

Build, live together

Joint building ventures: Empowerment and participation

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Abstract

We live in an increasingly globalized world, are facing a climate emergency, and rapidly increasing housing prices in most European cities. In Sweden, we see a trend towards more segregated cities and growing inequalities, a housing market dominated by large housing developers and a system that does not always favor building with quality. In order to face these problems, there is a need to find new strategies for organizing and building our homes and cities. Through a new system that brings more empowerment in the built environment to the inhabitants, social, economic, and ecological aspects can be improved by encouraging a mindset of sharing, meetings between neighbors, and participating in the actual building process. I also believe that there is a need and will of people to participate more in the built environment, their homes and close surroundings.

The thesis examines methods to bring more empowerment and participation to future residents in the development of housing. It investigates systems for user-initiated projects and the joint building venture in Berlin and Gothenburg. Case studies show contemporary examples of user-driven housing projects that have achieved something new in their context. Based on the findings in the research, the thesis proposes a new system for the joint building venture and implements it in a design proposal in the Gothenburg suburb Tynnered. The system includes an updated version of the cooperative tenancy and a structure with a community land trust where multiple joint building ventures share a site, an arrangement that makes it possible for groups of people to get together in joint building ventures to develop their own homes.

*“We need a system that promotes
user-driven design and brings
empowerment to the residents to
face our future urban challenges”*

We must build and live together.

*Special thanks to:
John, Clarisse, Anders
and my roommates at Segitzdamm 10.*

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Introduction

I was born and raised in the countryside but have lived for the last nine years in different cities. I experienced a lack of opportunities to impact the home and close surroundings and the sense of community among neighbors, something I have seen a lot in the countryside. Working with small projects for private clients, I have seen how people can realize and adapt their homes to their own needs and ideas. At the same time, the supply of housing in cities is monotonous, and the possibilities to impact few, something I also experience working with housing development in architecture offices. My Erasmus exchange at UdK in Berlin introduced me to the methods of joint building ventures, to the debate about community-led and self-organized housing, Berlin's vivid history of empowerment in the built environment, and the more or less norm of co-living among younger people.

The thesis takes its start in the concept of the joint building venture as a way of community-led housing development. It investigates it in the context of empowerment and participation. The focus is on a Swedish context to explore how to create more variety in the housing sector and the German context provides examples and inspiration of tools and methods. In many German states, The joint building venture has developed to be a commonly accepted way of developing housing buildings during the last 30 years. (*Broms Wessel, & Hedström, 2016*) In the previous years, the method has been more present in the debate in Sweden with initiatives such as byggemanskaper.se and Divercity.se, organizations that work to promote the joint building venture in Sweden. The thesis explores and proposes how new strategies could be implemented in Sweden to make the Joint building venture a tool for empowerment and more diversity in the building sector.

Keywords

Self-initiated architecture, paradigm change, resilience, systems thinking

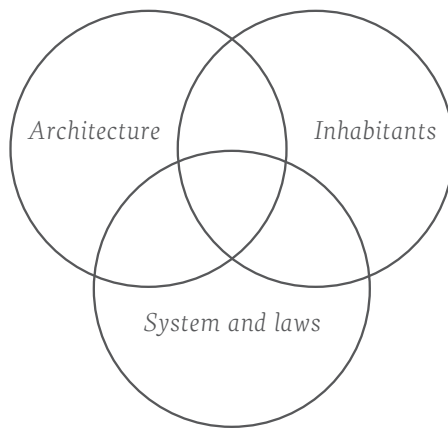


Figure 1: The system of the building sector, the aspects of empowerment and participation, and its connection to architecture.

“How can the joint building venture be a tool for more participation and empowerment in the built environment in a Swedish urban context?”

Aim

The thesis aims to be a part of a change towards a more self-initiated architecture in urban regions, to see housing beyond a standardized product and participation as a way of direct democracy in the built environment, by involving and giving power to the inhabitants to impact and be engaged in their lived environment. It aims to explore how the infrastructure for the joint building venture could be made to encourage empowerment in the home and the building and how this could be a way to produce a different type of architecture than what we mainly see in Sweden today.

Methods

The thesis is carried out in three parts; theory, case studies, and implementation. The research is based on contemporary literature and projects, the latest reports, and personal communication with people working within the field of focus. The projects included in the case studies are based on project information and, in the cases where it has been possible, site visits. The final implementation part is based on the research, re-interpretation, adaptation, and combination of the findings applied to the proposed context of the suburban area in Gothenburg.

Delimitations

The research will focus on a Swedish suburban context and on projects with a social and environmentally sustainable profile that increases the participation of the inhabitants. It will not go deeper into the participatory process of the joint building ventures.

Reading instructions

In the first part, *context*, the reader is introduced to the general guidelines approved by the Swedish government and the UN and the importance of participation and empowerment. The thesis then introduces the owning structures, tenures, and a selection of tools to achieve empowerment and participation in housing development, tools mainly found in the research and investigation of Germany and Berlin and that could be used in a Swedish context. *The case studies* show the contemporary architecture of community-led housing projects that have achieved something new in their context. The last part, *implementation*, demonstrates a new system for the joint building venture in Sweden, an updated version of the cooperative tenancy and a system of community land trust. It presents a way for groups of people to get together in joint building ventures to develop their own homes.

But first, let us get in a good mood with some funky music, of course, dedicated to the basis of this report: the house. Scan the QR -code, and plug in the speakers:



How can the joint building
venture be a tool for
more participation and
empowerment in the built
environment in a Swedish
urban context?

*How can an infrastructure for user-driven
housing development be designed for a Swedish
context, and how can the architecture be adapted
to this system?*

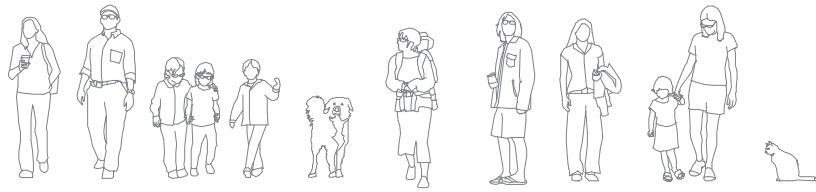
Context

Climate crisis, growing inequalities, and a system that seldom favors building with quality and produces monotonous housing.

Increasing globalization, a climate threat that is getting more and more present, rising housing prices in most European cities, an average increase of 74% in Germany and 47% in Sweden in the last ten years (*globalproperty guide, 2021*), and increasing loneliness in our cities. In Sweden, we see a trend towards more segregated cities and growing inequalities (*Miljö- och energidepartementet, 2018*), a housing market dominated by large housing developers, and a system that generally produces a homogeneous housing stock and seldom favor building with quality. This affects both our society, the climate, and the long-term economy negative (*Crona, 2018*).

The *Agenda 2030* from the UN consists of 17 global sustainability goals made to provide general guidelines to deal with the problems we are facing, including policies, directly addressing sustainable cities and communities, as goal number 11: “*Make cities and human settlements inclusive, safe, resilient and sustainable*” (*UN, 2021*). The *Agenda 2030* were adopted in 2015 by UN and accepted by Sweden. A year later, the *New Urban Agenda* was accepted and is a framework for the global work with sustainable city planning, where Sweden has stated to have a leading role globally in the field of sustainable city planning (*Kulturdepartementet, 2018*). The importance of participation is included in the vision of the *New Urban Agenda*, among several social and environmental aspects “*We envisage cities and human settlements that: Are participatory, promote civic engagement, engender a sense of belonging and ownership among all their inhabitants...*” (*UN, 2017*)

How can we meet the problems and find new systems of organizing and building our homes and cities? We need to find a way to, in practice, get the building closer to the inhabitants, the users (*see figure 2*). I believe more initiatives must be taken to involve and use the capacity and engagement of the people as a resource to create or future city environments. The following pages give an insight into the policy *Designed Living Environment* a domestic policy that connects to *Agenda 2030 and New Urban Agenda*. It also gives an introduction to empowerment and the importance of creating possibilities for people to have a direct impact and possibility to self-organization in the built environment.



User = own interest, diversity, and long term perspective.

Figure 2: Who makes the city? With a new system, the development could come directly from the users.

Designed Living Environment

A policy for the built environment including architecture, form, and design

A policy from the Swedish government

Designed Living Environment is a policy to improve the built environment, accepted by the Swedish government 2018.

“Architecture, form, and design must contribute to a sustainable, equal, and less segregated society with carefully Designed Living Environments, where everyone is given good conditions to influence the development of the common environment.” (Kulturdepartementet, 2018)

It is designed to be a guideline for municipalities to put the aims of the direction into practice. The objective is to strengthen the value and significance of architecture, form, and design to the individual, the living environment, and the sustainable development of the society. The policy underlines the importance of the democratic aspects of city planning, of including the people in the process of developing the future living environments to ensure quality and to give people the chance to have an impact on their current living environment (Kulturdepartementet, 2018). Participation is an important factor since the perceived participation and the health of people has a connection (Folkhälsomyndigheten, 2019). Further, the policy declares that the short-term profit should not be seen before the long-term values such as ecological sustainability and social aspects (Kulturdepartementet, 2018).

The local strategy, Västra götaland

The county Västra götalandsregionen, including the City of Gothenburg, has a strategy that relates to the directions *Designed Living Environment*. The strategy encourages collaboration between organizations to spread knowledge that promotes a change towards a sustainable lifestyle and through “do it yourself” solutions create new inventions within the field of participation and empowerment in the built environment. The report also points out that projects promoting user-driven design can be a way of increasing the knowledge about the function and use of design (Västra Götalandsregionen [VGR], 2019). Two of the prioritized working fields mentioned in the strategy are the following:

“Develop inclusive working methods and strengthen inter-municipal collaboration that contributes to participation and sustainable living environments throughout Västra Götaland”

“Increase residents’ empowerment and commitment to a sustainable lifestyle through pilot projects, to promote intercultural dialogue and participation, and to inspire changing consumption patterns” (VGR, 2019)

“Architecture, form, and design must contribute to a sustainable, equal, and less segregated society with carefully Designed Living Environments, where everyone is given good conditions to influence the development of the common environment.”

(Kulturdepartementet, 2018)

Empowerment

In the home, building and close surrounding

Empowerment

“-The act of giving somebody more control over their own life or the situation they are in.

*-(formal) the act of giving somebody the power or authority to do something.”
(Oxfordlearnersdictionaries, 2021)*

Architecture and empowerment

By creating systems and methods for people to have the opportunity to participate in the development of the built environment, people get empowerment. This participation creates more connection between the people and the architecture and willpower to create something particular and then also take care of it. Empowerment in the built environment can also be seen in a broader democratic perspective by giving the people a chance to engage in the creation of the cityscape and our living environments, which is an essential factor to consider (VGR, 2019).

In the report, “*Ombildning av hyresrätter till bostadsrätter i Göteborgs ytterstadsdelar*” by Centrum för Boendets arkitektur på Chalmers [CBA] (2018) the transformation from rental rights to tenant ownership in Gothenburg’s suburb areas is analyzed. Many apartments had been changed and renovated by the inhabitants after they became the owners of their apartments. 84% of the people who answered a survey done in the report pointed out that they appreciated the possibility of being able to change their apartment. People see it as a quality to live in an owned

apartment due to the possibility of making changes and being responsible for their apartment (CBA, 2019). Empowerment over the own home is the possibility of impacting and being responsible for the house and the home. The empowerment can also be achieved in cooperative models where the inhabitants own together which also naturally brings the aspects of cooperation and community.

Who wants to be a part?

Thoughts from a conversation about cooperative tenure forms with Ylva Sandström: How much do the inhabitants want to be a part of associations to change their environment? The base of the cooperation ideas is that the initiatives have to come from a grassroots movement. However, as always, first comes knowledge. People need to be informed to then be able to demand and take part in a change. The idea of the cooperative is a way for people to get influence in their home and close surroundings without more considerable economic resources (Y. Sandström, personal communication, February 16, 2021).

Thoughts about what empowerment

Cities are in many cases structured in a way where the inhabitants of the building often have low or no impact on their own building and close surroundings. How could we bring this to a larger scale into cities? In a city with a history of almost free space, Berlin, the initiatives are seen all around the city, from community gardens to autonomous house projects spreading a vivid and human impression to its surrounding.

“Empowerment- The act of giving somebody more control over their own life or the situation they are in.”

(Oxfordlearnersdictionaries, 2021)



Figure 3 (Melo, 2020) CC0. Taking part in the building process can be a way of empowerment in the built environment.

Tools for participation and empowerment

In the home, building and close surrounding

The end-user as developer increases the interest and ambitions to achieve a good result. Self-organized housing naturally brings long-term perspectives and participation over time and the architecture is a part of this continuous process, the making of our lived environment.

In the following chapter, several tools for participation and empowerment in the built environment are presented, focusing on a Swedish context and how the policies' words could be taken into practice.

Tools for participation and empowerment - to bring policies into practice



Figure 4 (Beazy, 2020) CC0. Tools, even if the tool for empowerment and participation in the built environment mainly is about knowledge.

Tenures

Participation is continuous

Tenures

The tenure is an essential factor for empowerment in the building since it regulates the owning structure and thereby the inhabitant's possibilities and responsibilities. There are few alternatives in the forms of tenure in Sweden (see Figure 5) today, and the house is often seen as an investment, a commodity, people speak about, *the housing market* and *housing-careers*. Increasing prices have made it hard for many people to own their homes and have driven up private house loans, which is also a factor in the increasing segregation in Swedish cities (Miljö- och energidepartementet, 2018).

The Swedish government has recognized the problem, and in 2018 the government decided to support the cooperative tenancy (Olsson et al., 2018), a non-speculative tenure where the residents organize the building. This represents a will to create a more diverse and inclusive housing sector.

Rental right

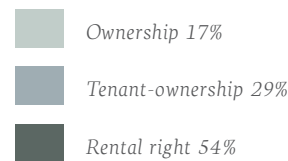
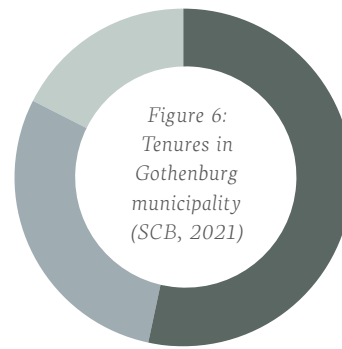
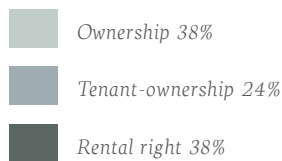
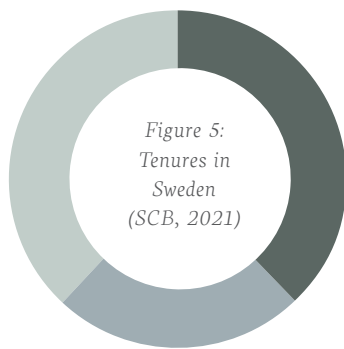
The rental right is a tenure where the home is rented from a landlord who owns the property (Boverket, 2019). 38% of the Housing stock in Sweden are rental apartments (SCB, 2021). The influence in the apartment and the building for the inhabitant in a rental apartment is low in comparison with the other tenures, but on the other hand, there is no need for own capital.

Ownership

The home is a private property of the owner, in Sweden mainly used for detached houses and rowhouses. Only 0,4% of the apartments in Sweden are of the tenure ownership (SCB, 2021). This tenure entails that the home can be sold, mortgaged, or rented out by the owner (Boverket, 2019) but the owner must have a share in the community association, which will take care of the common parts of the house.

Tenant-ownership

The tenants are members of a tenant-owner association, which owns the property, and each member has the right to use one apartment. A tenant-ownership can generally be sold on the open housing market, but the association must approve the buyer (Boverket, 2019). A monthly fee is paid to the association for the maintenance of the common parts and depends on the association's economy (Crona, 2019). The tenant-owner associations (Swedish abbreviation: Brf.) was created in the 1870s from a Danish role model. The Brf. was founded as a way for workers to organize to provide affordable housing for themselves, in a cooperative form. Later the cooperative aspect of the Brf. was taken away, and the tenure is today no longer a tool to provide self-initiated housing (Broms Wessel, & Hedström, 2016).



Cooperative tenancy

The cooperative tenancy is something in between a rental right and a tenant-ownership. An association owns or rents a property and the members rents their apartments from the association. The apartment cannot be sold but is returned to the association when a member moves out (Boverket, 2019), and the tenure is therefore not a part of a speculative housing market. A deposit is paid to the association when moving in and is refunded when moving out. The deposit brings capital to the association, which, depending on the structure, can be used to keep financial costs down and lower rent. Today, there are two types of cooperative tenancy in Sweden: the owner and rental model (Y. Sandström, personal communication, February 16, 2021).

The owning model: the building is owned by the association consisting of the inhabitants. The price is set after a cost price, and the association is fully responsible for the house. This gives the inhabitants the opportunity to make all the decisions themselves regarding the building without the need for a large sum of private capital.

The rental model: the association rents the entire building as one unit, which gives the inhabitants more influence in the building

than a normal rental apartment, caretaking and renting out the apartments is often managed by the association. But all decisions are not taken by the inhabitants since the property is owned by an external part. An advantage with the external owner is that the model lowers the risk for the inhabitants (Westholm, 2019).

Andelsbolig - cooperative tenancy

An interesting tenure form in Denmark is the “Andelsbolig” which is familiar to the Swedish Cooperative tenancy. In the “Andelsbolig” tenure, the price is not set from the market but from the economy of the housing association and the user value. Investments done in the apartment can also raise the prices, which encourage the inhabitants to take care of their apartments (Øresunddirekt, 2021).

Housing cooperatives

Housing Cooperatives are organisations that owns several residential houses on the behalf of its members, and can be seen as a cooperative tenancy in a larger scale. In Sweden SKB (*Stockholms kooperativa bostadsbolag*) is the largest housing cooperative, founded in the 1920’s to create affordable rental apartments to its members (Broms Wessel, & Hedström, 2016).

The joint building venture

Community-led housing

The joint building venture

The joint building venture is a method for community-led housing; the future residents take the initiative to develop housing for themselves. The method challenges the conventional system and gives future users the possibility to design and take part in the development of their homes. The joint building venture can be organized with different tenures, owning structures, and financing methods, but the process always includes the future users, who therefore can adapt the architecture after their situation and needs.

“A joint building venture is a group of people who together, based on their own ambitions, plan, build and then use a building.”
(Föreningen för byggemskaper, 2021)

Joint building venture projects are adapted to the future residents and therefore naturally create diversity. Personal interest comes with a long-term perspective that favors quality, improves ecological sustainability, and saves costs over time. The method has often been a tool to meet a demand or wish that could not be found on the regular housing market. By including small actors in the urban development, a variety and more vivid district can be achieved and in newly developed neighborhoods the joint building venture can be a tool to create community and a unique character (Broms Wessel, & Hedström, 2016).

Co-housing

In most cases, joint building ventures are connected with co-housing ideas to create a community within the building, *build together, live together*. Co-housing means that independent homes are centered around common activity rooms, shared spaces that all the residents can use. This type of living counteracts loneliness, creates a community among the residents, and is often more sustainable and less resource-demanding than other living forms (Westholm, 2019). The positive effects of collective housing also tend to spread outside the own house (Broms Wessel, & Hedström, 2016).

