

TAKING FOLKHEMMET INTO THE 21st CENTURY

What architectural lessons can we take from the building of the Swedish welfare state in the mid 1900?



CHALMERS

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ABSTRACT

In today's Sweden we are facing a widespread housing shortage and according to "Boverket" about 700,000 homes need to be built in Sweden over the next ten years to meet the need. To solve the most acute shortage, The Real Estate Department in Gothenburg has been commissioned by Gothenburgs property management committee to develop and produce provisional housing in modular form that can be quickly erected. In connection with this, questions regarding how these dwellings will work from a sustainable, social, economic and political perspective arises.

Sweden has suffered from housing shortage several during the last 150 years and the problem has been approached in different ways. During the era of *Folkhemmet* the political goal was to solve the housing crisis by building "good housing for all". This was a political question and the state housing policy during that time was all about quality and everyone's right to a good housing.

The purpose with the thesis is to lift a selection of architectural qualities from the time of *Folkhemmet* and to show an example of how to take those qualities back into consideration when planning a residential building today. This is important as it stands in contrast to today's ideal, a time of disregarding existing minimum requirements and building provisional homes with lower standards than what is essentially allowed. A time where architectural qualities are being deprioritized in favour of reducing floor space and costs.

The aim for the work is to, with support from a theoretical study together with comparative apartment analyses, see if and how we can learn from this time, when building/designing today. Architecturally *Folkhemmet* is characterised by rational planning, function-specific rooms and apartments with good natural light, which was a result of an extensive housing study with the aim to fight overcrowding and the endemic diseases of that time that was linked to poor housing standards.

The result will be a design proposal based on a selection of architectural qualities typical for *Folkhemmet* put in a contemporary housing design context.

This is for architects, students, planners, property developers, politicians and anyone interested in the discussion on how to handle the lack of adequate and sustainable housing for all people residing in Sweden.

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The rationally planned apartment is strongly associated with the rise of Sweden as modern country. It was the core of post-war social housing policy that was formulated in the 1930s and which have come to characterise the Swedish welfare state. The connection between the ideology and the accommodation was clear; the dwelling was considered to have a central role in an individual's health, morals and work - and thus for society in general. The perception of what was good housing was clear and it was also formulated in rules and regulations, which controlled and had a strong impact on the design of our housings. Today the housing has different political, social and economic conditions and they are primarily built by private companies that build condominiums in attractive areas. The development has made the housing into a commodity and investment where a large profit margin is more important than good architecture for everyone.”

(Söderberg, 2011)

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1. INTRODUCTION

Housing crises is nothing new to Sweden and its three largest cities. In 1917 the Swedish parliament passed a law where tenants were guaranteed a maximum rent and from now on the municipal councils would have to approve rent increases and evictions. This was a first step towards the social responsibility the Swedish state later would be known for. Most of the past hundred years have been characterised by lack of housing with one exception; “the million programme” (1965-1975). During this time the housing shortage was built away and apartments even stood unoccupied.

Different eras stand for its time ideals on how to best address the housing shortage and with more or less innovative solution and future-spotting. The era that perhaps left the greatest impression and has had great significance for the direction the housing construction has taken is the era of “Folkhemmet”. Folkhemmet may initially be seen as an overly rational architecture where everything should look the same. But by looking closer, you see a time of tremendous innovation. To understand it, and not only see a obsession with standards, you must focus and pay attention to the long period of substandard housing, overcrowding, dirt and diseases that characterised Sweden during the era of folkhemmet (“lort-sverige”).

1.1 BACKGROUND

In today's Sweden we are facing a widespread housing shortage and According to "Boverket" about 700,000 homes need to be built in Sweden over the next ten years to meet the need. A type of housing that is currently being built is provisional housing for "newly arrived" residents. This kind of building construction and the overall positive approach towards it is somewhat problematic. The reason the buildings are considered provisional isn't because of the lifecycle of the building, it because the building permit is temporary. One effect of this could be that the building permit is extended or transferred into a permanent building permit. If this happens we will have a lot of poorly planned apartments and residential areas with lower standard as a part of our residential environment. This is not an unreasonable assumption to make as the forecast for solving housing shortage in the near future looks bleak. (Fastighetstidningen, 2016; Boverket, 2015)

Temporary housing increases alienation and contributes to ethnic segregation. Studies show that a private accommodation for asylum seekers can give a greater sense of control over their own lives, which means that they come closer to normal society and thus have greater opportunities to find employment, become self-sufficient and integrated (*Boverket, 2008*). This means that private accommodations are essential when it comes to successful integration. But studies also shows that "placing" asylum seekers and newly arrived residents as large groups in specific areas will contribute to alienation and a growing ethnic segregation which already is a large societal problem. (Riksdagen, 2003)

A third reason for questioning this type of provisional housing is that the duration of a temporary building permit is 15 years, which is an entire childhood. Imagine being a child born in to a family of two newly arrived parents.

You will have a citizenship in a country you most certainly haven't been to or visited. You will grow up in a stigmatised neighbourhood in a apartment with lower standards and with the knowledge that it will soon be demolished. One could wonder, what kind of citizens do we expect to develop from such circumstances when we fail so disastrous in our accountability?

” *The good accommodation provide opportunities for people to develop themselves and their relationship to others. Residential areas characterised by quality and beauty is a great tool for a rising generations possibilities when it comes to acquiring a good sense of self-esteem, no matter what social class you come from.*

(Nylander, 2003)

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Architectural qualities are being deprioritized

Architectural qualities being deprioritized isn't just a matter of fact when building provisional housing. This is nothing new and of course done in a quest to reduce costs and square meters. Examples of degraded architectural qualities could be:

the usage of cheap materials that do not age gracefully, minimising or completely removing the entrance room, which means you will enter the apartment straight into the kitchen or living room, partly or completely removing communication paths with alternative routes within the apartment. In an article on bostadsratterna.se, Hans Lind, professor of real estate economy at KTH, is being interviewed. When being asked if we need to build with lower standards to reduce costs, he answers “hmmm, we will never build apartments that are not insulated or have kitchens and bathrooms, but on the other hand we can cut down on the standard and some less important requirements, for example a small room of five square meters might not need a window.” (Bergling, 2016)

1.2 AIM, PURPOSE, DELIMITATION

AIM & PURPOSE

The purpose is to lift a selection of architectural qualities from the era of Folkhemmet and to show an example on how to take those qualities back into consideration when planning a residential building today. If this kind of approach would be considered in a contemporary project the direct costs would be higher because I aim to bring back architectural qualities that have been diprioritized and set aside. But to keep the economy down and proposing a design that is economically justifiable by today's standards, I will as far as possible work with the minimum accessibility requirements.

DELIMITATION

Limitation is set not to take the political climate into consideration. Limitation is set to solely study and make comparisons between contemporary architecture and the housing architecture sprung from the era of Folkhemmet. Limitation is also set to only focus on housing in apartment buildings (flerbostadshus), as their more limited area and number of rooms make the room organisation a major impact on the overall design of the apartment, but also because they represent the majority of all accommodation types in Swedens three largest cities.

QUESTIONS:

How can the architectural qualities of "folkhemmet" be used in today's housing planning?

How can strategies for sustainability used during the era of "folkhemmet" be used today?

1.3 METHODOLOGY AND STRUCTURE

THEORETICAL STUDY OF FOLKHEMMET

I started the process with a theoretical study to get a deeper knowledge in the topic. This first part consists of this study with information about Folkhemmet, its history, housing policy and the residential architecture that represents this time.

- Quotes in Swedish are freely translated into English

RESEARCH AND COMPARATIVE ANALYSIS

This study consists of three parts:

- A comparative apartment analyses where floor plans from the era go folkhemmet and newly produced apartments have been evaluated through four architectural qualities: Movement, daylight, flexibility/generality and axiality. This has been studied through models of the apartments build in scale 1:50.
- An interview with one of the residents in “solhuset i Järnbrott” The interview has been done in Swedish, and when quoting I have done a free translation into english.

DESIGN PROPOSAL

The third part is my design proposal based upon the research and analysis, it consists of concept, programme, drawings, illustrations and process.

1.4 WORD DEFINITIONS

Allmännyttan - a public housing company in Sweden, it is usually a municipal limited company, but may also be a foundation. The companies referred to, under the Act (2010: 879) on public municipal housing corporation, is a limited liability company as a municipality or several municipalities jointly have control over and that the general interest purpose

- In its operations mainly manages properties in which apartments are granted a tenancy,
- promote housing in the municipality or municipalities that are owners of the company, and
- offers tenants the opportunity for tenant influence and control of the company.

Boverket - an authority on urban planning, urban development, construction and housing. Working on behalf of Parliament and the Government, in collaboration with others for people to have high quality in their accommodation. Boverket gives out different regulations and manuals, which are more or less compulsory, called Boverkets building regulations

Fattigsvärd - period of time in Swedish history where poverty levels were high

Lort-Sverige - was an acclaimed series of ten Swedish radio reports broadcast in the fall of 1938. The series, which is seen as one of the Swedish radio's first Social Report, produced by the writer and journalist Louis "Lubbe" Nordström. It caused considerable attention and debate on the social housing deficiencies in Swedish society and depicted problems of overcrowding and lack of hygiene.

Folkhemmet - is a metaphor for a society politically organized to take care of all citizens and provide them with basic security. The concept has its roots in Germany's introduction of social insurance in the mid-1800s, and later came in the early 1900s show up in thoughts about the welfare society. The German equivalent of the interwar period was called the Volksgemeinschaft ("people's community"), which came to be associated as strongly with the National Socialist German Workers Party as the socialist parties.

Social Housing - Social housing is an umbrella term referring to rental housing which may be owned and managed by the state, by non-profit organizations, or by a combination of the two, usually with the aim of providing affordable housing. Social housing can also be seen as a potential remedy to housing inequality. Some social housing organizations construct for purchase, particularly in Spain and to an extent elsewhere.

Social Sustainability - The social dimension of sustainability is very much about the well-being, justice, power, rights and needs of the individual. Some of these can be quantified and others are more qualitative. Both parts interact together to span across the social dimension of sustainability. What that means in practice vary depending on what context you are in.

2. FOLKHEMMET

“Folkhemmet” has become a metaphor for a society that is politically organised to take good care of its citizens. The notion is associated to Swedish Social Democratic Party and Per Albin Hansson who launched it as a concept January 18, 1928.

(Lönnaeus, 2009)

”

Hemmets grundval är gemensamheten och samkänslan. Det goda hemmet känner icke till några privilegierade eller tillbakasatta, inga kelgrisar och inga styvbarn. Där ser icke den ene ner på den andre. Där försöker ingen skaffa sig fördel på andras bekostnad, den starke trycker icke ner och plundrar den svage. I det goda hemmet råder likhet, omtanke, samarbete, hjälpsamhet. Tillämpat på det stora folk- och medborgarhemmet skulle detta betyda nedbrytandet av alla sociala och ekonomiska skrankor, som nu skilja medborgarna i privilegierade och tillbakasatta, i härskande och beroende, plundrare och plundrade.

(Hansson, 1928)

”

2.1 HISTORY AND HOUSING POLICY

During the First World War the cost of building materials increased violently. Inflation rose constantly from the outbreak of the war until 1920 when building costs reached a level that was four times higher than before the war. At this time the housing construction was still dominated by private actors and the financial risk associated with building resulted in an almost stagnated building industry, with catastrophic housing shortage as a result. This forced the municipality to start acting. Slowly, the state began to undertake the responsibility for the critical housing issue and when the Social Democrats won the election in 1932 they formed a government with a new political direction in which a strong state played a more active role in the economy than previously. (Gärde, 1923)

During the period from 1931-1945 the foundation of a new policy role for public housing was formed. The goal was to stabilise the building rate, reduce overcrowding and housing shortage and raise housing standards. Municipalities became the state's tool to realise these goals. The social democracy used the term "folkhemmet" to describe this social vision. Today, Folkhemmet, is also used as a description of a time and an era in Sweden that started in the 1930s and ended in the mid-1960s.

In the beginning of the 1930s Sweden, and the rest of the Western world, suffered a deep economic crisis. Nearly 25 percent of the Swedish industrial workers were unemployed. But at the same time a new vision of society and the state started to take hold. There was strong growth optimism and political consensus to change "Fattigsverige" into a modern democracy. (Allmännyttan, 2016)

After the 1932 election the Social Democrats formed the government, with a new political direction in which a strong state played a more active role in the economy than previously. Through an expansionary fiscal policy, the state would increase demand and employment, and “folkhemmet” would provide security to all.

(Allmännyttan, 2016)

One year after the Social Democrats won the election a social Housing investigation (bostadssociala utredningen) was initiated, with the intention of mapping overcrowding and propose actions. The study consisted of a group of radical economists, architects and builders, and their work laid the foundation for the Swedish housing policy in the postwar period. (Allmännyttan, 2016) The measures that were taken in the mid-1930s connected housing policy with family policy, and housing standards became a political issue.

After a few years of work, an interim report from the investigation was presented, including proposals for barnrikehus- subsidised housing for families with many children and low incomes. Barnrikehus was one of the first measures that originated in the social housing investigation. For the first time the state decided to actively improve the housing situation for those who had many children and scarce financial resources.

(Allmännyttan, 2016)

Large families with many children was a vulnerable group since they often were denied renting from private landlords, who considered that the wear and tear of the apartment became excessive. Therefore families with a great need for a well working residence were living in poor housing conditions. As an attempt to overcome the problem the state invested in “Barnrikehus” with favourable loans with low interest rates for those developers who built the houses and contributions for the families living there. This can be considered the first version of “social housing” in Sweden.

To meet the requirements to rent an apartment in the subsidised houses the families had to have a minimum of three children. Three children represented 30% contribution to the rent, 4 children gave 40%, 5 or more children gave the maximum contribution of 50%. Barnrikehus were built up to 1946 with a total 12,000 apartments. (Nylander, 2013). Even if the apartments were small this was a huge improvement of housing standards. The apartments consisted of 2-3 rooms and a kitchen or kitchenette, with bathroom or shower and central heating. In the basement there was shared laundry room and on the yards playgrounds.

