms.

On their web-page the shared spaces are advertised heavily with nice pictures of happy people. I would question if this is really the case. The common kitchens for example are small for the number of people it is meant to serve. How does it work if you prepare a meal there along with maybe a dozen others? Do you then sit down and eat together or do people take their plates back to their own rooms?

The different themed rooms are actually the size of just two private rooms and placed in a corner without daylight. In some ways the shared spaces seem like something that was often times placed in areas of the building that otherwise would be difficult to fill with actual rentable rooms. The shared spaces are placed centrally within the residential floor plan which is positive because it increased the likely-hood of these areas being used when they are passed by daily but in this case it also means that they do not have any daylight.

The shape and exterior of the building look more like an office building than a residential one. Two squared volumes slightly pulled away from each other and the facade material is metal sheets in different grey shades. There is nothing from the outside that speaks to the unconventional concept of what is going on inside.

Street view of the building

As you enter the lobby a sign hangs there reading "welcome home". While it may be a nice touch I would question how "home-like" this building feels. The general feeling is more that of a hotel with a lobby, private rooms opening up to long corridors and the minimal personal spaces. The rooms can not really be personalized when you don't bring your own furniture and can not hang things on the wall or paint them. There is also not any space to have a friend over. The services such as housekeeping, maintenance and the staffed front desk also increase the feeling of it being a hotel.

A sign in the lobby of old oak greeting people

For the developer on the other hand I think this works very well. They have fitted about 600 paying residents into a building that is not that big and only has nine residential floors. It certainly is an effective building with a very small area for each person even if you include the shared spaces.

Positive aspects to take with me

+ The wide array of different shared spaces.
+ The general concept of the buildings as co-living.
+ The centrally placed shared spaces on the residential floor.
+ The openness of the ground floor and the mix of commercial and shared spaces.

Negative aspects to take with me

- The private rooms are too small and don't have a space for socializing or enough storage space.
- Little ability to personalize your private space.
- Try and avoid the impersonal and hotel-like feelings.
- Very small shared spaces per person.
- The kitchenette area shared between two seems unnecessary and difficult to make work.
- The industrial and boring exterior of the building with no reflections as to the unusual concept of the building in the facade.

REFERENCE EXAMPLE, KOMBO

ABOUT THE PROJECT

Info

Location:	Not built but proposed in Sundbyberg, Sweden
Typology:	Apartment-style co-living
Opened:	Not opened
Floors:	One public plus four residential floors
Rooms:	32 rooms per building of 9m^2 each

Background

The KomBo-project was designed by Utopia architects in 2014 as a concept-idea for an alternative typology of housing. The lack of housing in Sweden especially for young people is acute.

Concept

KomBo aims to create large, cost-effective and functional apartments for 3-5 residents sharing functions such as kitchen, living room and bathroom. All residents get their own small room where only a bed and some closets fit. The rest of the apartment is shared and according to the developer the fact that many essential functions are shared makes it less expensive per person than it would have if they had lived in their own small apartment.

The hope from the architects and developer is to create a new typology of housing that is almost non-existing in Sweden today.

Proposed site plan

Ground floor

Given that this is just a concept and not built there are no drawings of a ground floor. From what can be seen on the images and the fact that an elevator is placed centrally in the residential plan the ground floor seem to contain public and shared functions. There is no mentioning of any extra shared functions outside the apartments. According to Swedish building regulations there would have to be a laundry room and bike storage in at least one of the buildings.

Residential floor

Each floor contains two apartments with four bedrooms each. The apartments are entered via an access balcony that is big enough to furnish. As you enter the apartment you step directly into the open plan kitchen and living room. All of the private rooms are located at the back of the apartments meaning you have to pass by the shared spaces to get to your bedroom. Bathroom and shower room is shared and not placed in the rooms but located close to them at the more private side of the apartment.

The private room

The rooms are at the bare minimum while being handicap-adapted containing only a bed and two closets. There is no private bathroom or socializing space. The only extra feature is a French balcony in each room.

REFERENCE EXAMPLE, KOMBO

ANALYSES OF THE RESIDENTIAL FLOOR PLAN

All bedrooms placed along the same side making it easier to locate them towards a quiet side or north depending on the site conditions.

A french balcony in all private rooms. Bringing in more daylight than a window and a connection to the outside.

Private rooms such as bedroom and bathroom located along the back corridor of the apartment.

Roundabout within the apartment which increases the feeling of a spacious room.

Very open plan between the shared spaces such as kitchen, dining, living room and the entrance zone.

Access balcony large enough to furnish and use as a socializing space between the two apartments.

The entrance open up into the dining and living room. Very social plan but unclear entrance zone.

Storage units open up to the shared spaces. Good for close access but doesn't make it very private and limits what can be kept there.

Shared spaces

Private spaces

REFERENCE EXAMPLE, KOMBO

WHAT FUNCTIONS ARE SHARED AND WHAT IS PRIVATE?

Functions shared by the building

Balcony

Bike parking

Laundry room

Functions shared by the unit

Kitchen

Bathroom

Dining area

Study area

Living room

Functions that are private

Resting

Personal storage

Storage

Here the function shared by the building is nothing more than any residential building with conventional apartments in Sweden. You share a laundry room and presumably it would be some storage for bikes.
The only thing extra is the spacious access balcony's that can be shared by two apartments and work as a social space when it is seen from everyone in the building complex and the yard.

The apartment share all required functions that make it an apartment such as living room, kitchen, entrance and dining. Even the bathrooms are shared which can be a bit of a problem for some.
Here they seem to share everything that can be shared while still making it a complete apartment.

The private rooms are really at the minimum they can be and still adhere to the Swedish building regulations of handicap-adaptation and the bed as well as two wardrobes that are required in a small private apartment. It does not offer any private socializing space to have a friend over. The storage unit in the living room would presumably be private belonging to each person but it's located in a very open space.

REFERENCE EXAMPLE, KOMBO

YOUR WAY FROM PUBLIC TO PRIVATE

The courtyard

Public
Shared with: All of the residents and strangers

Mainly used by residents of the buildings but also accessible for strangers and passers-by. A mix of familiar faces and strangers.

The access balcony

Semi-private
Shared with: The residents of two shared apartments

No locked door but unlikely to be used by anyone who is not a residents or guest. Daily meetings with friends and familiar faces.

The shared spaces

Private
Shared with: The residents of the apartment

The first thing you meet as you enter the apartment. You have to pass by these areas multiple times a day. Only friends and some occasional guest.

The private room

Entirely private
Shared with: Only you

Locked door where only you have the key. Only your things in the room. Guests need to be invited. No one can see or hear you and you can be alone.

Levels of privacy

Between the buildings on the ground floor an open space can be seen with lots of people. That and the presumably public functions in the ground floor would make it a public space.

The stairs of the access balconies are presumably open for anyone to climb the stairs but it is unlikely that anyone who does not live or are visiting would make their way up there. This is more private and mostly for residents of the building. This would partly be the people that you know but also people from the other apartments. Given that there is very little shared space outside each apartment this would mainly be strangers or somewhat familiar faces.

As you enter your floor there is the shared balcony where most people would be friends or at least familiar to you. Here you may meet people sitting outside socializing before you enter your apartment. Other people may pass by on their way making it semi-private.

After that you enter your apartment and step directly into the shared spaces. Here you may meet your room-mates and some guests. This is a private space where its only friends and familiar faces that you talk to regularly. You are not given the option really to be private when you enter the front door and you can not just go into your room. Instead you would need to at least say hello and maybe make some small talk with the people in the room.

The next step is your private and locked room. Here you can be alone and in peace but given the rooms small size and limited functions it may not be an area you would want to spend much time in. Another problem is that you would need to leave it to go to the bathroom or eat. This is still a private space where you are the only one with access and guests need to be invited.

REFERENCE EXAMPLE, KOMBO

SPACES IN THE BUILDING

Kombo is meant to be a new type of living that have about the same total space as a typical four bedroom apartment of about 100m². Here there is also four bedrooms although no double bedroom and two bathrooms just like the typical apartment.

The rooms are tiny and only include a single bed and two wardrobes which are only 9m² of private space. Here no other functions can be fitted and everything outside of this is shared within the unit.

The spaces that are shared with the unit are the most spacious ones with about 16m²per resident. This figure may seem generous but there are many functions that need to be fitted within it. The shared unit spaces include the kitchen, dining, entrance zone, study area, living room as well as the bathrooms.

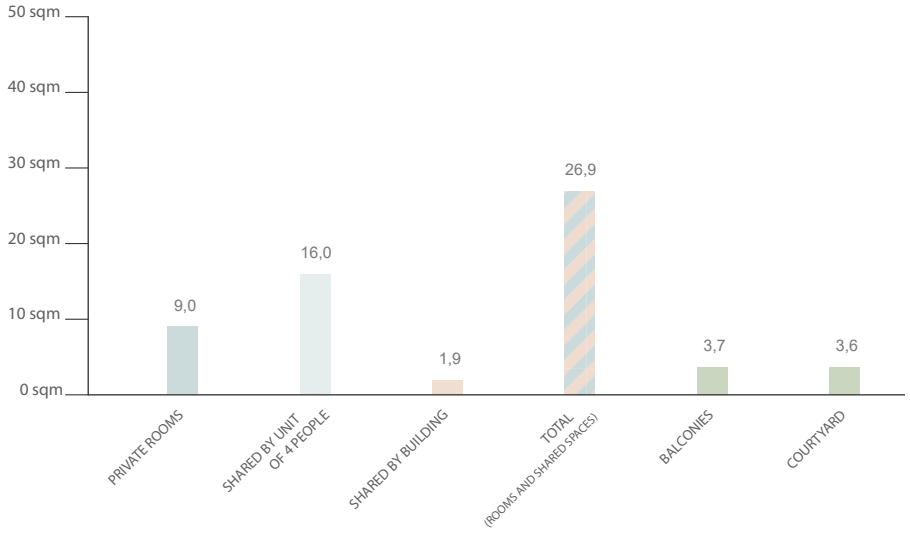
The spaces shared for the entire building is difficult to calculate given that there is no ground floor plan but with the assumption that they would need bike storage and a laundry room this would give each resident less than 2m² per person. None of this is anything "extra" that can't be found in a regular apartment building in Sweden. There is no mentioning of any amenities for the residents in this project.

The outdoor space is mainly the large access balconies that can be furnished and not just used as communication space. They are about 30m² and shared by two units of a total of eight people giving each person almost 4m² to use which is quite generous.

Number of private rooms:	32
Space for private rooms:	288 m²
Space for shared areas within the apartment:	512 m²
Space for shared areas for the building:	60 m²
Space for corridors and stairwells:	32 m²
Space for other rentable functions:	173 m²
Rentable building area (BRA):	1 033 m²
Total building area (BTA):	1 225 m²
Ratio number (BRA/BTA):	0,84
Space for access balconies:	118 m²
Space for shared courtyard:	350 m²

(Numbers for one building)

AVERAGE SPACE PER PERSON:



REFERENCE EXAMPLE, KOMBO

CONCLUSIONS

Here the idea seems to be to complete the current housing market with a new type of typology reminiscent of a regular four bedroom apartment but with some changes. This is clearly aimed at young people and where a group of friends shares their living space.

Kombo is designed to be a collective and not a regular apartment that later was turned into a collective. A typical four bedroom apartment would need to have a double bedroom and three smaller ones in slightly different sizes. Here they have really worked on making everything equal in size and placement within the apartment.

The rooms are small and do not offer anything in terms of socializing space. You are probably not meant to spend any time in your room other than sleeping. Even the bathrooms are shared which I would think would be a problem for many people. Overall I think it is very important that the people living here get along well because the layout does not offer much privacy.

The entrance situation is very open where you enter directly into what is the dining area. On the one hand this makes for a very social plan where residents will interact naturally multiple times a day but it also takes away the opportunity to just come home and go directly into your own space. It could work better if you enter the apartment and then is given the choice to go either to the private zone of the apartment or the shared spaces.

The openness of the shared spaces can work quite well for socializing, you have both the dining table, the kitchen area and the living room furniture in the same open room. The plan does not really give you the opportunity to divide kitchen area from the living room which can be a problem when multiple people may want to use the room at the same time. There is also something that looks like a desk meaning some kind of study space. I would question how this would work in practice when more than one person is using the space at the same time. Watching TV and studying can be difficult to combine in this plan. You would probably want to do the later in your own room but there really is no space for that.

I don't really see the point of the elevator that opens up into the apartment. You would need an elevator for handicap-adaptation but it could have been placed near the stair and open to the outside. What's also inconsistent is how the elevator opens up directly into the private zone of the apartment giving it a completely different entrance situation than the front door that comes directly into the shared spaces.

I would also question the point of having the storage units inside the apartment. What is meant to be kept there? It is not shared things for the entire apartment because everyone gets their own unit. This would have worked better on the ground floor or in a possible basement.

Positive aspects to take with me

+ The shared spaces are not shared with that many people giving it a more intimate feeling and more of a sense of community.
+ The shared spaces have an open plan between then but are separated from the private zone consisting of bedrooms and bathrooms.
+ Very familiar and apartment-like concept.

Negative aspects to take with me

- Hardly any shared spaces between all the buildings residents.
- Private rooms too small with no socializing space.
- Shared bathrooms with the entire apartment.
- Private storage units placed inside the shared spaces.
- No possibility to divide the shared spaces if used for different things.
- No possibility to go directly into your own private space without passing by shared spaces.

SUMMARY OF REFERENCE EXAMPLES

THEIR FUNCTIONS

	Resting	Personal storage	Bathroom	Private socializing space	Quiet reading and studying
Tietgenkollegiet	Entirely private in your own room.	Lots of built in storage in the private room.	Private bathroom with shower in your room.	Large rooms that can be furnished for socializing.	Studying space in the spacious rooms. A reading room in shared spaces.
Old oak	Entirely private in your own room.	One fairly small closet in the private room.	Private bathroom with shower in your room.	Small rooms that does not offer any socializing space.	A small desk is placed in every private room.
KomBo	Entirely private in your own room.	Two regular sized closets in the private room.	Everyone in the apartment share the bathrooms.	Small rooms that does not offer any socializing space.	No studying space in the room but desks are placed in the shared spaces.
	All of the reference projects have the bed in the entirely private room. This is very much a given and having that in some kind of shared space would be an entirely different typology.	All of the reference projects have storage in the form of wardrobes in the private room although in different sizes. While Tietgenkollegiet does have plenty of built in storage the other two examples may be on the minimal side and something that could be increased.	Bathroom is something that people could be very reluctant to share. If you have to share bathroom it would be preferable if you know the people very well. It is a very nice quality to have your own private bathroom and something that could be a deal-breaker for many people when deciding where to live.	Even if you live in some type of collective housing it is still a very nice quality to have a private space to invite a friend. In the reference projects only one of them offer this. The other two have really taken the private room to the minimal and almost excluded the possibility for this.	Many young people living in a co-housing situation may be students and having the possibility for a study space with a desk or table can be very important. In Kombo this placed in the shared space which I don't think is a good solution because of noise. Tietgen-kollegiet probably has the best solution with space for a desk in each room but also a study room in the shared spaces.

Cooking and dining	Living room	Other amenities	Outdoor space	Other practical functions	Handicap adaptation
Nothing in the private room. Kitchen and dining shared between 12 rooms.	Private rooms can fit tv and a sofa. Living rooms in each unit of 12 rooms.	Lots of shared amenities between all residents. Mostly in the ground floor.	An enclosed courtyard for residents and several shared balconies.	Laundry room and indoor bike parking in the ground floor shared by everyone.	One private rooms per unit of 12 is handicap adapted.
Nothing in private room. Kitchen and dining shared with the entire floor.	A tv in the private room but no sofa. Living rooms shared in the building.	Different themed rooms placed on each floor. Some in the ground floor.	Outdoor space in the ground floor and two roof terraces shared by all.	Laundry room shared by everyone. Outdoor bike parking.	Some private rooms are handicap adapted.
Nothing in private room. Kitchen and dining shared by the apartment.	Nothing in private room. Living rooms in the shared spaces of the apartment.	No shared amenities between the buildings.	Spacious access balcony shared by two apartments and a open courtyard.	Laundry room and indoor bike parking in the ground floor shared by everyone.	All private rooms are handicap adapted.
Sharing the kitchen and dining area is one of the most basics ideas of a co-house. None of the reference projects have any kind of cooking abilities within the private room. They all share that function with a smaller unit within the building. The main difference here is the size of the unit ranging from seventy people in Old oak to four people in Kombo.	Sharing the living room is another basic part to a co-housing situation in order to increase social interac-tions. All of the reference projects have shared spaces for living rooms. The main difference however is what can be fitted in the private rooms; in tietgenkollegiet they are big enough to fit a sofa whereas Old oak and Kombo could only have a tv mounted on the wall.	Both Tietgenkollegiet and Old oak have a large variety of different themed shared rooms such as game room, computer room and assembly hall. This is a very nice feature and one of the advantages of shared spaces in a building. In Kombo there are no shared spaces in the building and the living space functions more like a regular apartment and the building as a typical residential building.	All of the reference projects ave some form of outdoor space. The spaces vary a lot with Tietgenkollegiet being the most generous with both an enclosed spacious courtyard and several balconies surrounding it. Old oak has spacious roof terraces and a smaller patch of outdoor space in the ground floor whereas Kombo again resembles a typical residential building with an open courtyard.	All the reference projects have a shared laundry room and no washing machines within the private rooms. All of the projects also have biking storage either indoor or outdoor.	In both Tiegenkollegiet and Old oak only a few of the rooms are handicap adapted. Kombo on the other hand have followed the swedish building regulations and handicap adapted all of the rooms as well as the shared spaces within the apart-ments.

SUMMARY OF REFERENCE EXAMPLES

MOVING AND LEVELS OF PRIVACY

About moving and the levels of privacy within the building

How you make your way from the entrance through the building and into your private room is very different for the different examples. In KomBo there is no main entrance to the building as you enter your apartments shared spaces directly from the access balcony. Here you have no way of getting to your room without passing by the shared spaces and have small-talk with the people sitting there.

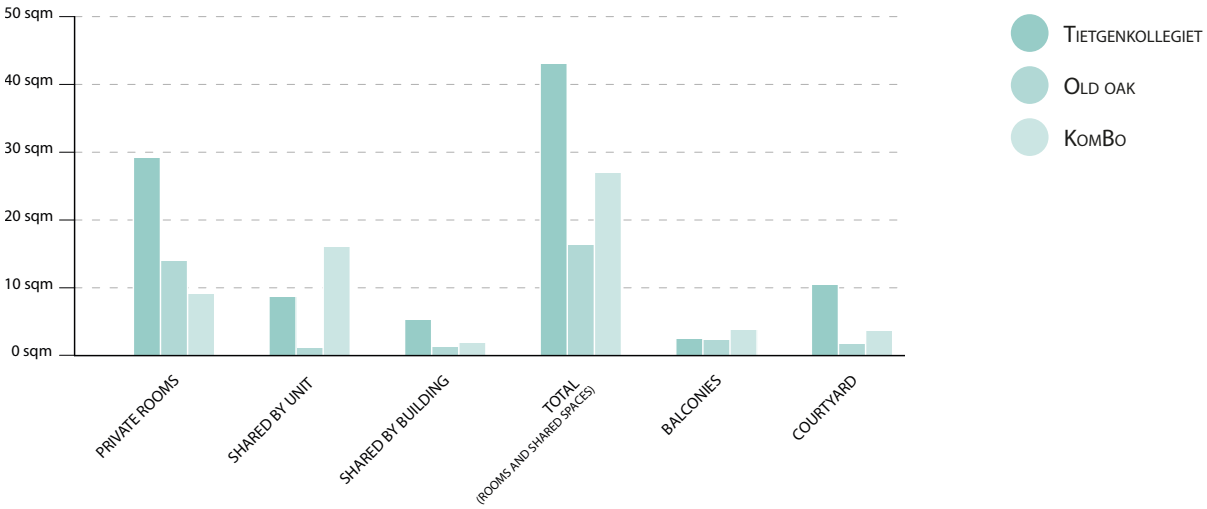
In Tietgenkollegiet you enter a stairwell and make your way to your floor. After that you are in the corridor and pass by the shared spaces on your way to your private room. You do not need to stop there if you don't want to. Old oak has a similar idea but you enter into a shared space which is the lobby where people may sit and socialize. You can go directly to your room via a corridor but you still need to pass by the shared spaces on your floor as this is where the stairwell opens up. To have 70 rooms share a kitchen is a lot. It is way too many to create any kind of group feeling or a smaller unit within the building. Overall the way Old oak's rooms open up to a corridor feels very hotel-like. The same principle goes for Tietgen-kollegiet but I would think that the much smaller units of twelve people which could be small enough to create a more familiar feeling within a large building.