Finance

The high initial costs of land, planning, and building in combination with the problem for the groups to find financing are holdbacks for the joint building ventures in Sweden today (Göteborgs Stad Fastighetskontoret, 2020). The time span from idea to the finished building must also be shortened, since too long processes are a problem for groups building for themselves, both due to the risk of changed personal conditions and the cost of long processes. The financial problems are the major issue, for Swedish banks, the joint building venture is relatively unknown and seen as a larger risk factor. In the German context, joint building ventures are considered to have less risk than conventional developers due to the strong personal interest and multiple financiers (Westholm, H. 2019).

“A joint building venture is a group of people who together, based on their own ambitions, plan, build and then use a building.”

(Föreningen för byggemenskaper, 2021)



Figure 7: R50, ifau Architekten, an acknowledge joint building venture in central Berlin (Bauwelt einblick, 2019).

Self-build

Empowerment, personalization and direct participation

Self-build

Self-build in combination with the joint building venture gives future residents a direct impact on their living environment and can be a way to save costs and personalize the home. Self-build lets residents themselves take part in the building process of their new home, which I am convinced creates a connection and a deeper understanding for the building.

History

Many of the old idyllic rowhouses and detached houses we see in central locations today, such as “*Landala egnahem*” in Gothenburg, arose from a movement initiated as a reaction against speculation in the building sector that had occurred due to the vast migration to cities about hundred years ago (Broms Wessel, & Hedström, 2016). The movement “*egnahemsrörelsen*” (translated: *Own home movement*) was started to create decent housing for working-class people since many lived under poor conditions in overpopulated cities. The “*egnahemsrörelsen*” offered an own house with a piece of land, which also made it possible to be self-reliant to a certain extent.

The ground was leased from the city over a long time frame to avoid land speculation. To make it accessible for less wealthy people, an initiative in Stockholm started to allow people to take part in the building process instead of paying some of the initial fees. This self-build, Prefabrication, the organization, and the financial support from the government are mentioned as the success factors of *egnahemsrörelsen* (Broms Wessel, & Hedström, 2016).

Raw space architecture

Raw space is a concept of letting future residents complete the interior of the project. The concept can lead to a lower price for the user by doing parts of the work and choosing the finished standard themselves. It also gives a possibility to adapt the apartment after the current need and plan for future changes. The concept is common on the market for detached homes, with alternatives such as choosing the level of finishing or an unfinished second floor. In Germany, the concept of raw apartments has been used in recent years. One example is the *Ausbauhaus Neukölln*, a project where the members of the joint building venture could choose the level of finishing on their apartment, from just a bath to a complete finished interior. In Sweden, the concept is implemented in a current project in Uppsala; a difference is that specific regulations require a complete kitchen and bathroom to be approved as a home to be able to sell the apartment to a customer (Berg, J, 2020).

Self-build, cost reduction?

The price of construction in Sweden is highest in Europe (Crona, 2019). Letting a part of the work be done by the inhabitant's cost can be saved, mainly due to the high labor costs but there is also a critic against the idea that self-build always reduces the costs. Efficiency in serial production and material discounts for larger companies gives prices hard to compete with (H. Westholm, personal communication, February 2, 2021). The factors that are included in the discussion of price reduction by self-build are many and often hard to compare but building for oneself gives a long-term perspective, and quality is cost-effective in the long run (Crona, 2019).



Figure 8 (Engström, 1927) CC-BY. Building permit drawing for the housemodel "Knivsta" from "egnahemsrörelsen"

Self-build, a report from Egnahemsbolaget
 "Rapport - självbyggeri" is a report done by the Gothenburg company Egnahemsbolaget, where the possibility for them to introduce self-build is examined. The report concluded that the main group interested in self-build did not correlate with the intended target group of Egnahemsbolaget but that it would be possible and that houses with an unfinished attic would cost around 600000sek less.

In the survey done by Egnahemsbolaget, 45% would prefer a finished house, 25% a house that they could finish themselves and the other 30% mainly answered that the price was too high or that they prefer an apartment. The group interested in self-build was mainly

older people without kids at home and a relatively good economy, but also the other groups of people showed a high interest in self-build. 19% of the people interested in the self-build concept would do all work by themselves, and the rest would do it with support from artisans (Egnahemsbolaget, 2020).

Self-build is not only a way to afford but also a way to personalize the home. That people want to hire artisans is not a bad sign and required for some work, and hiring artisans can support small local businesses. The desire of people to take an active part in their homes, which is displayed in the survey, should be utilized by giving people possibilities for initiatives.

Community land trust

Who owns the land?

Community land trust

A community land trust (CLT) is a community-led, non-profit organization that buys and owns land to manage it on behalf of the local community. The land is leased by the CLT with a land-lease contract to the user that owns the building, the user could be a private person, organization, or an association. By separating land and building, the control of the building belongs to the residents and the CLT takes away the land from the open market and therefore avoids land speculation. The organization of the CLT can be arranged in different ways, including both the people holding the land lease rights and the surrounding neighbors (*id22 et al., 2017*). The price of the land is connected to the development created by the community and by public investments. Joseph Stiglitz demonstrated this correlation between public investments and the increased real estate value in the 1970s. With a community land trust, this community and public created value is brought back to the community (*J. Lagander, personal communication, March 1, 2021*).

Securing expansion: By inviting private capital, banks, and crowdfunding, the CLT has investors involved that requires interest which make sure that the land trust expands and that in its democratic structure not stops expanding and uses the income of the land rent to lower the land lease rent to the benefit of its members (*J. Lavender, personal communication, March 1, 2021*).

The situation in Sweden and Germany

Sweden does at the moment not have any community land trust. But there are still a few examples of arrangements that handle the problems with high and rising land prices such as different associations and cooperatives (*J. Lagander, personal communication, March 1, 2021*). In Berlin, *Stiftung trias* is an active community land trust and the organization *Das Miethäuser Syndikat* is an alternative model of an CLT, more about the concept of *Das Miethäuser Syndikat* in the case studies.

Land lease right

Land lease right (*Swedish: tomträtt*) is a system to lease land for a particular purpose over a given time, often up to 99 years. It is used similarly by cities and municipalities in Germany and Sweden. The land lease contract is a form used by CLTs and foundations to lease land to secure affordable rents for housing or activities. In Sweden, the system was developed during the times of the “*Egnahems movement*” as a way to avoid speculation. (*Broms Wessel, & Hedström, 2016*) In Sweden the Land lease right is used exclusively by municipalities and the state. In Gothenburg The land lease contract is today more seldomly used, and instead, the city often sells the land since this allows the city to finance the common infrastructure and the cost of the organization (*Göteborgs Stad Fastighetskontoret, 2020*). On the other hand, the regular income from the lease contracts is lost.

*“The value of land is created by the community
and should therefore stay in the community”*

(Curtis, 2019)



Figure 9: Holzmarkt 25, Berlin. The riverside of the Spree has a long tradition of user-initiated activities. The Holzmarkt 25 was bought by a foundation, and with a land lease contract, a cooperative developed the area for public activities (Holzmarkt 25, 2021)

Case studies

*An investigation of Gothenburg, Berlin, and
contemporary projects in the field of joint
building ventures*

An introduction to the situation for the joint building venture in Gothenburg and Berlin followed by projects showing user driven projects connecting to empowerment and participation. Projects in different countries and with different preconditions but all with committed people who managed to achieve something different in their context.



Map, Location of examined Case studies.

1. *Experimental housing at Svartlamon*
2. *Gothenburg, Kumlet*
3. *Berlin, Ausbauhaus Neukölln, Hausprojekt M29*

Gothenburg, Sweden

The joint building venture

Today, there are around fifty joint building ventures in Sweden and a lot more groups in the planning stages (*Föreningen för byggemenskaper, 2021*). The joint building venture represents an insignificant part of the housing development in Sweden and Gothenburg, although the method has received more attention in recent years. Initiatives such as the platform “*Byggemenskaper.se*” and the recent project “*Diversity*” are working to spread and promote the concept to get more joint building ventures in Sweden. Although the term joint building venture is new in Sweden, the idea of community-led building development has been seen in Sweden before. Different organizations, associations, and groups of neighbors building for themselves are based on the same idea. Even some of the old, for Gothenburg characteristic working blocks from around 1900, called “*Landshövdingehus*” was built in a way reminding of the joint building venture (*Göteborgs Stad Fastighetskontoret, 2020*).

Despite the initiatives, we today see a setback for the joint building venture in Gothenburg, the problems are to a large extent depending on political ambitions to be solved. The instruction that 5% of the land allocation agreement should go to joint building ventures and co-housing projects has been stopped (*Göteborgs Stad Fastighetskontoret, 2020*). To facilitate the joint building venture *Göteborgs Stad Fastighetskontoret (2020)* proposes a system where smaller sites are pre-planned; this would shorten the total project time and make it more accessible for smaller actors, including joint building ventures.

Another possibility is to give land allocation agreements to joint building ventures and evaluate proposals on quality and not only on the highest offered price for the land. Support and explicit instruction of the process from the municipality is another aspect that would ease for the groups. The financing, mainly in the initial stages, is critical for smaller actors due to the problem of taking loans without anything as a guarantee for the bank (*Broms Wessel, & Hedström, 2016*). The municipality proposes various ways of facilitating the financial issues; some alternatives are land lease contracts, planning the sites before they are sold, or taking the land payment after the project is finished. The banking sector also has to change the attitude and risk calculations for joint building ventures to make it easier for the groups to get loans; a proposed start could be that municipality grants loans (*Göteborgs Stad Fastighetskontoret, 2020*).

Political initiatives

Thought from a conversation with Lukas Memborn, Property Management Administration, the city of Gothenburg: Does Gothenburg need a recession to develop new ways for city planning? Small actors can be more reliable in these situations; a group consisting of several people, all with a personal interest, creates security like many German banks argue while giving favorable loans to joint building ventures. The last years of a good construction market have made it easy for the municipality to sell land, and high demand for housing has given few initiatives for the politicians to change the systems. With a growing interest in the method, political initiatives can change (L. Memborn, personal communication, March 2, 2021).

“The instruction that 5% of the land allocation agreement should go to joint building ventures and co-housing projects has been stopped”

(Fastighetskontoret Göteborg stad, 2020)



Figure 10 (©E:son Lindman, n.d). Kumlet, a joint building venture on the Island of Brännö in the archipelago of Gothenburg.

Kumlet

Location: Brännö, Gothenburg, Sweden

Size: Apartment house with 8 apartments

Year of finishing: 2013

Architect: Anders Landström

About the project

Kumlet was initiated by four persons on the island Brännö in Gothenburg. The initial idea was to create affordable rental apartments, something that does not exist on Brännö, but after a 13-year long process, the project ended up as tenant-ownership apartments.

The process encountered a long process for the detailed development plan and problems to obtain a bank loan. The financial issues were solved by partnering with the building company, crowdfunding, and unsecured loans. The project could be completed at a cost lower than the market prices and built with quality materials, but with only one of the four initiating persons still in the project. (Antonsson, 2019)

Berlin, Germany

The joint building venture

The Swedish term *Byggemenskap* comes from the German word *Baugemeinschaft* (In Germany, also often referred to as *Baugruppe*). The joint building venture has been a commonly accepted way of building in many German states during the last 30 years and inspired the Swedish method (*Föreningen för byggemenskaper*, 2021). In some cities as Thüringen and Freiburg in southern Germany, a large part of the housing is developed with the method (Broms Wessel, O. & Hedström, H, 2016). In Berlin, the market is dominated by rental apartments, and the city has several large cooperatives representing about 11% of the rental apartments (Investitionsbank Berlin, 2019). The joint building venture is not as common as in the states mentioned above. However, Berlin has a variety of initiatives and actors working with user-driven design. The term joint building ventures are in Berlin not used as such a comprehensive concept as in Sweden, and the focus is rather on the ownership structure and the organization model of the projects. The joint building venture is criticized and sometimes mentioned in gentrification since the projects commonly are created as privately owned apartments (Novotny, 2019). As an example are projects within Das Miethäuser Syndikat dissociating themselves from joint building ventures (Hausprojekt M29, 2021).

Numerous organizations are active in facilitating the user-driven design and developing buildings and environments in

the city based on self-organization. Stiftung Trias, a CLT organized as a foundation that buys land and land leases it to self-organized groups. The foundation today has 47 projects, many of them in Berlin (Stiftung trias, 2021). Another actor is Das Miethäuser Syndikat, working for de-privatizing housing and support self-organized housing projects; this organization is introduced on the next spread.

Berlin's history of war and division has led to times with empty houses and leftover places in central locations, which has brought this tradition of self-initiated projects. From occupied and self-renovated houses in the 1980s and 1990s to more recent experimental initiatives of joint building ventures on leftover sites. Several architect offices are working with joint building ventures in Berlin and played a key role in developing and implement the joint building venture in Berlin at the beginning of this century (Ring, 2019). Today, the time with affordable land at central locations is over and architects working within the field in Berlin demand political initiatives to facilitate the joint building venture to use its potential in the newly developed areas (Friedrich, 2019).

The situation in Gothenburg and Berlin are, to an extent, comparable. With an increasing population, the demand for housing is high. The political goals of producing housing are set against giving people the opportunity to participate in this development by giving land allocation or support self-organized projects.



Figure 11: Ausbauhaus Neukölln, a contemporary example of a joint building venture in Berlin.

Ausbauhaus Neukölln

Location: Neukölln, Berlin, Germany

Size: Apartment house with 24 apartments

Year of finishing: 2014

Architect: Praeger Richter Architekten

About the project:

A joint building venture with a high degree of prefabrication and a possibility for raw space apartments, the project could therefore offer spacious and high-quality living conditions at a low price, with strong influence from

future users. With no load-bearing walls in the apartments, each floorplan can be individualized after desire, and with a ceiling height of 3 meters, the inhabitants get flexibility in the design their own home. A loggia of 20m² towards the south extends the space of the apartment to a low additional cost and gives the building a lively facade. (Praeger Richter Architekten, 2021)

Das Miethäuser Syndikat

“Self-organized living – solidarity-based economy”

(Mietshäuser Syndikat, 2021)

Das Miethäuser Syndikat

The German organization Das Miethäuser Syndikat (MHS) started in Freiburg from the squatting scene in 90's Germany.

The organization connects and supports autonomous housing projects and has the slogan “Self-organized living – solidarity-based economy”. The main idea is to de-privatize and un-capitalize land and housing, to let the buildings be self-organized by the inhabitants. The MHS is a democratically operated organization, and new projects are voted in on the members' meeting after a presentation of the project idea and the financial plan. The buildings are bought or built on the group's initiatives, and the MHS supports with knowledge and financial resources. In exchange, the MHS gets a share in the project, which by a legal form gives a veto to prohibit the groups from selling the property back to the private market. The projects are financed by the MHS, crowdfunding, and conventional bank loans. The rent is calculated from the costs of interest rates and maintenance and is fixed over time. As parts of the loans are paid back, the exceeding capital goes to the MHS as a solidarity contribution to finance new projects see figure 12 (Mietshäuser Syndikat, 2021).

The network has today around 160 connected projects, split up into regional groups. The MHS organization expands continuously and

gets more and more expressions of interest from new groups (R. Somnitz, personal communication, March 15, 2021).

The organization is an alternative to the traditional housing market and gives groups of people an opportunity to self-organized living without private financial resources. The projects always come with a risk and plenty of work; organizing the group, managing the administration, finding direct loans from crowdfunding, and be responsible for the renovation or building process (Mietshäuser Syndikat, 2021).

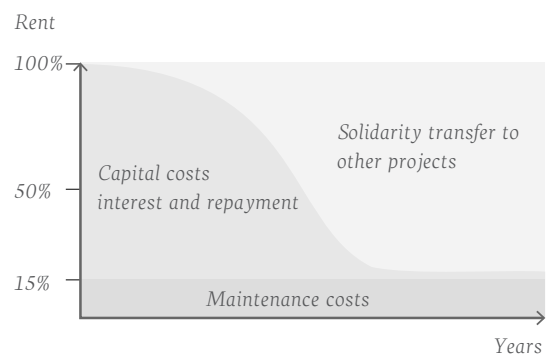


Figure 12 - Financial idea behind the expansion of Das Miethäuser Syndikat. The managing costs are constant, and the amount of interest rates and repayments gets lower with time but instead of lowering the rent the money is invested in a new project, and the rent stays the same. (Mietshäuser Syndikat, 2021)



Figure 13: (©Reclaimyourcity, 2012) The house project Grüni, Berlin. A project connected with Das Miethäuser Syndikat and with its roots in the squatting scene.



Figure 14: (©Hummel & Clemens, n.d) Hausprojekt M29 in Berlin

Hausprojekt M29

Location: Berlin, Germany
 Size: Co-living house for about 20 residents
 Year of finishing: 2012
 Architect: Clemens Krug Architekten

About the concept:

The M29 is a user-initiated and self-organized project and part of the MHS network. The project is democratically run with the principle of consensus and characterized by an alternative structure of few private square meters and plenty of shared spaces with

remarkable low rents for a newly constructed building. The whole building functions as one community and includes rooms for activities and project spaces for events with cultural and political alignment that invites the city. The building was financed by crowdfunding, loans in a cooperative bank, and financial support for energy-efficient buildings, which requirements the building fulfilled. The building was also partly constructed by the initiating group (Hausprojekt M29, 2021).

“The project is essentially a comment on and critique of the notion that a sustainable lifestyle is something you can buy”

(Fundació Mies van der Rohe, 2021)



Figure 15: (©Nøysom arkitekter, n.d). *Experimental housing at Svartlamon.*

Experimental housing at Svartlamon

Location: Trondheim, Norway

Size: 5 rowhouses

Year of finishing: 2018

Architect: Nøysom arkitekter

About the concept:

Svartlamon is an experimental housing area in Trondheim, Norway, managed by an association that rents the land from the municipality. The self-built rowhouses were initiated by the architects and planned and then later build by the future residents,

with support from the architects and a professional carpenter. In the process were also both the other residents in the area and the surrounding neighbors included. When finished, the rowhouses were rented by the self-builders from the Svartlamon housing association. The project focuses on affordable rents, environmentally friendly, low-tech solutions. The low-tech solution was a way to reduce the cost and make it possible for the residents to build and maintain their building themselves. The project was completed to 25% of the average Norwegian building costs (Nøysom arkitekter, 2021).

Implementation

The joint building venture, a way of densifying and adding diversity to suburban areas

The suburban areas offers space for densification. Giving prerequisites for people to be a part of the development will invite new people to the area and give the current residents looking for something different a possibility to stay and create a home after their needs; this strengthens the social networks and contributes to a social mix. Gentrification is often mentioned as a problem when suburban areas are being developed since the prices rise with new development and bring new types of inhabitants (CBA, 2018). At the same time, the addition of people of different backgrounds can lead to positive initiatives (Spacescape, 2018). I believe by doing this in a way where the tenure and system include people with less capital and where meetings and cooperation are in focus, it can be a way to strengthen the area and the risk of gentrification minimized.

The implementation part presents a project developed with a new system for the joint building venture in the Gothenburg suburb Tynnered. Based on the research findings, the new system is a concrete way to answer the policies and bring more empowerment to the people in the housing sector. The ideas and the projects are a framework inspired by the case studies and research, re-interpreted, and developed to fit a Swedish context. The chapter starts with an analysis of the area and the report *Value-creating urban development in central Tynnered* as an introduction to the area.