Barnrikehusen were not only a successful solution mainly because of social and economic reasons. The neighbourhoods sometimes became stigmatised and the houses and the surroundings were torn extra hard. They continued building those houses until 1948, when the government loans to this activity ceased. Efforts were replaced by a new housing policy that was directed towards a general public. A number of local companies was formed in order to build and manage barnrikehus. These housing corporations, together with the initiatives that municipalities took during the First World War, laid the foundation for the municipal public housing companies/corporations known as *Allmännyttiga bostagsbolag*. (Allmännyttan, 2016; Haste, 1986)

2.2 THE RESIDENTIAL ARCHITECTURE OF FOLKHEMMET

The term “Folkhemmet” was coined by the Social Democrat politician Per Albin Hansson in the late 20s but became a widely known term in Sweden first around the mid-1900s. Synonymous with the term is that everyone should have the right to a good home (en god bostad) and have access to the materiality that the modern city demanded. The “good home” had a modern kitchen and bathroom, hot water, living room, bedrooms, closets, common laundry and garbage chute. During the 1940s, 1950s and 1960s millions of healthy, bright and practical housing were built with the help of government loans. “Bostadsområdena var möjligheternas plats, blickarna var riktade mot framtiden.” (Womack, 2013)

2.2.1 Modernisms entrance into Sweden

CIAM stands for “the international congress of modern architecture” and was an avant-garde organisation that very successfully propagated the ideals of the modernistic city and architecture. The congress was initiated in June 1928 in Chateau de la Sarraz in Switzerland with Le Corbusier, amongst others, as one of the leading profiles. Among the Swedish participants on the congresses were the famous architects Uno Åhren and Sven Markelius. (Somer, 2007; Mumford, 2000)

CIAMs main focus was on urban development and social issues. They discussed everything regarding the modern city, for example housing minimum subsistence and which building height was best suited to the modern city. But the most famous result of CIAM was a manifesto called Charte d’Athènes, whose draft was written in 1933. The main idea was about the functional city which according to the Charte d’Athènes would be zoned, different zones had different functions: housing, recreation, work, transport. The residential buildings would be high, free-standing and widely spaced in parkland. (Somer, 2007; Mumford, 2000)

So far overcrowding meant more than two residents per room, including the kitchen. During the 1930s this changed. Now it was considered that the kitchen had its definite function for cooking and all sorts of household chores, and therefore should be excluded from the sleeping area. Modernism with their entirely new room concepts is launched in Sweden in the late 1920s.

Gunnar and Alva Myrdal family ideals.

In their famous debating book “Kris i befolkningsfrågan”(Crisis in the Population Question) from 1934, Gunnar and Alva Myrdal described which needs were sound and correct but also addressed the urgent topic of the declining birth rate in Sweden. They argued that, in order to make the birth rate rise, families must receive support from the community through a series of social measures. Many of their ideas became reality but also created a lot of criticism and debate. A criticism that put strict welfare against softer values such as homeliness and residential dreams. (Womack, 2013)



Fig. 1

2.2.2 The Apartment - five rooms for different purposes

1939 the foundation for the so-called housing inquiry/investigation was laid which was initiated by Sveriges Arkitekter and Slöjdföreningen.

The rationally planned home is strongly associated with the rise of modern Sweden and the housing issue was central to the welfare policy. The main goal was to fight housing shortage, tuberculosis and overcrowding by building good housing for all citizens. The perception of what was an appropriate and good housing was formulated by experts and translated into state standards. The homes that were built had the nuclear family as the ideal, and it was especially for families with children, that the modern apartments were built and designed. Swedish homes from this period stand out internationally. Few homes are so thoroughly researched, measured and investigated in order to become "good homes" with sufficient space for furniture, interaction, storage and sunlight. (Nordiska Museet, 2016)

THE KITCHEN - a rational elaborated room on a minimum of space

"Man prövade olika sätt att förbehandla , diska, skölja och stapla diskgodset, mätte tidsåtgång, krav på utrymme och resultat. För att göra arbetet så naturtroget som möjligt utgick man från vanliga rätter, som lämnade rester på diskgodset (som tex havregrynsgröt och stuvad spenat) och enhetligt sammansatta diskgodsmängder." (Boalt, 1984)

In the era of Folkhemmet the ideals aimed for functional kitchens and to rationalise the work associated with household. The lack of norms and standardisation of measures was considered urgent and a kitchen study was initiated. The result of this inquiry was important when designing kitchens with enough space for cooking, washing dishes etc. on a minimum of floor space. Formerly the kitchen was normally also used as some kind of living room that in the evenings was transformed into a bedroom. During the functionalism they wanted to change this behavior and by minimising the area they wanted to make it impossible to use it for other activities. (Larsson, 2013; Nordiska Museet, 2016)



Fig. 2

THE LIVING ROOM - from parlour to family room

A central thought of the functionalists, the innovative architects and designers in the 1920s and 30's were that the living room should be something other than the parlors belonging to the farms and bourgeois homes. They claimed leaving a room unused was the same as voluntary overcrowding. (Peres, Wallin, Womack, 2013) This did not only set new demands on the layout design, it also required new residential habits with a clear functional separation of different areas of the property. Neither the kitchen as a family gathering place or the parlor for festivities was consistent with functionalist ideals. This new room was aimed to be the heart of the home and a room that was used every day by all family members. The squaremeters were redistributed and we ended up with one big living room whilst all the other rooms decreased in size. (Nordiska Museet, 2016) Despite the new vision of the living room's function, the result would linger. It was not easy to get the residents to adjust their lives to the new ideals. The living room was often furnished with functional furniture such as sofa beds that could be converted to beds at night.

It wasn't until the first newly built areas of "The Million Programme" was finished that the ideals of *Folkhemmet* received its completion. Then at last the living room became what it was intended for; a everyday family room with no beds. Some say it was the TV that finally got us to take the actual step into the living room.

(Nordiska Museet, 2016; Perers, Wallin, Womack, 2013)



Fig. 3

THE BEDROOM - a hygienic room dedicated for sleep

To have a specific room for sleep and rest hasn't always been something we have taken for granted, in fact the bedroom has a short history. It was during the 1930s ongoing debate about overcrowding in the residents the thought about rooms dedicated only for sleep arose.

A bedroom becomes a question of hygiene. Tuberculosis, dirt and bedbugs became synonymous with overcrowding and a question that involved medical science. Doctors and engineers became interested in how poor ventilation affected health. Cleanliness and the need for sunlight and fresh air were key issues in the debate about a modern approach to interior design. The everyday functions in a residence has to become more important than representation aspects and guests. The room for recovery should from now on be cleanest and most dust free room in the resident. The ideal was an airy room furnished with washable furniture, easily cleaned linoleum floors and bright wallpaper. (Nordiska Museet, 2016; Womack, 2013)

Today the bedroom is not only important for a good nights sleep, intimacy and relaxation. It has also taken place as a room used during daytime, a place to meet a need for a moment of solitude.

THE LAUNDRY ROOM - a swedish institution

The laundry room is a unique Swedish institution with roots in the vision of a country with justice and equality where everyone would be able to wash themselves, their clothes and keep clean. One of the first modern common laundry rooms was built in Stockholm in the 1920s, but it wasn't until the 1950s that they began to appear explosively. The purpose of the laundry room was also to free up time for the woman and this became a symbol of the rational housework. (Lund, 2009; Nordiska Museet, 2016)

"The laundry room is today a meeting place of conflict and love, dirt, lint and angry notes. The laundry room is a living world that reflects our time, questions about the individual, the community and the environment." (Lund, 2009)



Fig. 4

THE BATHROOM - a time marker between poor and modern

After several decades of cramped living conditions and poor hygiene with disease epidemics as a consequence, Sweden reached its bottom in the late twenties. It was now considered that it was absolutely necessary to change people's hygiene and living behaviour to obtain a healthier country.

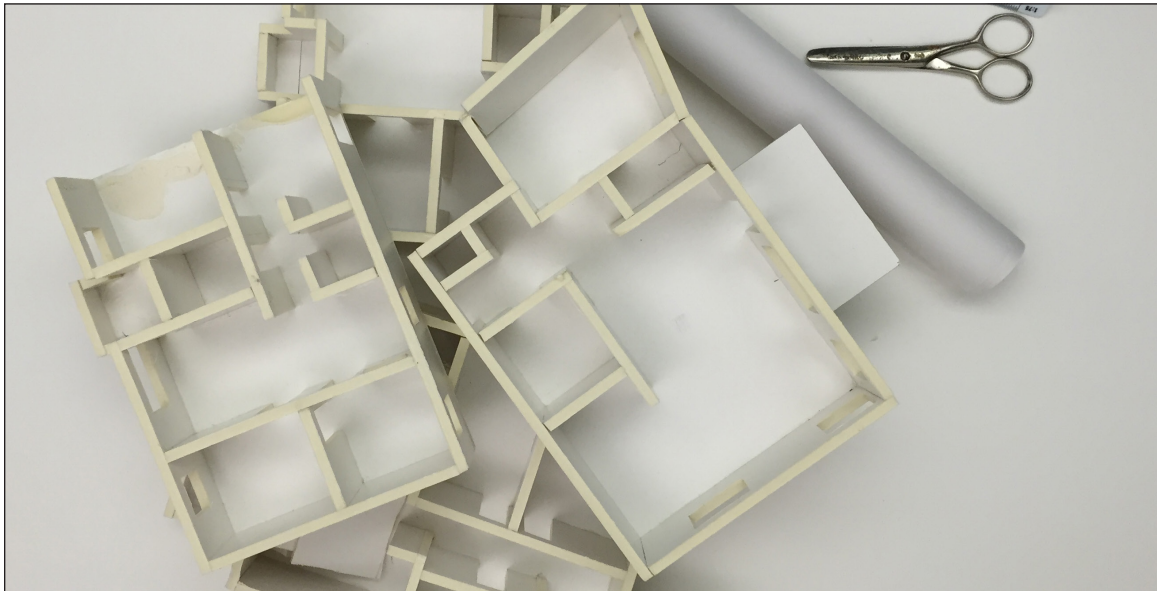
Indoor bathrooms began to appear about 100 years ago. Bathrooms, as we know them today, has a even shorter history. When the bathrooms first moved inside our homes the toilet area and the washing area was two separated activities that demanded separate rooms. During the era of Folkhemmet, the bathroom played an important role, since one of the main goals of "bostadssociala utredningen" was to make the country and its residence clean. The bathroom slowly became part of all apartments, were it developed in to a multi-functional room with shower, bath, toilet, storage etc. It became a room beyond feces, odour, sweat and urine. The bathroom was now also a place for children to play, conversations to take place, fellowship and relaxation. (Nordiska Museet, 2016) During the 1930s, HSB housing was the first housing corporation to equip all their apartments with this latest modernity, but with separated toilet and bath areas. HSB soon discovered that the bathtubs remained unused and a lack of concern for cleanliness among the people residing there. To say the least, people's attitudes towards cleanliness was not the same as today. This lack of concern for cleanliness HSB met by putting the toilet in the same room as the bathtub. They thought that if the residents see the bathtub every time they go to the bathroom they would be encouraged to take a bath. With this small change the residents was forced into the room where the bathtub was and this was the starting point for the clean and modern Sweden that the government had aimed for. Maybe it isn't necessary to say, but as soon as the joy of bathing and personal hygien was discovered, HSB residents had friends come and queue in their apartments to wash themselves in the bathtub. (Nordiska Museet, 2016; Lund, 2013)

3. RESEARCH

RESEARCH AND COMPARATIVE ANALYSIS

This study consists of two parts:

- A comparative apartment analyses where floor plans from the era go folkhemmet and newly produced apartments have been evaluated through four architectural qualities: axuality, movement, generality/flexibility and daylight. This has been studied through models of the apartments build in scale 1:50. All photos are taken of the sketch models if not anything else is mentioned. The selection is made through common building typologies from both times. In total 30 apartments has been analysed, five prime examples are presented in this research.
- An interview with one of the residents in “solhuset i Järnbrott” The interview has been done in Swedish, and when quoting I have done a free translation into english.



3.1 APARTMENT ANALYSIS

Movement, daylight, flexibility/generalality and axiality

The analysis of the apartments from the era of folkhemmet has been done with main focus on the following criteria: Movement, daylight, flexibility/generalality and axiality.

Movement and more precisely circular movement has been lifted as an important living quality by for example Nylander (Nylander, 1998) and this is also confirmed in Femenías study (Femenías et al., 2016) that people highly appreciates this floor layout.

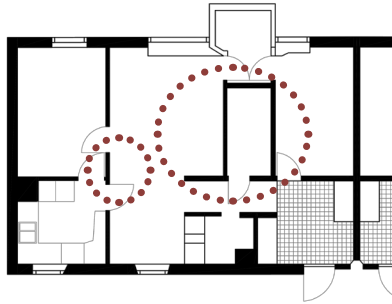
A recent studie (Femenías et al., 2016) shows that the respondents in their questioner had "light", "windows" and "good spatial organisation" among the top 10 positive aspects of their apartments.

When discussing the issues of flexibility and spatial organisation it is for example shown that a common way to create an extra bedroom is to divide a larger bedroom into two smaller ones, especially if there are two windows in the larger bedroom. There are also examples where it is done the other way around, creating a larger bedroom out of two smaller. Creating bedrooms out of part of the living room or out of a office are also common ways to renovate apartments which shows the need of flexibility in the apartments. Another aspect to take into consideration is that renovations resulting in a changed apartment plan is one way for the residents to avoid having to move out from the apartment, Femenías report shows that as many as 41% of apartments in condominium association in Stockholm has been rebuilt to make one extra bedroom. (Femenías et al., 2016)

In the book "Berättelser om den öppna planlösningens arkitektur" (Willén, 2012) interviews has been done with residents living in the Stockholm suburb, Hammarby Sjöstad. In the interview the residents lift "open plan" layout as a quality they really appreciate, but they also find it problematic that they can see and hear the rest of the family at all times. The need for being able to shut a door as a mean of privacy is adressed.

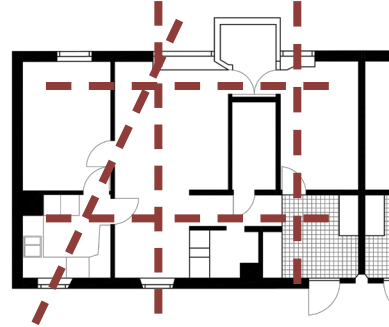
Dr Liborius Gata, Tower Block, 1950-1952

MOVEMENT



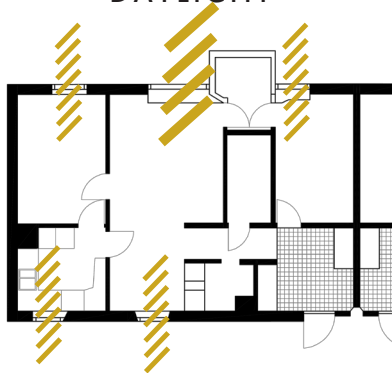
- Circular movement, no dead ends
- Possibility through movement to choose to socialize or be private

AXIALITY



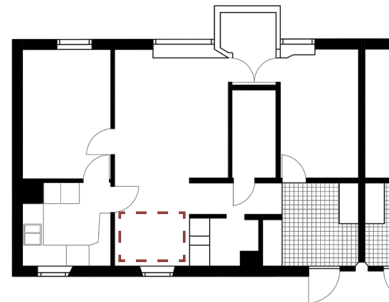
- Window view when entering the apartment
- Long sightlines

DAYLIGHT



- Daylight from two directions. The building has the opportunity for an additional direction but does not make use of that

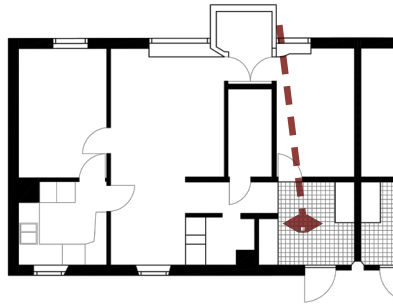
FLEXIBILITY/GENERALITY



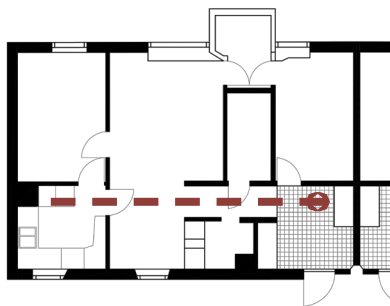
- By removing dining area there is a possibility to create an additional small bedroom. This is not an optimal solution because in a apartment this size a dining area is necessary. Even if it is not a flexible layout it gives the residents the opportunity to somewhat adapt the apartment if necessary.

