



The informal care

society:

Multigenerational living

COLOPHON

Design Booklet
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INTRODUCTION

Within the Rotterdam studio of Architecture & dwelling, research and design are closely related and interwoven. Literary research is one of the main ingredients for the actual design. By doing research one's knowledge about a certain target group is going more into depth. This is an individual part of the studio and each student has his own specific group of people for whom he is designing. This group is related to a relevant contemporary societal problem or issue.

From my point of view an architect has to be able to develop a sense of empathy towards the users for who he is designing. This is especially the case in the Dwelling studio, because one of the goals is to create an inclusive city for everybody, young or old / rich or poor, and thus not excluding anyone. However, another demand is to design for a specific group of people (in my case elderly and students) and therefor their social needs can only emerge when the designer really becomes part of their world. What you do for us, but not with us, is against us (Arna Mačkić, 2020). This means that when designing new buildings and public spaces in the city, we actually have to work together with residents and supply them with their specific needs. This doesn't mean that everything should be the result of compromise, but at least designing should be based on the genuine needs of people.

A second way of doing research is part of a collective research with the group. In total we are a group of sixteen people, and initially we divided ourselves in four sub-groups. In doing research each group had their own case-study projects. However as a total group we used the same ways and methods of doing research into different aspects of collectivity. Collectivity plays a huge role in today's striving for an inclusive city. The inclusive city is also part of a topic that we addressed from Richard Sennett's book: Building and Dwelling.

A third method of doing research is; research by design. The essence of this method is that by formshaping and projecting existing structures and floorplans on this shape you'll quickly get a grip on dwelling design/structures. During this projecting one is continuously trying to solve problems that arise from this interaction between formshaping and the functional.

Normally experimenting with models would have been a familiar way to practise research by design. However, due to the corona crisis we were forced to use digital tools more than in the "normal" situation from before. Initially we used Enscape and it's eye-perspective to shape the mass from the building block, taking into account the environmental factors of the Keilekwartier as a whole. We did this in another compulsory research seminar.

INTRODUCTION

Collectivity and spatial conditions

Spatial conditions depend on certain social needs within the built environment. These social needs can be stimulated by using certain architectural means or tools. For example: sound, light, smell, color, materialization, contrast, spaces, routing etc.

All these elements can make someone attracted or comfortable with a certain (collective)space.

Functions of collective spaces within the city should represent the direct needs of the people who are using them, but at the same time not excluding anyone.

So an inclusive city also stands for not excluding certain groups in society.

When we build with inspiration and respect for the past, and we provide space for all inhabitants, a society has a real chance of success. This is reflected in both the collectivity of buildings and the public spaces in the middle of the city. All societal groups should feel comfortable and be attracted to the place, rich and poor, young and old.

What you do for us, but not with us, is against us (Arna Mačkić, 2020). This means that when designing new buildings and public spaces in the city, we actually have to work together with residents and supply them with their specific needs. This doesn't mean that everything should be the result of compromise, but at least designing should be based on the genuine needs of people.

Within the ongoing globalisation of today's world we cannot exclude the fact that collective spaces might be in need of a temporary and very flexible character. Furthermore our society is getting more and more culturally diverse and thereby the needs of people also fluctuates heavily over the course of time.

The definition of collectivity within the city also reflects on building blocks and their relation with public and collective spaces. How public should the character of the collective spaces within the building block be? This could mean that public functions within the plinth could lead to more livelihood within the building as well as the whole neighborhood or even the city.

1. TOPIC RESEARCH

POSED PROBLEM

AD

Nieuws Regio Sport Show Video NLblijftThuis

Sociale dienstplicht vraagt om rijke ouders

COLUMN | Özcan Akyol schrijft drie keer per week over wat hem bezighoudt.

Özcan Akyol 07-10-17, 06:00

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Die sociale of militaire dienstplicht was kennelijk ontzettend belangrijk voor het CDA.

Hoewel de partij het beleidsplan er niet doorheen heeft gekregen, lijkt het er op dat de nieuwe coalitie wél een 'maatschappelijke dienstdienst' gaat invoeren, wat in de praktijk behelst dat jongeren die vrijwillig een stage willen lopen op hun cv beloond zullen worden met een certificaat. Dit kan leiden tot voorrang bij sollicitaties – op welke wijze is nog onduidelijk.

Het past in het straatje van de christelijke bevolking willen laten terugkeren, want veel groepen niet meer met elkaar in aanraking. Maar toen ik me probeerde voor te stellen uitpakken, leverde dat de nodige vragen op.

AD

Nieuws Regio Sport Show Video NLblijftThuis

AD

Nieuws Regio Sport Show

Binnenland Buitenland Politiek Economie Gezond Bizar



▲ Ter illustratie

Enorm tekort aan mantelzorgers binnen twintig jaar

Over twintig jaar hebben we een ernstig tekort aan mantelzorgers. Vooral in Zuid-Limburg en Zeeuws-Vlaanderen wordt het de vraag wie nog voor onze 85plussers kan zorgen. Dat laten nieuwe cijfers van de planbureaus zien, zegt mantelzorgvereniging Mezzo.

Hanneke van Houwelingen 29-03-18, 00:01 Laatste update: 08:59

AD

Nieuws Regio Sport Show Video NLblijftThuis

AD

Nieuws Regio Sport Show Video NLblijftThuis

Binnenland Buitenland Politiek Economie Gezond Bizar Wetenschap Auto Tech Wonen

PvdA is om: meerderheid Kamer wil basisbeurs voor studenten terug

De PvdA is om en wil weer een basisbeurs voor studenten. De partij maakt een draai van 180 graden en trekt de handen af van het leenstelsel, dat het zelf nota bene heeft ingevoerd. Daarmee is een ruime meerderheid in de Tweede Kamer voor de terugkeer van de basisbeurs, al zal het waarschijnlijk nog wel even duren voor er werk van kan worden gemaakt.

Hanneke Keultjes 03-09-19, 03:00 Laatste update: 08:15

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De PvdA sluit zich aan bij Coalitie-Y, een initiatief van de ChristenUnie die samen met jongerenorganisaties oplossingen bedenkt voor problemen waar jongeren tegenaan lopen. Een van de speerpunten van Coalitie-Y is het afschaffen van het leenstelsel en de herinvoering van een basisbeurs.

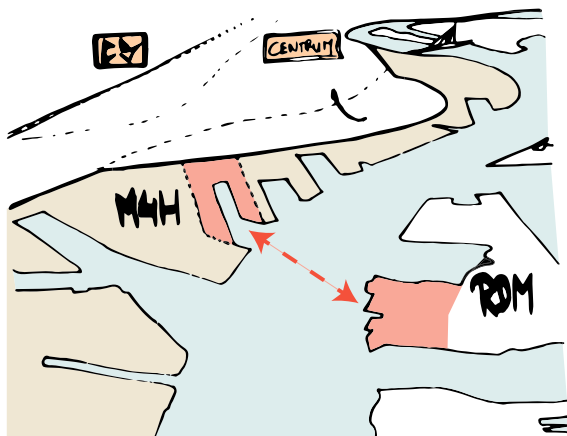
GroenLinks nam eerder als mede-architect [al afstand van](#) de studietoelagen. Alleen VVD en D66 zijn nu nog voorstander van het leenstelsel. Dit kabinet zal nog geen einde maken aan het leenstelsel, maar duidelijk is dat er nu een ruime meerderheid aan partijen is die bij een volgende formatie wel de basisbeurs of een variant daarvan wil terugbrengen.



POSED PROBLEM

Shortage of informal care for elderly

- people are getting older on average
- The caring society: government will no longer take care of all the elderly in the Netherlands. As a society, we must take care and responsibility for the people around us.
- Closed retirement homes
- For adults it is often not possible to take care of their parents next to their busy worklife. In addition to this there is also a shortage of informal care.
- Furthermore one of the political parties suggested that there should be an obligatory social service for young people: CDA with Sybrand Buma has suggested this.
- There has also been criticism in the Netherlands about the tuition fee for students. As it is now, students have to make a compulsory loan for their student costs but this will be discussed again during the next elections: right now, only the VVD disagrees.
- **Meet in the middle:** student gives informal care to the elderly and will therefor be compensated in their study costs
- A community where elderly and students take care of each other: co-existence of two different generations
- Students from the RDM Campus and the city of Rotterdam and surrounding cities.



Relevance

Society is aging at a rapid phase and the increasing technological possibilities make it possible that a solution or treatment method is found for many life-threatening situations. As a result, people are getting older on average.

As people age, so does the number of health care treatments. As a result, care has started to cost more and more in the past few decades. Because of this the government has decided to close a large number of care homes and thereby encourage society to take more care of each other.

There is an exception for the elderly who now live in an institution. They keep the right to stay in an institution and none of them will be homeless.

However, for someone with a light indication of care, there will no longer be a place in a government-funded care home in the future. In the plans from the government, someone who wants to go to a care home, but who does not need intensive care, must now take care of a house or room themselves. According to researchers, that plan is doomed to fail because the rent from these rooms is disproportionately high. The corporations do not intend to make up for the shortages (NOS, 2013).

The trend is therefore that a large proportion of the elderly want to continue living in their current environment and that they receive the care and support they need and deserve.

In practice, however, this entails many problems, because children often experience difficulties to provide care to their parents in addition to a busy full-time job. That is why they are largely dependent on nursing at home by external healthcare authorities. In the Netherlands, therefore, there is a great shortage of informal care, which means that we as a society have to look at new combinations and ways of living.

Compulsory social service for young people

The political parties 'CDA' and the 'Christenunie' wanted it to be compulsory for young people to do a social service for a while. During the election campaign for the national elections, the CDA in particular wanted to reintroduce compulsory social service for young people in health care. A reason for this was that they wanted to bring back the community spirit among society, because many groups no longer interact with each other because of the ongoing individualisation.

The young people who choose to do this type of "volunteering," could get favoured over other candidates for government or corporate jobs.

According to CDA and ChristenUnie, social conscription offers young people the opportunity to work on their CV and it would promote community spirit in an increasingly individualistic society.

However, other parties disagreed with the mandatory nature of this proposal and that is why it has not been accepted on these specific terms.

Return of scholarship for students

In addition, there has also been criticism of the abolition of the basic scholarship in the Netherlands.

It appears to put too much pressure on students.

After a long period of doubt, the political party PvdA made a plea for the return of basic student scholarship. The party made a 180-degree turn and pulls its hands off the lending system, which has been introduced by themselves. Currently the VVD is the only political party who is not in favor of the new proposal for scholarship.

However, this means that there is a large majority in the House of Representatives in favour of the return of a scholarship for all students. Yet, this Cabinet will not put an end to the loan system, but at least it is clear that there is now a majority of parties that would like to return the basic loan system or a variant of it during the next elections.

Meet in the middle

It is therefore good to think about possible alternatives and the position that urban planning, architecture and housing construction may have in this. Other ways of student housing/living might offer a good alternative. For example, a student can live in a complex mixed with elderly people, in which the student can take on a caring task to relieve the high pressure on the informal and formal care system.

This allows the student to “earn back” his tuition fees. So this is in advantage for the student who gets his basic scholarship back, but therefore has to compensate by taking on a care task for the elderly.

For the elderly it has the advantage that they get what we can call a “buddy” who can keep them up to date on current affairs and events. In addition to carrying out light care tasks and helping with practical matters, there is time for a cup of coffee, a chat or a walk. The students take their time and create a personal bond.

co-existence of two different generations

My design will respond to these political developments, thus meeting a need that arises from society and changing governmental policies.

A relatively new way of living two groups will form a community consisting of a combination of elderly people and students who are involved in caring for each other.

Furthermore the complex will become a building for an ever-increasing group of older people who want to continue living independently on the one hand, but on the other hand want to have the facilities that are important to them within walking distance and, if necessary, fall back on a social network that offers guidance or support. The design is emphatically not a nursing home and does not meet the needs of all elderly people. It focuses on the elderly without psychiatric CIZ specifications. These are the elderly that demand professional help/care, i.e. people with psychiatric disorders such as dementia.

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1.1 Research Question

Which types of co-existence are best suited to prevent loneliness and isolation among the elderly?

1.2 sub questions

1) What types of collectivity can stimulate informal care for the elderly within a residential community?

Social needs within the network of elderly people who are in need of care play a major role in this.

2) What are these social needs and how do they translate into a spatial design?

The spatial design depends on certain spatial conditions. These conditions arise from the social needs of the residents and can be reinforced or emphasized by the use of certain architectural tools.

3) What are the architectural tools that create the spatial conditions to stimulate informal care for the elderly?

Research into existing forms of housing (case studies) plays a role in this. It will provide more insight into the way in which spatial factors influence the social needs / cohesion within a residential community or network.

1.3 Definitions

Generalization of different groups:

- elderly people in need of care; vulnerable target group - people with a need of (professional) care
- self-reliant elderly people; no care needed now - might be in the near future
- vital elderly; relatively healthy people who are able to take care of themselves

In my design the emphasis lies on the self-reliant and vital elderly. This means elderly people who do not need a heavy demand for care that cannot be given by students. This does not mean that this option is not for people who have certain problems, but people with a CIZ specification such as dementia or other serious psychological problems usually need more professional guidance, whereby a care institution or nursing home might be more suitable.

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Spatial conditions

Spatial conditions depend on certain social needs within the built environment. These social needs can be stimulated by using certain architectural means or tools. For example: sound, light, smell, color, materialization, contrast, spaces, routing etc.

Informal elderly care

It is important to make a distinction between informal and formal care. With informal care is meant the care that can be provided by people who are not specifically trained or schooled in professional care giving. You can think of help with household tasks, all kinds of practical matters and mental support. This is not sufficient for formal (professional) care and certain actions must be performed with more knowledge. That is why this is done by professional care providers.

Social needs

Social needs arise from the way in which people want or receive informal care.

A certain degree of social cohesion within a network can contribute to the social needs of residents. However, the question is how these social needs can be translated into spatial needs. For example, a need for privacy within a building block could lead to a gradual transition from public to private.

The way in which this is designed depends on the use of specific architectural tools.

Inclusive city

What you do for us, but not with us, is against us (Arna Mačkić, 2020). This means that when designing new buildings and public spaces in the city, we actually have to work together with residents and supply them with their specific needs. This doesn't mean that everything should be the result of compromise, but at least designing should be based on the genuine needs of people. Furthermore, an inclusive city stands for not excluding certain groups in society.

When we build with inspiration and respect for the past, and we provide space for all inhabitants, a society has a real chance of success. This is reflected in both the collectivity of buildings and the public spaces in the middle of the city. All societal groups should feel comfortable and be attracted to the place, rich and poor, young and old.

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Designing for the elderly

In the coming years, the number of elderly people will increase rapidly. According to the CBS Population Prognosis, the number of 65-plussers will increase: in 2012 there were still 2.7 million 65-plussers, in 2041 there will be 4.7 million. Until 2060, the number will continue to fluctuate around 4.7 million.

In particular the proportion of 65-79-year-olds will increase. From 2025 onwards, the 80-plussers group will also increase strongly (the double ageing of the population). In 2040, when the number of 65-plussers peaks, it is estimated that 26 percent of the population will be over 65, a third of whom will be over 80 years of age.

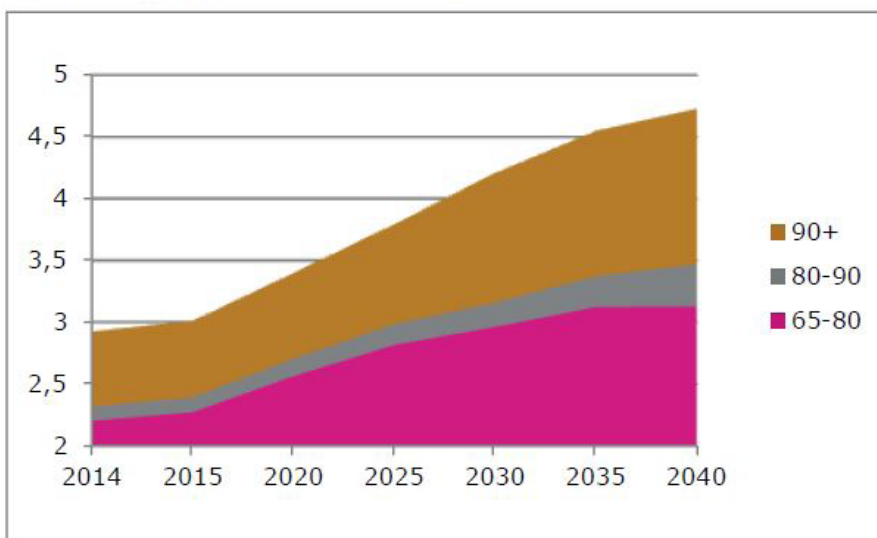


Diagram 1: Demographics of aging

Elderly and loneliness

Loneliness is an increasing problem among the group of elderly people (65-plussers). In general, the percentage (very serious) lonely people increases with age. This applies specifically to social loneliness. The percentage of people who feel emotionally lonely only increases from the age of 75.

After the age of about 75, the likelihood of loneliness increases with the accumulation of various events such as the death of the partner and other peers and the loss of mobility and independence due to declining physical, cognitive and sensory functioning (van Tilburg, 2007; Jylhä, 2004). Nearly two-thirds (63%) of the 85-plussers feel lonely. Loneliness can be caused by the lack of certain social needs, which can isolate a person from their environment.

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Social isolation among the elderly

In the Netherlands there are many initiatives and interventions to reduce or prevent social isolation among the elderly. Most interventions, however, prove to be ineffective. The main stumbling blocks in tackling problems through interventions are the relative invisibility and heterogeneity of the older target group. It is therefore important to provide insight into this heterogeneity by dividing the group of elderly into different types.

This typology can then serve as a guideline for determining appropriate interventions and guidance. The typology shows that the time investment and the intensity of the help can differ greatly per type. It will also become clear which results are possible for different categories and what the limits of care provision are (Machielse, 2011).

In some cases, network development or activation is possible and isolation can be removed. In other cases, the results are more in the field of practical problem solving. Sometimes it is not possible to improve the situation and a safety net can be created to prevent further decay (Machielse, 2011).

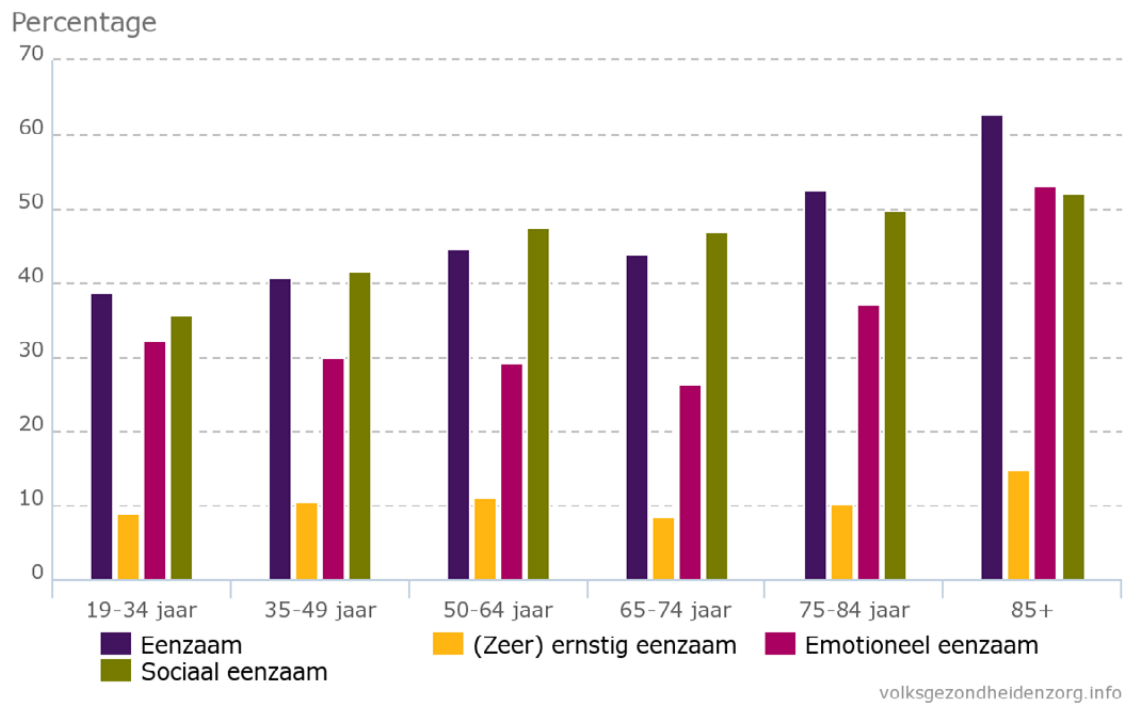


Diagram 2: Loneliness compared to age in 2016

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An important reason for tackling social isolation is that socially isolated citizens often fail to be self-reliant.

People who live in social isolation often lack the network of people who can possibly provide informal care or other forms of support.

If they become (temporarily or structurally) in need of help, they are completely dependent on professional help (Machielse, 2003, 2006a). In the worst case, (temporary) admission to a care or hospital nursing home is necessary (Van Campen, 2011).

For this reason, the prevention of social isolation in our society is a very important factor. This reduces the chance that someone needs professional help, because the proximity and support of a social network can mean a lot to someone who gets into trouble.

Because socially isolated people participate much less in social networks and participate in activities, they are also less involved in social life.

You could say that they participate less in society and therefore have fewer opportunities to reflect a sense of solidarity to others (Machielse, 2006a).

This is also described in the policy reports of the Social Support Act (Wet Maatschappelijke Ondersteuning, Wmo). The aim of this law is to increase social cohesion and mutual involvement between people, so that people are more able to take care of themselves and each other.

However, when the elderly are unable to find a solution to their own problems within their own network of family and friends, they can request support from professionals. However, reaching this stage can be prevented by stimulating the ties of a social network in the immediate surrounding of the elderly.

In recent years many interventions have been carried out in the Netherlands on the basis of these motivations to reduce or prevent isolation.

However, evaluations show that a large part of the socially isolated people with the use of existing interventions is not reached.

One reason for this may be that this group is relatively invisible because they often do not turn to help and support agencies. Someone will only be noticed when a situation becomes really unmanageable and more professional forms of assistance are required (Machielse, 2011). It is therefore difficult to reach vulnerable elderly people.

It is therefore helpful to at a very early stage take into account how to prevent social isolation in the elderly community in order to prevent them from further decay. Being able to reach out to the immediate environment will already help a lot in this case. My complex will therefore provide in this need for direct social contact for the elderly.

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Research into interventions for isolation

The research by Anja Machielse (Machielse, 2011) reveals two points that are important in determining specific interventions to combat loneliness: **persistence and action orientation**.

Persistence has to do with the duration and cause of the situation. For example, one speaks of situational isolation when the situation has arisen due to major life events (death of a loved one) and of structural isolation when it has been going on in the person's life for a longer period (never being able to connect with other people during childhood). The action orientation revolves around the degree to which a person needs to participate in formal and informal social relationships.

- informal connections: contacts with a partner, family, friends and neighbors
- formal relationships: participation in associations, paid work or voluntary work

Together, these two points (indicators) result in eight intervention profiles that can help to form a better picture of a person's situation (Machielse, 2011).

Machielse argues that the eight profiles are typified by terms that reflect a dominant survival strategy.

Active people (actieven) feel good when they have an active social life; salvages (geborgenen) seek one protective network in which they feel safe; those left behind (achterblijvers) long for the emotional support from a close relationship, dependent people (afhankelijken) seek security in a relationship of dependence, compensators compensate for the lack of personal contacts with functional activities, outsiders prefer to function outside of the main society, hopeful people (hoopvollen) have a high need for social contacts and continue to hope that their situation will turn for the better, and survivors have given up and are only spending their time surviving.

With persistence it is important to distinguish different causes and ways of isolation, namely: threatening, situational or structural isolation.

- **Threatening isolation:** elderly people who are in danger of social isolation due to recent circumstances or events (temporary support required)
- **Situational isolation:** elderly people who have become isolated due to circumstances or events (temporary support required)
- **Structural isolation:** elderly people who have been in social isolation for many years (long-term more complex support)
- **Structural and psychiatric problems:** elderly people who are structurally isolated and who also have psychiatric problems (long-term more complex support)

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The interventions must then also fit in with the different strategies that people use to deal with certain situations. So interventions are most effective if they match the specific aspirations and strategies of a particular person. Therefore, interventions aimed at participation can have different forms:

- **Compensators:** will actively look for opportunities to participate
- **Hopeful people:** are much more passive and wait for the situation to change
- **Dependents:** hold on to one single social contact
- **Outsiders:** emphatically turn away from society

It is therefore often sufficient to provide short-term ways of help and support for elderly people who are in danger of isolation due to circumstances or events. Steering people towards activities or other ways of participation will have a lot of positive influence for people who are focused on social participation. This is the group of elderly who will benefit the most from the informal care that students are able to provide. The question then is how the different shapes can be facilitated in the design, as it were. So how do you respond to the above points and which collective facilities suit the different strategies that people use to deal with situations.

Persistentie van het Isolement	Uitgangssituatie m.b.t. sociale participatie		Typen interventies
	Gericht op sociale participatie	Niet (duidelijk) gericht op sociale participatie	
Dreigend Isolement	Actieven	Geborgenen	Belemmeringen voor participatie weghalen Preventieve interventies (hulp bij rouwverwerking, mantelzorgondersteuning, etc.) Toeleiding naar groepsaanbod/activiteiten Inzet vrijwilliger/match met andere oudere Relatief korte trajecten, niet intensief
Situationeel Isolement	Achterblijvers	Afhankelijken	Belemmeringen voor participatie weghalen Individuele begeleiding door professional Doorgeleiding naar specialistische hulp Inzet vrijwilliger/match met andere oudere Toeleiding naar groepsaanbod/activiteiten Relatief korte, intensieve trajecten
Structureel Isolement	Compenseerders	Buitenstaanders	Praktische problemen oplossen Monitoren door professional Geen inzet vrijwilliger mogelijk Langdurige trajecten, niet intensief
Structureel Isolement, verweven met psychiatrische problematiek	Hoopvollen	Overlevers	Praktische problemen oplossen Begeleiding bij dagelijks functioneren Emotionele en psychosociale steun Doorgeleiding naar specialistische hulp Inzet van gespecialiseerde vrijwilliger Creëren van een professional vangnet Langdurige, intensieve trajecten

Diagram 3: Interventionprofiles for socially isolated elderly

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Privacy and the degree of desired social contact

The degree of desired social interaction can vary greatly from person to person, but the need for control over social interaction is universal. Control is created by setting limits or by seeking the right contact. The desired result of these actions is a balance between the desirable and the degree of social interaction obtained. If this balance is not achieved or if an equilibrium is disturbed, social pressure or loneliness arises (Altman, 1975). Furthermore, we can say that in general three basic necessities are important for every person, namely the desire for; assistance and security, intimacy and positive self-esteem (simons, 1984)

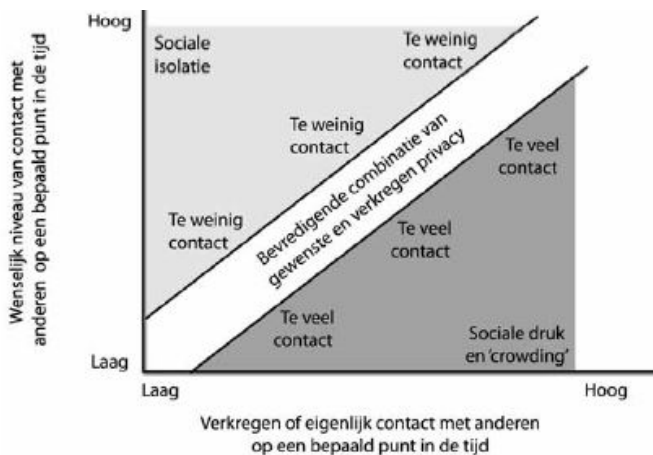


Diagram 4: Degree of desired social contact

Social contacts and everyday encounters

Meeting is one of the primary necessities of life for humans. Meeting brings you into contact with other people, thoughts, feelings and cultures. Meeting provides a certain enrichment in life because people learn from each encounter and thereby they bring this knowledge along.

According to Tanja Blokland (Blokland, 2008) it is useful to make a distinction between different ways of meeting in **weaving** and **cross-linking**.

Weaving refers to the everyday shifting and moving towards and among each other. People do not always necessarily want to meet, but they meet each other through necessary displacement. Cross-linking is about going into deeper relationships with others. This often creates more intimate social networks. Both ways of living together are important on their own. However, more value is generally attached to durable ties compared to short contacts.

However, sporadic contacts also play a very important role and meet an everyday social need, even if it does not lead to anything else.

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For this reason, when developing my residential complex, sporadic opportunities will be taken into account (brief and unplanned) for the layout of the physical spaces. When these contacts are repeated, public familiarity arises, whereby people gain knowledge about others. As a result, the immediate surrounding of the neighborhood or the building will be seen more positively.

Lastly, we can say that collective spaces with a specific function can contribute more to connecting older people. These are the spaces where people with a shared interest are given the opportunity to get into a deeper long-term relationship.

Informal help

Informal help refers to help for all people with a diversity in health problems that is not provided by a professional performing their profession.

This concerns people helping each other, because of their mutual bond or voluntary work. So any kind of support, because of limitations or psychological complaints that are not given by professionals.

Examples of the activities are emotional support, guidance in arranging appointments, administrative help, domestic help, transport or personal care.

Meaning (zingeving) among elderly

The term personal meaning system is used when researching performances about self and life.

This concept connects psychological theories about the self-concept with theories about motivations in life. Psychological studies of the self-concept focus mainly on self-esteem, self-development and personality traits. Other aspects of life are also depicted in the personal meaning system, insofar as these are relevant to the person himself. The personal meaning system thus includes several life domains: in addition to the self-reflective contents physical aspects of the person, activities, social relationships, one's own financial and economic situation, living situation, religion, politics and ideas about life in it generally.

The extent to which one focuses on a domain is different for each individual.

The meaning of the elderly and young people reflects different age-specific developmental tasks. For example, young people talk about tasks like self-development, finishing school and study and finding a job and partner, while elderly people talk about maintaining health and autonomy and good family relationships (Westerhof, 1997).

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Perceived barriers to provide informal care

Distance

The distance that a caregiver has to travel can be a barrier to provide in-home care or help with transportation. Therefore it can be important to live in the vicinity of the person who is in need of care.

Time

The healthcare provider may see alternative costs that limit the freedom to provide healthcare. There is time pressure from a paid job, volunteering or caring for a family with young children. People with long working hours are less likely to provide care than people who work shorter hours.

Money

An alleged barrier to providing informal care could be the financial costs associated with traveling to the care recipient. However, only a small proportion of informal caregivers experience financial problems as a result of informal care. On the other hand, money can be a trigger to provide care, especially if you receive a benefit for informal care (Broese, 2016).

In the research from Broese they developed an Informal Care Model (ICM) in order to describe the multiple and diverse arguments of an individual to take up the caregiver role when they would be confronted with a person who is in need of informal care (Broese, 2016). They also explain that other studies focussed on other aspects of caregiving such as the burden that comes with it, the combination between work and studies, intergenerational solidarity (i.e. students and elderly) etc.

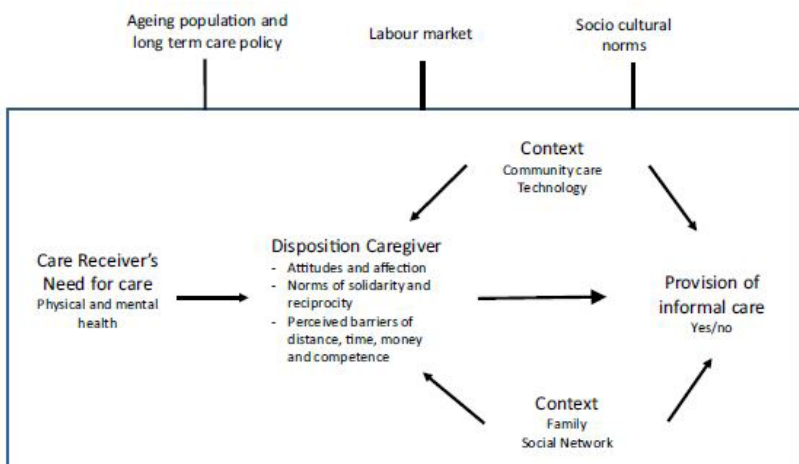


Diagram 6: The Informal Care Model: determinants of informal care provision at the individual level

THE COMMUNITY

Furthermore they mention how informal care works out differently in specific contexts such as families, communities or other networks.

According to Fishbein and Azjen (Broese, 2016) the intention of informal care provision is based on the general beliefs, normative beliefs and perceived constraints. Important questions one asks himself are; is giving care something that I want to do or do I have to do it? And what are my specific qualities in providing care?

Informal care is always based on the relation between the care receiver and giver, so the above factors are very relationship dependent.

In the figure below you'll see the factors that influence the care provision on an individual level. In short the provision of informal care is influenced by the context: community care, technology, family, the social network and the disposition of the caregiver.

Conclusion

For the design of my complex this means that the context factors; community care and the social network within the building contribute to the disposition of the caregiver. Thereby perceived barriers of distance, time and money will be reduced to a minimum.

In communities with different generations people will be able to learn from each others strengths as well as taking care of the weaknesses. Especially because different generations can have such different backgrounds and views on life. Therefore they will be able to complement each other on multiple aspects.

THE COMMUNITY (SURVEY)

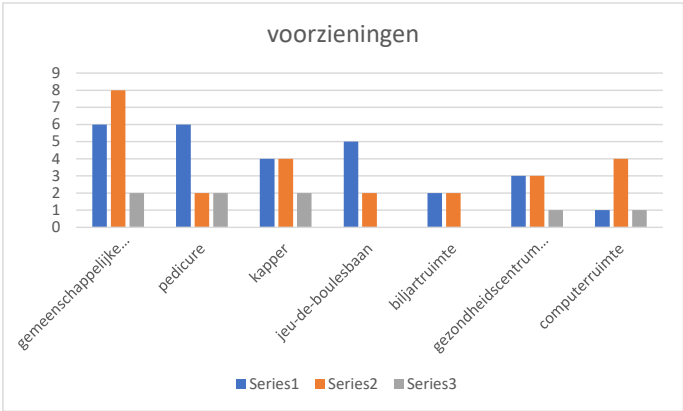
Housing requirements (65-plussers)

Survey results for the elderly

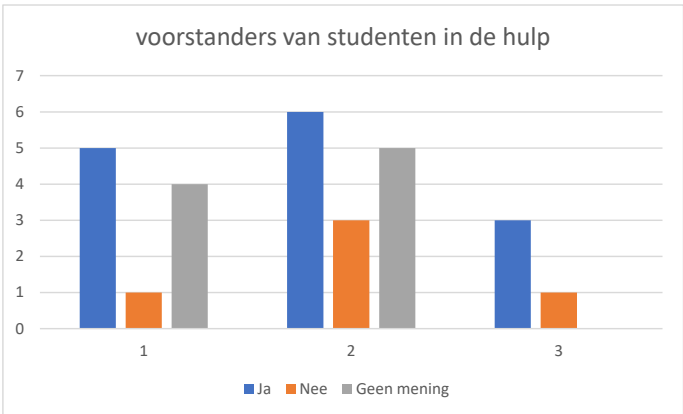
This survey was conducted at three different elderly complexes in Delft. To be able to do this permission was requested from the housing corporation Woonbron.

The three complexes had similar target groups (senior housing) but were differed in their architecture, typology and shared (collective) functions. The first two complexes both had a shared courtyard with gallery access. The third complex was a flat with corridor access. This complex produced the fewest surveys. This is probably due to the fact that there was no collective courtyard here and many floors were stacked. As a result, people probably identify less with the entire building, but rather with only their own floor, which increases the barrier to completing a survey and bringing it to the ground floor.

Vraag 1 (welke voorzieningen zou u willen hebben in uw wooncomplex?)

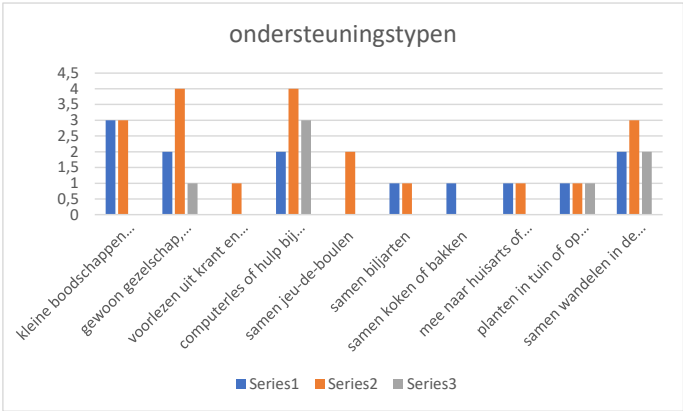


Vraag 2 (zou u het fijn vinden om hulp te krijgen van jonge mensen, bijvoorbeeld studenten?)

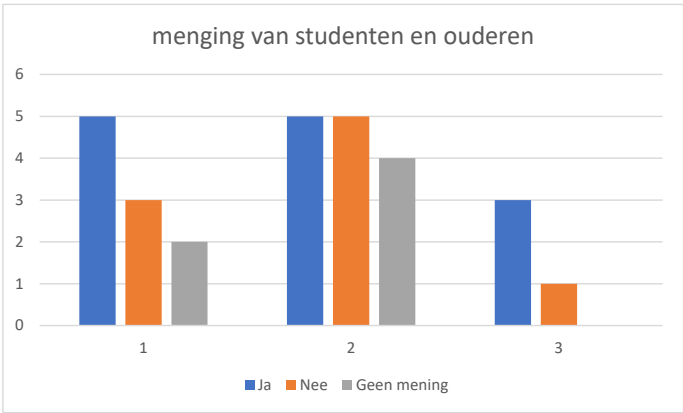


THE COMMUNITY

Vraag 3 (Zo ja, welke soort hulp zou u dan wensen?)



Vraag 4 (vind u het een goed idee om studenten en ouderen in hetzelfde complex te laten wonen? De studenten krijgen dan een zorgtaak en verdienen hiermee hun collegegeld terug)



THE COMMUNITY

Vervolg vraag 4 (kunt u eventueel aangeven waarom wel of niet?)

Complex 1

studenten staan erom bekend feestjes te hebben en dat is hier niet gewenst. De rust is voor bewoners heel belangrijk er is altijd wel iemand die hulp kan gebruiken

Het is goed dat jongeren en ouderen in contact met elkaar blijven. Het verplichten van een dienst moet geen moeten zijn

Houdt het levendig en brengt een zekere mate van gezelligheid met zich mee

Heb er voor gekozen om te wonen met leeftijdgenoten, dat bevalt mij prima en is lekker rustig. Met studenten vlakbij is onrustig, die hebben een heel ander leven

Wij hebben 20 jaar studenten in huis gehad

Het idee is goed maar niet rendabel, wat moet dat dan gaan kosten!! Heeft u daar nog over nagedacht?