While I do like the smaller unit of KomBo's proposal I would like it to be possible to create rooms that are more independent from the shared spaces of that unit. Sometimes you just want to go directly home without stopping and engaging in small-talk. I also like the placement of the shared spaces for both Tietgenkollegiet and Old oak as they are something you naturally pass by on your way within the building. These examples have many different degrees of shared spaces and privacy aside from the private rooms. Creating a mix of this with shared spaces that are shared by different amount of people can be useful to create different degrees of privacy and increase socialization.

SUMMARY OF REFERENCE EXAMPLES

THE SPACES AND THEIR DISTRIBUTION

Average space per resident:



About the spaces in the buildings

When looking at the area and spaces in the three different reference examples there are big differences. Both in and how they are distributed and the total amount of space per resident.

The most generous one is Tietgenkollegiet which isn't surprising given the no limits budget they had for the project. Here the average space per resident is almost 30m² and in addition to that each resident gets about 15m² of shared spaces in different forms.

Old oak on the other hand has really taken the spaces to the minimum with rooms that are less than half the size of Tietgenkollegiet and the shared spaces which amount to less than 5m² per person. This entire building seems to aim to maximize the numbers of residents that can be fitted into it by minimizing the space per person by using a concept of shared spaces.

KomBo lands somewhere in between with about 28m² in total per person. Here the rooms are even smaller than the ones in Old oak but they do not have a private bathroom within them. Most of the space is found in the shared spaces for the unit consisting of four people. It is clear that they think this is where most of the daily living will take place and the rooms are just for sleeping.

For the outdoor spaces Tietgenkollegiet is again the most spacious one mainly because of its inner courtyard. After that Old oak and KomBo has about the same amount of outdoor space with about 10m² per resident.

SUMMARY OF REFERENCE EXAMPLES

CONCLUSIONS

About the exterior, the volume and the entrances

While all three reference examples have a concept that is different from a typical residential building it is not always shown from he outside. The exterior and building shape of KomBo looks like a typical apartment building with the only thing making it stand out being the large access balconies.

Tietgenkollegiet does have a very special facade and shape that certainly stands out in the surroundings. They have really worked with materials, to make the building unique and to make it stand out. While the building in itself looks spectacular there is not that much of a glimpse as to what is going on in the shared spaces, at least not in the residential floors where they are located inwards and can only be seen from the courtyard. In the ground floor however you can see the shared spaces and get a glimpse of the courtyard.

Old oak has a very industrial looking facade that looks more like an office building than a residential one. You can not see anything of the unique concept from the outside other than on the ground floor where some shared spaces are.

I would like for my building to stand out and to show some of the life going on within it as well as the unique concept of the building. Tietgenkollegiet have a rather different idea with five equally important entrances. While this could be practical when coming from different directions from the city I would still prefer to have one main entrance that gathers the residents as a meeting point and to have shared spaces connected to it like Old oak.

About the ground floor

In all three of the reference examples they do not have any presidential spaces on the ground floor. This is something I agree with as ground floor apartments can be difficult to make feel private and safe especially in a central location within a city.

The reference examples have slightly different functions in the ground floor. Tietgenkollegiet has focused almost entirely on shared spaces both social ones and functional ones. KomBo is difficult to analyse but from images it looks like they have commercial spaces and they would also need some functions like laundry room and bike storage as that is not found in the apartments. Old oak is more commercial and most of the ground floor is rentable as retail or office space. There is also a lobby and an assembly room connected to some outdoor space for the residents.

I do think Old oak has the best mix and solution for the ground floor. There is some commercial space which is reasonable for a centrally located building within a city that also brings some foot traffic to the area and contributes to the street life. At the same time they have shared spaces on the ground floor which gives a glimpse of the concept for the building and again contributes to the street life outside. In old oak you enter the building via a lobby. While this could be a nice feature and be better than entering directly into a stairwell they also have a staffed reception which gives the entire building a hotel feeling which is not something I would strive for.

About the private rooms

The private rooms in the reference examples vary from being large enough to be small apartments to being nothing more than a standard single bedroom. I think that many of the qualities and functions provided in Tietgenkollegiet's rooms are necessary to make the room feel like a home and something you would want to live in for a longer period of time. Aside from the given fact that

they can fit a bed they can be furnished in some different ways with a sitting area and a god amount of storage space. At the same time those rooms are large enough for both a table, a desk, a sofa and a bed which I think is a bit too generous and not reasonable. It is also against the concept of shared spaces for social interactions and gets more in terms of functions and quality of life. On the other hand the rooms in both KomBo and Old oak are too small to feel home-like and be used for much else than sleeping.

Having a private bathroom is also something that feels like a necessary feature. Sharing this very private space with someone that you may initially not know can be uncomfortable and give the feeling of being a hostel and not a home.

About the smaller unit

All of the examples have some kind of unit that is bigger than the private room but smaller than the one shared by the entire building. However these units vary in size significantly. For KomBo it is the apartment shared by four people, for Tietgenkollegiet it is the twelve rooms placed around one kitchen and living room and for Old oak it is all of the 70 rooms on one floor that share a kitchen. For KomBo this is the main feature of their concept that everyone shares an apartment type of living but have their own private room. This isn't that different than living in a larger apartment either as a family or some kind of rental-share. They have fitted all of the functions into this apartment whereas Tietgenkollegiet does have units of twelve who share a kitchen but they also have other functions within the building.

I like the ideas of KomBo to create a smaller very well-defined unit within the building and to not have too many people share the kitchen. At the same time their concept seems a bit too conventional and closed off from the rest of the building. On the other hand I like the openness of the plan in Tietgenkollegiet where you can visit other units shared spaces but I do think the kitchen could be more private and shared by fewer people.

About the shared spaces for the building

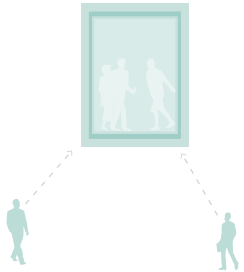
Both Tietgenkollegiet and Old oak have many different shared spaces and functions within them. In Tietgenkollegiet these spaces are mainly placed on the ground floor but the openness of the floor plan makes the spaces that belong to each unit open to everyone in the building. In Old oak they have a themed room on each floor which is a nice addition but unfortunately these rooms are fairly small and do not have a window.

The wide array of different shared spaces is something I very much likes as it gives the building its unique concept and the residents of it much more than what they could have in their own apartment. I also like the idea of having the shared spaces placed centrally within the building and making them something that you pass by naturally on your way to and from the building.

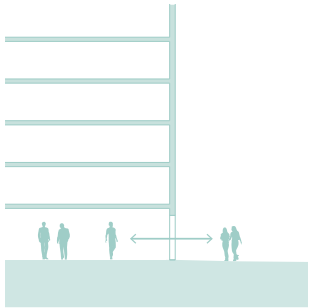
SUMMARY OF REFERENCE EXAMPLES

CONCLUSIONS

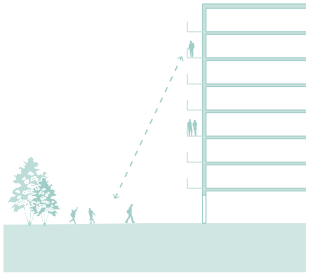
One main entrance centrally located as to create a natural meeting place and gather people



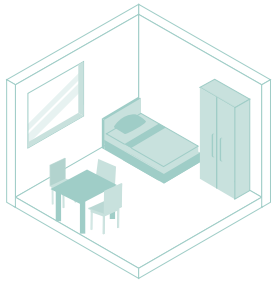
Show the life within the building and its unique concept from the outside and to passer-by



Connect the ground floor with the surrounding both visually and with public functions

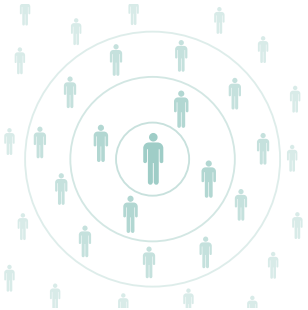


Create visual contact between the courtyard and the shared spaces in the building above

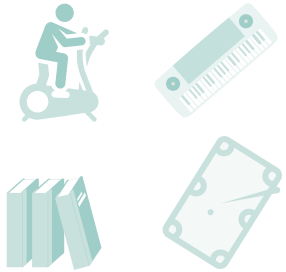


Private rooms that are large enough to fit different functions such as bed, storage, bathroom, socializing space and a study area

Natural meeting places for daily social interactions



Create different levels of privacy and spaces that are shared by smaller groups within the building



Have a wide array of different style shared spaces to give the residents something they could not get in a typical apartment

CONTEXT

CONTEXT

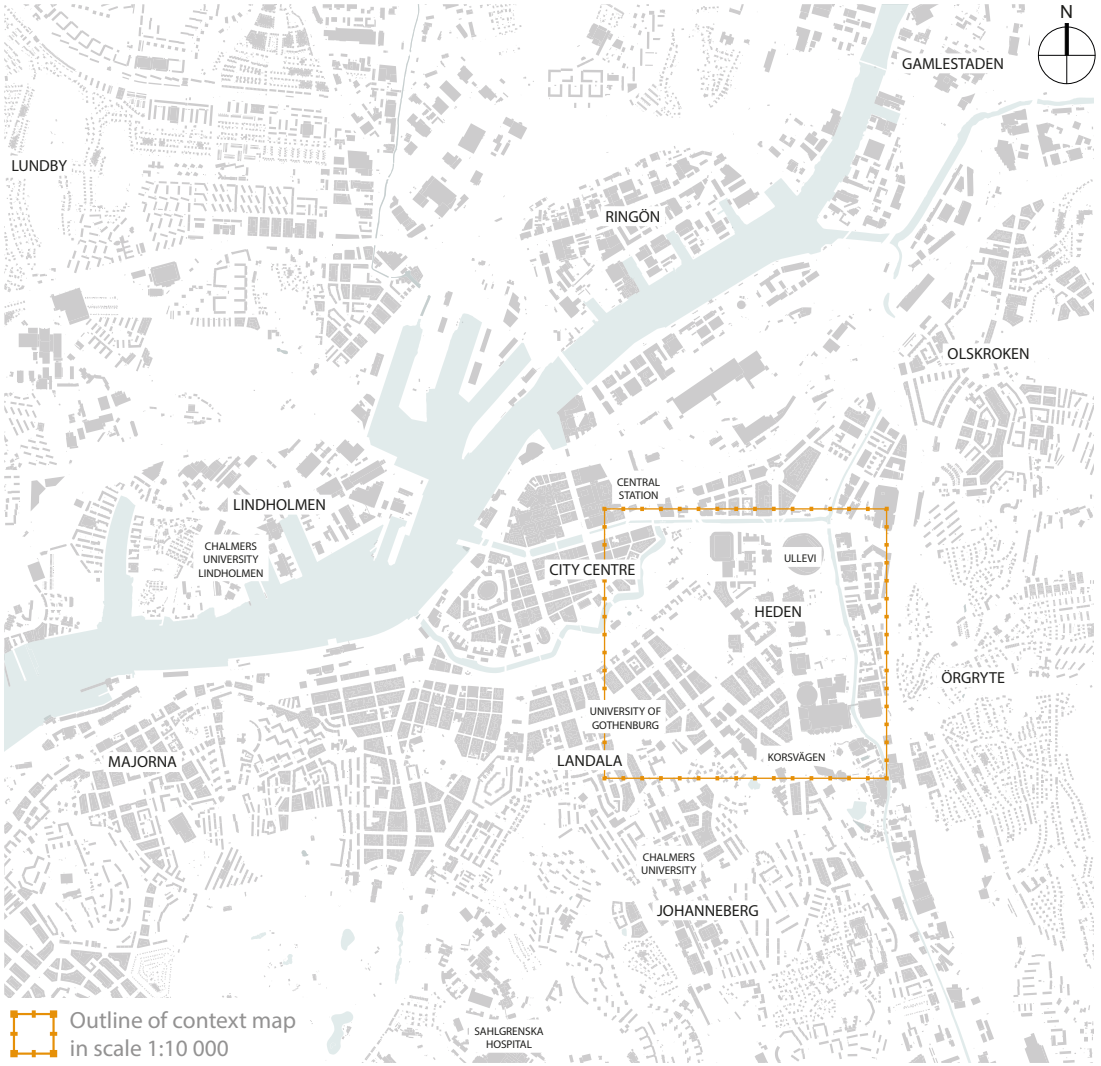
THE CITY OF GOTHENBURG

Gothenburg is the second largest city in Sweden with its 550 000 residents within the city area and around 1 000 000 in the surrounding areas. The city area is 72 100 square kilometers and about 40 percent of that is water, mainly the river Göta älv that runs through the city.

The city was founded in 1621 by the king because there was a wish for a city near where the river met the sea for strategic commerce reasons. The city really started to expand around the mid 18th century mainly due to extensive trade going on with East Asia.

Gothenburg kept expanding both as a trade and industrial city during the late 19th century. As emigration to America became more common in the beginning of the 20th century Gothenburg was one of the more common starting points on the way. Around this time Gothenburg developed itself into a "sea-city" with fishing and shipbuilding. The population grew tenfold from 13 000 in 1800 to 130 000 in 1900.

During the 20th Gothenburg became an industrial city with large companies such as Volvo and SKF. Today much of the industrial production has decreased and Gothenburg has become more of an event and educational city as well as a focus on commerce.



Scale 1:40 000 — 0 500 1000 1500 2000 (m)

CONTEXT

THE SURROUNDING AREA

The site is centrally located in the city within walking distance to the city centre and near the event arenas new Ullevi, Old ullevi, Scandinavium and the cinema Bergakungen.

The site also has great tram connections from the tram stop "Ullevi south" which is only 200 meters away. The site is just off the event street Skånegatan where the tram goes south towards Korsvägen and continues on towards Chalmers University, Sahlgrenska University Hospital and on to the southern parts of the city.

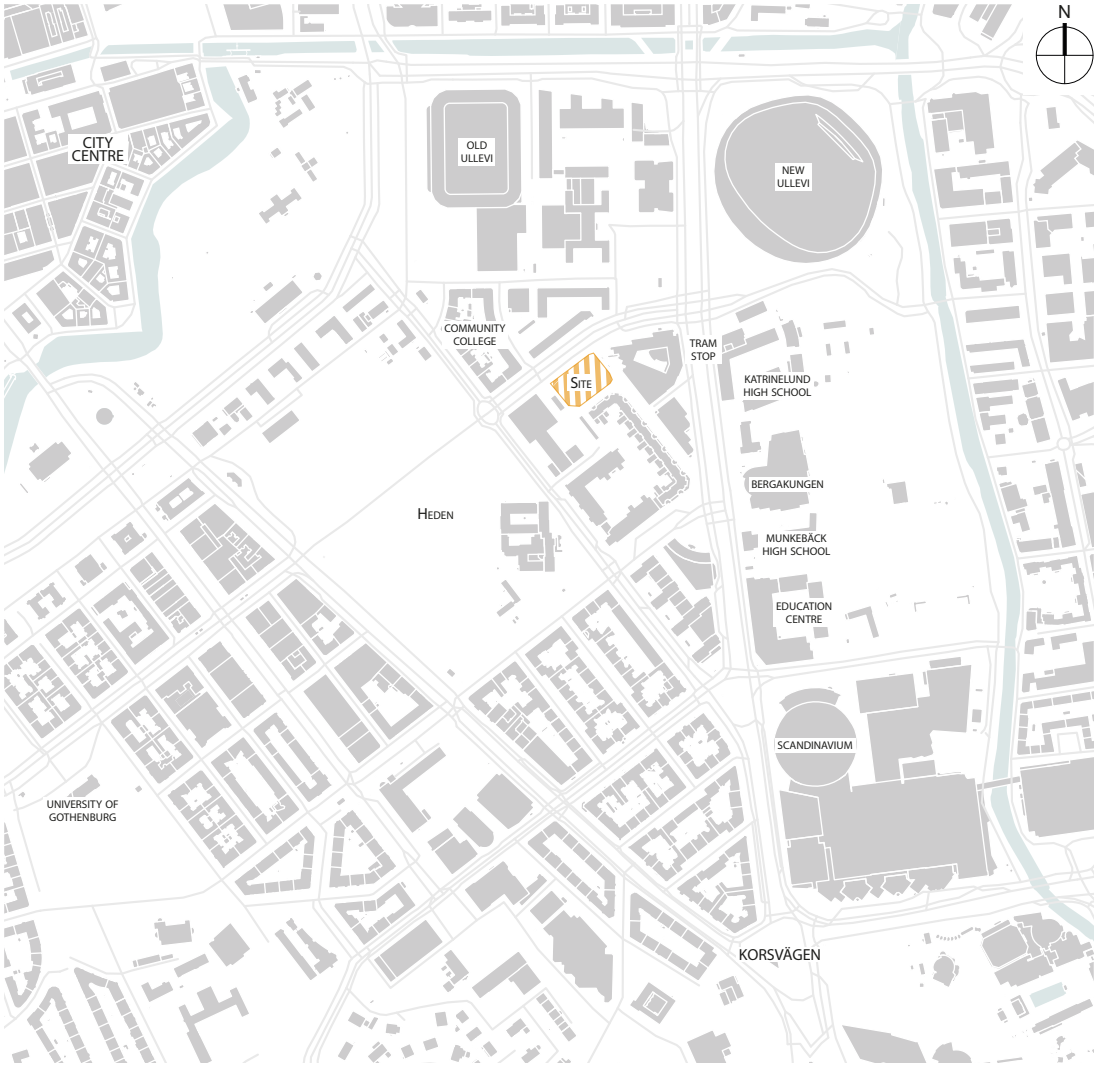
Southwest of the site is the event area Heden where a large walking path runs directly through it and then by the site on its way to Skånegatan. Along this walking path is the University of Gothenburg and in the surrounding area there are several other education centres.

Tram to Brunnsparken: 7 min
Walk to Brunnsparken: 15 min

Tram to University of Gothenburg: 13 min
Walk to University of Gothenburg: 10 min

Tram to Chalmers university: 8 min
Walk to Chalmers university: 25 min

Scale 1:10 000 0 100 200 300 400 500 (m)



THE SITE

FACTS AND HISTORY

Facts

Address:	Bohusgatan 9
Width:	89 m
Depth:	49 m
Area:	4360m^2
Current use:	Parking lot with space for 92 cars

Aerial view of the site with the existing parking lot and its surroundings

About the site

In 1930 a fire station was built on the site and was used as such until 1988. The building was empty until 1999 when it was torn down and the parking lot that still stands today was built.

The parking lot is currently surrounded by trees on three sides with walking paths behind them. On the site there is also a car ramp to an underground parking garage underneath the office building to the southwest of the site.

The area consists of both office buildngs as well as residential buildings.
The site right now is an empty space in the city that stands out along the surrounding higher buildings in an otherwise fairly dense part of the city. This is a lot that could really benefit from being built on as a way of closing the hole in the city.

N
Västgötagatan
Bohusgatan
Skånegatan
Sten Sturegatan
RESIDENTIAL BUILDING VI
RESIDENTIAL BUILDING V
OFFICE BUILDING IX
OFFICE BUILDING V
RESIDENTIAL BUILDING VIII
PARKING GARAGE III
CAR RAMP
+13.8
+13.2
+16.3
+16.3
+13.8
+13.7
+13.7
+14.4
+14.9
+17.2
+13.6
+13.8
Scale 1:1000
0
10
20
30
40
50
(m)

THE SITE

PHOTOS

Panoramic view of the site with its existing parking lot and the hotel to the left, a residential building in the back and the office building to the right.

The entrance of the car ramp to the existing underground parking garage

The site with the existing parking lot seen from the walking path behind it.

The office building and car ramp to the left and the residential buildings seen across bohusgatan

The walking path behind the site with a residential building to the left and the office building in the back

The biking and walking path to the east of the site with some bike parking

THE SITE

SURROUNDINGS AND THE CITY'S PLAN

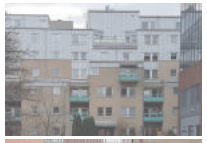
The surrounding buildings

The surrounding buildings consist of mainly residential ones ranging from five to eight floors. There is also an office building to the southwest side of the site and on the opposite side there is another office building of nine floors facing Skånegatan.