Dr Liborius Gata, Tower Block, 1950-1952

SIGHTLINES



- Window view from the entrance

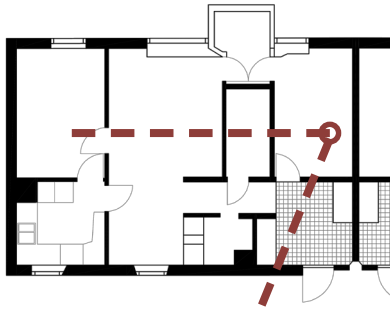


- View from the entrance towards kitchen

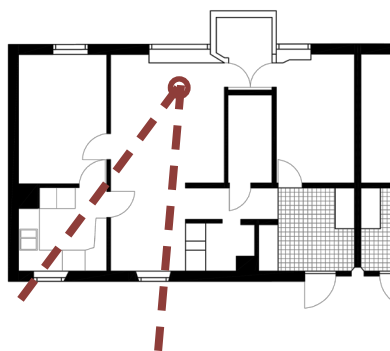
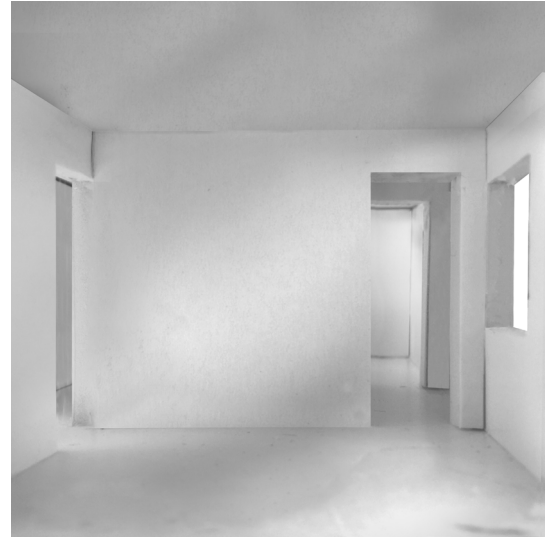


Dr Liborius Gata, Tower Block, 1950-1952

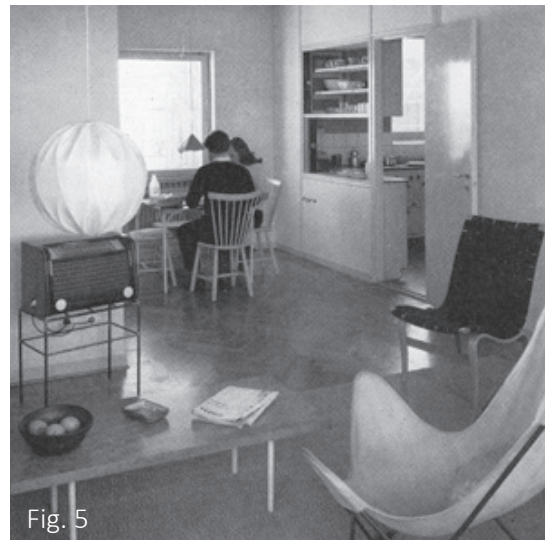
SIGHTLINES



- Window view from the entrance

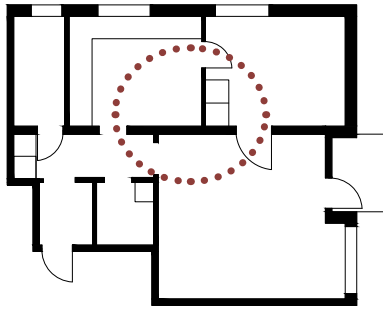


- View from the living room towards kitchen and dining area



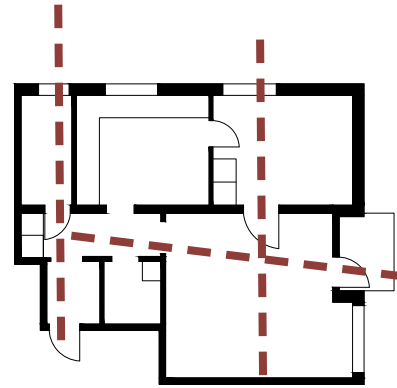
Östra Midvintersgatan, Tower Block, 1950

MOVEMENT



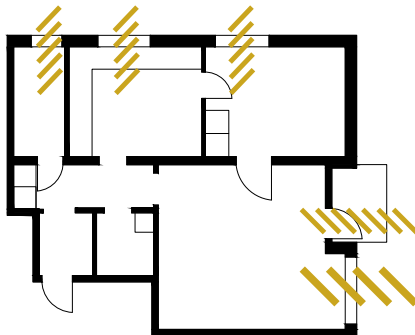
- Circular movement, no dead ends
- Possibility through movement to choose to socialize or be private

AXIALITY



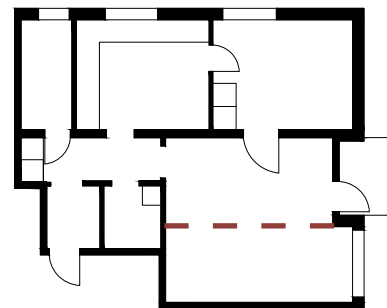
- Window view when entering the apartment
- Long sightlines

DAYLIGHT



- Daylight from two directions

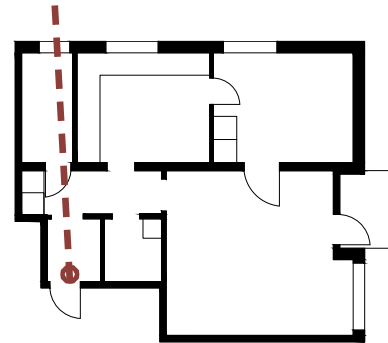
FLEXIBILITY/GENERALITY



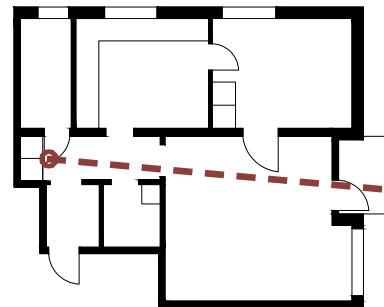
- This layout is not flexible because if adding a wall between the windows there is no livingroom left. The flexibility within this apartment is the multiple doors. In this way, if the aptments is shared between two friends, both rooms can be reached without having to walk through the other room

Östra Midvintersgatan, Tower Block, 1950

SIGHTLINES



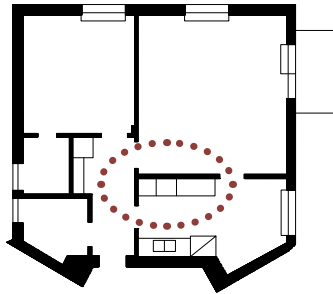
- View from the entrance towards bathroom



- Sightline along the lengths of the apartment

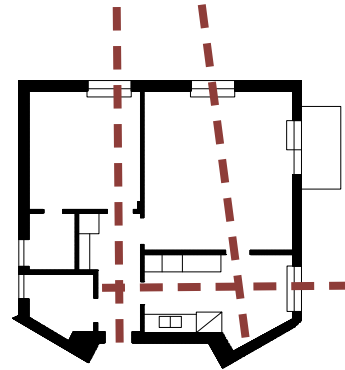
Sjöbjörnsvägen, Star House, 1945

MOVEMENT



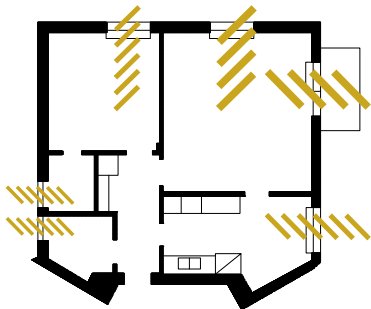
- Circular movement through hallway, livingroom and kitchen

AXIALITY



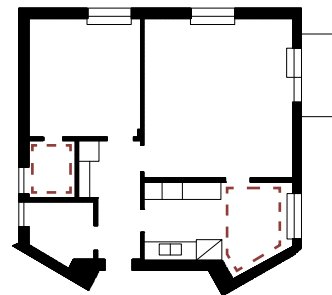
- Window view when entering the apartment
- Long sightlines

DAYLIGHT



- Daylight from three directions

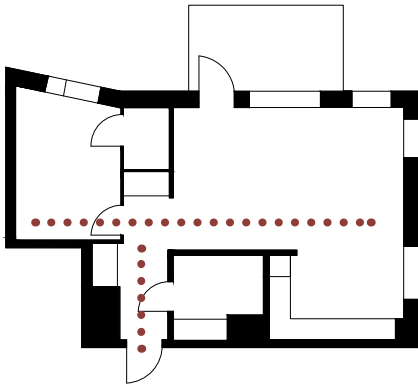
FLEXIBILITY/GENERALITY



- This layout can not be considered flexible because if adapting the apartment and creating additional rooms you have to take away some of the main functions as the dining area and storage. But if you are willing to do so it is possible to create an additional small bedroom. The walk-in closet could be used as a small room, with enough space for a baby cot.

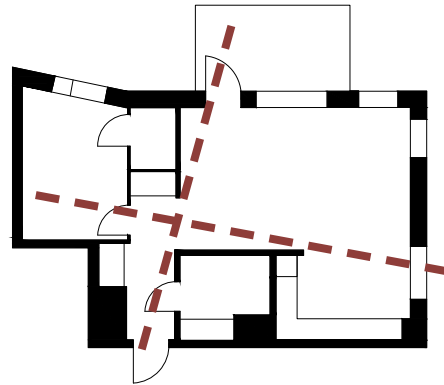
Monsungatan 77, "lamellhus" 2016

MOVEMENT



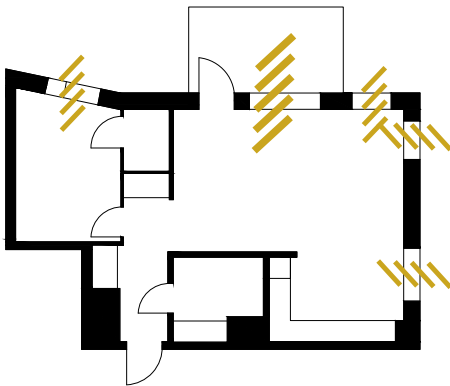
- All rooms are dead ends, no circular movement

AXIALITY



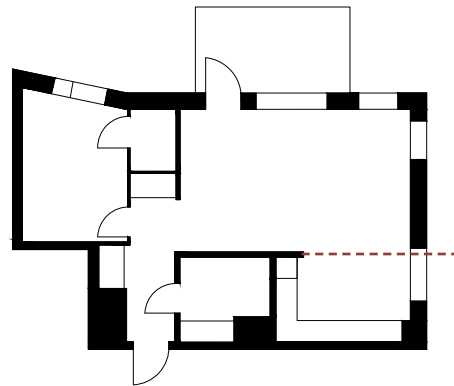
- One long sightline from the bedroom towards the kitchen

DAYLIGHT



- Daylight from two directions
- Corner apartment
- Large balcony

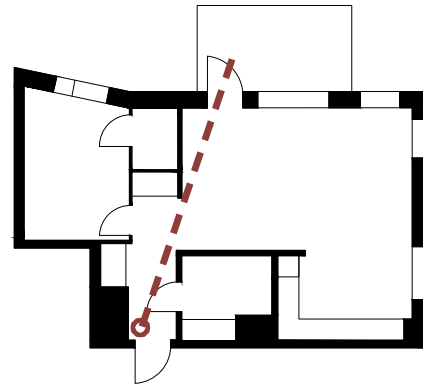
FLEXIBILITY/GENERALITY



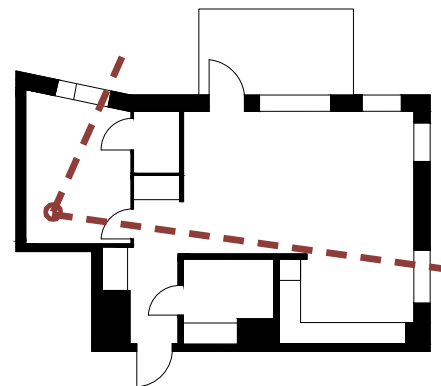
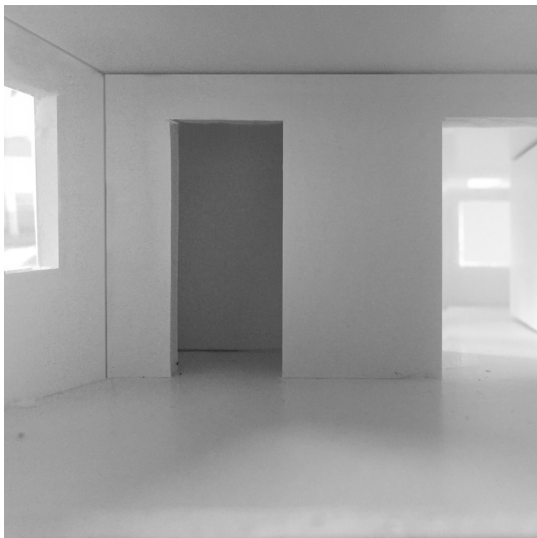
- Not possible to build a wall to separate the kitchen from the living room
- Not a flexible plan layout

Monsungatan 77, "lamellhus" 2016

SIGHTLINES



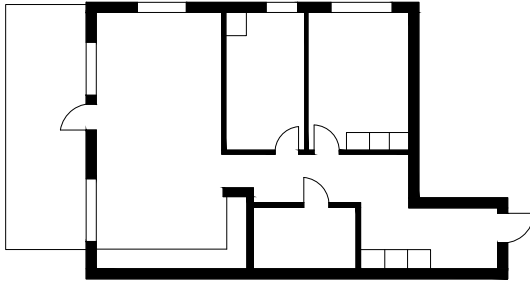
- View from the entrance towards livingroom



- View from bedroom towards kitchen window

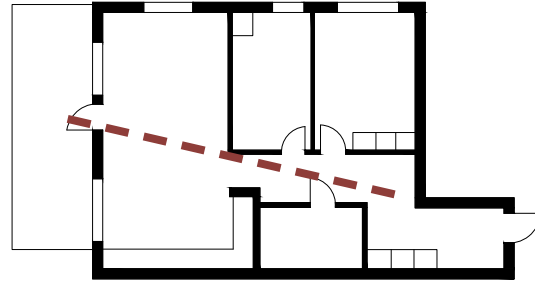
Kvillegatan 7, 2016

MOVEMENT



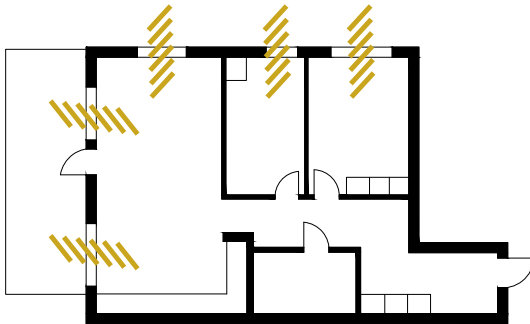
- All rooms are dead ends, no circular movement

AXIALITY



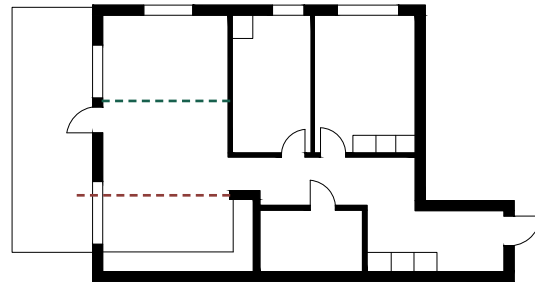
- One long sightline from the entrance towards the living room

DAYLIGHT



- Daylight from two directions
- Corner apartment
- Large balcony

FLEXIBILITY/GENERALITY

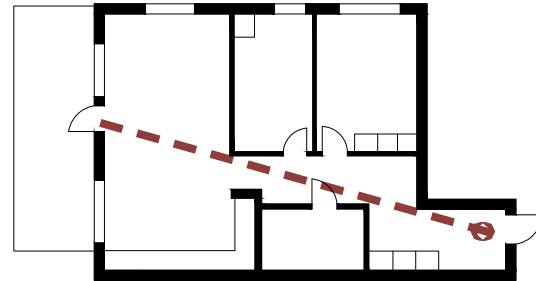


- Not possible to build a wall to separate the kitchen from the living room
- Not a flexible plan layout

Kvillegatan 7, 2016



SIGHTLINES



- View from the entrance towards livingroom. The axially would have been stronger if the axially ran through rooms instead of the corridor

3.2 INTERVIEW "SOLHUSET I JÄRNBROTT

Interview with Ture Tingström (2016-12-02), he lives in the building and is responsible for the greenhouse. He has been living there since before the greenhouse was built.



