LAYERS OF SPACE

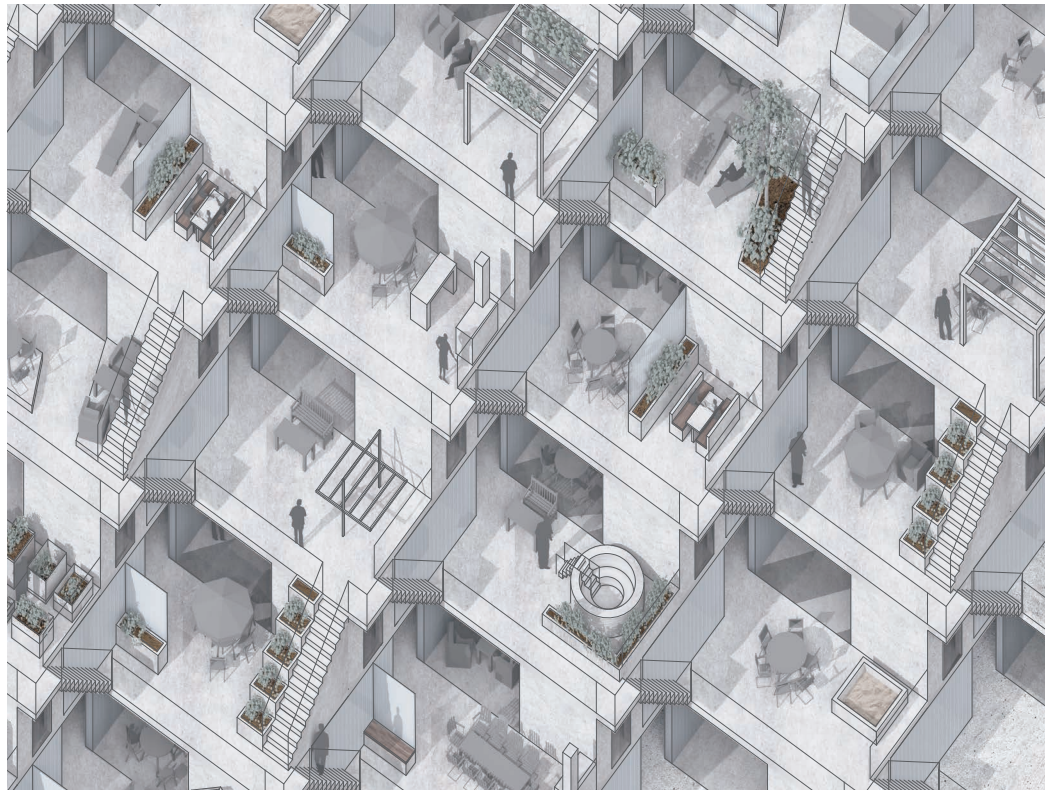**Investigation of Transition Space between Public and Private through Building Design**

MARTIN FÄLLSTRÖM

LAYERS OF SPACE

Investigation of transition space between
public and private through building design

Martin Fällström
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Supervisor: Jonas Carlson

CHALMERS
UNIVERSITY OF TECHNOLOGY

ABSTRACT

This thesis investigates the transition space between public and private, and the layers of space in-between them.

In urbanisation and densification of cities, distance between people decreases. This creates situations where the meeting between private and public space gets very direct, making the transition space between them a key for design.

In this thesis public space is defined as space that the public has unrestricted access to, while private space is strictly controlled by an owner. Between them there are layers of private and public space.

The subject is investigated through a building design, with the starting point for the design to create situations where private and public space gets as close and direct as possible. In order to create these situations the most private space, housing, is combined with totally public space and thereby also allowing for investigation and design of the space in-between the spaces. The working method for the design has been to let the most extremes stand against each other, i.e. let the most private face the most public. By investigating the consequences of those meetings prototyping for design of the situations have been made, which then have been implemented in the design.

A number of reference projects and literature on the subject have also been studied and conclusions from them have been used in prototyping of design as well.

The thesis result in a design proposal of a mixed-use building of terrace type with public spaces along the façade, on top of the building and within the building. This allows for investigation of meetings between different kind of spaces, from public space facing public space to private space facing private space, and all the spectrum of meetings in-between. The method of using a building design in an urban environment let the investigation of spaces span from the large urban scale via building scale to micro scale. The design of building typology, floor plan layout, material choice, entrance spaces and furniture design has been implemented by the meeting of private and public as a guideline for design.

The result of the investigations and the design shows the possibilities of alternative typologies and mixed-use spaces in a building, when considering the situations created by the meeting of public and private space. The typology itself can also be used to vitalise an area with it's mix of use and activities for both housing and commercial space.
The thesis and proposal is to be seen as a discussion and investigation of private and public space and how to design it in relation to each other in a dense urban environment.

STUDENT BACKGROUND

Martin Fällström

Date of Birth
27th March 1988

Relevant Education
BSc. Arch: Chalmers University of technology
MSc. Arch: Chalmers University of technology
Exchange studies: University of Strathclyde (Autumn 2016)

Relevant Work experience
Internship Stadsbyggnadskontoret (2017)

Contact
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WHY THIS THESIS?

For my thesis I wanted to do a research that connected to a current discussion but also touched upon the core of architecture.

I'm interested in architecture that creates something more than just a building, and especially in the field of housing. It can be rethinking of the concept of a home, it can be new ideas for the common spaces, or it can be the buildings function for the city. This interest has developed during my whole education together with a critical take on architecture.

A field of architecture that I consider important but sometimes overlooked, is the development of cities in the small scale. The small scale for me is as in designing of streetscapes, small spaces and buildings as a part of the urban life.
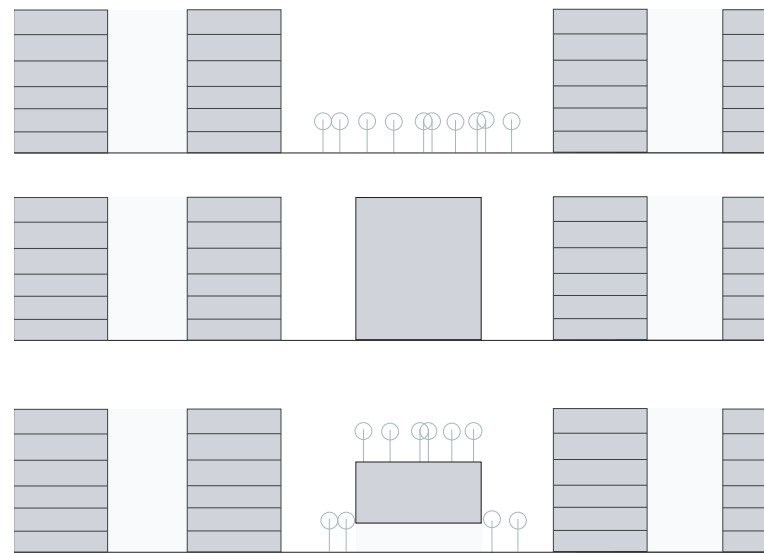
What I find is a common subject for these to fields, and also very important for architecture in general, is the meeting between private and public space. It's important for creating good housing in a continuously denser urban environment, but it's also important for the common public space in the dense city.

My research therefor became to investigate private and public in a way that is critical towards the traditional solutions of keeping them apart, and to see what can be gained by mixing them, and how.
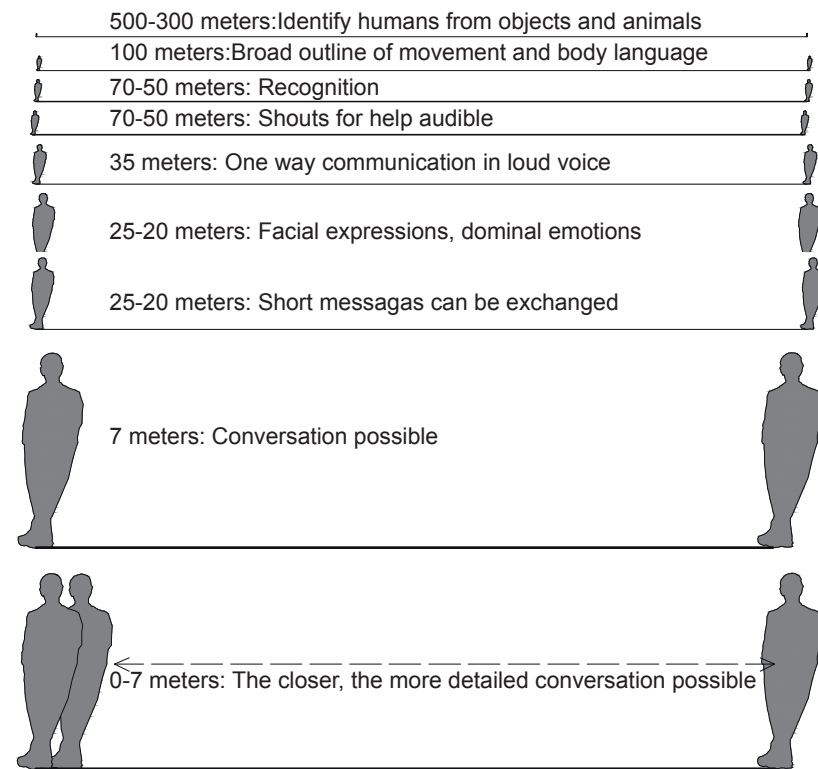
TABLE OF CONTENT

INTRODUCTION

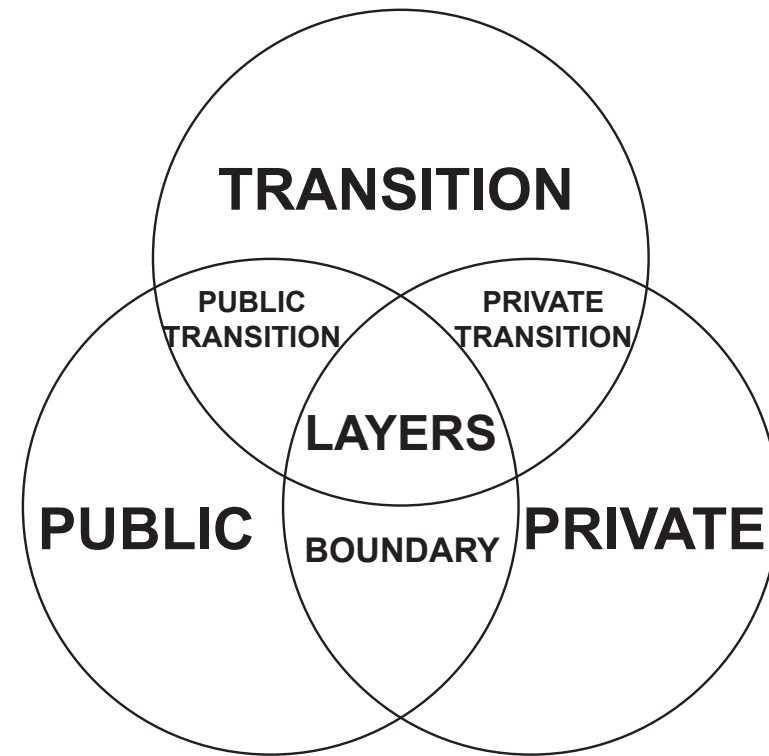*Public, private and mixed use of urban space.*

DISCOURSE

This thesis investigates the transition space between public and private, and the layers of space in-between them.

In urbanisation and densification of cities, distance between people decreases. This creates situations where the meeting between private and public space gets very direct, making the transition space between them a key for design.

The subject is investigated through a design proposal of a mixed use building, which links together the research question of public and private space with the urbanisation and densification of cities.

500-300 meters:Identify humans from objects and animals

100 meters:Broad outline of movement and body language

70-50 meters: Recognition

70-50 meters: Shouts for help audible

35 meters: One way communication in loud voice

25-20 meters: Facial expressions, dominal emotions

25-20 meters: Short messagas can be exchanged

7 meters: Conversation possible

0-7 meters: The closer, the more detailed conversation possible

*Peoples perception of each other from different distances,
as described by Jan Gehl.*

TRANSITION

PUBLIC
TRANSITION

PRIVATE
TRANSITION

LAYERS

PUBLIC

BOUNDARY

PRIVATE

*VENN- diagram showing the different subjects and interests touched
upon in the thesis.*

BACKGROUND

The thesis background is urbanisation of densification of cities, which decreases the distance between people. This makes design of urban spaces and living spaces very important, and especially in regards to private and public space, since the buffer zones between them get smaller or disappear.