“We today see a trend towards more segregated cities and growing inequalities in Sweden.”

(Miljö- och energidepartementet, 2018)



Figure 16: Tynnered - an area developed in the million home program.

Tynnered

“Although the goal of all actions has been to break segregation, that goal has not been achieved”

(Framtiden, 2020)

Location

Tynnered is located southwest in the Gothenburg city region, with a fast connection to the city center and popular destinations. The area is well connected with public transport, including two tram lines. By its proximity to Frölundatorg, the hub in western Gothenburg, and a closeness to both the sea and nature areas, Tynnered has many potentials. Within a short biking distance, a large extent of services, work, and nature is available.

The area

The area mainly consists of multi-family houses built during the 1960s but partly also

including detached houses and townhouses. The traffic separation, large spaces for the car, and the lack of services are noticeable in the area with plenty of space unused between the buildings. Opaltorget is the local centrum with some services and shopping.

Popular destinations and travel times:

1. Göteborg C: Bike 40 min, tram 27 min,
2. Chalmers Univ.: Bike 32 min, Tram 19min
3. Järntorget: Bike 33 min, Tram 20min
4. Frölunda torg: Bike 8 min, tram 7 min
5. Sisjön industrial area: Bike 15 min
6. Naturereserve (Välen): Bike 5min
7. Ocean, Askimbadet: Bike 10min



Figure 17: Central Tynnered - Scale 1:100 000, Location in the Gothenburg-region, circles as distance references, 4km - approximately 15min on the bike. (©Lantmäteriet, 2021)

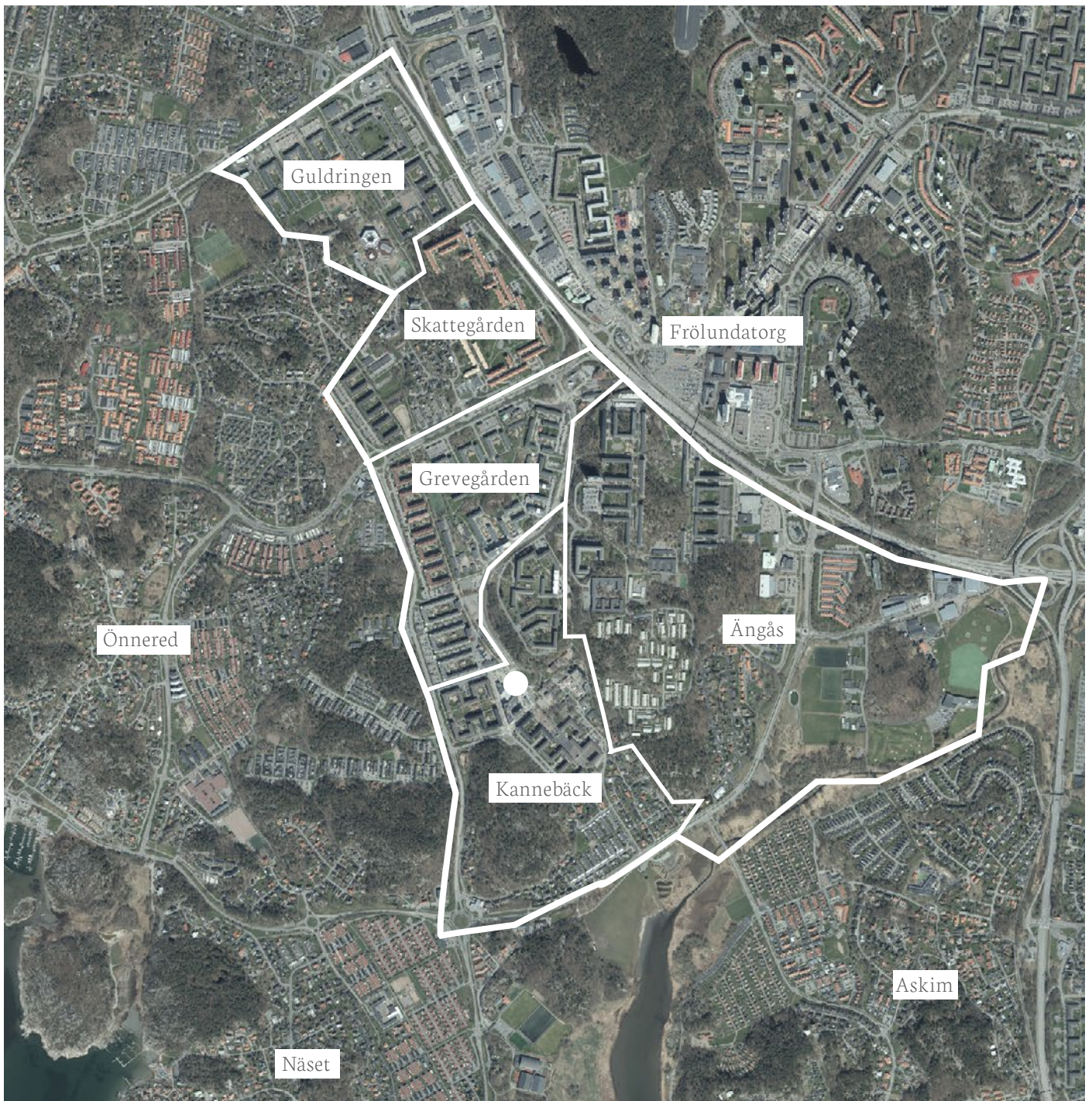


Figure 18: Central Tynnered and its neighboring districts. Opalstorget, the local center, is marked, scale 1:20 000. (©Lantmäteriet, 2021)

Tynnered, an area in focus

Tynnered is one of the focus areas for the development of the intermediate city in the initiative *Göteborgs Strategi för Utbyggnadsplanering 2035*. The city has given the task to investigate how to develop the area with a focus on “city qualities” to Framtiden, which is a collision of the public landlords in Gothenburg and the owner of the majority of the rental apartment in Tynnered. Framtiden, therefore, has a key role in the development of the area (Framtiden, 2020). The report *Value-creating urban development in central*

Tynnered is a part in this task and is going to be introduced later in this thesis.

A few new buildings have already been constructed in central Tynnered, and Opalstorget is now under renewal with a large center-building and around 500 new housing units under construction. In the urban development plan *Opalstorget* is 1050 new homes planned at Opalstorget and the areas north of the center. The plan consists of 250 rental apartments, 600 tenant ownership, and 200 student apartments (*Stadsutveckling*

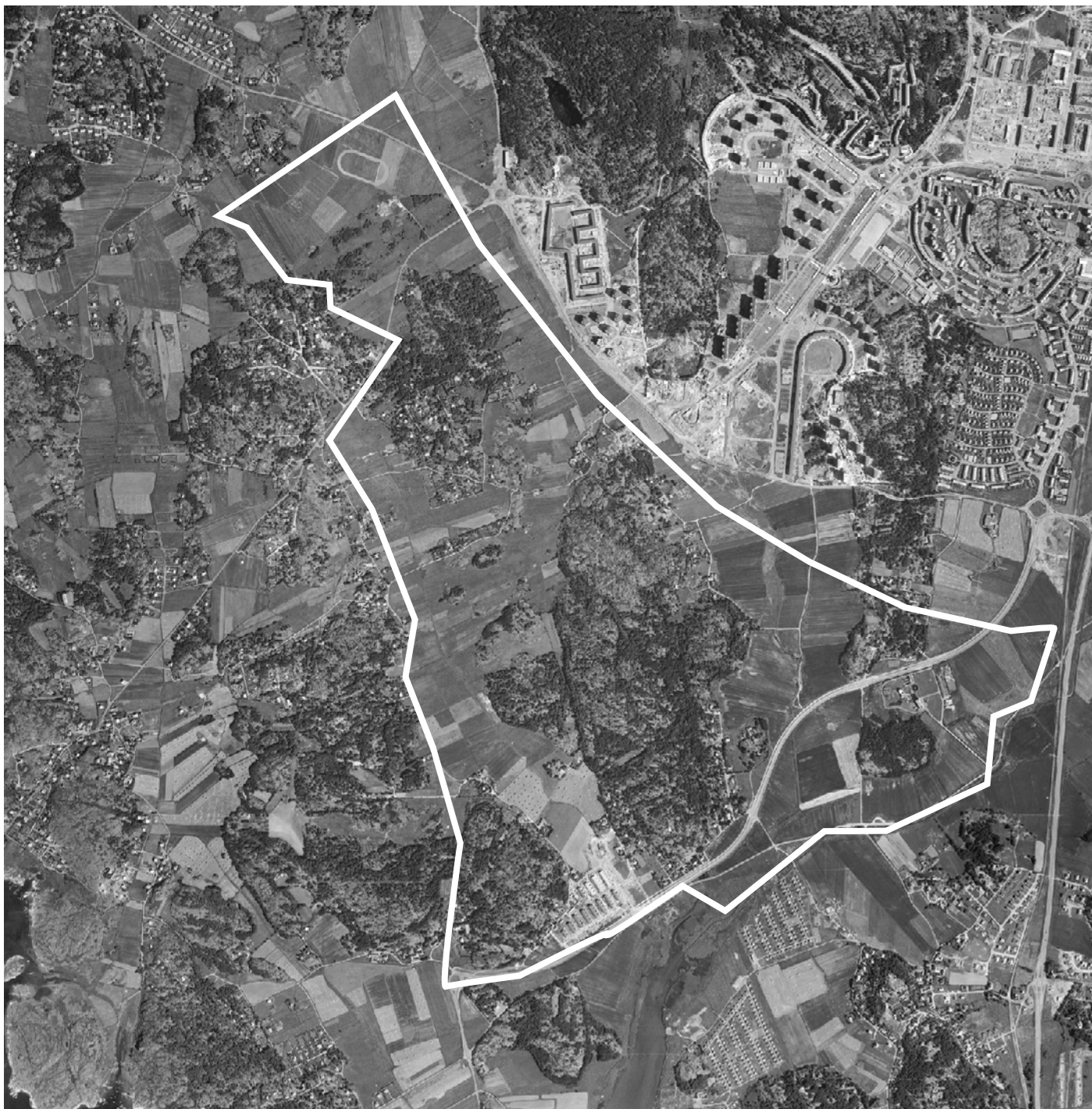


Figure 19: Central Tynnered about 1960, Scale 1:20 000. (©Lantmäteriet, 2021)

Göteborg, 2021). The underlying cause for the focus on central Tynnered is the negative social development in the area that now is classified as an “Especially Vulnerable area” by the Swedish police. By renewal and investments in the area, the hope is to change the negative trend. (Framtiden, 2020).

History

The area was planned and built in the mid-1960 during the Swedish *million home program*, a Swedish public housing program aiming to construct one million apartments

over ten years around 1970. (Swedish: *miljonprogrammet*). The area is mainly residential, with few workplaces within the area, and the traffic separation is prominent.

The multifamily housing stock was partly renovated during 2005 - 2010 and included transformation from rental to tenant ownership (CBA, 2018). Except for this and some smaller dwellings in the 1980s, the area has been more or less unchanged until today (Statistikdatabas Göteborgs Stad, 2021).

An increase of the square-meter price of 102 % in the last ten years, and a difference of 10 000 Sek/Sqm. within a distance of 500 meters.

Statistic from Mäklarinfo.se (2021)

The development of the area

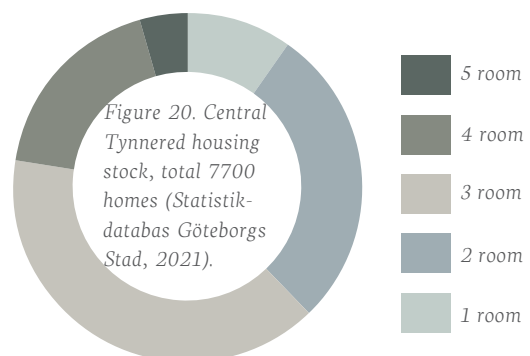
The development of the area has started. Framtiden is in the upcoming years going to make major investments in Tynnered and invites to financially support innovative projects to create innovation within the field of social and ecological sustainability (Framtiden, 2020). Framtiden points out that the trends so far has been hard to break and that a more holistic approach is needed to create a positive trend:

“Although the goal of all actions has been to break segregation, that goal has not been achieved. The trend has rather been going in an opposite direction, and implemented efforts have been characterized by unclear goals and goals that were impossible to achieve with the available resources” (Framtiden, 2020)

A diversity is needed

A mix of socio-economical backgrounds is essential for the area since people’s social networks get extended by a higher interaction between households with different backgrounds. Different types of tenures and housing could achieve this since it attracts various types of people and creates possibilities for people to stay in the area during all the phases of life (Spacescape, 2018). The housing stock in central Tynnerd is monotonous, mainly apartments from the million home program, designed for a standard family and few larger apartments (see figure 19). The area consists of 7700 households,

where 6600 are multi-family houses. 64% of the housing stock is rental apartments (Framtiden, 2020).



Prices in the area

In the last ten years, the price has increased rapidly in the Gothenburg region. The prices in central tynnered have followed the increase, but has in average a lower price than the surrounding districts due to the area’s reputation (CBA, 2018).

The price differences to the neighbouring areas as Önnerved in the west (see figure 17) are noticeable (Mäklarinfo.se, 2021).

- 27000 kr/m² Tynnered
- 37000 kr/m² Önnerved



Figure 21: The differences in the typologies from central Tynnered and its neighbors in the west are seen clearly in the figure-ground, scale 1:20 000

Conclusion of the analysis

There is a lack of variety in the apartment stock, mainly big and small apartments. New types of tenures could attract new people and make it possible for more people to stay even when life situations change. The Surrounding areas with people with different social and economic situations bring a possibility to create a social mixture of people already settled in the close surrounding by creating a system that can attract different types of people and are based on self-organization and cooperation. Increasing

prices due to the investments in the area could be managed with a CLT to secure affordable and self-organized housing over time. By using the joint building venture, I believe the attractiveness and diversity of the area could increase and bring value to the existing community. I see a potential to use a part of the planned investments to promote cooperative user-driven projects.

Value-creating urban development in central Tynnered

*A strategy for central Tynnered by Spacescape (2018)
for Framtidenkoncernen*

Value-creating urban development in central Tynnered

The report is made by Spacescape and Evidens for Framtiden and is a part of the development of central Tynnerd. The report examines how to create a more connected, equal, and qualitative city on a planning level. It aims to set the frames for developing the area in the long-term perspective (*Spacescape, 2018*).

The report presents “*the city-quality-proposal*” that shows how Tynnered could be densified with about 6500 new housing units in a way that adds value to the entire area (*see figure 22*). An analysis of city qualities, called plan indicators, shows how the attractiveness would increase due to a development plan that recognized the qualities. The qualities are consisting of multiple variables, (*see figure 24*). This proposal is compared to a scenario of densification accordingly to the current strategy, in the report called “*the housing proposal*” (*see figure 23*) (*Spacescape, 2018*).

The site plan (*See figure 22*) shows “*the city quality proposal*” implemented in central Tynnerd. On the upcoming pages, an analysis and comparison of the two proposals are displayed.

Relevant strategies

- Maximum 150 meters between the intersections in a dense city environment.
- A grid of streets and roads connects the city.
- Parking lots are replaced by street parking and parking garages.
- The parking norms relate to the lower guidelines of the “*mobilitets och parkerings planering 2017*” 0,5 within 500 meters from Opaltorget, outside 0,4. For Detached houses 1,0.
- Land exploitation 1,5 within 500 meters from fast public transport. Otherwise 1,0 is used.
- Within 500 meters from fast public transport, 20 - 50% of the buildable area is dedicated to commercial, municipality services, and parking space.

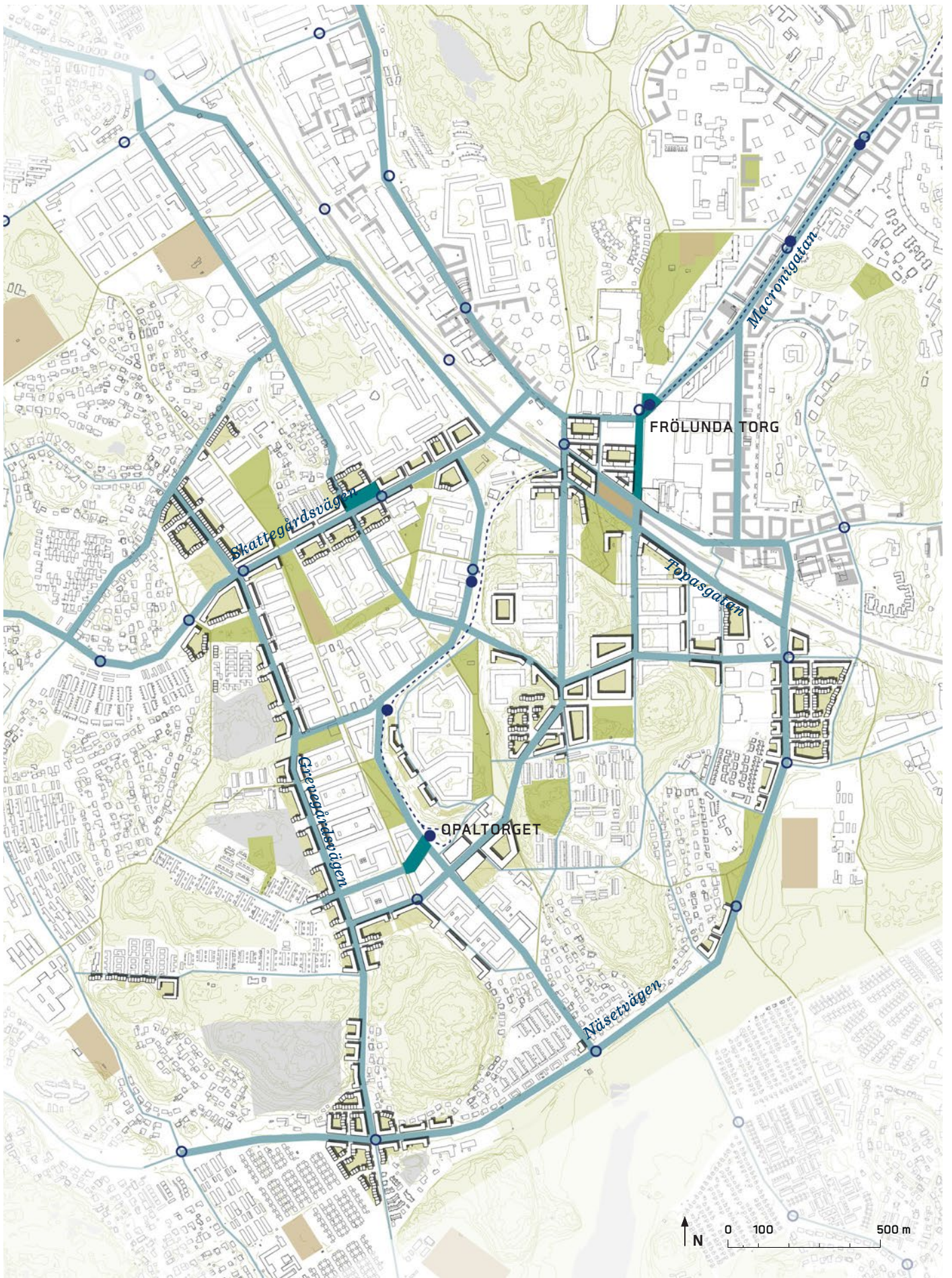


Figure 22: Tynnered in the proposed scenario called “the city quality proposal”. Illustration from Spacescape (2018)