Zij hebben een woning, wij kunnen ervan profiteren en ook voor jonge mensen in ons atrium is ook gezond

Complex 2

Ik ben nog zelfstandig, en dat wil ik voorlopig zo houden

Dat zijn mensen die een hoog IQ hebben en tot veel in staan zijn, en is een belangrijke aanvulling voor wat zij of hij doen. Heel belangrijk voor de oudere gemeenschap

Ik heb het niet zo op studenten

Bereikbaar met korte lijnen

Wij wonen in een kleinschalig complex (24 woningen) en hebben er bewust voor gekozen. Als we niet meer boodschappen kunnen doen bestellen we dat via picnic of onze kinderen en kleinkinderen helpen dan, want die wonen in de buurt

Het is een goed idee omdat er meer variatie in ontmoeten ontstaat. Ouderen hebben meer input van buitenaf nodig. Het "postzegel" bestaan doorbreken

Het plan lijkt goed, maar het moet een senioren complex blijven

Vitaliteit van de populatie

Complex 3

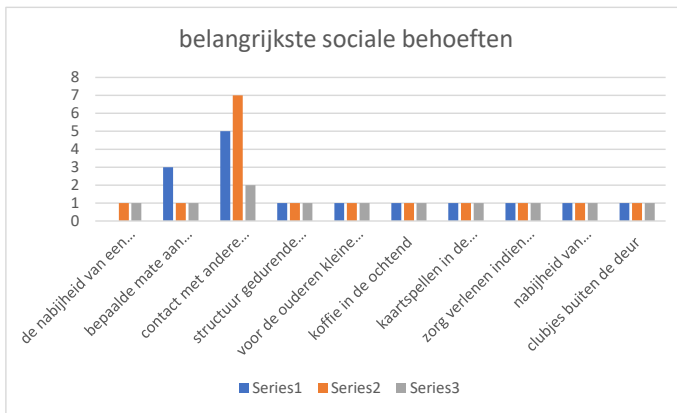
Wie doet zo'n éénmalige selectie? Als je onder je studielening uit wil komen, kun je je heel goed presenteren, begrijpelijk. En wie gaat dit handhaven? Worden er weekroosters opgesteld?

Voor veel mensen zou dit een goede oplossing zijn voor mij persoonlijk nog niet

THE COMMUNITY

Vraag 5 (wat zijn voor u de belangrijkste sociale behoeften?)

- de nabijheid van een zorgverlener (student)
- bepaalde mate aan privacy: in de woning en in relatie tot een eventuele zorgverlener in het complex
- contact met andere bewoners
- structuur gedurende de dag
- voor de ouderen kleine boodschappen doen
- koffie in de ochtend
- kaartspellen in de middag
- zorg verlenen indien nodig
- nabijheid van computer kennis / les
- clubjes buiten de deur



Vraag 6 (Heeft u zelf nog iets toe te voegen of een goed idee?)

Er is een grote behoefte aan ruimte voor e-bikes en scootmobielen

bevorderen van de sociale cohesie is van groot belang

intercom van camera voorzien, zodat je weet wie er voor de deur staat

intercom verplaatsen van de ontvangsthal naar woonkamer

Voor een kleinschalig complex zoals dit zou het mooi zijn om één huis leeg te laten om dit als ontmoetingsruimte te gebruiken voor een bakke en wat fitness apparatuur dat voor allen is te gebruiken!

Er is ooit voorgesteld bij de woningbouw om één flat vrij te laten voor ontmoetingsruimte, maar dit werd afgewezen.

De zorg voor elkaar kan ook door bewoners gegeven worden, die in hun arbeidzame leven verschillende beroepen hebben uitgevoerd. Bv. Boekhouder, chauffeur, kok, timmerman, iemand die goed met computers om kan gaan.

THE COMMUNITY

Conclusions from survey for the elderly

The survey provided very useful information regarding the housing needs of the elderly. The interpretation of the rather specific social needs that the residents mention and their own comments or ideas have led to more general values and norms (code of conduct), or a kind of profile of a way of living that is perceived as pleasant and will serve as a guideline when designing:

Generic social needs:

- Independence
- Dignity
- Meaning - Being part of society
- Daily structure
- Privacy (in relation to the students)
- Social cohesion between residents

What is perceived as important by the elderly (specific requirements for the building-complex):

- All facilities available within walking distance
- Any (social) support (now or in the future)
- Guidance for activities
- Exercise facilities (swimming, fitness, etc.)
- Technical support for digital activities
- Living with like-minded people

Important Quotes

“Ouderen hebben meer input van buitenaf nodig. Studenten kunnen zo het “postzegel” bestaan van de (vaak wat angstige) ouderen helpen te doorbreken en ouderen hebben studenten ook levenservaring te bieden.”

“Ontwerp een gebouw dat vooral naar buiten gericht is met de nodige gewenste voorzieningen. Ons huidige complex is te gesloten, een beetje zoals gevangenissen gebouwd zijn. Hierdoor ontstaat er een (negatieve) vorm van sociale controle.”

“Wij hebben hier een prachtig dakterras dat voor iedereen toegankelijk is, maar wat slechts gebruikt wordt door de dominantste (de mensen die er het langst wonen). Studenten zouden er veel creatiever mee omgaan.”

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Architectural toolbox

Independence:

- facilities within walking distance
- preservation of autonomy

Dignity

- not pushed away in an isolated environment
- living with like minded people (socially active)
- mix with younger people

Meaning (zingeving)

- self-esteem
- self-development
- maintaining health

Daily structure

- guidance for daily activities
- accessible collective space
- public functions within building
- exercise facilities (fitness, swimming etc.)

Privacy

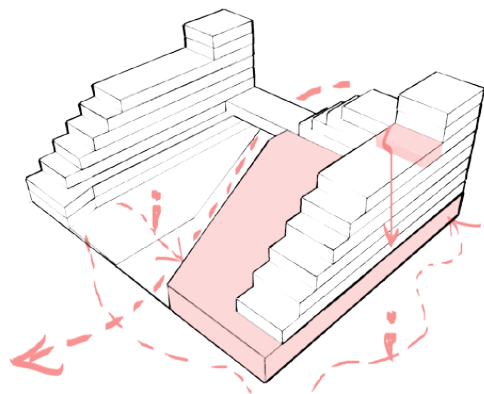
- privacy in relation to other residents (elderly)
- privacy in relation to the students
- privacy in relation to informal care
- different zones of privacy

Social cohesion

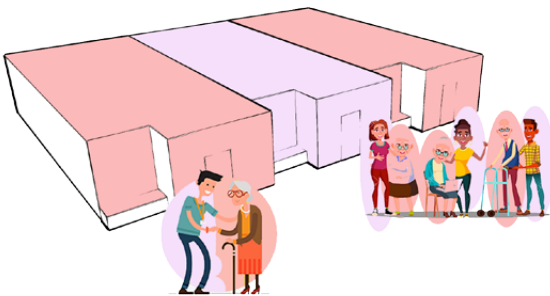
- stimulating social contact between residents on the same floor
- stimulating social contact within the building
- weaving: sporadic opportunities such as brief / unplanned meetings
- cross-linking: deeper relationships with others

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INDEPENDENCE



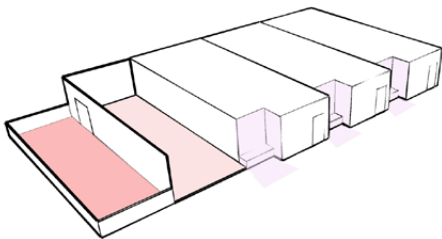
DIGNITY



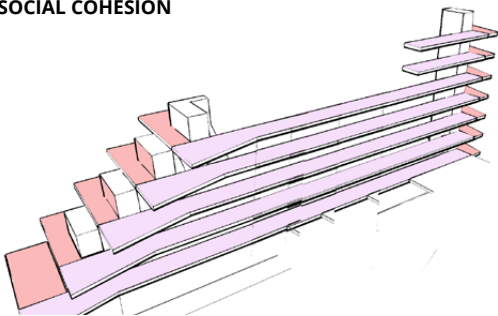
MEANING



PRIVACY



SOCIAL COHESION



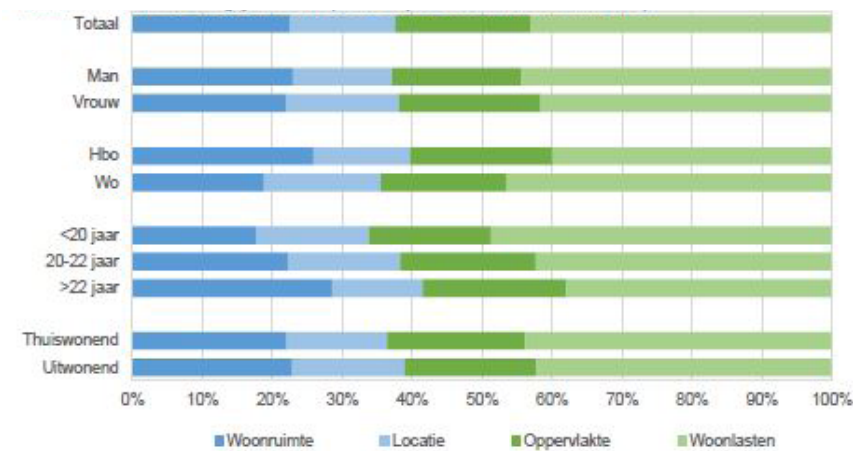
DAILY STRUCTURE



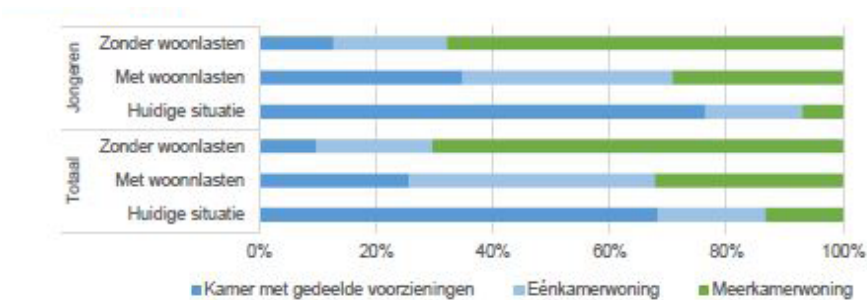
THE COMMUNITY

Housing preferences students

When looking for housing, students weigh up different housing characteristics. After all, a multi-room house in the center of the city entails higher housing costs than a room with shared facilities outside the center. To visualize the housing wishes of students, the influence of four living space characteristics was examined: type of living space, amount of space, location and housing costs.

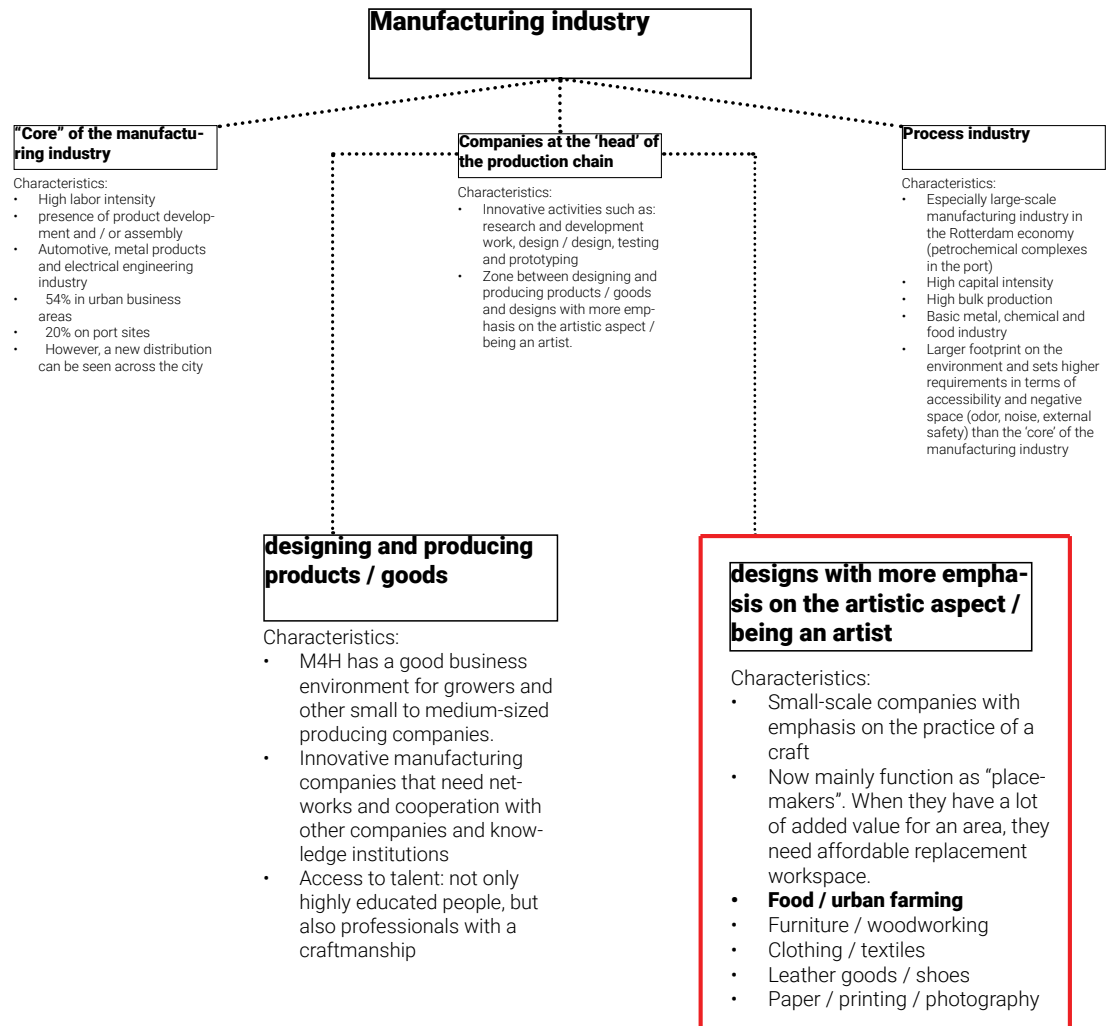


Almost a quarter of all students prefer a room with shared facilities. However, when housing costs are taken into account, more than a third of young students prefer a room with shared facilities at the expense of the share of self-contained housing.



In living space, preferences for young students and all students are divided. In the current situation, rooms with shared facilities and one-room houses have relatively many small living spaces, while many students have a clear aversion to this.

SUMMARY GENERAL MAKING RESEARCH



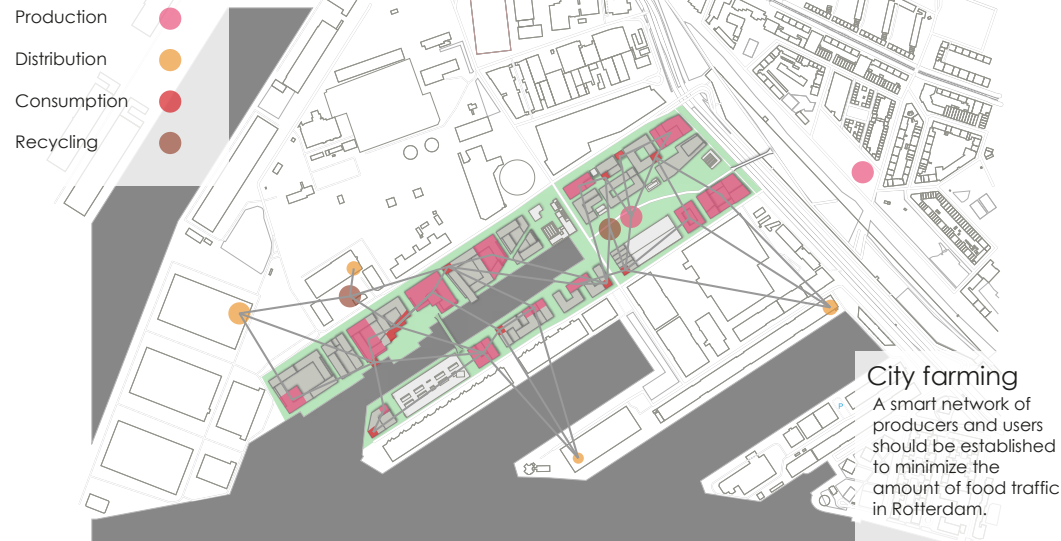
Relevance Makers

In my design I will focus on the food industry. As you can see in the food flow diagram there are a lot of food relating activities within the M4H area. However, there is lots of distribution but less actual consumption of the food within the area. Therefore small food relating businesses will be housed in the old factory building next to my new building. Initially the urban plan described a making function within the plinth of the new buildings. However it also described that the old factory building should be taken into account with the design of this plot. Therefore I chose to place public functions for the elderly in my plinth and the factory for the makers, because this could be a place that has a more authentic character/ambiance for a bazaar/foodmarket. From my own perspective architecture and the perception of its authenticity is related to the fact that something is build with the materials and the relating techniques of it's own time. Therefore it is also very interesting how the new buildingcomplex is going to react on the existing (authentic) factory building.



MAKING RESEARCH

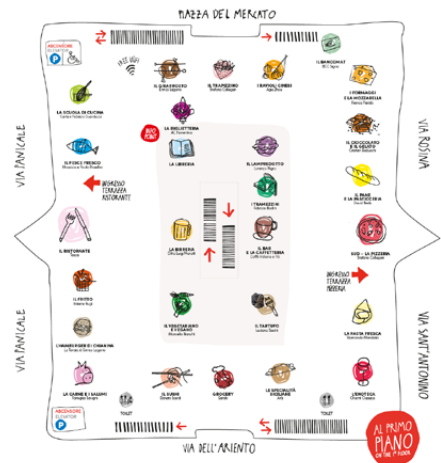
Food flows



Relevance makers

From the groupresearch we stated that a smart network of producers and consumers should be established to minimize the amount of food traffic in Rotterdam while providing a platform for community, activity and education.
Furthermore I used Mercato Centrale Firenze as a reference for the way in which food is presented to the customer.

However for my makingconcept it is important to mention that the rental costs for the makers should be as low as possible, so the foodprices could be kept to a minimum. Thereby it will be a more attractive alternative for the daily necessities and they'll be able to compete with supermarkets within the area.



2. MAIN CASE STUDIES

INTRODUCTION

These are the three main current issues in Dutch housing:

1. There is a growing housing shortage in the Netherlands. Between 2019 and 2030 around one million new residences will need to be built. (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2019) So a lot of housing has to be built in a short time span. Partly because of the housing shortage housing prices are rising quickly which can lead to the exclusion of less well-off groups of people.

2. Additionally, there is little space to build upon. With the continuing urbanization of Dutch society, most residences will have to be built in and around existing cities. These cities are now densifying their existing urban fabric with new housing developments, but will still have great difficulty building enough on the available plots of land.

3. Then there is possibly the biggest issue of all: climate change. Building has had a huge impact on our environment and will continue to do so. Solutions have to be found to strongly reduce our emitting of greenhouse gases, our shrinking of biodiversity and our depletion of (natural) resources.

Enter communal housing.

By sharing certain facilities among a group of inhabitants, less space is needed for each of the inhabitants' needs. Say eight apartments each have their own washing machine, that means that eight square meters of the building houses washing machines. But not all these machines are used all the time. If per eight apartments two machines are available for all eight residents, only two square meters of the building needs to be reserved for everyone's needs. If enough floor space is 'saved' through sharing facilities, additional rooms or even additional apartments can be built for the same amount of money in the same amount of time.

And this can be part of the solution to the first problem; the housing shortage. Being able to build more apartments within the same time span is obviously beneficial to reaching the goals set for 2030. The sooner the housing shortage can be solved, the quicker housing prices will stabilize (or even drop). The less fortunate people in our society would stand a better chance finding suitable housing at an affordable price. They might not have to move to more peripheral areas of the city because they can no longer afford the rents in the city centre.

As stated, the second current issue in Dutch housing is the availability of space. Delft for instance has no big empty plots left to build upon apart from the currently planned developments. (Gemeente Delft, 2016) And even the planned developments may not even be sufficient. If major real estate developments have shared facilities in them, a lot of additional apartments can be built on the same plot.

Communal housing also addresses climate change and our impact on this world. "The building

and construction sector accounted for (...) 39% of energy and process-related carbon dioxide emissions in 2018 (...)" (United Nations Environment Programme, 2019, p. 9) The process of building itself as well as the production of building materials are the biggest contributors to these emissions. Now, this is a far greater issue than can be solved through the means of a type of housing, but it can again be partly be solved through it. Simply put less individual facilities leads to less real estate needed which leads to less materials needed per capita. Per capita, because the housing shortage demands us to fill up superfluous real estate with more dwellings. If less materials are needed per capita, less energy is consumed in making the necessary materials for an equal amount of dwellings. Less energy will have to be put into the transportation and placement of materials as well. Less materials needed per capita also means that each person has a smaller impact on the depletion of natural resources. Scarcity of virgin materials is growing, and all materials we extract from this planet are finite resources.

Communal housing comes in many different shapes, some more suited for a specific situation than others. As the Dutch saying goes "zoveel mensen, zoveel wensen". Although it can prove itself valuable for solving the previously mentioned problems, it is by no means the single solution to the issues at hand. The desired degree of collectivity always depends on the specificities of the project. Through the analyses of case studies we can learn what types of living and which types of communities are suitable for what situations, and draw lessons from them for our own design practices.

Methodology

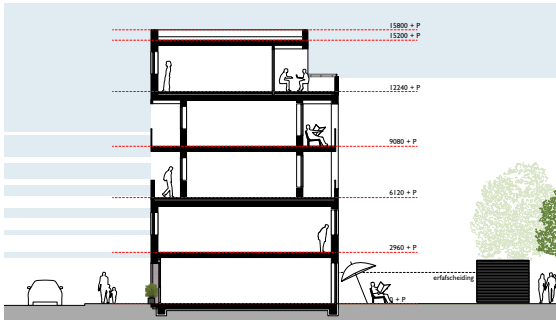
In this research a number of 15 residential buildings have been analysed, elaborating on a wide variety of housing typologies. Main issues as the type of housing, functions in the building, accessibility, the relation between public and private and movement in the building have been studied. The latter has resulted in a representative route of a resident through the building with possible collective encounters. Spatial aspects which influence these encounters have been pointed out to emphasize the relation between architecture and collectivity. A brief overview of all research is included in this report and will discuss the earlier mentioned topics in the coming section. Finally a conclusion will be drawn on the topic of collectivity.

Sources:

Ministerie van Binnenlandse Zaken en Koninkrijksrelaties. (2019, July). Achtergronddocument Opgaven in de fysieke leefomgeving: huidige situatie en ontwikkelingen. Retrieved from <https://ontwerp.novi.nl/download+pdf+ontwerp-novi/HandlerDownloadFiles.ashx?idnv=1407076>
Gemeente Delft. (2016). Woonvisie Delft 2016-2023. Retrieved from <https://www.delft.nl/wonen/wonen-delft/woonvisie-2016-2023>
United Nations Environment Programme. (2019, December). 2019 Global Status Report for Buildings and Construction. Retrieved from <https://www.unenvironment.org/resources/publication/2019-global-status-report-buildings-and-construction-sector>

Functions

In the West Indian neighborhood in Groningen, family homes, informal care apartments and starter apartments have been realized in one building. People with different needs can now live in the same place. Furthermore it is a building of more than 125 meters long and five layers high, built in dark brown masonry, houses 16 family houses, 22 informal care apartments and 20 starter apartments. The Kangaroo dwellings consist of two apartments, a larger and a smaller one that are connected with a connecting door, but also function as independent apartments. They are rented in pairs, but: each has its own front door and rental contract. The houses are also suitable for tenants who are disabled. This offers the informal caregiver and informal care recipient the opportunity to design living and informal care according to their own wishes and size.

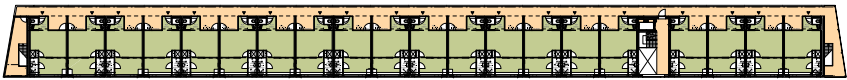


Curaçaostraat Groningen

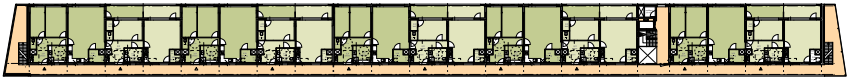


year: 2014
architects: KAW Architecten
city: Groningen
type: Kangoeroewoning
amount: 42 dwellings
plot size: 1425 m2
total floor area: 5700 m2

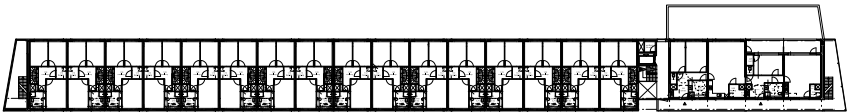
Each kangaroo home consists of two apartments, one for the caregiver and one for the informal care recipient. These two are also called the main house and pouch house. The apartments, a large apartment of 109 m2 and a smaller apartment of 86m2, are connected by a soundproof connecting door. This offers residents the opportunity to fill in informal care to their liking and to measure. Informal caregiver and informal care recipient do not have to be family. Each apartment has one own house number, own front door and own lease. Residents are therefore not cut on any benefits (based on the cost-sharing standard).



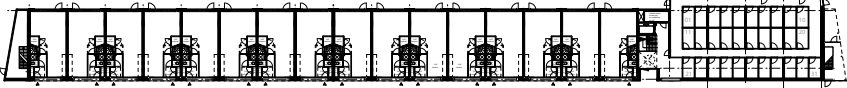
laag 4
20 x appartementen type 2



laag 2 en 3
2x 5 appartementen type 3 en 4



laag 1
16 x eengezinswoning
1 x appartement type 3 en 4



laag 0
16 x eengezinswoning
bergingen

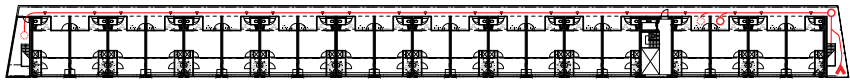


Private-public

On the west side, the building borders the slope of the Groningen Ring Road, on the east side it connects to the quiet, green inner area of the block. In order to make optimal use of the residential quality of the inner area, the outdoor areas of all homes are oriented to this. The informal care apartments are accessed via galleries at the front of the building, for the starter apartments the gallery is combined with the outdoor areas at the rear for spatial experience. Benches incorporated into the facade provide seating for the residents of the family homes in the afternoon sun.

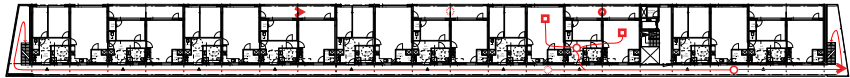
Conclusion

In terms of collectivity the top two floors are accessible through galleries that also function as meeting place. Especially on the top floor where little niches are connected to the gallery and thereby encourage neighbors to socially interact with each other. A disadvantage could be that social contact is almost imposed, although it is not always wanted. Imagine someone living somewhere in the middle of the block, passing by all of the neighbors and feeling obliged to talk to them.

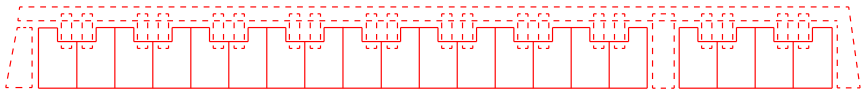


informal short meeting (0-10 min)
informal long meeting (10-30 min)
negative
sight
formal short meeting (0-10 min)
formal long meeting (10-30 min)

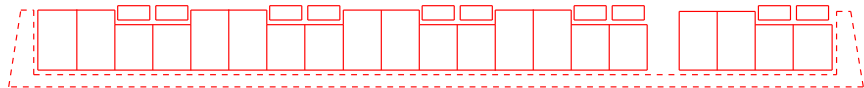
laag 4
20 x appartementen type 2



laag 2 en 3
2x 5 appartementen type 3 en 4



laag 4
20 x appartementen type 2

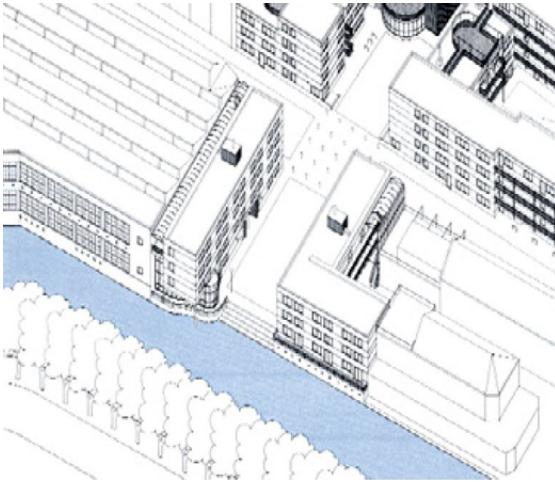


privé
collectief
publiek
openbaar

laag 2 en 3
2x 5 appartementen type 3 en 4



Functions and typologies

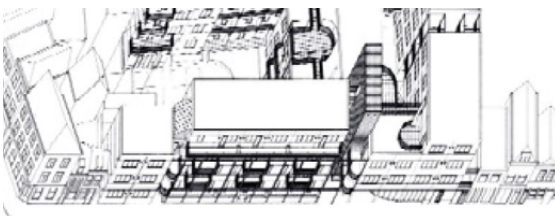


Situatie

- A Langegracht
- B Derde Binnenvestgracht
- C Maresingel
- D studentenwoningen
- E ouderenwoningen

Begane grond

- 1 trappenhuis
- 2 winkel
- 3 onderdoorgang
- 4 gemeenschappelijke binnentuin
- 5 fietsenberging
- 6 wasserette



Zamenhofstraat

year: 1984–1987

architects: Verheyen, Heuer & de Haan

city: Leiden

type: housing for elderly and students

amount: 86 dwellings

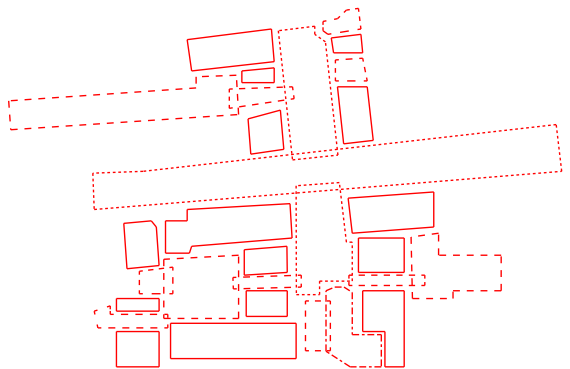


On one side of the Derde Binnenvestgracht are two blocks with 33 student residences, on the other side two blocks with 53 housing residences for the elderly. Together, the blocks enclose an elongated square. The blocks with homes for the elderly both enclose a communal courtyard, which are connected to the central square through underpasses.

From the square you reach the Langegracht by going through an alley. The south facades of both blocks are situated around this alley and make this a coherent space. A wide central section of four layers jumps back 1.50 meters in relation to the narrower sections of three layers on either side.

Functions

The houses on the ground floor are accessed from the courtyard, which is on the first floor through galleries at the rear. These are accessible via staircase and elevator in a high glass disk in the alley that is lighted by it at night. There is a shop on the ground floor of one of the blocks for the elderly, and the student housing has a laundryspace and bicycle storage as communal facilities.



- privé
- - - - collectief
- publiek
- . - . openbaar



Private-public

The courtyards have already been partially fenced due to disturbance, but there are still many underpasses that give opportunity to feelings of insecurity. The assignment was to close off access to both complexes and thus to bring the courtyards into the collective domain of the residents only. Thereby the barrier between the two buildings (and groups) became very physical and present in the streetscape.

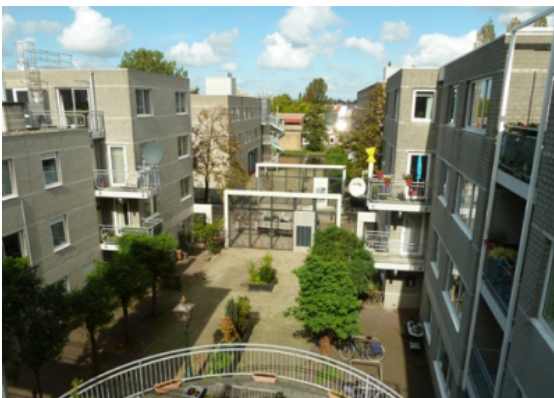
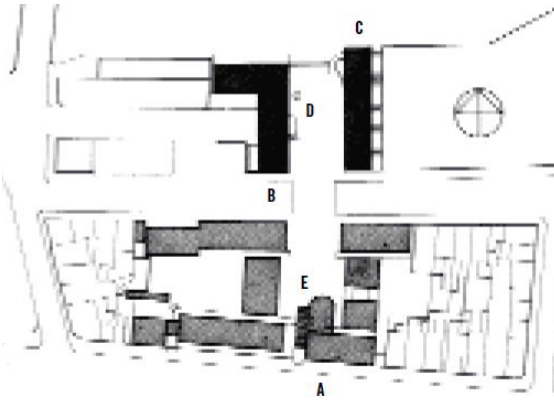
Conclusion

During my visit to Zamenhofstraat I spoke to a former resident of the elderly housing. What emerged from this conversation was that separating the group of students and the elderly was initially experienced as pleasant. The older residents were especially skeptical about the contrasting lifestyle of students in the early days.

However, it turned out that students did have contact with the elderly. This could be from a short chat in the shared courtyard to helping with groceries. The former resident also indicated that separating the two groups with an intersecting street between the two complexes created a certain barrier.

In this example, these two groups are therefore very clearly separated. This separation makes the sense of solidarity between the two groups less, and therefore internal connections are less likely to be created. In order to stimulate these internal connections, you will have to look for a more intensive way of living together between these two contrasting groups.

Furthermore from the public/private/collective scheme we can see that the elderly complex has multiple collective courtyards. These courtyards can be reached by small passageways, which give them a more intimate character. Also the courtyards are divided into smaller squares, giving them a certain layeredness and human scale.



Berkenstede Diemen



year: 2006

architects: Dick van Gameren Architecten

city: Amsterdam

type: Residential care centre for elderly

amount: 141 dwellings



The building offers space to different target groups, which are arranged per tower.

In the first block (the "bomentoren") there are 85 homes for intramural care of approx 50 m². Block two (the "fruitoren") consists of 46 independent selfservice flats with an area ranging from 60 to 80 m².

In the third block (the 'bloementoren') there are spaces for temporary stay and rehabilitation. Block Four (the "Faunators") contains ten group homes for people with dementia.

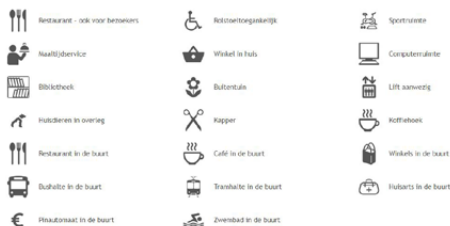
Functions

The building consists of four residential towers that are connected by a covered street. Different facilities are connected to this street, such as a restaurant, a grand café, a hairdresser, a physiotherapist, a relaxation room and paramedical facilities.

These facilities are not only intended for residents, but should have a district function, and not just for elderly people from the neighborhood. This should also contribute to a longer life of the complex.

Building and landscape are designed as a whole.

Between the four towers they placed gardens, patios, terraces and slopes like a hidden landscape.

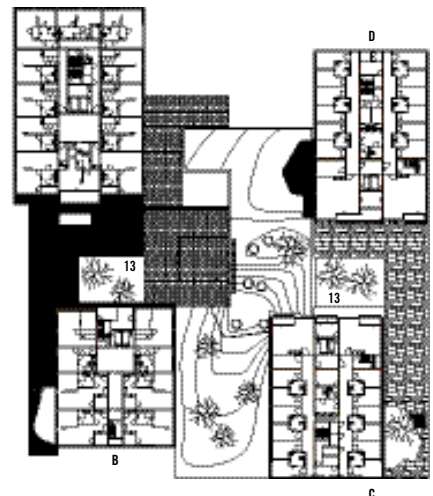
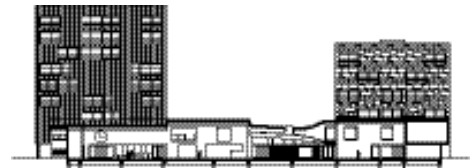
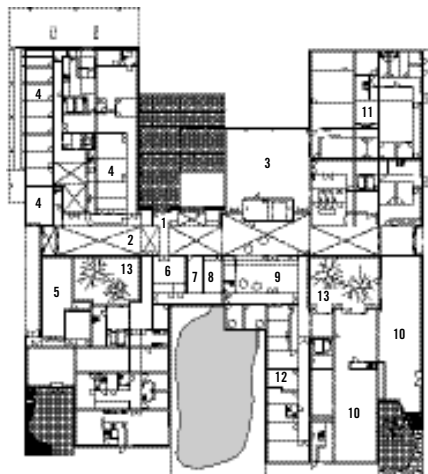


Doorsnede

Begane grond, tweede verdieping

- 1 hoofdentree
- 2 centrale gang
- 3 recreatieruimte
- 4 kantoor
- 5 grand café
- 6 winkel
- 7 wasserij
- 8 kapper
- 9 sportruimte
- 10 verhuurbare ruimte
- 11 techniek
- 12 medisch centrum
- 13 patio

- A ouderenwoningen
- B gehandicapten- en reguliere woningen
- C revalidatie
- D psychogeriatric





Private-public

To be able to cope with changes in healthcare and keeping the building up-to-date for a longer period the designer chose for a certain flexibility in terms of space size.

Furthermore the ground floor has been made as public as possible with various facilities, the first floor is a service corridor that connects all nursing and residential departments.

The building is transparent on the bottom layers, so that the usual hermetic character of a nursing home is not present.

Conclusion

Daycare activities

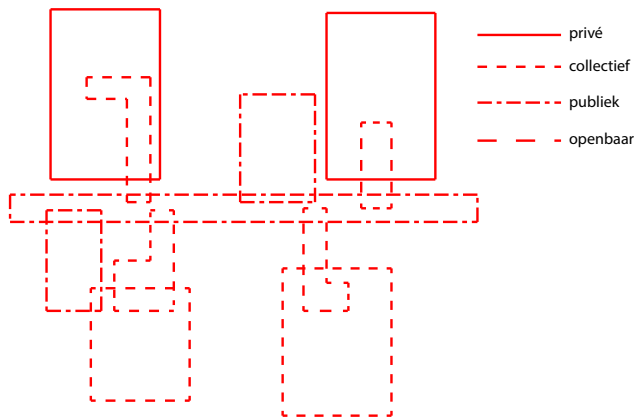
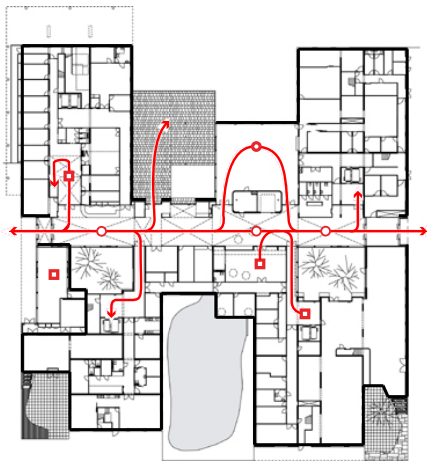
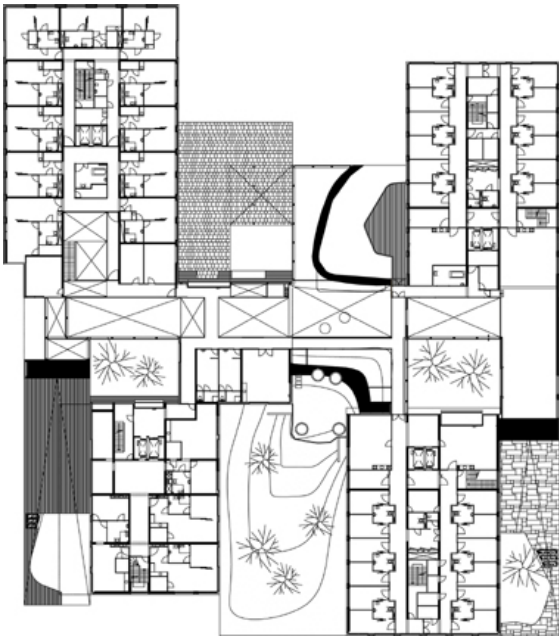
Day activities Berkenstede has various activities such as seated exercise, yoga, bingo, flower arranging, crafts, a singing club, a cooking club, a men's box, internet cafe, computer lesson, billiards, games, memory training, walking, going to the market in good weather and also making trips are part of their range of activities. You can choose from multiple activities per day to participate.

These activities as well as the public functions in the plinth could also be important in the design of my complex for elderly and students.