Another aspect of the densification is that the public space decreases as the available land gets built on. This thesis want to explore how instead public space can be increased when densifying cities, and how that effects the private space.

OBJECTIVE

CLAIM
When densifying cities is it possible to create public space by building private buildings, if the physical transition space between public and private is used as a design tool?

AIM
The purpose of the thesis is to investigate how to create public and private space in symbios in a dense city, with focus on the physical layers between them. The aim is to find a number of design tools to use in a design proposal. This proposal then can be used for discussions on how we densify our cities, and how we design the transition space between public and private.
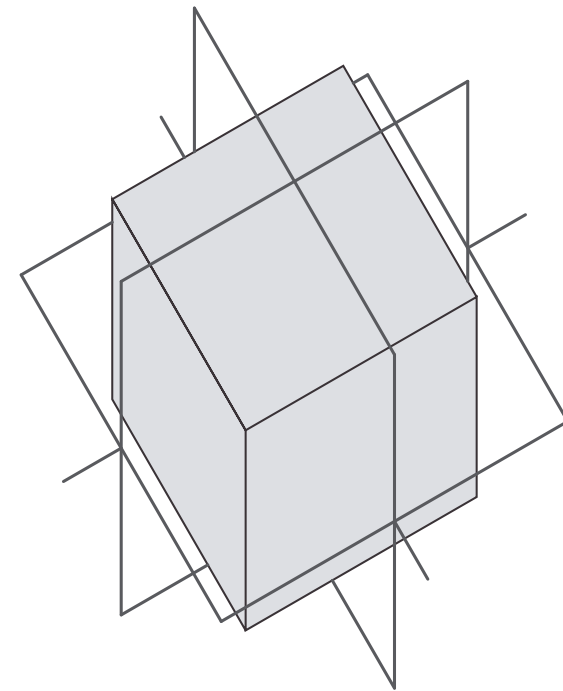
Private box surrounded by public space

METHOD

The thesis is based on research by design as a method. The method for the design has been to let the most extremes stand against each other, i.e. the most private facing the most public. By investigating the consequences of those meetings prototyping for design of the situations have been made, which then have been implemented in the design. A number of reference projects and literature on the subject have also been studied and conclusions from them have been used in prototyping of design as well.

In the first stage of the design process, it was vital to establish a working method for how the investigation would be done, but also what the result was to be. In order to properly go into the subject, the most extremes would be facing each other as a starting point in every step of design. In this thesis the extremes would be the absolute private space and the absolute public space. Part of the investigation was therefor also to find the most extreme situations both of public space and private space.

The design proposal of the thesis was early on decided to be put in Gothenburg. This because of the city being quite scattered but is in a process of densification. This means that the meeting of private space in housing, semi-private in offices, semi-public of shops and event spaces will face public space of streets, squares, parks etc will be more evident in the future development of the city.
In search for a site Brunnsparken was identified as a great mock-up site for testing out prototypes and typologies, since it's a very busy public space in a dense location in central Gothenburg.

DELIMITATIONS

Focus on subject private/public. Have been prioritzed when in confleict with Swedish building and housing regulations regarding accessibility or light demands inside apartments.

TERMINOLOGY

The thesis is focused on public and private space, and spaces in between them. In order to understand the intentions and situations in the thesis and project, here's a short explanation of the meaning of the words, in this thesis.

Public space: Space that the public has unrestricted access to
Private space: strictly controlled by an owner.
In-between space: Layers of different space in between the public and private space. Semi- private, semi- public and overlapping spaces.

READING INSTRUCTIONS

The material is split into different chapters. It starts of by the introduction, and is followed by research, the design stage and the final proposal. In the end of the booklet there is a discussion part with a small summary, conclusions and reflections of the work done in the thesis. At the very end there is also list of references used during the thesis work.

RESEARCH

PRIVATE IN PUBLIC

The research is devided into different parts and steps. Most of the research is based on reference projects, that have been analyzed and then oprototyped from the aspects of design of private or/ and public space. The reference part is devided into three different subjects. The main one focuses on the private space in a public enviroinment. The other treats the building typology and it's use of public and private space, where's the last one focuses on the public space of a private building.
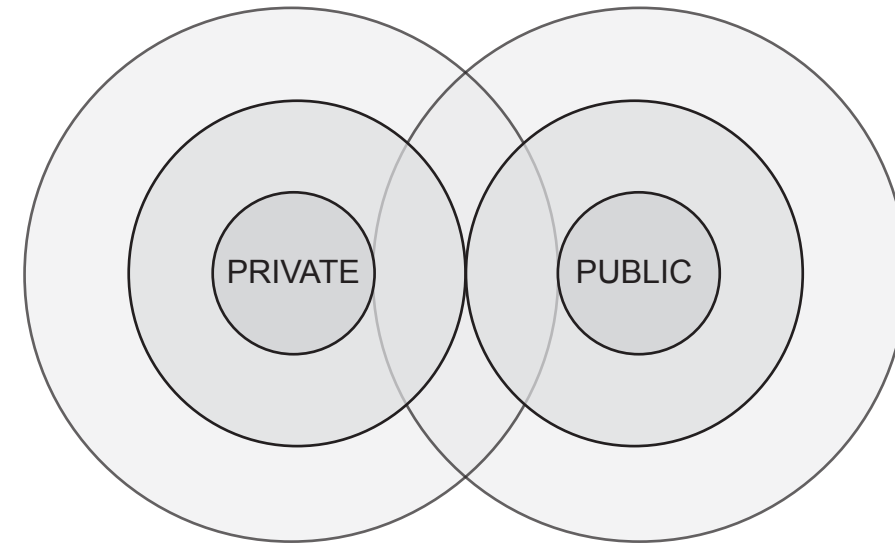
Illustration of a gradual shift from private to public space, and how they intersect with each other.

LITTERATURE

A number of written references have been used. They focus on public and private in different aspects; the psycology of space, the built environment and the design tools for creating public or private space. Learnings from this litterature have then been implemented in the design in different ways.

The Language of Space, Bryan Lawson

Privacy and Publicity, Beatriz Colomina

Cities for People, Jan Gehl

Primitive Future, Sou Fujimot

Något om.. Liten Skissbok om Det Upplevda Rummet, Arne Branzell

CASE STUDIES

There are two parts of case studies in the thesis. The first part, this one, is linked to the research. The case studies is focusing on private in public and what tools and design features that are used to deal with the meeting between them. The projects looked into are three different one family housing- projects.

House in Tousuien, Hiroshima.
Suppose Design Office

PROTOTYPE

Fig. 1: House in Tousuien (Toshiyuki Yano)

Fig. 2: House in Tousuien (Takumi Ota)

CONCLUSIONS

- Translucent facade: Lights & movement
- Dark core: Private space
- Adding varied transparency: Varied privacy

CONCLUSIONS

Mixing materials: Concrete, transluscent plastic and glass. Providing conditions for different amount of privacy.
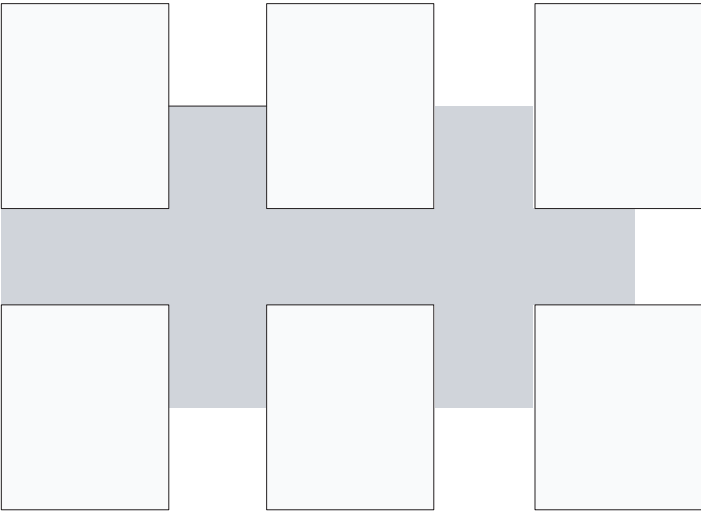
House in Buzen.
Suppose Design Office

PROTOTYPE

Fig 3: House in Buzen (Suppose Design Office 2010)

CONCLUSIONS

- Transition spaces
- Solid facades

CONCLUSIONS

Expanding transition space outside the unit strengthen the layers of privacy.
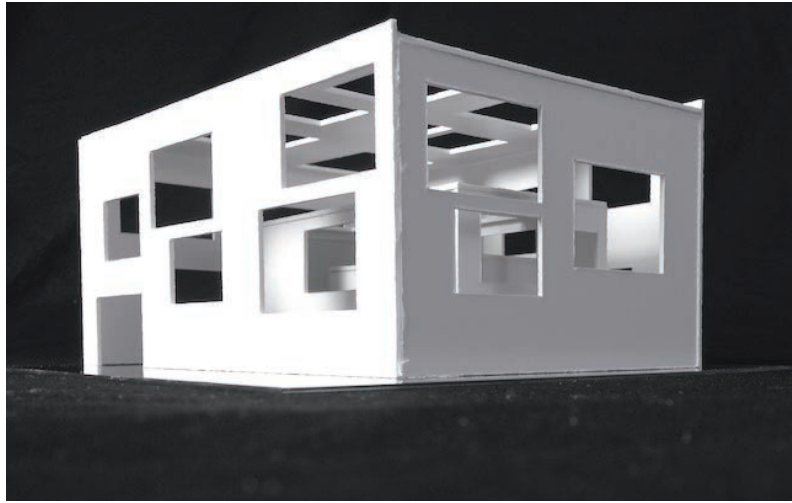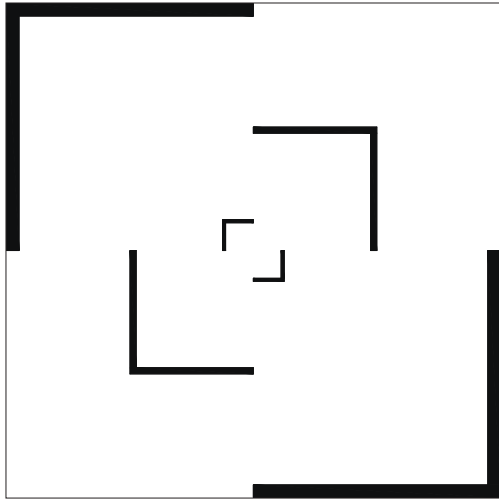
House N, Oita.
Sou Fujimoto

PROTOTYPE

Fig 4: model of House N (author's own image, 2017)

CONCLUSIONS

Box-in-box floor plan:
- Gradual Transition: Private core- public outer shell
- Directed views & sightlines

CONCLUSIONS

Box- in box: Strong feeling of privacy in core.
Light visable outer shell, layers of private- public within the unit.

EARLY SKETCHES

In the first stage of the design process, it was vital to establish a working method for how the investigation would be done, but also what the result was to be. In order to properly go into the subject, the most extremes would be facing each other as a starting point in every step of design. In this thesis the extremes would be the absolute private space and the absolute public space. Part of the investigation was therefor also to find the most extreme situations both of public space and private space.

The design proposal of the thesis was early on decided to be put in Gothenburg. This because of the city being quite scattered but are in a process of densification. This means that the meeting of private space in housing, semi-private in offices, semi-public of shops and event spaces will face public space of streets, squares, parks etc will be more evident in the future development of the city.

In search for a site Brunnsparken was identified as a great mock-up site for testing out prototypes and typologies, since it's a very busy public space in a dense location in central Gothenburg.