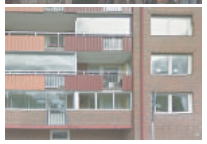
The street Bohusgatan is quite nice with trees planted along it enclosing a walking and biking path but the buildings surrounding the street are very closed off in the ground floor. None of the surrounding residential buildings have any commercial space. The office building does have a lobby that is visible from the street but otherwise the building is fairly closed off. The hotel is the only thing activating Bohusgatan with glazed and public areas facing it.

The facade materials mainly consist of brick in different colours. Both the office building and the hotel on the two sides of the site have a red brick that is similar to each other with white or grey window frames.

Behind the site there is a residential building with yellow bricks and light green window frames but that building also has very light grey metal sheets as facade material on the top floors.



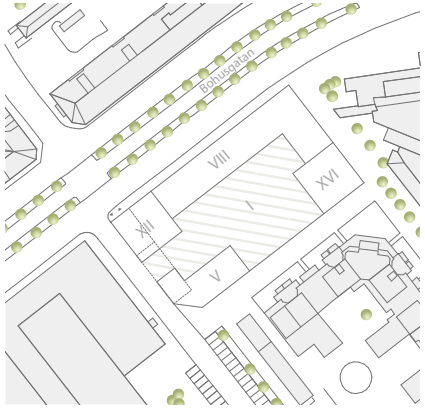
Across the street of Bohusgatan are more residential building with bricks that are a red-ish brown colour but the building also has some yellow and red metal sheets as balcony railings that become very visible in the facade.



The city's plan for the site

In june 2015 the city planning office of Gothenburg approved a change of use for the site from a parking lot to residential use. They also have plans for some commercial spaces on the ground floor in the parts that face Bohusgatan.

The plan heavily exploits the lot and includes some different building volumes ranging from five floors and all the way up to sixteen floors. The volumes facing the main street Bohusgatan is generally eight floors with a higher tower of twelve floors in the southwest corner. There is a smaller five-floor volume in the back of the site as well as a high-rise tower of sixteen floors in the southeast corner of the site which would make it quite a lot higher than all surrounding buildings.



Proposed plan by the city

In the proposal they intend to lift the courtyard one level off the ground in order to keep the parking spaces that are there today. In addition to that they will build an underground parking garage that fills the entire lot. The underground garage will be accessed from the already existing car ramp down to the garage under the neighbouring office building to the southwest. The proposal overbuilds the ramp and integrates it into the new building volumes and the new entrance to the ramp will be from the ground floor of the twelve floors tower.

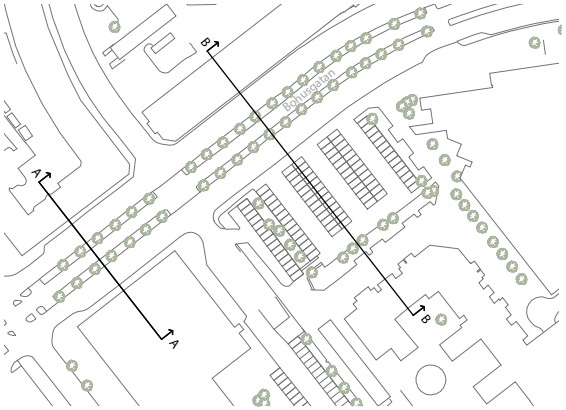
THE SITE

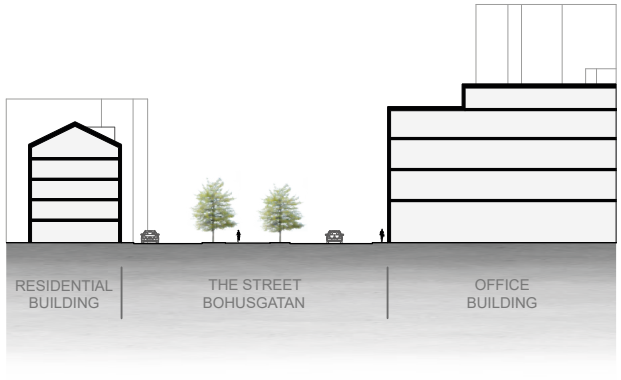
STREET SECTIONS

An empty hole in the city

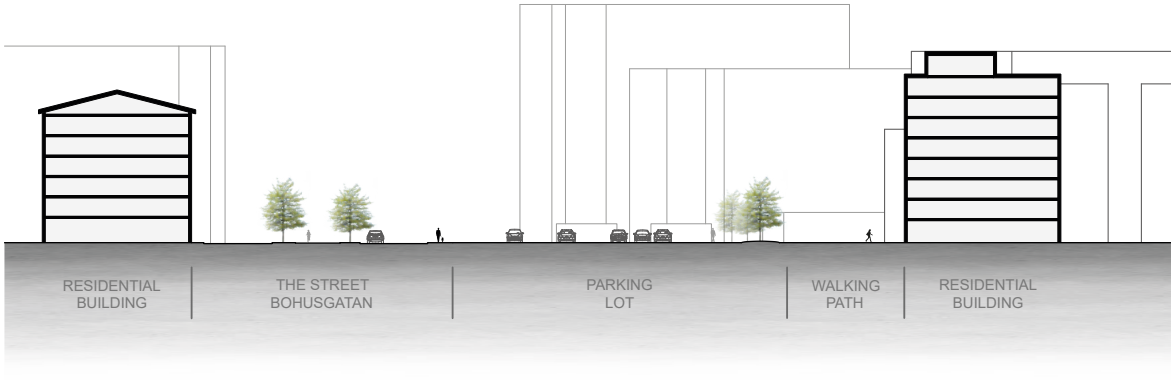
The site is fairly centrally located but is currently an empty hole in the city. As you walk past it there is just open space with some cars that do not contribute to the street life. The street of Bohusgatan is quite nice with sidewalks on both sides of the street as well as a walking and biking path running in the middle surrounded by trees on both sides.

Section A is cut through a part of the street that is well enclosed by a residential building and an office building. However in section B you can see the open space that the parking lot is until the next building. The street is not enclosed in this part and can be experienced as unsafe at night-time.





Section AA



Section BB

THE SITE

SUN STUDIES

1st of January

(Shadows from 12.00)

1st of April

(Shadows from 12.00)

1st of July

(Shadows from 12.00)

1st of October

(Shadows from 12.00)

THE SITE

TRAFFIC FLOWS IN THE AREA

Tram

Cars

The tram stop called Ullevi south is located just a short walk to the east of the site. That tram line that runs along Skånegatan can take travellers either up to the north into the central parts of the city with a five minutes ride or to the residential areas to the northeast of the city. If you go in the opposite direction you come to Korsvägen, Chalmers University, Sahlgrenska and on to the southern parts of Gothenburg.

Along the street of Bohusgatan which runs along the site the car traffic flow is substantial. This street connects the larger road of Skånegatan to the sports and event area called Heden. To the southwest of the site is an office building with some parking spaces in front of it. Out of the streets surrounding the site these two are the only ones where cars can travel.

Bikes

A bike street runs pass the site along Bohusgatan between the two car traffic lanes. This path also connects the bike streets along Skånegatan with the sports and event area Heden as well as the bike street running along Heden. Surrounding the site are bike parking for residents of the area both to the southwest and northeast of the site.

Pedestrians

The street Skånegatan is sometimes referred to as an event boulevard with bars, a cinema, restaurants and hotels surrounding it. Here the flow of pedestrians is heavy. Along the street of Bohusgatan it is not as many people but there is still many passers-by on their way to Heden or on to the central parts of the city. The other sides surrounding the site are all back streets and not areas people would pass by unless they live in or are visiting one of the surrounding buildings.

THE SITE
CONCLUSIONS

About the volumes and heights
The proposal from the city heavily exploits the lot with two towers of twelve and sixteen floors. The height of the highest towers is something I can feel would be a bit too much for this site as it out stands out too much. The general height of eight floors towards Bohusgatan seems reasonable as that is something in between the heights of the hotel and the office building on the sides of the site.

According to the city's plans there is a smaller building shape in five floors that is separated from the other shapes in the southwest corner. I do agree that the building should be lower in that part of the lot due to sun conditions of the inner courtyard. However I do not agree with separating the volume like that. The opening would be right above the entrance to the underground parking garage so there is no possibility for an entrance to the courtyard from that side.

I have decided not to use the entire lot for my building because that would make it too big in scale. I will build on about half of the total volume and leave the rest for other residential buildings. Given the fairly large scale of this lot I think it is important to work with different heights of the volumes to make it more dynamic and varying.

About the ground floor and courtyard
I agree with the ideas of making the ground floor public with commercial spaces as a way of activating the surrounding areas. However given the fact that the only street that is likely to get any foot-traffic from non-residents of the area the only street that could sustain commercial space would be Bohusgatan where people walking pass Heden to or from Skånegatan would be. In order to further activate Bohusgatan and to give a glance of the life in the courtyard I make the yard visible in some parts from the street providing a nice view of some greenery and the life within the yard.

The courtyard has great potential as it is in a quiet area only surrounded by walking paths and is facing the south. I will open the shape and yard up towards the south and enclose it on the other sides.

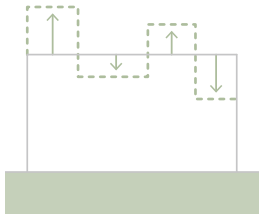
About parking and the basement
In the city's proposal they intend to lift the courtyard one level off the ground in order to keep the parking spaces that are there today. In addition to that they will build an underground parking garage that fills the lot to take care of parking for the residents of the new buildings. While I do agree with the underground parking garage I will not lift my courtyard one level up. The parking demand for my target group of young adults would not be very high and I do not feel additional parking aside from the underground garage will be necessary. I will instead focus on providing bike parking and I believe a large part of the residents in my building would use public transportation due to the closeness of the city, the tram stop and because few people in this age group own a car.

Survey conclusion: young adults want a central location and easy access to public transportation

About the facade materials
While the general facade material for the surrounding buildings is bricks in some different colours there is also some other elements such as metal sheets in varying forms. This makes the area fairly homogeneous as you travel along the streets and I have decided to break this up by using different facade materials for my building as well as the other buildings on the site. This is done in order to extinguish this block and mainly my building with its different concept from the surrounding area. It will also give some variation in the city pattern and show that these buildings are from a different time than the surrounding ones.

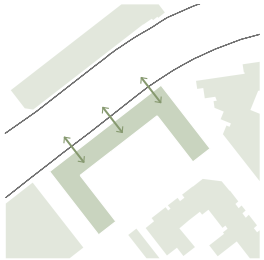
THE SITE

SUMMARY OF CONCLUSIONS

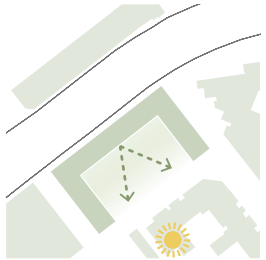


VARYING HEIGHTS FOR BUILDING VOLUMES

NO CAR PARKING SPACES BUT LOTS OF BIKE PARKING AND EASY ACCESS TO PUBLIC TRANSPORTATION



GROUND FLOOR OPENS UP TOWARDS THE MAIN STREET OF BOHUSGATAN



COURTYARD ENCLOSED BY BUILDING BUT OPEN TO THE SOUTH FOR SUN CONDITIONS

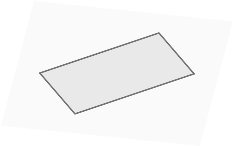
GROUND FLOOR OPEN BETWEEN COURTYARD AND MAIN STREET OF BOHUSGATAN

VARIATION IN FACADE MATERIALS FROM SURROUNDING BUILDINGS

THE HOUSING PROJECT

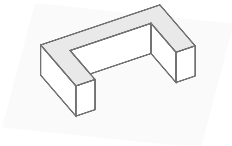
BUILDING DISPOSITION

THE VOLUME



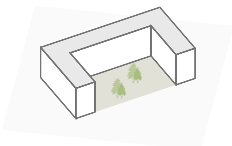
The lot

The actual lot is square and fairly flat.



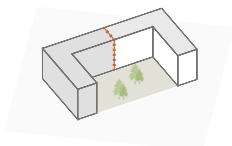
General shape

A general shape of an U is created as to enclose an area between the volumes. The general height is eight stories per the city's proposal and something in between the heights of the two buildings on the sides.



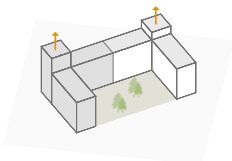
An inner courtyard

The area between the buildings is located and open towards the south and is a great location for a courtyard.



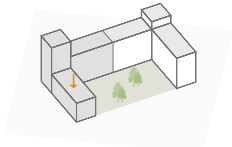
Different buildings

The general size of all the building volumes would be too big for this concept and the shape is divided into two L-shapes. The other buildings have typical apartments.



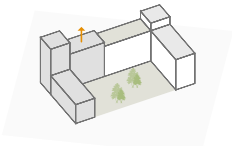
Different heights

In the two corners facing the street Bohus-gatan the volumes are raised two and four stories to create some varying heights in the volumes.



Bring in more sun

The volume to the southwest is lowered to five stories as to bring in more sunlight to the courtyard.

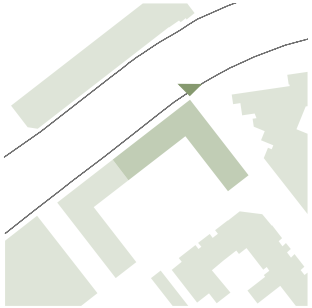


A roof terrace

A roof terrace is created overlooking the street and the yard. The volume to the west is raised one level to separate it from the terrace.

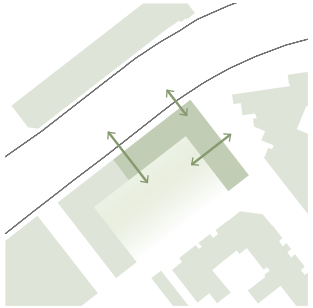
BUILDING DISPOSITION

MAIN IDEAS FOR THE BUILDING



Centrally located entrance

To gather the residents there is one big main entrance. It is located centrally within the shape and towards the most exposed street corner.



Public ground floor

The entire ground floor is public and very visible in and out from all directions.

The central corner

The entire northeast corner facing Bohusgatan consists of shared spaces on all floors. In the back with a view of the courtyard is the stairwell. These are spaces all residents need to pass by daily and make them a natural meeting place.

Display window

The most exposed corner in the northeast is very visible from Bohusgatan. It is meant to be a display window for what is going on inside and the unique concept of the building.

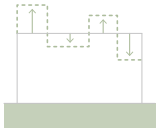
SITE PLAN

Volumes and heights

The building volumes for the lot is shaped like an U. The main entrances to all the buildings are located towards Bohusgatan which is the main street where most of the foot-traffic will be. Here is also some retail space located facing Bohusgatan as a way of activating the street instead of just entrances to private buildings.

For my building the general height is eight floors in a fairly simple L-shape. As a way of creating some variation in the volumes and to highlight the corner with shared spaces in the northeast there is a higher part with ten stories.

For the other buildings on the site the general shape and heights are according to the city's proposal. There is a general height of nine floors towards Bohusgatan with a higher volume of twelve floors in the corner. The overbuilt ramp to the underground garage is integrated into the volumes and is accessed via an entrance and exit towards Bohusgatan. The volume towards the south is five floors like the city proposed but is straightened out and connected to the twelve stories building now as a way on enclosing the courtyard.



Varying heights for the building volumes

The courtyard

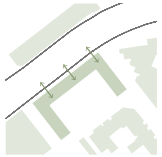
The building volumes are arranged as to enclose the courtyard from three sides and then open it up towards the south and the walking path passing by behind it. This is to maximize sunlight during the day from about eleven to three when the sun is the strongest.

The courtyard is owned communally by the surrounding buildings and there is no clear division as to what part of the courtyard belongs to which building. The courtyard can also be seen from the retail spaces via large windows as a way of connecting to the street and showing the life in the courtyard.

Courtyard open to the south

Connecting to Bohusgatan

The main entrance to this building is located at the corner closest to the event boulevard Skånegatan and the hotel next to it. This is a very exposed corner that can be seen from many different directions and by the trams passing by. The placement of the main entrance is also in the middle of the building and is meant to be a gathering point as it opens up to a lobby on the entrance floor.



Open towards the main street

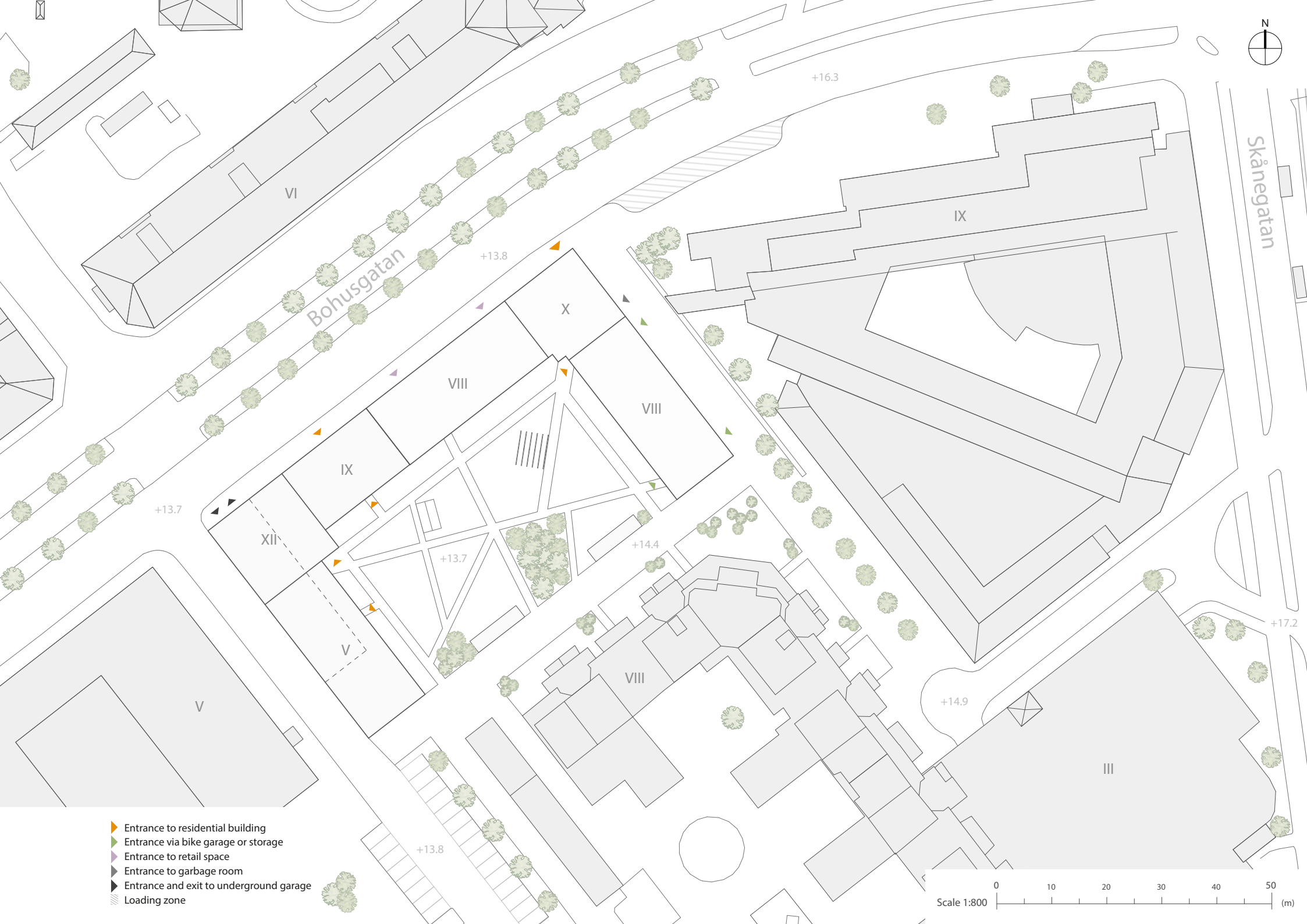
The lobby with some seating areas is also a way to activate the street outside and give some views into the building. Above the lobby are shared spaces on every floor that are very glazed and open as to provide a glance into the life within the building and the very different concept for this residential building.

Biking garage and garbage room

The building can also be accessed via the biking garage that is on the ground floor with an open plan toward the courtyard. The bike garage is placed facing the walking path east of the building which is an easy access from the biking paths that run along Skånegatan and Bohusgatan.