Public street (plinth)

The public functions on the street will make the plinth a very lively place, not just for the building but also on neighborhood level.

Because this street is public, the designers had to make some sort of gradual transition between public and the collective functions that are a bit more private. For this reason you'll see a (collective) transition zone between each collective and private function of the building.

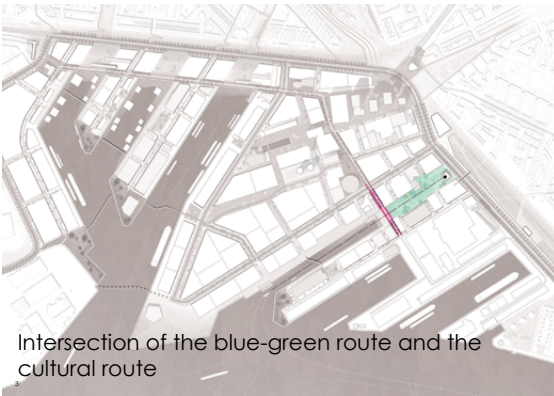


3. URBAN MASTERPLAN

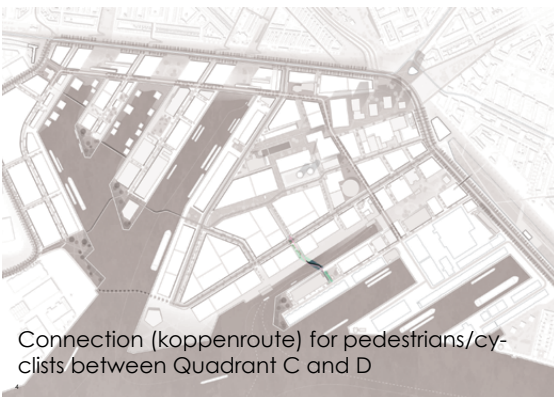
KEILEKWARTIER



Keileweg as a part of the makersstreet and cultural route



Intersection of the blue-green route and the cultural route



Connection (koppenroute) for pedestrians/cyclists between Quadrant C and D

M4H & Keilekwartier

The project site called Keilekwartier is located within the M4H area. It is characterized by a mix of solitary industrial buildings and halls, situated around a large open collective space. In the near future, new work-and-live typologies will be added that foresee space for craft and creative manufacturing companies and high quality homes. Affordability of workplaces and collectivity as a basis for circularity are two important starting points for these new developments. The challenge is to densify the site with circular building blocks where working and living meet; building blocks which are inextricably linked to the 'flows' and values present on the ground and embody the idea of a circular city, offering affordable spaces to work and to attract and retain the (starting) creative and cultural entrepreneurs.

The City of Rotterdam is looking for opportunities in the combination of accommodating its growth, shaping the transition from traditional industry to the next economy and creating a more sustainable and therefore circular city. Building on a long tradition of architectural experimentation and the development of the urban metabolism of the city and its port, it now calls on citizens to collectively contribute to smart circular solutions for innovative work and living environments, while at the same time contributing to the renewal of the port area.

Our projectsite specifically houses several existing companies. The park on the north-east side is surrounded by multiple creative companies who are already part of the making industry. This is also the place where the Keilepand and Werf, Atelier Van Lieshout and Studio Roosengaarde are situated. They all house several artists and designers.

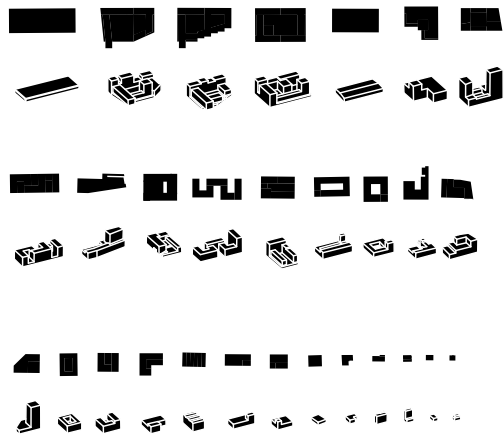
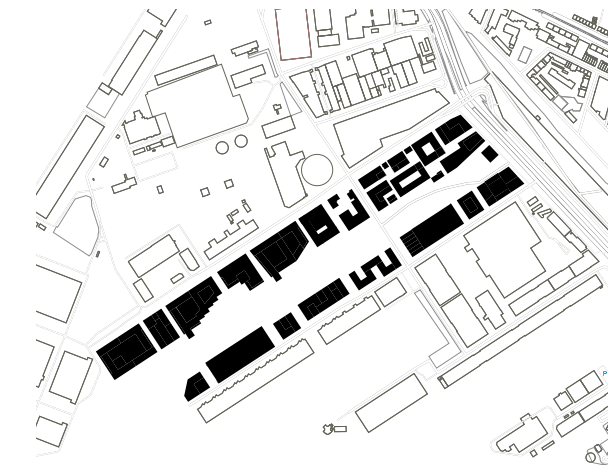
Furthermore the plan for the Keilekwartier is marked by three main urban structures. The makersstreet is an axis going through the total area of the plan and the cultural route is intersecting this axis. These are the main routes for industrial and residential traffic.

Then we have the blue-green route which intersects with the cultural route. The blue-green structure is a combination of park and harbour branch.

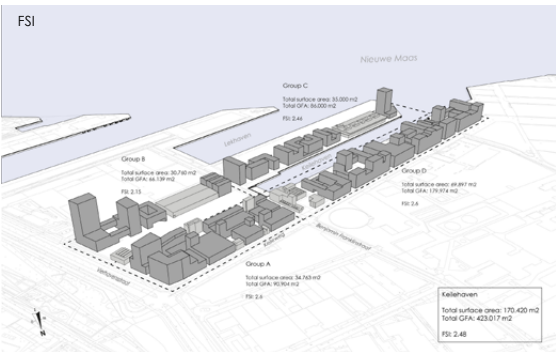
The third structure is the connection of Quadrant C and D by a pedestrian/cycle route which is part of the koppenroute along the Maas.

As mentioned earlier the Keilekwartier has been split up into four different quadrants, taking the cultural route and the blue-green structure into account. Therefore each group could make a more detailed sub plan for their own quadrant, where our group worked on the north-west plot, named Quadrant D.

PLAN FOR THE KEILEKWARTIER



This map shows the morphology of the plan area. The shapes and sizes of all buildings. Mainly it can be seen that quadrant A, the part most northerly, contains many small building blocks which are woven and connected through smaller streets. This is because the old existing buildings have the same grain size. Quadrant B and C, on Keilestraat, consist of large rectangular building blocks. This maintains the fact that the Katoenveem and Keilepand monuments are also shaped in this way. The longitudinal shaping is therefore continued in the new buildings. On the opposite side in quadrant D the space is larger and wider, making the blocks a bit more squared. Most blocks in this quadrant have a larger "industrial" size. In all of the plans the aim was to have space for small industry or making functions which could be situated in for example the plinth.



The overall Floor Space Index (FSI) that we had to aim for as a total group for the overall plan was 2,5. This resulted in high density buildings where in most cases space for making is reserved in the plinth.

Furthermore the Keilewerf was kept carfree where possible. This means that most of the times the inner streets are pedestrian/cyclists only. To resolve the parking need several mobility hubs are incorporated in the core of the plan. Residents and employees can park their car here and then walk to work. The image shows a lot of activity in the center of the area. This area has the potential to become a small center. By creating a square at the back for both residents and workers, social mixing is created between the different users of the area. This place of interaction is stimulated by the cyclist route along the waterfront and the intersecting bridge.



URBAN PLAN - QUADRANT D

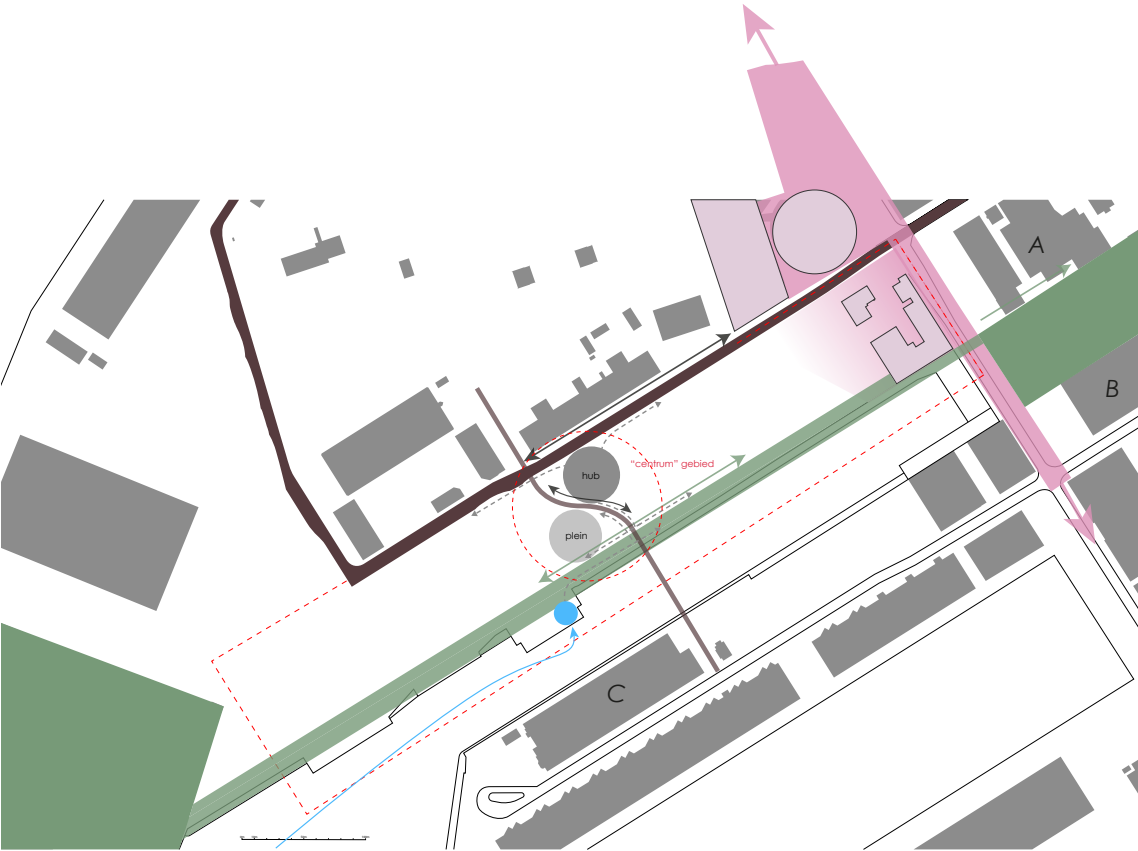
- EXISTING BUILDING
- ROUTES
 - CULTURE
 - MAKERSSTRAAT
 - GREEN
- MOBILITY
 - BRIDGE
 - HUB
 - WATERTAXI STOP

- CENTER
- SQUARE

The image shows a lot of activity in the center of the area. This area has the potential to become a small center. By creating a square at the back for both residents and workers, social mixing is created between the different users of the area. Height could be used here to accentuate the center.



COBERCOKKWARTIER, ARNHEM



STADSWERF, OOSTENBURG



HAVENKWARTIER, BREDA

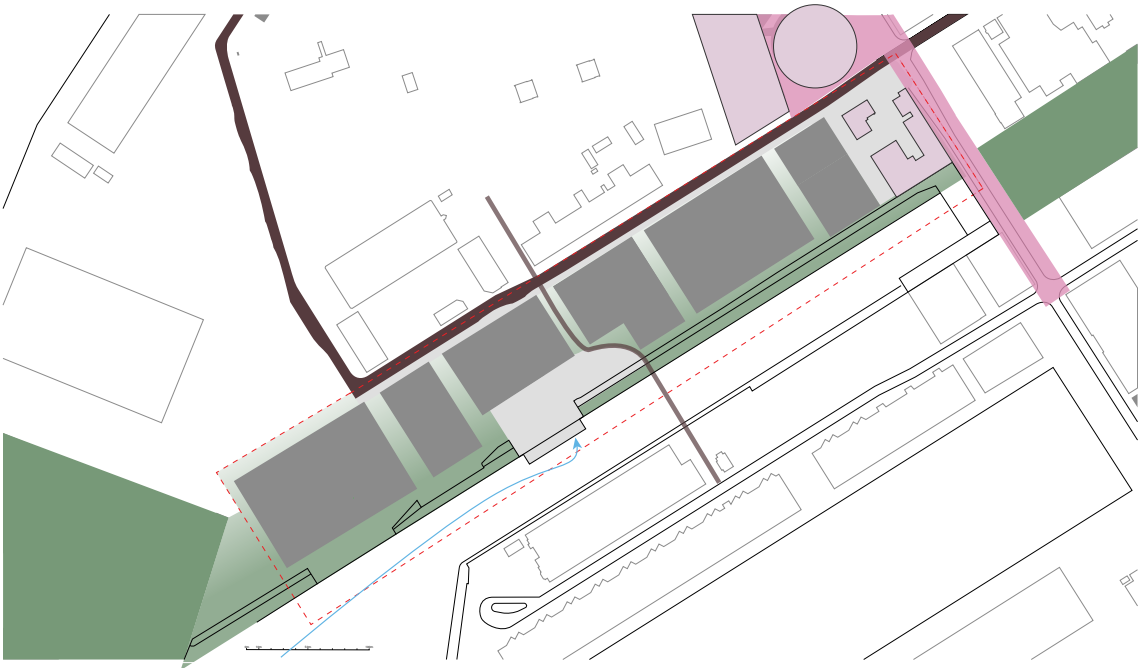
URBAN PLAN - QUADRANT D

● DECK

In the area we place 6 building blocks. These blocks have a deck of at least 2 floors at the bottom with a straight industrial plinth. The buildings above can be freer. The decks provide space for large workshops with possibly large machines. Daylight can enter through skylights.



ANTONI, DELFT



HALLO NPD, OVERVECHT



HAVENKWARTIER, KATENDRECHT

URBAN PLAN - QUADRANT D

- DECK
- PARKING
- **SHAPE**
- CUT
- **PASSAGE**

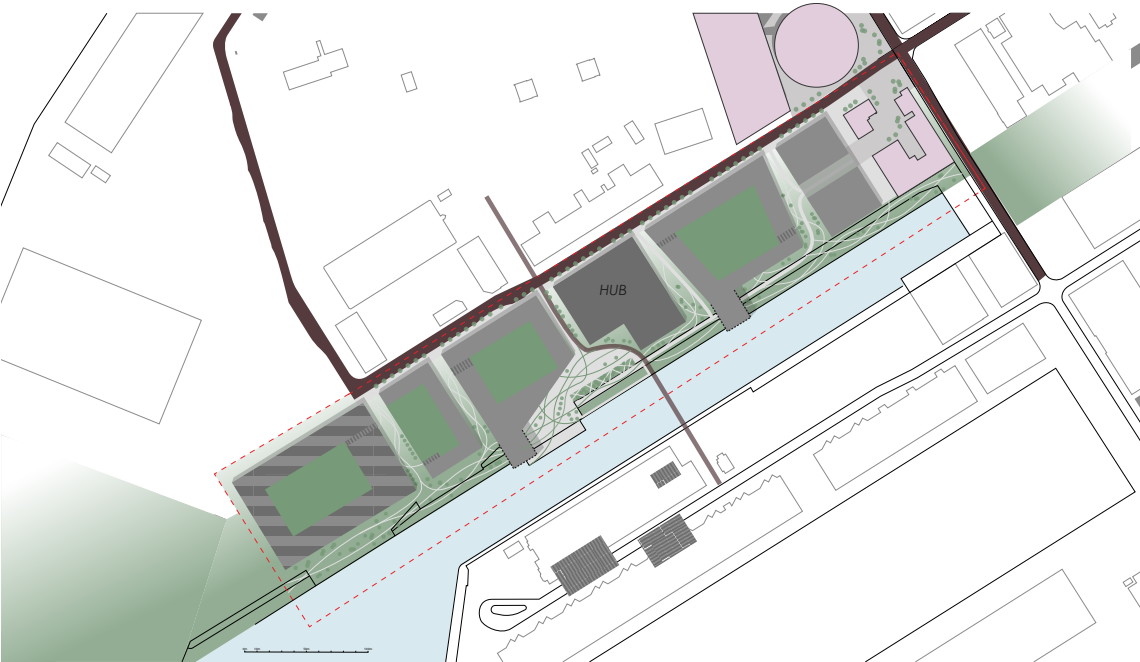
We make a passage through the building on the right. This is because it fits in better with the culture route and the existing art building. This principle is also more in line with the shapes devised in quadrant A. In this way we try to connect this area. Various public functions can be included in this passage.

- **INNER SPACE**
- **COLLECTIVE**

Raised open spaces are created between the buildings. These spaces are collective of the residents of the blocks but are publicly accessible with stairs inbetween the buildings



REBEL, AMSTERDAM



NEW WEST, AMSTERDAM



ANTONI, DELFT

URBAN PLAN - GUIDELINES

D1

D2

D3

D4

D5

D6

D1	D2	D3	D4	D5	D6
Dimensions: 108 m x 72 m Minimum GFA: 42000 m²	Dimensions: 47 m x 72 m Minimum GFA: 16000 m²	Dimensions: 115 m x 72 m Minimum GFA: 36000 m²	Dimensions: 72 m x 72 m Minimum GFA: 25000 m²	Dimensions: 115 m x 72 m Minimum GFA: 38000 m²	Dimensions: 58 m x 72 m Minimum GFA: 14000 m²
Parking: 6000 m²	Parking: N/A	Parking: 5500 m²	Parking: 18000 m²	Parking: 5500 m²	Parking: N/A

On the east side there is a section cut off the footprint of the plot. The depth a is 28 m. The minimum surface area removed from the footprint this way is 1000 m². The shape of this cut is up to the architect.

On the west side of the block is an element to visually divide the public space on the waterside into two areas.

On the west side there is a section cut off the footprint of the plot. The depth a is 28 m. The width b is 36 m, so that the public space created connects to the bridge. The minimum surface area removed from the footprint this way is 600 m². The shape of this cut is up to the architect.

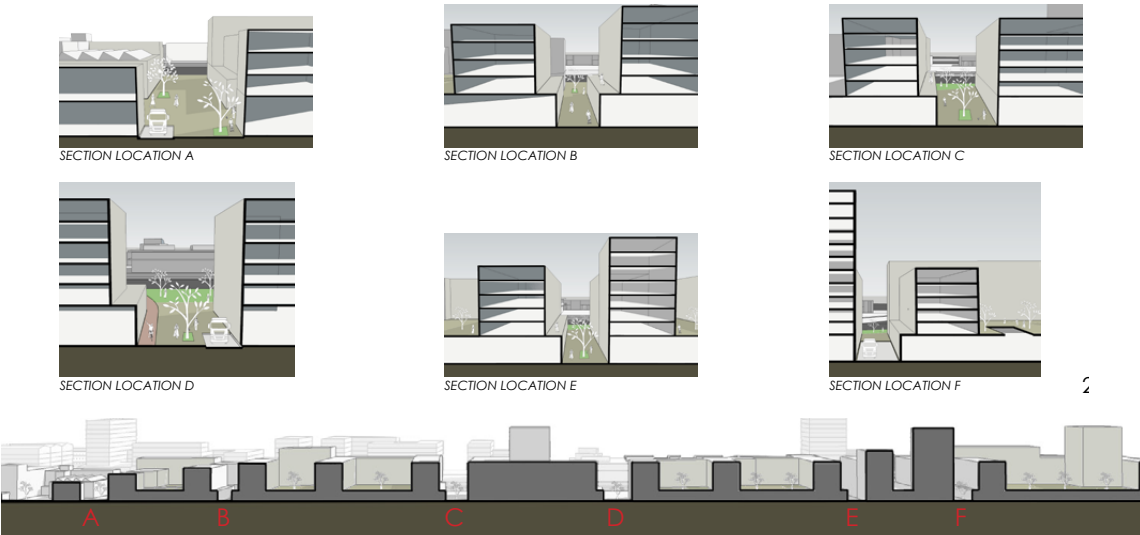
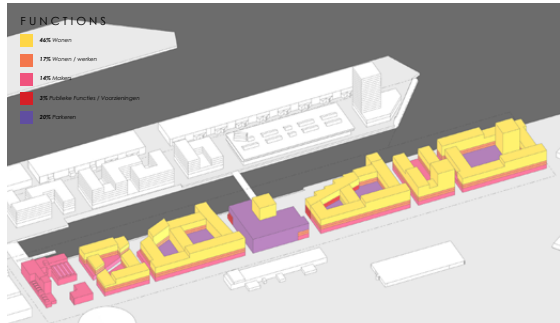
On the west side there is a section cut off the footprint of the plot over the depth of the plot. This is minimal at the side of the mokersstraat and widens towards the water. The minimum surface area removed from the footprint this way is 250 m². The shape of this cut is up to the architect.

On the east side there is a section cut off the footprint of the plot. The minimum surface area removed from the footprint this way is 450 m². The shape of this cut is up to the architect.

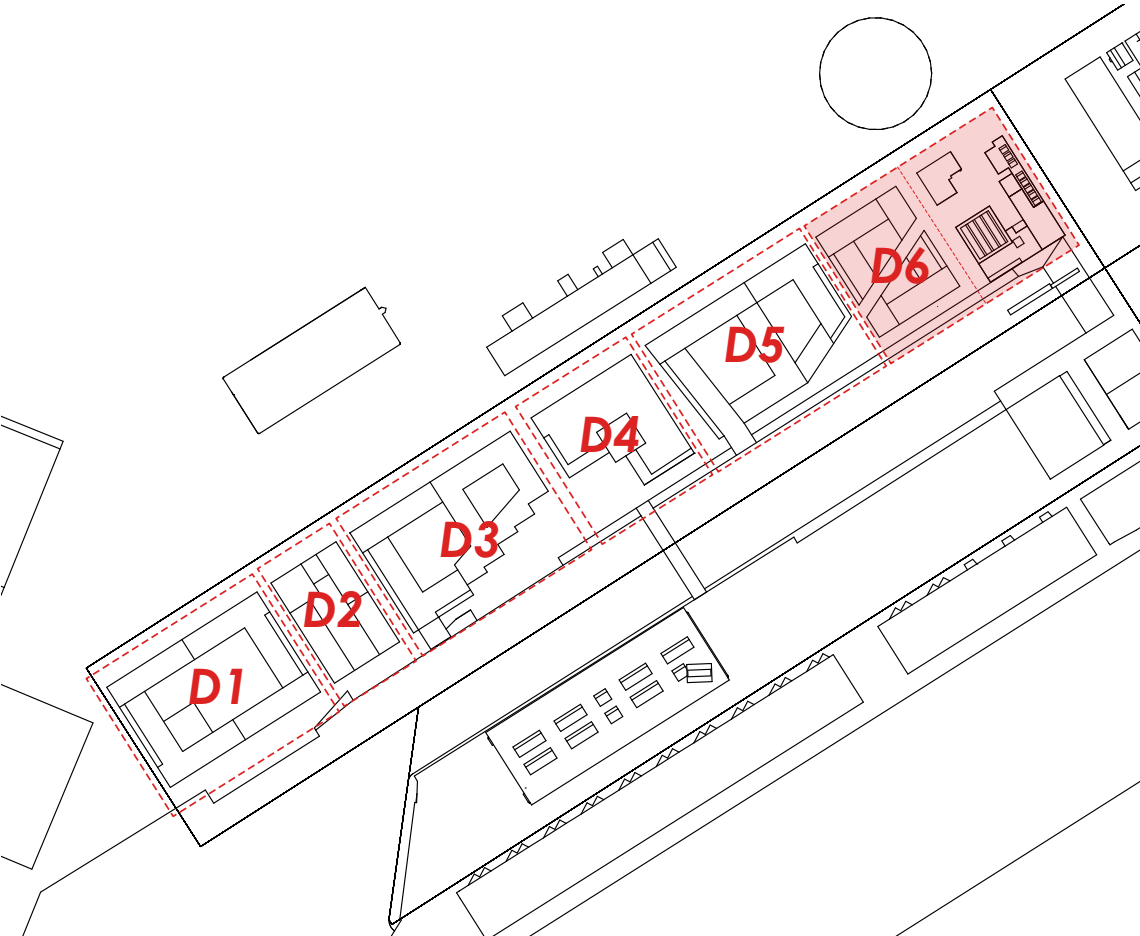
On the west side of the block is an element to visually divide the public space on the waterside into two areas.

General Rules

- The ground floor has a minimum height of 6 meters with the possibility of a mezzanine floor.
- The plinth floors fill out the building line. Their total height is 6-12 meters.
- Above the plinth floors the maximum height is 40 meters. The building mass no longer has to follow the building line.

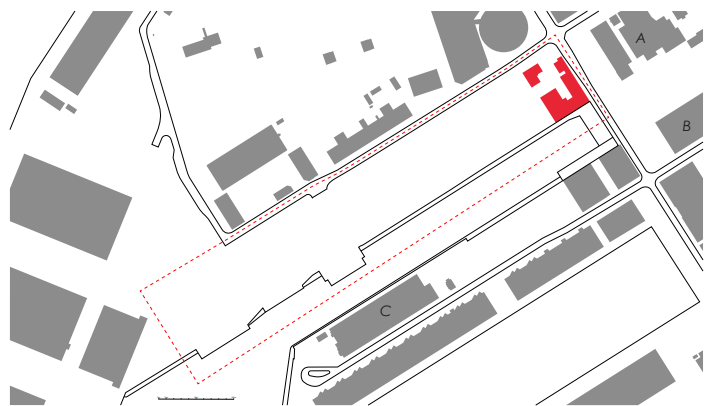


SITE



● EXISTING BUILDING

The existing building on the corner of the quadrant will remain. The building has a characteristic facade and an industrial look which fit the surroundings. The building is used by Foundation Kunst&Complex. This foundation was founded in 1981 and moved here in 1987. The building consists of 26 workshops for several artists.



STICHTING KUNST & COMPLEX



4. RESEARCH SEMINAR

RELATION SENNETT

As mentioned in the introduction collectivity plays a huge role in today's striving for an inclusive city. The inclusive (open) city is also part of a topic that we addressed from Richard Sennett's book: *Building and Dwelling*. Sennett mentions the five open forms of the city:

1. The centre is synchronous - two central spaces
2. Punctuated - monumental and mundane markers
3. Porous - the membrane
4. Incomplete - the shell and the type form
5. Multiple - seed planning

For my design in particular two of these five open forms could be of use to explain how the relative small influence of one particular building concept relates to a larger societal issue.

Firstly, we look at the fifth form: seed planning.

According to Sennett the city should be able to change with the help of other people and their ideas of what a city should look like. One can plan a certain type of element (a library, a square) at a certain location, but should not set a specific shape/design for it. Sennett calls this form of planning 'seed-planning', referring to the idea that a farmer understands that every specific climate (soil, water, wind etc) can turn seeds of the same type into plants of different qualities. "The essence of seed-planning is minimum specification of how form relates to function; this leaves room for maximum variation and innovation." (pp. 237)

This could relate to how a specific way of living with mixed generations plays a role in a larger ambition from the government to stimulate a self-caring society. The elderly complex is not just a building that houses elderly, but it also includes all kinds of public facilities. These facilities have an impact on the livelihood of the building as well as the whole surrounding neighborhood.

Furthermore the concept of housing elderly could be seen as a basic principle. However mixing this group with students is partly an outcome of the specific needs from Dutch society but also from the specific context of Rotterdam and the presence of students on the RDM Campus.

This is similar to the example of Medellín, where the libraries work like seeds that have different effects in different places under different conditions. For the elderly, the building concept also has many variants, influenced by the specific location and the needs of the residents.

Lastly the way in which the building is situated with its terraces oriented on the livelihood of the foodmarket within the factory building is also an outcome of site specific circumstances.

Secondly, the centre is synchronous: two central spaces

This chapter of Sennett's book described the way in which activities in a city's centre can be organised, either sequential or synchronous.

Where the danger of the Pnyx lies with its "[...] emotional domination [...]", the danger of the ancient Agora lies with its "[...] intellectual fragmentation [...]" (pp. 208) The Agora hosted a multitude of different activities at any given time. People would move through the Agora, only picking up parts of conversations.

The many impressions that were thrown at people here would numb the mind in a different way.

Sennett is curious whether it is possible to design a space with synchronous programming, like the Agora, without this negative aspect. To answer his own question, Sennett talks of a failed design on which he once worked. Three aspects that Sennett wanted to tackle in this design were:

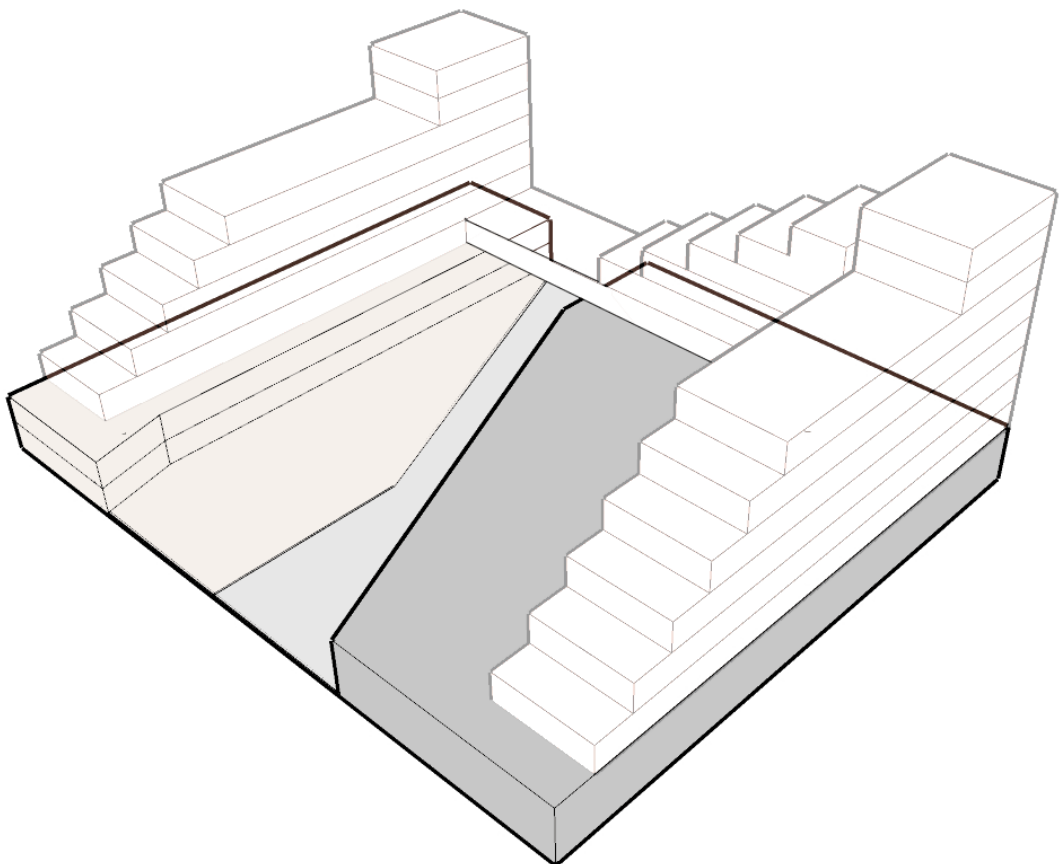
1. How many activities need to be mixed in a synchronous space? (answer=maximum of four)
 2. What kind of activities need to take place? (answer=distinctly different ones)
 3. That a space needs to issue invitations for mixing activities, instead of imposing the mixing of activities.
- The reason his design failed, was that it issued too many invitations, and would therefore be too disorienting.

I can use these principles in my design for the plinth of the building. As mentioned earlier the plinth should house public functions for the elderly within the building as well as for the surrounding neighborhood. However these public functions should be organised in a way that they stimulate social interaction and also issue invitations for mixing activities. Within this synchronous space it would be best to hold on to a maximum of four distinctly different activities.

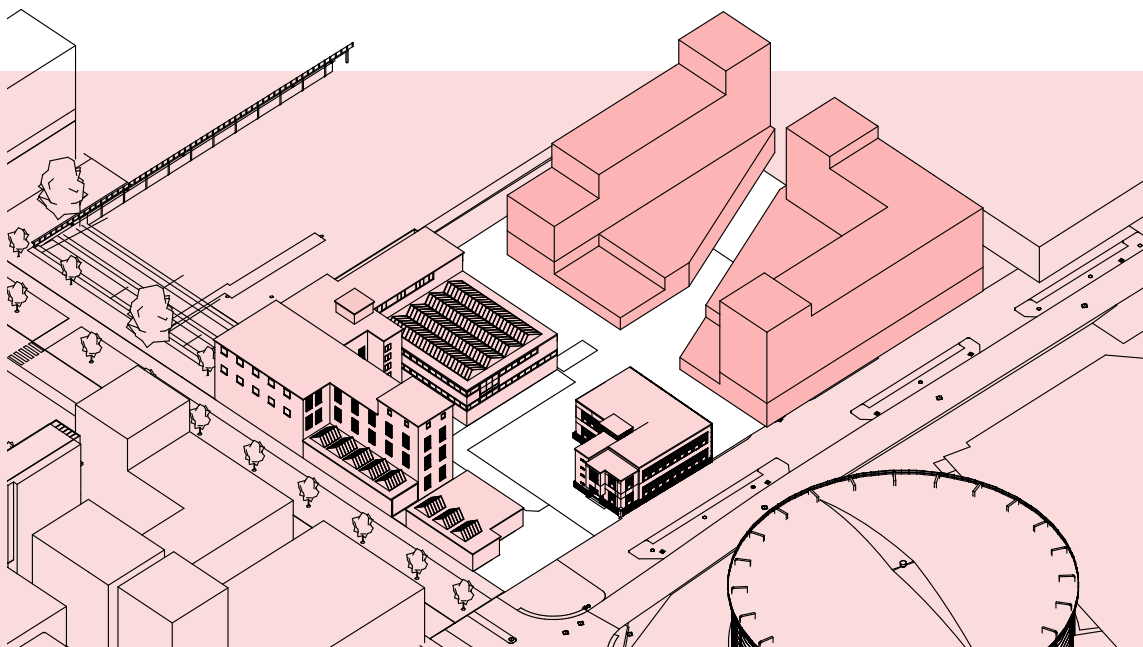
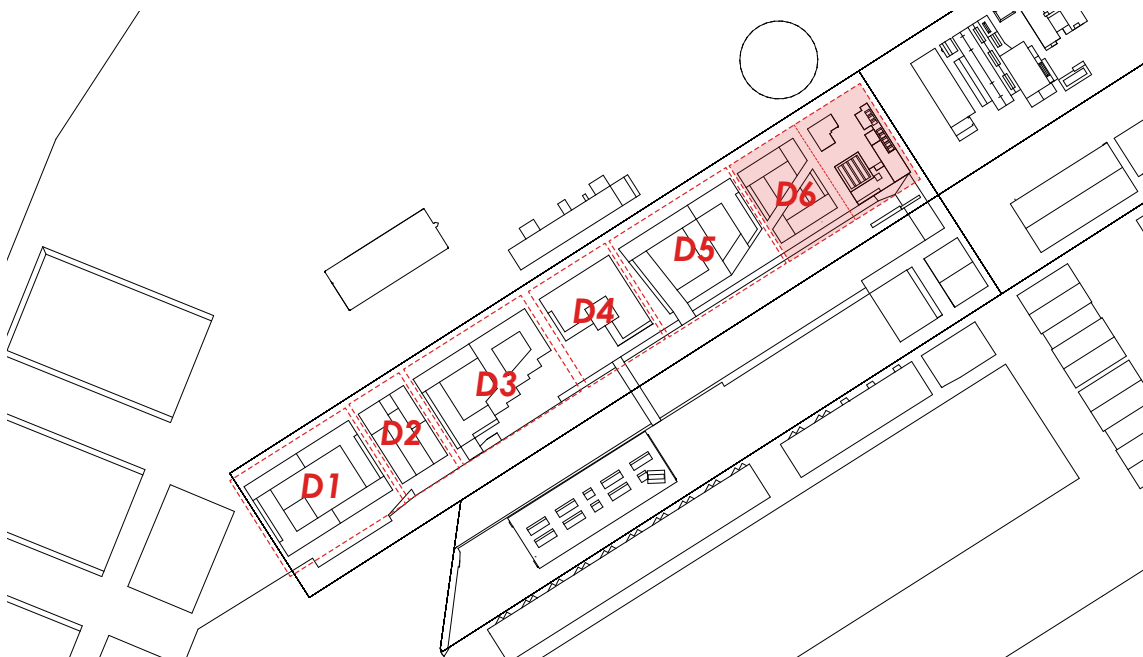
CONCEPT DESIGN - SOLIDS & CAVITIES

In his book *Experiencing Architecture* Rasmussen mentions the Police Headquarters in Copenhagen. Here the architect has designed cavities. The courtyards seem to be hollowed out of the enormous block. Furthermore all construction is carefully hidden; it is impossible to form any idea of how the building was made. What you experience in this building is a rich composition of regular cavities: circular and rectangular courts, cylindrical stairways, round and square rooms with absolutely smooth walls. Nyrop's City Hall is embellished with semi-circular bays which push out from the facade.

The many cavities of Police Headquarters, on the other hand, are enriched with semi-circular niches pushing back into the solid masses of the walls. In conclusion these terms and ways of sculpturing the design could be used for the plinth of my own building. The pushing back of niches or pushing out of bays are two different ways to give the rather large and overwhelming plinth a more human scaled character, by making little exceptions in the rhythm of the long façade.



BUILDING BLOCK - QUADRANT D

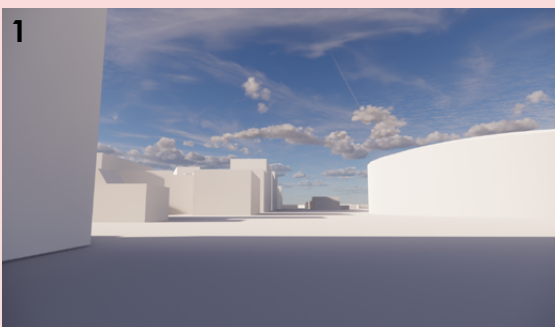


The chosen plot is D6. I chose this plot because it has the ability to become the main entrance for quadrant D and also functions as a gateway for the connection with the cultural route. Also the relation between the old and the new in the further development of the architectural design is something that interests me. From my own perspective architecture and the perception of its authenticity is related to the fact that something is built with the materials and the relating techniques of its own time. Therefore it is very interesting how the new building complex is going to react on the existing (authentic) factory building. Furthermore the former factory building could be a place that has an authentic character/ambiance for a bazaar/foodmarket.

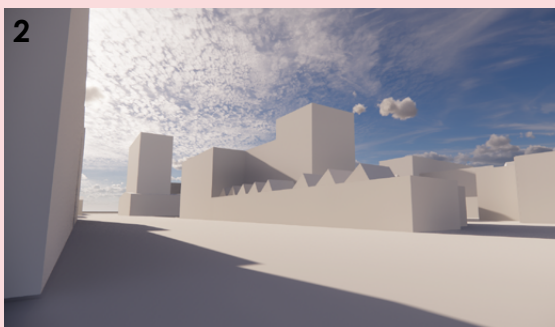
(LAND)MARKING ELEMENTS



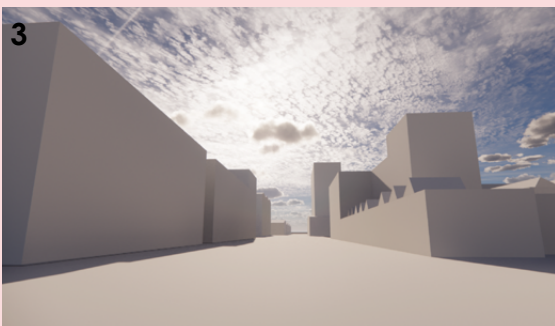
Rhythm, solids and cavities (ritme, uitholling en uitsteking). According to Rasmussen instead of letting your imagination work with structural forms, with the solids of a building, the architect can work with the empty space, the cavity between the solids, and consider the forming of that space as the real meaning of architecture. With this being said we can look at the plinth of my building in terms of solids and cavities. Let's suppose the plinth is an enormous solid rock and the question arises to hollow out parts inside it to divide it into different sections of open and closed areas. Then it is a task for the architect to form space by eliminating material, in this case by removing some of the rock. The material itself would not be given form though some of it would be left standing after most had been taken away. Therefore the stone mass of the plinth can be seen as the first reality, the second the cavities within the mass.