The starting point of the building design was set to be a one family housing, since a housing is a private function which includes a variation of rooms needing different amount of privacy. By choosing a one family house, the public space could also surround the private space in every direction, creating no natural buffert zone.
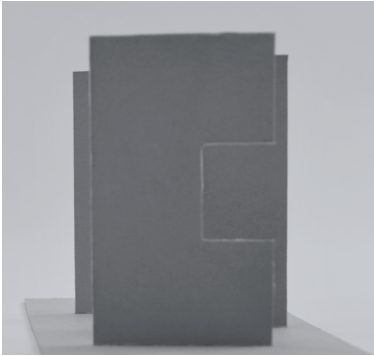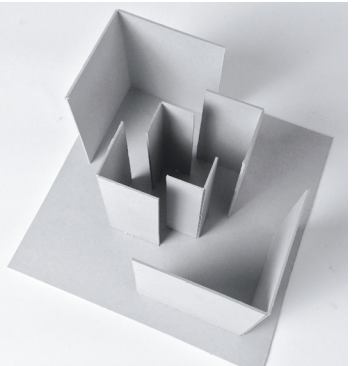

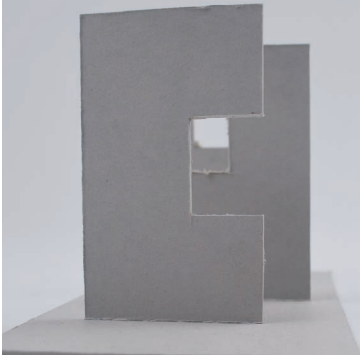*Brunnsparken - Trigger for design*
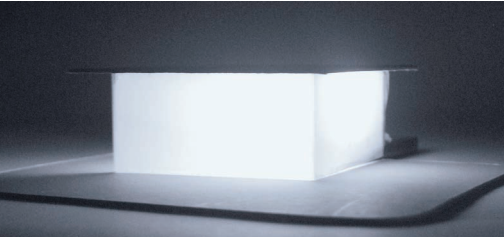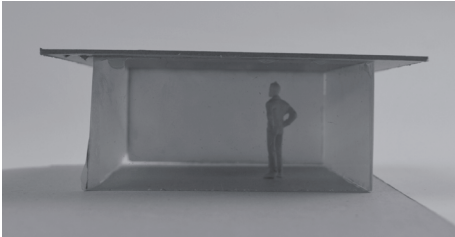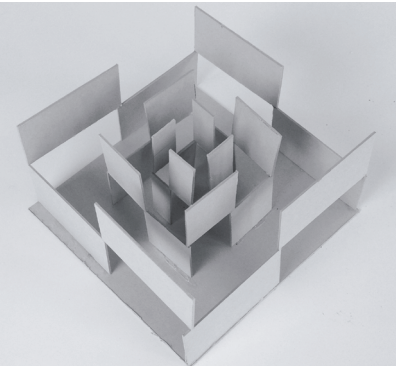
Fig. 5 & 6: Brunnsparken
(Author's own image 2018)
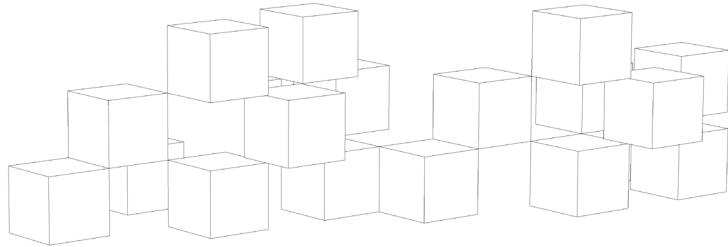
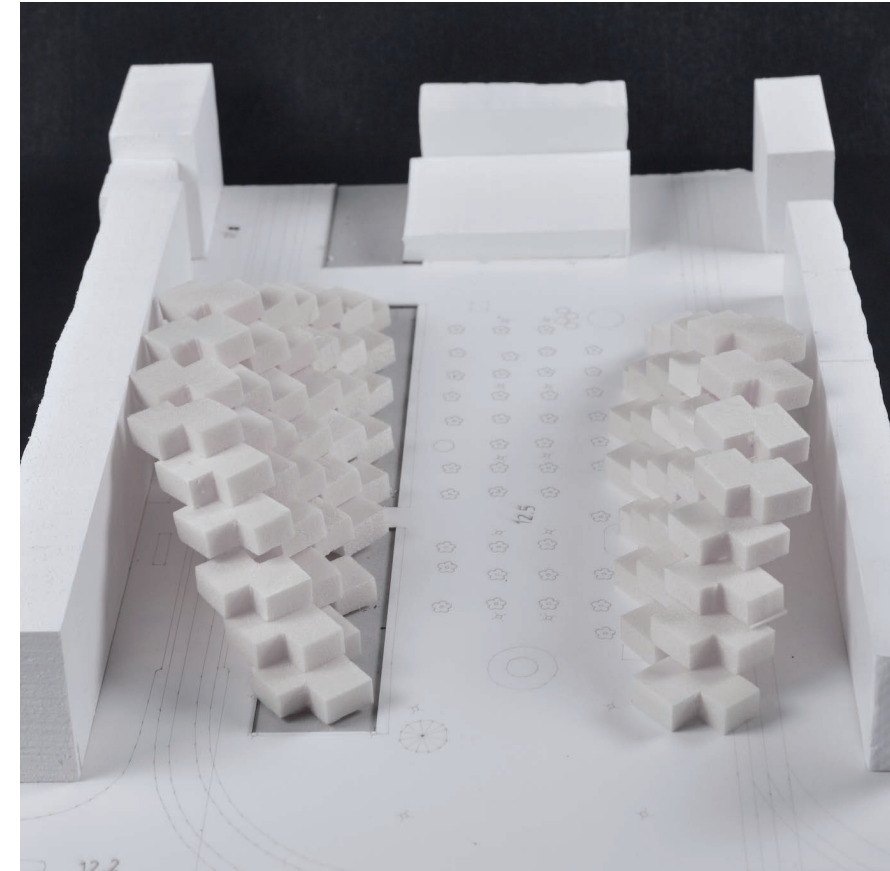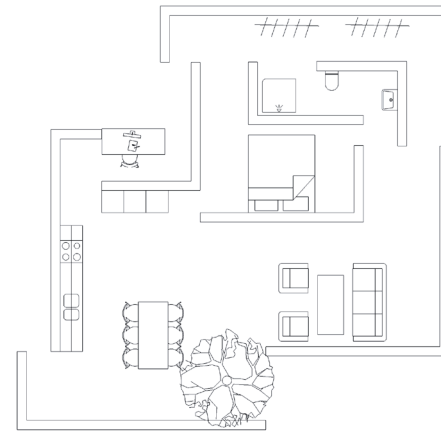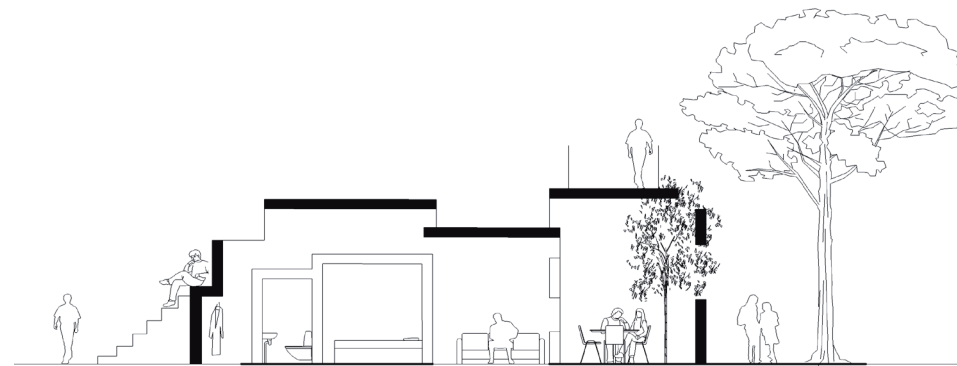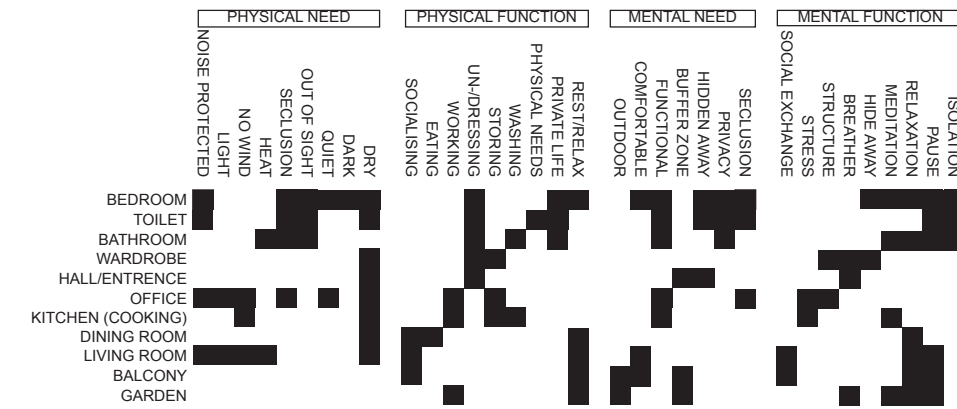*Single units put togheter, starting point for structure*

sightline models

"box- in- box" prototypes

sketch models of visibility through material; transparent, transluscent and transluscent at night

	PHYSICAL NEED									PHYSICAL FUNCTION									MENTAL NEED						MENTAL FUNCTION								
	NOISE PROTECTED	LIGHT	NO WIND	HEAT	SECLUSION	OUT OF SIGHT	DARK	DRY	QUIET	SOCIALISING	WORKING	EATING	UN-/DRESSING	WASHING	STORING	PHYSICAL NEEDS	PRIVATE LIFE	REST/RELAX	COMFORTABLE	FUNCTIONAL	BUFFER ZONE	HIDDEN AWAY	PRIVACY	SECLUSION	SOCIAL EXCHANGE	STRESS	STRUCTURE	BREATHER	HIDE AWAY	MEDITATION	RELAXATION	PAUSE	ISOLATION
BEDROOM																																	
TOILET																																	
BATHROOM																																	
WARDROBE																																	
HALL/ENTRENCE																																	
OFFICE																																	
KITCHEN (COOKING)																																	
DINING ROOM																																	
LIVING ROOM																																	
BALCONY																																	
GARDEN																																	

CONCEPT & PROTOTYPES

ROOFTOPS AS AVAILABLE SPACE

The starting point for the building design was the idea of a private unit completely surrounded by public space. From this point the identification of rooftops as potential public space on top of a private building was made.

In many cities the rooftops are unused, or used in very limited scale. By using the rooftops either for private or public use the dense city will get more useable space.

The rooftops existing in Gothenburg today are often either private ones connected to housing or offices, or semi- private ones connected to restaurant and bars or hotels. There is a very limited number of public rooftops in the city, giving a new public rooftop a lot of potential to become well- used, since it is a rarity still.

A lot of the rooftops are also unfortunately hard to find, since they lack a good connection with surrounding streets.

When the city will become denser, the need for more use of rooftops will increase since there will be less available space on ground level.

Aerial view of central Gothenburg

Semi public rooftops - separated

Fig 7: Rooftop bar, Gothenburg. (author's own image, 2018)

Terrace house- Visual connection

Fig. 8: Terrace houses Gröndal, view from the balcony (Holger Ellgaard, 2010)

Fig. 9: Terrace houses, Gröndal (Holger Ellgaard, 2010)

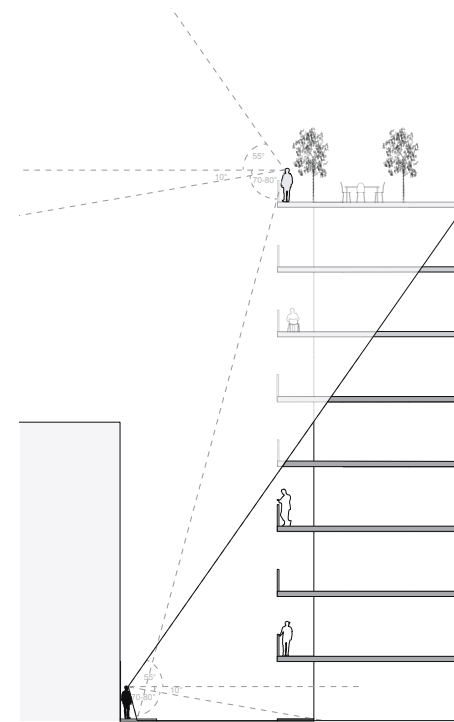**Public rooftops- lack of connection**
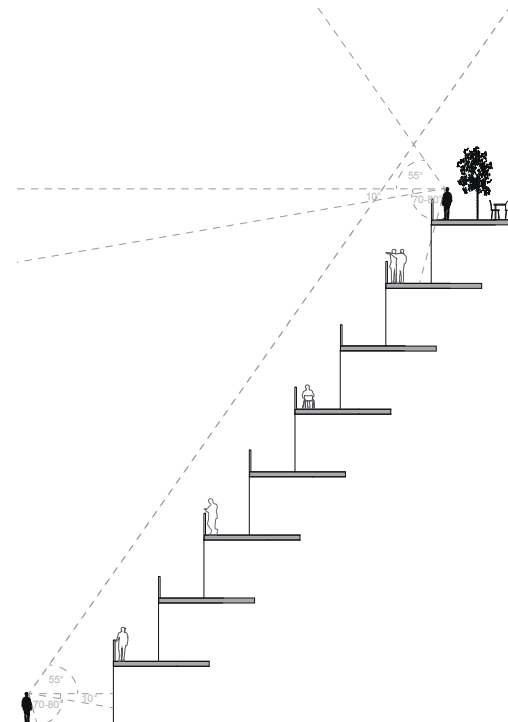