Bike parking and public transportation

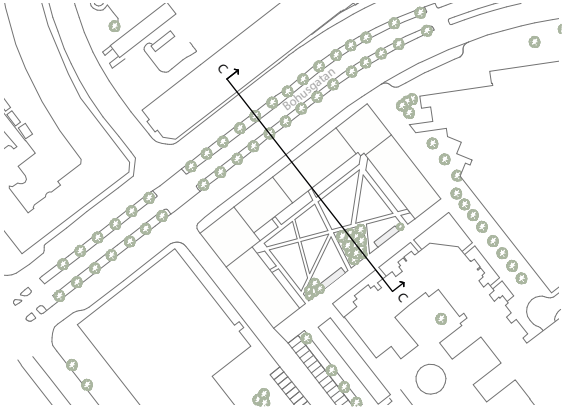
Located along the same walking path is also the entrance to the garbage room for the building. The garbage room is placed close to the loading zone used by the hotel next to the site where the trucks can stop and load.

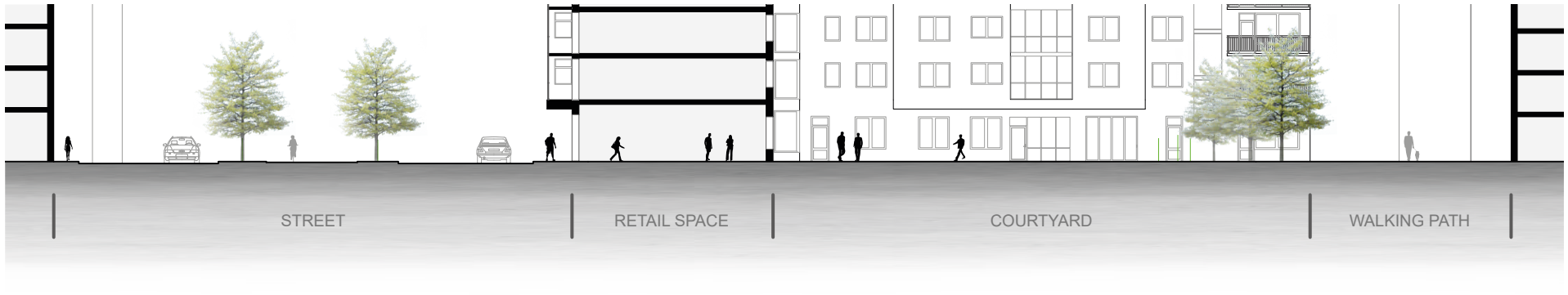

N
Bohusgatan
Skånegatan
VI
IX
X
VIII
VIII
IX
XII
V
V
VIII
III
+16.3
+13.8
+13.7
+13.7
+14.4
+14.9
+17.2
+13.8
Entrance to residential building
Entrance via bike garage or storage
Entrance to retail space
Entrance to garbage room
Entrance and exit to underground garage
Loading zone
Scale 1:800
0
10
20
30
40
50
(m)

STREET SECTION

Closing the empty hole in the city

With the addition of this building the previously empty hole in the city is now closed. The street of Bohusgatan is now enclosed the entire way and instead of a parking lot there is instead retail space and the entrance to residential buildings facing the street. The retail space is also glazed both towards the street as well as to the back giving customers and passers-by a glance into the courtyard.





Section CC

SUN STUDIES

1st of January

(Shadows from 12.00)

1st of April

(Shadows from 12.00)

1st of July

(Shadows from 12.00)

1st of October

(Shadows from 12.00)

EXTERIOR PERSPECTIVE FROM BOHUSGATAN

BUILDING DISPOSITION

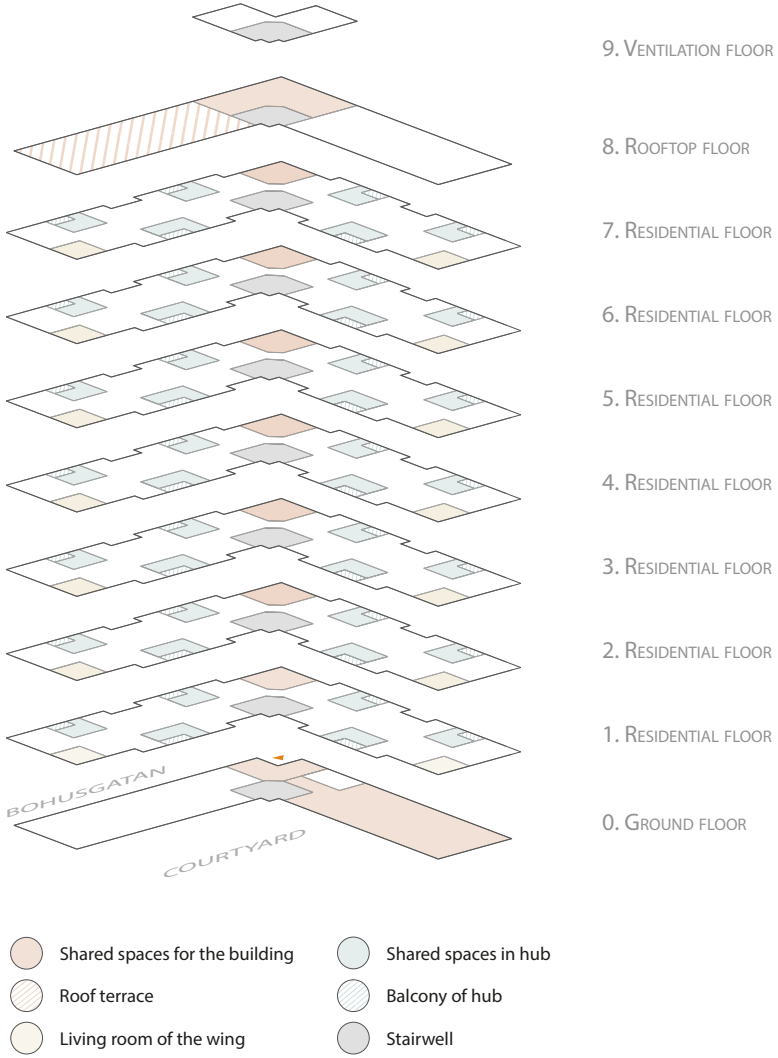
THE SHARED SPACES IN THE BUILDING

The shared spaces in the building are in several different degrees of sharing and are spread out throughout the building. After the entrance on the ground floor the first thing you enter is a lobby that is shared by the building and with big glazed areas to Bohusgatan as a way of activating the street and showing some of the life within the building.

The south wing of the ground floor is also shared spaces by the building and place there for its close connection to the courtyard. Overall the floor plan is very open and the rooms open itself up towards the courtyard with folding doors and glazed areas. The entire ground floor is public with retail spaces towards Bohusgatan as a way of activating the streets around it.

The stairwell is centrally located in the corner of the L-shaped building with a visual connection to the courtyard as well as the street on the other side. The other shared spaces for the building is placed in the northeast corner towards Bohusgatan as it is in close connection to the stairwell and therefore a place residents pass by several times a day. It is also meant to be a display window for the unique concept of the building by showing off the life within it to passers-by on the street. On the top floor there is a roof terrace placed there for its excellent sun conditions with sunlight during the day as well as evening sun. The roof terrace is also in close connection with an assembly room in the northeast corner and can be opened up between them.

At the end of each wing is a shared living room placed there partly to be more private than the spaces around the stairwell and partly because it connects well with the courtyard through its visual connection and the balcony belonging to it. As residents make your way to the shared living room they pass by the shared spaces of the hubs that have a window towards the corridor for visual connection and to increase facial recognition of your neighbours.



GROUND FLOOR

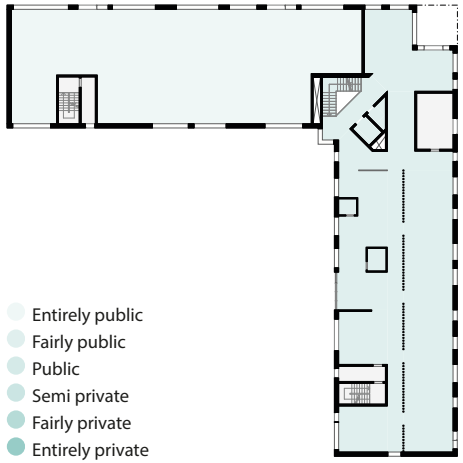
The ground floor has the main entrance centrally located in the L-shaped volume at the corner facing Bohusgatan. The first thing you enter is a lobby with sitting areas to increase social interactions within the building and give passers-by a glimpse of the life inside. The rest of the space facing Bohusgatan is rentable retail space that also contributes to the street-life of this otherwise fairly closed off street.

After you pass the lobby the main stairwell is located right in front of you with a very clear sight-line across the building out to the courtyard shared by the residents and the surrounding buildings. The rest of the ground floor is entirely shared spaces. There are partly functional spaces like the bike garage and the laundry room but there is also more social ones like a sitting area connected to the courtyard and a bike workshop. The entire ground floor has a very open layout with only a vertical rib wall separating the bike garage from the other spaces. These spaces are also connected and do not have any walls out to the corridor that runs in the middle. The laundry room is not closed off but rather has three units consisting of two washers and a dryer each and residents can interact while doing their laundry. The room is only separated by smaller boxes such as a bathroom and drying room.

The bike workshop can also be opened up to the deck outside where more workspace is as to connect to the courtyard. Overall the spaces on the ground floor are located towards the courtyard with large glazed areas. In the back street to the east is the biking garage with entrances to that street as well as the garbage room which is meant to be close to the stairwell and the loading zone out by Bohusgatan.

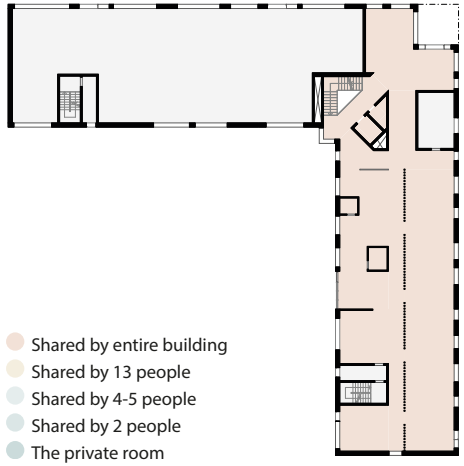
Levels of privacy

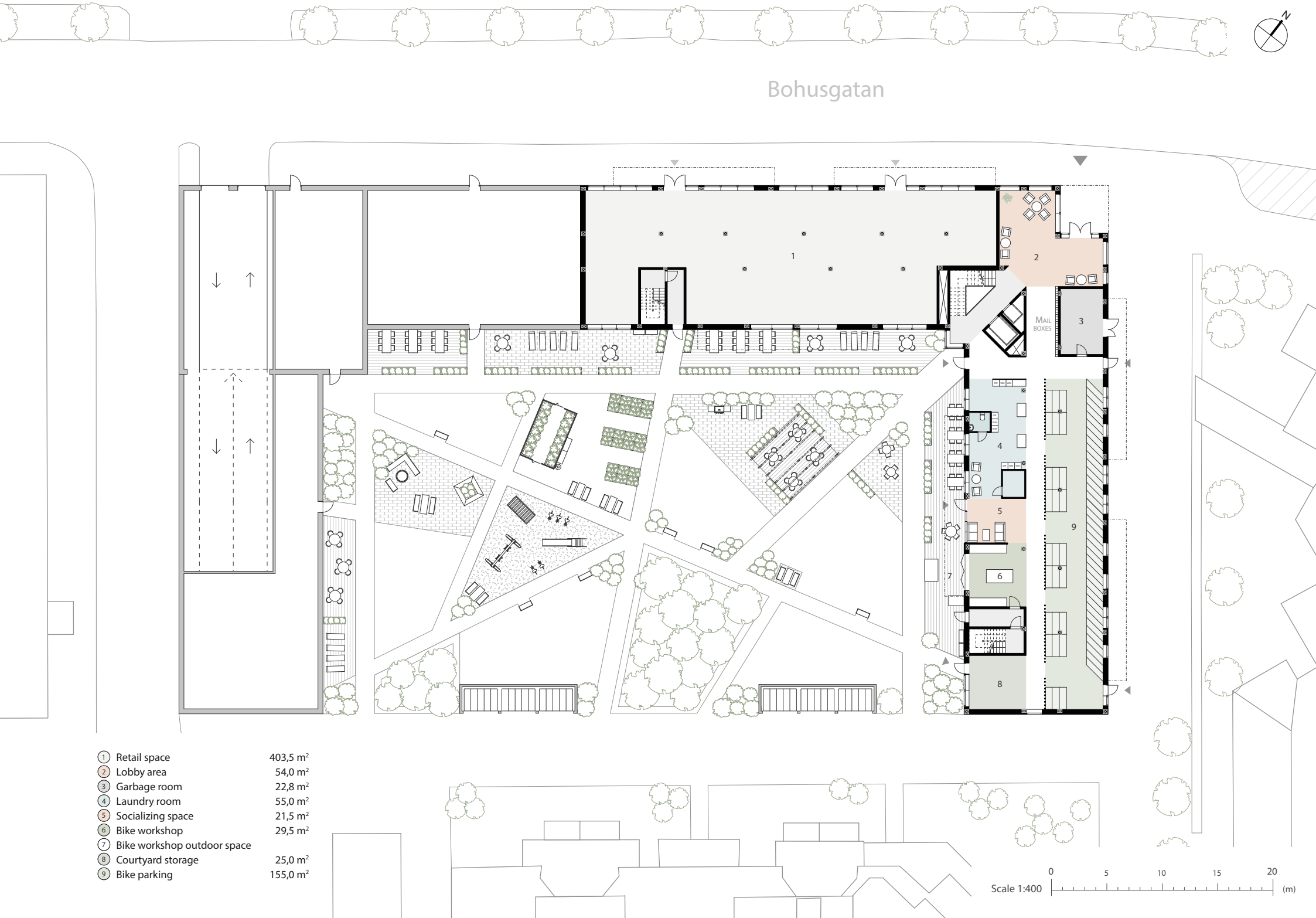
The entire ground floor consists of public spaces. The retail space is entirely public and open for everyone. The rest of the floor is shared spaces for the residents of the building. All of these areas can be seen from the outside by passers-by making them very public and contributing to the street life around the building.



Spaces shared by

The part of the ground floor that belongs to this building is entirely shared by all residents of the building. There are partly practical functions such as laundry room and bike garage but also socializing space such as the lobby by the entrance and a sitting area with an entrance towards the courtyard.





1	Retail space	403,5 m²
2	Lobby area	54,0 m²
3	Garbage room	22,8 m²
4	Laundry room	55,0 m²
5	Socializing space	21,5 m²
6	Bike workshop	29,5 m²
7	Bike workshop outdoor space	
8	Courtyard storage	25,0 m²
9	Bike parking	155,0 m²

RESIDENTIAL FLOOR

The residential floor plan is entered via the centrally located stairwell with a view to the courtyard in the south and the street Bohusgatan in the north. The first thing you see as you get out of the stairwell or just as you make your way up the stairs is the themed room placed on every floor. All f the floors have a different style room such as a cinema room, game room and a gym. These rooms are placed near the stairwell in order for residents to have to pass by them several times a day making them more likely to be used and more socially inclusive. These rooms are also very open with large glazed areas towards Bohusgatan as to give an in-look as to what is going on there and one of the main features of this building.

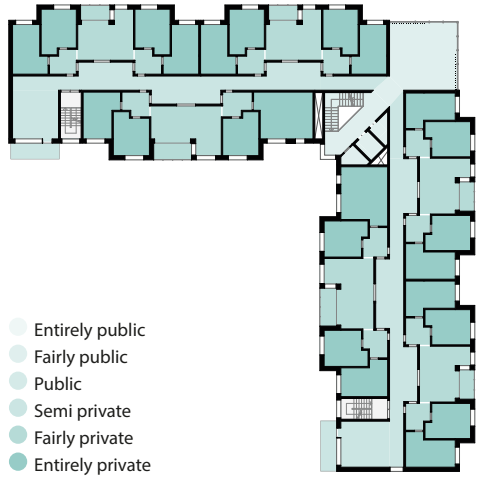
After you leave this area you enter the corridor in one of the two wings. In order to make the corridor more interesting and give a clearer entrance zone there are niches where the front doors to each hub are. There is also a window into the kitchen area in order to give a glimpse of what is going on in there, increase social interactions and recognizing your neighbours.

Most of the rooms are single ones but in the two hubs facing the courtyard there is a larger double room to provide variety for the residents and include couples as a possible target group. The kitchen and dining area in these hubs are bigger than the ones containing just four single rooms.

In the end of each wing is a shared living room for the residents of that wing. These are open and can be accessed by anyone in the building but it is meant to be a gathering place for the residents of that wing as to create a larger unit outside of the hub to increase social interactions. Connected to these rooms are a balcony that overlooks the courtyard and gives a visual connection between these two shared spaces.

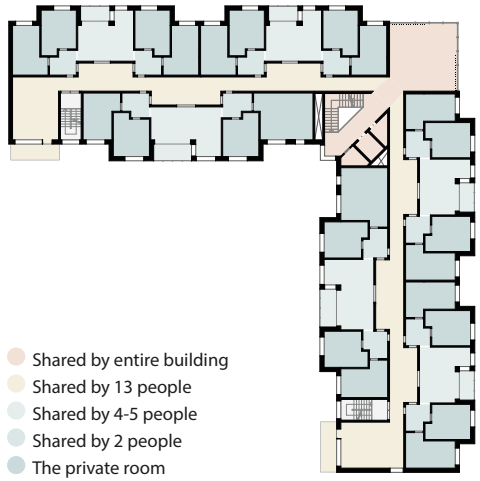
Levels of privacy

The residential floor consists of many different degrees of privacy. The most public ones are located in the corner where everyone pass by. The corridors shared by residents of that wing is slightly less public. Inside each hub the spaces become fairly private in the shared kitchen and entrances and inside each room the space is entirely private.



Spaces shared by

The entire corner in the middle is shared by the entire building. As you get into one of the wings the spaces are mainly for the 13 residents of that wing with a shared living room at the end. Inside the hubs you have the entrance mainly used by the two rooms connected to it, the kitchen shared by everyone in the hub and then the private rooms.



1	Shared living rooms	27,5 m²
2	Shared living room balconies	8,9 m²
3	Shared themed room	49,0 m²

ROOFTOP FLOOR

On the rooftop floor there is an assembly room that is open to all the residents of the building. Here you can have larger gatherings for the building. The room consists of a dining area, a lounge area and a large kitchen. There is also some bathrooms, a coat rack for when you are having guests from the outside and a storage room if you want to store away the furniture and use the room as an open space. The dining area has a double ceiling height to create a really luxurious space. The kitchen and lounge area have a normal ceiling height as there is a ventilation room above. This room can also be divided by a movable wall if a resident would like to rent it for maybe a birthday party with their family.

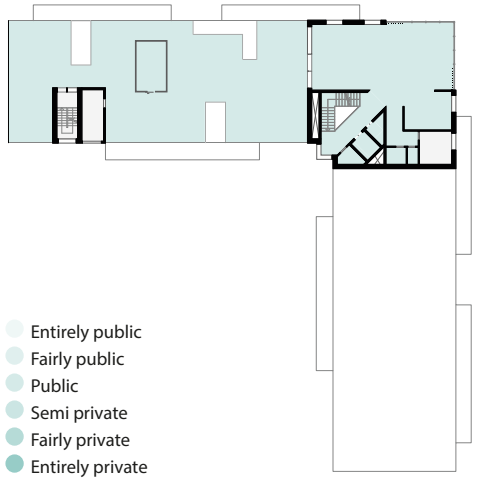
From the assembly room there is a large roof terrace shared by all of the residents. The terrace gets sunlight from the hours of ten to four during the day and then evening sun after six o'clock when the courtyard is shadowed. The terrace has many smaller areas surrounded be greenery where you can sit and hang out. There is also a dining area under a glass roof, a hot tube and two barbecue areas.

The terrace has some raised garden beds that can not be accessed in order to make it possible for slightly larger bushes and smaller trees that bring in more greenery.

On the wing to the south is a green roof for sustainability and to give a nice view from the terrace.