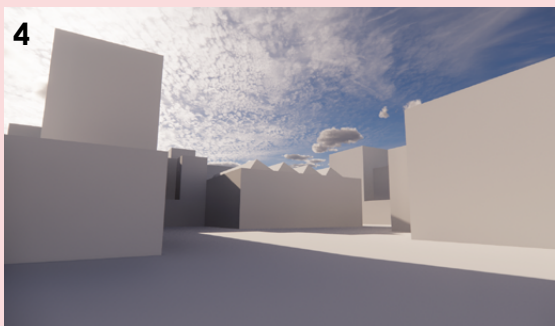
When you walk into the Keileweg from the Vierhavenstraat, you first notice the static facades of Quadrant A. Then the eye is guided to a striking point of attention: The Ferro Dome. The present roundabout is framed by the Dome and the adjacent characteristic building that currently houses "kunst en complex".



When continuing the route, you'll turn around the corner from the end of Quadrant A. From here you have a full view on the former factory building. This building could be seen as a little urban roof landscape that increases in height as the view drifts away. On the right we can see the opening in the "splintered" buildings of the ensemble.

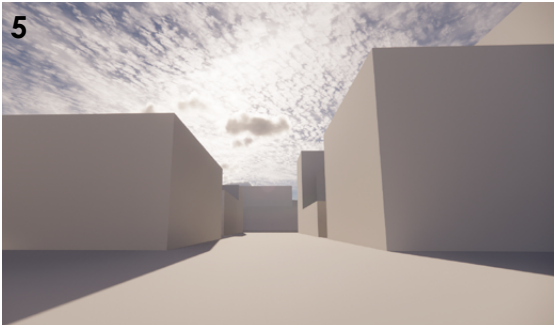


When continuing on the route you can clearly see that the opposite buildings are practically the same height as the maximum height of the former factory building. Again you'll notice here that the varying height of the factory's roof landscape contrasts strongly with the straight facade line of the buildings of Quadrant A.

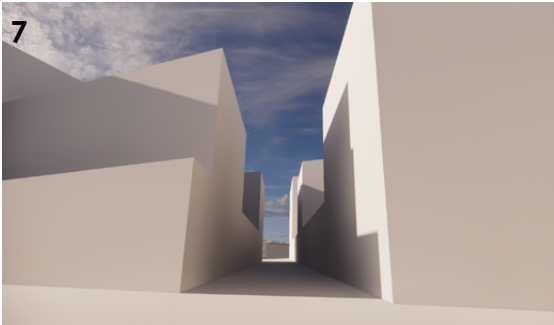


Then one arrives at the building, where, as it were, your eye is drawn to a courtyard enclosed by varying building heights. The courtyard arouses curiosity, because the entire square is not immediately visible from the street.

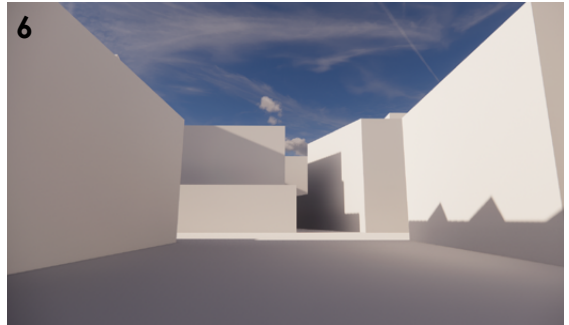
(LAND)MARKING ELEMENTS



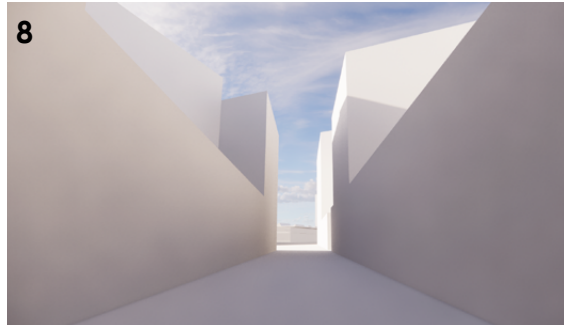
When one walks towards the building from the Benjamin Franklin Street, you walk along the bend street of the Ferro Dome and then you'll arrive at the space between the existing factory building and the new volume. The space between them is approximately 15 meters wide and the surrounding buildingheight is about the same size. On the horizon one looks over the water with buildings of Quadrant C on the other side.



This public / collective route has a more closed character compared to the adjacent passage. Because the space is relatively small in relation to the building height, the view is drawn to the end of the passage.



When entering the alley, you can walk to the left towards the existing factory building. When you turn around, you'll have a view on the new building volume. This volume has a public / collective route that connects to the rest of Quadrant D.



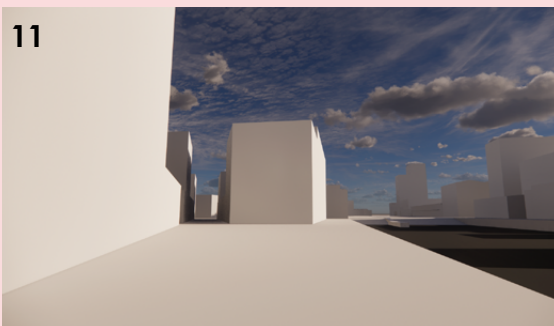
When entering the passage you enter the "inner world" of the new building volume. This inner world is in line with the character of the narrow streets of Quadrant A. The building makes a kind of gradual transition from Quadrant A to D, because the buildings and public space are more intricate (fijnmazig) than the rest of Quadrant D.



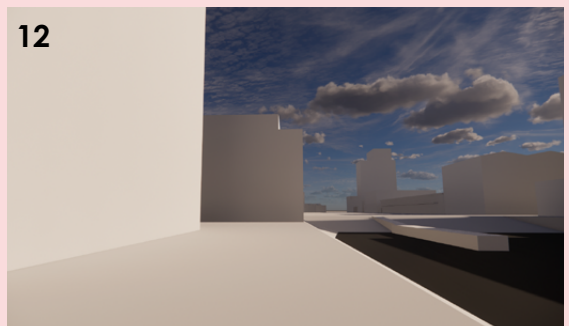
When one walks along the public / collective passage, the view is drawn to the opposite Quadrant C, because the buildings open up like a funnel (trechtvorm) towards the water.



Then you walk around the corner and the ever-widening view is emphasized even more by the open space above the water, overlooking the waving building height of quadrant C.

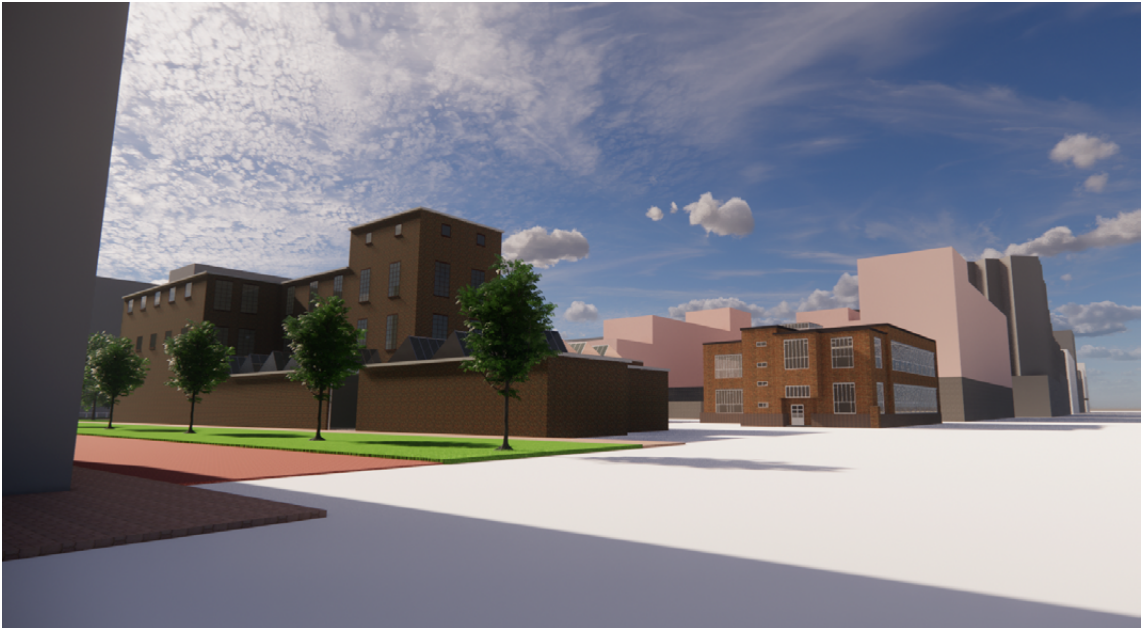


If one approaches the building from the other side (southwest), you'll see the front side (kopse kant) of the building. This is split in two by a route along the water and an internal route (passage) through the building. The open / gradual relationship with the water on the right side is a quality that can be included in the design.

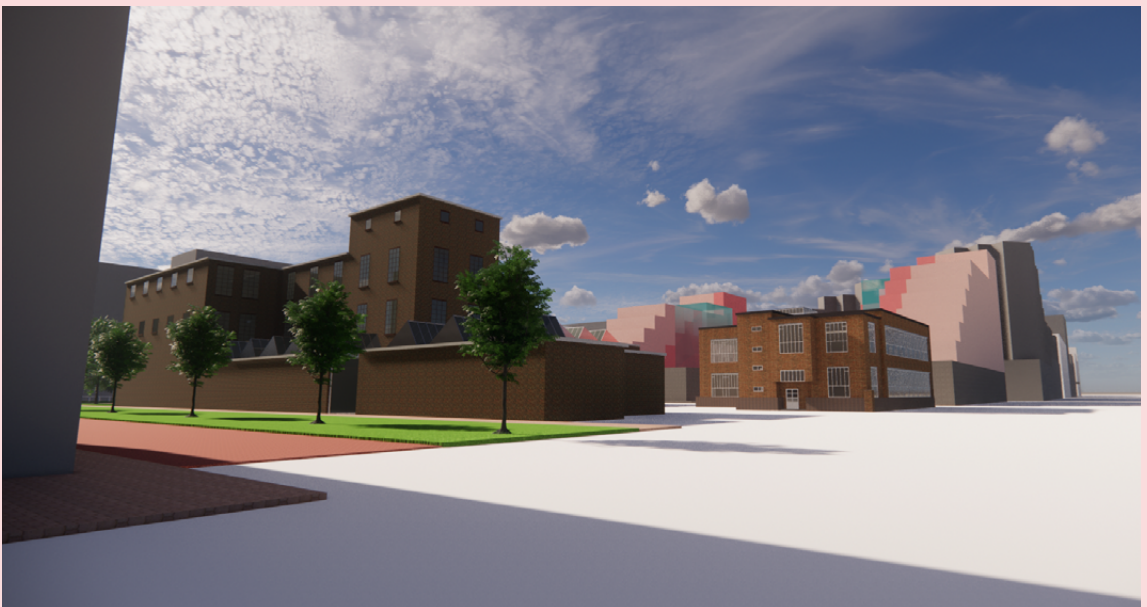


If you then follow the route along the water, you'll see the wall of the existing factory building. From this perspective, a possible contrast between "new" and "old" could play a role in the design. The contrast between these two, but also between the other buildings from quadrant D, makes people more curious of what is behind the corner.

DESIGNING FROM EYE-LEVEL PERSPECTIVE



An important rule or starting point from eye-level perspective is the experience of an urban roof landscape (daklandschapje). This roof landscape from the existing building differs in height/size, and therefore the new building reacts on this principle. The existing (old) makes an announcement for the new.



Then I started designing from a more functional perspective, but always with this principal in mind. The variety in height differences is gradually making place for terraces. These terraces are orientated on the eastern morning sun as well as the existing building which is going to be a bazaar / foodmarket. The collective terraces provide the elderly with a view on the livelihood of the market. Thereby they'll have the feeling of being in the middle of society and this enhances a sense of meaning and being part of this society.

5. DESIGN

CONCEPT DESIGN (FIRST DRAFT)

Design aspects / criteria:

- avoidance of a prison atmosphere
- all vertical access has the character of an intermediate phase between inside and outside
- This means that these vertical spaces should be as transparent as possible
- Weaving and Cross-linking

According to Tanja Blokland (Blokland, 2008) it is useful to make a distinction between different ways of meeting in weaving and cross-linking.

Weaving refers to the everyday shifting and moving towards and among each other. People do not always necessarily want to meet, but they meet each other through necessary displacement. Cross-linking is about going into deeper relationships with others. This often creates more intimate social networks. Both ways of living together are important on their own. However, more value is generally attached to durable ties compared to short contacts.

However, sporadic contacts also play a very important role and meet an everyday social need, even if it does not lead to anything else. For this reason, when developing my residential complex, sporadic opportunities will be taken into account (brief and unplanned) for the layout of the physical spaces. When these contacts are repeated, public familiarity arises, whereby people gain knowledge about others. As a result, the immediate surrounding of the neighborhood or the building will be seen more positively.

Finally, we can say that collective spaces with a specific function can contribute more to connecting older people. These are the spaces where people with a shared interest are given the opportunity to get into a deeper long-term relationship.

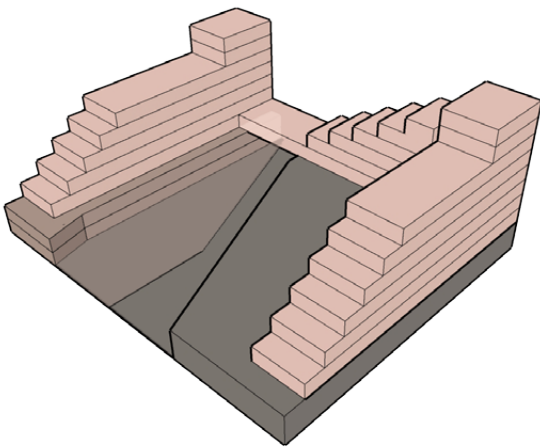
Design hypothesis

How can the two groups of "students" and "elderly" with different / contrasting needs live with and in close proximity of each other, without promoting conflict situations.

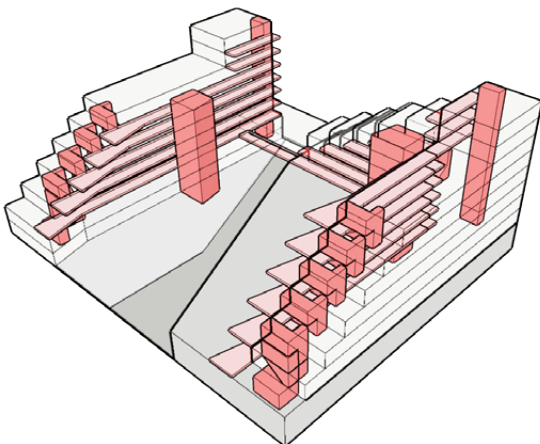
First of all, the students will be subjected to a selection procedure. This examines the willingness / suitability of the student to provide informal care to the elderly. The design should find a good balance between the number of students and the elderly. (show what a good ratio is).

As a rule, the housing needs of the elderly must come first, because they belong to the more permanent residents of the complex, while the students have a more temporary character.

In my view, it is important to make the homes suitable for both students and the elderly to make the rental of the homes interchangeable between these two groups.



PLINTH + DWELLINGS

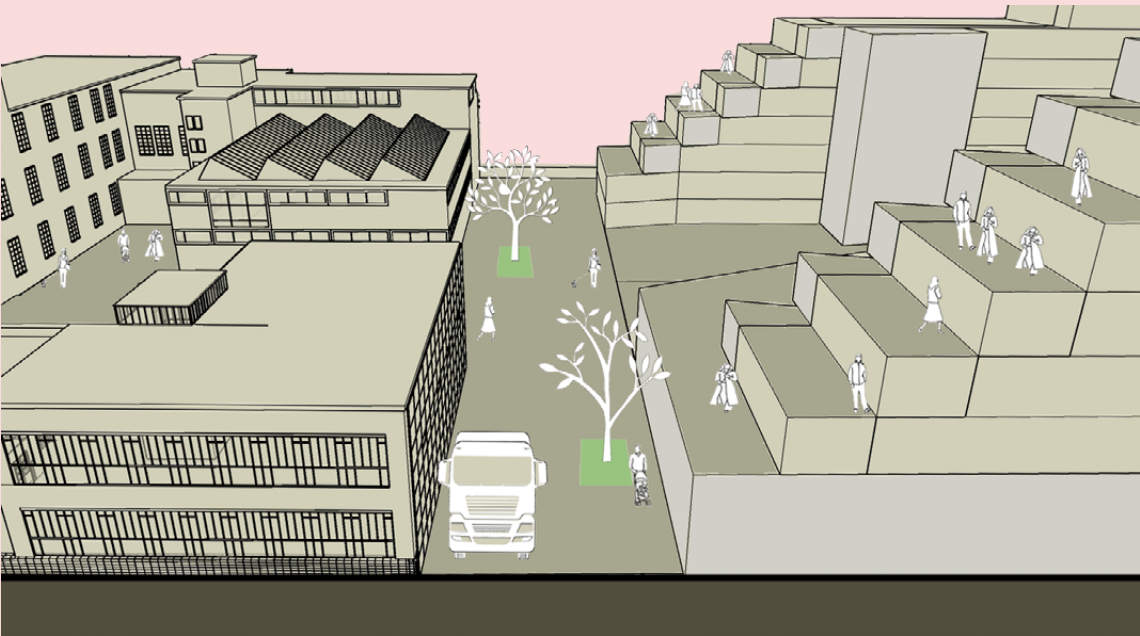
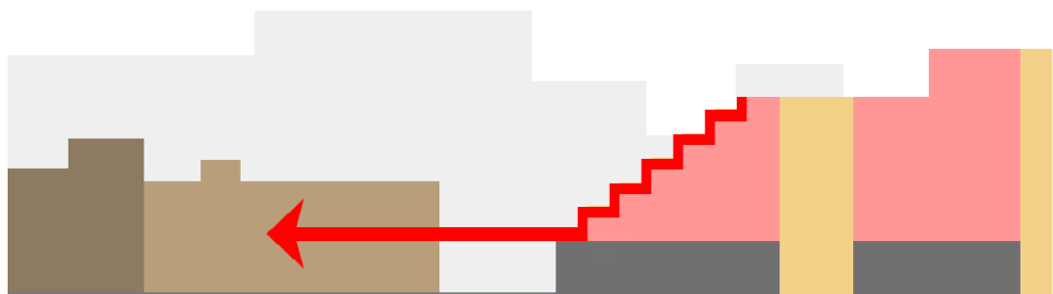


ACCESSIBILITY

CONCEPT DESIGN (FIRST DRAFT)

According to the urban development plan, this plot has makers in the plinth in terms of functions, but during further development of the concept I chose to put the maker function entirely in the adjacent factory building. This makes the plinth of my building free for public functions for the elderly and surrounding neighborhood.

The sales point will be situated in the existing factory building and will have the character of a bazaar / market place with small shops. This will make this part of the plan a lively area. The design responds to this through the terraced shaped building that focuses on the vibrancy of this area and the market. This gives the elderly the feeling that they are situated in the middle / at the heart of society.



CONCEPT DESIGN (FIRST DRAFT)

Social contacts and everyday encounters

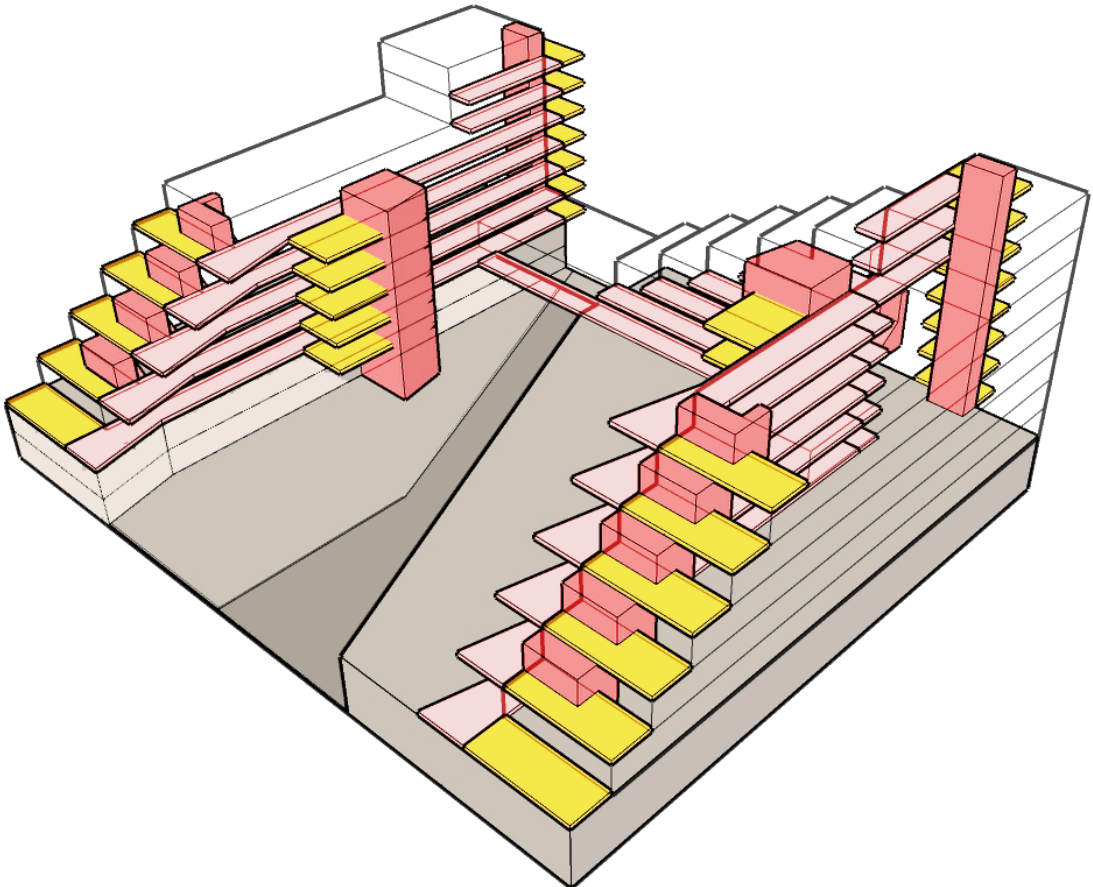
According to Tanja Blokland (Blokland, 2008) it is useful to make a distinction between different ways of meeting:

- weaving: sporadic opportunities such as a brief / unplanned meeting
- cross-linking: deeper relationships with others



- weaving

- cross-linking



CONCEPT DESIGN

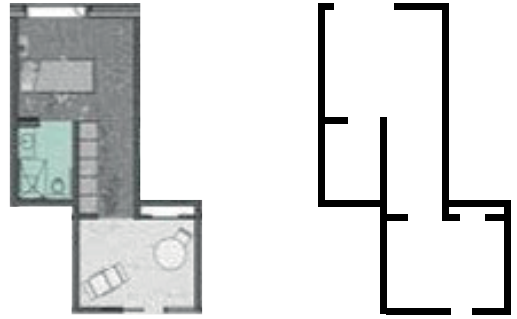
Nevele studio's as a guideline

The studio's from nevele were used as a main reference for the spatial arrangement of the floorplans from my project. I preferred this option due to the efficiency of the arrangement of the studio's. By moving each living room partly to the half of the other dwelling the space for vertical movement will be a bit more flexible. Also the apartments go from more intimate (the bedrooms and their smaller windows) to a more open living room which is directly connected to an overscaled hallway. This hallway can be seen as the collective living room, which provide social interaction between residents.

The adapted floorplan in my own building uses the leftover space between the diagonally placed living rooms for vertical transportation. Furthermore the main vertical transportation route has been placed centrally in the project and also has a collective / connecting function. In comparison to the hallway which is designed for shorter informal meetings, this space is used for long-stay visits by the residents.

Therefor openness and light are very important characteristics of this space, because elderly prefer not to be pushed away somewhere and thereby a wide angle view with lots of light would contribute to this.

Furthermore I adapted studio's from the project on the Curaçaostraat in Groningen. These studio's have larger dimensions in width than the smaller (nevele) studio's. They're based on a 5700mm grid and therefor a bit more generous in their room dimensions.



Standard floorplan one unit Nevele + Tietgen

Nevele dwelling floorplan:

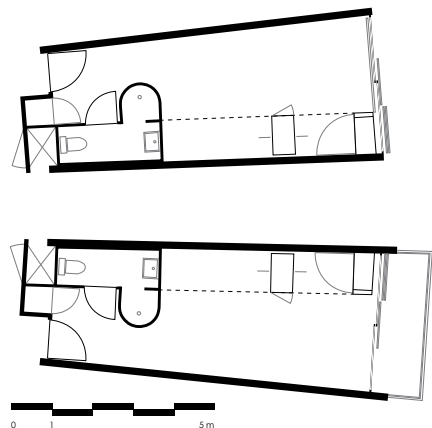
- Dwelling without living room: $4\text{m} \times 6,5\text{m} = 26\text{m}^2$
- Living room (day area): $4\text{m} \times 3\text{m} = 12\text{m}^2$
- vestibule/corridor: 3m in width

Because of the interchangeability of the studio's between elderly and students I also compared the floorplans with student housing from Tietgen Dormitory.

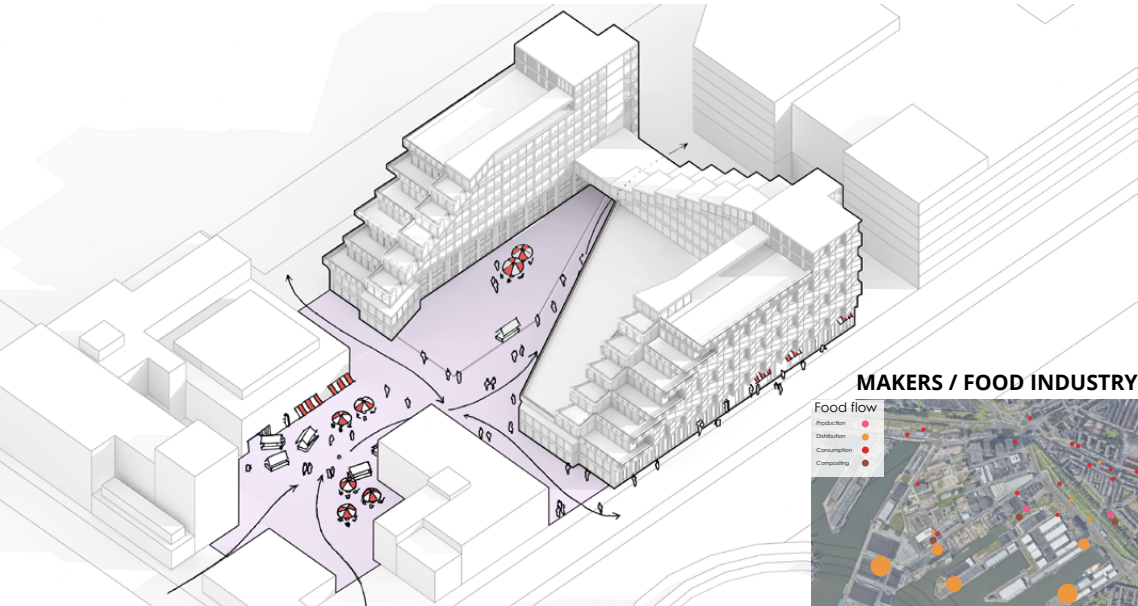
Tietgen Dormitory (student housing) sizes:

- dwelling: $8\text{m} \times 3\text{m} = 24\text{m}^2$
- additional balcony: $1\text{m} \times 3,4\text{m} = 3,4\text{m}^2$

Apartments in this project vary in size, between 24-30 m². They are all the same width, some are just longer than others. There is also a variation in outside space. About half of the apartments have a balcony which can also vary in size, between 4 and 7 m². Apartments without such balconies have french balconies.



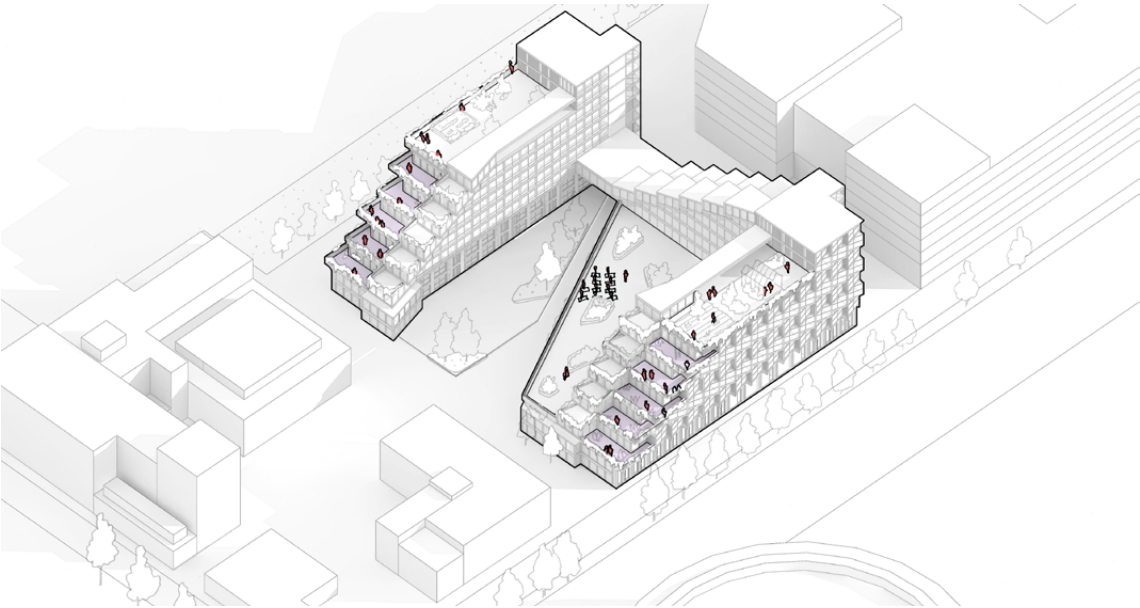
RELATION FACTORY BUILDING



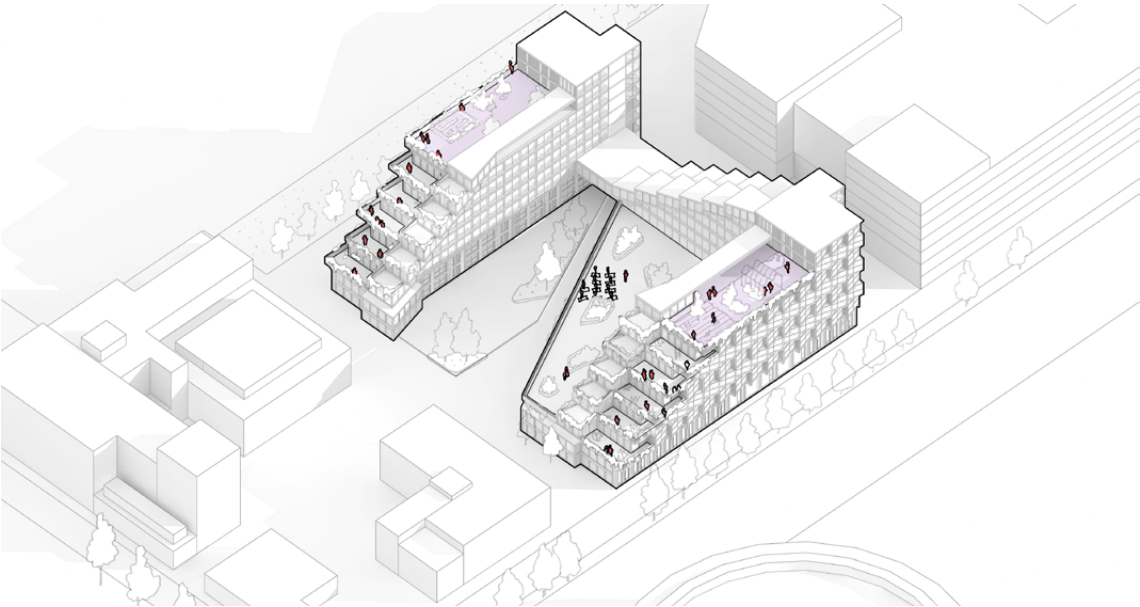
USE OF THE PLAZA



DIFFERENT ZONES OF COLLECTIVITY: ZONE 1

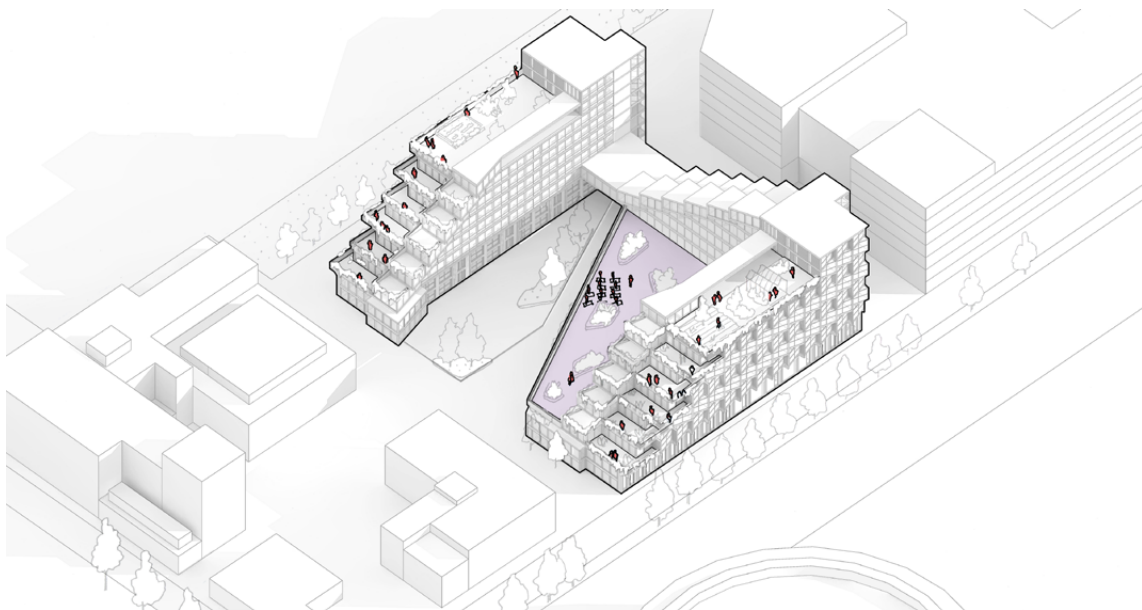


DIFFERENT ZONES OF COLLECTIVITY: ZONE 2

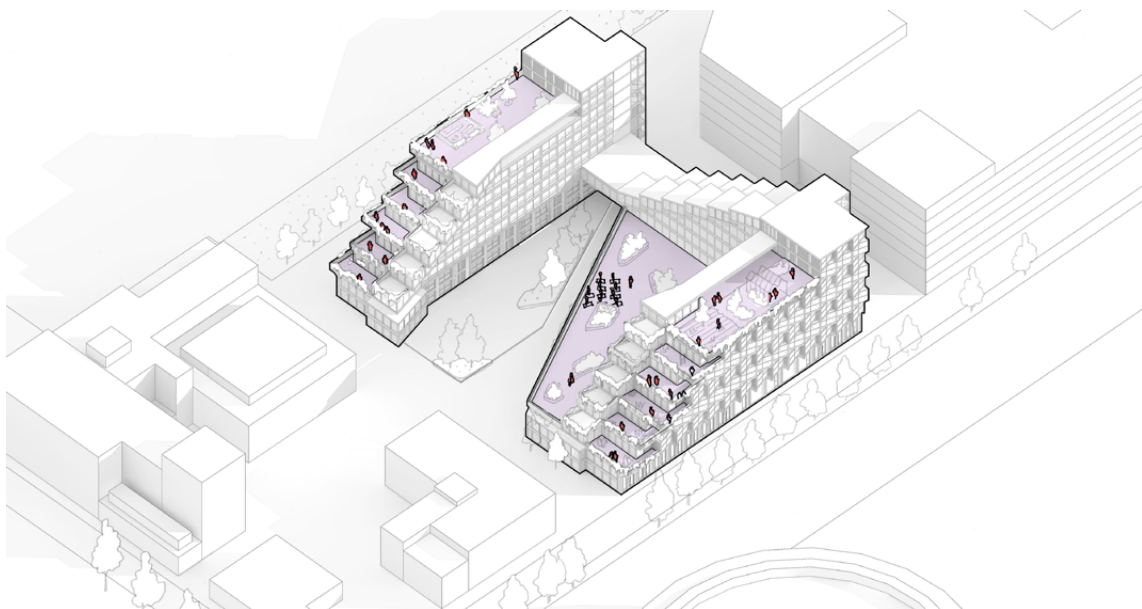


My research showed that different generations are very capable of learning from each other's strengths and can offer support in each other's weaker aspects. The question then also arises of how architectural interventions can facilitate the needs of socially isolated people.