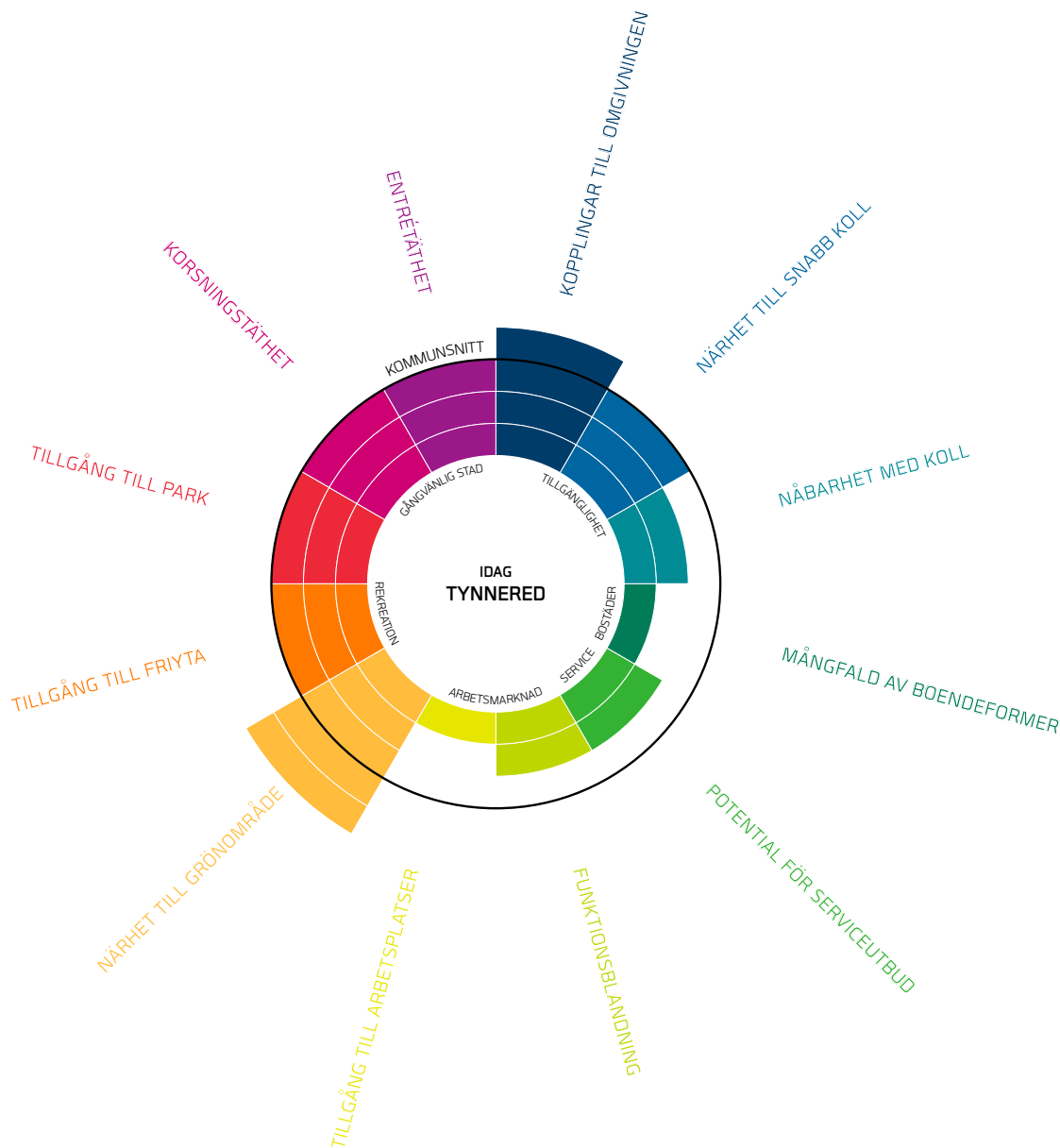


Figure 23: The plan indicators of the current situation in Tynnered, the black circle indicates the Gothenburg city average. Illustration from Spacescape (2018)

The plan indicators

The analysis in the report has been made with 12 plan indicators, analyzing the city-quality proposal, (figure 23) The same analysis has been done of the area today, (figure 24). The results have been compared with the average in Gothenburg city's central and intermediate city districts, the average is marked with a black circle in the diagrams.

The plan indicators have been selected based on what two reports "Program för jämlik stad

(Göteborgs stad 2018)" and "Delad stad (KTH 2015)" have listed as important preconditions to improve the conditions in vulnerable areas, and what could be impacted by city-planning (Spacescape, 2018).

The joint building venture

Several indicators can be improved with the joint building venture, marked with black dots in figure 24. The city-quality proposal increases the attractiveness of the area, but in the variety of functions and closeness to



Figure 24: The plan indicators in the “city quality proposal” in Tynnered, the black circle indicates the Gothenburg city average. The black dots indicate where the joint building venture could be a tool to improve the qualities. Illustration from Spacescape (2018)

workplaces, the proposal does not improve compared to the current situation. By working with joint building ventures and giving people more empowerment in the built environment, these parameters could be improved and secure a variety in forms of housing and tenures.

By building on a smaller scale, the number of entrances increases, high entrance density gives social security in the urban environment and a correlation to

attractiveness is also shown in the study *Value-creating urban development in central Tynnered* (Spacescape, 2018).

A mix of housing and workplaces: Workplaces provide conditions for a more varied range of services and are also crucial for social security in the urban environment (Spacescape, 2018). Joint building ventures and a CLT can ensure that a mix of functions is created, workspaces, and spaces for smaller and local businesses.

The site

The intersection of the rental blocks and the private detached houses

The site

In the border zone between the multi-family blocks from the million-program area and the detached houses is leftover space, a space for car infrastructure that cuts off the area. Framed by four-story red brick houses with few entrances towards the street and plenty of undefined lawns, the first impression is monotone. Towards the south, behind fences and bushes, are private detached houses, which offer more variety, and well-used gardens but are facing away from the site and the main streets. I see a potential in the site to connect the two areas by remaking the traffic situation and adding a new building

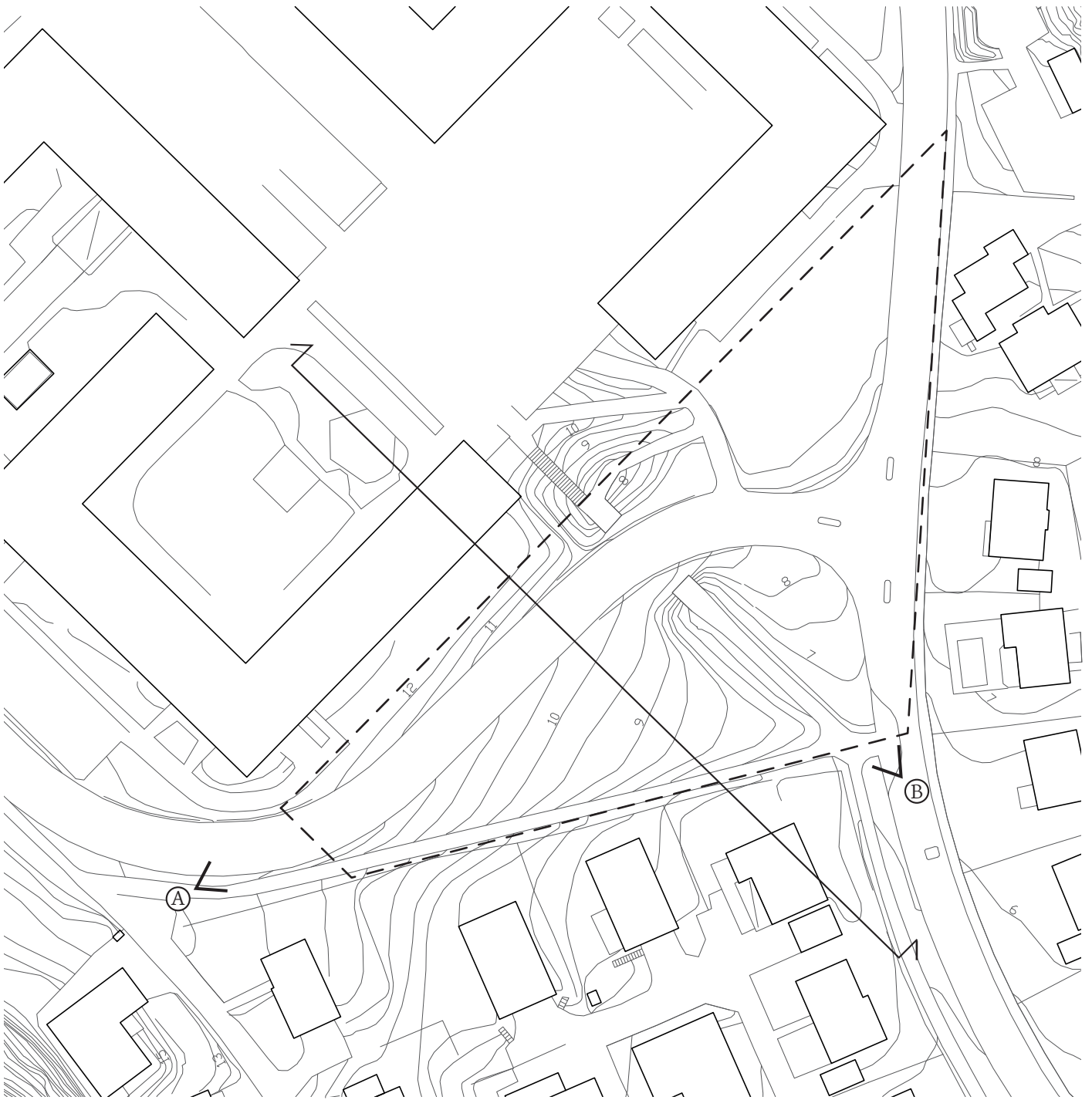
scale that is more open to its surroundings, and bringing the focus from the cars to the humans. The site has been identified in “*the city quality proposal*” in the report *Value-creating urban development in central Tynnered* as an unsued place suitable for development.

Location

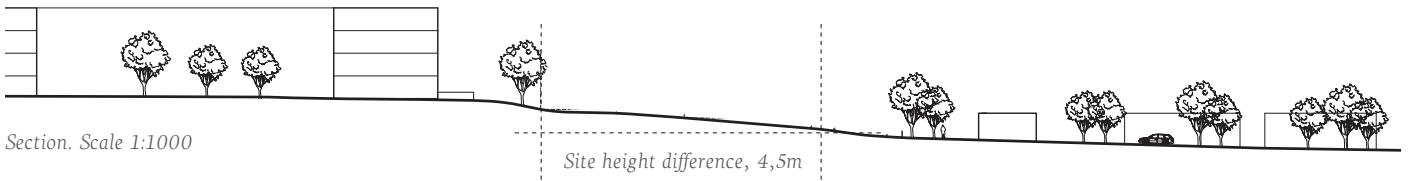
The site is central located in Tynnered with a distance of about 500 meters to Opalorget with its public transport and services. In the other direction, it is only a kilometer to the ocean and the nature reserve Välen. On a slope facing south, the conditions of light are excellent.



Figure 25: Aerial photo of the site today, site marked. Scale 1:2000. Map in left corner shows the location in central Tynnered (©Lantmäteriet, 2021)



Site, today. Scale 1:1000



Section. Scale 1:1000

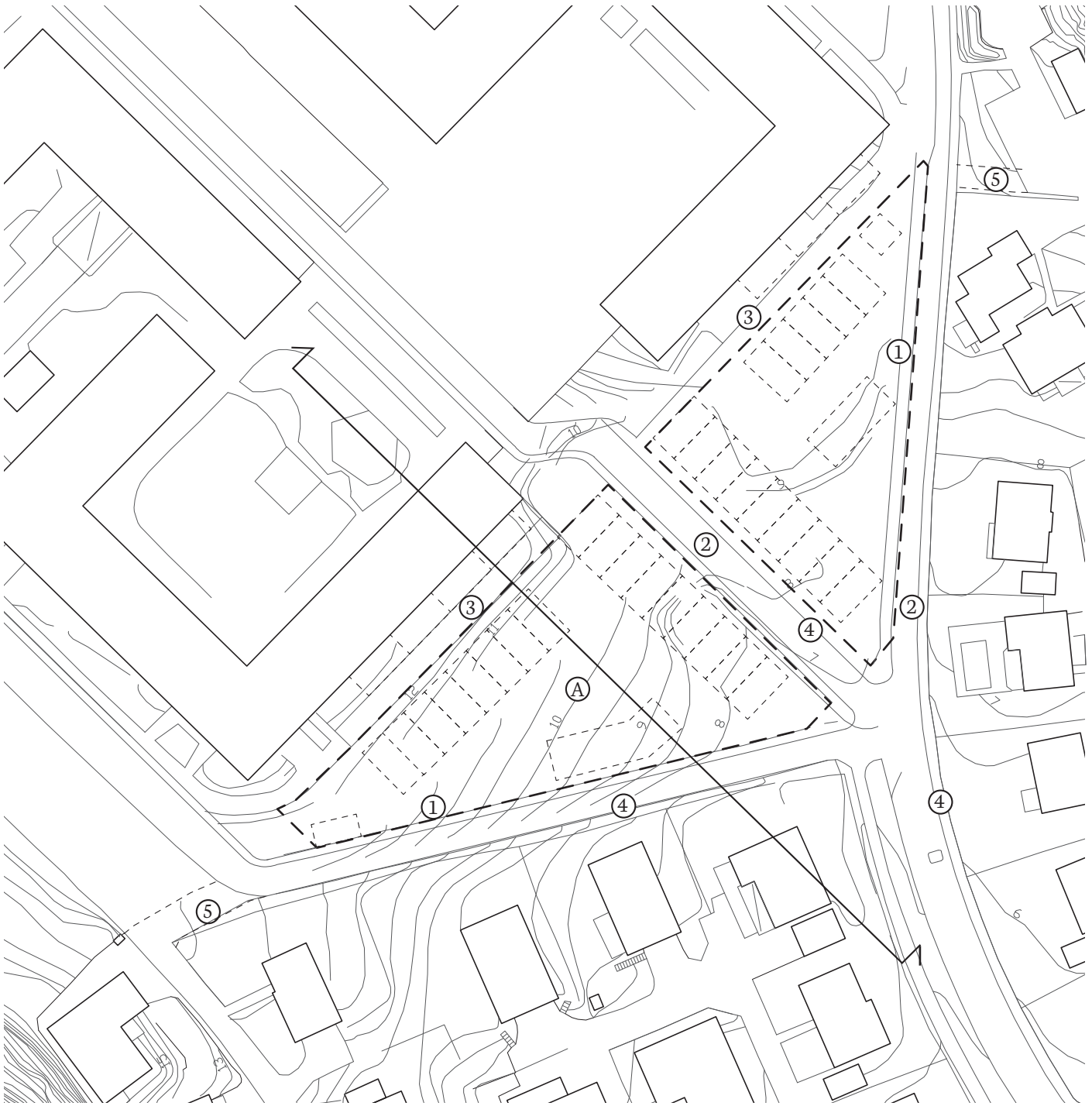
Site height difference, 4,5m



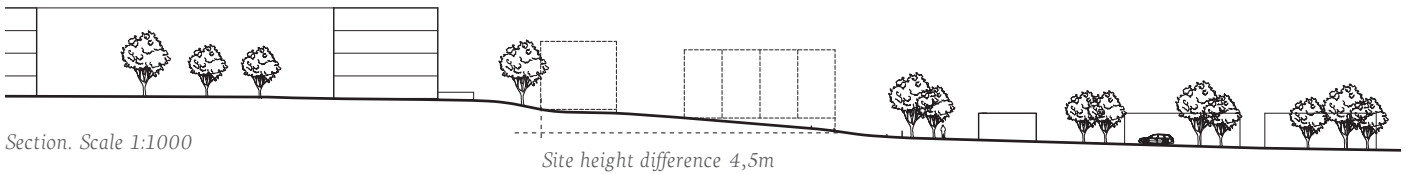
Figure 26: Site photo, A



Figure 27: Site photo, B



Site, proposal, Scale 1:1000



Section. Scale 1:1000

Site height difference 4,5m

A site recognized in “the city quality proposal” is developed, and new qualities are added to the area.

Explanation to siteplan

1. Street parking
2. The new street Segitzdamm with priority for pedestrians
3. Pedestrian street
4. Bike lane
5. New connection

Replanning the site

The site is planned from the guidelines of “the city quality proposal”. Roads are converted into streets, more connections are added, which helps to integrate the area. The shift from roads to streets does not only favor pedestrians but also makes more land available to build on. The site is split into two estates, where the following project is

developed one marked A in the siteplan. The pedestrian tunnel is taken away, and a new street through the existing block integrates the *million home program* area and creates a connection direct to Opaltorget. The space in front of the buildings is given to the ground-floor apartments, which is also proposed for the existing rental apartments. The private gardens bring quality for the residents and makes the streets more enjoyable for pedestrians. By creating gardens in front of both new and existing buildings, intimacy is created towards the surroundings giving the area a human scale. This, combined with numerous entrances facing the streets, the area becomes more pedestrian-friendly.

Preconditions for the project

A new urban development

Participation and inclusion of people in the urban development are highlighted as very important and should be prioritized. However, the reality seems to be different, with few alternatives in tenures and a system of organization. How could a new system be designed, where the future users could take part in the development and organize the projects themselves? On the upcoming pages, a proposal, a pilot project, is demonstrated on the site in Tynnered, built on the land of Sweden's first Community land trust, *Allmänningen*, a proposal for empowerment in the built environment.

Allmänningen community land trust

Allmänningen is started to take action towards more diversity in the housing sector, inspired by the established land trust organizations in Europe. Initiated by the cooperative movement and the groups in the pilot project in Tynnerd, and supported and financed by foundations, crowdfunding, donations, Framtiden, and the city of Gothenburg. For the purchase of land, loans from cooperative banks are taken in addition to equity, this to include external capital, which brings an incentive for the land trust to keep expanding. With future income from the land lease rents, the trust could expand, and new projects could be developed and connected within the new network. The land trust is operated by direct democracy, including all project groups

that join the trust; this creates a network that will work as a platform for collaboration and knowledge exchange. The projects get three levels of community and cooperation, Within the CLT network, the site shared by multiple groups and the community within each joint building venture.

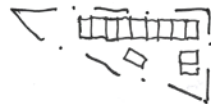
The aim of Allmänningen: Land owning and support for self-governed housing projects.

The municipality

The city could support the trust with land in exchange for affordable housing, attractive living environments, and spaces for local interactions and businesses. The CLT can manage the initial planning phases of the sites which will make the project time shorter for the joint building ventures.

Tenure - cooperative 2.0

By owning the house but not the land the groups will have the full power of their home, the possibility to change and adapt, and the responsibility to take care of it. The cooperative 2.0 apartments can not be sold but the association fee is paid back plus a addition for investments done in the apartment. In a Swedish context the Cooperative 2.0 would give the inhabitants the initiative to create their own homes but avoid speculation which would make it available for a large group of people.