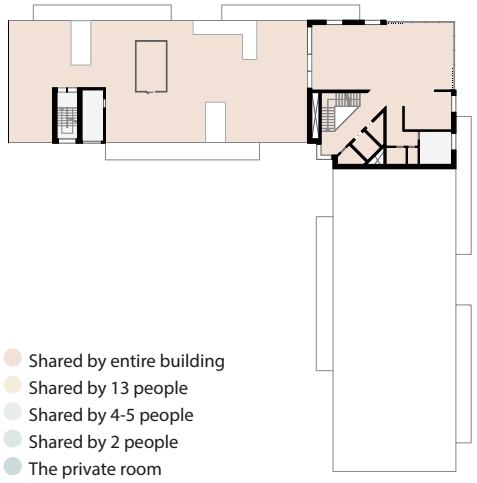
Levels of privacy

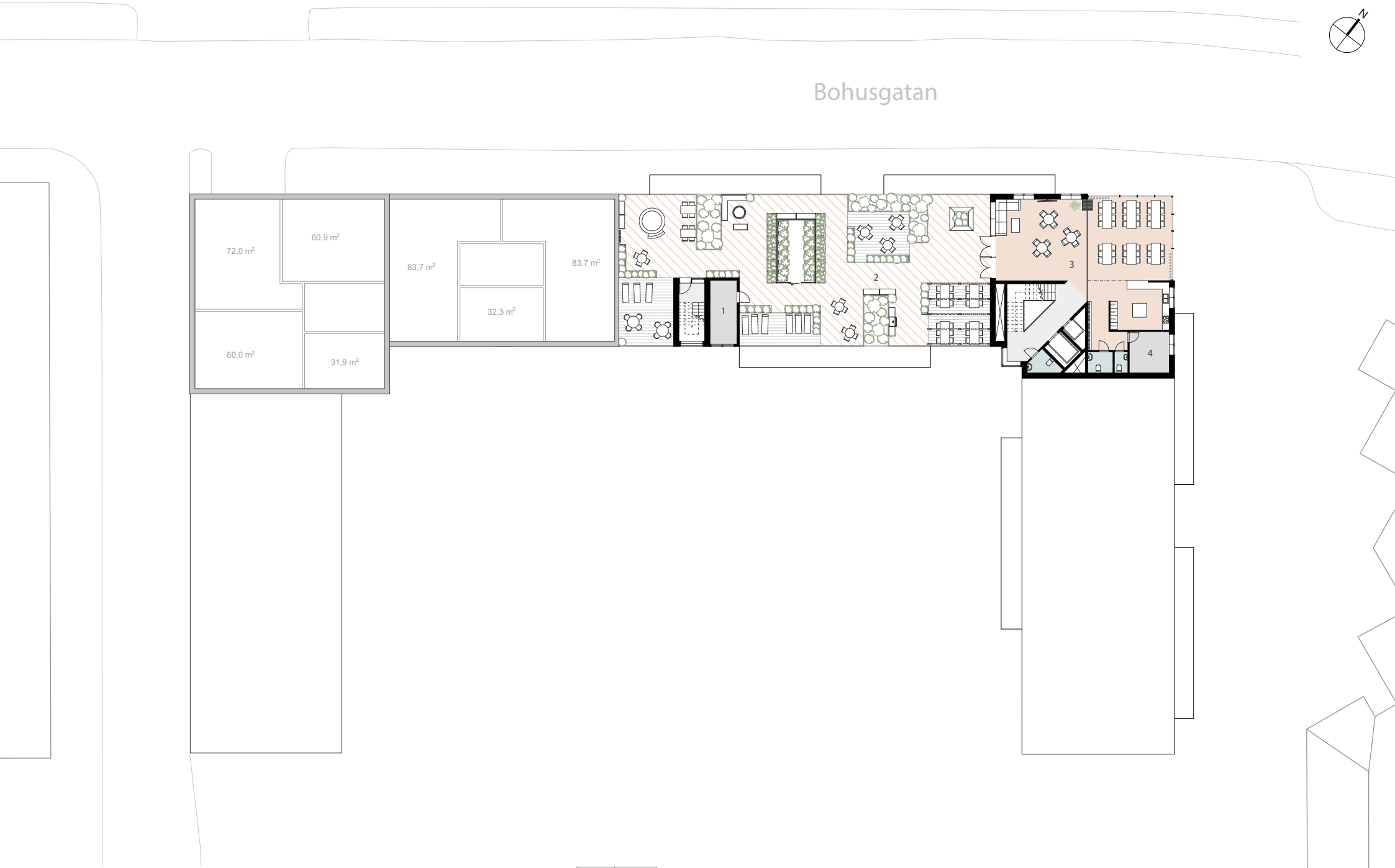
The entire rooftop floor consists of shared spaces for the entire building. These are areas that can partly be seen from the surroundings and the street below but it is still high up and you have to be a resident or a guest to have access making it semi-public.



Spaces shared by

The entire top floor consists of spaces that are shared by the entire building. There is partly the assembly room inside as well as the terrace outside.





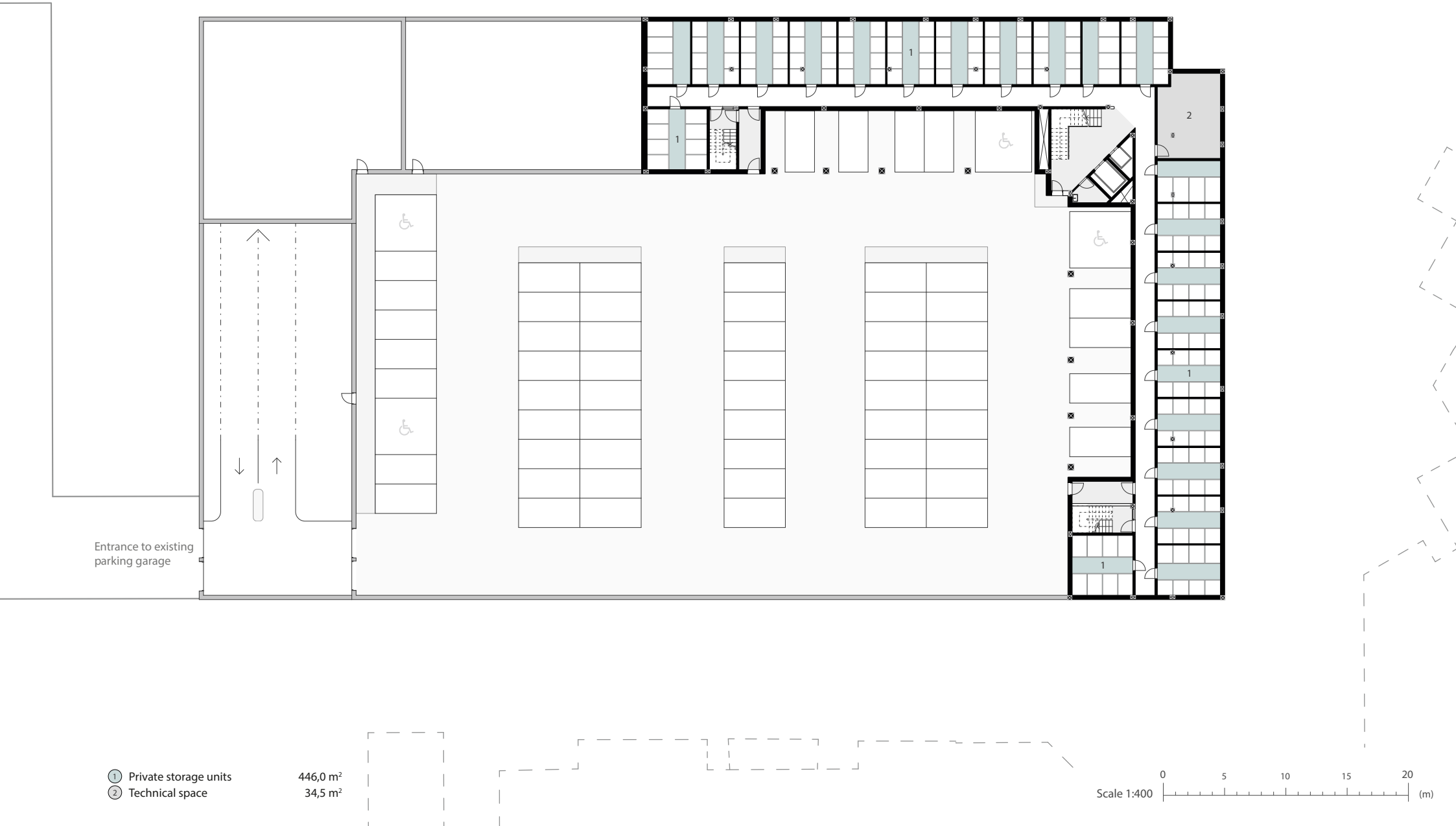
1	Courtyard storage	12,8 m²
2	Roof terrace	332,0 m²
3	Assembly room	139,0 m²
4	Assembly room storage	12,0 m²

Scale 1:400 0 5 10 15 20 (m)

BASEMENT FLOOR

The basement is shared by all of the buildings on the site. It mainly consists of a parking garage underneath the courtyard. This garage is accessed via the existing ramp to the already existing garage underneath the office building to the west. A new entrance is made making it possible to turn left also into this garage.

Most of the space for this building on this floor consists of storage spaces for the residents. Everyone gets at least 1,5m^2 to store their personal belongings. There is also a technical space for the building located near the stairwell.



1	Private storage units	446,0 m²
2	Technical space	34,5 m²

THE HUB

FUNCTIONS AND THE SPACES

The hub is the private space for the residents shared by only 4-5 people depending on if the hub has a larger room with space for two residents or just four smaller rooms. For the hubs with one larger room the kitchen and dining area is slightly bigger than the ones with just four small rooms. In the survey on student housing in the future it was clear that while many people were open to sharing their living they also wanted to do it with a relatively small group of people in a more apartment-style living. It was also a wish that you would not share a kitchen with too many people as this could be a problem area.

Apartment-style living, shared by a small group.

Not share a kitchen with too many people.

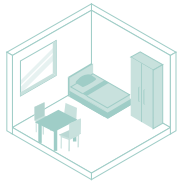
The hub is entered through two different front doors into an entrance zone shared by 2-3 people. The entrance zone is where you take your shoes of much like an apartment. The reason for the two front doors and entrance zone is that a resident should have the ability to enter their own private space without having to stop by the shared spaces of the hub. In the survey for student housing it is mentioned that the ability to be private is important and in this case the kitchen area of the hub may be used by other residents of the hub who may have people over.

Two entrance-zones for privacy.

The different spaces of the hub are meant to be able to function independently from each other to account for different situations such as a private dinner party or people waking up at different times in the morning. The shared spaces for the hub has three areas; the kitchen, the dining area and the balcony.

These are centrally located within the hub and is where the residents meet and interact. There is also a window to the corridor in order to create more interactions and familiarity.

The private rooms are small with only 16,5m² but they can still be fitted with functions such as a bed, three wardrobes, a dresser and a sitting area all while maintaining handicap-adaptation. Having your own private space that works is crucial in order for the place to feel like a home. In the survey about student housing almost no one was willing to share a bedroom and it was also mentioned that people want the ability to add their personal touch to the residence as well as the ability to socialize with friends in a private space. The same survey also pointed to the importance of a quiet reading or studying space. In addition it is important to have different spaces to use in your living and just having a bed to sit on would feel very temporary. All of the rooms can be furnished with a table for at least three people that you can socialize or study around.



Private rooms with different functions.

Another conclusion one could draw from that survey was that very few people were willing to share a bathroom with others. That is very intimate and a space that should be private even in this small room. Sharing a bathroom would not make the space feel like a home but rather something temporary. All of the rooms has a handicap-adapted bathroom within them.

Private bathrooms in all rooms.

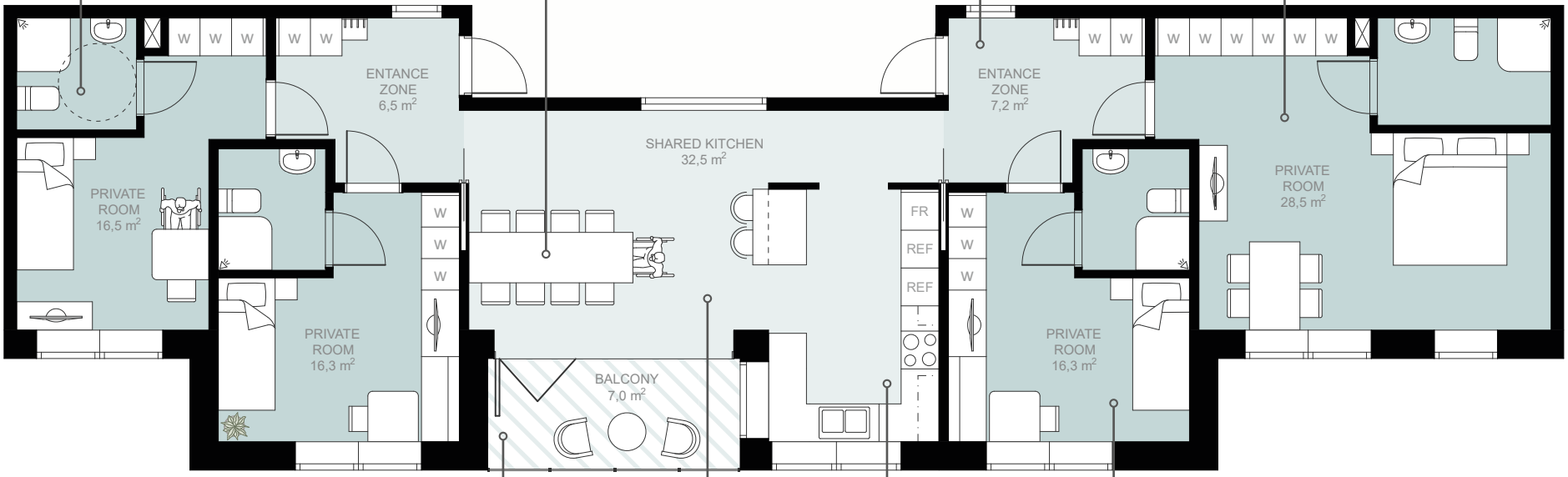
There are also some double rooms in order to include couples in the target group. These can fit a double bed, has a slightly larger bathroom, twice as much storage and more space for socializing.

Handicap-adaptation
Both the bathroom and the bedrooms are handicap-adapted

Large dining area
A large dining area that can fit all the residents of the hub and some guests.

Entrance zone
You enter through a neutral area and can go directly into your room if you like.

Larger room for two
A larger double room to include couples in the target group



Glazed balcony
A balcony that is glazed and can be opened using folding doors towards the dining area.

Different areas
Three separate areas within the hubs shared spaces but connected by an open floor plan.

Large kitchen
A fully equipped kitchen that can be used to prepare larger meals or by several people at once.

Furnish-able rooms
Rooms can be furnished in different ways and include functions such as a bed, storage and socializing area.

- Private room
- Shared by 2-3 people
- Shared by 5 people
- Shared by 5 people

Scale 1:100 0 1 2 3 4 5 (m)

THE HUB

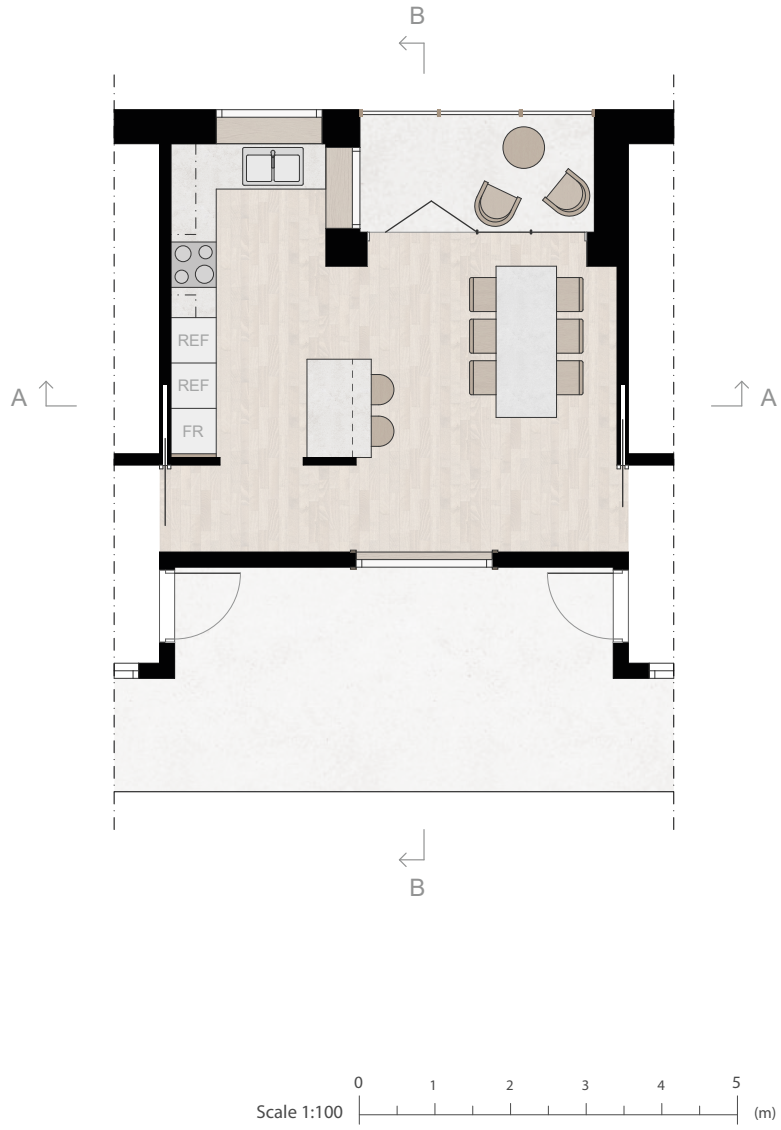
MATERIALS AND FUNCTIONS IN THE SHARED SPACES

Here are the shared areas of a hub consisting of four smaller rooms. The shared areas of the hubs are meant to be the focal point or "heart" of it. This is where the residents meet and socialize on a daily basis. The space consists of three areas; the kitchen, the dining area and the balcony.

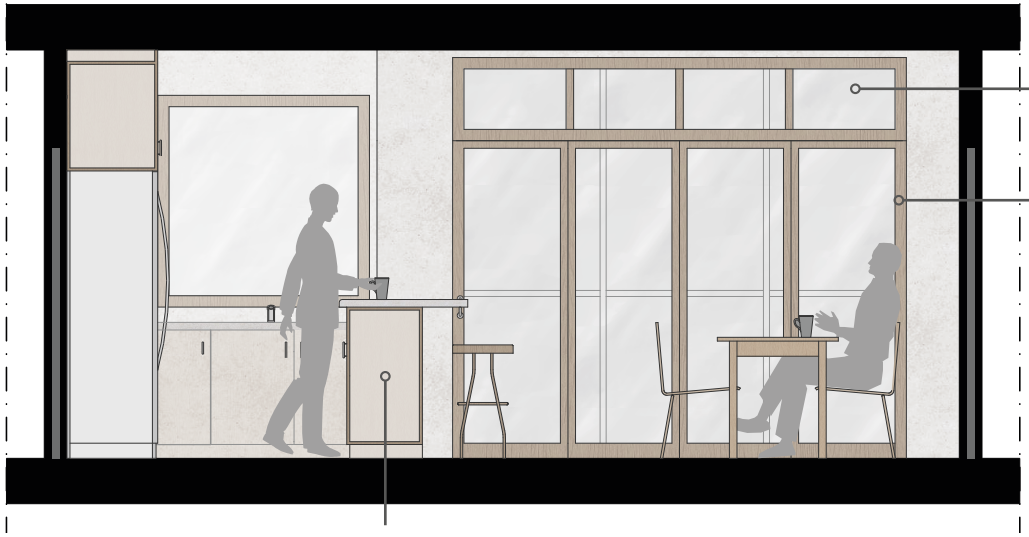
The balcony is glazed so that in can be used for a longer time during the year but it can also be opened during warm days. These areas have a fairly open plan but can still be used separately. The kitchen is separated from the dining area by a kitchen island that can be something you gather around. The doors to the balcony are fold-able so that the space can be opened entirely if you want to extend the dining area to the outside or move the table outside. The dining area is big enough to fit all the residents of the hub plus some guests. Over the folding doors are windows to extend the glazed area all the way up to the ceiling height of 2,7m.

The shared spaces can be divided using two sliding pocket doors if you want privacy. To the corridor there is a window where you can greet the people passing by much like you would if someone you knew was passing by on the street outside your kitchen window.

The materials in the shared spaces of the hub mainly consist of wood and concrete like the exterior facade. The floor is a wooden one except for the balcony and corridor that has a cast concrete one. The walls of the kitchen are in exposed concrete and the frames around all the windows as well as the doors are in a darker shade of wood. The countertop of the kitchen and kitchen island is in concrete whereas the cabinets are all wood. The appliances are in stainless steel and the furniture is also in concrete and wood.



Section AA



Windows above folding door
There are windows above the door to bring in daylight by extending the glazed area to the ceiling of 2,7m.