Fig. 6



Fig. 7



Fig. 8



Fig. 9

When was the apartment building and greenhouse built?

This is a residential area from the fifties and when this building was renovated in 1986 the architect responsible for the renovation proposed that a greenhouse was added along one of the sides of the building. Poseidon, the housing corporation thought it was a nice idea but they didn't want to pay for it. In the end it was financed by Chalmers University of Technology and Svensk Normbygge. This has come to characterise the neighbourhood and is something Poseidon today is very proud of. After a few years Poseidon paid for arranging outdoor allotments to complement the greenhouse.

How many apartments does the building hold?

The building consists of 24 apartments. The number of participating households varies from year to year. If everyone was to participate each apartment has one allotment each. Ten households were participating during this years growing season.

What does the age distribution look like?

Many of the residents participating are elderly, mostly women.

The greenhouse has been operative for 30 years now, has there been a time when the interested has been low and the greenhouse has stood empty?

If so could the space be used for something else? When the interest has failed, the residents interested have been able to claim multiple allotments. One year there was very little interest, so we engaged people from the neighbouring house. The greenhouse has always been full.

How important is the greenhouse to you?

If it wasn't because of the greenhouse, my wife and I would have moved long time ago. When we had children living at home the whole family used to spend time together in the greenhouse.

How does the placing of the greenhouse affect the accessibility?

You enter the greenhouse from the basement of the building. It nice that you don't have to walk outside to reach the greenhouse. There is also a common space in connection to the greenhouse. This is where we drink coffee and socialise. When the greenhouse first was new there was an old lady living in the building, Hulda 90 years old, she had a little cafe in this room.

How is the greenhouse managed?

It is managed as a collective and no-one is supposed to be more responsible than any other. This doesn't work that great, everyones thinks that I am responsible to manage everything. I do it because no-one else does it, its a bit tiring for me but convenient for everybody else. But thats the thing with collectives I suppose, there will always be some people doing a lot more.

Is the greenhouse used for something during the cold season?

No. Only by me, I grow garlic during the cold season.

Is there anything that doesn't work optimally?

Its a cold greenhouse, which means the growing season starts a bit late. We would have had more use of it if it was a warm greenhouse.

Can you see any connection between increasing gardening interest and moving into the building?

Yes, we have had some people that are active in the greenhouse community that has never been gardening before. But mostly there are people with gardening interest since before.

3.3 THEORETICAL STUDY AND RESEARCH CONCLUSION

It possible to see that architecture can be used as a tool to change the behaviour of an entire population, when saying that I refer to how the government with help from architects and designers changed the way we think of our housing and the way we use it, and how the placement of the toilet changed our relation to cleanliness. How multiple unwanted behaviours was revalued and swept away. This makes you start thinking about how these strategies from folkhemmet together with architecture can be utilised in both good and bad ways when it comes to directing people.

When analysing the apartments I have been able to see a pattern. It is obvious that the apartments from the era of Folkhemmet possesses more of the qualities that I'm lifting in my thesis than what the newly produced apartments do. Some of the qualities I expected to see less of in new production, for example the amount of daylight, as it is more expensive to build in this way. But other qualities I was surprised to find that they are lacking. For example poor window composition that removes the ability to close between the kitchen and livingroom, which is actually a requirement to be able to do. But also placing windows in such way that one large room can't be divided in two. When it comes to circular movement none of the newly produced apartments offer that quality. This is something that is actually quite easy achievable and something I think is important as it makes the apartment layout more flexible but also because it creates a greater spacious sensation. Many of the newly produced apartment have long sightlines but as they often run through large open space (kitchen & livingroom open-plan) they do not have as much dignity as they would have if they instead ran through multiple smaller rooms. I've been lifting flexibility because today it is considered an architectural quality that gives the residents the possibility to adapt the plan layout to their unique living situation. During Folkhemmet the apartments were planned for the nuclear family and wasn't supposed to be flexible. They were supposed to be the opposite of flexible where every inch of the apartment was planned. As it today is considered a valuable quality I was somewhat surprised to not find any or very little flexibility within the newly produced apartments.

4. DESIGN PROPOSAL

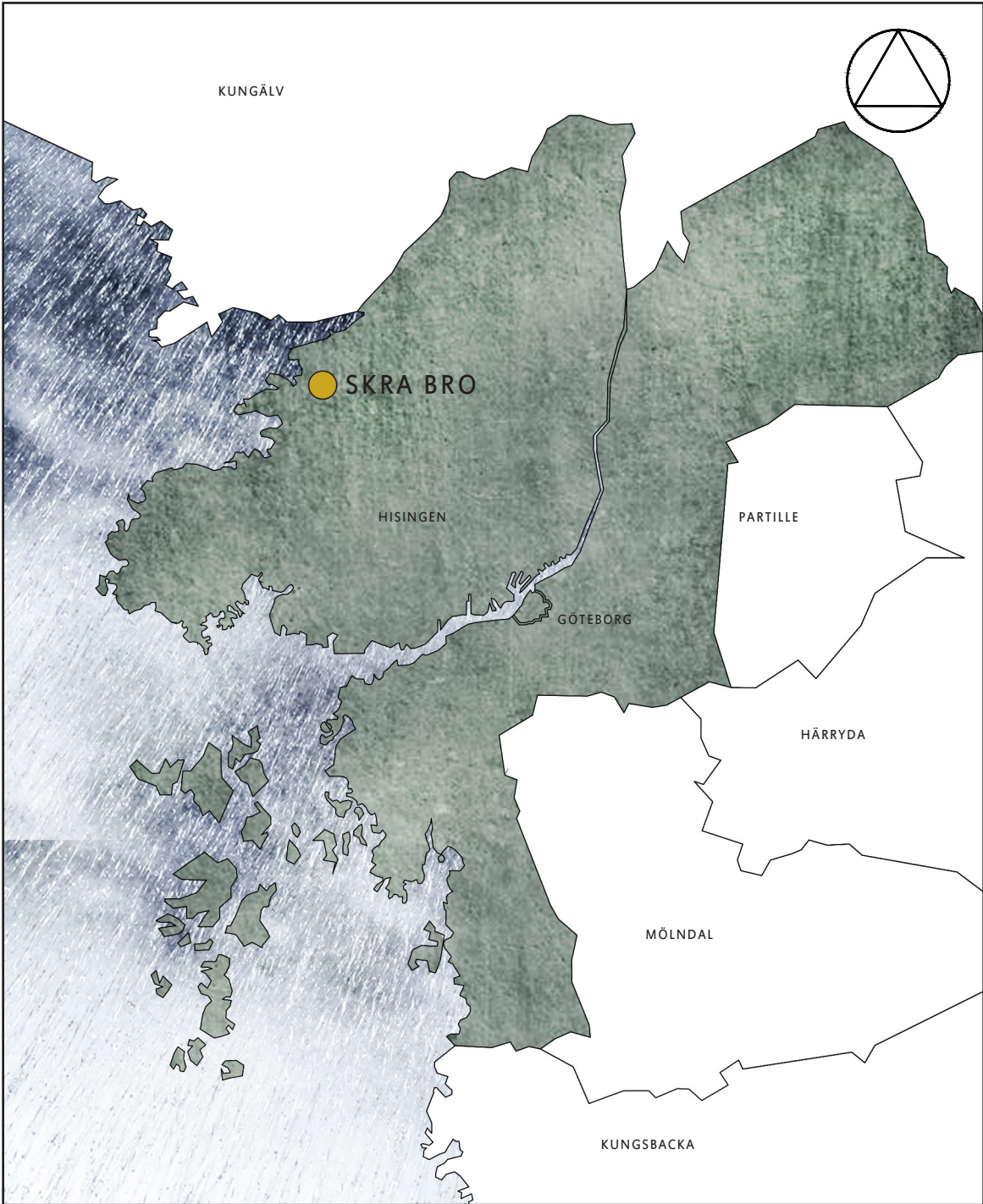
The design proposal is based upon the research and analysis and consists of :

- Prerequisites for location
- Concept
- The Building
- Volume, Placing & Massing
- The Apartments
- The Greenhouse
- Process & Sketches





view from southwest



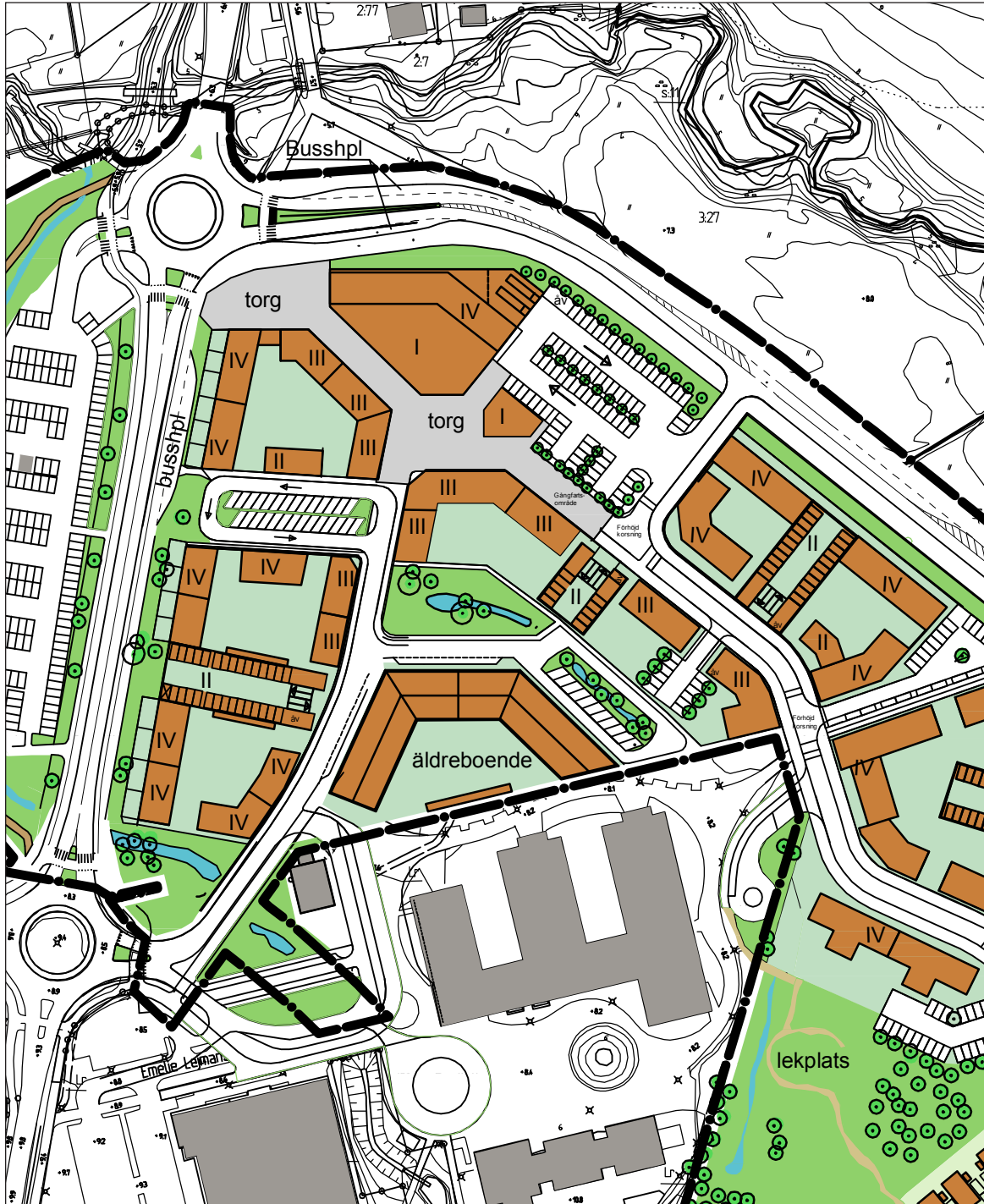
4.1 THE SITE

New centre on the north western side of Hisingen

Skra bro is located on the north western side of the island Hisingen. Today it is just a small centre with a school, shuttle parking, bus station and a small food store. A detail plan has been developed and they are now preparing for a bigger centre with about 500 new households, geriatric care, shops and restaurants.