Step 1. *The CLT “Allmänningen” buys the site and starts the initial plan development with the municipality.*



Step 2. *The site is leased with a land lease contract to a group of several joint building ventures that shares the site.*



Step 3. *Each joint building venture constructs their building and part of the common building they share with the other groups.*



Step 4. *“Allmänningen” is expanding when more capital is available from rents and investments.*

Segitzdamm

*Groups of joint building venture sharing a site from
Allmänningen CLT*

A pilot project

The project Segitzdamm is started to be an example of community-led housing in Sweden. With support from *Allmänningen* and organizations working in the field, the project takes its shape directly from future residents. The project shows how groups of joint building ventures can share a site and develop residential buildings with public and common spaces. The structure allows groups to arrange as cooperatives or as tenant-ownership associations, also actors building rental apartments on a small scale could get a part of a site, which creates a structure that can include a large amount of variety. By sharing a site between several joint building ventures, the scale of the projects can be held down, but the advantages of the bigger group still kept. The common spaces are shared and managed together and also possibly shared by future neighboring projects within the CLT. By introducing *Allmänningen* it becomes possible for more people to participate and take responsibility for the built environment, which will result in a natural variety.

The project would bring a new type of housing to Tynnered and Sweden, unique homes and spaces. Self-organization brings an interest in achieving good living environments, public and shared spaces that also bring diversity and city qualities to the existing community and area.

Needed: land, a CLT, capital, a change in the planning system of the municipality, and last but not least, dedicated people. Impossible? Maybe, but probably not.

The scale

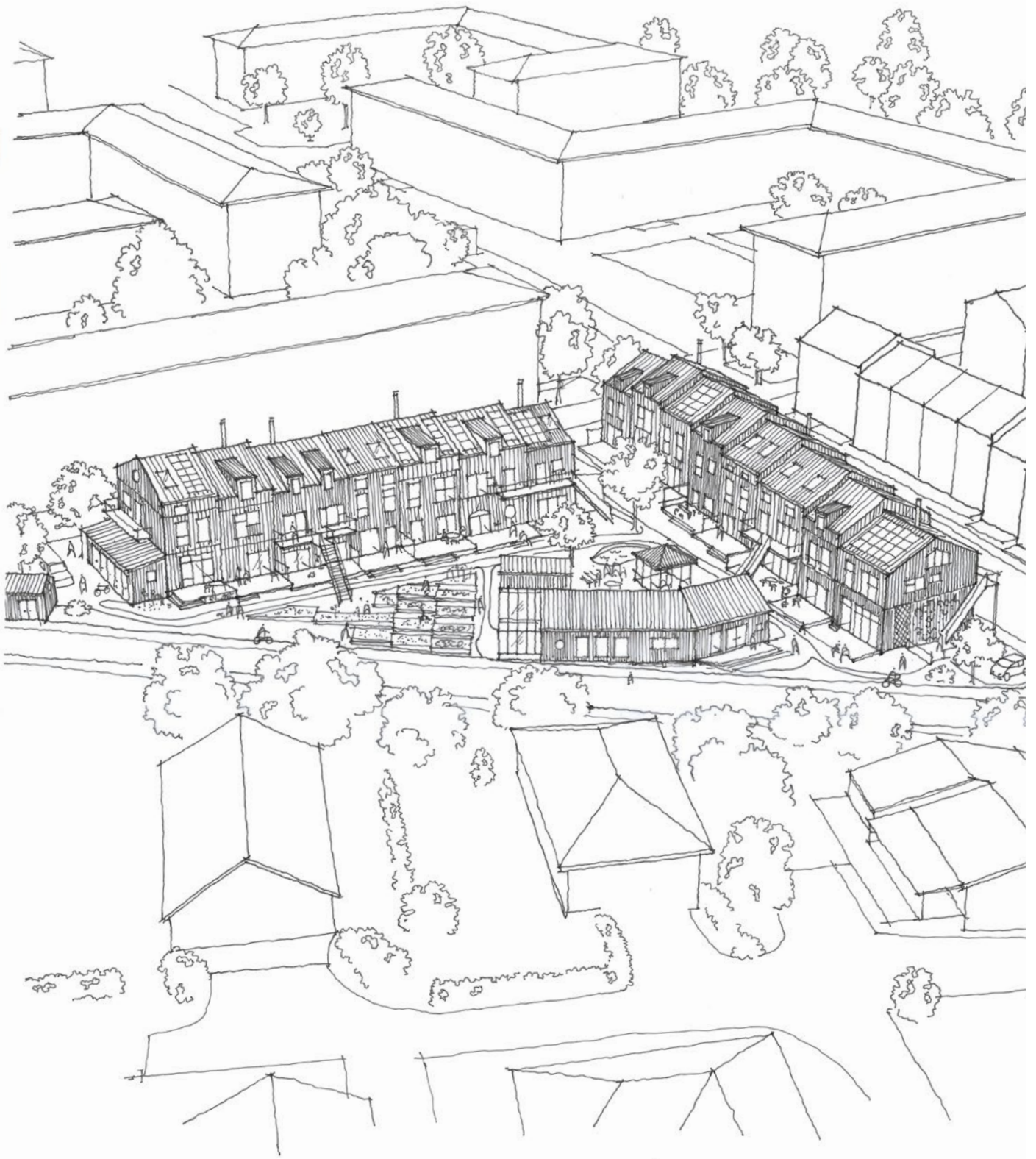
The rowhouse scale makes it suitable for the joint building venture, small actors, and more accessible for self-build. The rowhouses become an addition in the area, a scale between the detached houses and the larger apartment buildings, complementing the existing structure. The rowhouses could include spaces for businesses and services, one entire unit for a large apartment, or be divided into multiple apartments in different sizes. With a flexible structure, the plans can be changed over time.

Self-build

The self-build becomes a natural way of creating a community from the start of the project. The structure and the building envelope can be planned and bought together by the groups sharing the site. The individuals can decide the level of finishing. A common house is built and in the beginning used as a workshop for the people who build their apartments. Here the purchase of building material could be arranged to reduce the costs, maybe the groups could use the network from the CLT to get reduced prices on the building material.

Financing

The first project could be supported by Framtiden, the city of Gothenburg, and the organizations behind the CLT to promote a user-driven system. The groups finance their project differently depending on the tenure, but multiple organization behind the project could facilitate the projects getting loans, a bank could be a partner with the CLT, which would be one way to solve the financial issues.



Overview of the pilot project, Segitzdamm, in Tynnered. View towards north.

The site

*Sharing a site creates possibilities for shared spaces,
activities and efficient use of resources*

A shared site

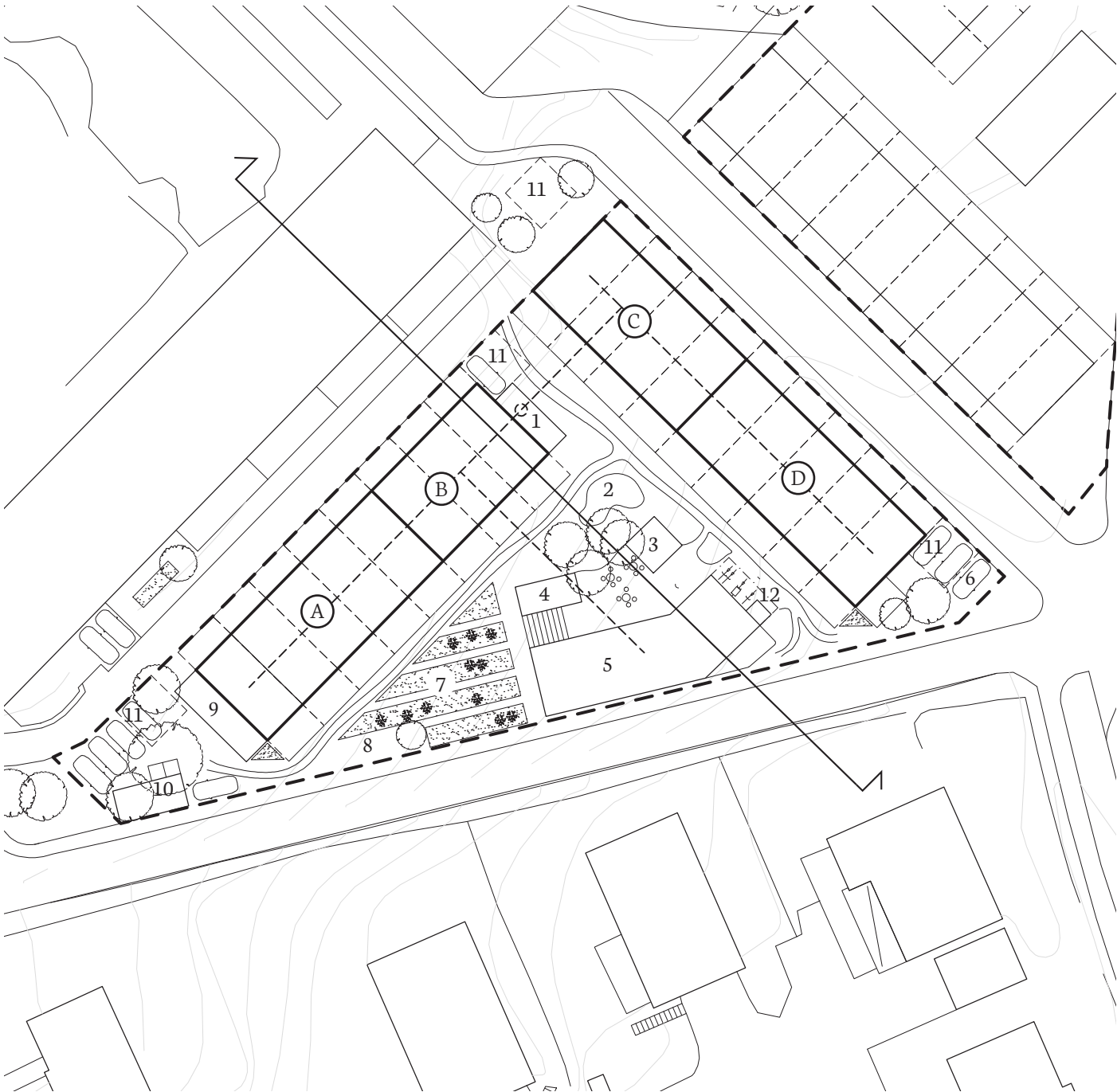
The site is split between four joint building ventures, marked; A, B, C, D on the site plan, based on a 5 x 10-meter module. The structure allows a variety of group sizes, from a couple of friends to larger constellations. Each group are responsible for the architecture of their project and deciding the apartment division and layout. The 2700m² site has space for about 20-25 apartments and gives a floor area ratio on 1,05.

Technical systems

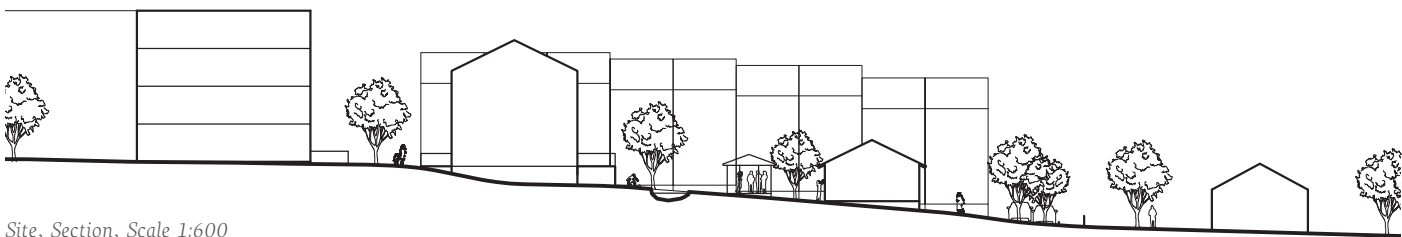
By sharing technical systems, the cost can be reduced and the reliability increased. A thermal heat system, battery for the shared solar panels, and other technical installations are distributed from the installation room.

Explanation to siteplan

1. Installation room, geothermal heating system, battery for solar panels, distributed through a culvert.
2. Rainwater pond for watering
3. Pavillion
4. Cold storage room
5. Common building
6. Electric car sharing
7. Cultivation
8. Visitors parking
9. Bike garage
10. Composte + recycling room
11. Disable parking
12. Exchange room



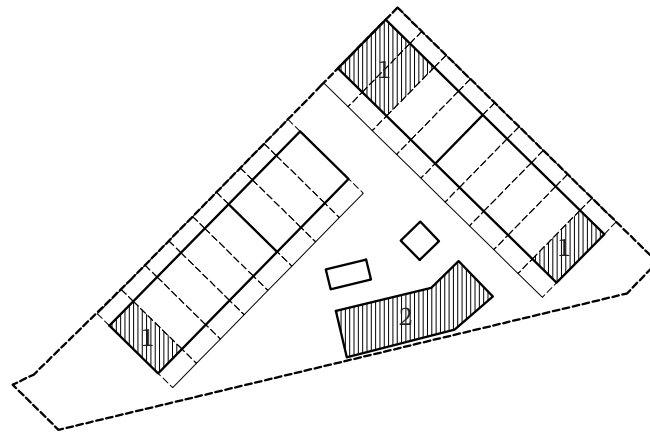
Siteplan, proposal, Scale 1:600



Site, Section, Scale 1:600

Common and public spaces

Spaces for social interactions



Around 40% of the ground floor is dedicated to common spaces and public activity.

1. *Workspace/ atelier/ guest apartment*
2. *Common building*

Common and public spaces

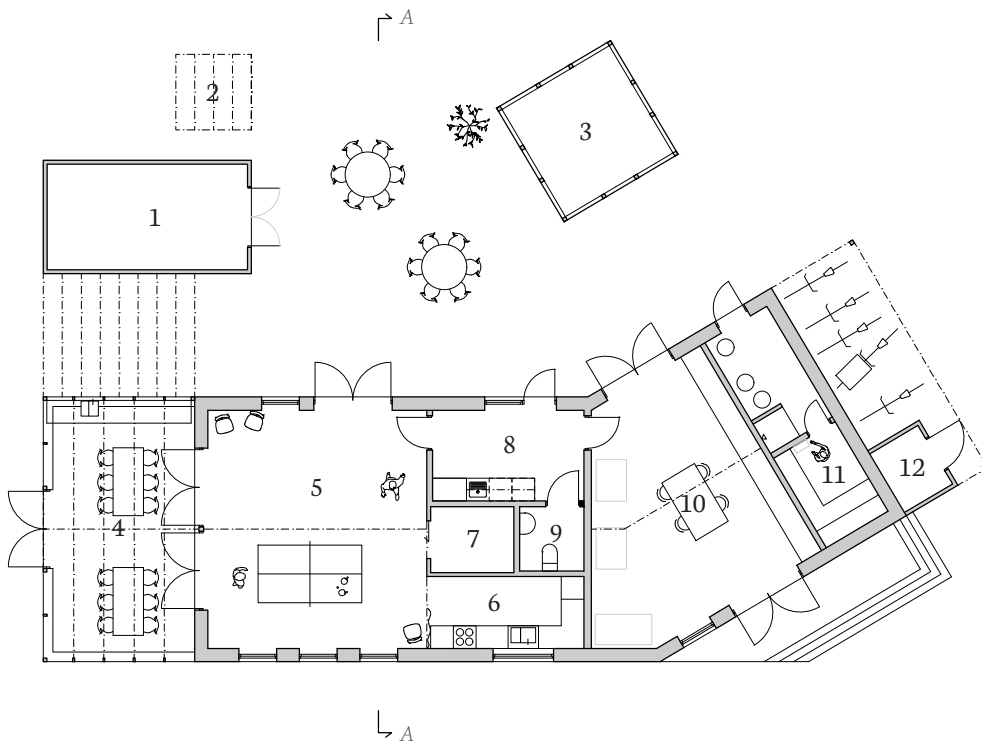
The groups share the common spaces on the site, including a guest apartment for visitors, spaces that could be coworking, atelier, workshop, studio, or venue for events. In total, the public and shared spaces are 12% of the total floor area. By planning the rooms smart and a booking system, rooms can have multiple functions and easily be accessed. An exchange room makes it possible for people to swap stuff and clothes with people living in the area, which benefits both the people and the environment. These shared spaces can become natural places of interaction between the project and the surrounding neighbors. The usage of the shared spaces is decided by the residents and can be changed over time due to interest and demand. The earnings from the spaces rented out become an extra income for the site association.

The central entrance in the common building with a laundry function makes meetings

natural. The large multi-function space with a kitchen and a greenhouse could be used for site association meetings, table tennis, dance, sport, whatever the residents decide. At an early stage, the common building and especially the workshop are used to complete the apartments, which directly starts to create a sense of community. The construction of the building is simple and maintained by the site association.

Community gardening

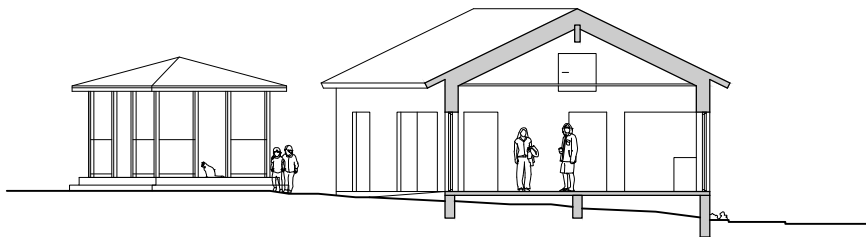
With a site sloping towards the south, the location is perfect for urban gardening, which except its community creating possibilities, gives an extra addition of vegetables to the plate. The amount of gardening space also makes it possible to invite interested neighbors. A small water pond collects the water from the roofs, which can be used for watering the gardens and a compost makes the organic waste into fertile soil.



Plan, common building, 155m²



- | | |
|-----------------------|-------------------|
| 1. Cold storage | 7. Storage |
| 2. Laundry drying | 8. Entry/ laundry |
| 3. Pavillion | 9. Toilet |
| 4. Greenhouse | 10. Workshop |
| 5. Multifunction Room | 11. Sauna |
| 6. Kitchen | 12. Exchange room |



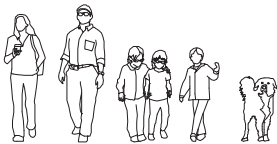
Section A-A, common building

Drawings scale 1:200 

Group D

A group in the first project

Group D is displayed as a reference of what the structure could include to complement the current apartment stock. Below is a short introduction to the members, started by the family Isaksson/ Sanin and Lev and Julia. The other members have joined the project through the network of *Allmänningen*, where it is possible to find other interested participants and apply for projects. Lev is involved in *Allmänning* to find people interested in joining or supporting; give him a call if you are curious: +46(0)768023691.



2. Townhouse, 6 rooms + kitchen: 135 m²
The family Isaksson/ Sanin are five persons who love the workshop where they are often found during the weekends, but their popular dog, Bernard, is more into the sunny terrace and playing with the neighbors.



5. Apartment, 2 rooms + kitchen: 60 m²
Lev and Julia are both working in Gothenburg, and it is a daily competition to cut the time from door to door with the bike; the record is 28 min. At the moment, they are building a loft since they plan to be three eventually. Until then, they will rent it out.



3. Townhouse, 4 rooms + kitchen: 110 m²
Laura and Berkay work a lot from home, not only during corona, and therefore need some extra space. Their son Niklas is the current champion of the table tennis tournament in the common building. The cat Ragnar is mostly hanging out in the pavilion.