Fig. 10: Filmstaden Bergakungen (I99pema, 2016)

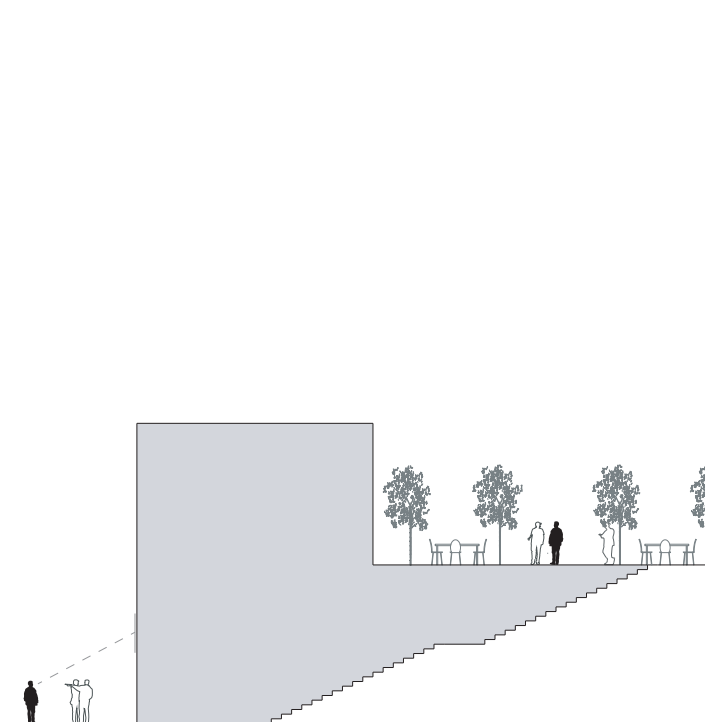Fig. 11: Public green area on top of cinema, Gothenburg. (Author's own image, 2018)

CONCEPT & PROTOTYPES

**Semi public rooftops
- separated**

**Terrace house-
Visual connection**

**Public rooftops-
lack of connection**

*No visual or physical
between spaces.*

*Visual connection,
no physical connection between spaces.*

Physical connection, no visual connection between spaces
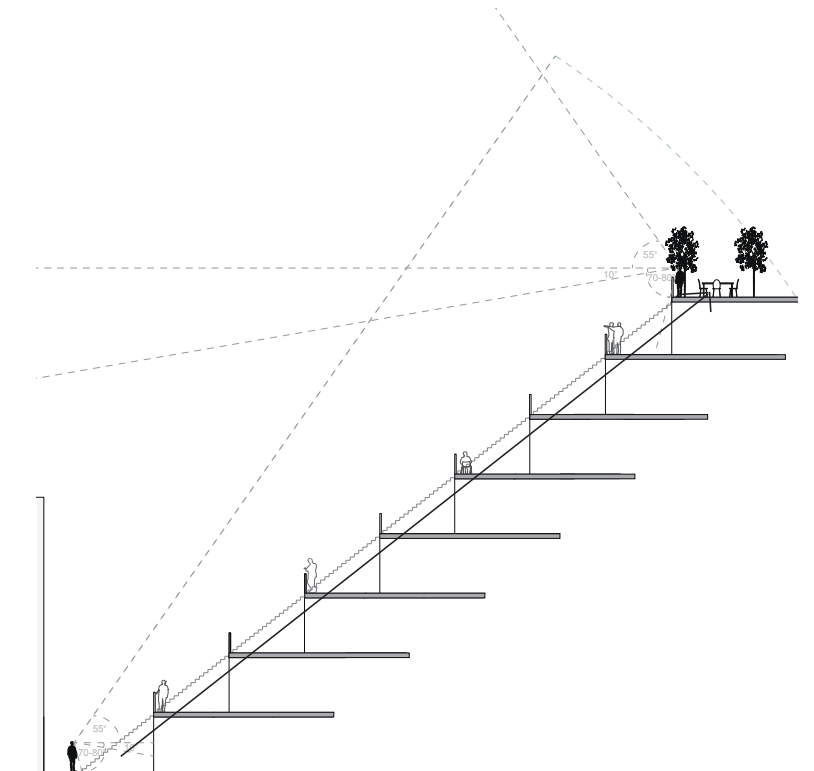
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CONCLUSIONS

CONCEPT- VISUAL AND PHYSICAL CONNECTION

In order to get the public rooftop well functioning there is a need for connections with surrounding streets. Most rooftops lack either visual or physical contact from the street to the roof, making them hard to find and often not as well used as they could have been.

The concept for the building design therefor is a terrace house with public access along the façade, creating strong connections with the street and also creating situations where public and private space get very close.

The humans field of view is between 55 degrees upwards and 80 degrees downwards. It's therefor important to let the angle of the building be within this limits in order to get a well functioning rooftop, where the connection between street and roof is visible.

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CASE STUDIES

The second type of case studies is about building typologies related to the project in the thesis. It's four terrace buildings, and how they deal with private and public in different way, and then four different rooftops and how they are activated.
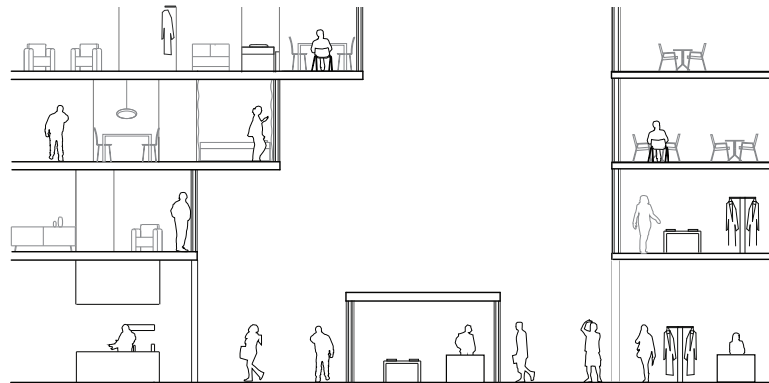
BUILDING TYPOLOGY
Markthal, Rotterdam. *MDRDV*

Conclusions

- Private housing as shell around public market.
- Private-public-private in double directions, unexpected views and meetings.

Fig 12: Markthal Rotterdam (Exmpltree 2014)

Prototype

Ivry sur seine. *J. Renaudie & R. Gailhoustet*

Conclusions

- Housing complex, mix of public and private space.
- Levels and greenery boundaries between spaces.

Fig 13: Housing complex (Autor's own, 2015)
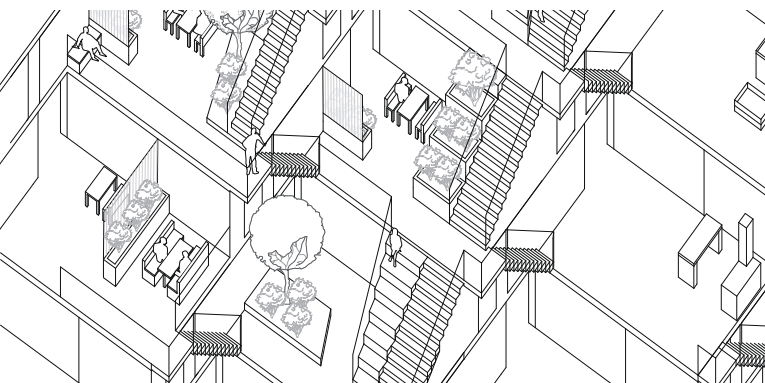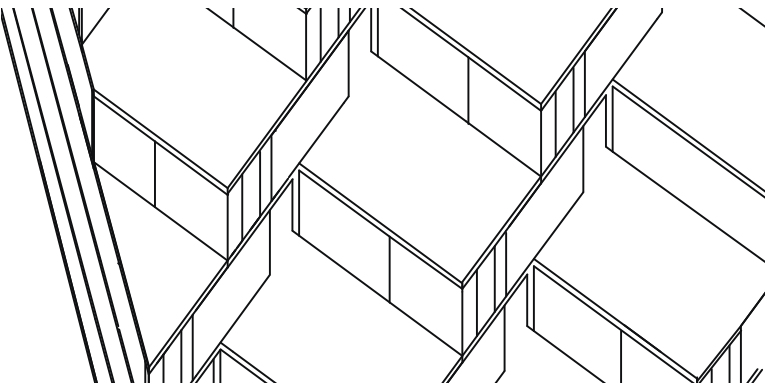
Prototype

The Mountain, Copenhagen. *BIG*

Conclusions

- Building layout shaped by optimized single private units, cut to fit site.
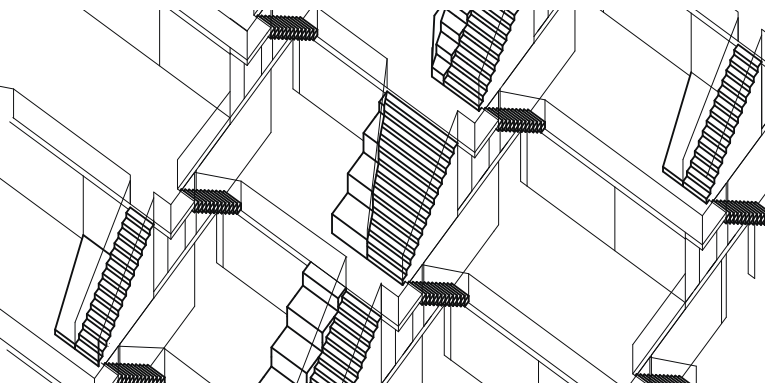- Lack of public use.

Fig 14: Housing units (Author's own image 2018)

Prototype

Stepwell, Jaipur

Conclusions

- Facade/wall as public space & communication.
- Repetition creates variation in possible paths.
- All public.

Fig 15: Chand Baori, Abhaneri, Rajasthan, India. (Doron, 2003)

Prototype

CONCEPT & PROTOTYPES

PUBLIC ROOFTOP
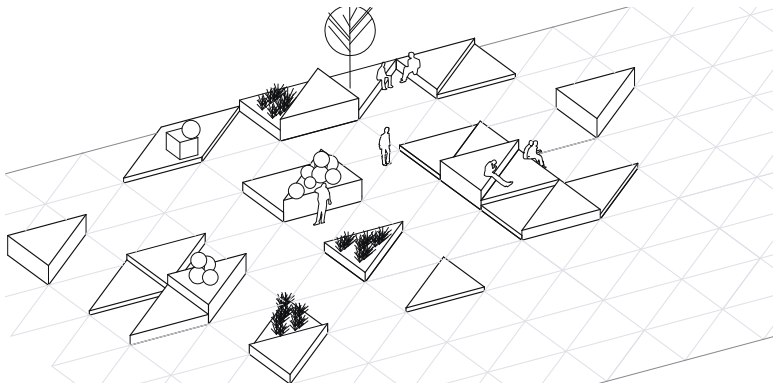**Metropolitan museum of art, New York.**

Conclusions

- Grid as landscape variation, different heights for different use.

Fig 16:Installation view of The Roof Garden Commission: Pierre Huyghe at The Metropolitan Museum of Art, 2015 (Hyla Skopitz, 2015)

Prototype

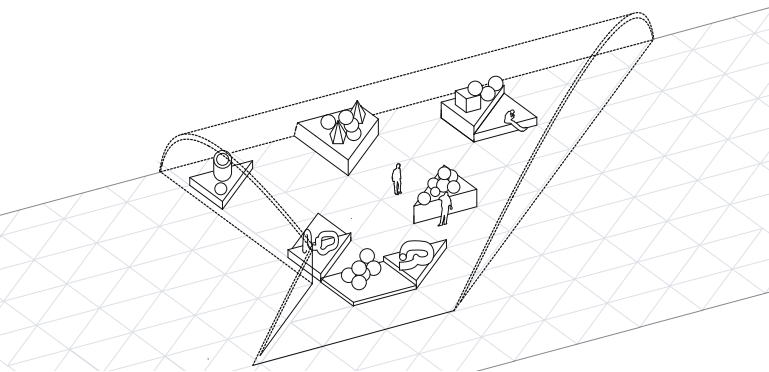**Unité d'Habitation, Marseille.** *Le Corbusier*

What

- Art exhibition in roof top pavillion, with view of the surroundings.

Conclusions

- Indoor exhibition space on rooftop.
- Enclosed space in open landscape.