- **500 new households in terms of apartment buildings, row houses and group housing settlements.**
- **Buildings consisting of 3-6 floors**
- **Downtown settlements**
- **The character should be inspired by the modern garden city, with block structure and clear street space with entrances from the street**
- **High land use**

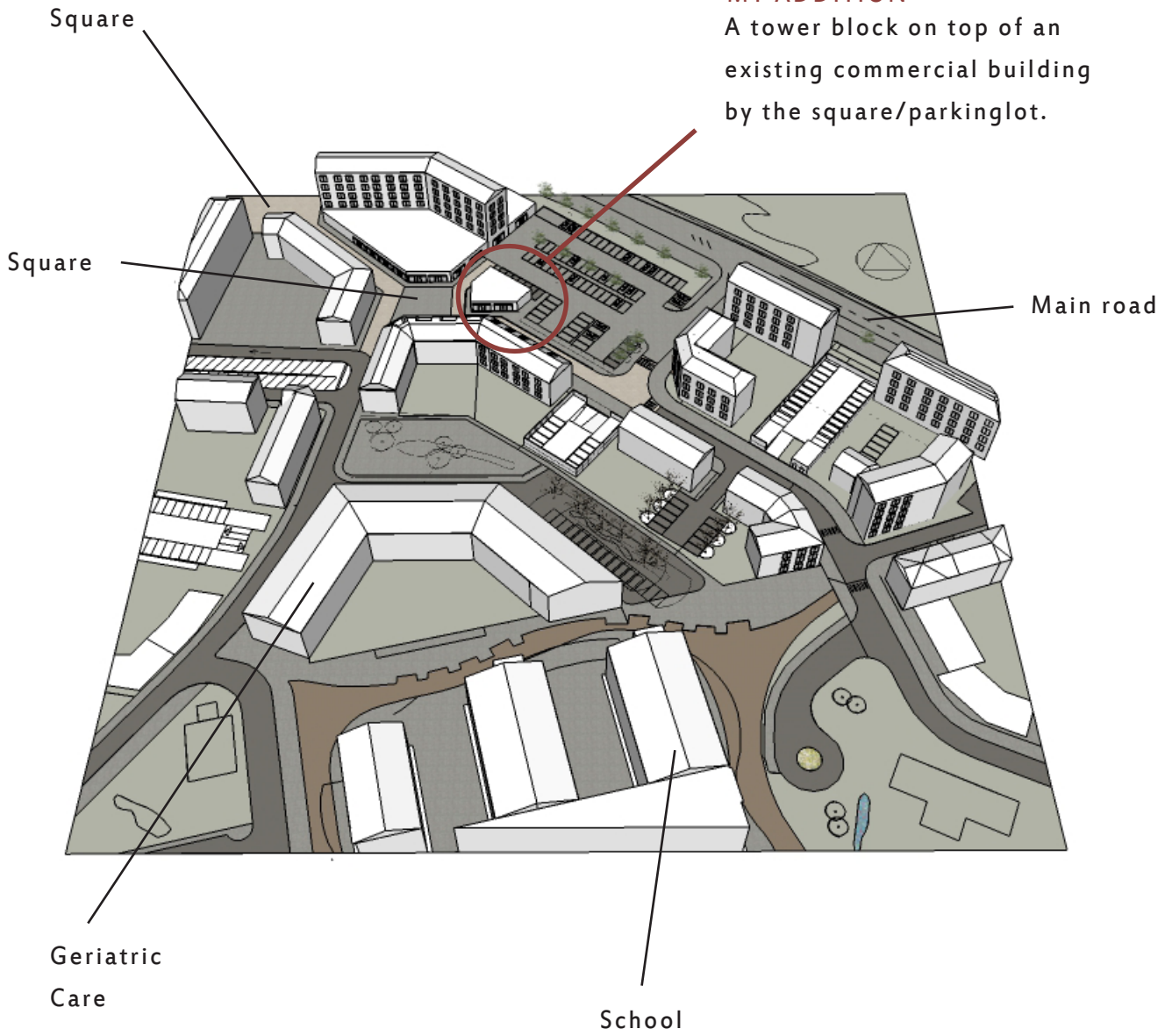
As this neighborhood is located rather far from Göteborg City, it is most likely that people entering the area will do so by car or bus. You are met by a large conspicuous parking lot. One should question why a new area is planned in this way. In this project I will not make an alternative to the large parkinglot but I think it is important to lift it as a solution that should be reconsidered and/or solved in another way.



Detail Plan 1:2000

MY ADDITION

A tower block on top of an existing commercial building by the square/parkinglot.



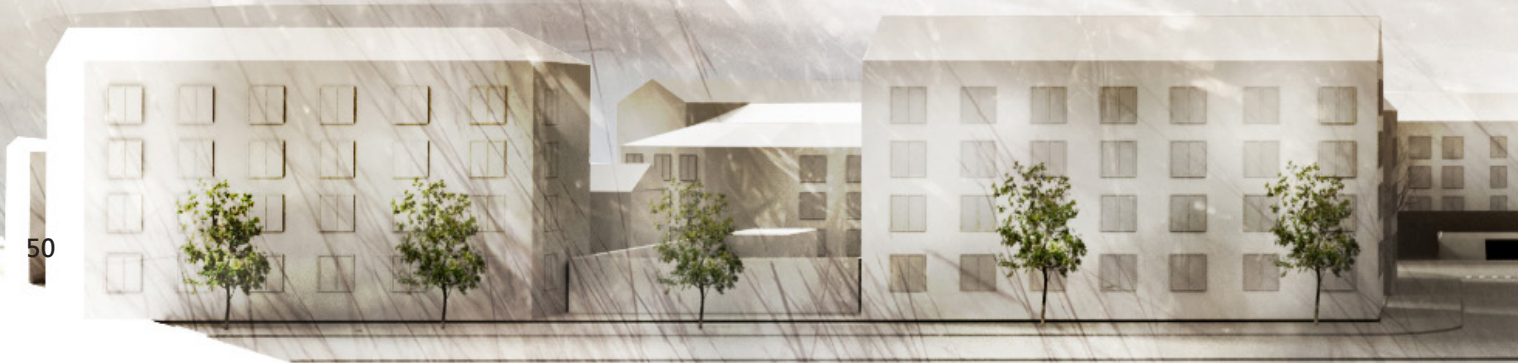
view from north according to detail plan

4.2 THE BUILDING

The focus has been to work with and highlight the selection of architectural qualities that has been lifted in my research. These qualities are associated with additional costs and become a counterbalance to the state housing policy of today with its constant quest to reduce "unnecessary" qualities, cutting costs and increase the profit margin. This kind of project would probably require a change in our state housing policy. But to do what I can to keep costs down, and thus make it more trustworthy, I have as far as possible worked with minimum accessibility requirements.

The residents should also have an additional shared room, a Greenhouse.

The purposes with the greenhouse are multiple, it is supposed to be a place for recreation and togetherness, a place for participation in the home environment, it gives a feeling of belonging, which is an important part of feeling that you have quality of life and self-fulfillment, a greater social sustainability. But it also has an important part in changing individual's attitude towards the environment. In Sweden during the 30's, it was considered absolutely necessary to change the attitude towards personal hygiene. Without clean inhabitants, Sweden could not develop in a desirable manner. In a similar way, it can be argued that in today's society it is absolutely necessary to change people's attitude towards the the environment to achieve ecological sustainability.



- 9 stories high, entrance, greenhouse and commercial space situated on the ground floor.
- 24 apartments
- 8 3-bedroom apartments
- 16 2-bedroom apartments
- Building placed in northeast side of the area
- Open towards square, closed towards parkinglot.
- Greenhouse, 46 sqm
- Small park as a green barrier towards parkinglot

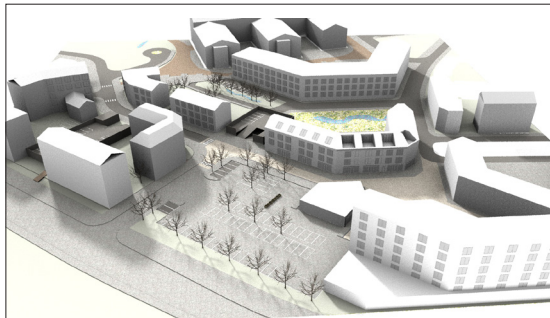




4.2.1 Volume, placing & massing

Building typology - Tower Block

During the era of Folkhemmet the urban block structure ideals with its backyards was revalued, they were now considered too narrow, dark and unhealthy. Instead, slab blocks (smalhus) and tower blocks became common building types. These buildings provide good day light opportunities and release large open spaces between the houses, this was qualities that during that time became extremely valuable. In my research I am showing some examples of apartments inside tower blocks, and they all show good lighting conditions. I believe this says something about the lighting potential these kind of typologies possesses. As plentiful of daylight is a quality I want to bring in to my project, a tower block as building typology became an obvious choice. A tower block also has the advantage of being able to characterize a key location, in this case the square and its social and commercial purposes. If carefully done, a tower block can be a beautiful contrast to the classical block structure that is planned for this area.



Bird view from north according to detail plan



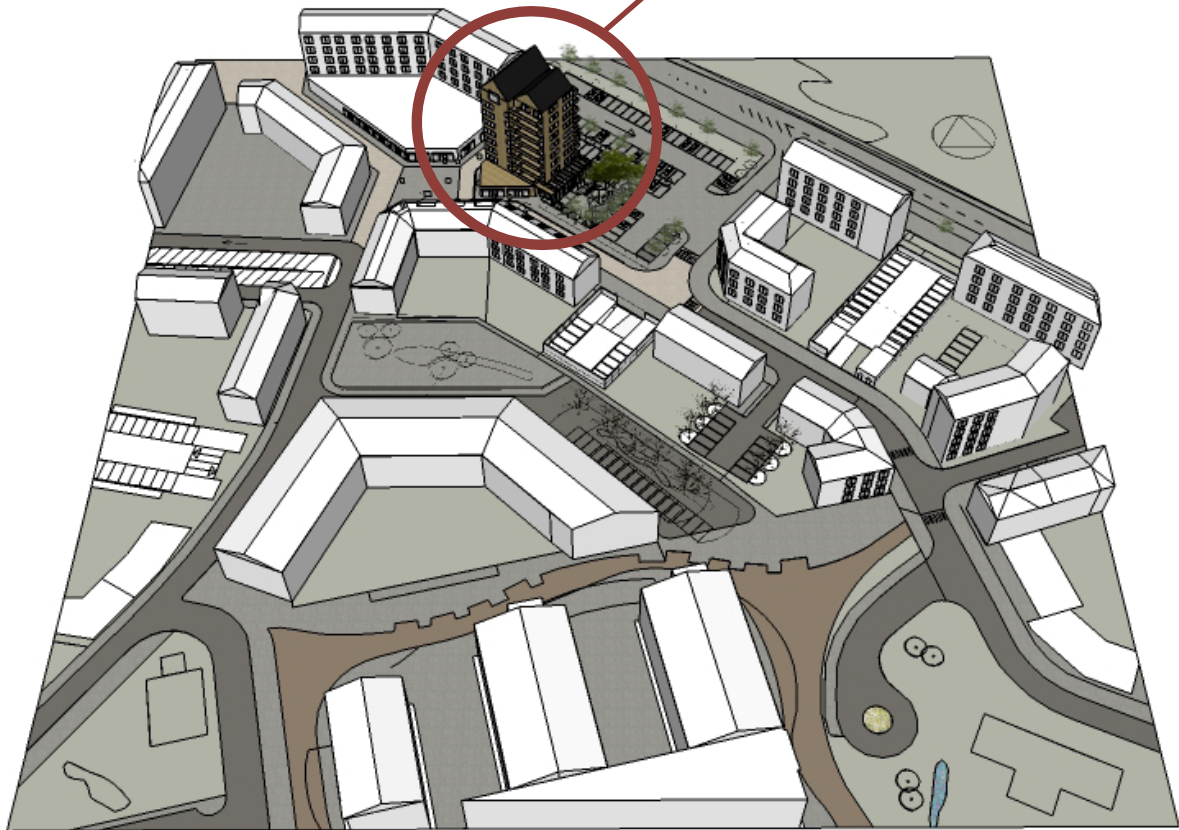
A tower block placed on top of 1-story commercial building.

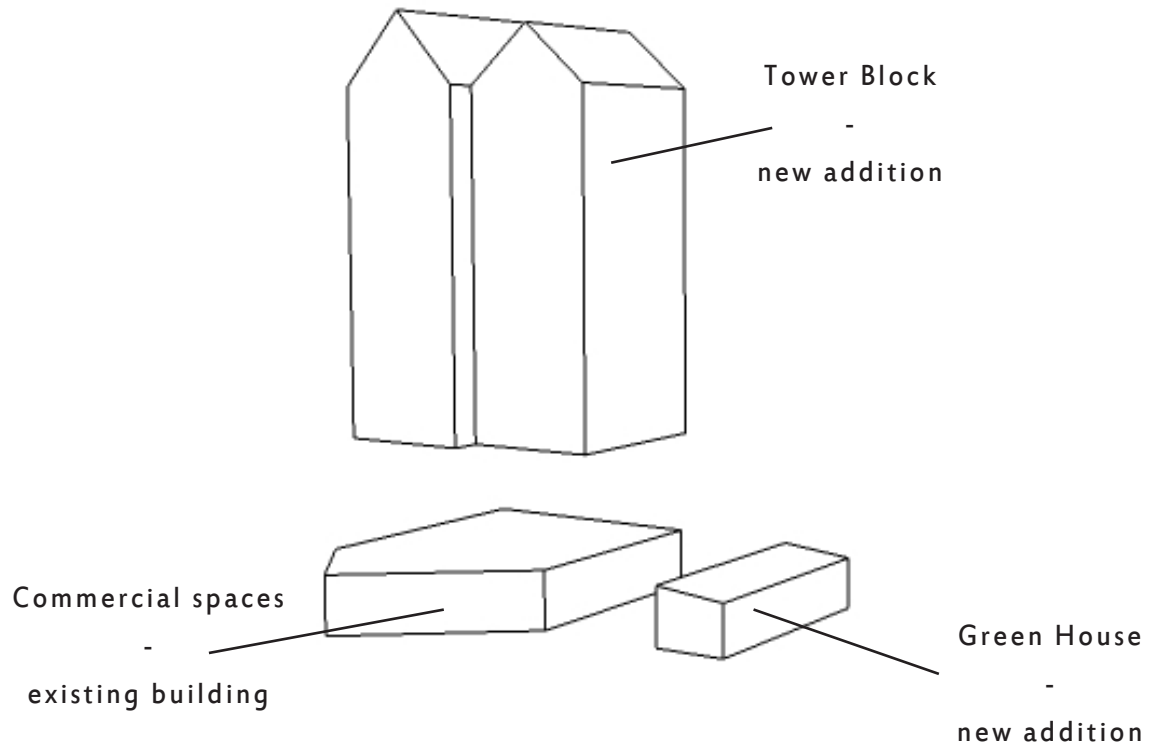
Placing & Massing

The building has been placed on top of a 1 floor building by the square, intended for commercial purposes. The tower has, on the square side, been retracted from the commercial building. In this way you do not lose the "human scale" of the square. The building does not reclaim additional land, but increases the exploitation of the land. The building is placed in north east and does not take away the important day and evening sun.