DIFFERENT ZONES OF COLLECTIVITY: ZONE 3

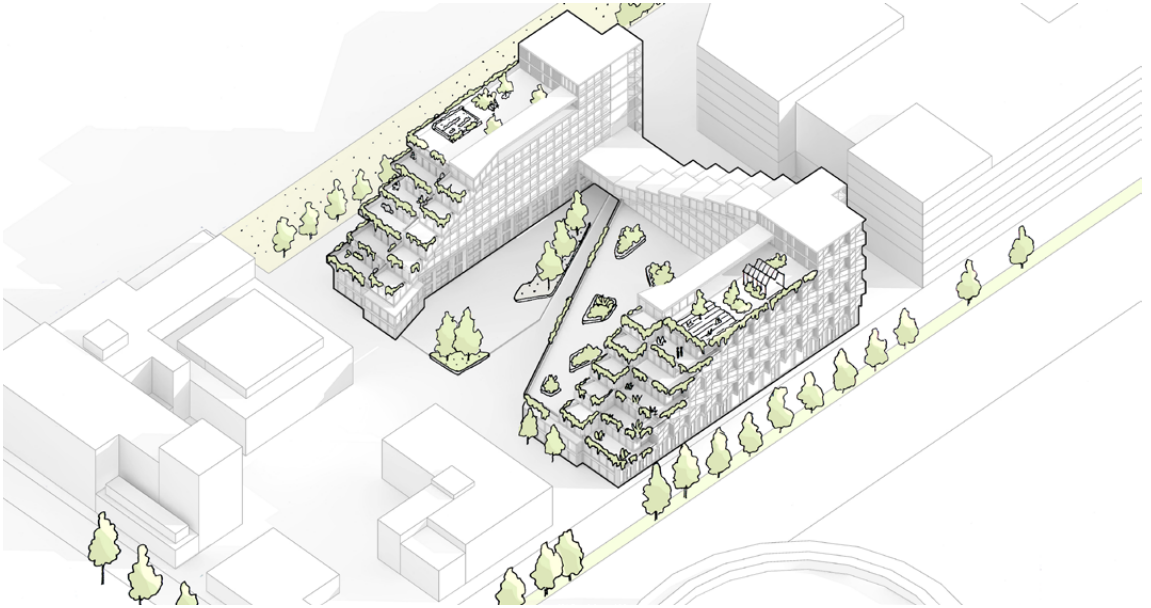


DIFFERENT IN THEIR SOCIAL INTENSITY AND WAYS OF INTERACTING



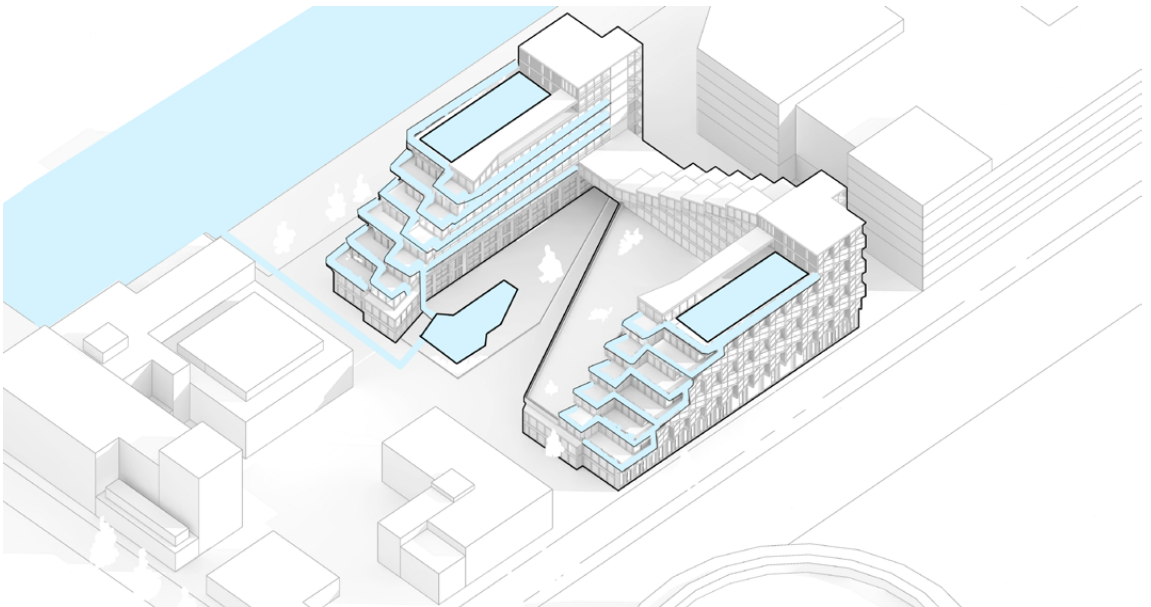
how does the design respond to this and which collective facilities fit the different strategies that people use to deal with certain situations. This already came to the fore in my research. So I have designed several types of collective spaces, and therefore the residents will be able to choose in different ways of social interaction. Each space actually differs in social intensity. So the terraces are meant for small groups to gather, the roof garden offers the opportunity for a little more seclusion and the plinth and raised courtyard provide space for larger group activities.

COLLECTIVE GREEN AS A CONNECTING ACTIVITY



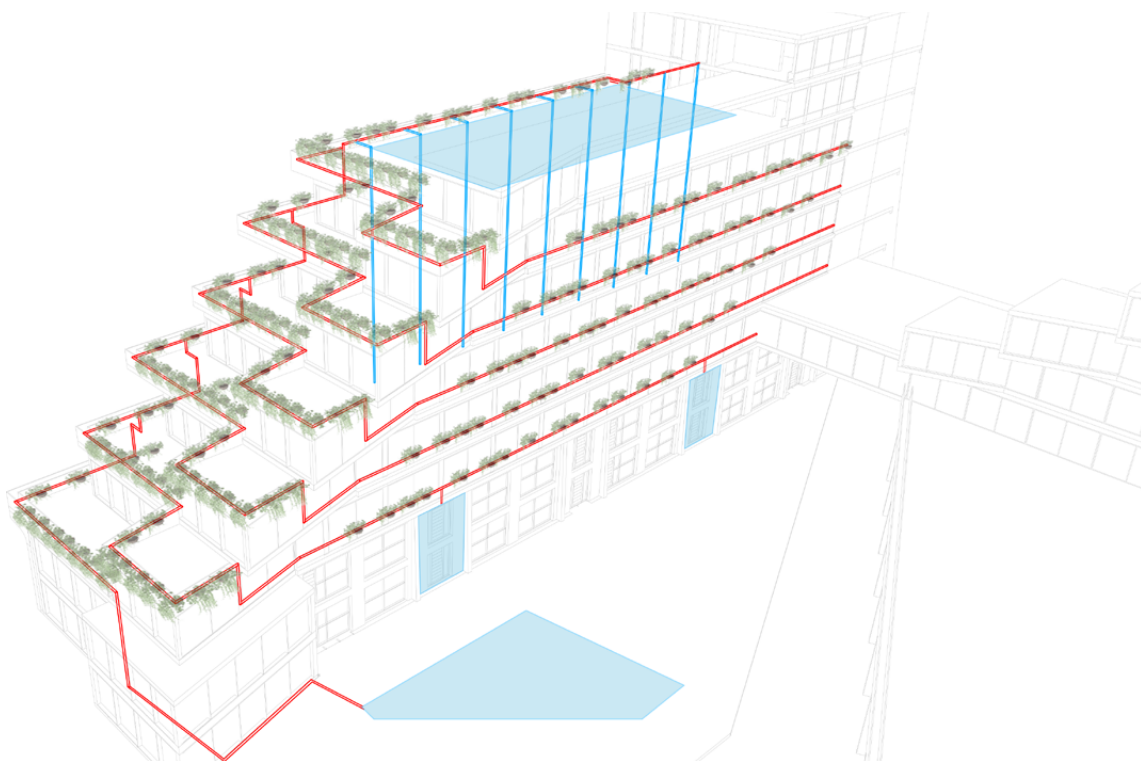
Greenery is used as a connecting element throughout the building. The joint maintenance in the galleries and the cultivation of vegetable products on the roof garden serve as a shared social activity and become important places for meeting. The greenery is actually functioning as a web that interweaves with the building and forms an essential part of the experience and atmosphere.

WATER CATCHMENT

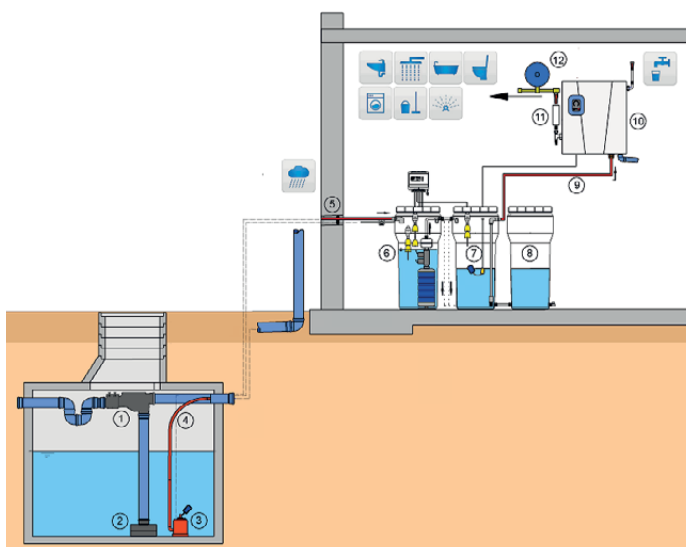


The greenery and substrate layers of the roof garden also play an important role in water retention. In cities like Rotterdam, dealing with the discharge of large quantities of water plays an important role. That is why several zones have been realized in the city that can collect this excess (rain) water and serve as a buffer zone. It is important that buildings can also play a role in the collection and temporary retention of water. This can then be used for functions in the building where gray water is sufficient, such as flushing your toilet or an outside tap in the winter garden.

DRAINAGE SYSTEM (TECHNICAL ASPECT)



RAINWATER PURIFICATION (TECHNICAL ASPECT)



Tank voorzien van:

1. Zelfreinigend filter
2. Rustige toevoer
3. Dompelpomp
4. Drukleiding

Leidingwerk met:

5. Muurdoorvoer

Zuivering regenwater:

6. Watervat met membraanfiltratie
7. Watervat voor schoon water
8. Watervat voor schoon water

Pompsysteem:

9. Zuigleiding
10. Regenwaterstation
11. UVC-unit
12. Expansievat

The drainage tanks are part of a system where the green retains water and the excess water ends up in the water square or is stored in a tank on the ground floor. In doing so, these sustainability principles give a very expressive appearance to the design and the public space around it, which raises more awareness among the users.

GREENSYSTEM (VISUAL ASPECT)



CORRIDOR (SOCIAL ASPECT)



ROOFGARDEN (SOCIAL ASPECT)





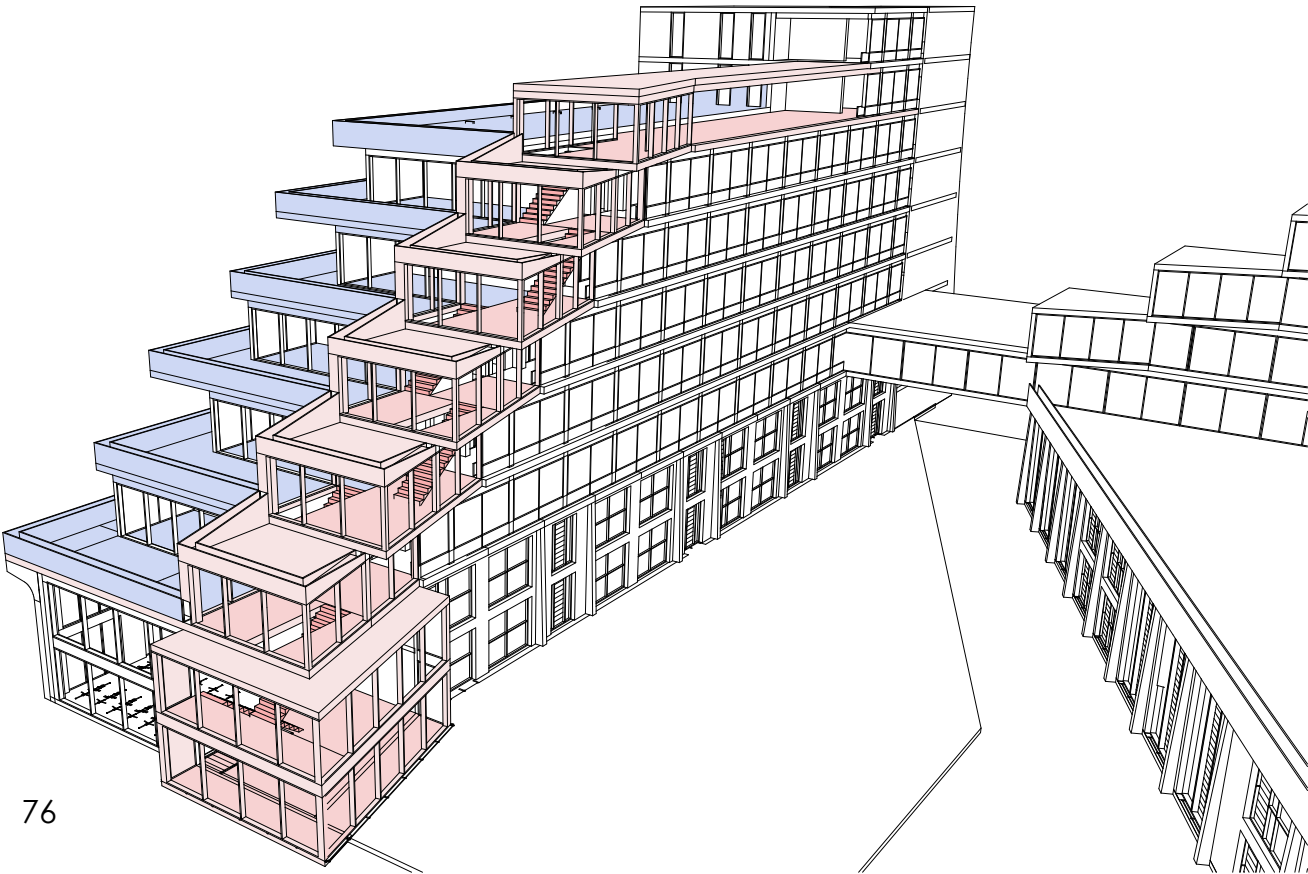
STEPPED STAIRCASE TO ROOFGARDEN



• weaving



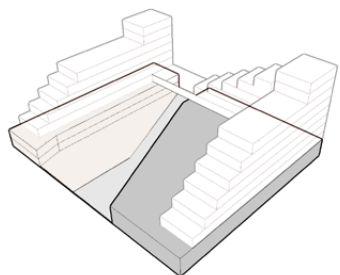
• cross-linking



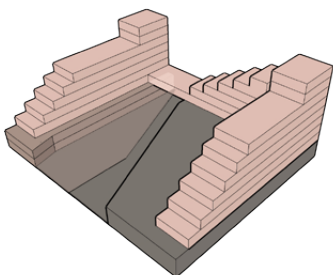
CONSTRUCTION SCHEME

Design aspects:

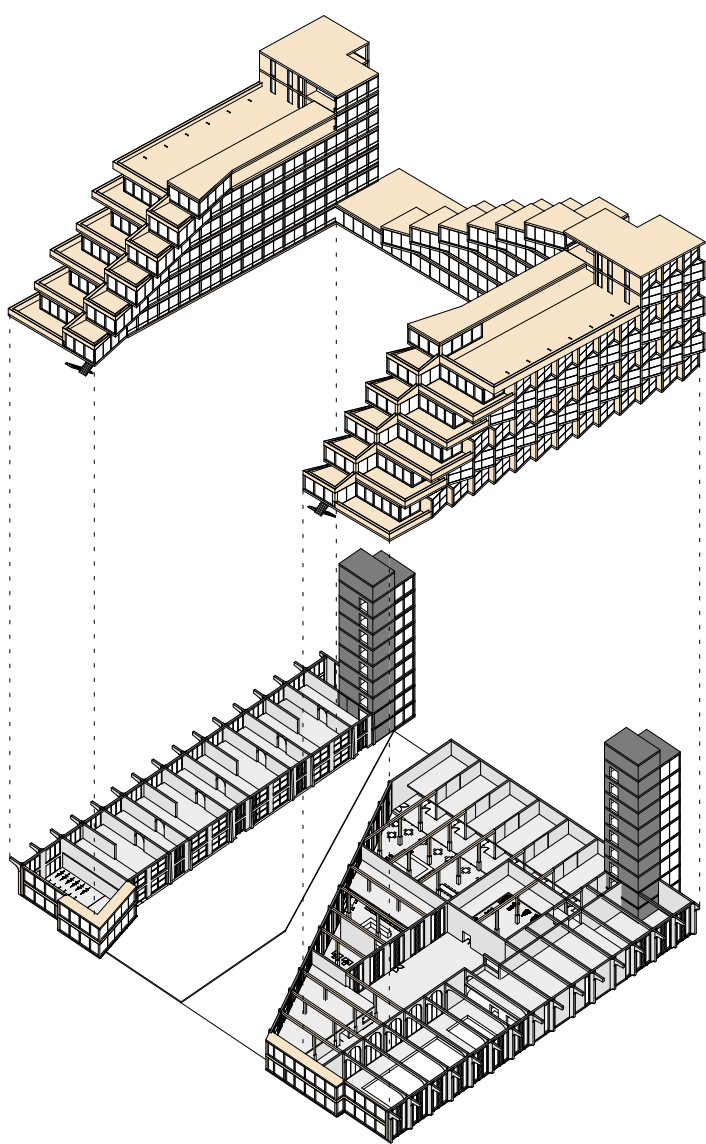
- Sculpturing the plinth
- Solid plinth
- Cavity within this solid mass functions as a passage



SOLIDS & CAVITIES

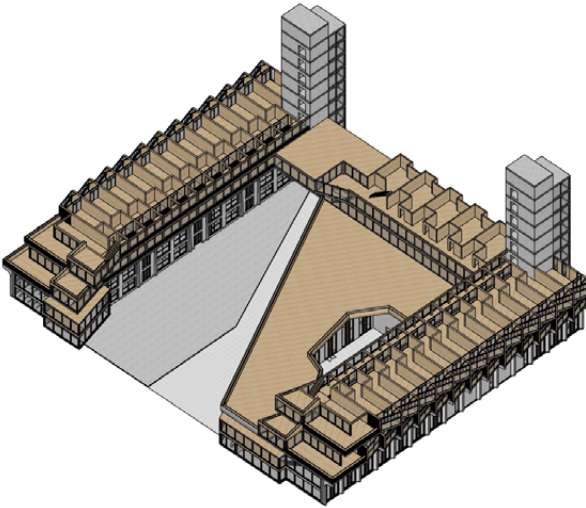
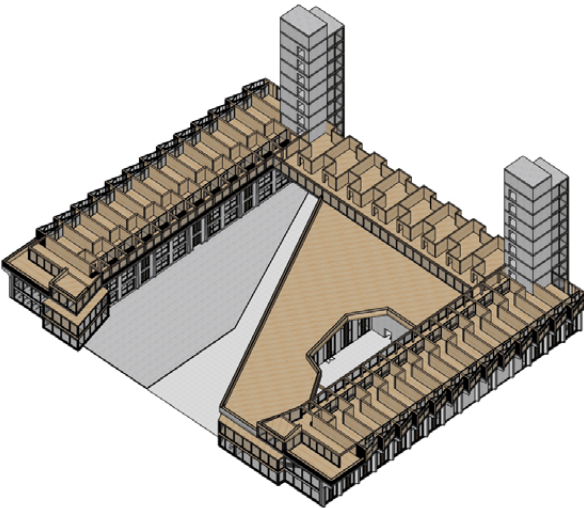
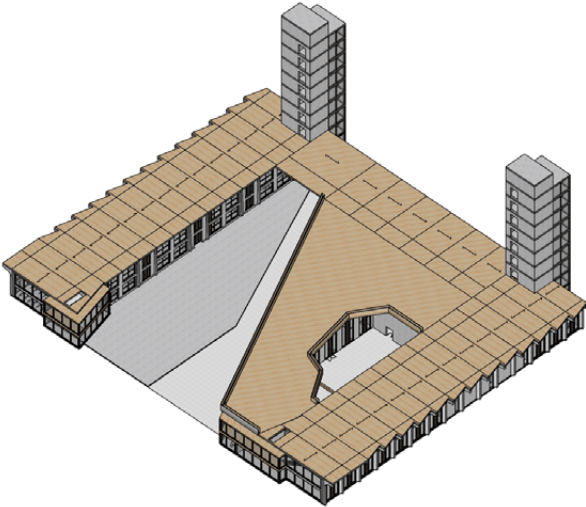
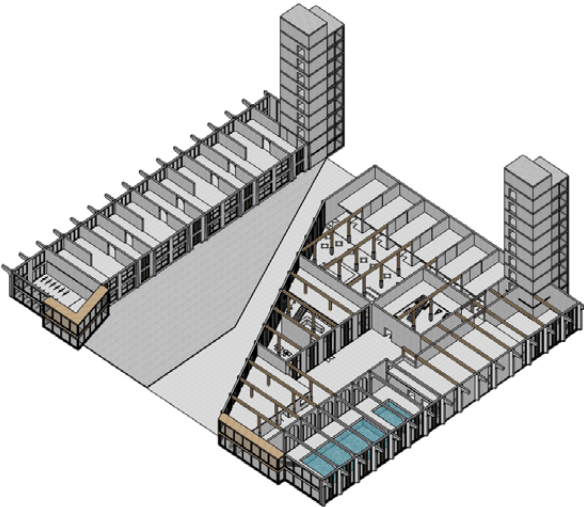


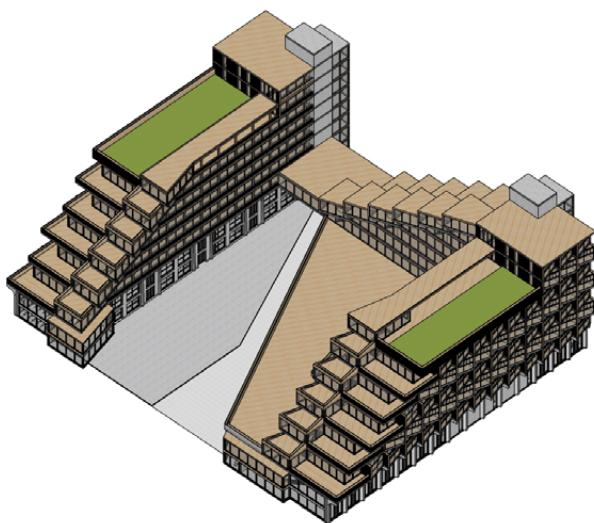
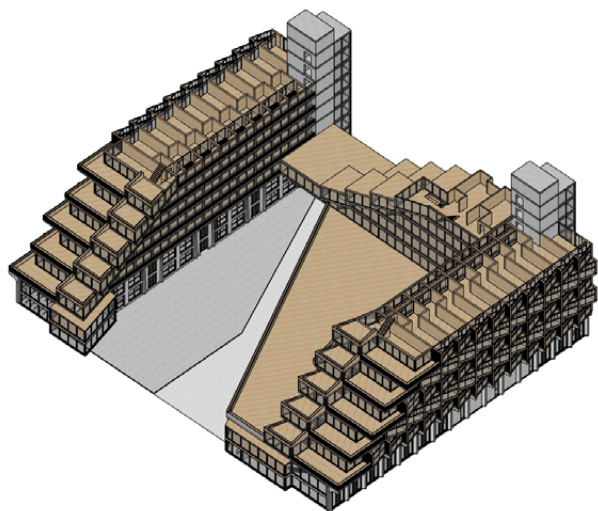
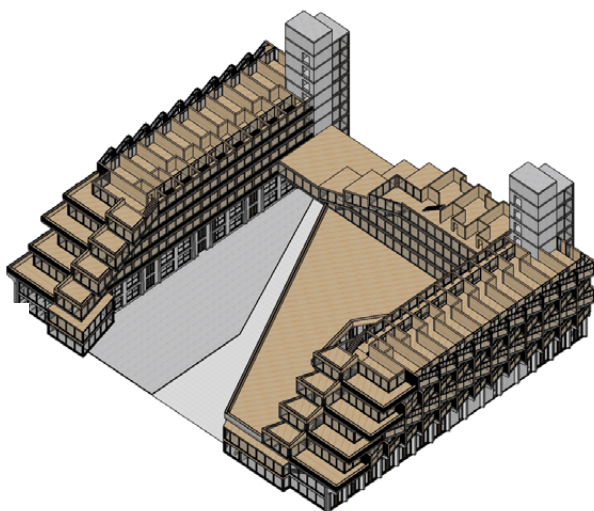
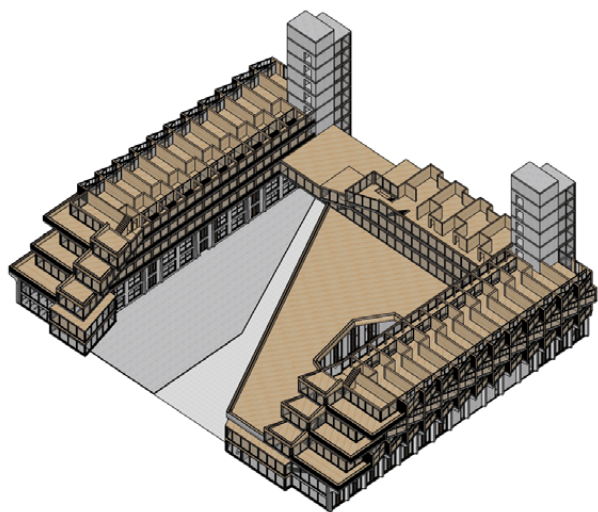
PLINTH + DWELLINGS



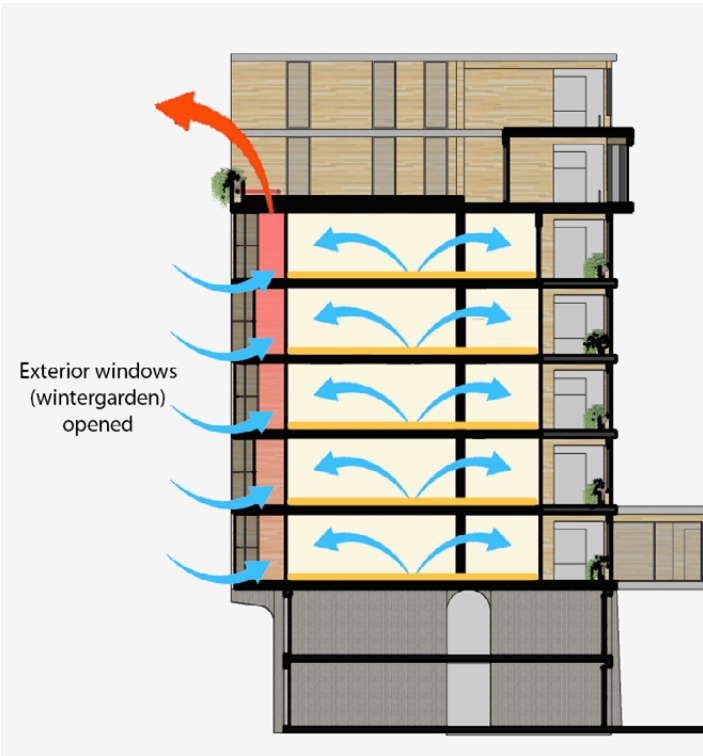
The construction scheme where you see that the plinth serves as the basis for the wooden construction above. The constructing of the main construction by CLT walls. The load-bearing walls ensure stability of the building in both directions and on the next page you can also see that the building is constructed per layer.

CONSTRUCTION SCHEME

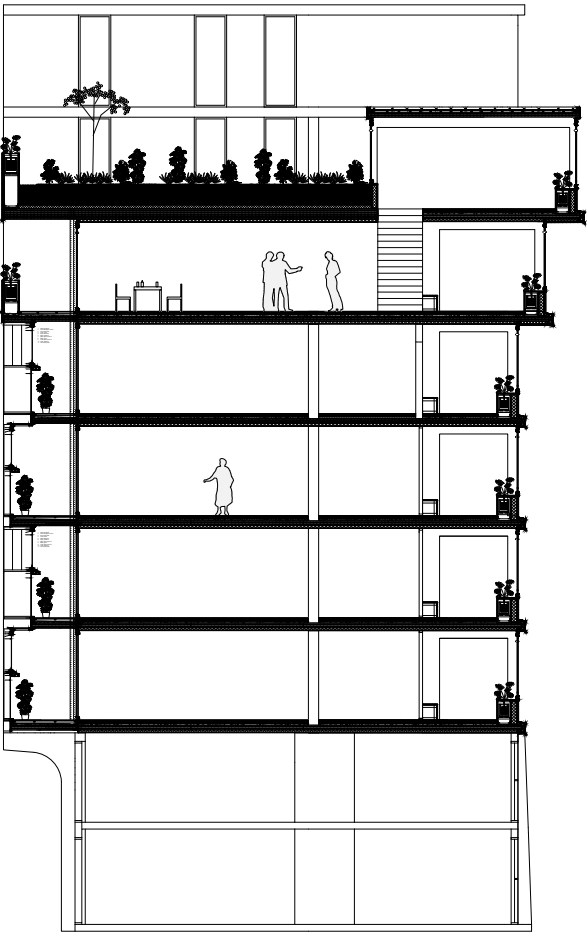




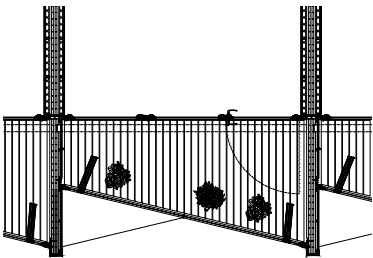
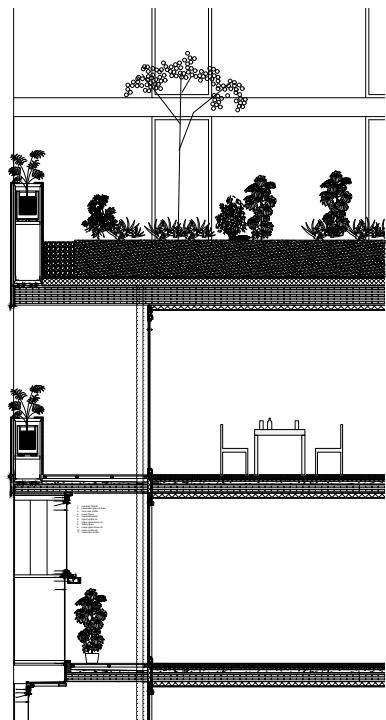
WINTERGARDEN AS DOUBLE FAÇADE (VENTILATION PRINCIPLE)



OVERALL SECTION



1:20 FACADE FRAGMENT



PARTITION WALL OPTIONS

Partition wall 1
(thickness 300 mm)



12.5 mm plasterboard
12.5 mm separate facing panel including 50 mm mineral wool
100 mm CLT by Stora Enso
40 mm mineral wool
100 mm CLT by Stora Enso
50 mm separate facing panel including 50 mm mineral wool
12.5 mm plasterboard
12.5 mm plasterboard

$D_{nT,w} (C;C_p): 67 (-1;-4) \text{ dB}$
 $C_{80-5100} = -9 \text{ dB}$

Partition wall 2
(thickness 270 mm)



12.5 mm sound rated plasterboard
12.5 mm sound rated plasterboard
65 mm independent studs held 15mm clear from CLT with 50mm mineral fibre in stud cavity
90 mm CLT by Stora Enso
65 mm independent studs held 15mm clear from CLT with 50mm mineral fibre in stud cavity
12.5 mm sound rated plasterboard
12.5 mm sound rated plasterboard

$D_{nT,w} (C;C_p): 67 (-2;-7) \text{ dB}^*$
 $C_{80-5100} = -11 \text{ dB}^*$

* lowest value out of 4 site measurements

Partition wall 3
(thickness 305 mm)

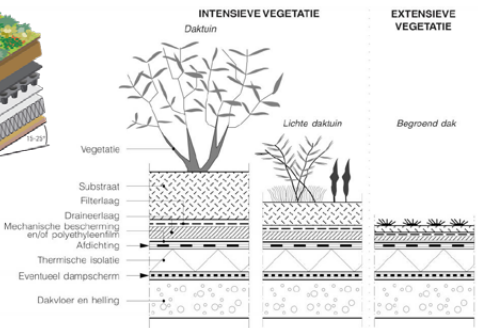
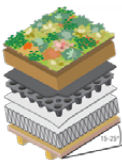


12.5 mm plasterboard
100 mm CLT by Stora Enso
60-80 mm mineral wool
100 mm CLT by Stora Enso
12.5 mm plasterboard

$R'_{w} (C;C_p): 58 (-1;-6) \text{ dB}^*$
 $C_{80-5100} = -2 \text{ dB}^*$

* lowest value out of 6 site measurements

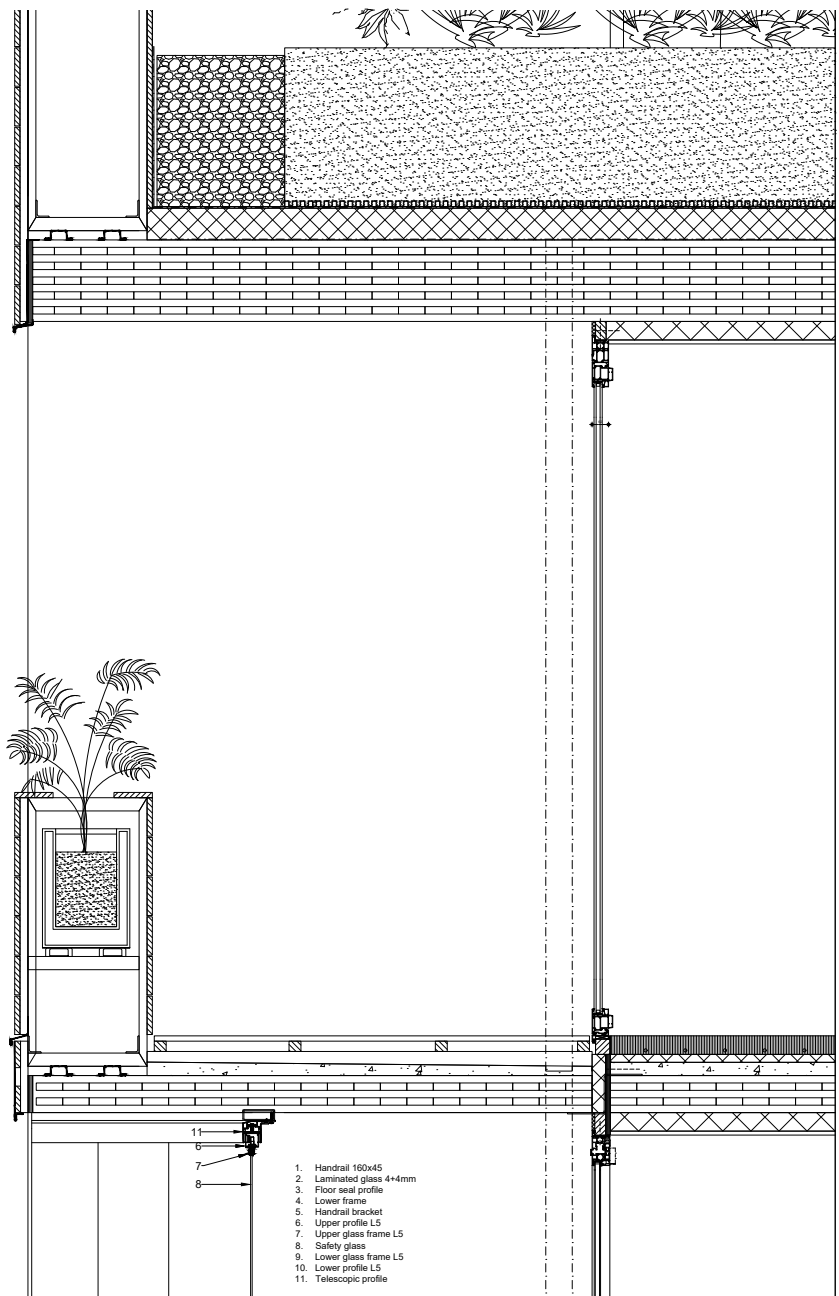
OPTIONAL LAYERS ROOF GARDEN



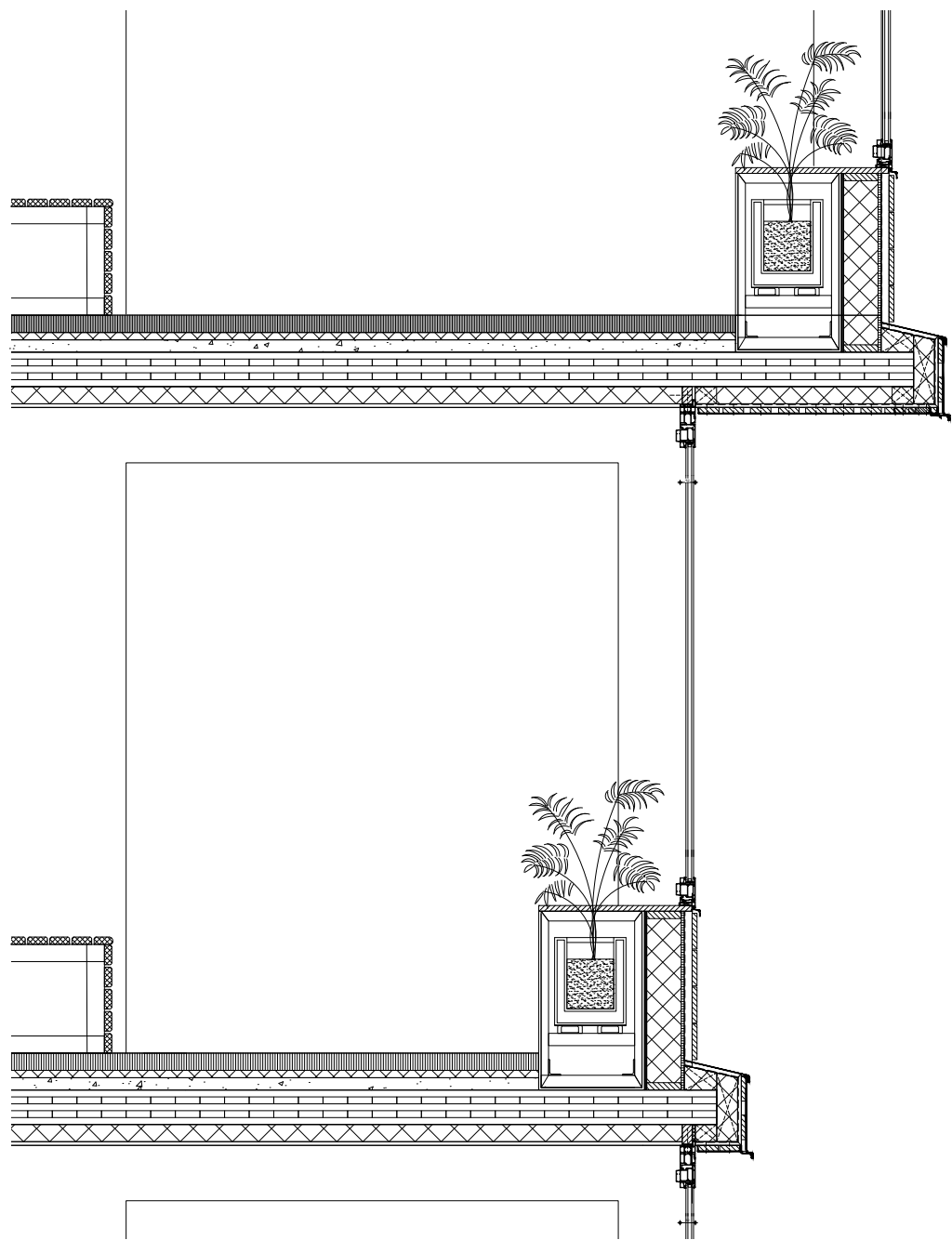
<https://www.gidsduurzamegebouwen.brussels/nl/3-samenstelling.html?IDC=7441>

Soundproofing for CLT by Stora Enso. (folder send by email)