Prototype
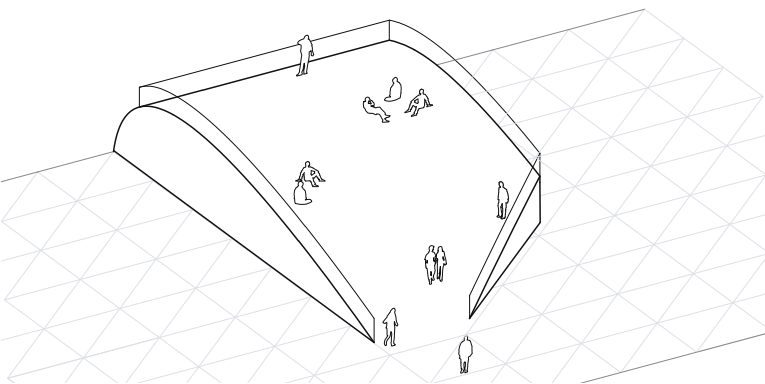

Operahus, Oslo. *Snöhetta*

Fig 17: Operans tak (Hans A. Rosbach 2007)

Conclusions

- Public roof in shape of a slope.
- Multifunctional space; seating, view and event space.

Prototype

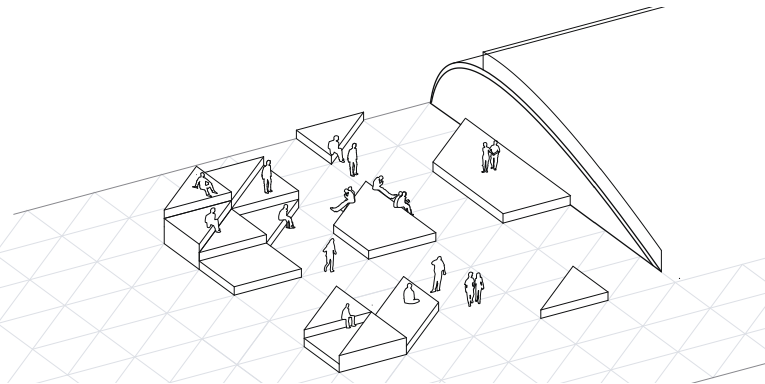

High square magasin, Copenhagen. *JDS*

What?

- Extension of department store and adding of a public garden on the roof

Conclusions

- Rooftop landscape as event space, with seating and screening/ backdrop possibilities.

Prototype

CONCEPT & PROTOTYPES

DESIGN PROPOSAL

SITE
ABOUT

The site chosen for the design proposal is in central Gothenburg, at the crossings of Fredsgatan, Drottninggatan, Kyrkogatan and Östra Larmgatan. Today here is a building mainly functioning as a car park on the site, a remain from the city planning of the 60s and 70s.

Stores in the ground floor towards two of the streets together with a newly built hostel in the northern part of the building creates some city life, but the car park together with the narrow streets efficiently creates a feeling of a back street. This even though it's right next to Fredsgatan, which is one of the busiest shopping streets in Gothenburg
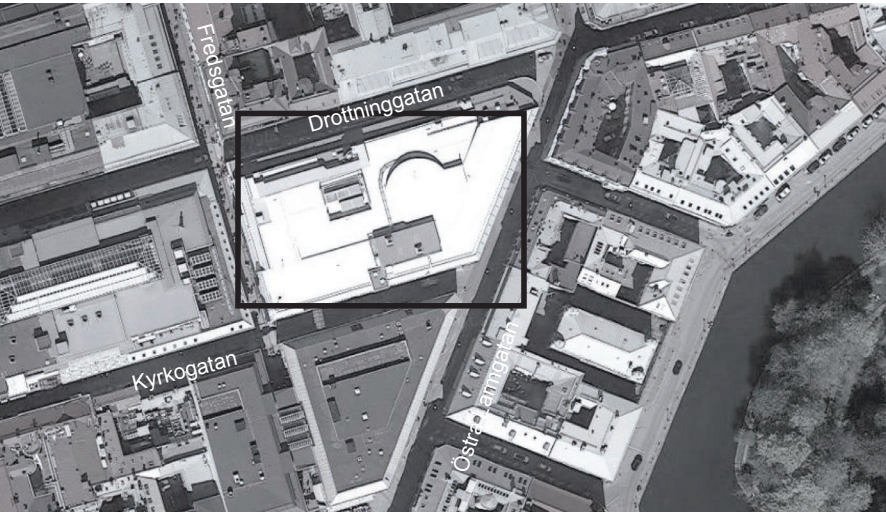
LOCATION
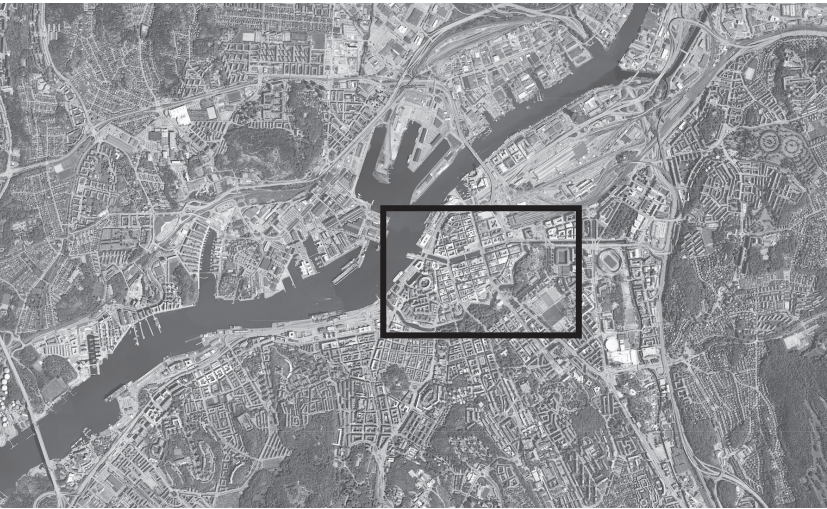
Location within Gothenburg
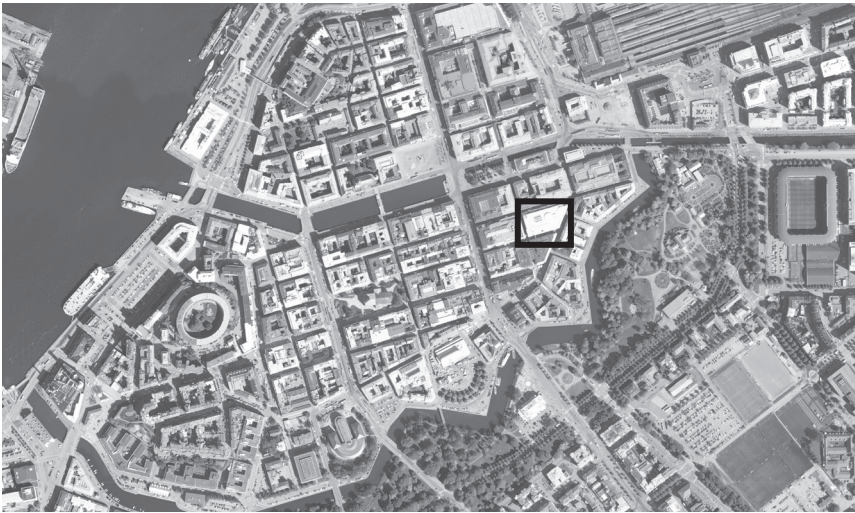
The site within the central of Gothenburg.

Site and surrounding.

DESIGN PROPOSAL

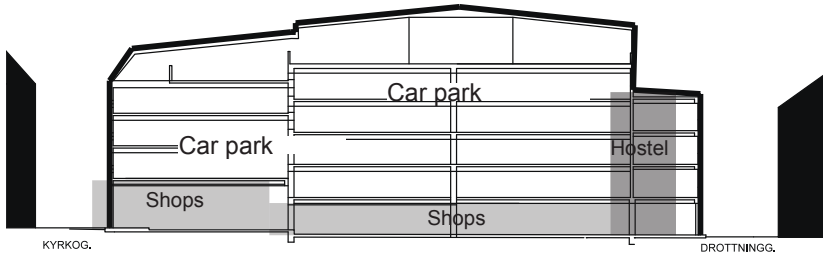PHOTOS

Fredsgatan

Östra Larmgatan
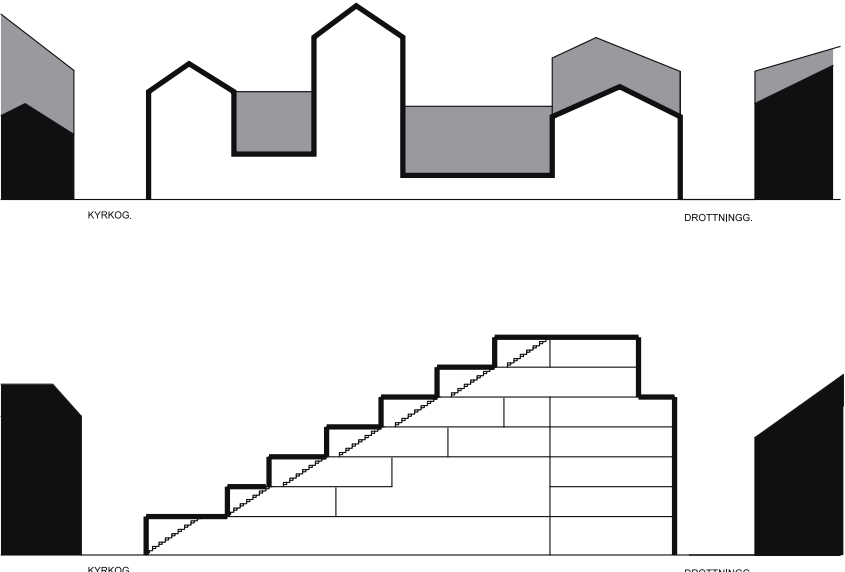
Drottninggatan *Kyrkogatan*

Fig. 18- 20: Street views (Author's own images 2018)

CROSS SECTIONS

Cross Section existing building

Cross Sections: past and future builing on site

DESIGN PROPOSAL

BUILDING PROGRAM

The project consists of a terrace house with private units in the southern part, a shopping gallery in the dark core, shops in the ground floor and an expanded hostel in the northern part. There is a public rooftop with communications along the façade from the street, as well as elevators in the northern part of the building.
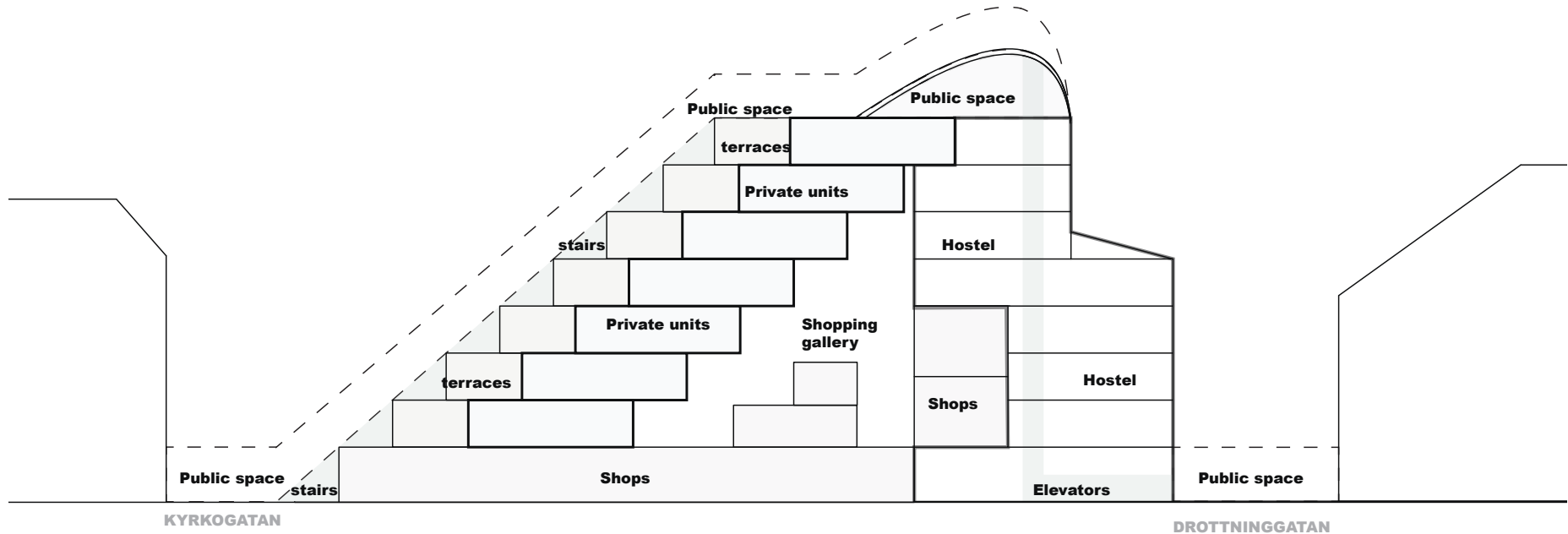
ROOF TOP DESIGN

A mixed-use exhibition and event space is designed. The indoor spaces are partly communication, public service and an indoor exhibition hall. The spaces include fixed furniture for different use; for example as podiums, greenery or a variation of seating areas. The rooftop is divided into different spaces by four buildings, which have public accessible roofs providing a great view of central Gothenburg.