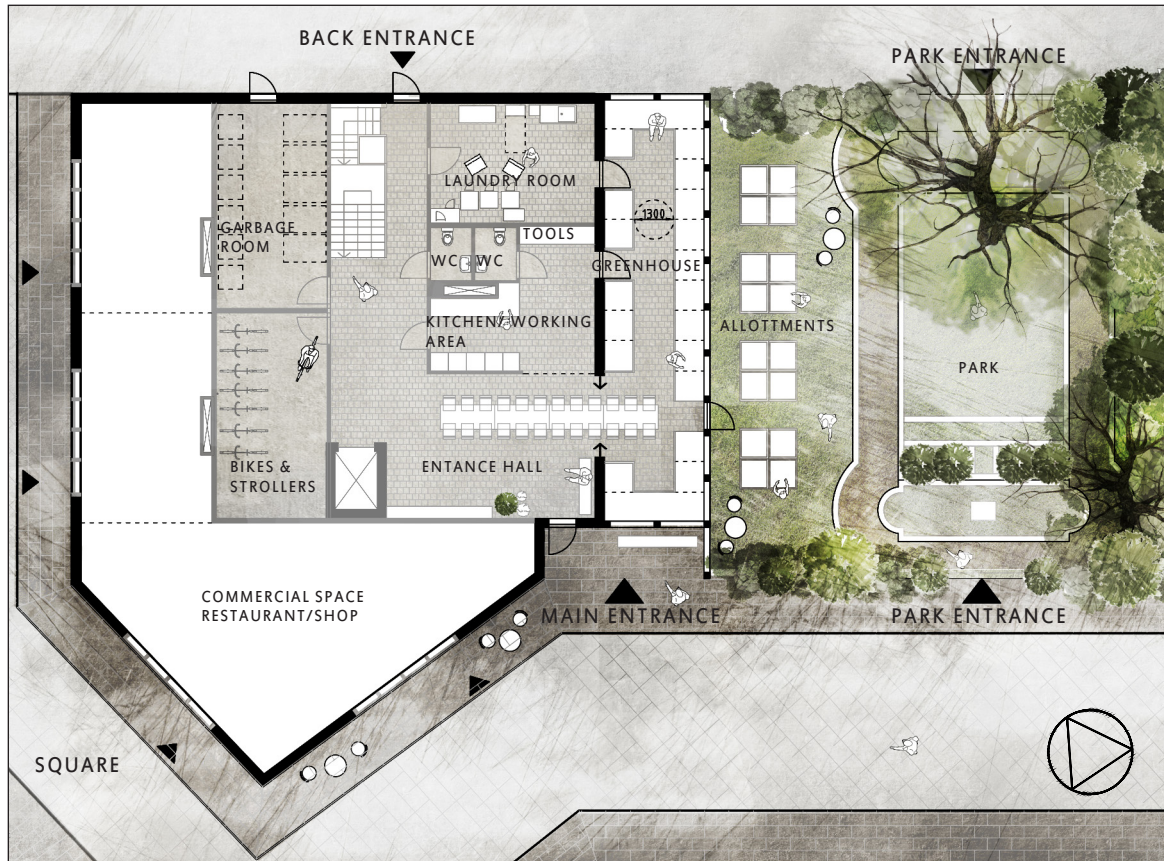
TOWER BLOCK

A tower block on top of an existing commercial building by the square/parkinglot.





4.2.2 The Entrance Floor



Entrance Floor 1:125

Social sustainability within the residential building/ greenhouse **Participation** in the home environment, gives a feeling of **belonging**, which is an important part of feeling that you have **quality of life** and **self-fulfilment**.

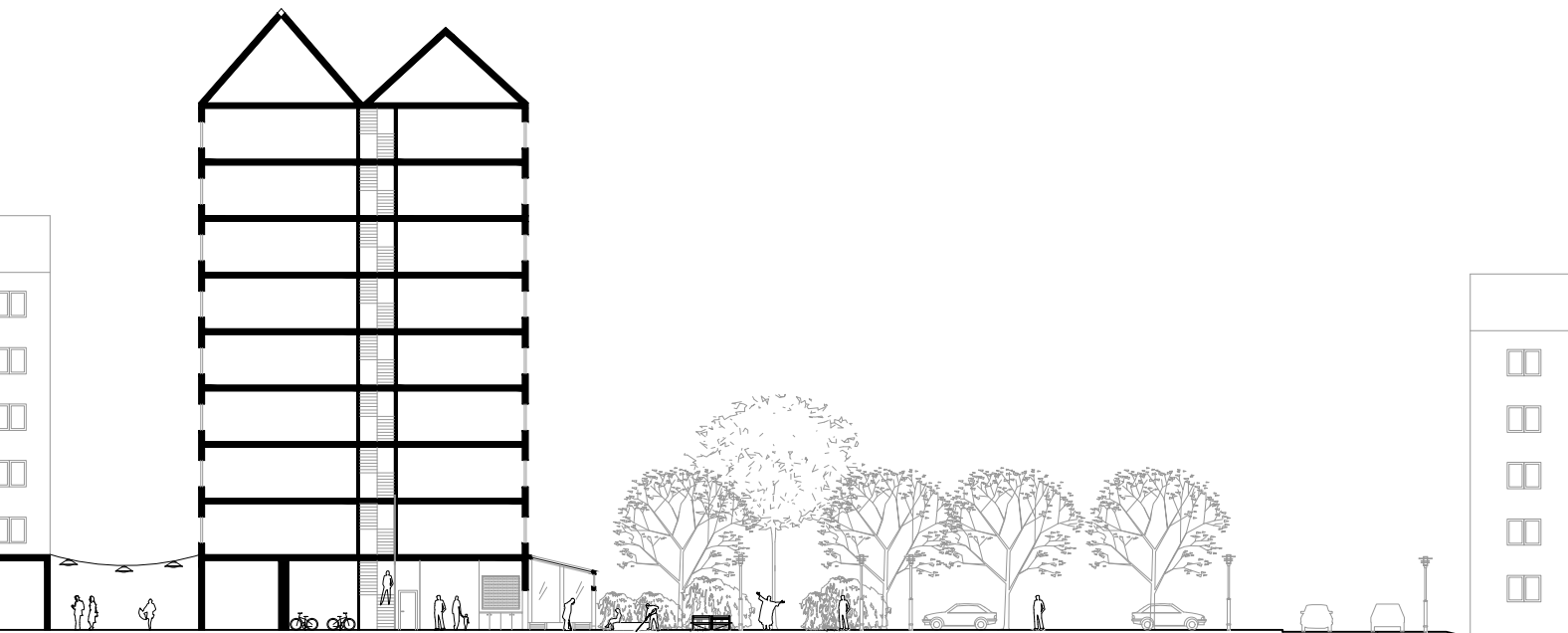


Entrance

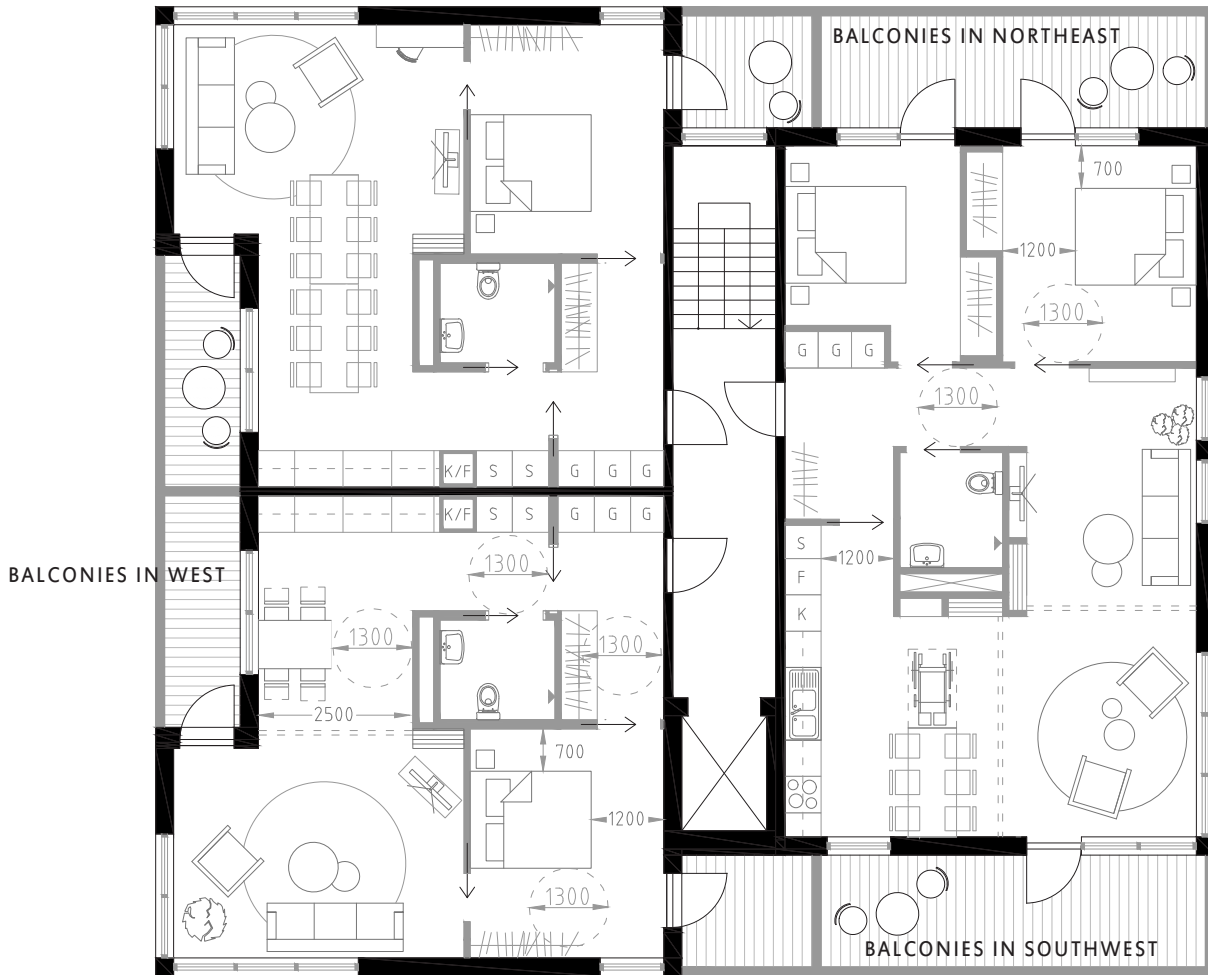
When entering the apartment building you have an direct visual contact with the greenhouse. Whether you are doing your laundry, throwing your garbage or checking your post you can see what is happening in the greenhouse. The entrance is a open space located next to the greenhouse and the workshop area. This gives the residents the opportunity to have get togethers, for example setting a long table and have a festival during harvest season.

Greenhouse & Park

The greenhouse fits a small allotment for each apartment, but can be assigned amongs residents as desired. In connection to the greenhouse there is a working/planing area and kitchen that can be reached through the greenhouse or the entrance hall. This reduces the risk of undesirable dirt and water in the entrance hall. The park works as a green barrier towards the parking lot. The park belongs to everyone in the neighborhood and works as a recreational area. The greenhouse continues out in the park where the residents have further allotments.



4.2.3 The Apartment



type plan, scale 1:125

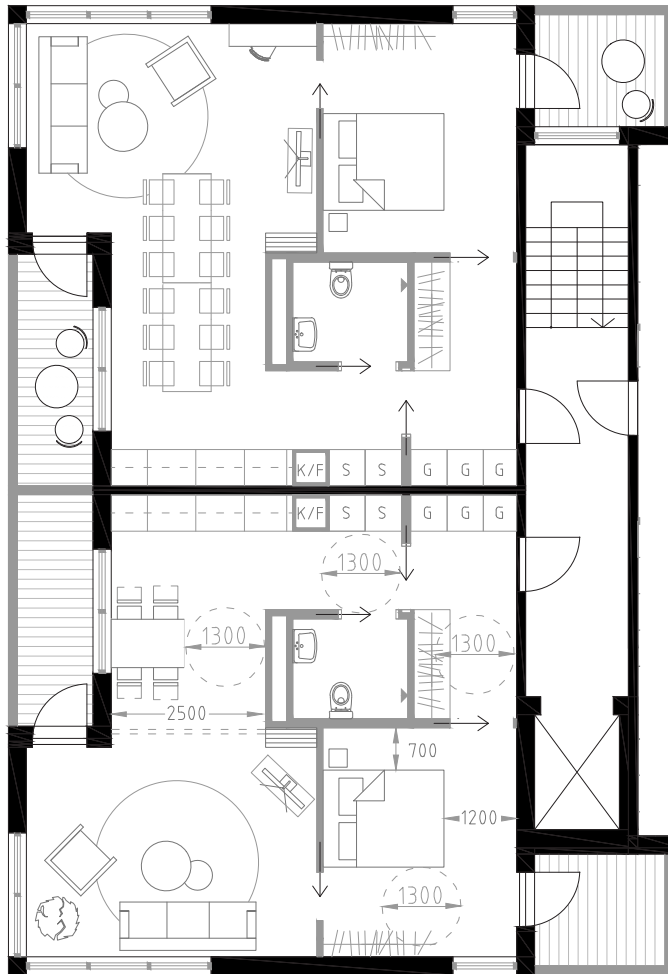
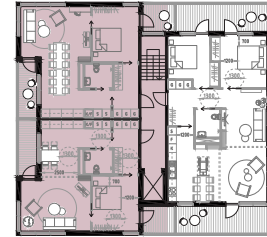
VISION

- circular movement, it creates a greater spacious sensation and provides alternative routes within the apartment and the option of closing a passage if needed.
- axiality & sight lines, opportunity to look through the rooms
- flexibility should work for various types of housing constellations. This is a deviation from "Folkhemmet", when the apartments were planned for the nuclear family.
- plentiful of natural light

Social sustainability within the apartment

The residents have the **right** to a qualitative home with layouts that give the user the **power** to make small changes in their homes. They have the **option** of taking different routes within the apartment, to either **participate** in social activities with other people living/visiting the apartment or to avoid them. The layout of the apartments is capable of handling unpredictable changes in life, this gives the user the **opportunity** to remain living there and thus keep their neighbors, which can provide a sense of **security** and **safety**. Social sustainability can also be achieved with carefully designed rooms/spaces with good natural light and views, as they are rooms that **stimulate** our senses and **awakens our emotions**.

1 BEDROOM APARTMENT

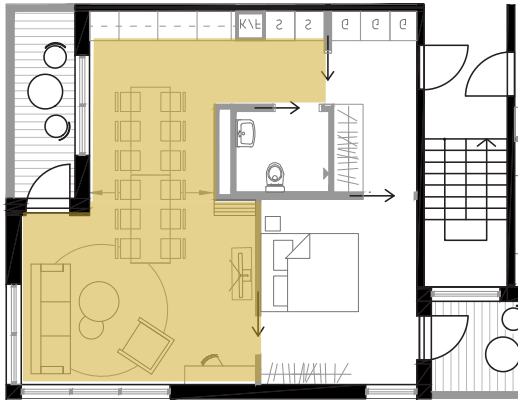


- 56 sqm
- One bedrooms
- Two balconies
- Corner apartment
- Daylight from three directions
- Circular movement
- Window view when entering the apartment

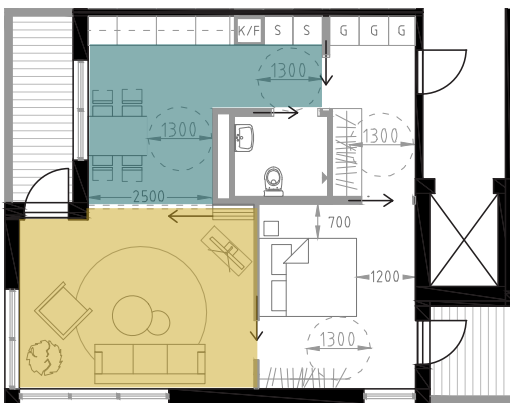
Capacity

- single household
- couple
- couple with small child
- two roommates

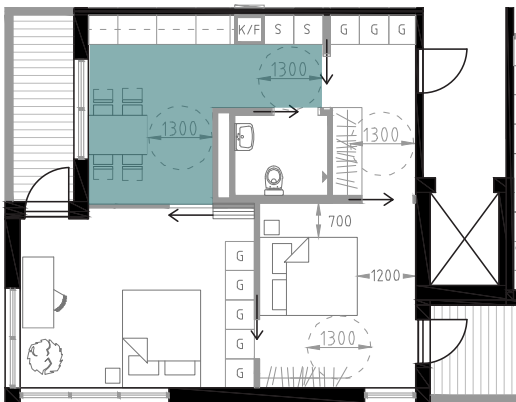
Kitchen & Livingroom furnishing options



- 32 sqm large kitchen and living room area, open space maximized.