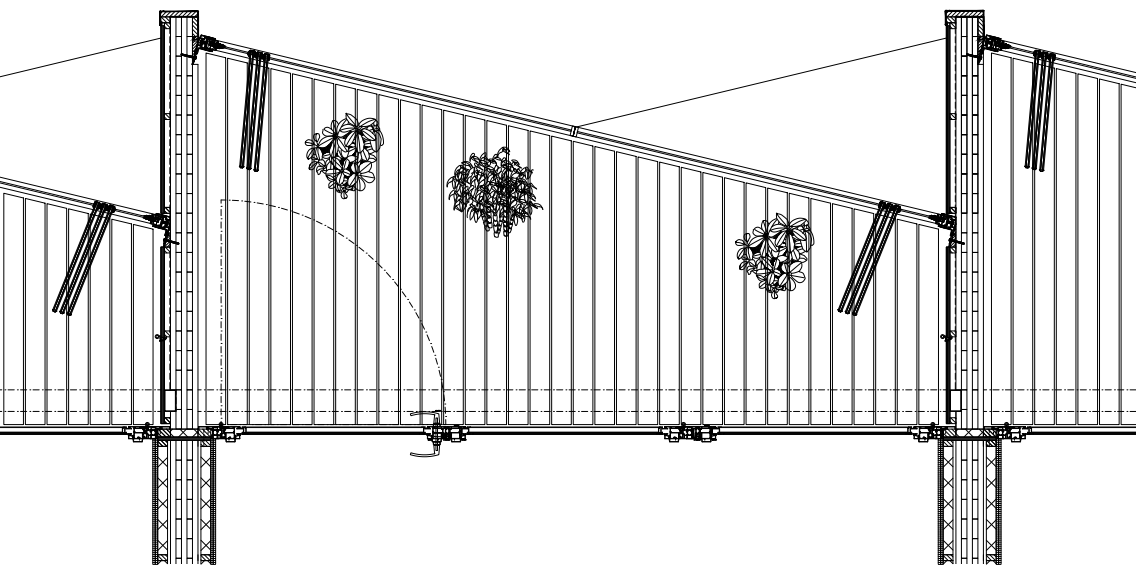
OUTER FAÇADE DETAIL 1:5



FAÇADE FACING THE COURTYARD 1:5

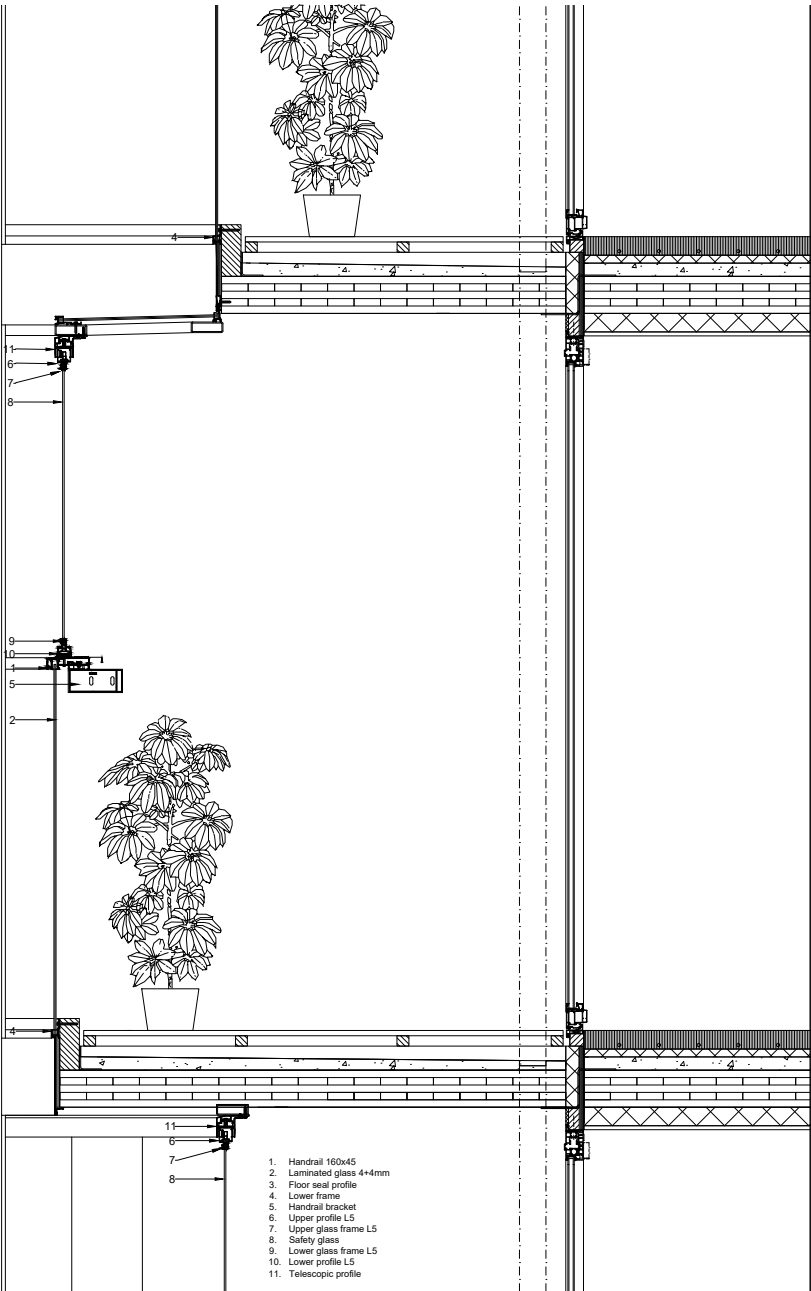


HORIZONTAL SECTION WINTERGARDEN 1:5

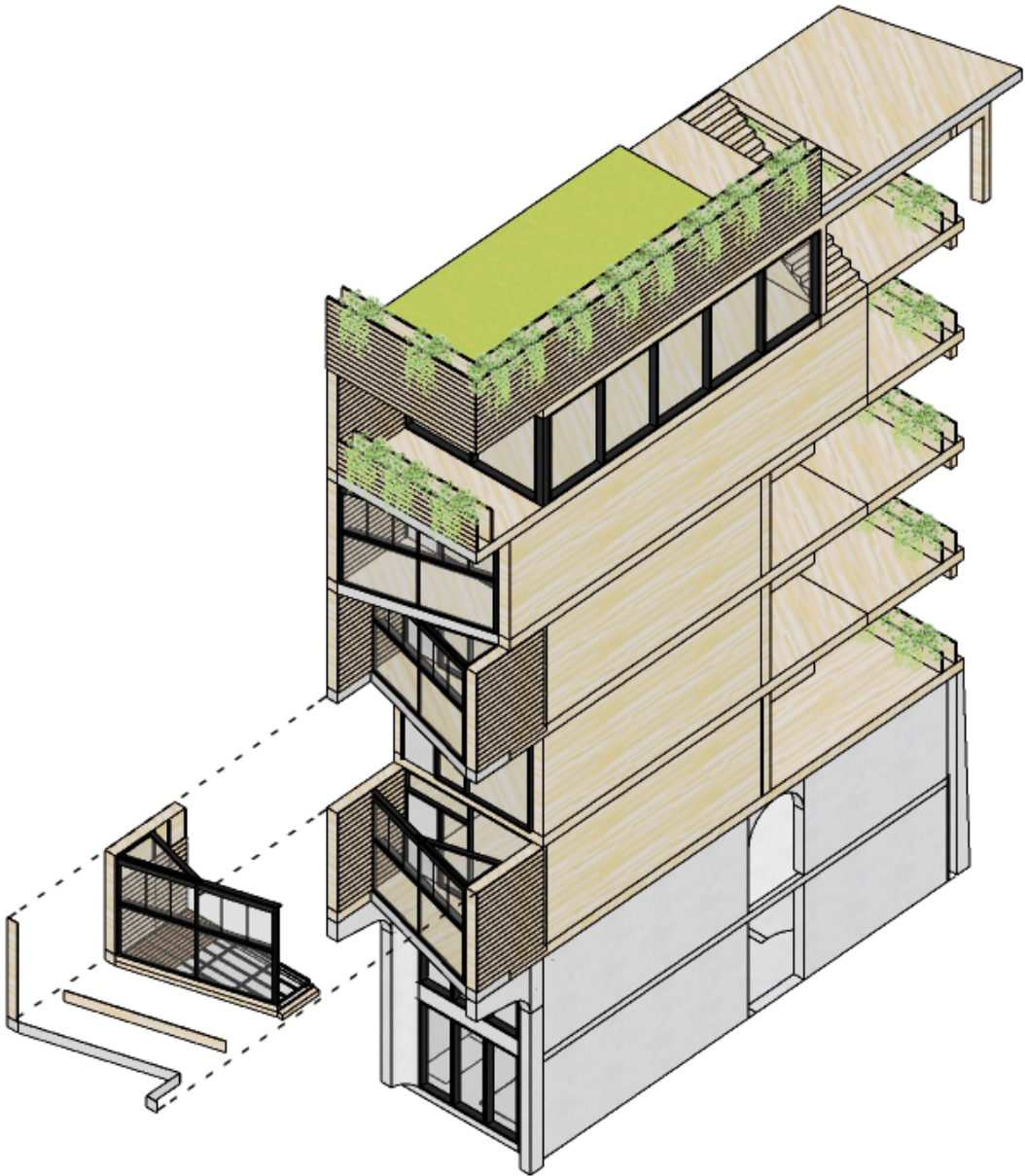


WINTERGARDEN DETAIL 1:5

LUMON (160MM HAND-
RAIL, HORIZONTAL
BRACKET, FACADE COVER
L-PROFILE)



FAÇADE FRAGMENT



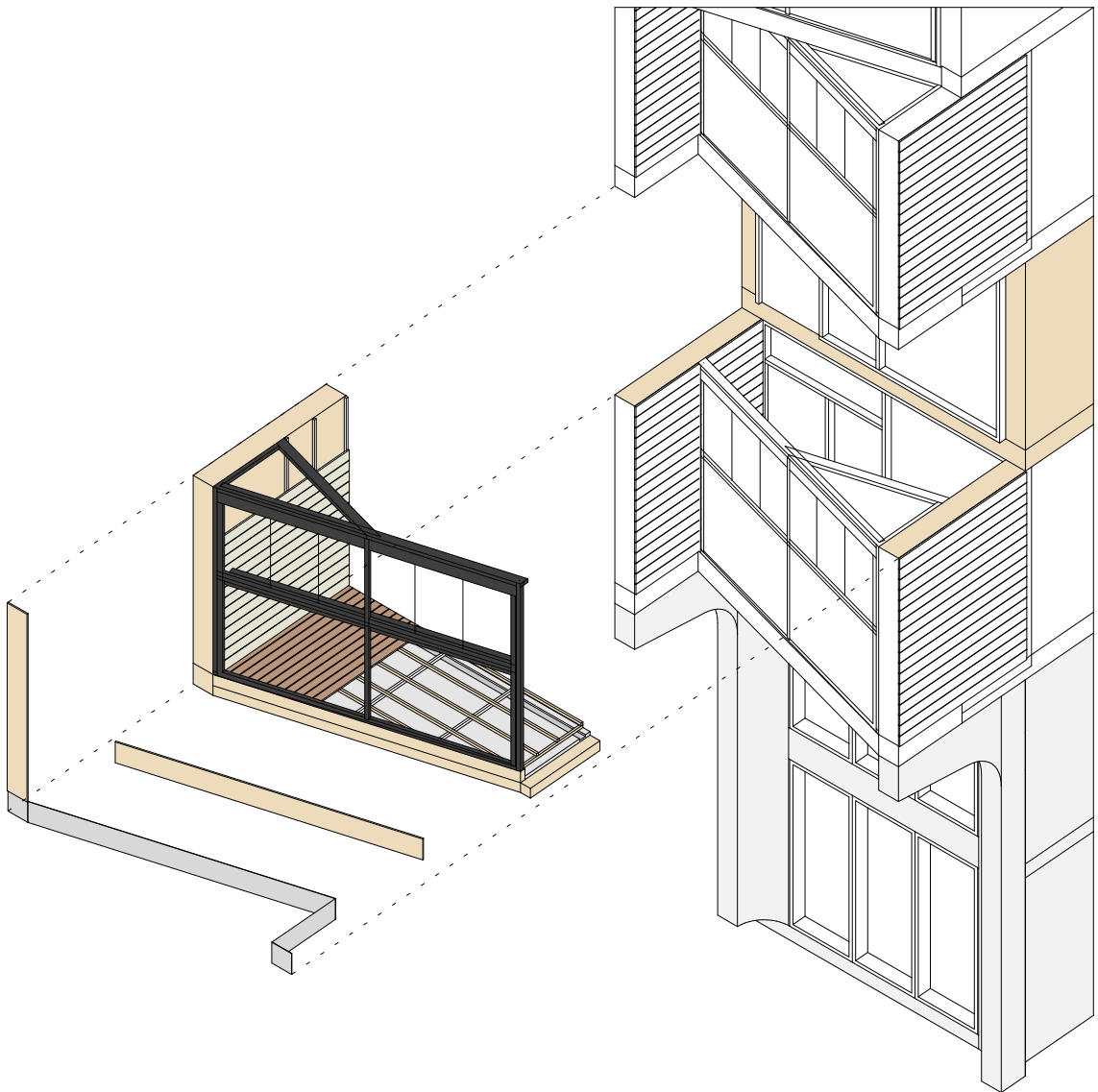
Wintergarden as double façade (ventilation principle)

Then the double façade that provides natural ventilation in the studios. The warm air in the spaces in between rises and thereby sucks the air out of the spaces that lie behind the facade element. In winter, the space serves as a buffer zone between indoors and outdoors.

When building the wall and floor packages, I mainly looked at the acoustic values. Because the lifestyles of students and the elderly can be quite contrasting in certain aspects, I have always opted for the packages with the highest acoustic qualities, in order to prevent noise pollution.

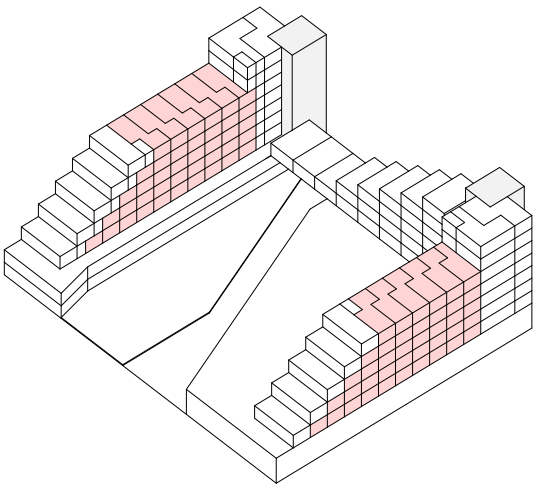
Furthermore the roof contains a relatively thick substrate layer for the roof garden to also offer the possibility for more intensive vegetation, such as trees, shrubs and bushes. This actually requires at least half a meter of substrate layer.

FAÇADE FRAGMENT (ASSEMBLY)

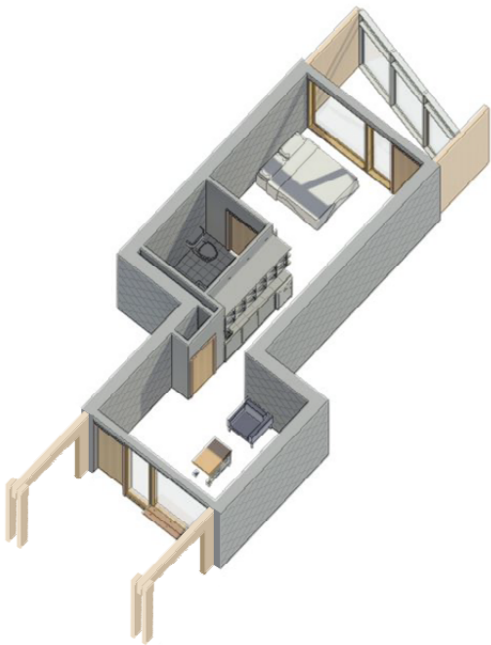
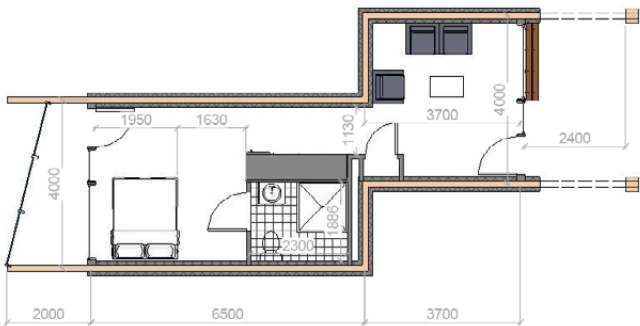


The winter garden is designed in such a way that it can be attached to the CLT construction as a prefabricated part. For the construction of the framework I used a window system by LUMON, in which the upper windows are opened like a harmonica and the desired indoor climate in the winter garden can be regulated quite easily by the user himself.

DWELLING TYPOLOGIES (ADAPTABLE)

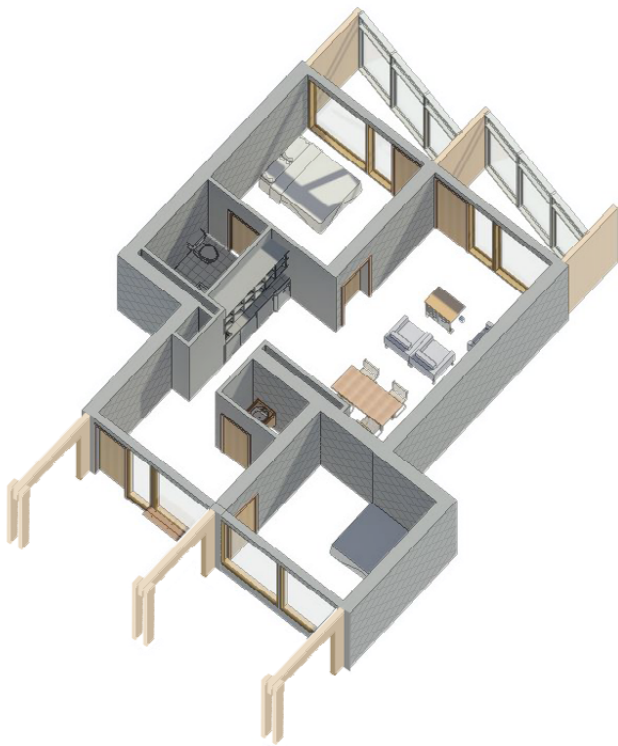
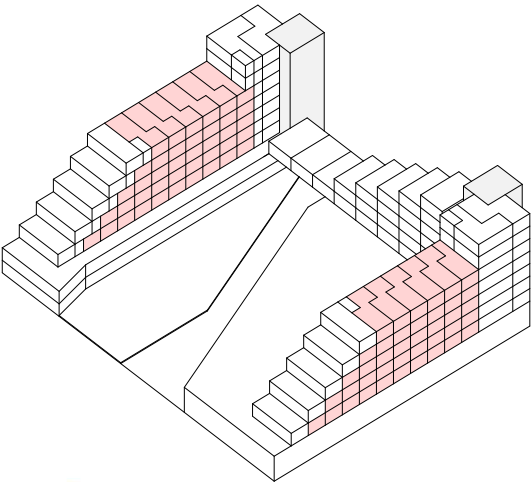


A Small apartment (37 m2)

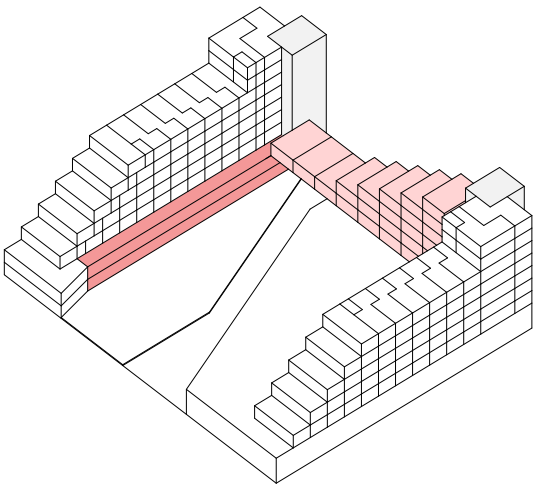


DWELLING TYPOLOGIES (ADAPTABLE)

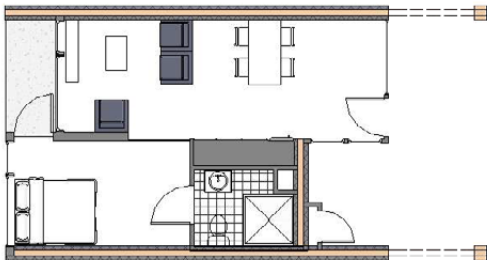
B Large apartment for two persons (65 m2)



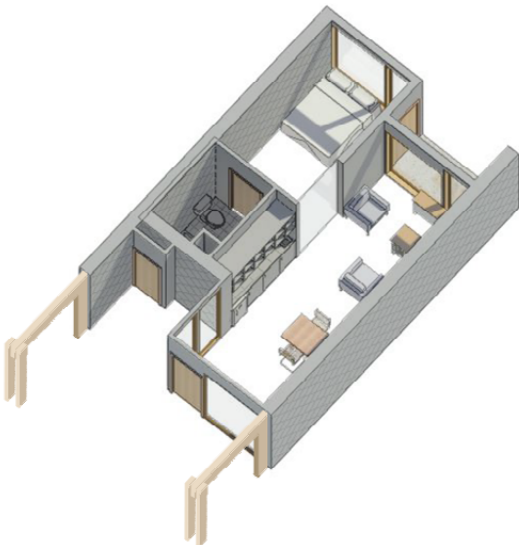
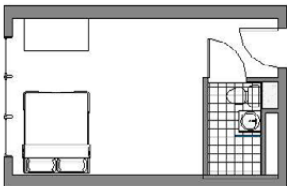
DWELLING TYPOLOGIES



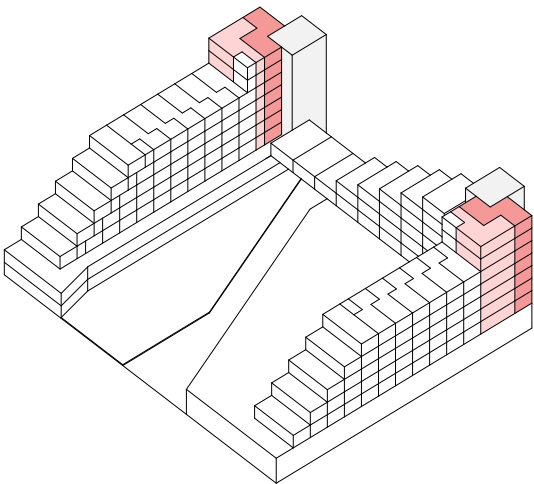
C Apartment for one or two persons (40 m2)



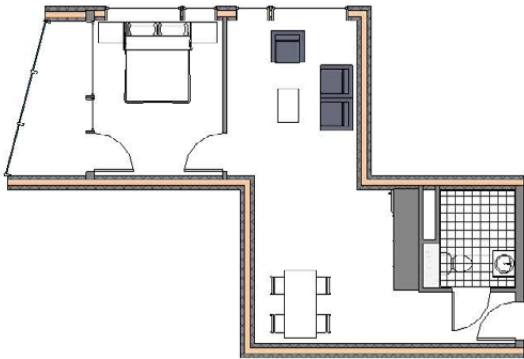
D Room as a part of group living (24 m2)



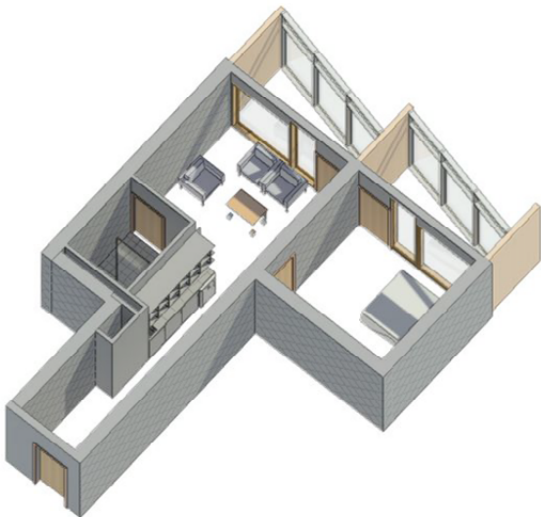
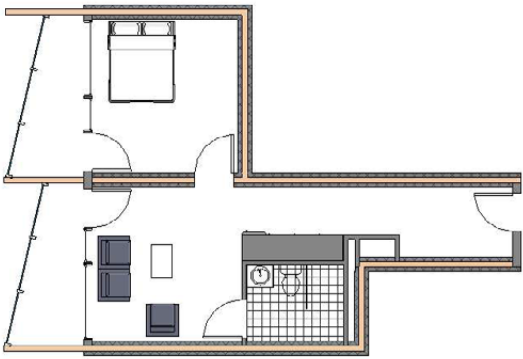
DWELLING TYPOLOGIES



E Variant op type A

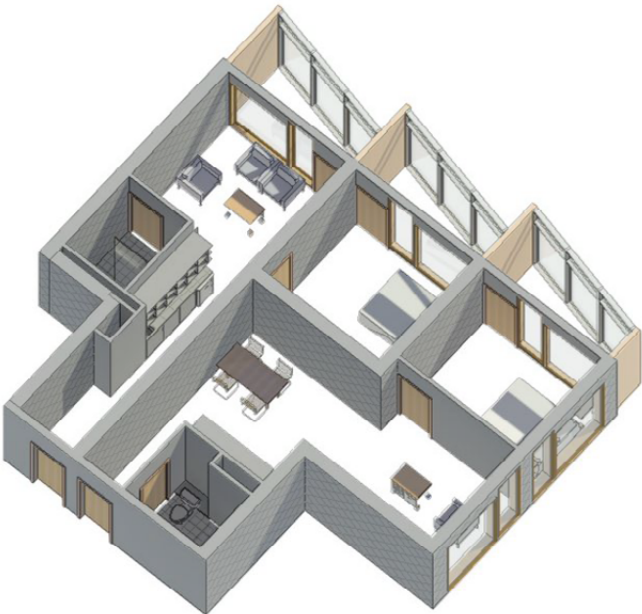
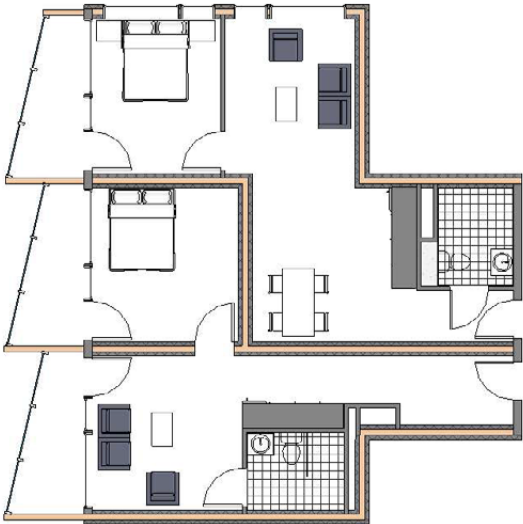
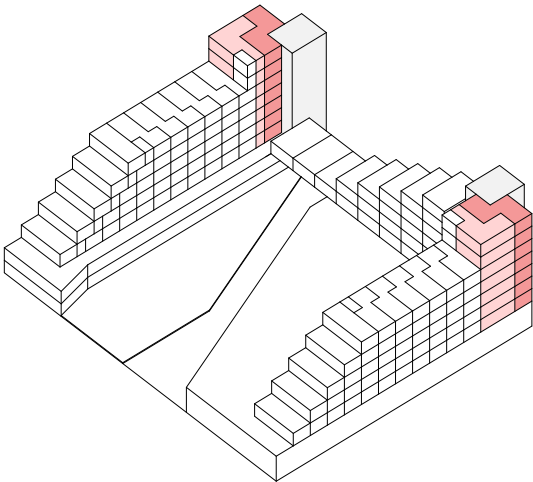


F Variant op type A

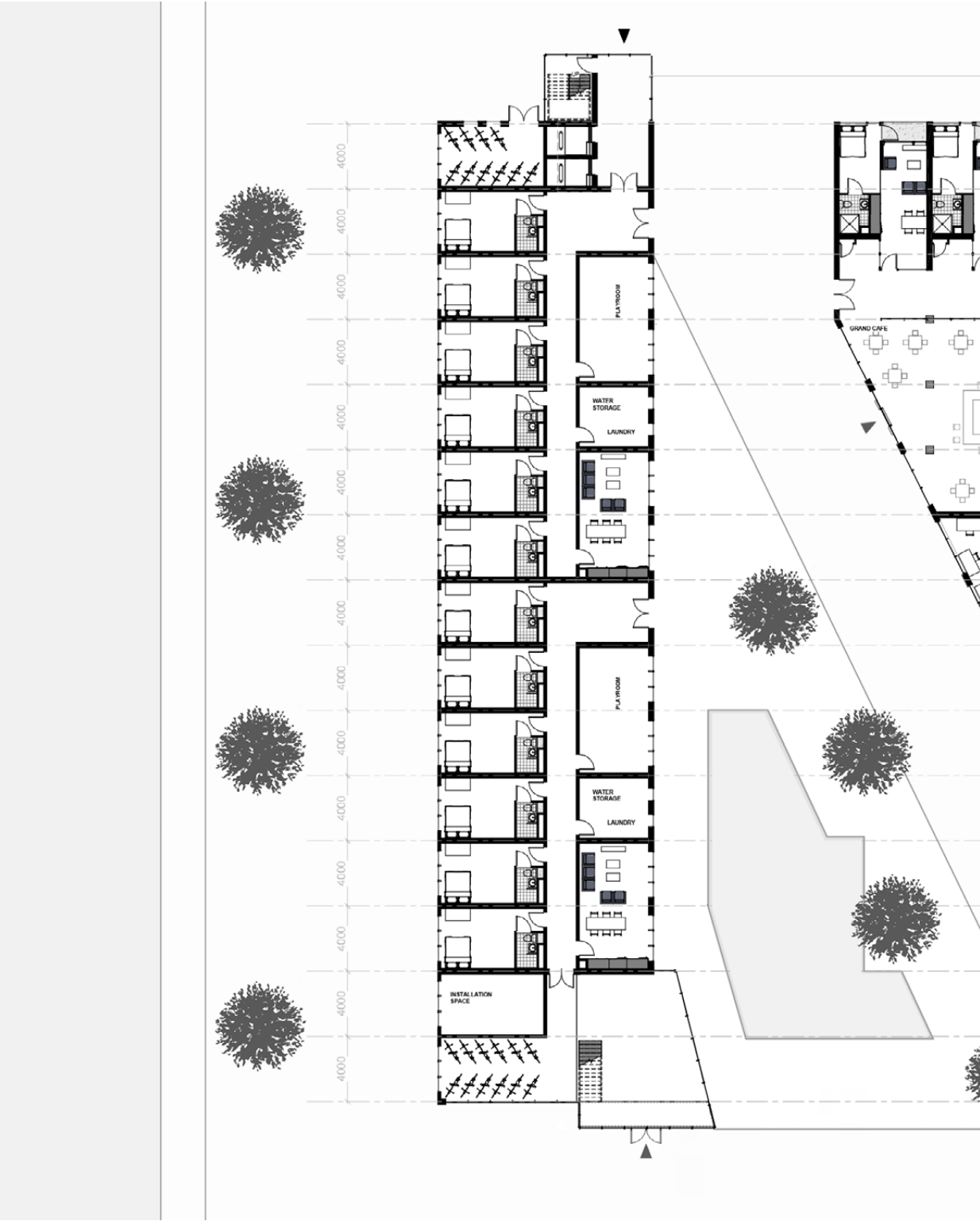


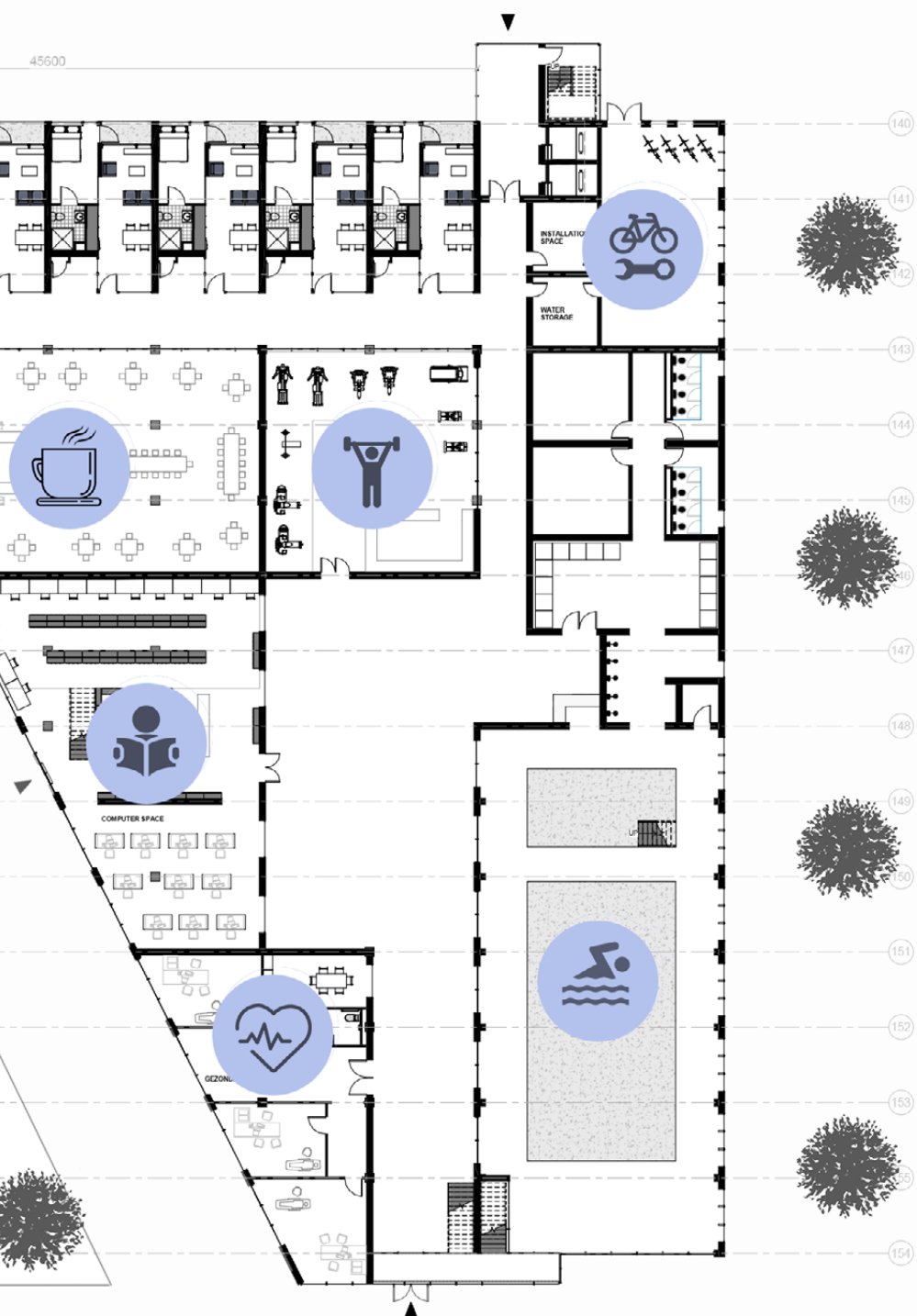
DWELLING TYPOLOGIES

E-F Combined

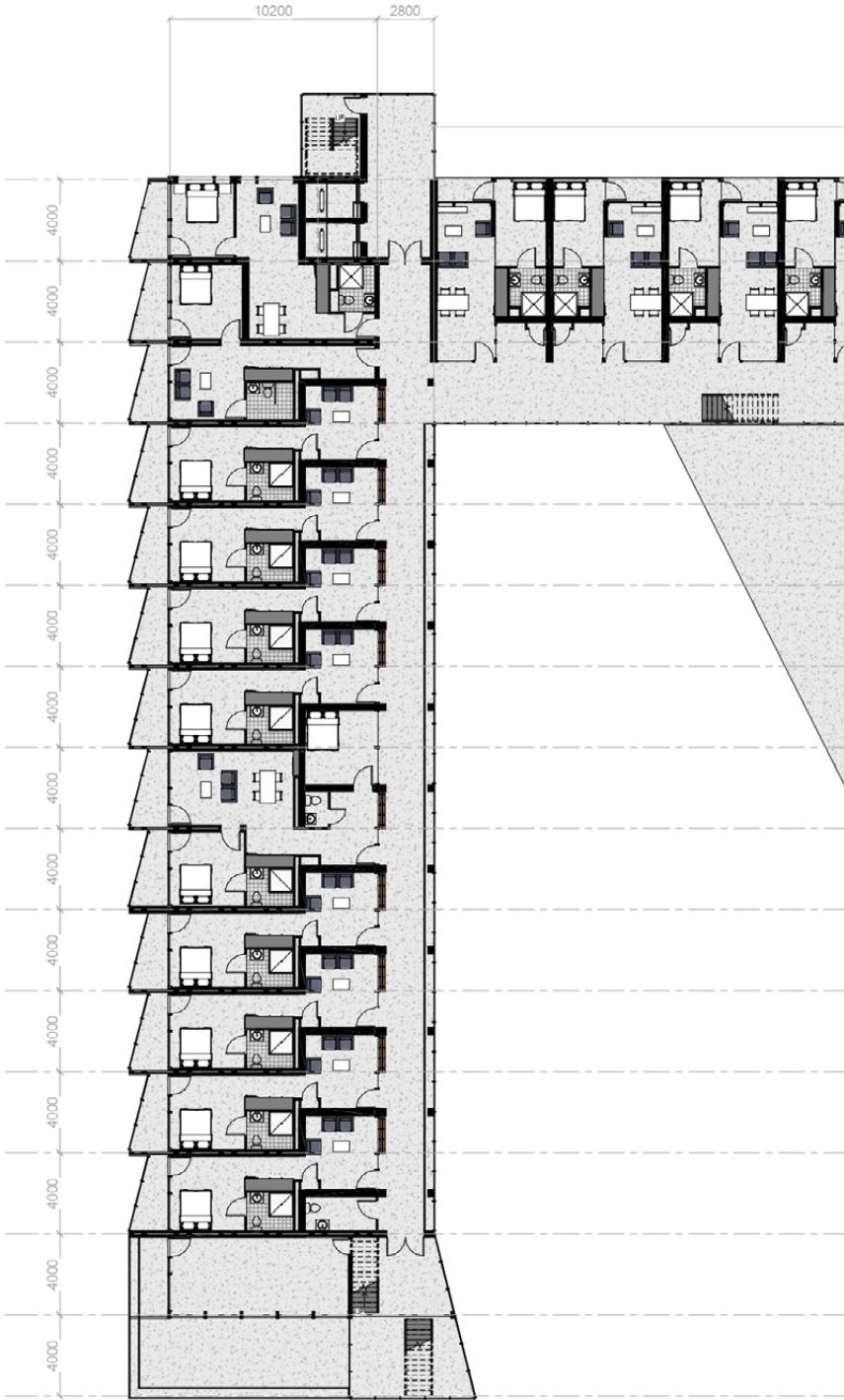


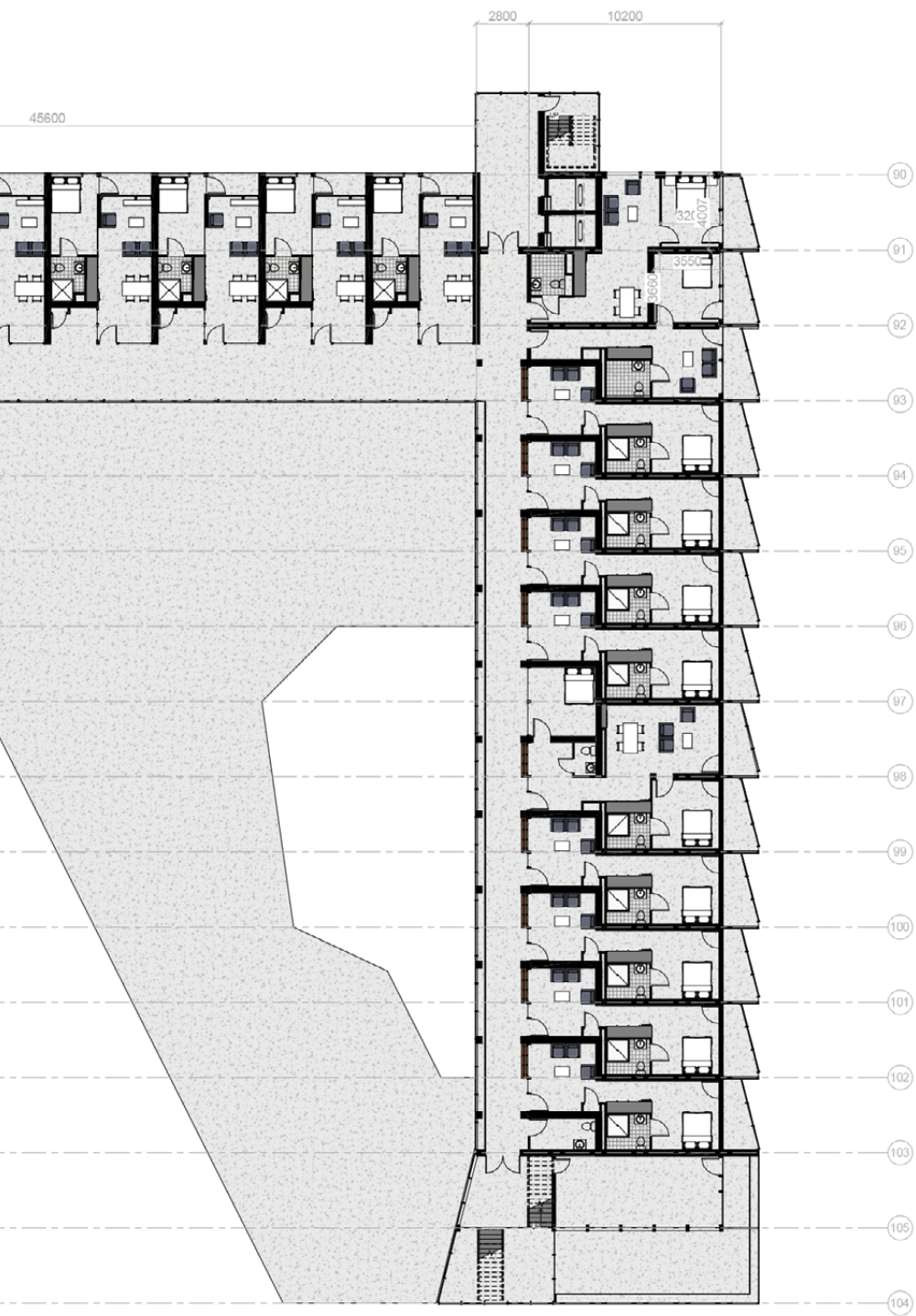
GROUND FLOOR / PLINTH





SECOND FLOOR





ELEVATION EAST FAÇADE





ELEVATION NORTH FAÇADE





ELEVATION WEST FAÇADE



MATERIALS

Red Cedar

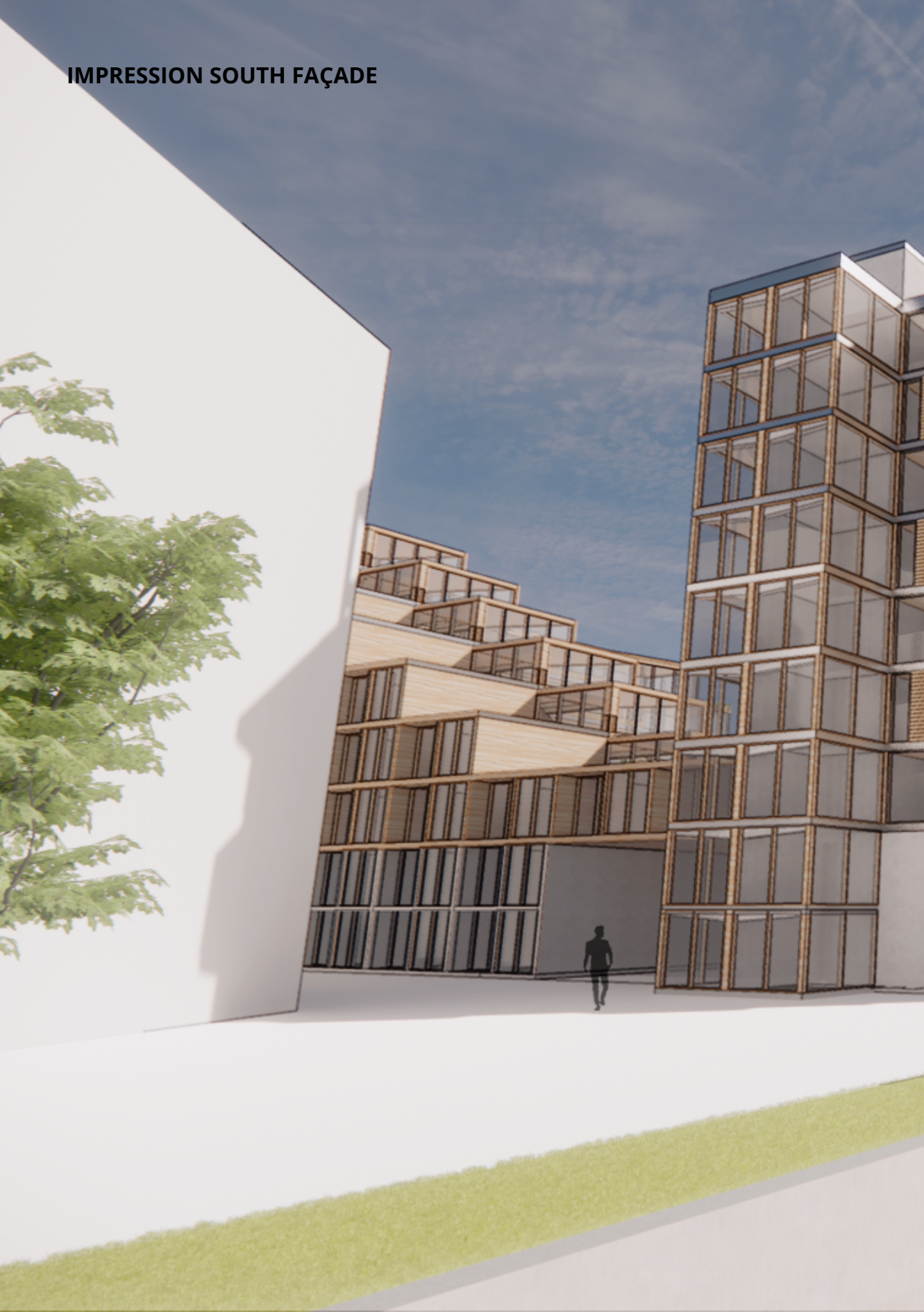


Red Cedar aging



The elevations show the choice of materials for the building. I chose to make the plinth of concrete because it beautifully reflects the raw industrial character of the surrounding area. However the plinth still opens outwards through relatively large windows in the facade. For the upper layers, wood is the predominant material, which ensures that the living functions have a somewhat warmer intimate character and also reflect the use of the entire wooden construction.