DESIGN PROPOSAL
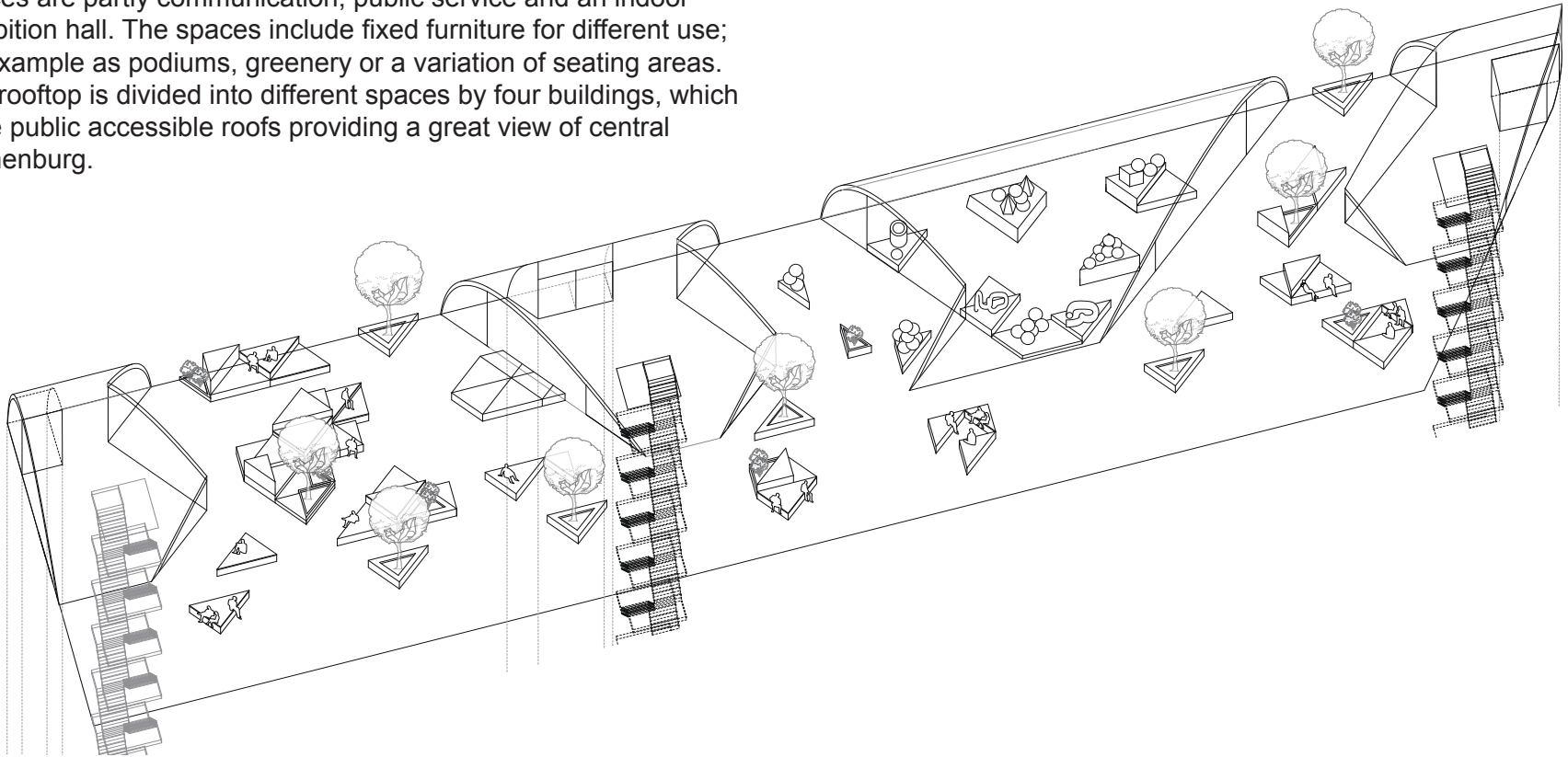
BUILDING LAYOUT

The building consists of repeated single units, facing south- west for maximum daylight. This creates a grid that's cut by the outline of the plot. On the ground floor there are a combination of shops, cafés and offices, where the grid from the unit creates small courtyards. From the street level there are two main communications leading to the public roof top, One from Fredsgatan and one from Östra Larmgatan

Each unit have a small terrace which function both as entrance space to the unit combined with private outdoor space, as well as shared or semi- public spaces. The units are connected with each other with a diagonal small stair.

Most of the units contain housing, some are common areas for the residents while some other contains commercial space. The terrace spaces are a mix of private, shared and semi- public spaces and can contain anything from sandboxes and picnic areas to green houses and bathtubs.

The building is a mix of different uses, and within the building and it's close surrounding, there are several different types of space. There is a transition from total public space in the street and on the rooftop, to the completely private space within the core of the apartment. Between them there are several different types of space within the fields of private or public, for example the semi- public space of the shopping gallery and small terraces, to the semi- private entrance spaces to the units.

The different types of spaces creates direct and indirect meetings between public and private, such as the view from the private unit to the shopping gallery, or from the public stairs to the semi- private entrance spaces of the small terraces.
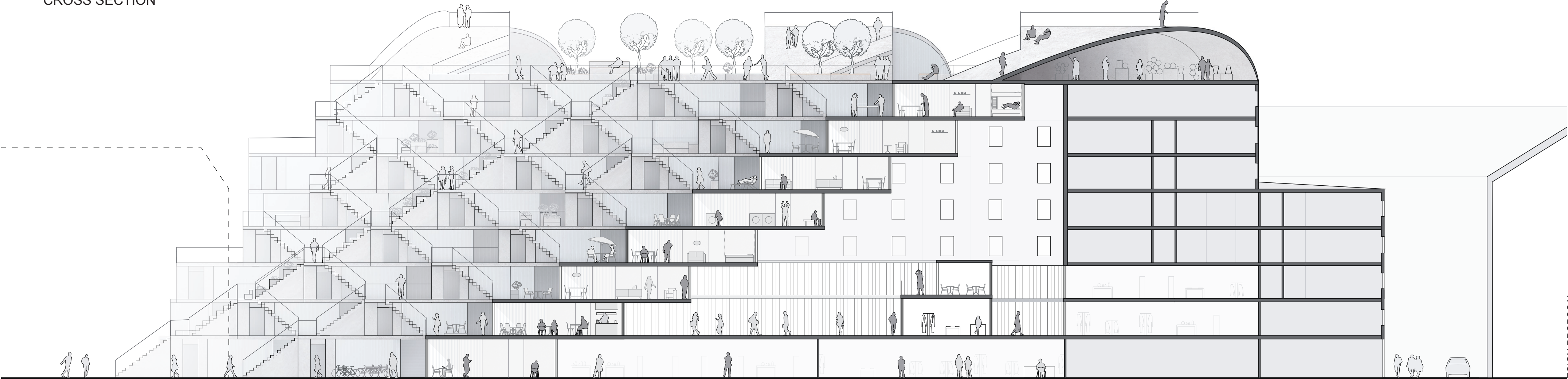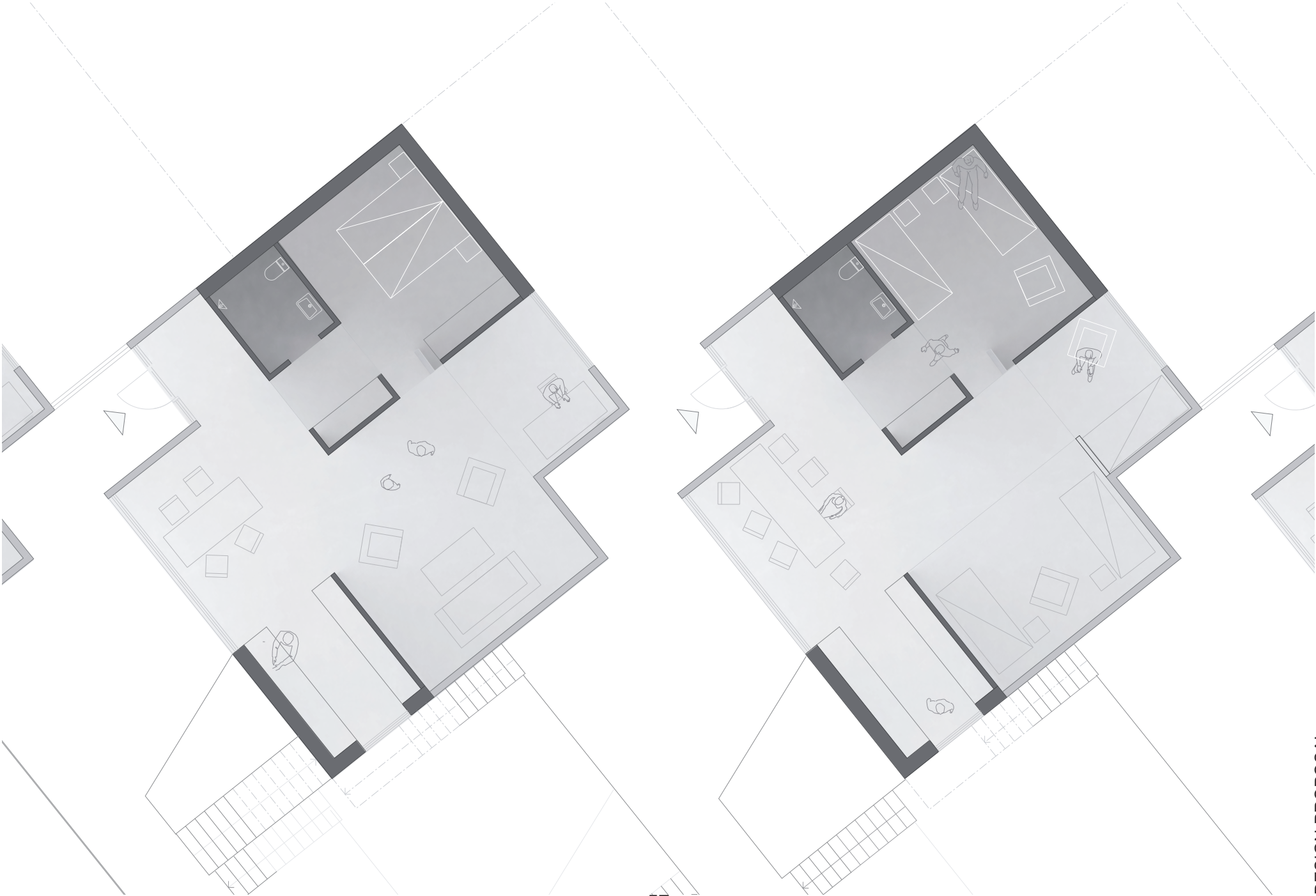
SITE PLAN