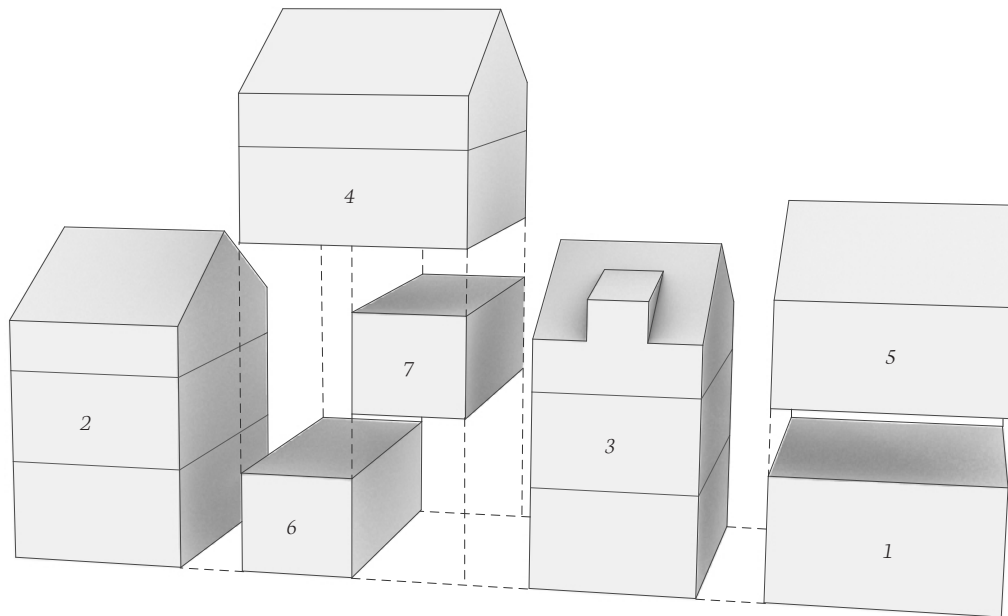
6. Apartment, 1 room + kitchen: 29 m²
Wolf (Wolfgang) always has a story to tell. He just moved from his old apartment, and in the days of retirement, he loves to stroll around in the area and fix stuff in the common building. His dog Pluto is a bit shyer but, according to rumor, adorable.



4. Apartment, 5 rooms + kitchen: 109 m²
Maria, Felix, Leo, and Danny have lived as a collective for many years; obviously, they love gardening and always dreamed of living in a community with their neighbors.



6. Apartment, 1 room + kitchen: 29 m²
Mara is a student and loves to invite people over to the sauna, but today she is a bit annoyed since someone did not clean the sauna, but later, after a beer with Leo and Danny, the hard feelings are gone.



Exploded view; scheme of apartments in the project *D*, number of rooms + kitchen [r+k], ordered after size (maximal floor area)

1.	Coworking space,	60 m ²	
2.	Townhouse,	6 r+k:	135 m ²
3.	Townhouse,	4 r+k:	110m ² (122 m ²)
4.	Apartment,	5 r+k:	109 m ²
5.	Apartment,	2 r+k:	60 m ² (76 m ²)
6.	Apartment,	1 r+k:	29 m ²
7.	Apartment,	1 r+k:	29 m ²



Facade facing the street

The plan

With a plan centered around a core, the larger apartments get multiple ways to move through the apartment and rooms can easily be divided. All apartments have light from two directions and access to a private terrace. A simple structure gives the possibility of leaving slabs open, adding and taking away rooms, and adapting the plan over time. The three-floor rowhouses can be extended onto the terrace with a winter garden or a small greenhouse room for the spring and fall. The possibility for the residents to adapt the apartments to their current needs and use their own imagination give the apartments unique character. In the group D project, a coworking space is included, a space where people from the whole Segitzdamm project but also the neighboring residents can rent a desk. This will also bring activity to the site in the day time.

Regulations

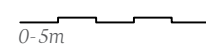
The project follows the Swedish 2021 BBR regulations (*Boverket, 2020*), where all apartments have accessible measures, and the apartments with more than one floor fulfills the regulations on the first floor. The apartments on the second floor are prepared for an elevator. Fire-safe windows have to be used in the facade in a few places to meet the regulations.

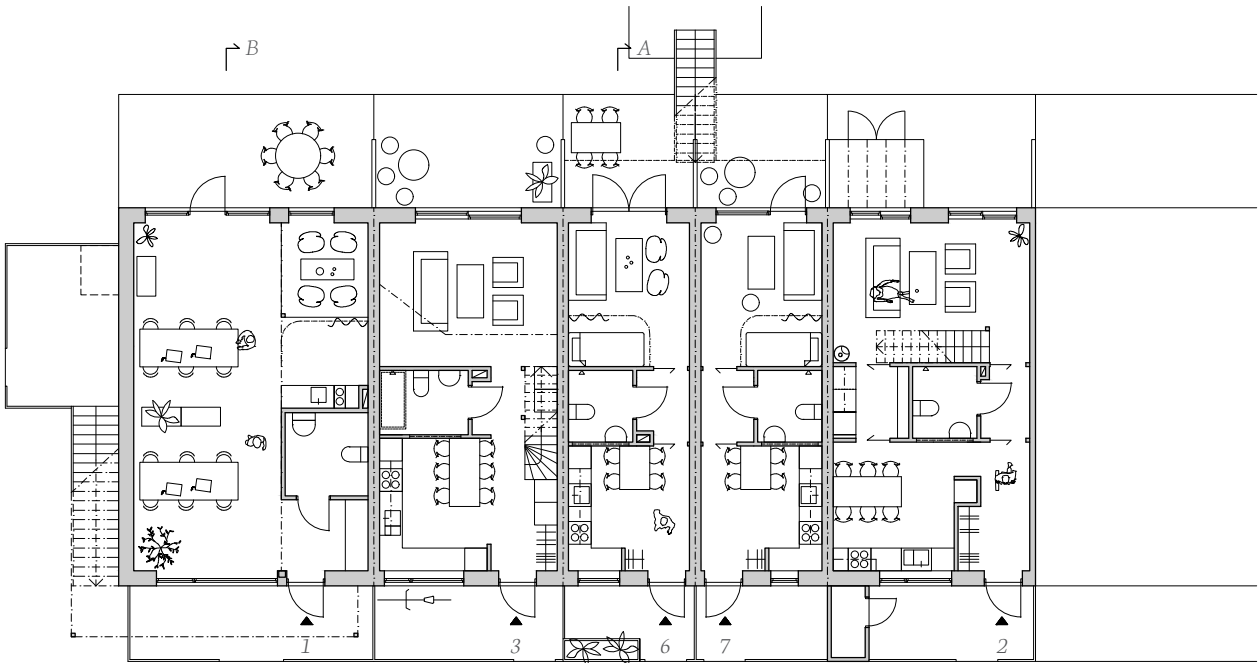
The apartments, number of rooms and sizes

(within parenthesis, the maximal floor area)

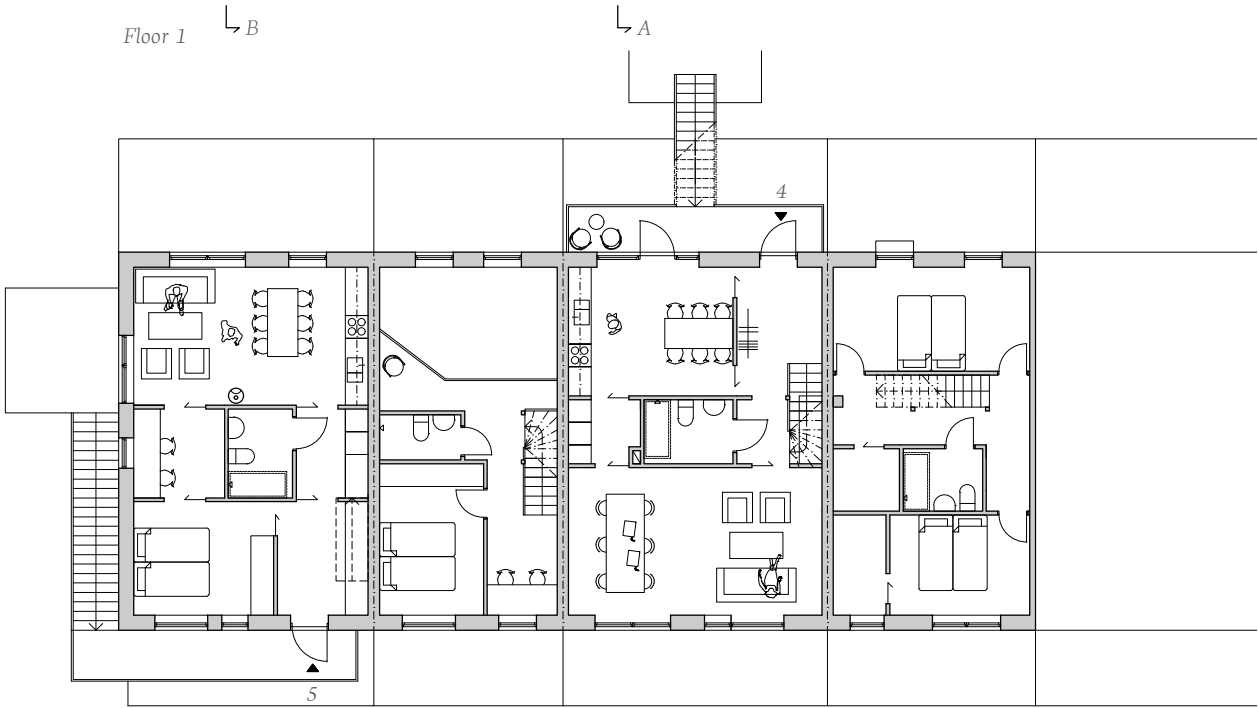
1. Coworking space: 60 m²
2. Townhouse, 6 r+k: 135 m²
3. Townhouse, 4 r+k: 110 m² (122 m²)
4. Apartment, 5 r+k: 109 m²
5. Apartment, 2 r+k: 60 m² (76 m²)
6. Apartment, 1 r+k: 29 m²
7. Apartment, 1 r+k: 29 m²

Drawings scale 1:200

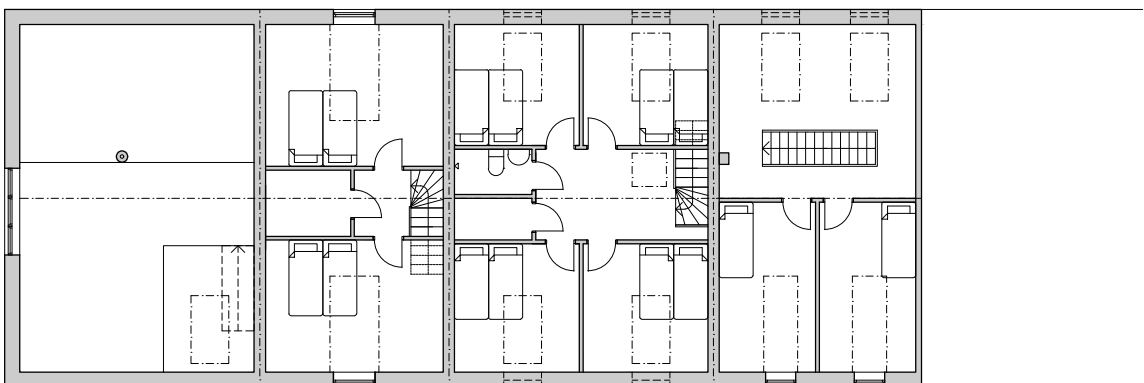




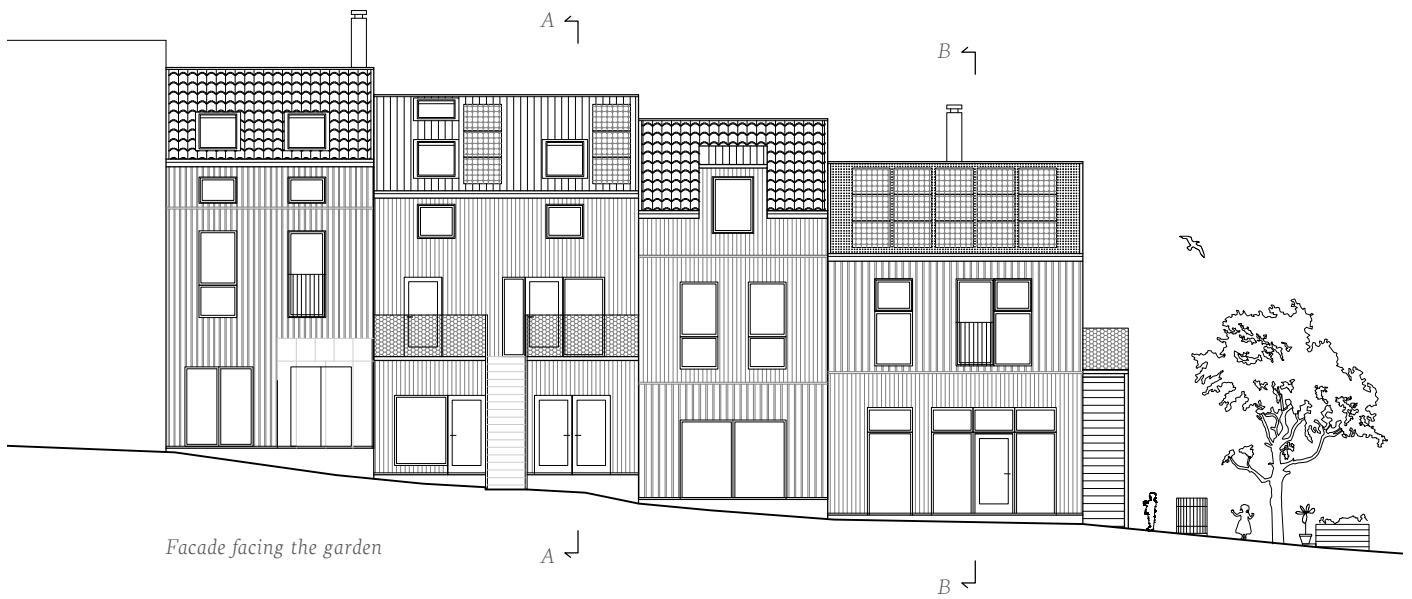
Floor 1



Floor 2



Floor 3, attic



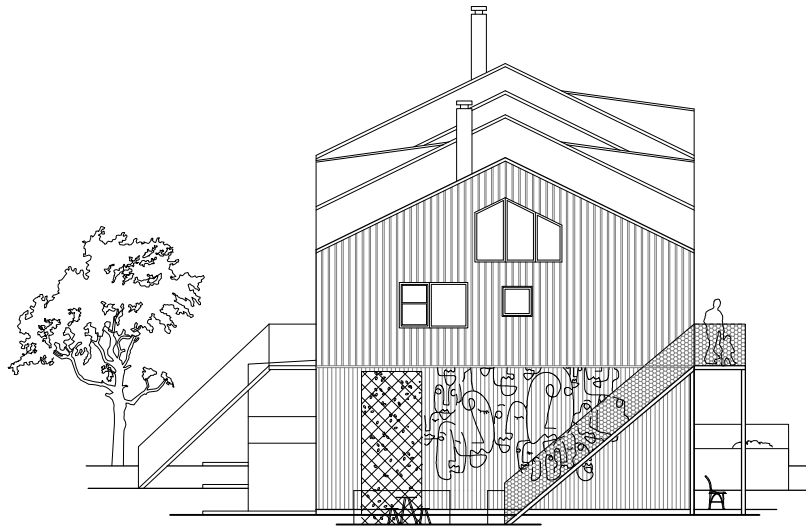
Section

A generous ceiling height gives the apartments a more spacious feeling, although compact room measurements. The attic rooms have a unique character and with dormer windows and generous roof windows they get a large amount of light. The space closest to the exterior wall can be built in and used for storage.

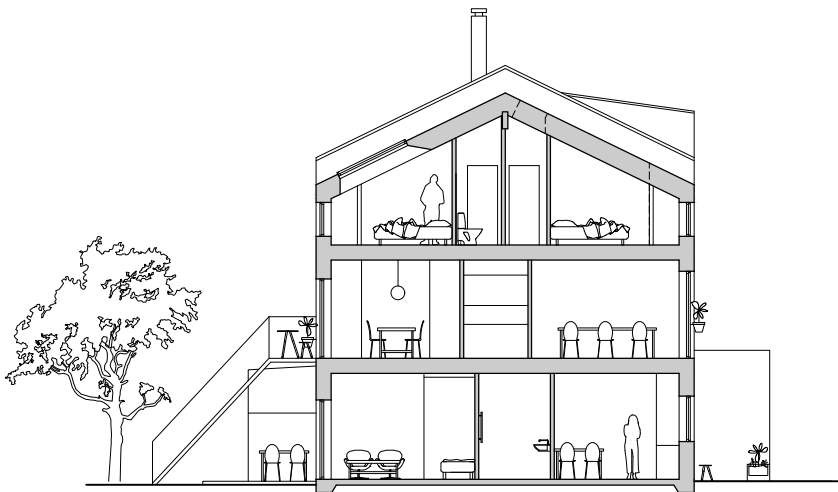
Construction

The construction is designed to be simple, standard wood joists, and a fixed core that

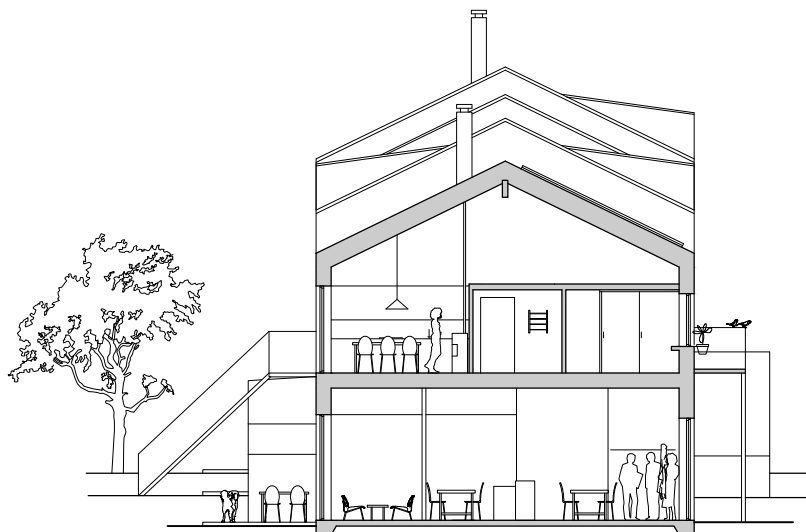
brings down the load makes the rest of the plan flexible for future changes. The relatively free placement of windows allows reused windows and to adapting the window placement to the structure. A mix of fixed and openable windows is a way of using large windows at a reasonable cost. The roof windows and the dormer windows are adapted to the roof trusses. The structure also allows the houses to be built in modules and assembled on the site, to reduce the cost and make the construction easier all around the year.