IMPRESSION SOUTH FAÇADE



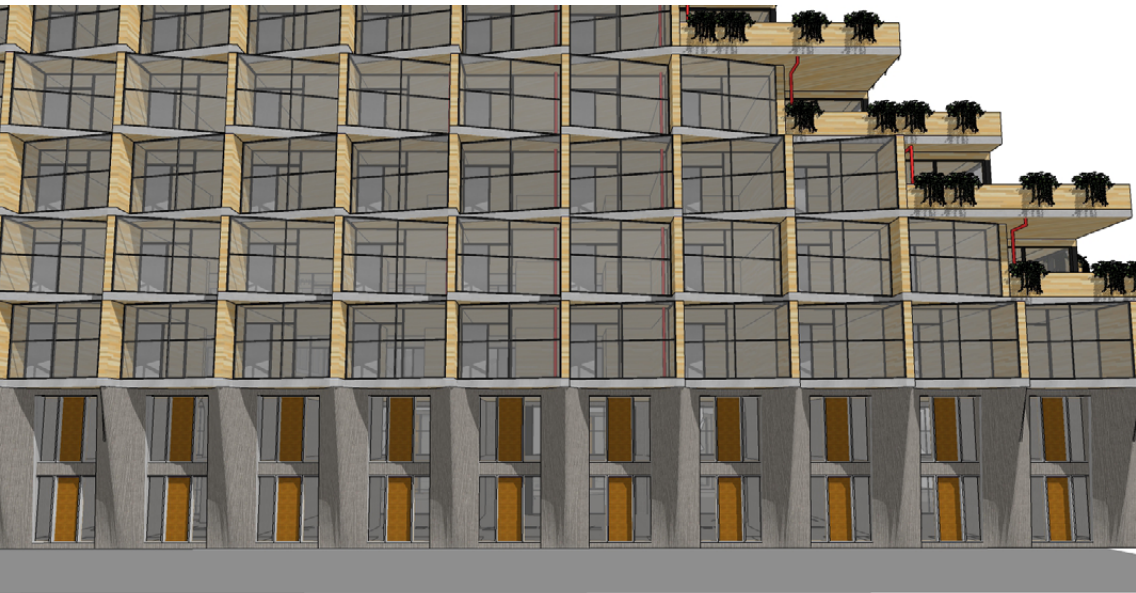
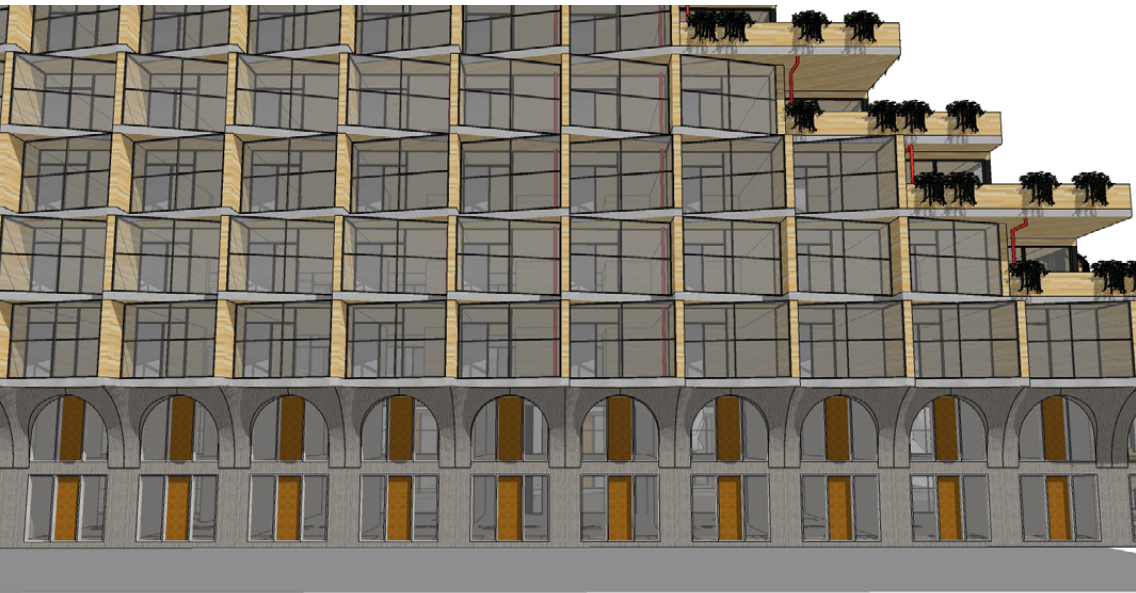


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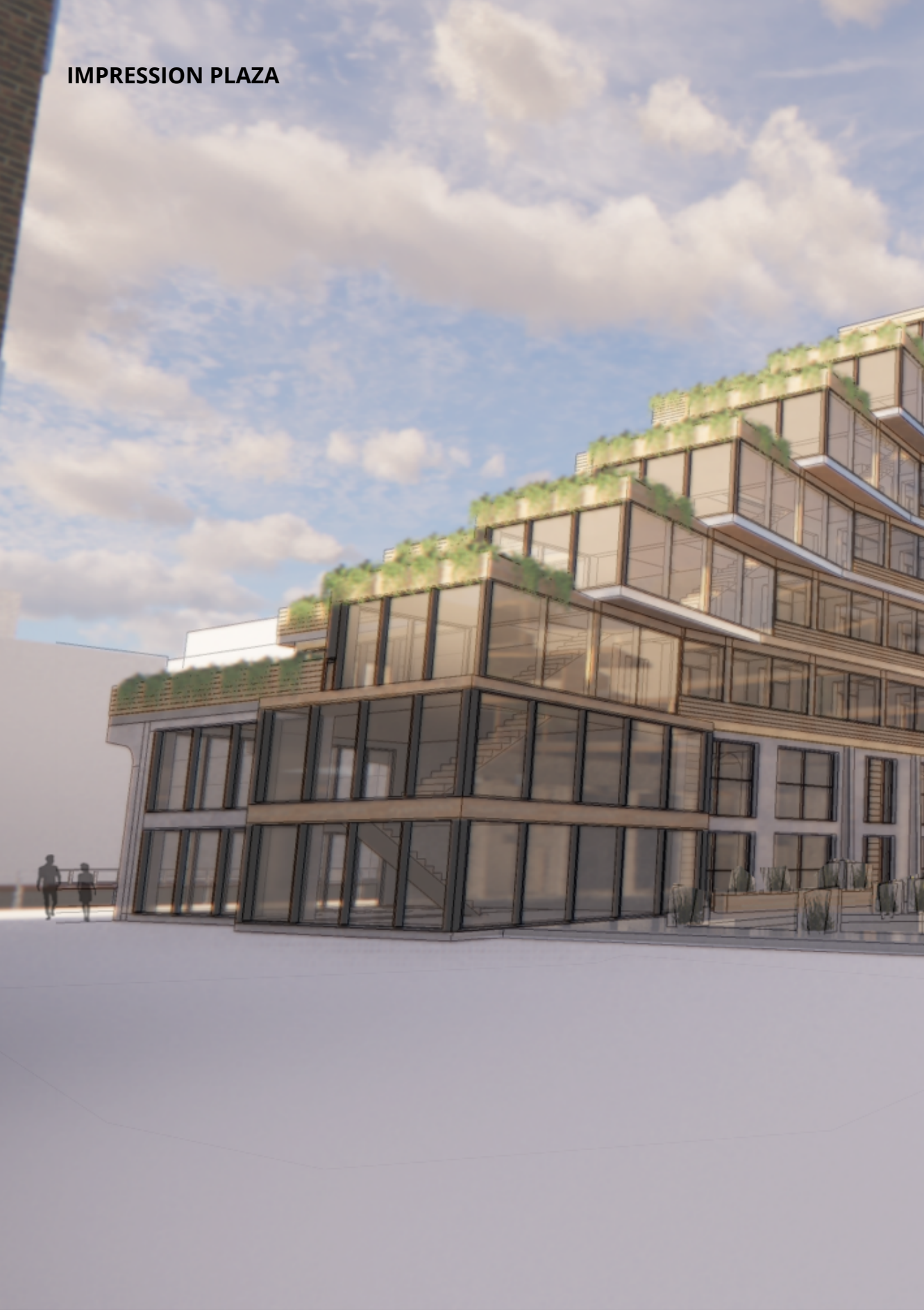


FAÇADE TESTING - OPENNESS ROBUST FAÇADE



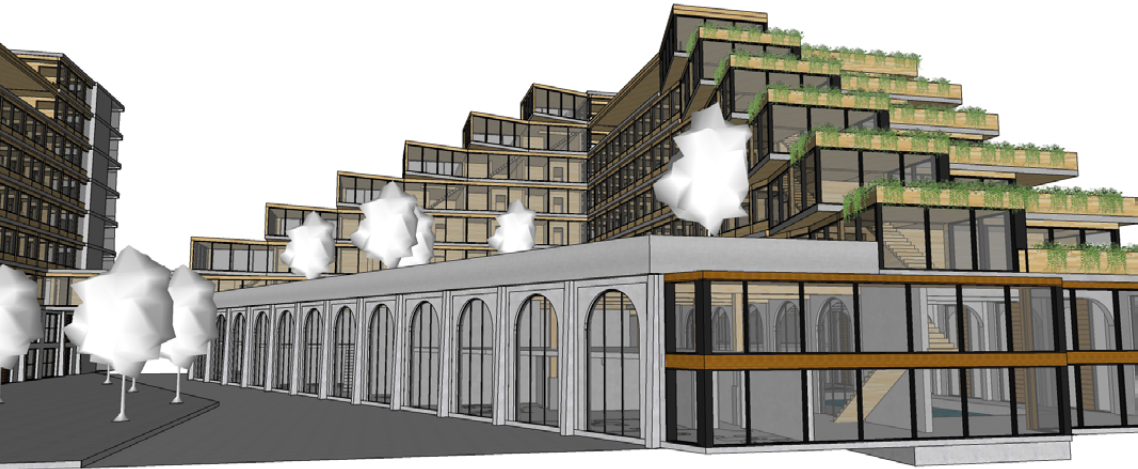


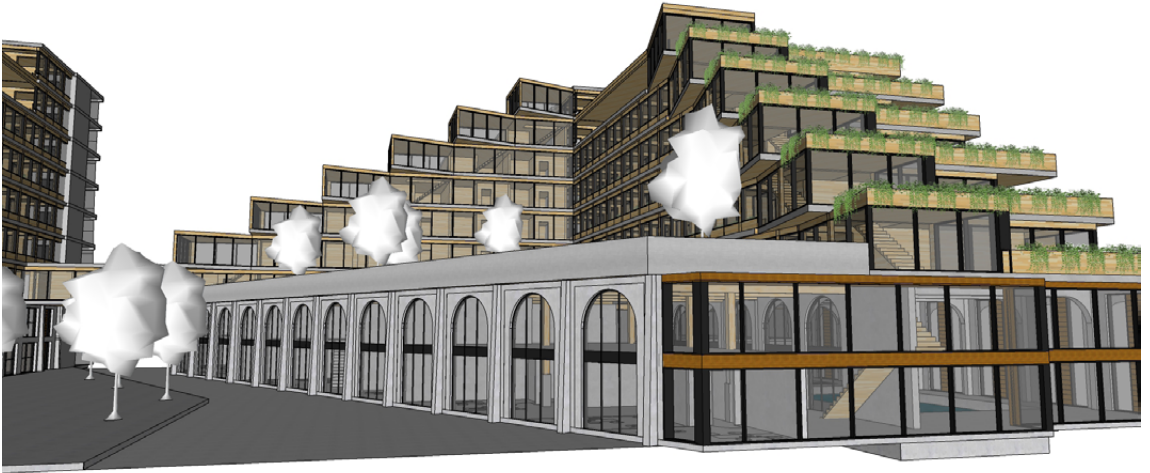
IMPRESSION PLAZA





FAÇADE TESTING - OPENNESS ROBUST FAÇADE



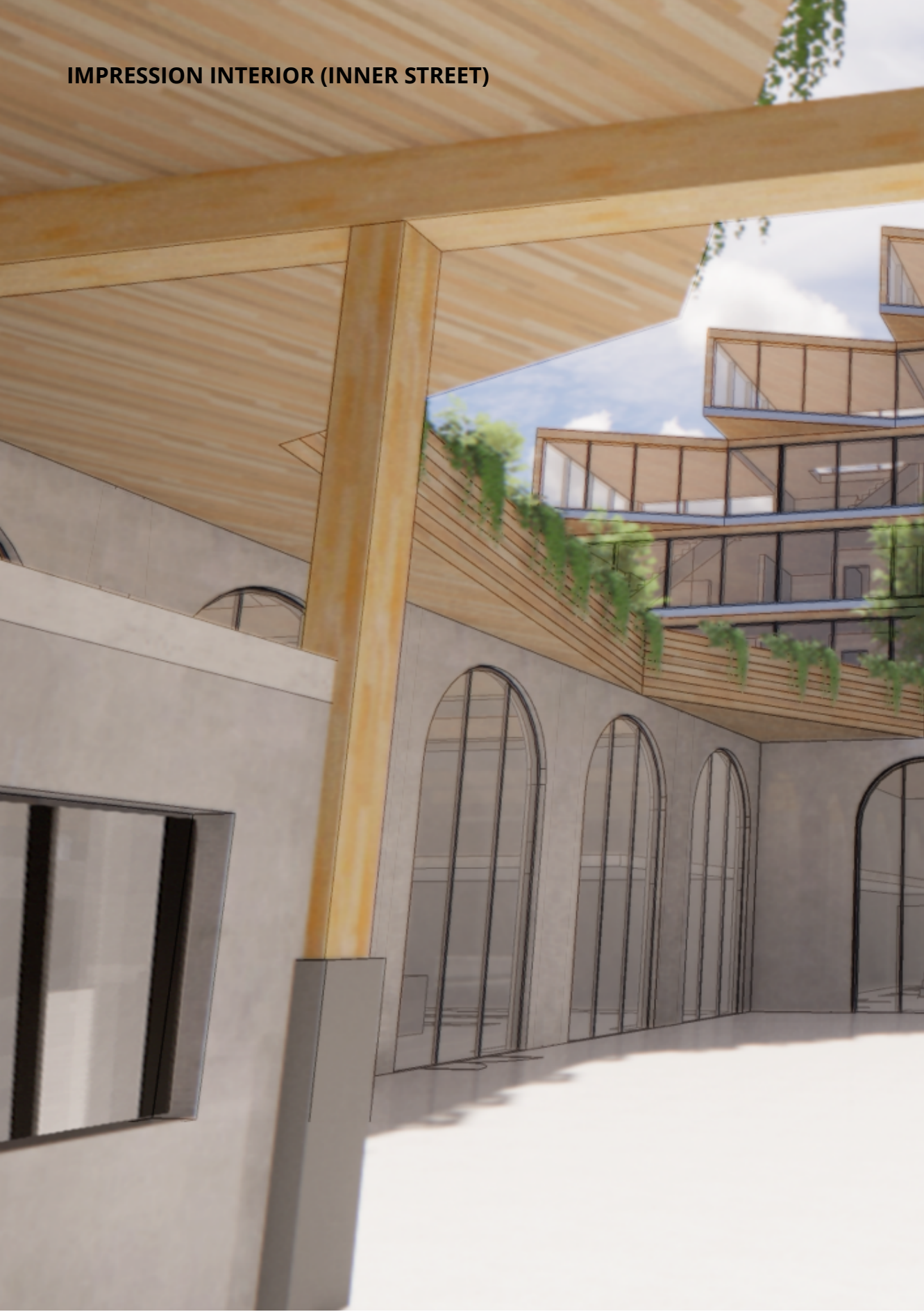


IMPRESSION PRIVATE COURTYARD





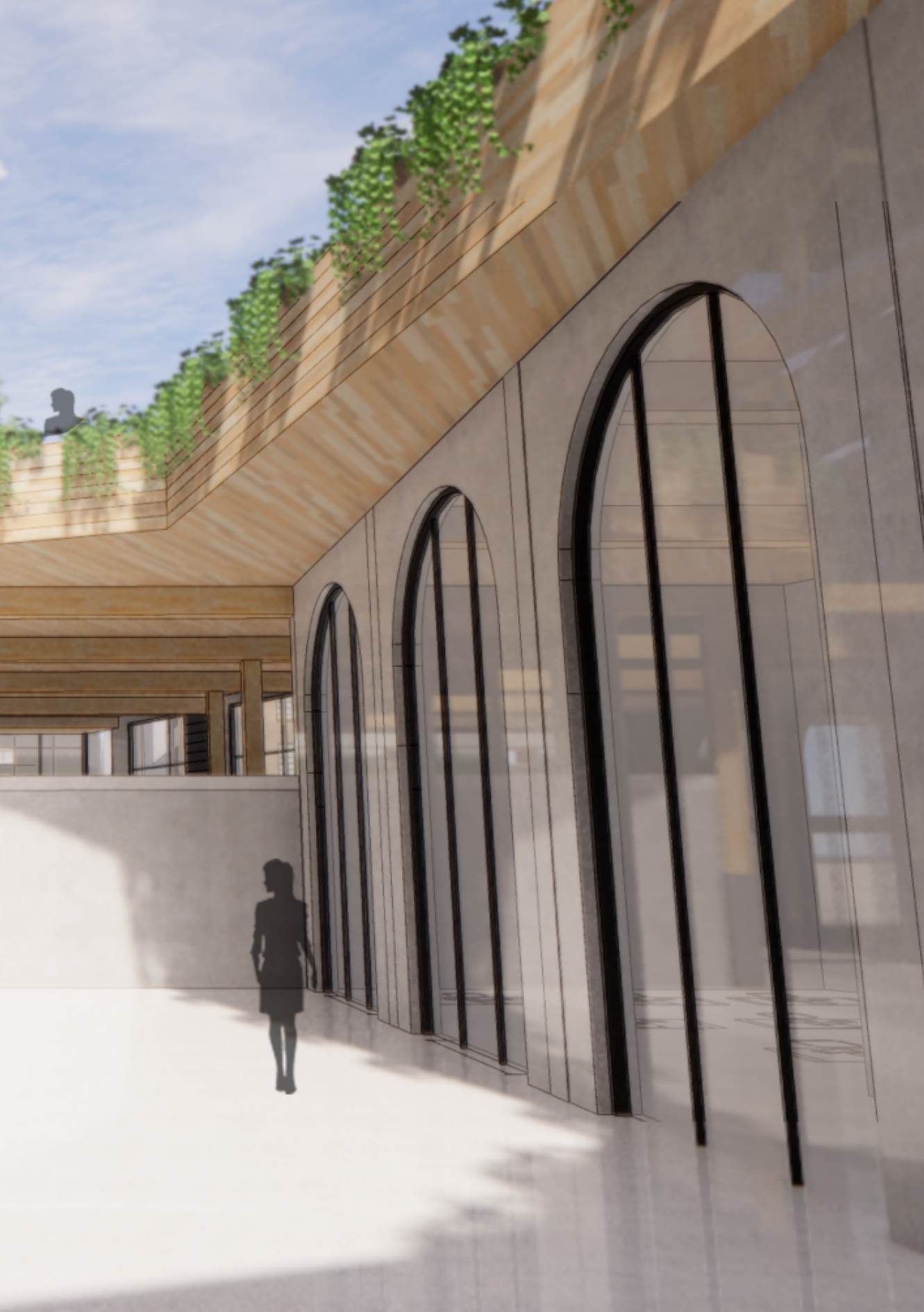
IMPRESSION INTERIOR (INNER STREET)



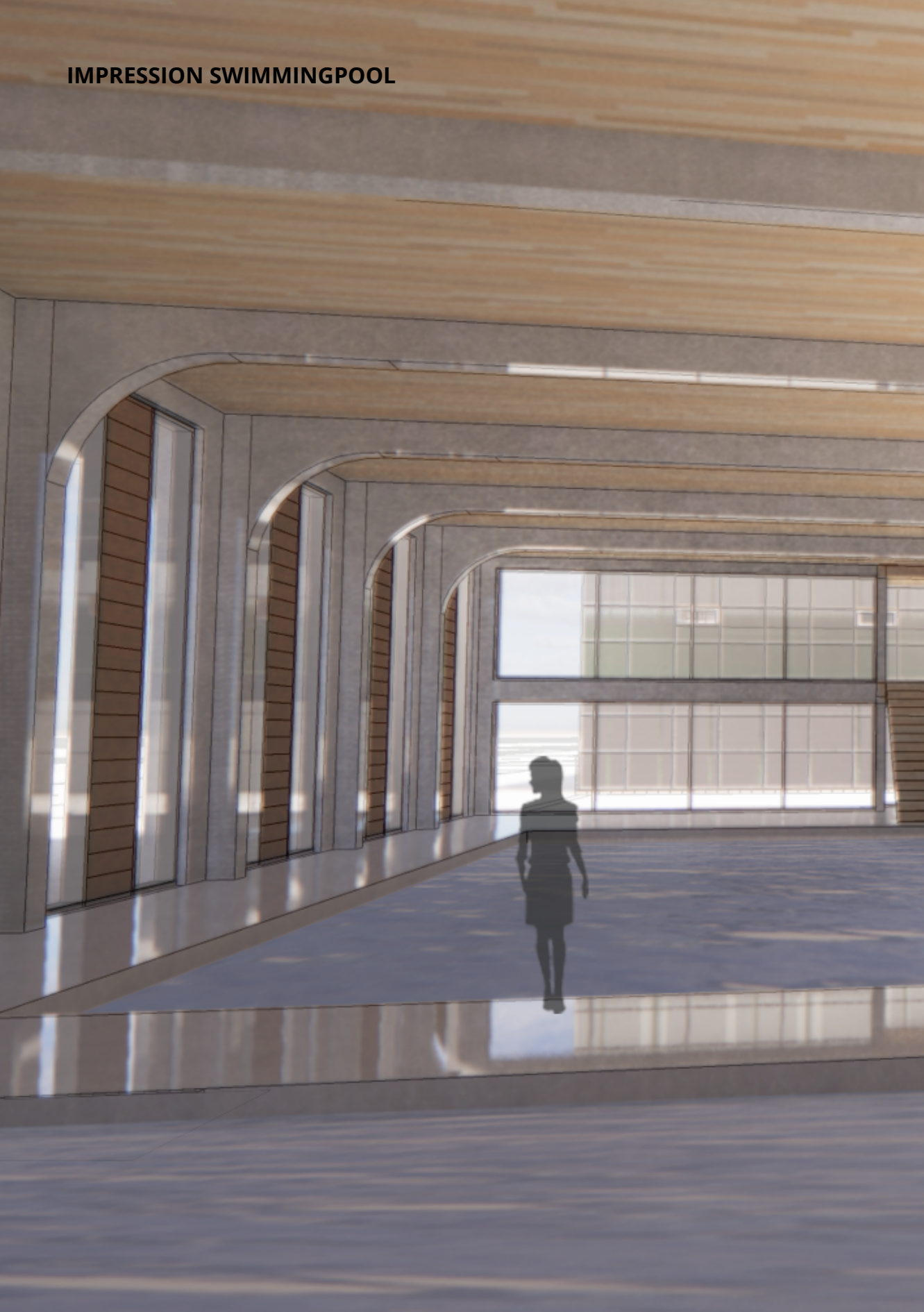


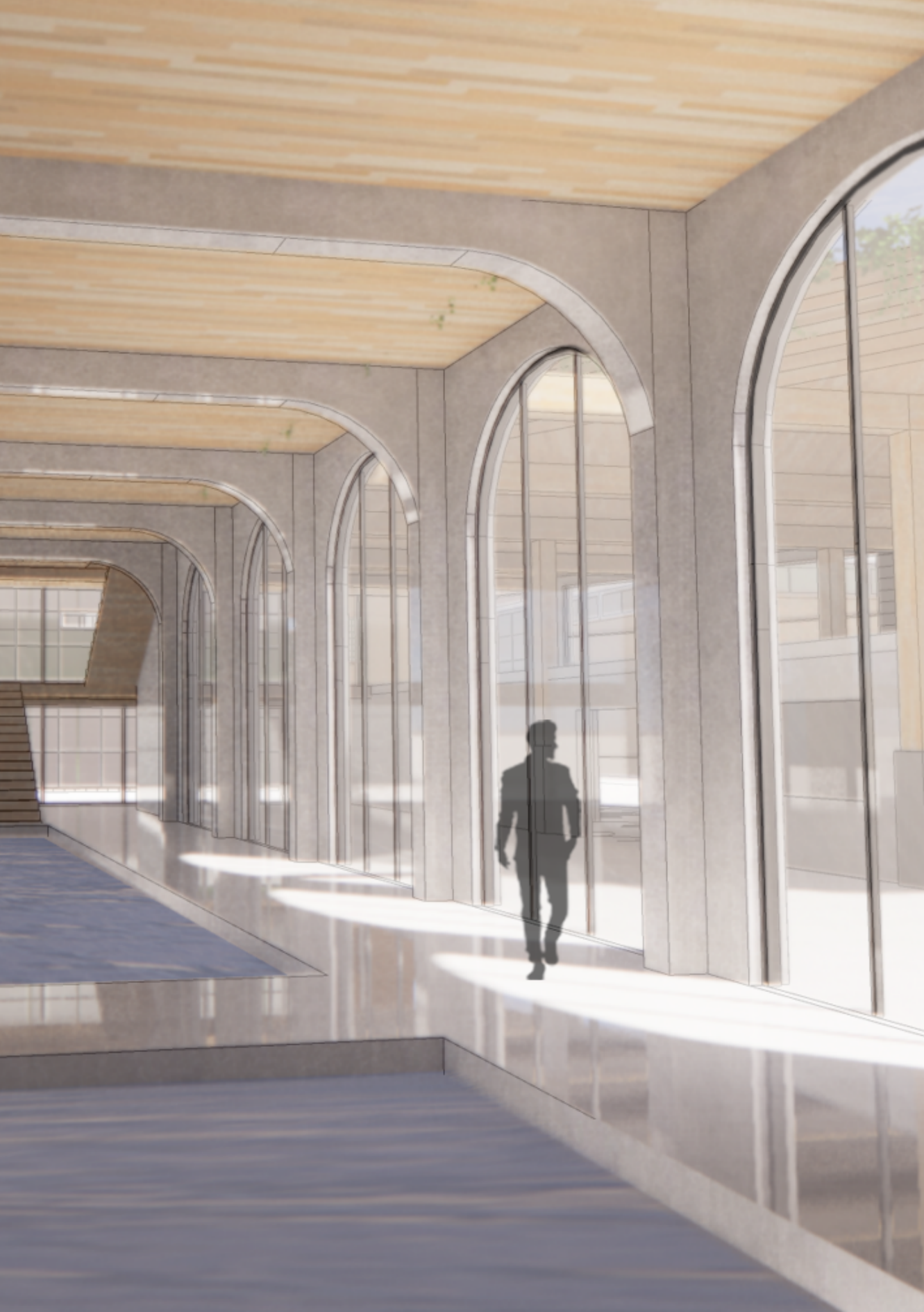
IMPRESSION INTERIOR (INNERSTREET)



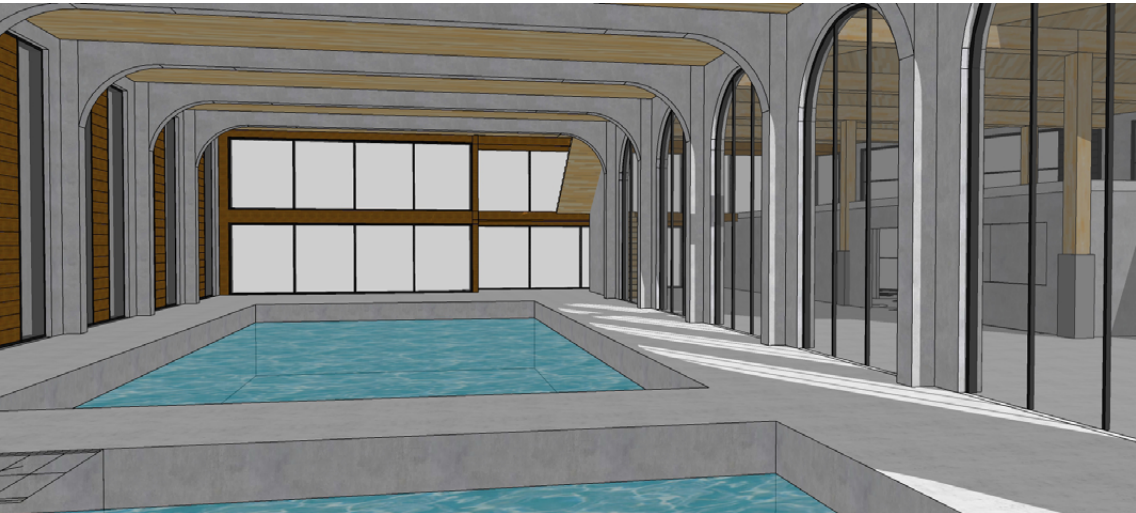
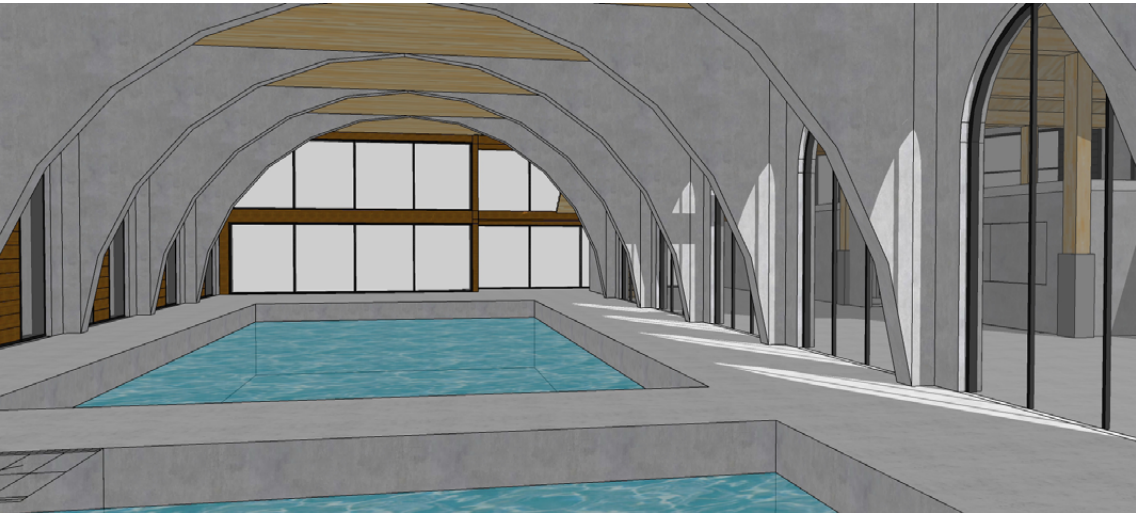


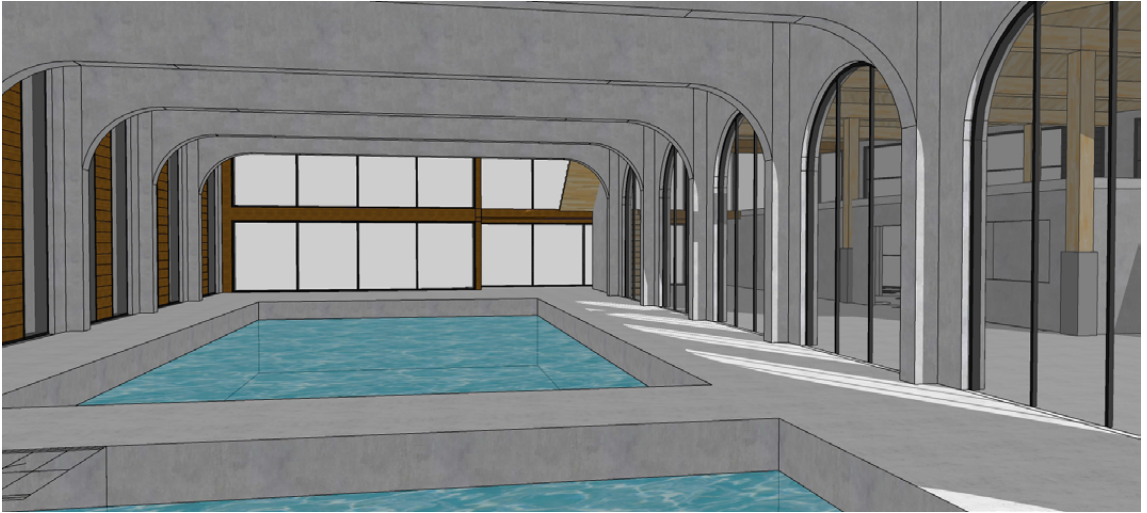
IMPRESSION SWIMMINGPOOL





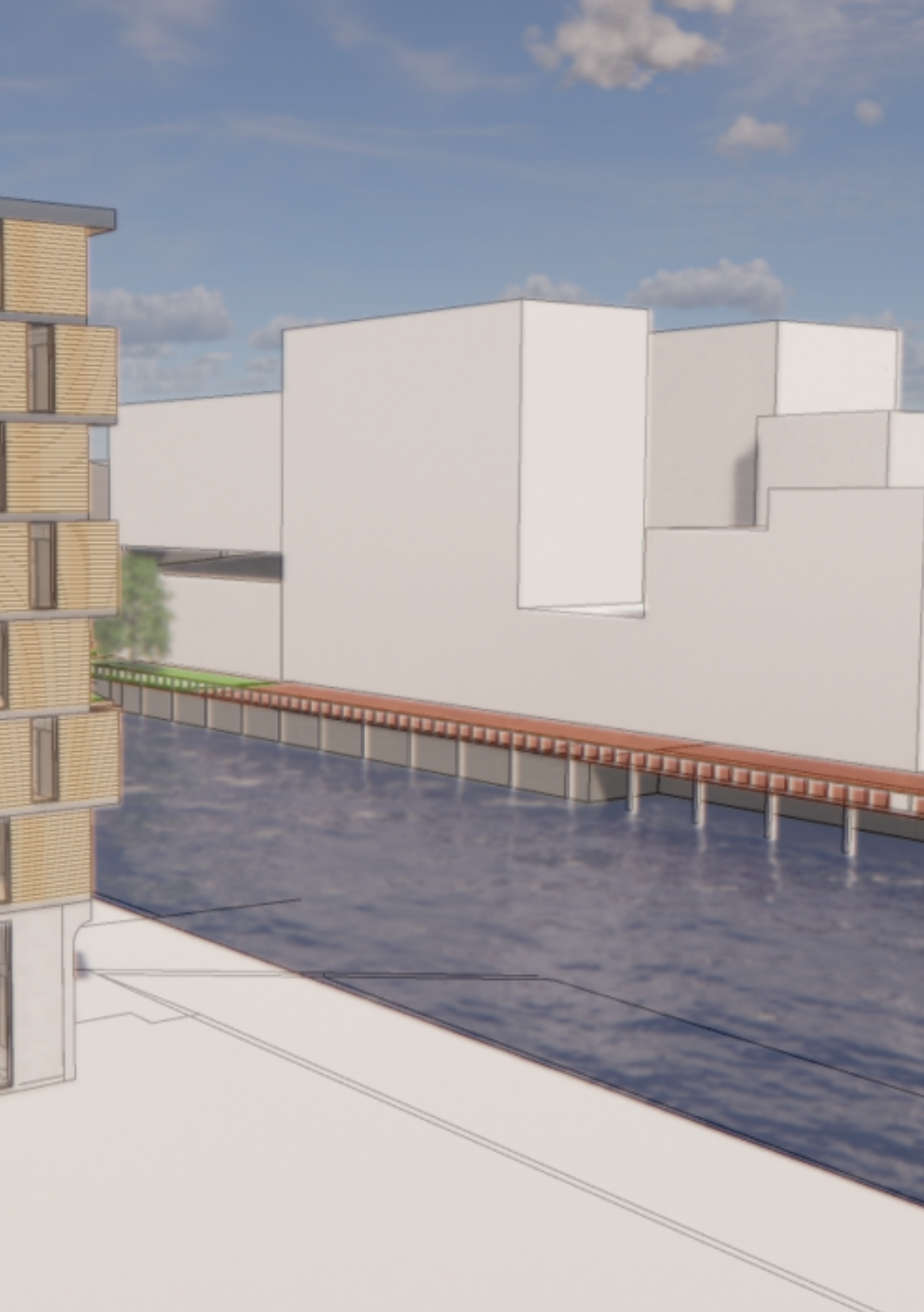
DESIGN TESTING - OPENNESS SWIMMINGPOOL





IMPRESSION BACKSIDE





6. REFLECTION REPORT

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INTRODUCTION

Architecture as a discipline contains a wide range of methods and approaches in design and research. Especially in doing research it is important to be able to reflect and describe your process and thereby validate your own work. Because the discipline has so many facets it is important to be aware of the different methodological approaches. These methodologies help the designer to work in a way that ensures him to discover and discuss relevant issues with more accuracy and authority.¹

We could also say that a research method defines the way of finding answers for a topic. Therefore it is important to be able to decide which one fits the best to certain project objectives rather than looking for which kind of research produces superior results. In doing so we pick a research method with a specific goal in mind. Furthermore using a variety of methods could lead to outcomes from different perspectives that might also be valuable. As a researcher it is important to understand that the fact that you're able to compare these different outcomes makes you have a deeper understanding of architecture on itself.