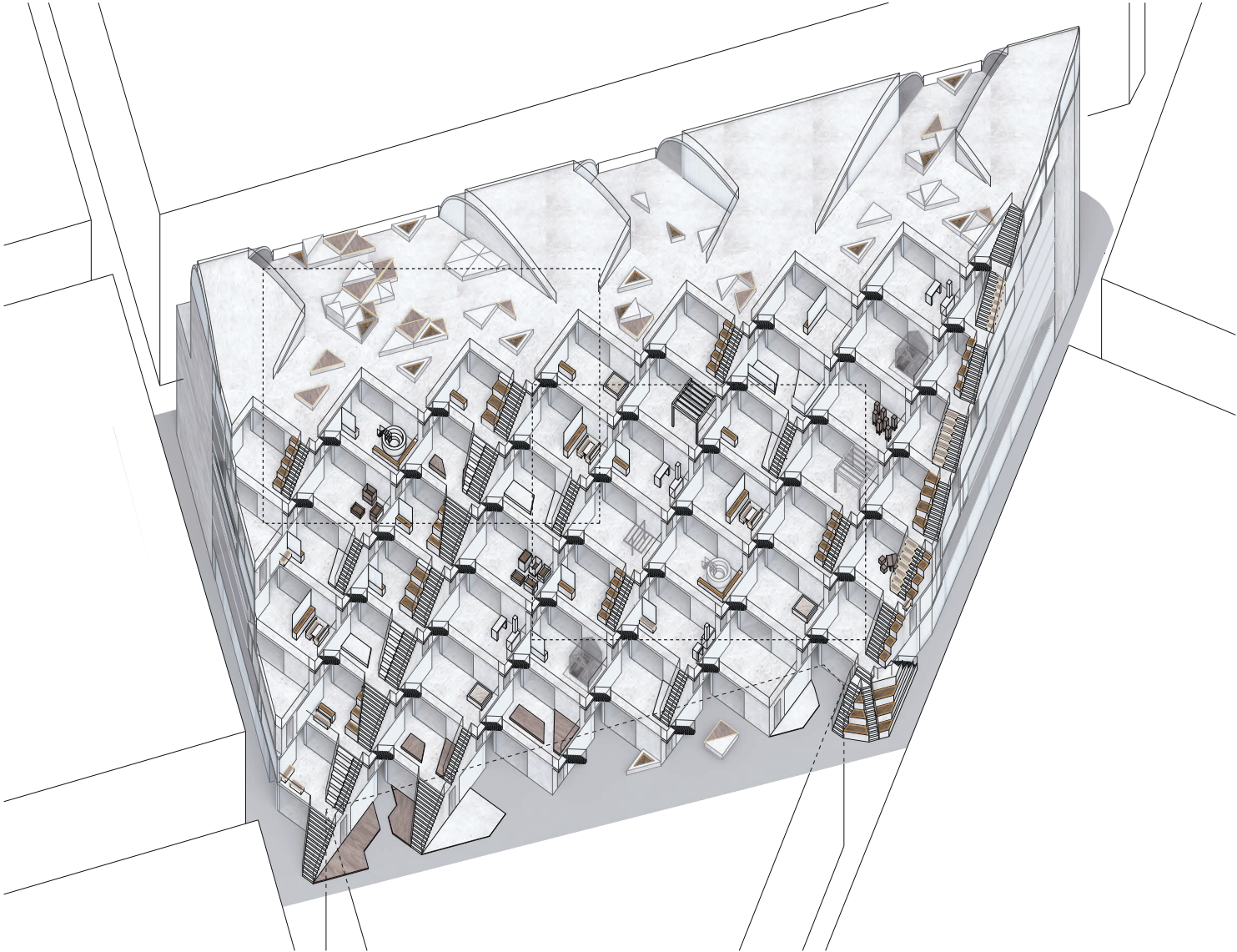PLAN DRAWINGS

CROSS SECTION

DESIGN PROPOSAL

PRIVATE UNITS

The private unit is designed for a flexible use. It has a solid private core, a semi-private layer enclosed by translucent plastic walls, and an exposed outer layer with glassed façades. In front of the unit there's an entrance space, which also functions as a private terrace.

AXONOMETRIC VIEWS

60

61
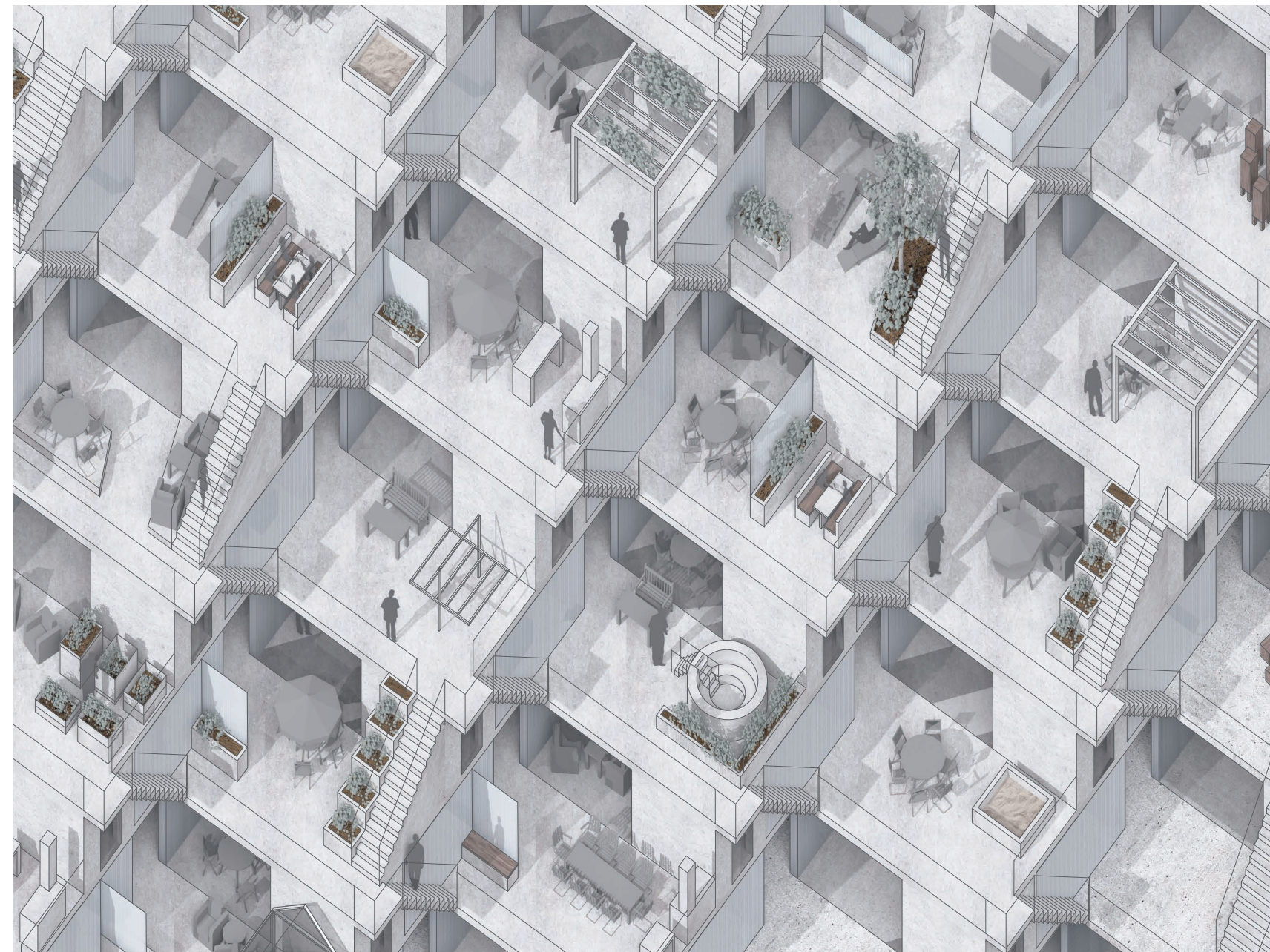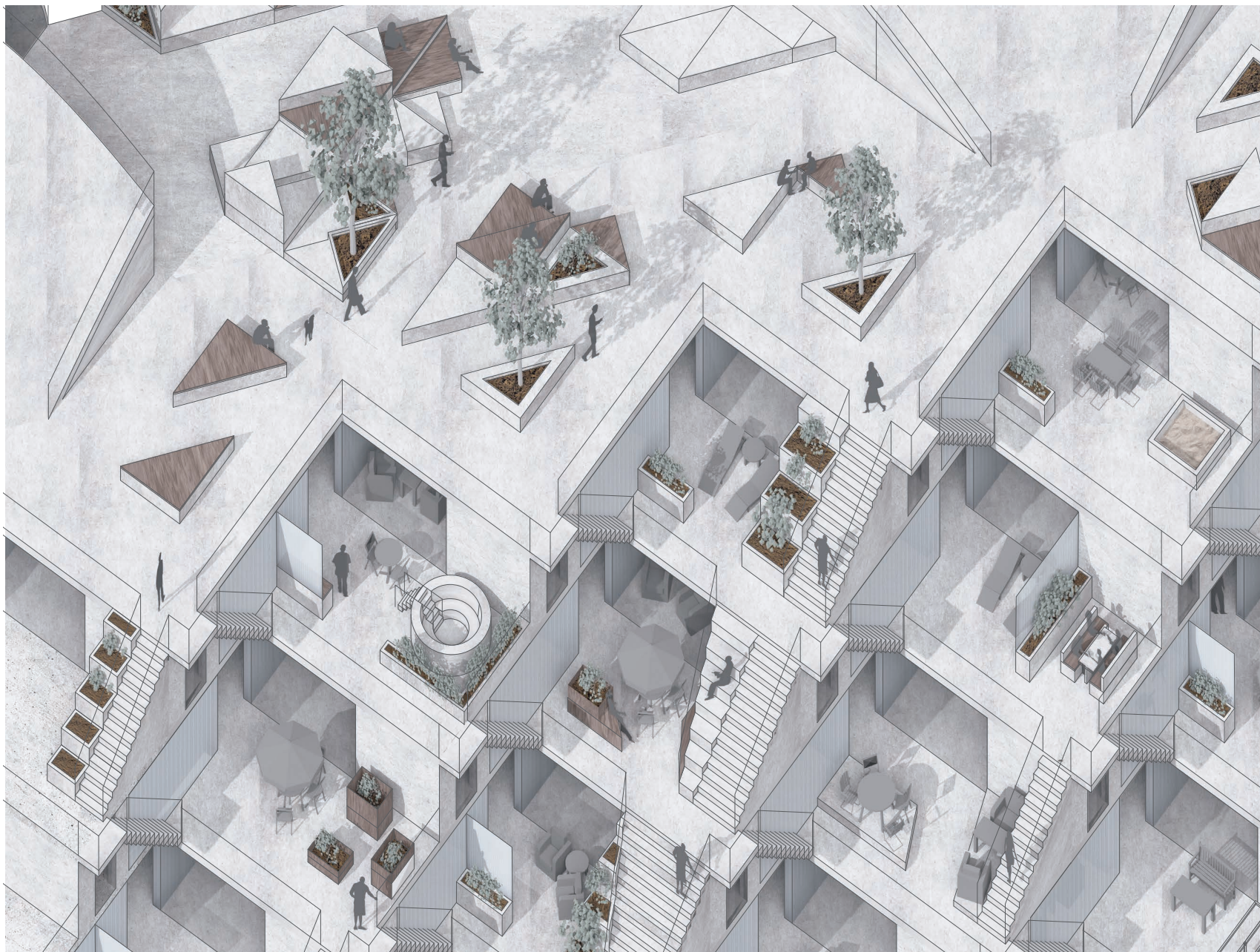
COMMUNICATIONS

The communication in the project is mainly by stairs. There are also some elevators going from ground floor to rooftop. The stairs are designed to be more or less public. Different width, directions and seating or planting areas are used for signaling the use of the stairs, and to create boundaries or openings between public and private.