Facade

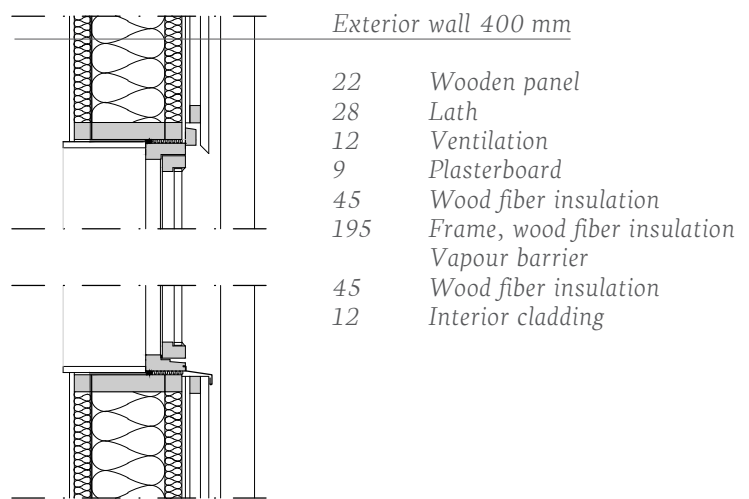
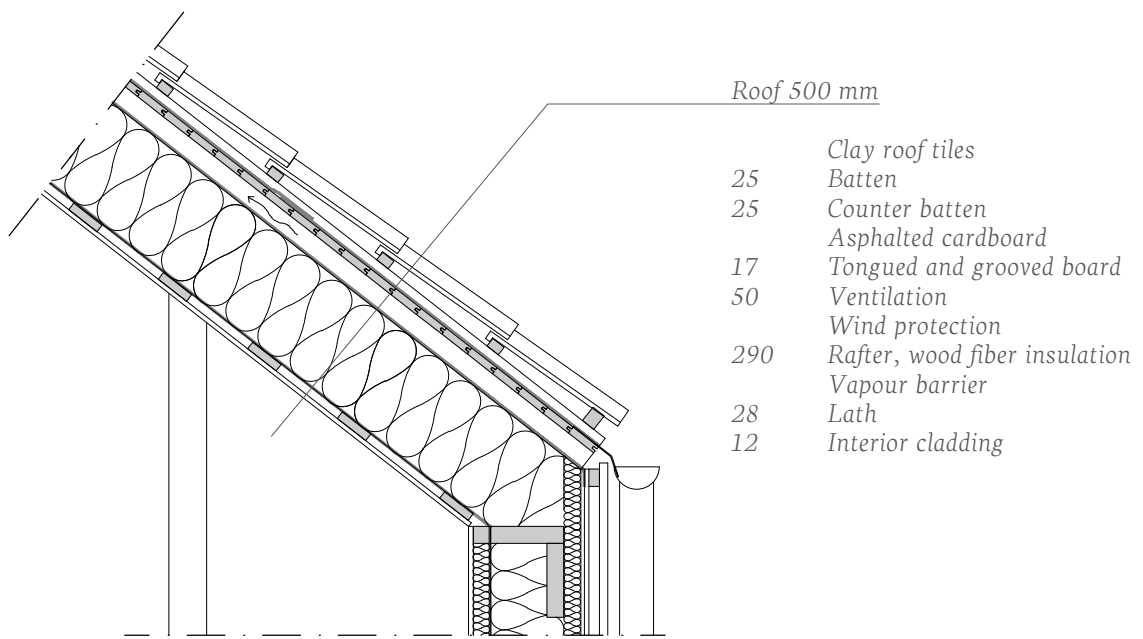


Section - A-A



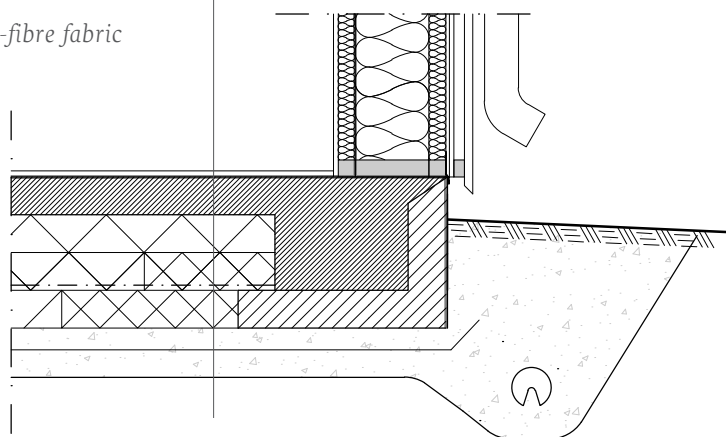
Section - B-B

Drawings scale 1:200  0-5m

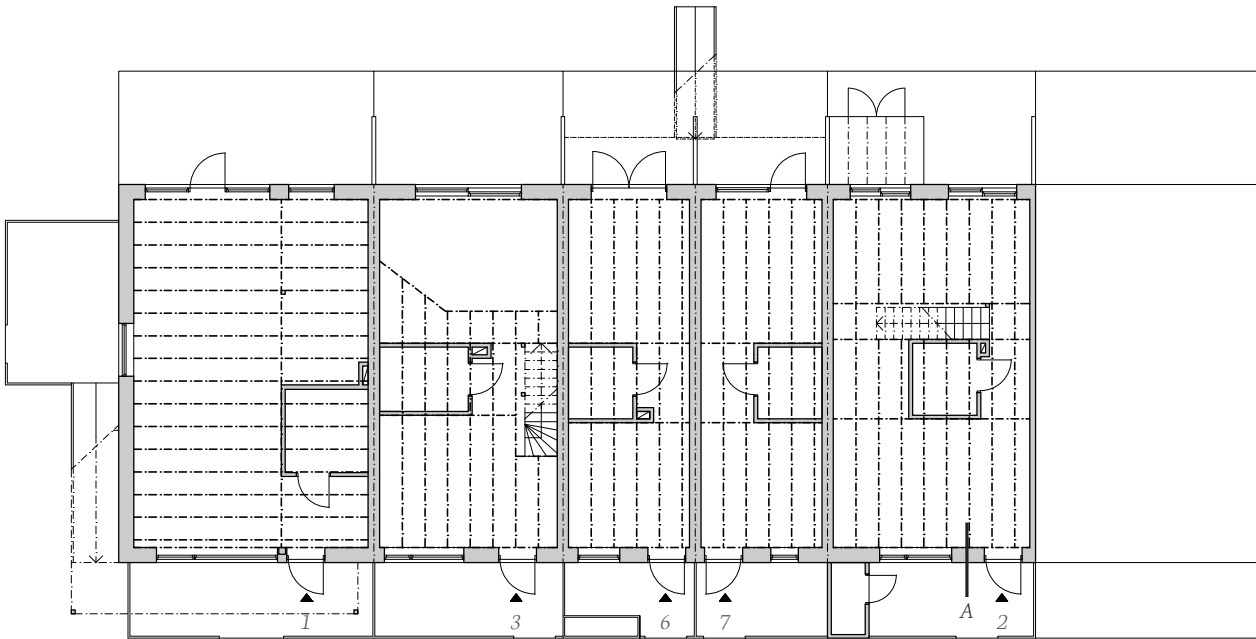


Floor

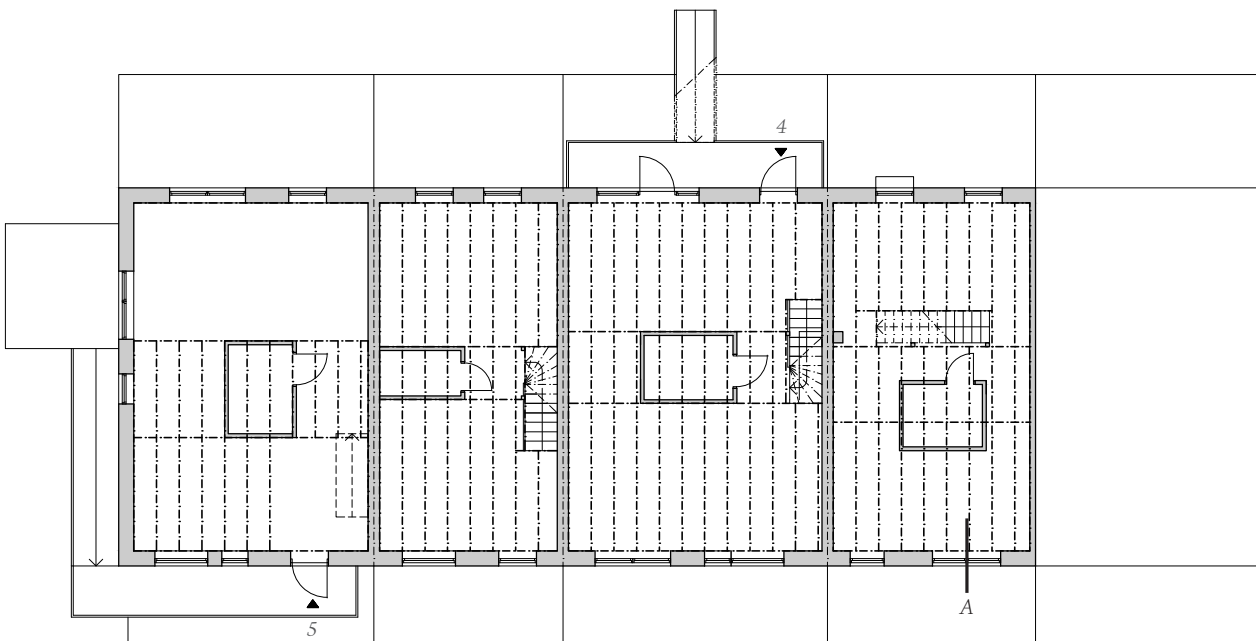
Wooden floor
 Concrete slab, reinforced
 Insulation
 Gravel
 Bonded-fibre fabric



Detailed section A, Scale 1:20



Floor 1, load bearing structure joists



Floor 2, load bearing structure joists

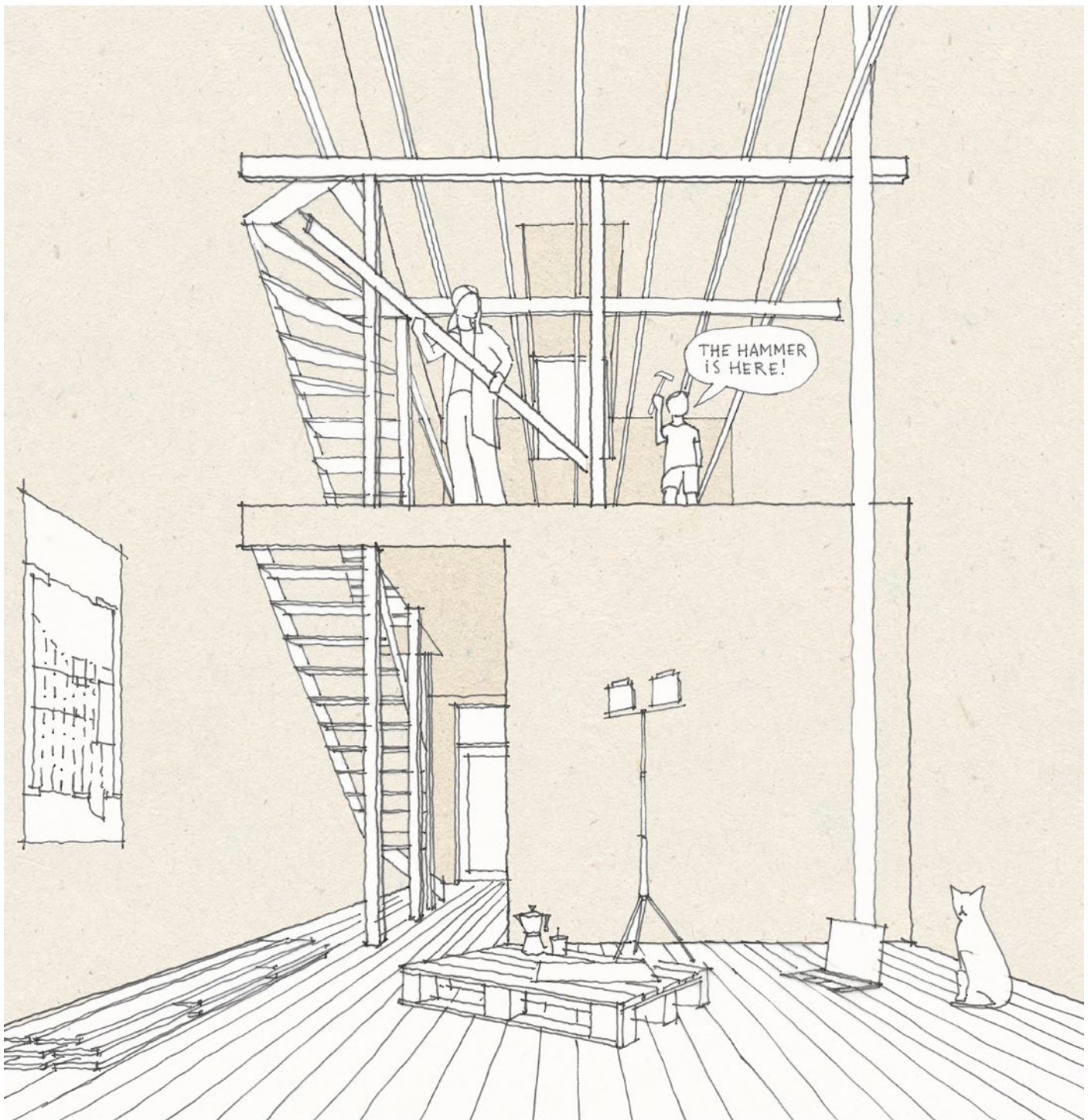
Construction details

The simple construction follows all the way into the details. The conventional light frame structure of wood is a cheap construction and makes self-build possible. The construction uses mainly natural material that can be maintained by the residents and last for a long time, which have both lower ecological impact and are cost-effective in a long perspective. The small scale makes it possible to use reused material, which will benefit the

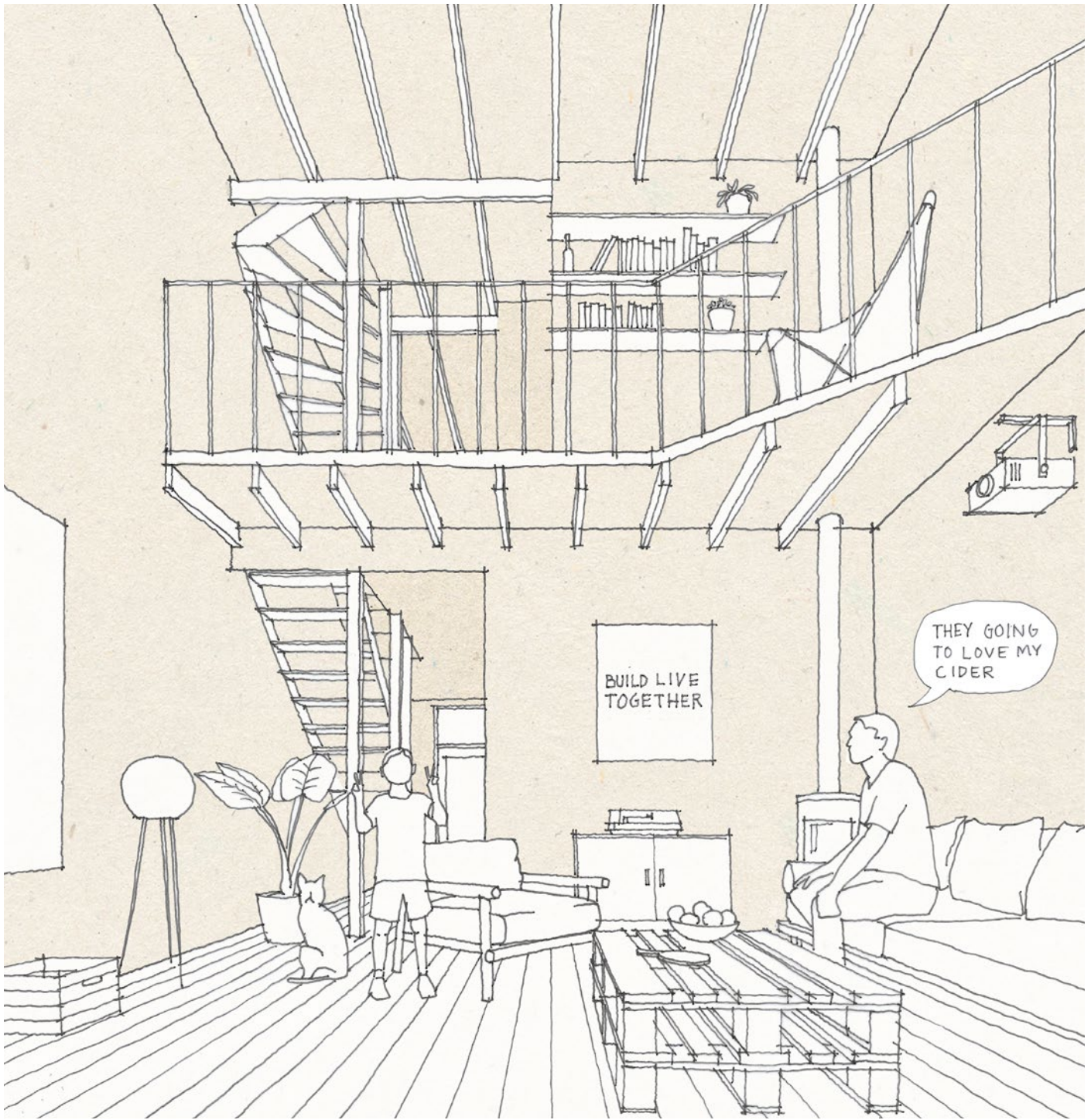
environment and could also be a way to save costs. *With creativity and personal adaptation, inexpensive standard products can be used to create something unique.*

Load bearing

The load-bearing plan shows the joist structure, the toilet is fixed, the rest of the walls can easily be adapted by the residents. The span-width are under four meters, this allows the use of conventional wooden joist.



Apartment 3 in progress:
Laura and Niklas are working on the second floor. Berkay is visiting his grandmother over the weekend. Sometimes, a break for a couple of days is needed, but the cat Ragnar disagrees, he refuses to leave, the project site is his castle. Laura and Alex chose to have wood sheets walls, not because they are lazy but because it gives a raw and unique look that they fancy and makes them remember their old apartment in Berlin.



The finished apartment:

Finally finished, after four months. Well, some baseboards and other minor things are left, but that does not count. Anyhow they are happy to not live on a construction site any longer and have learned a lot. Tonight, they invited Lev and Julia to watch some photos from the building process and drink some homemade apple cider. Berkay has bragged about his cider's "word-class" taste, up to prof toning if he can titillate himself the king of apple cider.

The expansion of the concept

The network of autonomous projects connected by the land trust creates synergies

A network of projects

In 20 years, the land trust *Allmänningen* is well known and the concept with the joint building venture established. A part of the development proposed in the *city-quality proposal* for Tynnered has been done with *Allmänningen*, and Tynnered has become a leading example for user-driven housing development in Sweden.

The number of self-organized groups has made it possible to create countless activities and spaces that can be shared within the network and invite the surrounding residents. The activities and spaces created become new natural meeting places for people not only

living in the projects. The extensive network also opens for a large-scale sharing of material, equipment, spaces, and knowledge. This brings, except social connections, benefits for the environment and brings numerous possibilities to the individual.