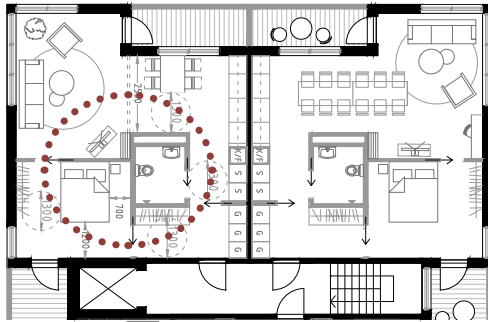


- 14 sqm kitchen
- 18 sqm living room



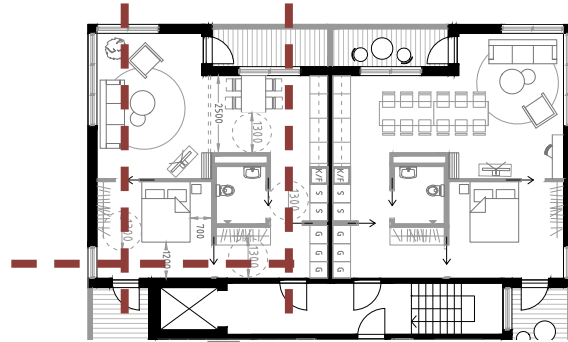
- 14 sqm kitchen
- 18 sqm bedroom

MOVEMENT



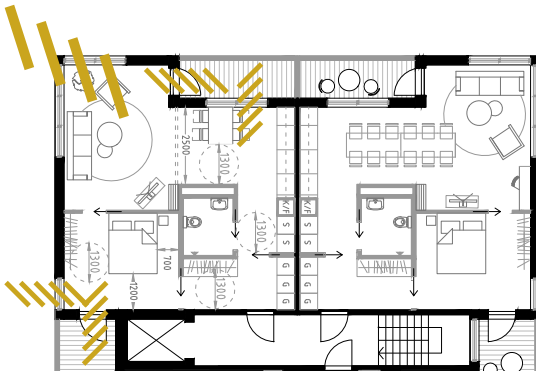
- Circular movement, no dead ends.
- Possibility through movement to choose to socialize or be private.

AXIALITY



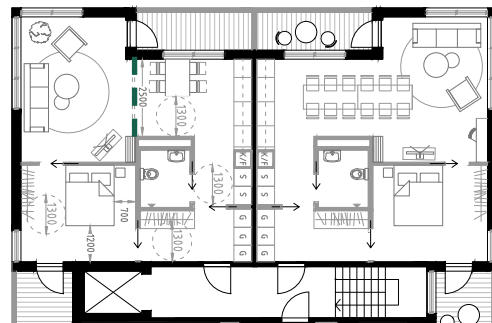
- Window view when entering the apartment
- Three long sightlines through the apartment.

DAYLIGHT



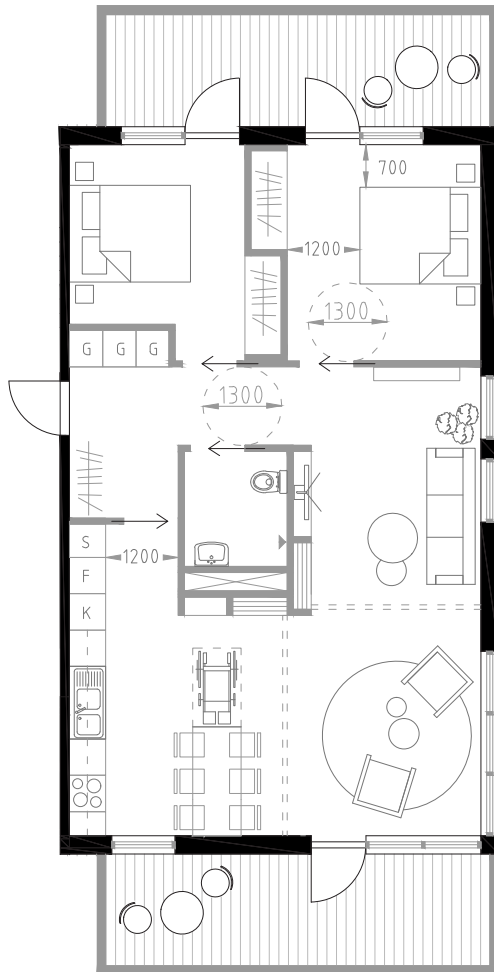
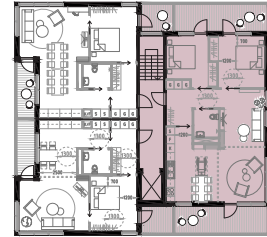
- Corner apartment
- daylight from three directions, two balconies

FLEXIBILITY/GENERALITY



- Open/closed between kitchen and livingroom after need and personal preferences. Possibility to create an extra bedroom without having to compromise with main functions.

2,5 BEDROOM APARTMENT

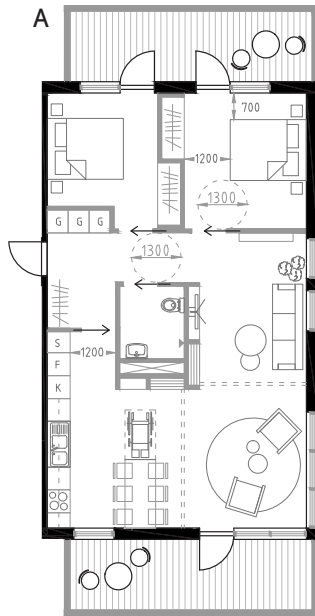


- 77 sqm
- Two large bedrooms
- Possibility to create an extra bedroom for permanent or temporary use
- Two balconies
- Corner apartment
- Daylight from three directions

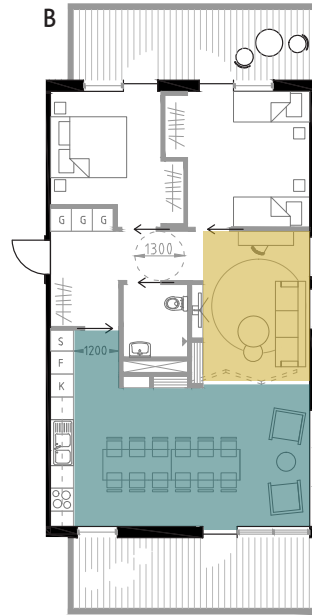
Capacity:

- 1 couple
- two couples
- couple with 1 child
- couple with two children

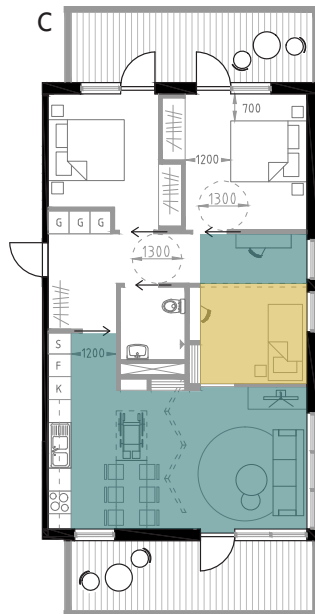
Kitchen & Livingroom furnishing options



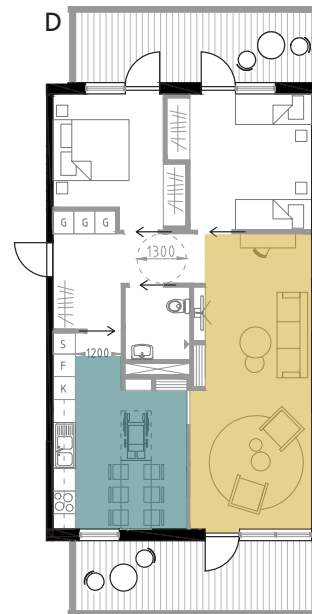
- 40 sqm large kitchen and living room area, open space maximized.



- 28 sqm large dining area for get-togethers
- 12,5 sqm TV-room

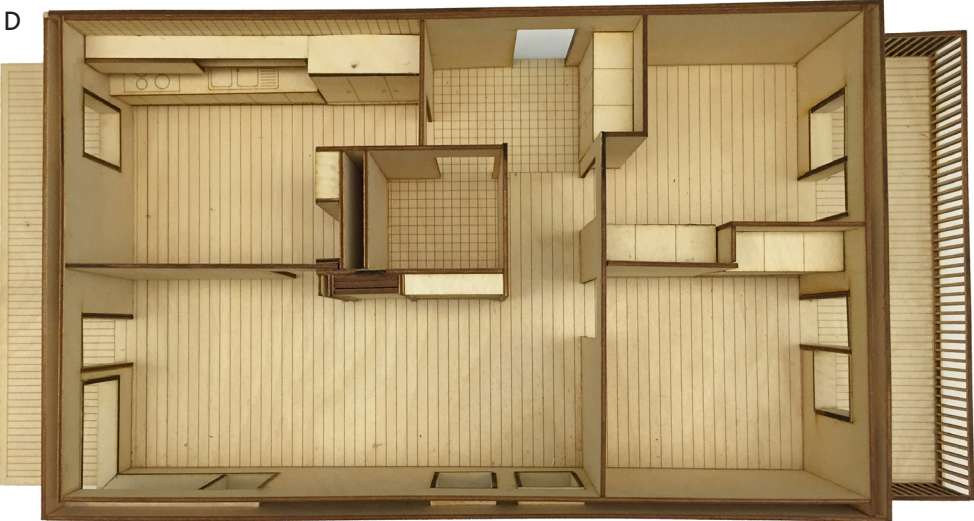
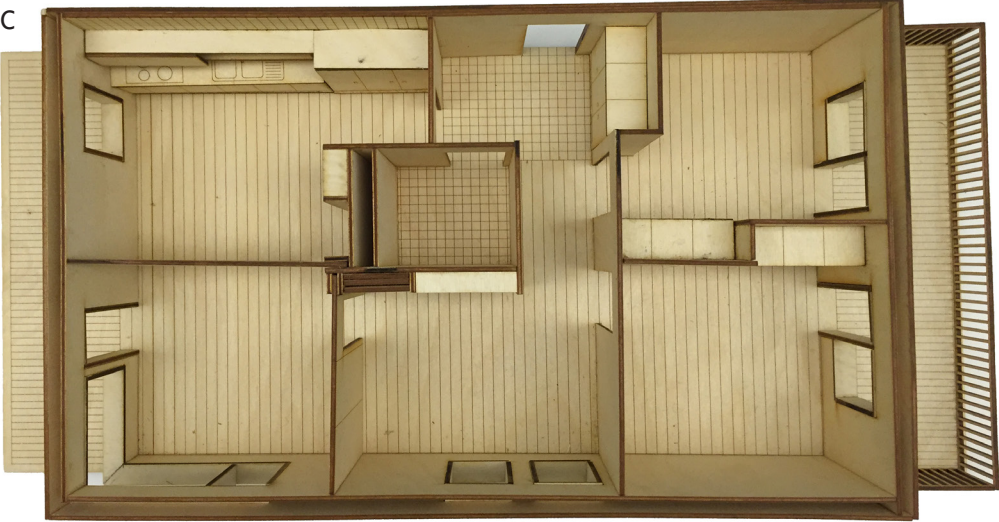


- 28 sqm open plan kitchen and living room
- 7,5 sqm extra bedroom
- 4 sqm office



- 16 sqm kitchen
- 24 sqm living room



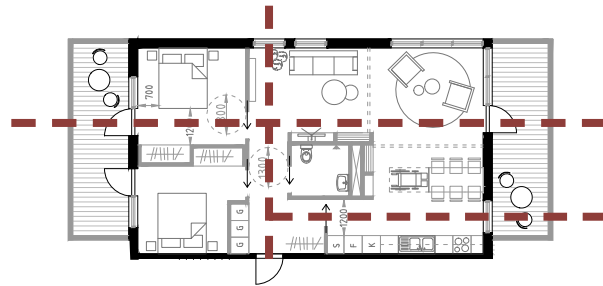


MOVEMENT



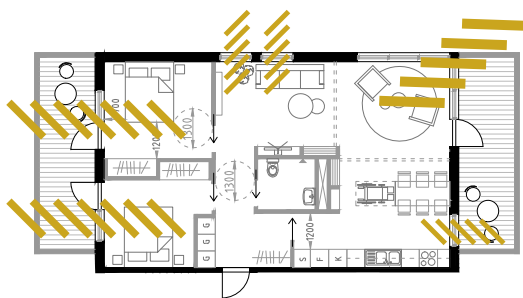
- Circular movement, no dead ends.
- Possibility through movement to choose to socialize or be private.

AXIALITY



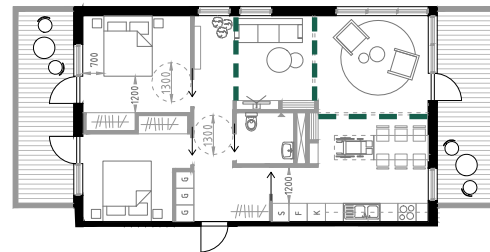
- Window view when entering the apartment
- Three long sightlines through the apartment.

DAYLIGHT



- Corner apartment
- Daylight from three directions, two balconies

FLEXIBILITY/GENERALITY



- Open/closed between kitchen and livingroom after need and personal preferences. Possibility to create an extra bedroom without having to compromise with main functions.



VIEW FROM THE ENTRANCE



VIEW FROM SOUTH-WEST BALCONY



4.2.4 The Greenhouse

Vision

- The Greenhouse should be a place for togetherness and recreation/relaxation) but also an important part in changing individual's attitude towards the environment. In the same way as HSB placed the bathtub next to the toilet in order to increase the desire for people to wash themselves, In this project the goal is to place essential functions (laundry room/garbage room) in such a way that the residents are forced to have visual contact with the greenhouse to reach them. This will not force the residents to care about the environment but hopefully it will bring a desire and curiosity for the nature and in that way achieve a greater environmental care.