Wooden window frames
The windows have wooden frames in a dark shade both on the inside and outside.

Open plan kitchen island
Only a kitchen island divides the kitchen and dining area for a more sociable space.

Section BB

Window to the corridor
A large window between the kitchen and the corridor increases facial recognition in the wing and gives natural social interactions.

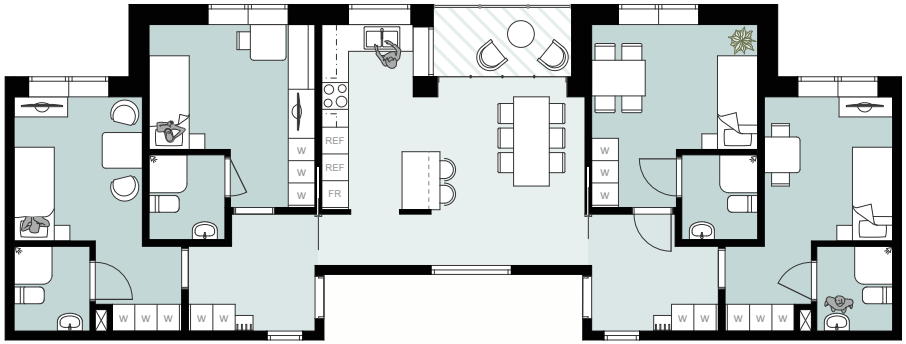
Wood and concrete in the kitchen
The general materials from the outside can be seen in the kitchen as well.

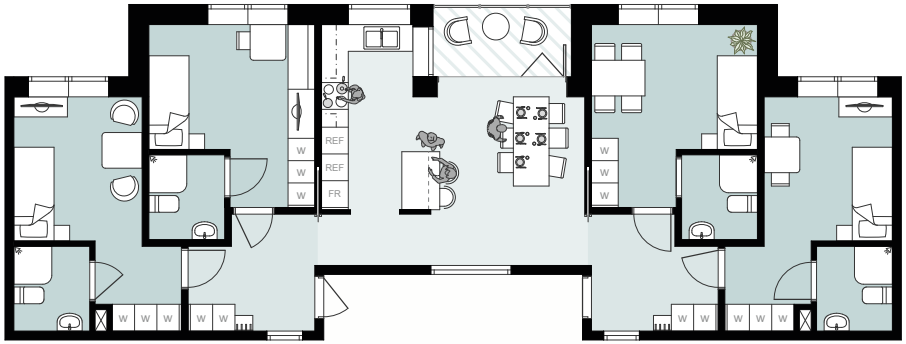
Doors in wood
The doors in the hub are in the same wood as the windows to bring the materials from the facade in and give a more luxurious feeling than regular white ones.

Scale 1:50 — 0 1 2 (m)

THE HUB

DIFFERENT LIVING SITUATIONS



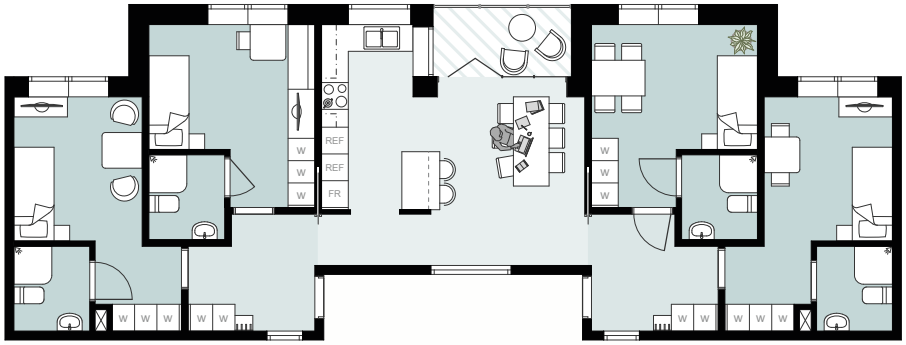


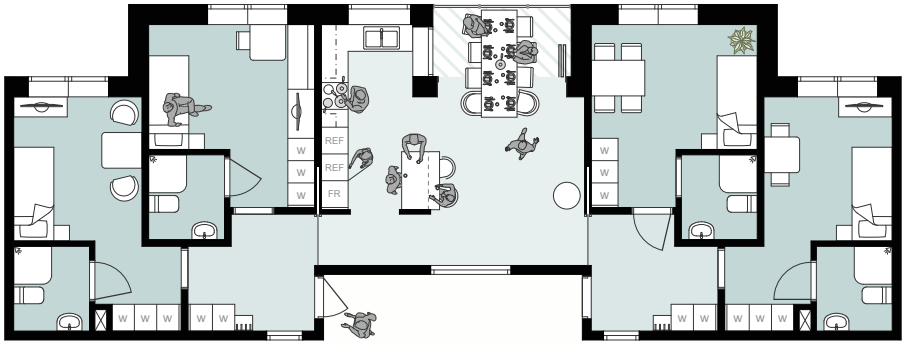
Morning time

It is morning and the residents have different routines and wake-up times. Two people are still asleep in their private rooms undisturbed by the others. One person is making breakfast in the kitchen area and one person has already had their breakfast and is getting ready in their bathroom.

Dinner time

It is time for dinner and everyone in the hub is home. They are getting the food ready in the fully equipped kitchen and around the kitchen island. One person is setting the table for five as they are having a guest over which they can see through the window to the corridor. The folding doors to the balcony are left open to let in some evening sun.





Home alone

Here one of the residents is home alone during the day when everyone is at school or work. She is herself a student and is studying at the large kitchen table which is filled with papers, books her laptop. The doors to the balcony are left slightly open to let in some air.

Dinner party

Here one of the residents is having a dinner party for some friends and colleagues. The other residents have already had their dinner earlier to leave the kitchen free for the others. One person is on their way to their room via the entrance zone and the sliding doors to the kitchen are closed to not disturb the others.

In the kitchen they are getting the food ready while some people are having drinks and small talk around the kitchen island and around the dinner table. The balcony folding doors are completely open and they have moved the table partly outside because of the nice weather. The chairs for the balcony furniture is now being used around the table for dinner guest.

THE SHARED SPACES FOR THE BUILDING

THE THEMED ROOMS IN THE NORTHEAST CORNER

In the upper northeast corner that is facing the main street of Bohusgatan there is a different themed room on every floor. The shared corner that is meant to be a display window for the unique concept of the building is very visible from the outside. The shared spaces start on the ground floor with a lobby area with seating groups. The idea is that you should not just enter the building into a regular stairwell situation but that you should be greeted by shared spaces from the moment you step into the building. This is also a very visible space from the outside and a place residents can sit and socialize. From this lobby area you have a direct view out to the courtyard as well as the shared spaces in the south wing.

The shared spaces are located in direct connection to the main stairwell and are the first thing you see as you walk along the stairs or as you exit the stairwell. The shared spaces on level one to seven are all 49m^2 and have all different functions and furniture. The idea is to give the residents something they could not get in a regular apartment building with their own small apartment.

On the first floor there is a music room that can be heard throughout the building with some different instruments and a stereo.

On the second floor is a small gym where residents can go to work out. Here are a few different machines such as a treadmill, stationary bikes and some weight lifting equipment.

On the third floor is a hobby room or "do it yourself room" where residents can come and work on some home projects such as painting or fixing something.

On the fourth floor is a lounge area with some sofas and armchairs around tables. Here residents from the entire building can come and socialize.

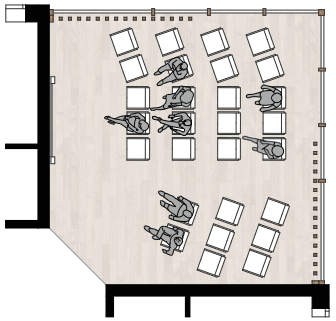
On the fifth floor is a study room with desks, bookcases and printers. Here residents can come and work, read or study in an area that is outside their own private room.

On the sixth floor is a cinema room with armchairs and a large screen. Here residents can have movie nights for larger gatherings of people.

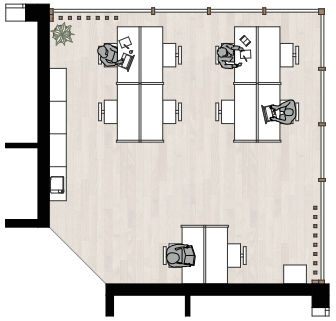
On the seventh floor are a game room with a pool table and some board games. Residents can come here for game nights with other people in the building.

On the eight floor the shared corner ends with a larger assembly room. This room has both a kitchen, a lounge area and a large dining room. Here residents can throw parties either for the people in the building or part of the space can be rented and divided by a folding wall if someone would like to have a larger party for friends or family.

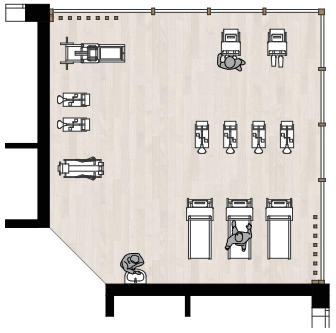
CINEMA ROOM

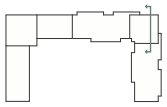


STUDY ROOM



GYM





THE SHARED SPACES FOR THE BUILDING

ZOOM IN OF COURTYARD

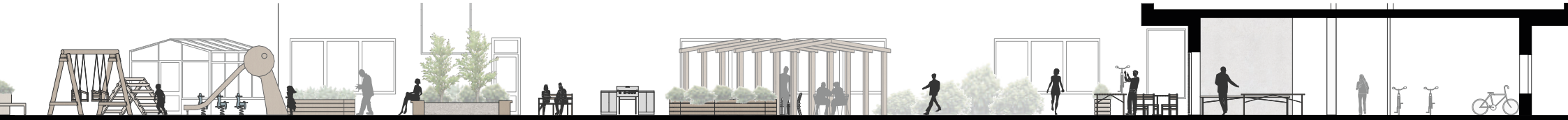
The courtyard is located to the south of the building and is enclosed by building volumes on the three other sides. The courtyard is meant to be owned, maintained and shared by all of the surrounding buildings and there is no clear division between what part belongs to which building.

The courtyard is divided by several walking paths running across it creating different themed spaces. Some are just covered in grass and can be used freely for sunbathing or ball games. There is also a playground located towards the side of the other building as the concept of this building would not include children. There is a greenhouse with some growing boxes located next to it for urban farming. A wooden deck with dining tables are overbuilt to create an arbour and located next to it is a barbecue space.

Located along the facade walls are sitting areas with wooden decks or stone slabs. This is a good spot for sitting or sunbathing as it creates a nice micro-climate. The spaces on the ground floor of this building are shared and can be opened towards the courtyard. Here is a sitting area near the entrance located between the open plan laundry room and the bike workshop. Outside the bike workshop on the deck are more workspaces for the workshop and a wide folding door can b used to open up the spaces between each other. In the end of the wing is some space for courtyard storage where residents can keep sports gear or other things that can be used on the courtyard.

There is also raised growing beds for larger bushes or smaller trees as the garage underneath makes it difficult to have larger plants otherwise. As to enclose the courtyard there are biking sheds with green roofs located to the south along the walking path behind the building.

GREEN HOUSE
URBAN FARMING BOXES
DR
WM
WM
RWC
DR
WM
WM
LAUNDRY ROOM 55,0 m²
DR
WM
WM
DRYING ROOM
BIKE STORAGE 155,0 m²
BIKE WORKSHOP OUTDOOR SPACE
BIKE WORKSHOP 29,5 m²
COURTYARD STORAGE 25,0 m²



THE SHARED SPACES FOR THE BUILDING

ZOOM IN OF ROOF TERRACE

The roof terrace is in direct connection to the assembly room and can be opened up with two double doors during warm days. The roof terrace is meant to be an outdoor space that unlike the courtyard is only for the residents of this building and their invited guests. This area gets sun light for most of the day during summer and spring from about eight in the morning to four in the afternoon and then again evening sun from about six until sunset. To add greenery for the roof terrace there are raised plant beds that divide the space into some areas. Here are bushes and smaller trees planted.

The roof terrace consists of many smaller spaces that are somewhat hidden from view and you have to move around it to see all the different places. Near the entrance to the terrace is an area with dining tables underneath wooden beams and a glass roof. In direct connection to this is a barbecue area. Here residents can cook lunch or dinner and eat together outdoors.

A greenhouse with smaller farming boxes is located in the middle of the terrace. Here residents can engage in some urban farming. In the back of the terrace is a jacuzzi for the residents to have a bath during warm summer days.

There are also multiple wooden decks in different places along the terrace with furniture both for sunbathing and just sitting and socializing. All of these areas are surrounded by plant boxes to add greenery and divide them from the walking paths of the terrace.

Scale 1:200 0 2 4 6 8 10 (m)

FACADE
TO THE EAST

Scale 1:400 0 5 10 15 20 (m)

FACADE

TO THE NORTH FROM BOHUSGATAN

Scale 1:400 0 5 10 15 20 (m)

SECTION/FACADE

TO THE WEST FROM THE INNER COURTYARD

FACADE

ZOOM IN AND MATERIALS

The curtain wall

The northeast corner of the building has a large glazed area starting one level up and going all the way to the top floor. The window frames are all in wood as to stand out and highlight the area from the surrounding grey facade.
The slab on each floor is in solid wood which can also be seen from the outside in the smaller glazed panels separating each floor.

Movable wood panels

Behind the glass on each floor are vertical blinds in wood with some space between each panel. These blinds are movable from the inside and can be changed depending on what you use the room for. This gives an interesting and changeable pattern in the facade and shows some of the life that goes on in the shared spaces in the building.

Concrete

The general material for the facade is pre-cast concrete in a light shade. This is a durable material that breaks away from the general material of brick for the surrounding buildings. It also blends well with the wooden parts for the rest f the facade.

Wood panelling

For the protruding parts of the building the facade material is a vertical wood panelling. This wood is lighter than the one used for the frames around the windows and curtain wall.

Balconies

For the balconies there is the same wooden curtain wall as the one in the northeast corner. The balconies are glazed but can be opened and the facade material inside the balconies is also the vertical wood panelling.

Windows

The frames for the windows are in a darker shade of wood as to stand out in the facade.

Scale 1:100 0 1 2 3 4 5 (m)

ANALYSING THE BUILDING

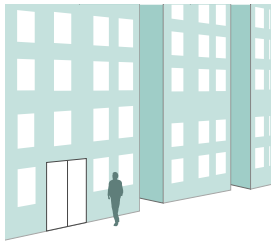
YOUR WAY FROM PUBLIC TO PRIVATE

Levels of privacy

As a resident make their way from the entrance to their room they move in and pass by many different spaces. This building is designed to take a person from the very public, through increasing levels of privacy and then into the entirely private space.

Here is a way to illustrate how a typical resident could move through the different spaces on their way to their room.

The street entrance



Entirely public
Shared by: Everyone

Moving in a public space. Anyone has access. Few familiar faces. Already here you may see the life going on in the buildings shared spaces mainly in the northeast corner.

The lobby

Public
Shared by: The entire building and seen from outside

Used by residents and their guests. An area to pass by on your way up in the building. Some familiar faces and friends that you greet. From here you may hint the inner courtyard.

The stairwell

Semi-public
Shared by: The entire building

Before reaching the stairwell you may hint the shared spaces in the ground floor such as the laundry room, bike workshop and courtyard. Only residents and possibly some guest travel here. Passing by strangers, familiar faces and friends.

The shared spaces in the northeast corner

Semi-public
Shared by: The entire building

Open and something you always hint on every floor if you use the stairwell. The first thing you see as you enter your floor. An area you can pass by via the corridor on your way to your room or stop by and greet friends. Mostly familiar faces and friends.

The corridor in the wing

Semi-private
Shared by: Thirteen people

Entered from the stairwell. Mainly residents from your floor. Many familiar faces. Other residents and their guests may visit.

The entrance zone of the hub

Private
Shared by: Two people

Entered from the corridor. You need a key to enter. Only for residents of the hub and their visitors.

The shared spaces in the hub

Private
Shared by: Four people

Private and only shared with other residents of the hub. You may meet some visitors. Somewhat seen from the outside via the window to the corridor.

The private room

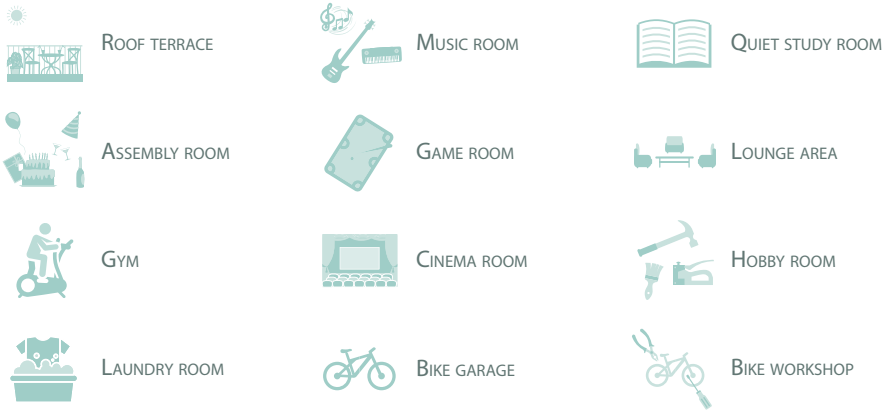
Entirely private
Shared by: Only you

Locked door where only you have the key. Only your things in the room. Guests needs to be invited. No one can see or hear you and you can be alone.

ANALYSING THE BUILDING

FUNCTIONS IN THE BUILDING

Functions shared by the building



Functions shared by the wing of 13 people

There are many different shared spaces, themed room and functions provided for the building. On the ground floor are the laundry room, bike workshop and bike garage. The floor plan is open and connects to the inner courtyard for socialization.
In the upper northeast corner that is facing the main street of Bohusgatan there is a different themed room on every floor. Here is a music room, a gym, a cinema room and a game room. There are also more functional rooms such as a hobby room and a study room. On the top floor there is a double ceiling height assembly room for larger gatherings that then connects to the roof terrace shared by everyone in the building.
The idea is to provide a large array of different rooms and functions that increase socialization within the building and gives the residents something that they could not otherwise be able to have in their own private 31m^2 apartment.

At the end of each of the two wings on each floor is a living room that is shared by the 13 people living there. This is furnished with a larger sofa that could fit a group of friends as well as a table to hang out around. This larger sitting area is not something that could ever be fitted into a small private apartment which gives the residents of the building something they could otherwise not have on their own. The purpose of this room is to increase socialization in the building by creating a larger unit outside of the fairly private hub of 4-5 people. Here you can talk to people outside your own apartment-style hub and although the room is entirely open to anyone in the building its location at the end of the corridor makes it more private than the shared spaces in the upper corner.
In connection to this living room is a balcony that is open to the inner courtyard below. Again in order to increase socialization as it visually connects these two shared spaces.

Functions shared by the hub of 4-5 people

Functions that are private

The residents of the hub all share a kitchen that is fully equipped and can easily be used to prepare a full meal as well as have more than one person cooking at the same time. In a small private apartment the kitchen is often times minimal and can be difficult to use to prepare a larger meal. There is also a dining room with a table that can fit everyone in the hub plus at least two guests. This is again something that could not be found in a private small apartment where fitting the guest to a dinner party is not reasonable. In addition to these spaces there is also a glazed balcony shared by the hub that is large enough to furnish with a seating area.
There is a saying that says that "the kitchen is the heart of the home" and in this case that is especially true. The shared spaces in the hub are where the residents meet on a daily basis. This is all in order to create a more familiar feeling within the hub.

The private rooms are small but can still fit the necessary functions. Each room has a private handicap-adapted bathroom as many people do not want to share a bathroom. There is storage space in the form of three wardrobes as well as of course a bed. The rooms are meant to be furnished by the resident as a way of increasing the feeling of it being a home when you get to personalize the space. The rooms are large enough that you can fit a sitting area for at least three people while maintaining the rules for handicap-adaptation. To have a private space to talk to friends or just sit around the table and study or read is important for privacy reasons. While the building is designed to increase socialization and decrease loneliness having alone-time is also necessary for most people.