The system organized with different scales of communities and a possibility of different tenures creates flexibility, variety and invites people with different life situations. The system connects people from different backgrounds united in the self-organized living environments, bringing empowerment to the people, which will make the area prosper.

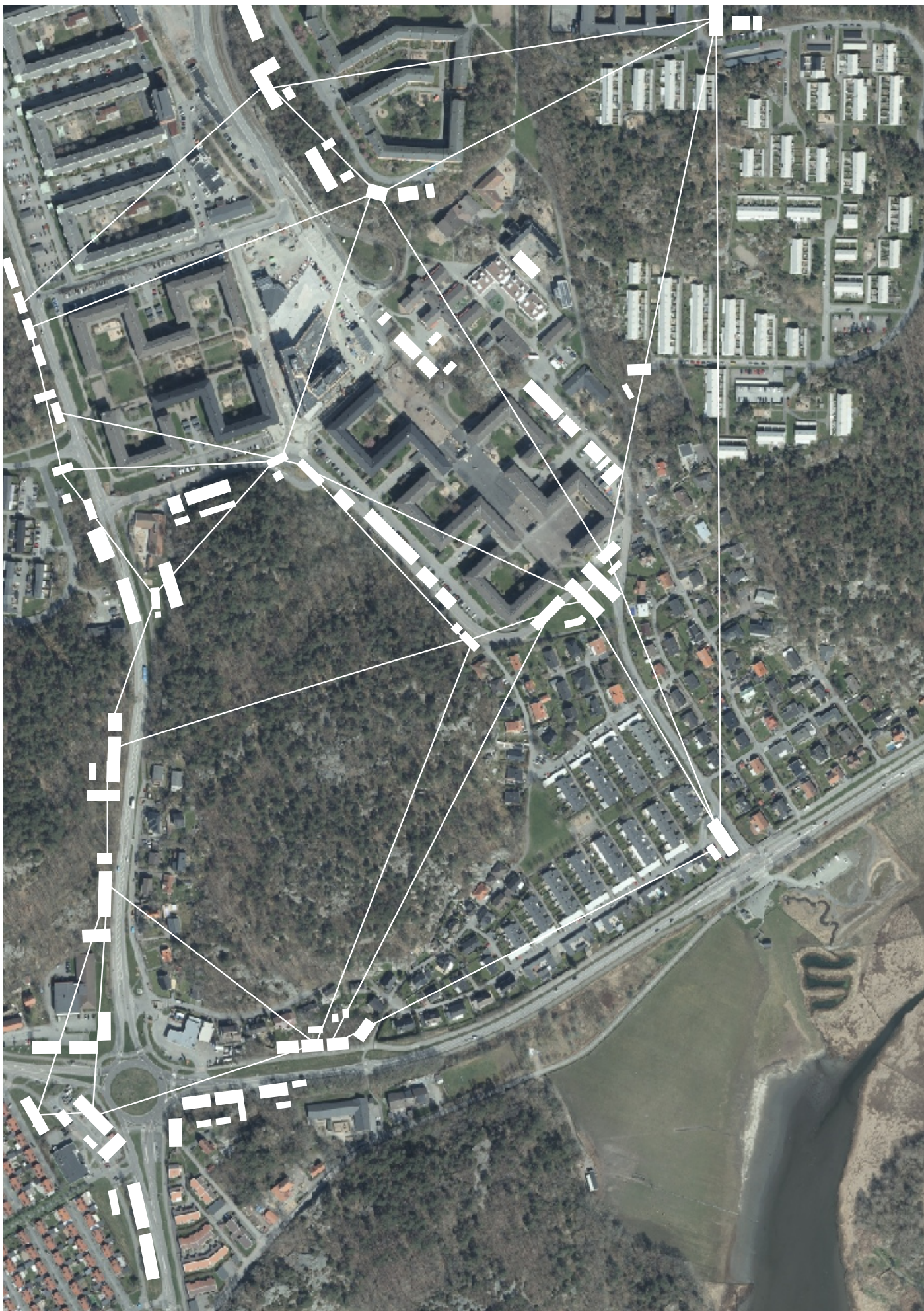


Figure 27 Aerial photo of the a future in Tynnered, with development on locations according the city-quality proposal and with connected user-driven projects. Scale 1:10000. (Lantmäteriet, 2021)

Conclusion and Discussion

Summary

The report has introduced policies regarding our built environment and, from a perspective of empowerment in the home and built environment, presented several tools to achieve this. Case studies from Sweden and Germany have shown examples of systems and architecture of community-led housing. In an architectural project, the findings have been re-interpreted and designed into a new system for a Swedish context that would make it possible for groups of people to develop their own homes in urban environments. The system is based on the new CLT *Allmänningen* and the joint building venture; multiple groups share a site which creates unique projects and brings a diversity of people. The design proposal displays one project on a shared site in the Gothenburg suburb Tynnered.

Conclusion

How can the joint building venture be a tool for more participation and empowerment in the built environment in a Swedish urban context?

The joint building venture invites people to develop their own houses, which gives direct empowerment in the building sector. Creating a system including a CLT and a structure suitable with a range of tenures, knowledge-sharing, and cooperation invites a wide range of people to participate and create unique environments adapted to the residents. The CLT structure makes the joint building venture more available in an urban context by offering land lease contracts.

How can an infrastructure for user-driven housing development be designed for a Swedish context, and how can the architecture be adapted to this system?

Through a CLT and different levels of cooperation, the proposed system can be a way to adapt to the current Swedish system. Since it allows various tenures and developing structures, it naturally creates diversity and facilitates the process for groups of different sizes and constellations. The rowhouse scale adapts to the proposed system and suits well for densification projects. It also is size comprehensible for the joint building venture and gives people the possibility to participate in the actual building process. The proposal with simple and natural materials makes it possible for the inhabitants to maintain the buildings themselves which will benefit the environment and long term economy of the project.

Discussion - method

The context of empowerment and participation connected to the joint building venture can be addressed in different ways and the proposed system have been inspired from Berlin and the projects in the case studies. The proposed system is designed to the situation, and to counteract the holdbacks, for the joint building venture in Sweden and Gothenburg today. The thesis argues for user-driven design; since the project is created from an imaginary group, it is an example of what a group and a project could look like and designed to complement the current housing stock in central Tynnered.

How can the joint building venture be a tool for more participation and empowerment in the built environment in a Swedish urban context?

How can an infrastructure for user-driven housing development be designed for a Swedish context, and how can the architecture be adapted to this system?

Reflection

The development process, organization structure, and tenures influence the architecture and our built environment considerably. With a higher level of self-organization, participation and more responsibility in all the stages of the process, the architecture and built living environment could be more inviting and done with higher quality. The living environment is continuously changing, and development over time is an essential part of achieving thriving neighborhoods. Therefore, the system with cooperation and self-organization are essential factors which also brings empowerment to the inhabitants.

The system with a CLT and sites shared between several joint building ventures adapts to the Swedish system. The CLT can take part in developing a detailed development plan with the municipality, the groups on the site can support each other, share infrastructure, and rationalize the building process, and the joint building venture can be kept relatively small, facilitating the process. The system applies to different types of tenures and could include housing developers willing to build on a smaller scale; this brings diversity and makes user-driven projects more inclusive by giving possibilities for arranging the projects in a cooperative structure. The self-build brings the aspect of direct participation and an understanding of the building, which connects to the maintenance and the long-term perspective. This together brings empowerment to the people living in the building who can change, adapt and develop the project over time. The method should be seen as a compliment on the current market, not all people have the interest or the possibility of user-driven projects, which demands both time and energy, but the opportunity must exist.

Implementing the proposed system in practice would meet several problems; finding stakeholders, getting the planning done, and arranging the legal forms are major issues. Another problem I see today is people's awareness of community-led housing since there are few examples and the concept not widely known. With more initiatives, the interest will grow, and the initiatives to facilitate user-driven projects will increase. The report mainly addresses the positive aspects of the user-driven processes and the systems of cooperation. However, as with all projects, it comes with a risk, personal conditions can change, unpredictable situations can occur, and personal opinions can go apart. With a solid system, many of the problems can be avoided.

We need a system that promotes user-driven design and brings empowerment to the residents to face our future urban challenges. Since it naturally promotes a long-term perspective and ideas of sharing, which is crucial for both ecological, economic, and social sustainability. Today, it is more or less impossible for most people to develop housing for themselves in urban environments in Sweden. People are forced into a monotonous market that cannot meet all people's personal needs, which closes opportunities for people to rethink, adapt and develop housing in our cities. For me, and I believe for many others, the home is essential, and therefore, naturally, people want to invest both time and resources to create something good. My position is that we must give the possibility to people who want to invest in their future living environment to do so.

We must build and live together.

ALBIN HAGGREN.

Berlin, May 2021.



Self-built, self organized. Berlin 2021. (Scan the QR-code in the right corner to see the process)

References

Books:

Broms Wessel, O. & Hedström, H. (2016). *Byggemaskaper -handbok om att bygga tillsammans*. Arkitektkontoret Spridd.

Westholm, H. (2019). *De byggde gemenskap - erfarenheter från tio bygg- och bogemaskaper i Sverige*. Chalmers university press.

Grip, E. & Kärnekull, K. & Sillén, I. (2019). *Gemenskap och samarbete i kollektivhus och bogemaskaper*. Migra förlag.

id22: Institute for Creative Sustainability. LaFond, M. & Tsvetkova, L. (2017) *CoHousing Inclusive Self-organized, community-led housing for all*. Jovis Verlag.

Magazines:

Ring, K. (2019). *Stadt gestaltung und Wohnprojekte in Eigeninitiative*. BauweltEinblick Baugruppe Berlin. 2-3.

Novotny, M. (2019). *Pioniere im Umbruch*. BauweltEinblick Baugruppe Berlin. 4-13.

Friedrich, J. (2019). *Zukünftige Kooperationen*. BauweltEinblick Baugruppe Berlin. 4-13.

Bauwelt. (2019). *Baugruppe Berlin*. BauweltEinblick Baugruppe Berlin. 8.

Reports:

Miljö- och energidepartementet. (2018). *Strategi för Levande städer - politik för en hållbar stadsutveckling* (Skr. 2017/18:230). Regeringskansliet. <https://www.regeringen.se/4971fa/contentassets/b5640fd317d04929990610e1a20a5383/171823000webb.pdf>

Kulturdepartementet. (2018). *Politik för gestaltad livsmiljö* (Ku18:05). Regeringskansliet. <https://www.regeringen.se/4a72ce/contentassets/0c956f9d26224b7f87420febf50c0d0f/politik-for-gestaltad-livsmiljo-.pdf>

United Nations. (2017). *New Urban Agenda* (A/RES/71/256*). <https://habitat3.org/wp-content/uploads/NUA-English.pdf>

Folkhälsomyndigheten. (2019). *Öppna jämförelser folkhälsa 2019* (18076). <https://www.folkhalsomyndigheten.se/contentassets/ec714fca0b0145eab3d7924511550a74/oppna-jamforelser-folkhalsa-2019-18076.pdf>

Västra Götalandsregionen. (2019). *Kulturstrategi Västra Götaland- och regional kulturplan 2020-2023*. <https://alfresco.vgregion.se/alfresco/service/vgr/storage/node/content/workspace/SpacesStore/d2dde95a-69e1-4178-aea4-a96773f6ce7a/Kulturstrategi%20V%c3%a4stra%20G%c3%b6taland%e2%80%93%20och%20regional%20kulturplan%202020%e2%80%932023.pdf?a=false&guest=true>

Egnahemsbolaget. (2020 October 1). *Rapport - Självbyggeri*. https://goteborg.se/wps/PA_Pabolagshandlingar/file?id=29535

Göteborgs Stad Fastighetskontoret. (2020). *Villkor för överlåtelse av mark/byggrätter för bo och byggemenskaper*. Göteborgs Stad , Fastighetskontoret. <https://static1.squarespace.com/static/5bf6e928365f02cc1a5ec3a8/t/5fdc766438e73f2e3d75db38/1608283749338/Villkor+bo+och+byggemenskaper+2020-12-16.pdf>

Olsson, K & Rojhan Gustafsson, A & Lindh, E & Westerén, H & Nilsson, I & Andersson, J & Persson, P & Carvalho, T & Björklund, H. (2018). *Utveckla upplåtelseformen kooperativ hyresrätt*. Riksdagen.se. <https://data.riksdagen.se/fil/E8F2A109-E51D-4E8F-A96C-BD6AEEEE1C4CA>

Boverket. (2018 oktober). *Byggemenskaper som en del i bostadsförsörjningen* (2018:32). <https://www.boverket.se/globalassets/publikationer/dokument/2018/byggemenskaper.pdf>

Crona, K. (2019). *Att bygga billigt är dyrt - finansieringens påverkan på boendets kvalitet och hållbarhet*. CBA & Sweco. https://www.chalmers.se/SiteCollectionDocuments/Centrum/CBA/Nyheter/20190115%20CBA_kortrapport_Crona_2018_1.pdf

Spacescape. (2018). *Värdeskapande stadsutveckling i Tynnered*. Spacescape. <https://www.spacescape.se/wp-content/uploads/2019/02/Tynnered-Framtiden-190222.pdf>

Centrum för Boendets arkitektur på Chalmers. (2018). *Ombildning av hyresrätter till bostadsrätter i Göteborgs ytterstadsdelar - En uppföljningsstudie*. <https://www.chalmers.se/SiteCollectionDocuments/Centrum/CBA/utbildning/CBA0615.pdf>

Framtiden. (2020). *Framtidenkoncernens strategi för utvecklingsområden 2020-2030*. <https://www.framtiden.se/wp-content/uploads/2020/09/Framtidenkoncernens-strategi-f%C3%B6r-utvecklingsomr%C3%A5den-2020-2030.pdf>

Familjebostäder i Göteborg. & Bostadsbolaget. (2019). *Övergripande strategi för utvecklingen av Tynnered 2020-2035*. Bostadsbolaget. https://goteborg.se/wps/PA_Pablagshandlingar/file?id=21429

Investitionsbank Berlin. (2019). *IBB Wohnungsmarktbericht 2019*. https://www.ibb.de/media/dokumente/publikationen/berliner-wohnungsmarkt/wohnungsmarktbericht/ibb_wohnungsmarktbericht_2019.pdf

Videos:

Berg, J. (2020). *Vad är rå arkitektur?* [Video]. Chalmers play, Centrum för boendets arkitektur. https://play.chalmers.se/media/0_dacf97gg

Curtis, M. (2019). *Arden - a town of shared land ownership* [Video]. Vimeo. <https://vimeo.com/339523370>

Web:

United Nations. (2021). *Goal 11*. <https://sdgs.un.org/goals/goal11>

Stadsutveckling Göteborg. (2021 may 3). *Opaltorget*. <https://stadsutveckling.goteborg.se/projekt/opaltorget>

SCB. (2021 april 22). *Antal lägenheter efter region och upplåtelseform. År 2015 - 2020*. <http://www.scb.se/bo0104>

SCB. (2021 april 22). *Antal lägenheter efter hustyp, upplåtelseform och år. År 2015 - 2020*. <http://www.scb.se/bo0104>

Stiftung trias. (2021 August 9). *Stiftung trias :: Taking properties out of the speculation market*. <https://www.stiftung-trias.de/english/>

Holzmarkt 25. (2021). *Die Holzmarkt 25 stiftung*. <https://www.holzmarkt.com/stiftung>

Oxfordlearnersdictionaries. (2021). *Definition of empowerment noun*. <https://www.oxfordlearnersdictionaries.com/definition/english/empower>

Boverket. (2019). *Upplåtelseformer och boendeformer i Sverige*. <https://www.boverket.se/sv/samhallsplanering/bostadsmarknad/bostadsbestandet/upplåtelseformer/>

Föreningen för byggemaskaper. (2021). *Om Byggemaskaper*. (<http://byggemaskaper.se/om-byggemaskaper/>)

Mäklarinfo.se. (2021 may 5). *Bostadspriser i Tynnered, Göteborg*. [Mäklarinfo.se/goeteborg/omraeden/tynnered](http://maeklarinfo.se/goeteborg/omraeden/tynnered)

Statistikdatabas Göteborgs Stad. (2021). *Antal lägenheter efter hustyp och lägenhetstyp 2017-2020*. <https://tinyurl.com/d9sjunsc>

Statistikdatabas Göteborgs Stad. (2021). *Bostadsbestånd efter hustyp och byggnadsår 2014-2020*. <https://tinyurl.com/9hthe6nf>

Øresunddirekt. (2021 february 22). *Andelslägenhet i Danmark*. <https://www.oresunddirekt.se/se/jag-vill-flytta-till-danmark/bostad/andelslagenhet-i-danmark>

Olof Antonsson. (2014 may 18). *Studiebesök hos byggemaskapen Kumlet, Brännö*. <http://byggemaskaper.se/studiebesok-hos-byggemaskapen-kumlet-branno/>

Hausprojekt M29. (2021). *Selbstverständnis*. https://hausprojekt-m29.org/?page_id=7

Praeger Richter Architekten. (2021). *Ausbauhaus Neukölln*. <https://praegerichter.de/AUSBAUHAUS-NEUKOLLN-1>

Mietshäuser Syndikat. (2021). *Der Projekteverbund*. <https://www.syndikat.org/de/unternehmensverbund/>

Mietshäuser Syndikat. (2021). *Finanzierung*. <https://www.syndikat.org/de/finanzierung/>

Mietshäuser Syndikat. (2021). *Die Verbundbausteine*. <https://www.syndikat.org/de/verbundbausteine/>

Mietshäuser Syndikat. (2021). *Das Syndikat in Betrieb*. <https://www.syndikat.org/de/betrieb/>

Fundació Mies van der Rohe. (2021). *Experimental housing at Svartlamon*. <https://miesarch.com/work/3790>

Nøysom arkitekter. (2021). *Experimental housing at Svartlamon*. <http://www.eksperimentboliger.no/>

Boverket. (2020). *Om Boverkets byggregler, BBR*. <https://www.boverket.se/sv/byggande/regler-for-byggande/om-boverkets--byggregler-bbr/>

Personal communication:

2021.02.02 - Helena Westholm, Ferrum arkitekter. - De byggde gemenskap

2021.02.03 - Lukas Memborn, Fastighetskontoret Göteborgs Stad. - Byggemenskaper

2021.02.16 - Ylva Sandström, Divercity. - Cooperative housing (in suburb environment)

2021.02.17 - Gunnar Persson, Framtiden utveckling. Tynnered och byggemenskaper

2021.03.01 - Jonas Lagander, Coompanion Östergötland. - Community land trust

2021.03.15 - Renee Somnitz, Miethäuser Syndikat. - Das Miethäuser Syndikat

Figures:

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Figure 13: Reclaimyourcity. (2012 august 17). *Grünberger Str. 73*. [Photograph]. <https://reclaimyourcity.net/sites/default/files/public/field/image//p179sk5h8f1bjh13j61d2peka1rtvc.jpg>

Figure 14: Hummel, B. & Clemens, O. (n.d). *Hausprojekte M29*. [Photograph]. <https://www.dabonline.de/2015/09/01/all-together-now-gemeinschaftswohnung-wohnraum-stadt-urban-living-cluster-berlin-m29-energieeffizienz-sozial-wohngenosenschaft/>

Figure 15: Nøysom arkitekter. (n.d). *Experimental housing at Svartlamon* [Photograph]. <https://miesarch.com/work/3790>

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