Functions

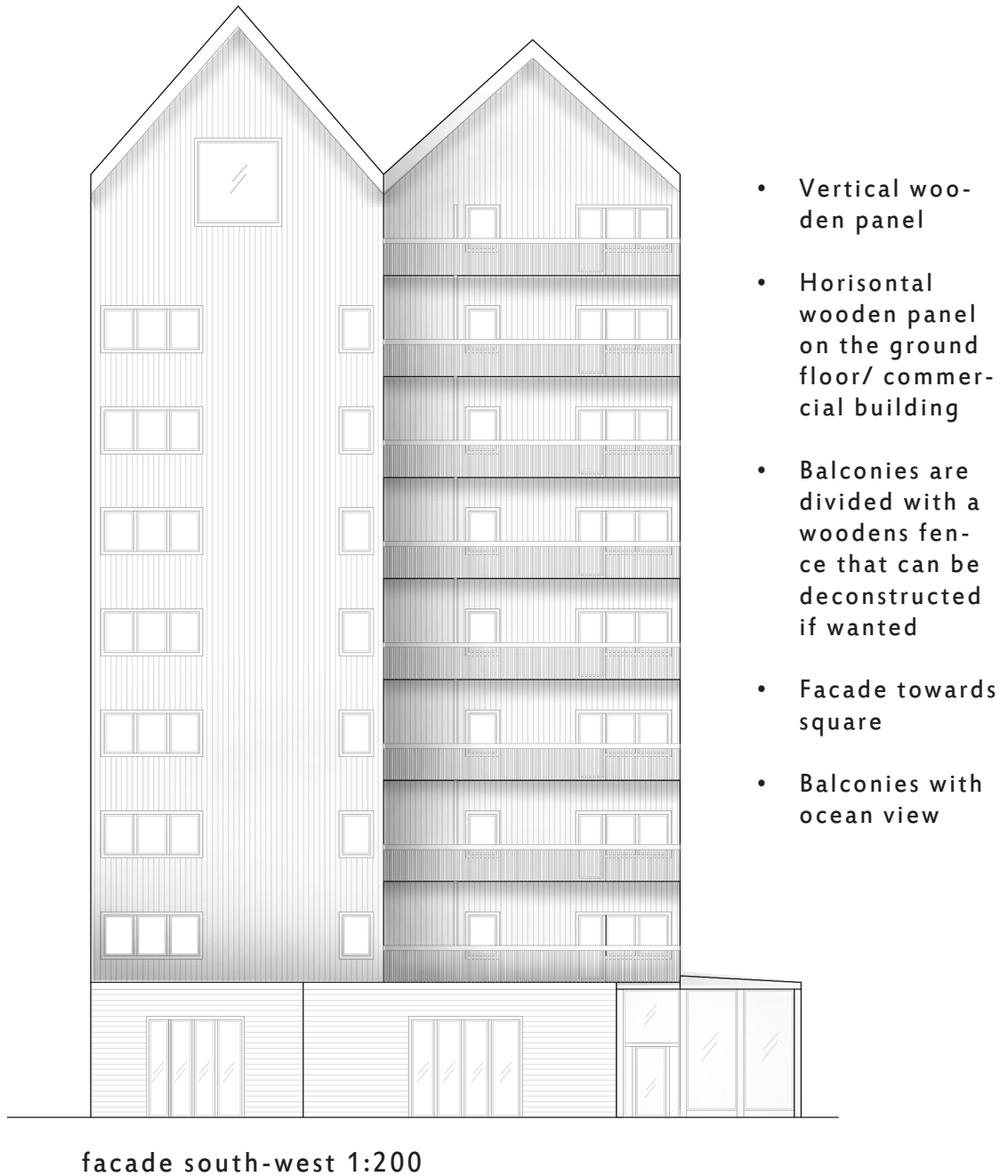
Indoor: Inside the greenhouse there is a small allotment for each apartment. The Entrance hall can be completely physically divided from the greenhouse when necessary. It is placed in such a way that everyone passing by has visual contact with the greenhouse but without having to walk through dirt and water.

Outdoor: The greenhouse is extended into the park with outdoor allotments. The park is small but yet has a significant role as a green barrier towards the parking lot. The park gives other residents in the area an insight and an opportunity to interact with those caring for the allotments.

Off season:

The workshop area can be extended into the greenroom, it can also work as a space for hibernation of plants.

4.2.5 Facades





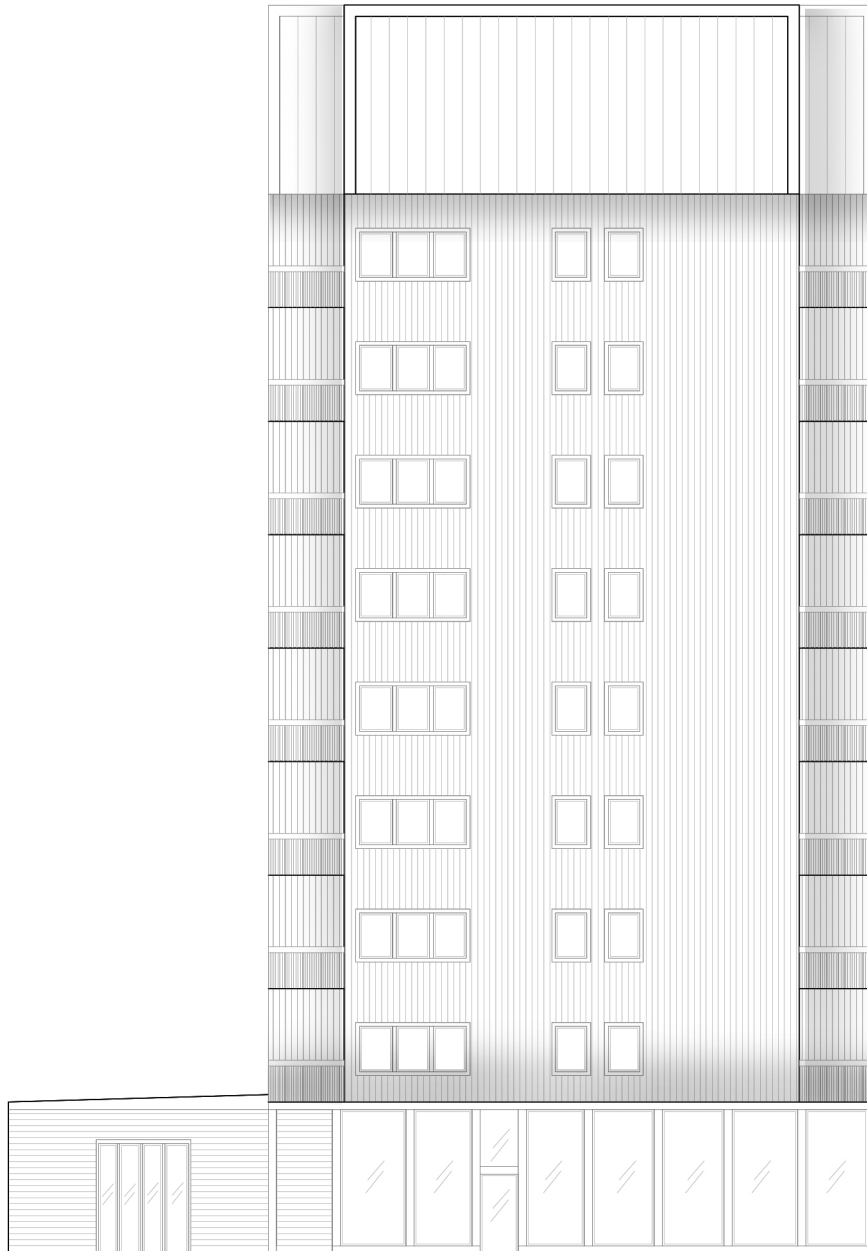
- Balconies facing the ocean

facade north-west 1:200



- Ground floor towards parking lot is a "closed" side with back entrance and garage entrance.
- Balconies are divided with a wooden fence that can be deconstructed if wanted

facade north-east 1:200

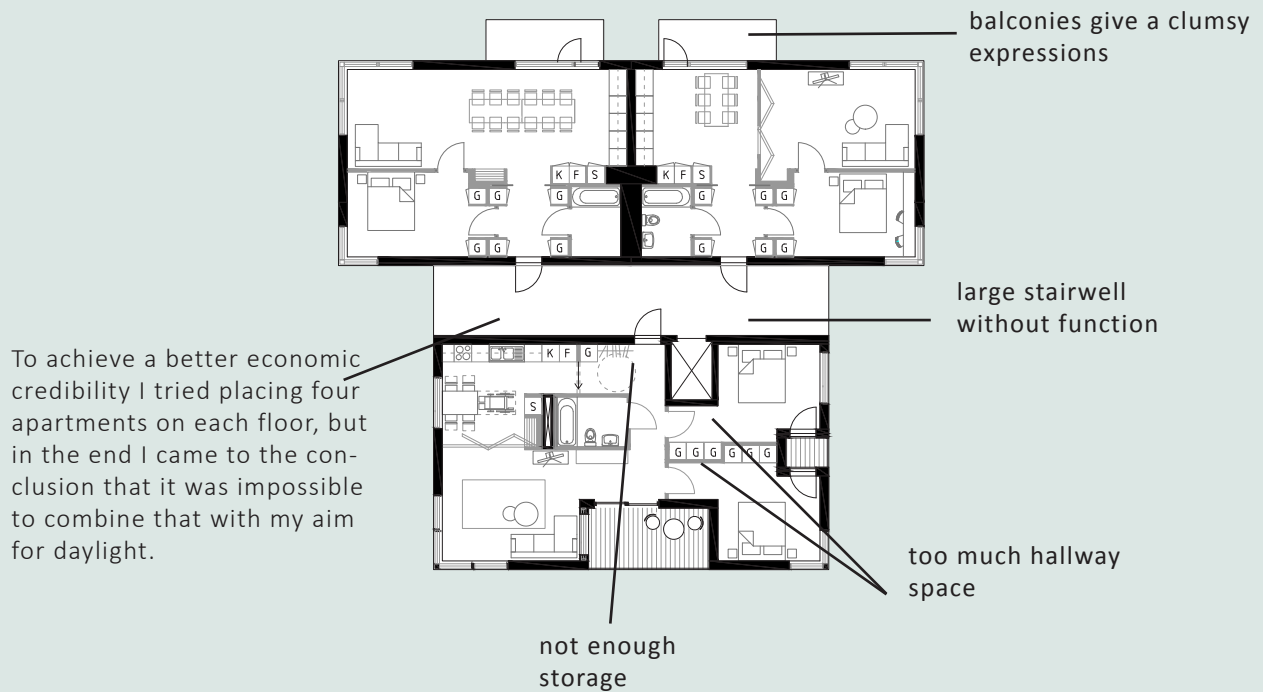


- Greenhouse with wooden structure
- Greenhouse in south-east
- Facade towards the park

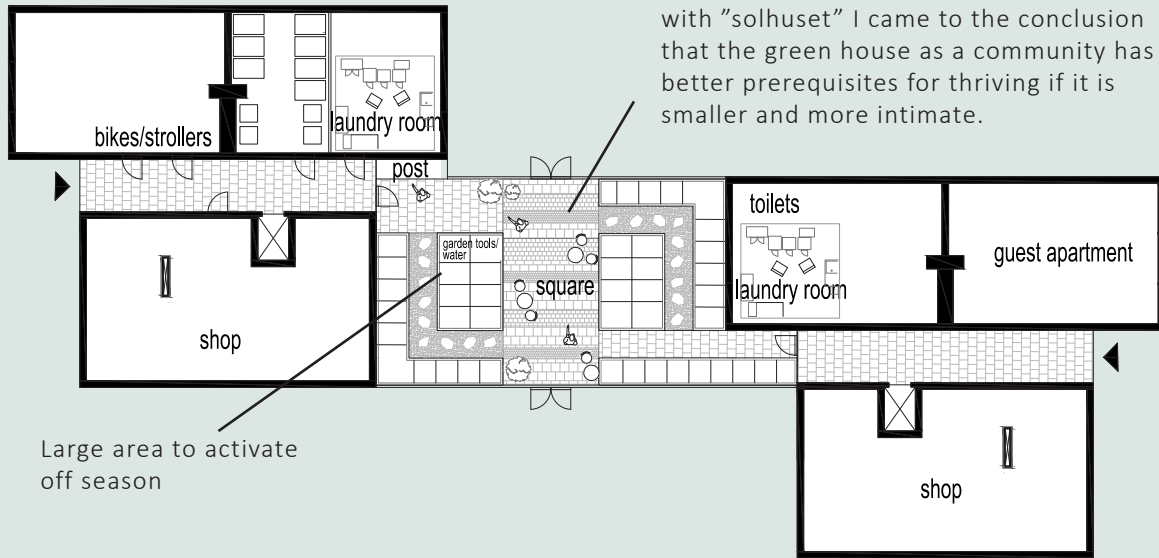
facade south-east 1:200

4.3 PROCESS & SKETCHES

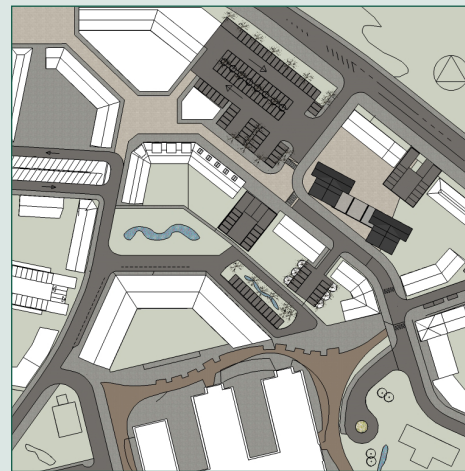
When starting to sketch I tried adding the architectural qualities that I had been lifting in my research. After this first outkast I kept working with the dys-functionalities that occurred in the layout.



At first I tried placing the building in a different location in the area. But when working with models and researching relations and light I came to the conclusion that the square was a better place for adding a tower block.



greenhouse to big. After the interview with "solhuset" I came to the conclusion that the green house as a community has better prerequisites for thriving if it is smaller and more intimate.



5. ENDNOTES & BIBLIOGRAPHY

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Images:

Fig. 1 Kitchen 1940-1950. Photo: Studio Granath.

<http://www.nordiskamuseet.se/sites/default/files/public/pressbilder/13-2.jpg> [2016-09-09]

Fig. 2 Livingroom 1950. Photo: Karl Erik Granath. Brud- och hemutställningen på NK i Stockholm.

http://www.nordiskamuseet.se/sites/default/files/public/pressbilder/n1_04892_karl_erik_granath_1950-tal.jpg [2016-09-09]

Fig. 3 Laundry Room. Photo: Karl Erik Granath, Nordiska museet.

<http://www.nordiskamuseet.se/sites/default/files/public/pressbilder/6284.jpg> [2016-09-09]

Fig. 4 Bathroom. Photo: André och Irène Reisz, Nordiska museet.

<http://www.nordiskamuseet.se/utställningar/badrummet> [2016-09-09]

Fig. 5 Interior. Photo taken from webpage www.ravjagarn.se, Photographer unknown.

http://www.ravjagarn.se/blogg/wp-content/uploads/s%C3%B6dra_guldheden_interi%C3%B6r_mot_k%C3%B6k.jpg [2016-09-09]

Fig. 6 Ture Tingström private photo album. Photo: Sandra Räder [2016-12-02]

Fig. 7 Ture Tingström private photo album. Photo: Sandra Räder [2016-12-02]

Fig. 8 Greenhouse. Photo: Sandra Räder [2016-12-02]

Fig. 9 Coffee shop sign. Photo: Sandra Räder [2016-12-02]