ANALYSING THE BUILDING

SPACES IN THE BUILDING

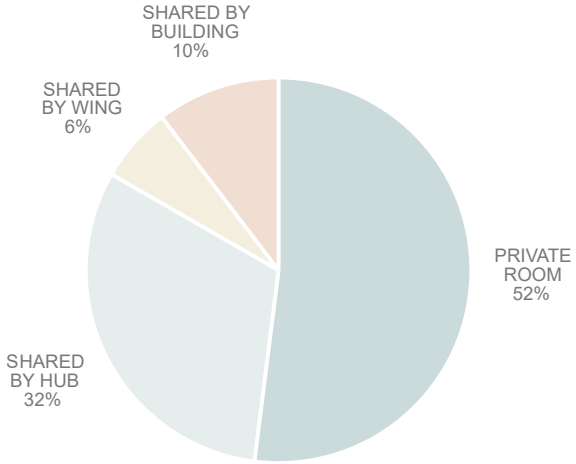
When looking at the spaces in the building i can be seen that the number of residents is 182. This is fewer than the reference examples of Tietgenkollegiet and Old oak which has 360 and 546 rooms. Old oak has really crammed as many rooms as possible into the building by minimizing them as well as the shared spaces. Tietgenkollegiet is a much larger building than this one but when it comes to the ratio number they have about the same efficiency with 0,62 and 0,64.

The private rooms were a lot bigger in Tietgenkollegiet and smaller in both Old oak and KomBo the private rooms in this building is about 16m^2 on average. This is only about half of the living space for one resident as the rest consists of shared spaces in different forms. The shared kitchen area in the hub is about one-third of a residents living space and the rest is shared spaces for the wing with about 6% as well as shared spaces for the entire building with about 10%.

The 10% of living space per resident that are shared by the entire building may sound low but multiplied with all the residents in the building it is almost 600 m^2. This includes themed rooms such as game room, gym, study room and music room as well as the assembly room on the top floor. Aside from that there is also the shared spaces on the ground floor such as bike workshop and the lobby.

The outdoor spaces sum up to about the sums amount as Old oak and are slightly smaller than the ones of Tietgenkollegiet. The figure for the courtyard only includes about half of it as the rest can be seen as belonging to the other buildings. This building has three different types of outdoor spaces unlike any of the reference examples with balconies, a roof terrace and a courtyard.

Number of rooms (154 single & 14 double):	168
Number of residents:	182
Space for private rooms:	2 934 m^2
Space for shared hub areas:	1 767 m^2
Space for shared areas in the wings:	354 m^2
Space for shared areas for the building:	581 m^2
Space for corridors and stairwells:	1 644 m^2
Space for other rentable functions:	849 m^2
Rentable building area (BRA):	6 486 m^2
Total building area (BTA):	10 169 m^2
Ratio number (BRA/BTA):	0,64
Space for balconies:	360 m^2
Space for roof terrace:	332 m^2
Space for courtyard:	998 m^2



ANALYSING THE BUILDING

AVERAGE SPACE PER RESIDENT

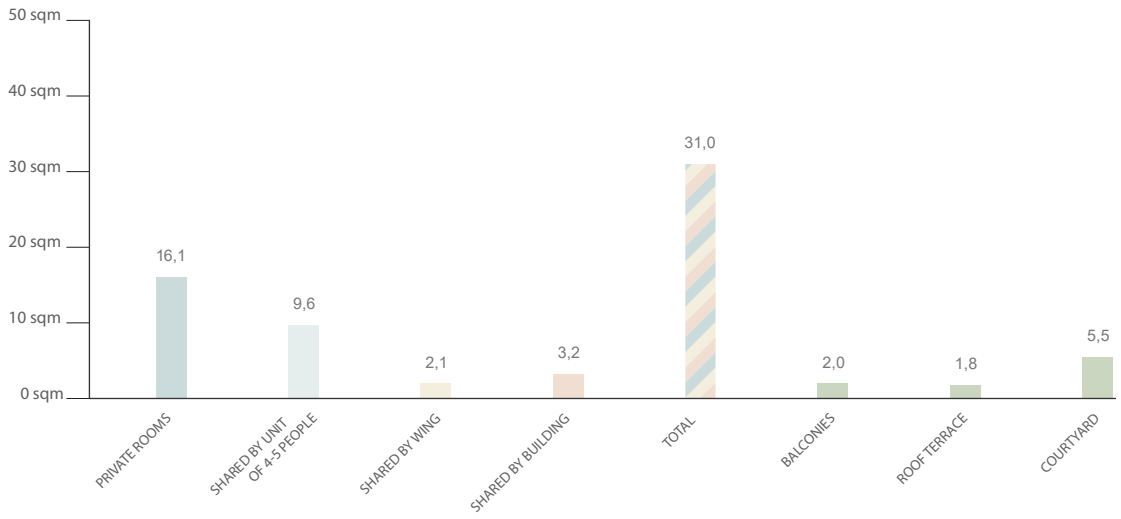
In the beginning of the sketching process there was a comparison to a typical 31m² apartment that is common in Sweden today. That apartment has all the functions needed but there is not much space for anything "extra" within the living space. Looking at that residential floor plan it can be seen that 26 of those apartment could be fitted within the same shape and space as this building. That is the same amount of residents fitted on one floor of this building.

This is a different concept and the spaces are distributed differently but by cutting down on the private rooms the same total amount of living space per resident can still be reached.

The private rooms are about 16m² which is too small to be an acceptable living space but aside from this each resident gets more space in other forms. Each hub has two entrance zones and the shared kitchen areas which are 9,6m² on average per resident. Aside from this is the 25m² living rooms at the wings shared by 13 people which give each resident another two sqm to live on. The spaces shared for the entire building is almost 600m² but given the number of residents this only equates to just over 3m² per person.

In total the average space per resident is 31m² which is the same as the typical apartment above. The areas are distributed differently but the sum is still the same.

AVERAGE SPACE PER RESIDENT:



CONCLUSIONS AND REFLECTIONS

COMPARISON

THE TRADITIONAL EXAMPLE

Here is an example of what a more traditional residential floor plan could look like on the site. In this example 26 private apartments of 31 m^2 each can be fitted in each floor. That is the same number of residents per floor that could be fitted in the co-housing building.

Everyone has their own one room apartment with their own bathroom and small kitchen. In the middle is a corridor that accesses all the rooms but there is nothing to break up the corridor other than the main stairwell in the middle dark corner. The corridor becomes long and repetitive with only a window at one end as a special feature. There are no shared spaces on the residential plan and the only place to meet your neighbours would be as you pass by them in the corridor or stairwell.

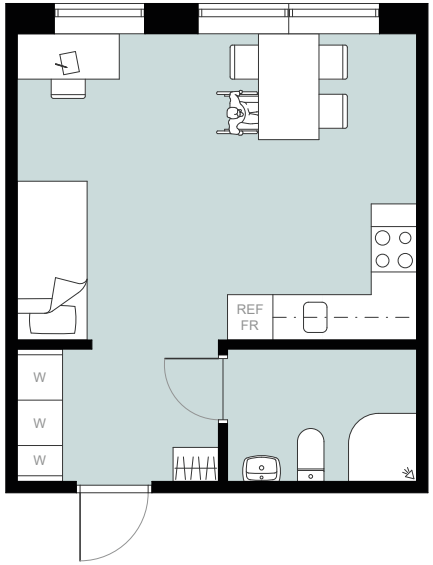
The apartment is 31m^2, which is the average size for people in the age category of 20 to 27 living in Gothenburg (Hyresgästföreningen, 2015). This is the entire living space for a resident of this building and also how most young people live today. While this apartment has everyone one would require in their daily life there is not room for much "extra".

What this apartment has in common with the private rooms in the hub is the handicap-adapted bathroom, about the same amount of storage space and a single bed. Within this apartment there is also a desk and a dining table which can also be found in the small private rooms in the hub if you combine the two functions and just have a table for socializing, possibly eating and also studying.

The kitchen is small and preparing a larger meal could be difficult. Unlike the kitchen of the hub that is fully equipped and spacious. There four people could easily prepare a meal together around the kitchen and the kitchen island. The dining table in the apartment can fit four people which are less than in the shared kitchen of the hub where all the residents of the hub plus 2-4 guests can be seated at once.

There is not room for a sofa within the apartment unless you have a sofa-bed. This is also something that is not found within the hub but that function can be found in each wing that is shared by 13 residents. That shared living room is bigger than the entire 31m^2 apartment and can easily fit a large group of friends.

	For one residential floor:	Average space per resident:
Number of residents:	26	
Space for private rooms:	806 m²	31,0 m²
Space for shared areas:	0 m²	0,0 m²
Building width:	14940 mm	
Building area (BRA):	1059 m²	40,7 m²



Scale 1:100 0 1 2 3 4 5 (m)

Private rooms *Stairwell*

Scale 1:400 0 5 10 15 20 (m)

CONCLUSIONS AND REFLECTIONS

About the concept

The housing market for young people is very limited due to financial reasons and it is also very homogeneous. In order for young people to afford a residence of their own what is offered and built is very small and has become a search in how to fit all required functions into the smallest possible space.

This project is meant to show that it can be possible to create a different type of housing typology that could not only work for its residents but to actually give them something they could not otherwise have in a traditional apartment. Most young people are limited to living very sparsely both in terms of sqm and in terms of functions. To be sharing spaces like this can for some people be unconventional and something they would feel negatively about.

While there are many people sharing a more apartment-type living with some type of shared rental contract in Sweden today there are no buildings with this specific concept. The rules set forth by the national board for housing and planning have until recently made that impossible for housing aside from student buildings.

In the survey about student housing 35% said they wished to live in a co-housing situation. While that is encouraging for the concept of this building my hope would be that the figure could be raised by handling some of the main problem areas such as lack of personal space and the kitchen war-zone. I do feel like I have taken care of lot of the problems that would arise in a typical student co-housing situation.

In addition to that I think that this building offers qualities that a traditional residential building does not. It is not reasonable to think that a 25-year old working in for example a department store would have access to a gym, cinema room, game room and 130m^2 assembly room within their building. Here it is one of the main points of the building. Everyone has access to more functions that are unique and you get this by giving up some private living space.

Looking at the numbers for this building compared to the typical residential building with only small apartments I am happy that it shows that this concept can be fitted within the same type of space. Figuring out the cost of this building would have been interesting but outside the scope of this thesis. It is positive though that the square meters can at least be compared and actually work just as well.

About social sustainability

One of the reasons for this type of building is the fact that many people, even young ones, report that they feel lonely in their life. Someone may be new to the city or even the county or just not have a large circle of friends and the hope is that this type of building could really help combat that. The entire building is designed to create different types of meeting places and interactions. This is done by both the shared spaces design and placement trying to make them visible and a natural part of your daily life.

The building is also designed to include many different levels of sharing and privacy. This is also done to increase social interactions and I do think it would work in terms of stimulation interactions when you share a kitchen with just a handful of people and then a living room with a dozen people. Those groups are still small enough that you could get to know everyone there ad be part of a smaller community within the building. Working with different levels of privacy has been an important part of this building and I do think this building shows that it can work.

About the process

Looking at my process and the other ideas it is clear that there are many different ways of creating this type of building and that the spaces, functions and degrees of sharing can be very different while still keeping to the general concept ideas.

The reasons for landing in this proposal was that it had all the ideas of different degrees of sharing, a reasonable size and distribution of spaces and contributed to social interactions.

About possible problems

One thing that I have not worked with is how this should be owned and maintained. When you have large shared spaces there is always the question of who should take care and maintain it. I have not worked much with this but I imagine maintenance of the building would have to be covered by the resident's rent and that someone would need to work at least part time there. There is also the question of who should own and take care of the furniture in the shared spaces of the hub. I think this would have to be something that comes with the room the way it is when you move into some student rooms.

Reflections

Going into this master thesis I did not have a clear idea as for how it would turn out. My initial ideas were to create a building where only a small part was private and the rest would be shared. I wanted to look at how a building like that would work at what the problems and benefits cold be. I do feel like I have been able to really explore how a building like this could work.

I also think this could be a great addition to the current housing market and something that could really work in a city like Gothenburg.

REFERENCES

REFERENCES

Allmännyttan (20170418)
Historical eras. Retrieved from: https://www.allmannyttan.se/historia/historiska-epoker/artikelsida/

Boverket (2014)
Consequence investigation BBR 2014, Retrieved from: http://www.boverket.se/contentassets/a9a584aa0e564c8998d079d752f6b76d/konsekvensutredning-bbr-21-slutlig.pdf

Boverket (2015)
The need for building of new residences, Karlskrona. Retrieved from: http://www.boverket.se/globalassets/publikationer/dokument/2015/behov-av-bostadsbyggande.pdf.

Boverket (2016-a)
Konsekvensutredning BBR 23, Karlskrona. Retrieved from: http://www.boverket.se/contentassets/a9a584aa0e564c8998d079d752f6b76d/konsekvensutredning-bbr-23.pdf

Boverket (2016-b)
http://www.boverket.se/sv/byggande/tillganglighet--bostadsutformning/bostadsutformning/

Dictionary (2017)
Co-housing, Retrieved from: http://www.dictionary.com/browse/cohousing?s=t

Hanze university (2014)
Supporting social contact design principles in common areas of cohousing communities, Groningen. Retrieved from: https://www.hanze.nl/assets/kc-noorderruimte/Documents/Public/OnderzoeksrapportSupportingSocialContactDesignPrinciplesInCommonAreasOfCohousingCommunities.pdf

HSB (2013)
Alva Myrdal ville förbättra barnens situation, Retrieved from: http://www.hsb-historien.se/manniskorna/alva-myrdal-ville-forbattra-barnens-situation/

Hyresgästföreningen (2015-a)
How do young adult live? How would they like to live? Nationwide, Stockholm. Retrieved from: https://www.hyresgastforeningen.se/globalassets/globalt-innehall/rapporter/unga-vuxna-2015/sverige-2015-hur-bor-unga-vuxna---hur-vill-de-bo.pdf

Hyresgästföreningen (2015-b)
How do young adult live? How would they like to live? The region of Gothenburg, Göteborg. Retrieved from: https://www.hyresgastforeningen.se/globalassets/globalt-innehall/rapporter/unga-vuxna-2015/goteborgsregionen-2015-hur-bor-unga-vuxna---hur-vill-de-bo.pdf

Kollektivhus (2016)
Startpage, Retrieved from: http://kollektivhus.se/

Lärarnas historia (20170413)
History year for year, Retrieved from: http://www.lararnashistoria.se/forskolan_ar_for_ar

Markeliushuset (20170410)
History. Retrieved from: http://www.markeliushuset.se/Markeliushuset/Historia.html

Psychology guide, Anette Utterbäck (2017)
Loneliness, Stockholm. Retrieved from: http://www.psykologiguiden.se/rad-och-fakta/relationer/ensamhet

SCB (2014)
Storstadsborna bor trängst, http://www.scb.se/sv_/Hitta-statistik/Statistik-efter-amne/Hushallens-ekonomi/Inkomster-och-inkomstfordeln- ing/Inkomster-och-skatter/Aktuell-pong/302201/Behal- lare-for-Press/368569/

Sidsjö Newspaper (2011)
For the elderly Gunnar is golden. Autumn/winter edition of 2011.
Retrieved from: http://np.netpublicator.com/netpublication/n2934093

Statistics Sweden (SCB) (2013)
Single parents often feel lonely, Stockholm. Retrieved from: http://www.scb.se/sv_/Hitta-statistik/Artiklar/Singelforaldrar-kanner-sig-ofta-ensamma/

Statistics Sweden SCB (2015)
This is how Sweden lives, Stockholm. Retrieved from: http://www.scb.se/Statistik/_Publikationer/LE0001_2014K01_TI_02_A05TI1401.pdf

Stacken (20170413)
The house and history, Retrieved from: http://www.stacken.org/

Statens offentliga utredningar, Socialdepartementet (1956)
Hemmen och samhällsplaneringen: Bostadskollektiva kommiteéns slutbetänkanden, Stockholm. Retrieved from: http://weburn.kb.se/metadata/608/SOU_885608.htm

Stockholms första centalkök (1905-11-23)
Idun, p. 595. Retrieved from: http://www.ub.gu.se/fasta/laban/erez/kvinnohistoriska/tidskrifter/idun/1905/pdf/1905_47.pdf

Stout, H (2009)
Where the Boys Aren't. Retrieved from: http://www.nytimes.com/2009/11/05/fashion/05webster.html

Studentbostadsföretagen and university of Lund (2013)
How students would like to live, Retrieved from: http://studentbostadsforetagen.se/wp-content/uploads/2015/02/Hur-studenter-vill-bo.pdf

Student housing association and White architects (2016)
Framtidens studentbostäder, http://studentbostadsforetagen.se/publikationer/framtidens-studentbostader/

The local (2011)
Cohousing: it's not just for hippies anymore, Stockholm. Retrieved from: https://www.thelocal.se/20110223/32214

The government of Sweden (2009)
Secure living for the elderly, Stockholm. Retrieved from: http://www.regeringen.se/sb/d/12309/a/135987

United Minds (2014)
Hur vill unga i Stockholm bo i framtiden? http://mb.cision.com/Public/197/9542344/a96a7d2f07b0993b.pdf (2016-01-10)

Uppsala Universitet (2010)
Ensamheten i Sverige 1985-2008, http://uu.diva-portal.org/smash/get/diva2:285794/FULLTEXT01.pdf

Versluis, A (1999)
Studies in American Esotericism - Western Esotericism and The Harmony Society, (Michigan State University, Religious Studies in the College of Arts & Letters)

Vestbro, D (2010)
From Central kitchen to community co-operation - Development of Collective Housing in Sweden, (Royal Institute of Technology, Department of Infrastructure).

Y.K. Huset (2005)
History, Retrieved from: http://www.ykhuset.se/

APPENDIX 1: PROCESS

PROCESS

SOME DIFFERENT SKETCHES

In the background studies consisting of reference examples, the history of co-housing and the surveys done on the subject some initial goals and conclusions were set up. These goals have somewhat changed throughout the time of the project and as new discoveries have been made.

This is a new form of housing typology with influences from many other types of buildings. There are many different ways of designing a building where "the living space is re-distributed and only some of the space is private and the rest of it is in different degrees of sharing".

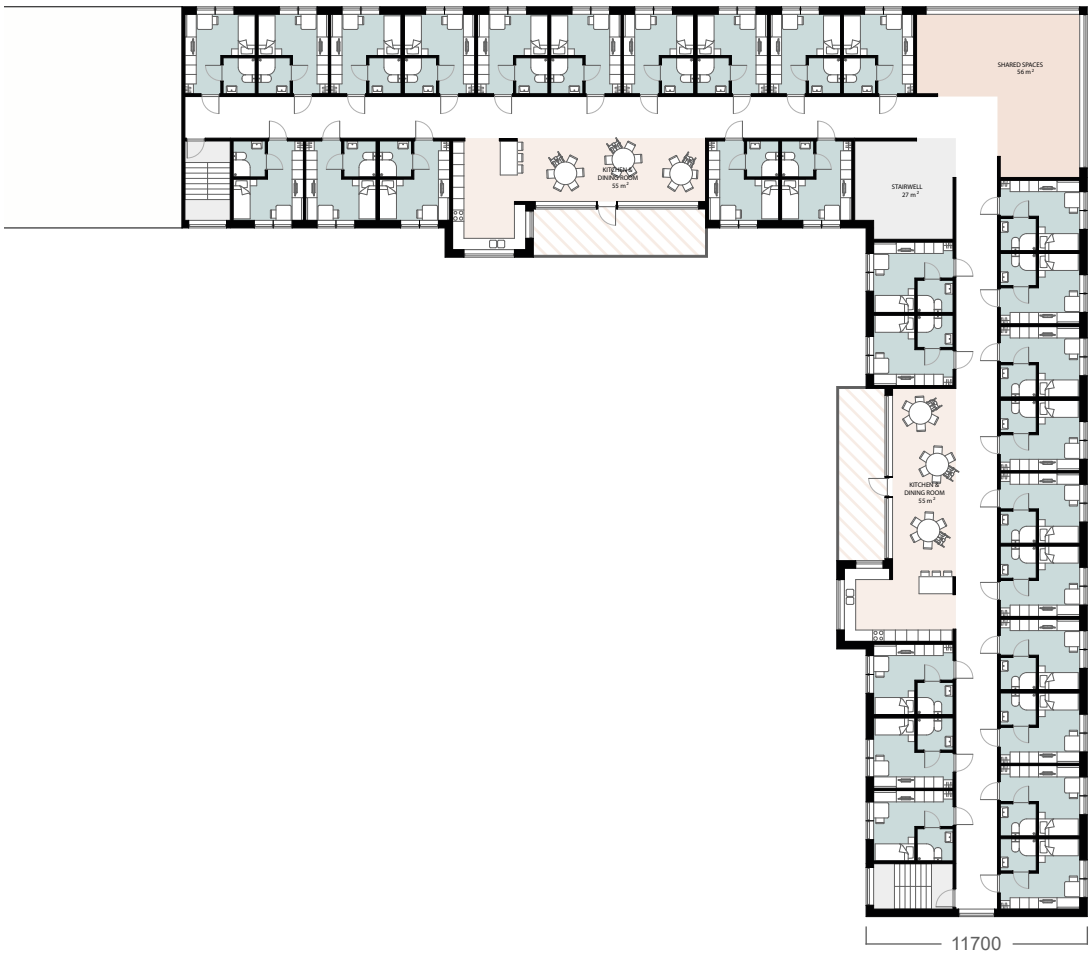
Here follow some alternative proposals that were developed throughout the way. These proposals have been evaluated in text and the spaces as well as the number of residents have been calculated in order to compare them.