Public
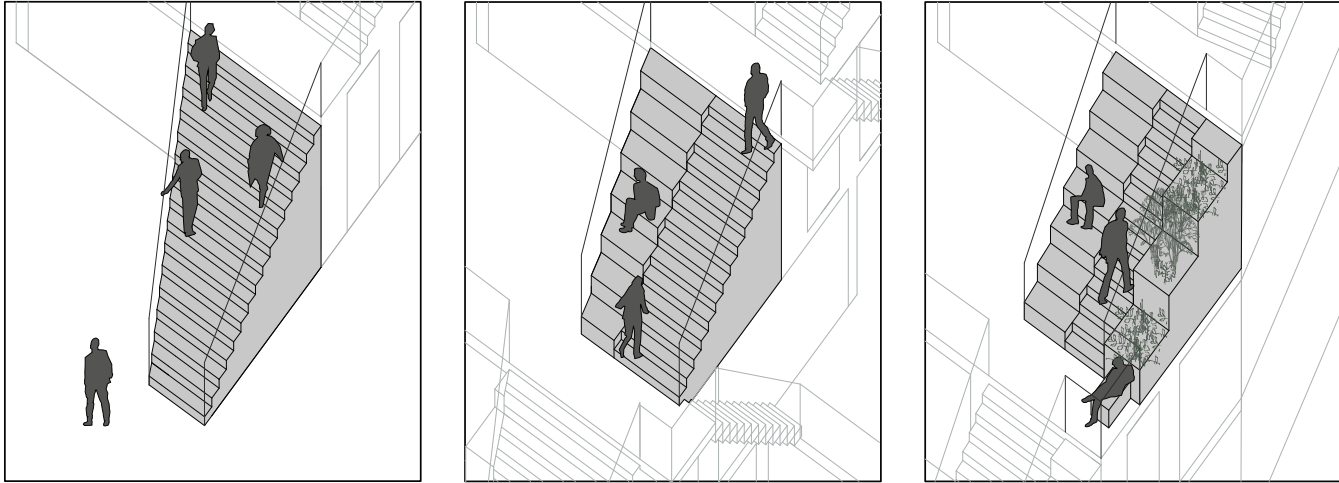
Private
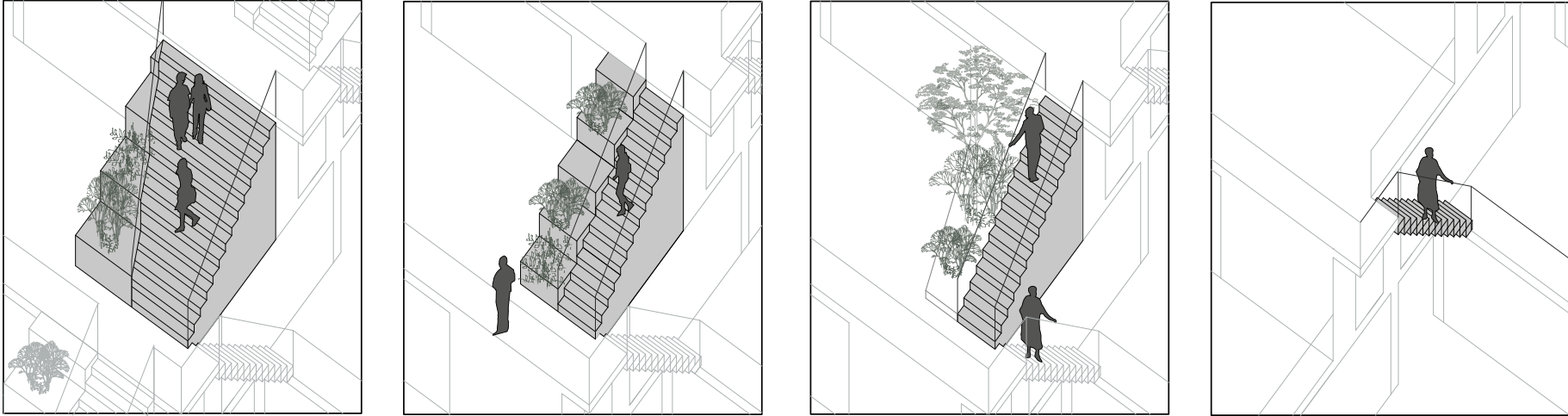
DESIGN PROPOSAL

SEQUENCES

Public
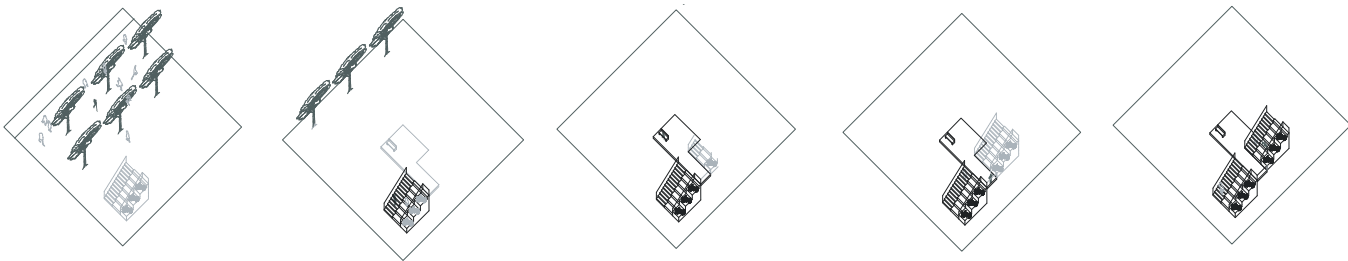
Private
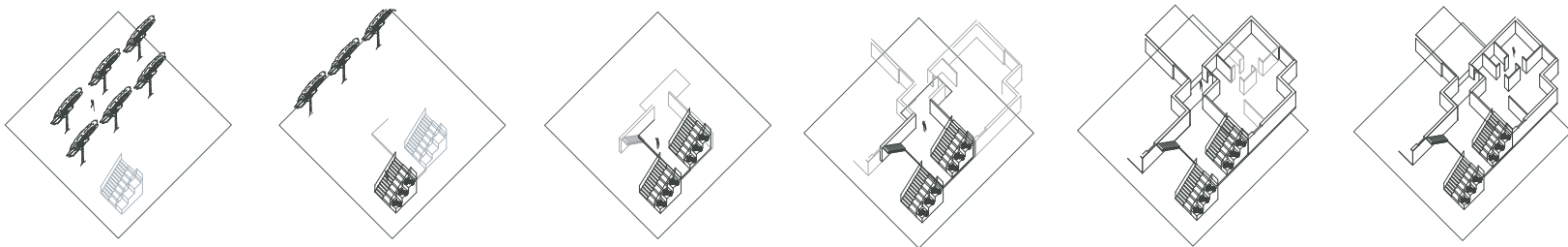
MODEL PHOTOS

DESIGN PROPOSAL

DISCUSSION

REFLECTIONS ON THE DESIGN PROPOSAL

THE PROJECT WITHIN THE URBAN CONTEXT

The choice of site was made after serious consideration. Initially Brunnsparken was used as a project site. Brunnsparken was a very good site to try out the most extreme meetings between private and very public, although it wasn't very suitable in other aspects. Instead of Brunnsparken, the site between Fredsgatan and Östra Larmgatan was choose. There are several reasons for this. First of all, the function of the building on the site today, a car park, is outdated and misplaced in the city centre. It do not only attract people to drive and park their car within the innermost parts of the city, but also efficiently destroys the liveliness of the surrounding area. The site is also situated in a very dense area of the city, which is perfect for the research of the thesis. The denser area, the closer people get to each other, and the more important the design of private and public space get.

The design proposal consists of a mixed-use building that offers several different kinds of uses. It combines housing, hostel, a shopping gallery, small-scale business, an exhibition space and big public areas. This combination gives a possibility for the area to be lively throughout all the hours of the day, and to attract people to the city centre. Not only for shopping or work, but also for living, visiting and leisure activities.

The layout of the building also creates a very dense block in the city, which gives it economical motivation. It creates a dense block without conforming to traditional structures of the closed block that often shuts people out, and instead invite people to experience the area.

THE COMPLEXITY OF THE DESIGN PROPOSAL

The layout of the building creates a grid that is both simple and complex. The units formation is repetitive, but the different combinations of the directions and layout of the stairs makes a system that at first sight might be confusing. This creates many layers to the exploration of the building, where it takes a while to understand the different connections and spaces. This creates situations where you might see a person or a space that you want to reach, but trying to go there takes you somewhere completely else. A little bit like the rocks of the archipelago, if you want. The whole building in itself is a bit like an artificial landscape, adding possibilities to walk, climb and explore the urban area in a different way then the surrounding buildings does. The rooftop and it's view over the city is of course the obvious reward for the visitor going up the building, but there are a lot of small spaces and paths to be found that needs more knowledge and spent time on the site. This creates a extra layer to the public and private subject, since the whole building is publicly available, but it takes time and effort to find and get to some of them.

BUILDING REGULATIONS AND ACCESSIBILITY

The thesis focused very much on the research question of public and private, which has been the priority in all the design questions. This means that in cases where there been a conflict of two different design ideas, the question of public and private was always considered the most important. A consequence of this is that some of the Swedish building regulations have been neglected, but with the gain of a more dynamic architecture in regards to public- private. These issues could of course be solved if the design process would continue to become a built project. The same goes for the accessibility, which also have been neglected in favour of design features that explore the meeting between public and private. There are solutions that can be implemented with a bit of rework of the design, with the adding of interior access balconies and some ramps and elevator, but that wasn't a priority in this stage of researching design.

CONCLUSION

The method of always putting the research question as a priority, and to put the most extremes against each other, was a very strong implement for the design of the project. By pushing this method as far as possible, a lot of struggle was created. This struggle was necessary in order to research the question properly. Where the meeting between private and public get's as harsh as possible, that's also where the most interesting architecture is made. And in regards to the future dense cities, the extreme situations are very likely to become more regular.

By looking in to the case studies and use the prototypes and features from them, a lot of design tools was gained. Tools that can be used not only in projects of this large scale kind, but also in the design of very small spaces and situations.

This notion of public- private going through every part of architecture, from city planning scale down to the design of the really small spaces and furniture is something that has been very enlightening. This has increased the interest for the subject even more, and made the thesis something worthwhile, both in terms of design knowledge and also in terms of inspiration for future design projects and research.

SUMMARY

The thesis focused on the research question of public and private space, and the meeting and space between them. The research has been made through literature and case studies, which has been concluded and prototyped. The working method for the design has been to let the most private face the most public in every step of the design, and then made conclusions and design prototypes of those situations. This has then been developed into a design proposal of a mixed- use building within a dense urban context of central Gothenburg. The research subject has been the focus of every step of the design, from the large-scale urban context down to the design of small spaces and furniture. The design of shape of the building, materials used, height differences made and use of greenery has also been a design result of the public- private subject, as well as the functions of the building. The mix of use from housing, hostel, offices to shopping gallery and small scale business has given the opportunity to create situations where public and private face each other in unusual ways.

The design proposal also shows that a building doesn't have to be either or, it can be both, which is a healthy thought in the architectural debate of urbanism today. It is possible to create dense cities without just doing straight blocks, and it is possible to create public space and still make a dense city. And when combining public and private the possibility for a more lively area is made.

The subject of public and private is one of the keystones in architecture and effects or get effected by all design, from large scale to small scale. A realisation of that is one part of the outcome of this thesis. There's also a lot of new theoretical knowledge in deliberate design of public and private space, a lot of practical knowledge from the design of the case studies and the prototyping of ideas, and a lot of inspiration from the design of the proposal.

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PHOTOS

• Fig. 1: Yano, T (?), *House in Tousien* [Digital image] Taken from: https://www.archdaily.com/458511/house-in-tousuien-suppose-design-office/52ae20d4e8e44e22b900010f-house-in-tousuien-suppose-design-office-photo

• Fig. 2: Ota, T (?)*House in Tousien* [Digital image] Taken from: https://www.archdaily.com/458511/house-in-tousuien-suppose-design-office/52ae2091e8e44e0f37000124-house-in-tousuien-suppose-design-office-photo

• Fig. 3: Suppose design office (2010) *House in Buzen* [Digital image] Taken from: https://www.archdaily.com/50701/house-in-buzen-suppose-design-office/50088cc828ba0d50da000f48-house-in-buzen-suppose-design-office-image

• Fig. 8: Ellgard, H (2010) *Terrashus Gröndal, utsikt från terrassen* [Digital image] Taken from: https://upload.wikimedia.org/wikipedia/commons/4/46/Terrasshusen_2010f.jpg

• Fig. 9: Ellgard, H (2010) *Terrasshuset mot väst*[Digital image] Taken from: https://upload.wikimedia.org/wikipedia/commons/4/41/Terrasshus_Gröndal_2010a.jpg

• Fig. 10: I99pema (2016) *Filmstaden Bergakungen* [Digital image] Taken from: https://commons.wikimedia.org/wiki/File:Filmstaden_Bergakungen._2016.JPG

• Fig. 12: Exmpletree (2014) *Markthal-Rotterdam* [Digital image] Taken from: https://upload.wikimedia.org/wikipedia/commons/1/1a/Markthal-Rotterdam.jpg

• Fig. 15: Doron (2003) *ChandBaori* [Digital image] Taken from: https://upload.wikimedia.org/wikipedia/commons/e/ee/ChandBaori.jpg

• Fig. 16: Skopitz, H (2015) Installation view of The Roof Garden Commission: Pierre Huyghe at The Metropolitan Museum of Art, 2015 [Digital image] Taken from: https://www.metmuseum.org/-/media/images/press/press-images/exhibitions/2015/roof-garden-pierre-huyghe/revroofgardenteaser.jpg?h=330&la=en&mw=495&w=495&hash=DC60C-E9556FF1681FB546E718DF60EF12C906566

• Fig. 17: Rosbach, H. A. (2007) *OsloOperaBjørvik* [Digital image] Taken from: https://upload.wikimedia.org/wikipedia/commons/6/6f/OsloOperaBjørvika_2007-08-26-05.jpg