PROCESS

SKETCH PROPOSAL 1

Here all the private rooms are located along a corridor running in the middle of the building. Two larger kitchen and dining areas break up each of the two wings. Unfortunately this plan looks very much like the typical student corridor layout. The floor plan and corridor is also very repetitive which is something that could be developed further. Both of the shared kitchens are located towards the courtyard with a large balcony also facing it in order to get a better connection to it which is positive. However the kitchens are shared by 15 residents which I think based on the surveys I've read is far too many people.
The stairwell is located in the dark corner whereas a large space that is meant to be shared by the entire building is located in the upper corner facing the main street, Bohusgatan. This is something positive where the most public spaces that make the building stand out is also in the most public corner towards the main street giving it a nice connection to the outside. This is a relatively effective plan where the shared spaces per person are low mainly due to the fact that the kitchens are shared by so many people.

	For one residential floor:	Average space per resident:
Number of residents:	30	
Space for private rooms:	469 m²	15,6 m²
Space for shared areas in the wings:	110 m²	3,7 m²
Space for shared areas for the building:	56 m²	1,9 m²
Building width:	11700 mm	
Building area (BRA):	906 m²	30,2 m²



Private rooms *Shared by the wing* *Shared by building* *Stairwell*

PROCESS

SKETCH PROPOSAL 2

This is a more varied form of the student corridor where not all the rooms have the same size or depth giving a more dynamic corridor. This is more interesting than the previous sketch but it is also not as effective where the average space for each resident increases both in terms of the shared spaces in the wings as well as corridor space. On the plus side the corridor could very well be furnished and used which the previous one could not. In the shared spaces in the wings there is not only the kitchen but also a separate dining area across the corridor that you could use but also a living room to be shared by the residents of the wing for socialization. Also here the kitchens are located towards the courtyard with balconies for better connections. The main stairwell is in the dark corner and the shared spaces for the building is in the most public corner with a view in and out from the main street of Bohusgatan.

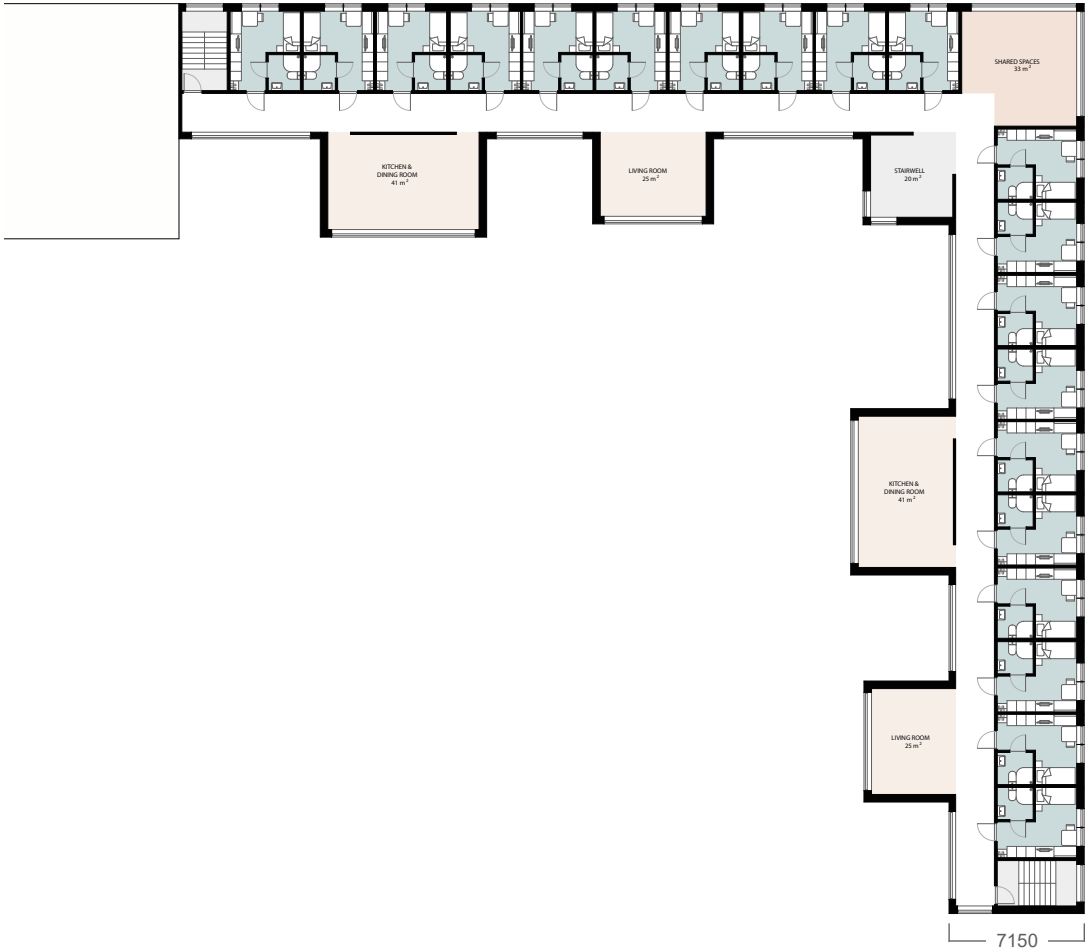
	For one residential floor:	Average space per resident:
Number of residents:	26	
Space for private rooms and entrance zones:	584 m²	22,5 m²
Space for shared areas in the wings:	174 m²	6,7 m²
Space for shared areas for the building:	50 m²	1,9 m²
Building width:	14940 mm	
Building area (BRA):	1072 m²	41,2 m²

Private rooms *Shared by the wing* *Shared by building* *Stairwell*

PROCESS

SKETCH PROPOSAL 3

This is a sketch very much inspired by Tietgenkollegiet where all the private rooms are located towards the outside of the shape and the shared spaces in the wings are located towards the courtyard in protruding boxes. While this reduces the building area by only having private rooms on one side of the corridor it also reduces the number of rooms making it less effective that way. All the rooms are the same and that along with the straight corridor makes it very repetitive. On the plus side you do have the shared spaces that break up the corridor as well as a great view of the courtyard on one side.



	For one residential floor:	Average space per resident:
Number of residents:	20	
Space for private rooms:	312 m²	15,6 m²
Space for shared areas in the wings:	132 m²	6,6 m²
Space for shared areas for the building:	34 m²	1,7 m²
Building width:	7150 mm	
Building area (BRA):	717 m²	35,9 m²

Private rooms *Shared by the wing* *Shared by building* *Stairwell*

PROCESS

SKETCH PROPOSAL 4

Here is a sketch with an access balcony from one side. From the balcony you enter a smaller unit with a kitchen and dining area and then 6-7 private rooms. By having an access balcony it reduces the building area and in this case it gives a good connection to the courtyard. The dining areas become at least semi-public where people pass by as you are sitting there. This plan is relatively effective mainly because of the access balcony that is not calculated and the fact that the kitchens are shared by many residents. Unfortunately it also makes for quite a lot of corridor space within the units to access each room. The stairwell is still placed in the corner although here it is not a dark corner but rather with a view to the courtyard. The shared spaces for the building is still in the uppermost public corner and with a close connection to the stairwell.

	For one residential floor:	Average space per resident:
Number of residents:	26	
Space for private rooms:	388 m²	14,9 m²
Space for shared unit areas:	289 m²	11,1 m²
Space for shared areas for the building:	50 m²	1,9 m²
Building width:	11650 mm	
Building area (BRA):	823 m²	31,7 m²

Private rooms *Shared by a unit* *Shared by building* *Stairwell*

PROCESS

SKETCH PROPOSAL 5

Here is a sketch where the units are on two levels. On the lower level is two private rooms, a kitchen and a dining area as well as access to the unit's balcony. An internal staircase connects the two levels. On the upper level are three rooms and an open space down to the dining area giving it a spacious double ceiling height. The kitchen area is somewhat separated from the dining area which is positive if several people may be there at once. The open space in the dining area gives the space a more luxurious feel that most small apartments don't have it also makes for a better connection between the floors. This opens up for some other questions such as handicap-adaptation. Obviously it would not be okay to have the kitchen on a separate level than the room if you rent a private room upstairs. However it would be allowed by the national board of housing and planning if you consider the unit as an apartment in which case only one room on the lower level would need to be fitted as a bedroom which it of course already is. In this sketch there is a corridor and entrance door on the upper level but that may not be necessary and that area could be used for shared space.

	Average for one residential floor:	Average space per resident:
Number of residents:	20	
Space for private rooms:	334 m²	16,7 m²
Space for shared unit areas:	266 m²	13,3 m²
Space for shared areas for the building:	90 m²	4,5 m²
Building width:	13840 mm	
Building area (BRA):	970 m²	48,5 m²

Entrance floor of one unit

Second floor of one unit

Private rooms *Shared by a unit* *Shared by building* *Stairwell*

PROCESS

SKETCH PROPOSAL 6

Here is another two-level solution where six rooms share a kitchen and dining area on the lower level. In each unit there is an entrance space and an internal staircase to the upper level. Both levels have three private rooms and over both the kitchen and dining area there is a double ceiling height connecting the two levels visually. You enter via an access balcony that is spacious enough to be furnished and used with connection to the courtyard. On the upper levels on every second floor the access balcony is narrow only meant to be passed by for the residents. This increases the daylight to the spaces on the lower levels both to the access balconies and the shared spaces in the units which is good given how deep the units are. Because of the depth of the unit the shared spaces for the building is here very large. If this were to be developed it would probably be good to move the stairwell into the shared spaces to reduce that area. It could also be good to have the residents move vertically in the shared spaces making it more visited and part of your daily walk to and from the building.

	Average for one residential floor:	Average space per resident:
Number of residents:	18	
Space for private rooms:	286 m²	15,9 m²
Space for shared unit areas:	191 m²	10,6 m²
Space for shared areas for the building:	109 m²	6,1 m²
Building width:	8840 mm	
Building area (BRA):	646 m²	35,9 m²

Section of building

Entrance floor of one unit

Second floor of one unit

Private rooms

Shared by a unit

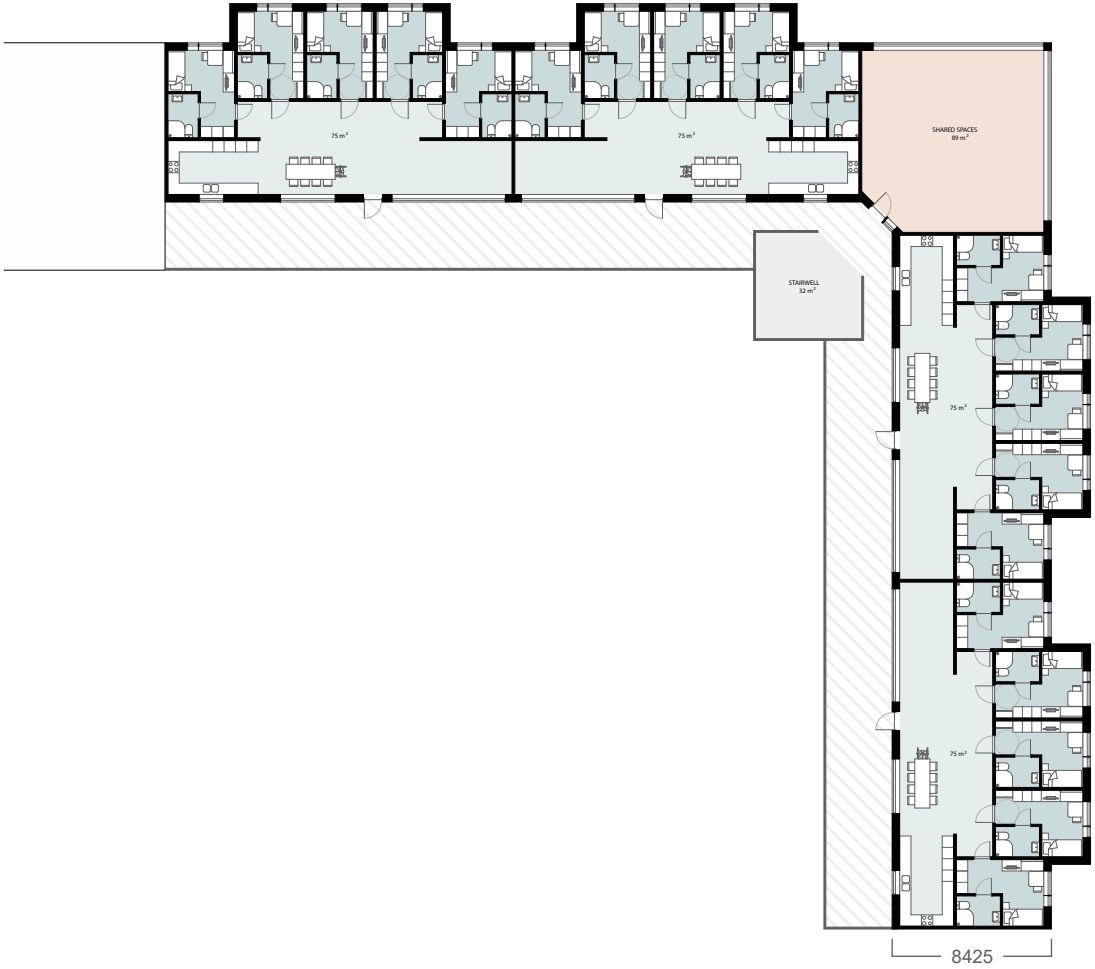
Shared by building

Stairwell

PROCESS

SKETCH PROPOSAL 7

Here we have five private rooms connected by a unit and shared space within it. Because of the total width of all the rooms this makes the shared spaces quite big but at the same time narrow in depth. It makes for an unusual room that is quite difficult to furnish and divide in a god way. All the units are entered via the access balcony that is very deep and could be furnished and used. Because people are walking by outside the units shared spaces could be very open and visual from the outside. Some may feel like this is a problem and you would really have to look into how to place the windows to get the right degree of privacy and at the same time outlooks as the shared spaces only get daylight from the deep access balcony. Also here the deep shape of the units made the shared spaces for the building quite large and the stairwell could also here benefit from being moved into the shared spaces.



	For one residential floor:	Average space per resident:
Number of residents:	20	
Space for private rooms:	326 m²	16,3 m²
Space for shared unit areas:	297 m²	14,9 m²
Space for shared areas for the building:	90 m²	4,5 m²
Building width:	8425 mm	
Building area (BRA):	770 m²	38,5 m²

Private rooms *Shared by a unit* *Shared by building* *Stairwell*

PROCESS

SKETCH PROPOSAL 8

Here is a sketch where the units have four or three private rooms surrounding it. This reduces the units shared spaces as the widths are reduced and despite the fact that it serves fewer residents it is still more effective in terms of square meters per resident. The units with four private rooms have space for a living room whereas the unit for three residents does not. This makes them very unequal in terms of functions. These units are also accessed via a spacious access balcony that could be furnished and used. As the units shared spaces all only have indirect daylight from the access balcony side they could be quite dark but at the same time very open to other residents passing by. While this increases socialization and face recognition within the building it could also be considered a bit too public for some people. Here the stairwell could be moved into the shared space for the building in order to reduce that rather large space but also because it blocks the views for the first unit of each wing.

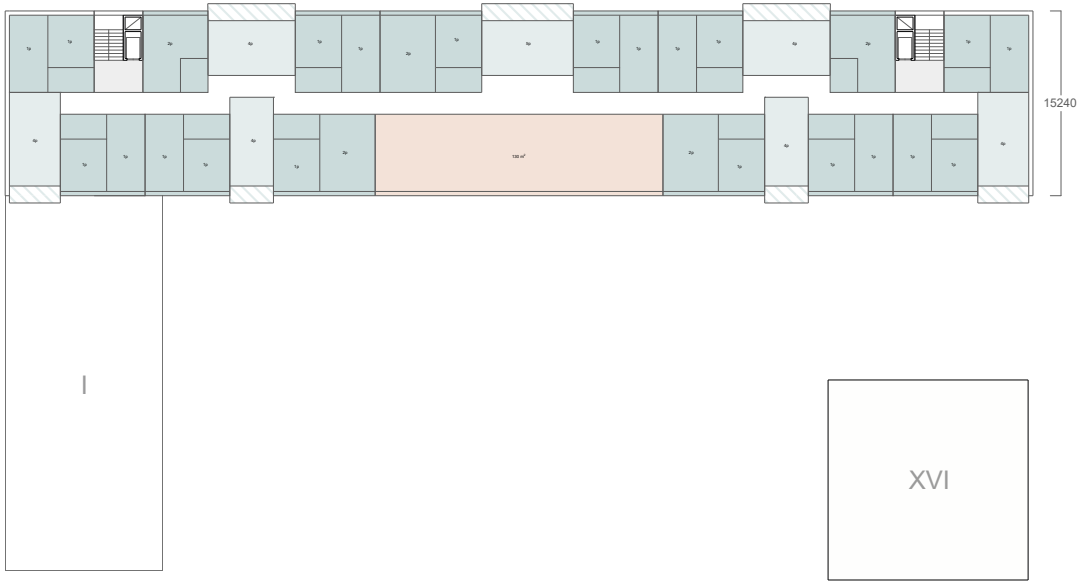
	For one residential floor:	Average space per resident:
Number of residents:	22	
Space for private rooms:	376 m²	17,1 m²
Space for shared unit areas:	266 m²	12,1 m²
Space for shared areas for the building:	114 m²	5,2 m²
Building width:	10050 mm	
Building area (BRA):	819 m²	37,2 m²

Private rooms *Shared by a unit* *Shared by building* *Stairwell*

PROCESS

SKETCH PROPOSAL 9

Here is one proposal with a different shape than the L-shaped corner. A lower part is placed in the southwest corner to frame the courtyard and a higher tower is on the opposite side. This simpler shape could make the arrangement of rooms easier when you don't have a corner you need to adapt to. Two stairwells are placed at the ends of the corridor making then equally important and eliminating the need for fire escape stairwells. The shared spaces are placed in the very middle facing the courtyard. This location does connect to the courtyard but it does not make the shared spaces a place you necessarily pass by on your way to and from the building. The shared space is also very large and would need to be reduced. In order to create a more interesting corridor the shared kitchen areas have different depths and niches into each other. Both the rooms and shared kitchens are very irregular and would make for many different room layouts. While interesting that could be problematic to make work.



	For one residential floor:	Average space per resident:
Number of residents:	31	
Space for private rooms and entrance zones:	630 m²	20,3 m²
Space for shared unit areas:	217 m²	7,0 m²
Space for shared areas for the building:	130 m²	4,2 m²
Building width:	15240 mm	
Building area (BRA):	1267 m²	40,9 m²

Private rooms *Shared by a unit* *Shared by building* *Stairwell*

PROCESS

SKETCH PROPOSAL 10

Here is one proposal with the L-shape where the shared spaces for the building is located in the uppermost public corner towards Bohusgatan. The main stairwell is in the opposite dark corner connecting them and making residents pass by the shared spaces on their way to and from the building. There are also shared spaces that are meant to be for the wing in which they are in giving another level of sharing. Here these are located close to the stairwell and the shared spaces for the building which could make them maybe a little too public and not clear to whom they belong to. The shared kitchen areas in the units have some different shapes depending on if they located along the corridor or at the end of it. The ones located along the corridor niches inwards in order to create a more interesting corridor and to give space for entrance doors in the niches. Here the private rooms are quite irregular with many different shapes and several double rooms which could be problematic to work with.

	For one residential floor:	Average space per resident:
Number of residents:	32	
Space for private rooms and entrance zones:	632 m²	19,8 m²
Space for shared unit areas:	182 m²	5,7 m²
Space for shared areas in the wings:	72 m²	2,3 m²
Space for shared areas for the building:	60 m²	1,9 m²
Building width:	14940 mm	
Building area (BRA):	1190 m²	37,2 m²

Private rooms *Shared by a unit* *Shared by the wing* *Shared by building*