The experience from the research method course helped us to set up a more deliberate research from the start of the graduation studio. Personally it helped me to have a deeper understanding of my past approaches and their position in the greater whole of methodology.

According to Ray Lucas the most conventional division in methods are qualitative and quantitative research. Qualitative methods are more subjective because they're based on interpretations from an individual or group perspective. Qualitative research might be more appropriate in understanding specific circumstances.

In contrast, quantitative research is measurable because it often contains large numbers of generalized data and thereby seeks to establish irrefutable truths. My research is a combination of these two but I would say the overall focus lies more on the qualitative side because it requires empathy and interpretation to understand the specific needs of the different user groups.

As a part of this reflection I will focus on the different types of research that I have done before and after the first stage (p2) of the graduation process and their influence on the design process and decision-making. Therefore the first part of the reflection will focus more on the intended starting points for the design and the theoretical framework. Furthermore the essay will reflect on the conducted methods of research. By reflecting on different types of research and their influence I aim to find the qualities and importance of each type on the design process / decision-making. I will also elaborate on the impact that the research had on the final design.

DESIGN AND RESEARCH APPROACHES (IN SHORT)

Firstly I will do literature research through books, articles and relating documentaries on the topic of informal / formal care in relation to the elderly society.

Case studies are a part of this literature research. They will help to draw conclusions on how collectivity plays a role in buildings and spaces within the city. Also they will generate more general knowledge about specific dwelling/corridor/gallery dimensions.

Secondly the use of surveys (interviewing) will help in finding more detailed information on the social needs of elderly (also in relation to the informal care from students). The survey was conducted at three different elderly complexes in Delft. To be able to do this, permission was requested from the housing corporation Woonbron.

The three complexes had similar target groups (senior housing) but were different in their architecture, typology and shared (collective) functions.

As mentioned in the research report the social needs of the elderly are guiding, however the students also have specific needs. I conducted statistics about housing preferences from reports and observations from the case study (Tietgen Dormitory). Furthermore we also did some collective research as a group on the subject of collectivity and inclusiveness within the city and it's buildings.

By interpreting the outcome from the surveys in combination with the literature knowledge will result in more general norms and values (code of conduct), or a profile of a way of living that is perceived as important by elderly and will serve as a guideline when designing.

Furthermore we designed with the use of virtual reality, but due to the corona crisis we used an alternative, called Enscape. This VR-like environment helped us in shaping the first characteristics of the building from eye-level.

From then on we used this first prototype shape as a basis for further development of the building in combination with the analysis from reference projects. Projecting these projects on the site will provide guidance for the overall structure of the building.

LITERATURE RESEARCH

Within the Rotterdam studio of Architecture & Dwelling, research and design are closely related and interwoven. Literary research is one of the main ingredients for the actual design. By doing research one's knowledge about a certain target group is going more into depth. This is an individual part of the studio and each student has his own specific group of people for whom he is designing. This group is related to a relevant contemporary societal problem or issue.

From my point of view an architect has to be able to develop a sense of empathy towards the users for who he is designing. According to Pallasmaa this ability of empathy is important in helping the architect to crawl into the mind of a possible client and thereby design something for himself instead of an anonymous user².

This is especially the case in the Dwelling studio, because one of the goals is to create an inclusive city for everybody, young or old / rich or poor, and thus not excluding anyone. However, another demand is to design for a specific group of people (in my case elderly and students) and therefor their social needs can only emerge when the designer really becomes part of their world. What you do for us, but not with us, is against us (Arna Mačkić, 2020).

This means that when designing new buildings and public spaces in the city, we actually have to work together with residents and supply them with their specific needs. This doesn't mean that everything should be the result of compromise, but at least designing should be based on the genuine needs of people.

Literary research also means writing about the chosen literature. This literary writing could help the designer with activating his architectural imagination from different (broader) perspectives.

According to Alvar Aalto the complexity of architecture calls for a simultaneous solution of opposites. Meaning that a solution to opposite directions and outcomes could lead to a deeper understanding of the design task.³ In my research and design process I used this method in times of stagnation. It forced me to zoom out a bit and look at a certain outcome from a different perspective. As an example I knew from the literature that there were certain interventions that would help people in coping with isolation. However the literature didn't really gave me the answers that were necessary in making a specific toolbox for design interventions.

LITERATURE RESEARCH

In this case I found the solution in combining the outcome from literature with the results from interviewing my target group. This is not completely the opposite direction as Aalto mentions, but it can be seen as the simultaneous solution of answers from other ways of research. The survey provided very useful information regarding the housing needs of the elderly. The interpretation of the rather specific social needs that the residents mention and their own comments or ideas have led to more general values and norms (code of conduct), or a kind of profile of a way of living that is perceived as pleasant. This served as a guideline when designing.

Furthermore there is a paper by Van der Voordt where he argues that a researcher should structure his research and writing in advance, in order to find answers to the research question more efficiently.⁴

Therefor I divided my research question into different sub-questions which formed the base of my research framework. Also very early on in the research I framed some of the most important definitions, for example; the target group (community), spatial conditions, informal elderly care, social needs(problems) and an inclusive city. These definitions helped me in finding a clear scope for the research. By framing certain definitions you automatically narrow down your options and the scope of research.

By researching the social needs of my target group, I stumbled across the problem of loneliness and social isolation among the elderly. Because at that moment also the first lock-down for the corona crisis started, this theme suddenly became very topical and also directly visible in society.

An important reason for tackling social isolation is that socially isolated citizens often fail to be self-reliant. According to my research students appeared to be a group that qualifies to provide help in the informal care and isolation among the elderly.

I learned that in communities with different generations people will be able to learn from each others strengths as well as taking care of the weaknesses. Especially because different generations can have such different backgrounds and other perspectives(-views) on life. Therefor they will be able to complement each other on multiple aspects. Architecture can help with certain design interventions to facilitate the specific needs of people who feel lonely and isolated.

LITERATURE RESEARCH

After going more into depth on interventions which help people in tackling isolation, the question arises how architectural interventions can facilitate in the needs for these people. So how do you respond to the above points and more specific; which collective facilities suit the different strategies that people use to deal with certain situations.

According to Tanja Blokland (Blokland, 2008) it is useful to make a distinction between different ways of meeting in weaving and cross-linking. Weaving refers to the everyday shifting and moving towards and among each other. People do not always necessarily want to meet, but they meet each other through necessary displacement. Cross-linking is about going into deeper relationships with others. This often creates more intimate social networks. Both ways of living together are important on their own. However, more value is generally attached to durable ties compared to short contacts.

Sporadic contacts also play a very important role and meet an everyday social need, even if it does not lead to anything else. These two definitions played an important role in the design of the floorplans and access routes of my building.

CASE STUDIES

A second way of doing research is part of a collective research with the group. The studio encourages to get people interacting with each other through debate within the group and subgroups. In total we are a group of sixteen people, and initially we divided ourselves in four sub-groups. In doing research each group had their own case-study projects. However as a total group we used the same ways and methods of doing research into different aspects of collectivity. Collectivity plays a huge role in today's striving for an inclusive city.

The inclusive city is also part of a topic that we addressed from Richard Sennett's book: *Building and Dwelling*.

In this book he mentions the five open forms of the city, which will be further explained in the "research seminar" chapter of this reflection.

In this study a number of 15 residential buildings have been analysed, elaborating on a wide range of housing typologies. Main issues such as the type of housing, functions in the building, accessibility, the relationship between public and private and movement in the building have been studied. This movement studies has resulted in a representative route of a resident through the building with possible collective encounters. Spatial aspects that influence these encounters have been highlighted to emphasize the relationship between architecture and the theme of collectivity.

The aim of the projects was centered around a similar theme. This theme could be a combination of collectivity and for example a certain target group. We looked at the project in a way that we searched for types of circulation space, public space, private space and communal space.

Through our framework and by using the same method / drawing style, we could easily compare the different projects with each other.

By analysing these floorplans we also familiarized ourselves with certain sizes and measurements of floorplans on dwelling level as well as building level. Furthermore we used this frame of reference as a pool of solutions for our own design, which was merely based on the mass of its volume. For example, we copied floorplans and their circulation space and adjusted it so that it would fit within our own mass study.

CASE STUDIES

Not every building's response to collectiveness is as expressive. In fact there are many different ways in responding to the inclusion of collectiveness. Some buildings express their collective aspect by the simple fact that they share a common staircase or hallway. Therefore it could be important to specifically design this common staircase or hallway as a space where people meet and spend their time.

Because of this simple notion that almost every building shares, I decided to include this as a design aspect for my building and also make it more expressive. Therefore the staircase is an important part of the building design, both internally and externally. Every level of this stepped staircase also has a collective space that is connected to it. The users of the staircase are visually connected to these spaces when they pass by and therefore these spaces tend to be more lively. This can enhance one's experience of safety as well as to actually improve safety. Furthermore visual connections can also stimulate actual meetings.

According to our research another way designers create moments of collectivity is by adding facilities to the building that draw the residents and create the collective interactions which can occur within such an environment. These facilities can include fitness areas or swimming pools, like in Hoge Heren or New Orleans. But they can also consist of more general communal areas like in Narkomfin, actively serviced collective facilities like in OCMW Nevele, or the independently organised variety of special room functions in the Tietgen dormitory. In that last building, as well as in de Olieberg, another potentially shared facility appears: The garden. It wasn't by then that I realised that these public/communal facilities would also play an important role in my own building. Because of my literature research and interviewing I learned which functions were specifically important to elderly with a risk of getting lonely or isolated. So I would say that the interviews and literature research were a validation of an aspect that I discovered from the case studies. This could again be seen as what Alvar Aalto called a simultaneous solution of opposites. One method confirms the other through a different medium, but also deepens the understanding of the case studies on themselves.

Robert Yin describes case study research with the following definition: "A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Groat & Wang, 2013). According to Groat & Wang a more applicable definition to architectural research would be: "an empirical inquiry that investigates a phenomenon or setting".

CASE STUDIES

Furthermore they identify primary characteristics of case studies, for example, the capacity to explain causal links, the importance of theory development in the research phase and the power to generalize to theory.

Causal links can be discovered by investigating correlational design aspects in an experimental research, which can identify patterns of relationships, but it stops short in attributing a deeper cause. According to Groat & Wang interpretive-historical and qualitative strategies can also address causal relationships, but with the difference that they both have the potential to reveal multiple more complex and overlapping design factors.

Yin suggests that besides the fact that case studies can be explanatory, they can also be descriptive or exploratory in their purpose. So therefor the role of the case study depends on the researcher's purpose. If I would have been aware of these goals or purposes earlier on, they probably influenced my case study research, resulting in a more structured and goal oriented approach.

Applying these typologies to our case study research we can classify it more as an attempt to explain causal links in a study on collectivity within buildings. I would say the study has both exploratory and explanatory purposes. In doing this we also described certain aspects of the building that came to our personal attention, meaning that we also looked at the projects from an inspirational point of view, seeking to find the first starting points for a design and research topic.

Besides the mandatory case-studies I also did some research into projects which were more suited for the intended target group: elderly and students. This research could be seen as mainly explanatory and descriptive; an attempt to describe and explain the pro's and con's of communal aspects or a reasoning behind the use of certain typologies. An example of this was the research for an elderly complex on the Zamenhofstraat in Leiden, where they made a very clear division between the area for elderly and students. This separation makes the sense of solidarity between the two groups lower, and therefor internal connections are less likely to happen. This gave me the insight that in order to stimulate these internal connections, you will have to look for a more intensive way of living together between these two contrasting groups.

From another project (Curaçaostraat Groningen) I've learned that semi-private space (niches) in front of an apartment could be valuable for social encounters but also one should be aware of the fact that in this way social contact is almost imposed. Furthermore from the project Berkenstede Diemen I was inspired by the fact that the right use and choice of public facilities in the plinth (internal street) could lead to a more lively building which is not only valuable for its residents but also for the neighborhood as a whole.

ENVIRONMENTAL STUDY

When we look at fieldwork it might seem that it is mainly conducted from experiences in the field. However this can be a relatively small part of what happens. Most of the time and experiences which are somehow processed in for example; drawings, photographs and sketchbooks will be spend on going through all these notes and finding relations with possible research interests.

According to Ray Lucas editing is an important process in making any of this material digestible for a possible audience.

Ordering and structuring the notes also help to make sense of it for yourself.

"Sometimes the point of editing is to find the underlying narrative - long before you would even think of showing it to an audience".

He also argues that fieldwork is only part of the story, and requires close analysis with reference to the theoretical concerns that emerge. The point of fieldwork would then be to give you some descriptive material to work with. This material can be understood in different ways, depending on the interests that you are bringing to the context.

When we started with our research we had a short lecture by one of the collaborators from the M4H Destrict. They could be seen as local academics and researchers from different fields and disciplines as a part of the municipality. They made us familiar with the site and came with some first insights and their perspectives on the project site in relation to density, important sustainability topics and the master plan (ruimtelijk raamwerk M4H). They also introduced us to the Harbor area as a part of the larger plan of Rotterdam as a city of Making.

ENVIRONMENTAL STUDY

When we first visited the site the most used method of documenting was photography and sketching. We knew beforehand that one of the products that was asked for were images that would represent the essence of the site. Editing was also an important aspect in making this photo more valuable and readable for presenting it to an audience (meaning the rest of the group).

The assignment was to edit the photo in a way that it would contain important notes about some experiences from the site - called anotated photos.

Most of the students came up with different photos and also different ways of annotating, even though we all had the same assignment. Some found it more important to really document the most sensory perceptions while others wrote more about specific facts and functions of buildings. Therefor we could say that what is perceived as of being of importance is different for each person and also relates back to previous ways of doing site research and knowing what aspects really helped you for your actual design.

De Rotterdamse Citrusveiling betrok in 1955 een gebouw aan de Marconistraat in het westelijke havengebied van Rotterdam en is voornamelijk in gebruik voor opslag van fruit.

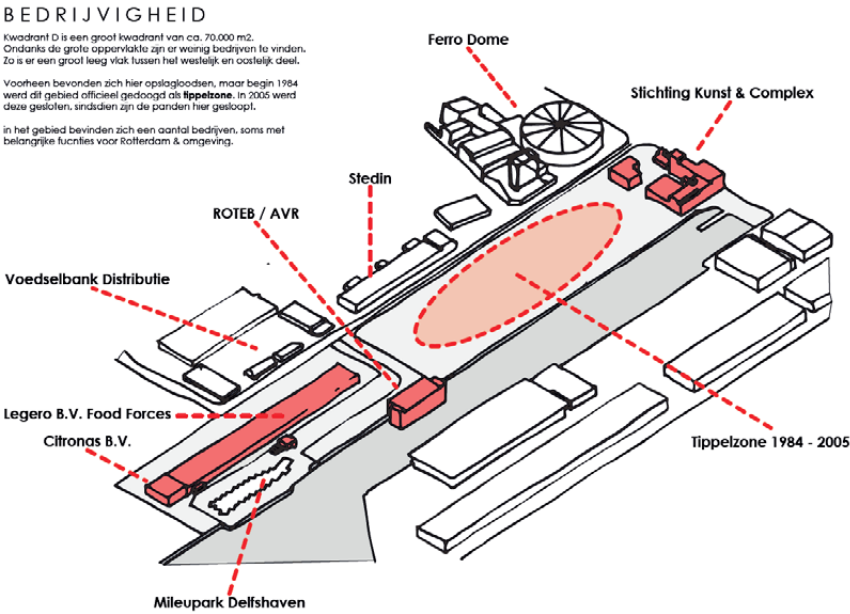
Het veilinggebouw was een initiatief van drie fruitim-porteurs: Jan van den Brinke's Im- en Exporthandel, velleman en Tas en Citronas. De eerste twee bedrijven vestigden zich ook in het complex.



De opdracht voor een ontwerp ging in 1951 naar het architectenbureau Van Tijen een Maaskant. Het pand moest plaats bieden voor een veiling en daarnaast ruimte bieden voor kantoor- en opslagruimtes voor twee van de opdrachtgevers.

ENVIRONMENTAL STUDY

Furthermore we could see this research as a phenomenological study of the perception of this place. This study has resulted in an overview of what buildings were classified as highly valuable for the area and which ones could be demolished.



ENVIRONMENTAL STUDY

Some of us were already more experienced in the site and certain methods and analysis of doing site research and thereby they could really benefit from their own frame of reference. This made it easier to structure the first steps of the research and also investigate some crucial aspects like people- and food flows very early on.

These aspects also played a role in my way of approaching the M4H district as a first step for Rotterdam as a city of making.

I chose food as an important aspect for my group of makers. Reflecting on this now, I realise that this also influenced the way that I designed my building. Some of the inspiration for the first steps of the design and atmosphere of a terraced building came from an image showing stepped rice fields, which relate to the food aspect of the makers district.



As mentioned in the introduction of this reflection, research could be divided into qualitative and quantitative research. Qualitative research is based on a more subjective interpretation of the research, which is based on the understanding of qualities.

I would say that the environmental study has both characteristics depending on the research goals and the measurable research that is done as a response to the site visit. The actual site visit and the annotating pictures are more qualitative. They are the personal interpretation of the phenomenology of the site and therefore they are also subjective.

RESEARCH BY DESIGN AND VIRTUAL REALITY

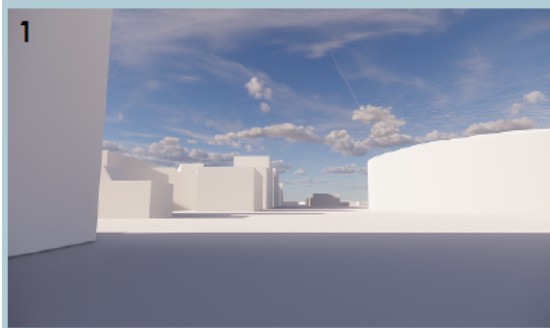
Another method of doing research is; research by design. The essence of this method is that by form shaping and projecting existing structures and floorplans on a shaped volume you'll quickly get a grip on dwelling design, it's structures and circulation. During this projecting one is continuously trying to solve problems that arise from this interaction between form shaping and the functional aspects.

Normally experimenting with models would have been a familiar way to practise research by design. However, due to the corona crisis we were forced to use digital tools more than in the "normal" situation from before. Initially we used Enscape and it's eye-perspective to shape the mass from the building block, taking into account the environmental factors of the Keilekwartier as a whole.

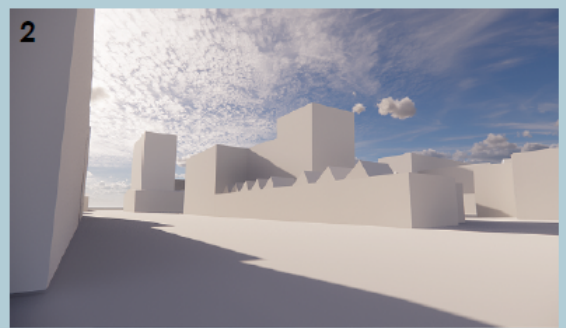
The approach of research by design is also "thinking through producing". Thereby you create your own coherent toolbox with the different methods of producing. Meaning that you constantly produce products and use them as tools for your research. For example; model making, drawing, mapping and writing. Sketchup in combination with virtual reality were our tools for shaping the first characteristics of the building. Virtual reality gives a realistic view of what the form does to your experience and sensory perception. We could say that experience is the interpretation of the sensory perception. In the case of virtual reality in Enscape the sensory perception is limited to the visual perception only, excluding sound, taste, smell and feeling. I believe that this type of research, just as an environmental study belongs to the field of phenomenology, because they both share the aspect of revealing how someone would experience a space or place and it's genius loci.



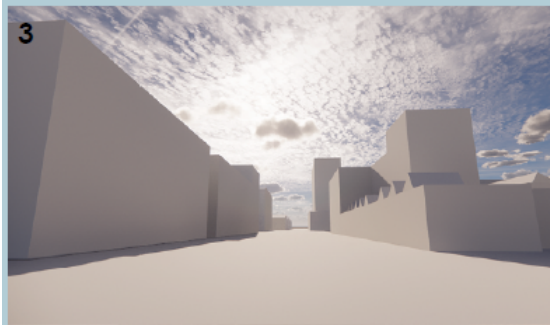
RESEARCH BY DESIGN AND VIRTUAL REALITY



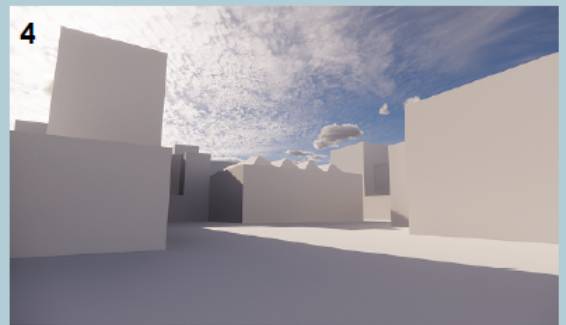
1
When you walk into the Kelleweg from the Vierhavenstraat, you first notice the static facades of Quadrant A. Then the eye is guided to a striking point of attention: The Ferro Dome. The present roundabout is framed by the Dome and the adjacent characteristic building that currently houses "Kunst en complex".



2
When continuing the route, you'll turn around the corner from the end of Quadrant A. From here you have a full view on the former factory building. This building could be seen as a little urban roof landscape that increases in height as the view drifts away. On the right we can see the opening in the "splintered" buildings of the ensemble.



3
When continuing on the route you can clearly see that the opposite buildings are practically the same height as the maximum height of the former factory building. Again you'll notice here that the varying height of the factory's roof landscape contrasts strongly with the straight facade line of the buildings of Quadrant A.



4
Then one arrives at the building, where, as it were, your eye is drawn to a courtyard enclosed by varying building heights. The courtyard arouses curiosity, because the entire square is not immediately visible from the street.

Another statement is that virtual reality would make the design more objective. I would say that the use of virtual reality wouldn't make the research or the design objective, but it helped in making certain design decisions more traceable because of the visual documentation from the eye-level perspective of another person.

Furthermore it is not just the opinion of the designer that is leading in decisions, but also the fact that others have the opportunity to make a valuable judgement by walking around in your model.

So in the process of shaping we implemented a descriptive method of describing several routes of a person that would lead to your building through writing which was supported by visual images from Enscape.

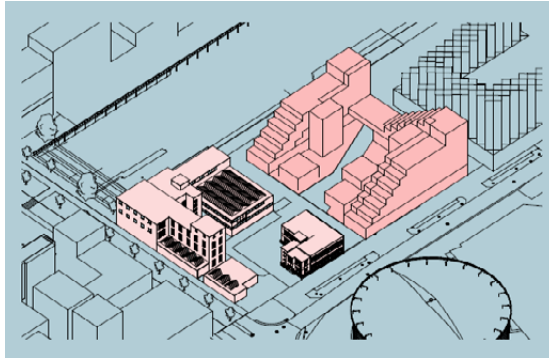
Describing certain environmental characteristics and points of interest from the perspective of a bystander helped to represent or imagine a perceptual image of how the users of this area would experience it. This also gave us the opportunity to take into account certain design aspects or test a hypothesis in relation to lighting, vista's, heights and shadows of other buildings and so forth.

RESEARCH BY DESIGN AND VIRTUAL REALITY

When we take a look at a later stage in the design process, other factors start to influence and shape the design, such as, measurements for installations and general regulations according to “het bouwbesluit” (fire regulations etc.).

The main result of the virtual reality workshop on the design characteristics were the terraced shapes of the building which are directed towards the existing factory building. From eye-perspective it made it look like an entrance (gateway) to our neighborhood and had the functional purpose of a breakthrough which would lead a pathway along the rest of our plot.

This connected with my earlier research that I saw it as a necessity to direct the collective area's towards a lively part of the plot. This meant towards the market area that will be situated in the factory building.



An important rule or starting point from eye level perspective is the experience of an urban roof landscape (daklandschap). This roof landscape from the existing building differs in height/line, and therefore the new building reacts on this principle. The existing (old) makes an announcement for the new.



Then I started designing from a more functional perspective, but always with this principal in mind. The variety in height differences is gradually making place for terraces. These terraces are orientated on the eastern morning sun as well as the existing building which is going to be a bazaar / foodmarket. The collective terraces provide the elderly with a view on the liveliness of the market. Thereby they'll have the feeling of being in the middle of society and this enhances a sense of meaning and being part of this society.

RESEARCH SEMINAR

The Research Seminar was mainly revolving around Richard Sennett's book *Building and Dwelling: Ethics for the City*. We used the book as a subject of discussion and thereby we analysed each chapter by comparing it with other references and case studies. In the end we wrote our own essay about several chapters with a topic that we thought was interesting and thereby we formulated and sharpened our own position on city-planning.

So I would say that the goal of this course was to position oneself and take a critical stand in what an inclusive city means for (future) city planning. In strengthening my own position in this broader field I feel my own design is also a part of this larger framework of the city.

For example Richard Sennett mentions the five open forms of the city:

1. The centre is synchronous - two central spaces
2. Punctuated - monumental and mundane markers
3. Porous - the membrane
4. Incomplete - the shell and the type form
5. Multiple - seed planning

"The essence of seed-planning is minimum specification of how form relates to function; this leaves room for maximum variation and innovation".⁷ For our design in particular we had to elaborate on these open forms and explain how they'll relate to the project. For example seed planning could play a role in explaining how the projects and buildings are part of a larger ambition of the city in becoming a city of Making.



RESEARCH SEMINAR

Hereby 'making districts' or spots for making activities could have different outcomes on different places within the city, taking into account the specific needs of the direct surrounding community. These specific needs could vary per space in the city.

In my own building this meant that specific function relating to social activities for the residents would be situated in the plinth and also had a more public function for the neighborhood as a whole. So this course formed the basis for a topic research and choosing an additional target group.

My topic is loneliness and isolation among elderly and taking this into account I learned that there was a desire for making social connections among this group of people. In this way a position on the larger scale can transform in a guiding theme for the design and graduation process. A guiding theme could then provide a goal for the research as well as the design.

CONCLUSION

Aspect 2: The relationship between your graduation (project) topic, the studio topic (if applicable), your master track (Architecture), and your master programme (dwelling).

My personal graduation topic is social isolation and loneliness among elderly. In my research I try to find architectural implementations and design options to help elderly to overcome social isolation.

The studiotopic relates to this in a way that collectivity and inclusiveness within the whole city starts on building level and the surrounding public space and not excluding people in these spaces. Therefore I see the public space around my building as a place for collective activities by the residents and people from the city. Also I try to gradually introduce the residents from a more private collective space to a public space which is used by the entire neighborhood. This gives the residents (who are different in their approach of dealing with social problems) the freedom of choice for their amount of exposure to other people. You could say that the building provides in area's of collectiveness with a different social intensity.

Aspect 3: Elaboration on research method and approach chosen by the student in relation to the graduation studio methodical line of inquiry, reflecting thereby upon the scientific relevance of the work.

As already mentioned collectiveness and inclusiveness within the city and its buildings is an important part of the graduation studio's line of inquiry. In terms of methodology and scientific relevance I would say that not every aspect of the design process has always been as scientifically measurable as possible. However I believe that the overall outcome of my project and the research could be used in further investigations. It shows how people in general have different strategies to overcome social isolation and elaborates on this by handing out a variety of architectural resources for a design that responds to these needs.

It is this translation from theory to actual architectural resources and design options which makes it interesting for further elaboration.

CONCLUSION

Aspect 4: Elaboration on the relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results.

When we mention transferability of the project results it is important to see the project in a wider scope and as a steering in the (right) direction for elderly care in a growing individual society.

The overall design of my project could be valued as an example of a possible outcome of all the research that has been done on the topic of social isolation among elderly.

Aspect 5: Discuss the ethical issues and dilemmas you may have encountered in (i) doing the research, (ii, if applicable) elaborating the design and (iii) potential applications of the results in practice.

Ethical dilemmas during the research had to do with the circumstances of this year's corona crisis. In order to make my research more clear I had to take interviews with people from elderly complexes. However the strict corona measures by the government made this more complicated. I had to be inventive in how I would approach people from these complexes, because I didn't want to be responsible for possibly infecting other people (who were in the risk group). In the end I came with the solution of simple mail boxes which made direct contact with the residents unnecessary.

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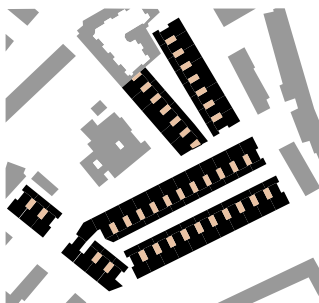
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8. APPENDIX (CASE STUDIES)



Pullens Yard, From: <http://kenningtonrunoff.com/pullens-yards/>



Pullens Estate

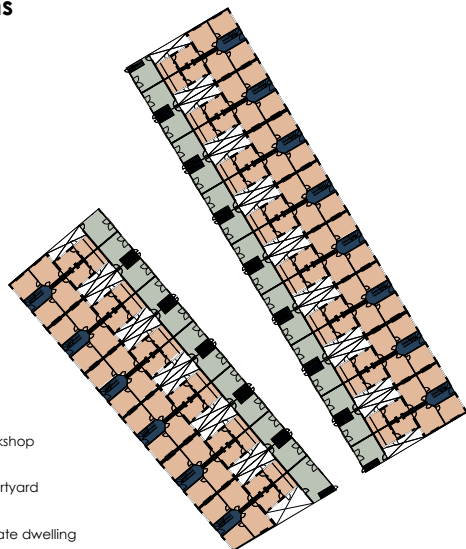
year: 1901
architects: James Pullen
city: London, England
type: Porch Apartments
amount: 351 units
plot size: 9354 m²
total floor area: 17.529 m²
FSI = 1,87

The Pullen Estate is a building complex combining living and working in London, England. The dwelling units face the outer streets while the workshops are facing inwards.

The apartments were built to provide relatively cheap but decent housing for poorer families. Each unit is 4 floors high and consists of 8 appartments and 4 workshops.

Originally 684 appartments were built. However, today only 351 remain. The remaining complex is protected by conservation area status.

Functions



- workshop
- Courtyard
- private dwelling
- Roofterrace
- circulation



Functions

The Pullens buildings are more or less split in two when speaking about functions. Appartments are situated facing the street, while workshops on the first two levels are facing the smaller so called yards.

The appartments are accessed via porches accessing two appartments per floor. The workshops on the ground floor are accessed directly via the yard, while the workshops on the first floor are accessed via a private staircase.

The appartments on the ground- and first floor are directly connected to workshops. However in reality they were often sold separately.

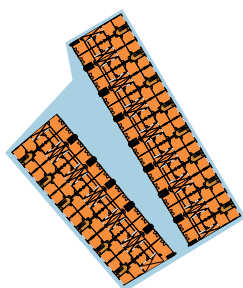
private-public

within the building private spaces are dominant. Only the staircases are shared with 7 other households. Streets surrounding the buildings are all public. However, the inner yards have a more communal character, all transport is mixed and slow and the pavement can serve as extra space for the workshops to be used.

Most of the communal spaces are found on the rooftops. The third floor has a communal roofterrace stretching all across the building facing the inner yard. The fourth floor has communal roofterraces that are shared with eight households.

Even though the roof terraces on the third floor stretch across the building and could be used as a upper street connecting various appartments, the terrace was immediately divided into private terraces.

private-public



Groundfloor



Top view

- public
- communal (for group of residents)
- communal (for all residents)
- private

Pullens buildings as seen from the street



From: <http://kenningtonrunoff.com/pullens-yards/>

Collectivity



Encounters - ground floor

- 1
 - -greetings to someone on the street. Small passage of words. 3 meters distance.
 - -small chat in the porch with neighbour. 1-2 meters distance.
- 2
 - < -Visual contact while being in the small courtyard. 4 meters distance.
 - -Work related conversation or chat with neighbouring makers in own shop. 2 meters distance.
 - -Less professional conversation with neighbouring makers, supposingly more people at once. 1-4 meters distance.
- 3
 - -Work related conversation or chat with neighbouring makers in their shop. 2 meters distance.
- 4
 - -as the street gets smaller, encounters become more likely. The street works as a funnel.
 - -The gate can be a meeting point for all makers. 1-2 meters distance.



Encounters - third floor

- 1
 - ^ -Visual encounter with neighbour from ground floor or quick look at other apartments.
 - -small chat in the porch with neighbour. 1-2 meters distance.
- 2
 - ^ -Visual contact with courtyard while being on the roof of workshops. Possible brief chat.
 - -Contact with people from different apartment that are simultaneously using the rooftop terrace. Fence prevents sharing. 2-4 meters distance.
 - ^ -Visual contact with inner (worker)street. More than 5 meters.



Conclusion

Pullens Estate has some very interesting features considering collectivity. The inner yards welcome a lot of local activity. There is a lot of interaction between the facade and the inner yard.

The roof terraces on the third floor seemed to have missed their purpose. Possibly the lack of clearly expressed function has misguided the inhabitants in their usage of the space.

Architecture and sociability

Peacock Yard



From: <http://www.urban75.org/blog/pullens-yards-winter-open-studios-elephant-and-castle-london-se17/>

Rooftop



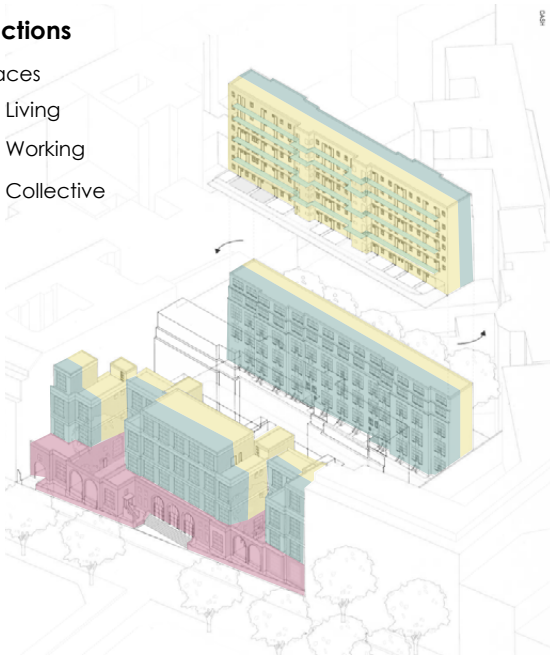
From: https://www.spareroom.co.uk/flatshare/london/elephant_and_castle/4722758

Cité Montmartre aux Artistes

Functions

Spaces

- Living
- Working
- Collective



Year 1930 -1932

Architects Henry Résal & Adolphe Thiers

Location Paris, 189, rue Ordener

Type work homes - Atelier housing for artists

Amount 165

Acces

The first block consists out of collective spaces on the ground floor level. The two entrances: the main entrance in the middle and the car entrance at the left side, are located here.

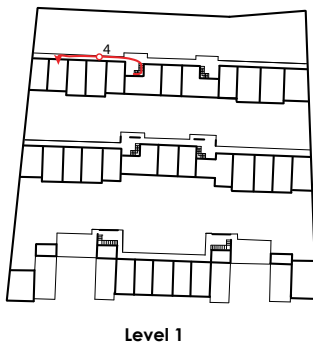
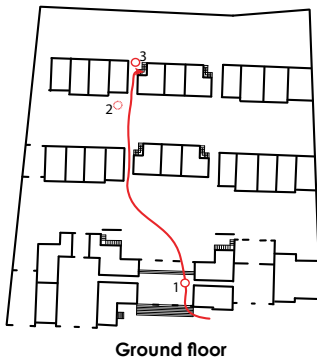
Cité Montmartre has three different acces typologies: the galerie, the ground bound and the porch typology (only in the first building).

Living & working

The blocks have two different sides. a side that could be interpreted as the living side: the side where the galleries and front doors are placed. And the side that could be interpreted as the working side: the side with the high ceiling windows for apartments, and where the ground bound dwellings have an extra door connected towards the collective area with stairs.

Routing in plan

scale 1:1500



Routes & moments of collectivity

The route that one takes starting from the public street to come home leads to a few points of possible collective moments. The route can be quite long which increases the chance of running into another neighbour.

The points are in most cases located on the routes from the private door through the collective area towards the public streets. Especially places where one is able to stay for a longer time. For example the private stairs facing the collective area, one is able to sit there and thus interact more with passing by neighbours.

Conclusion

Cité Montmartre facilitates different kinds of collectivity. The main entrance and the collective areas in between create a lot of different opportunities for small interactions between passing by neighbours through the area. This relates to the length of the route one takes through this area and the created opportunity of sitting outside.

Collective spaces



Main entrance



The atelier facade



The gallery

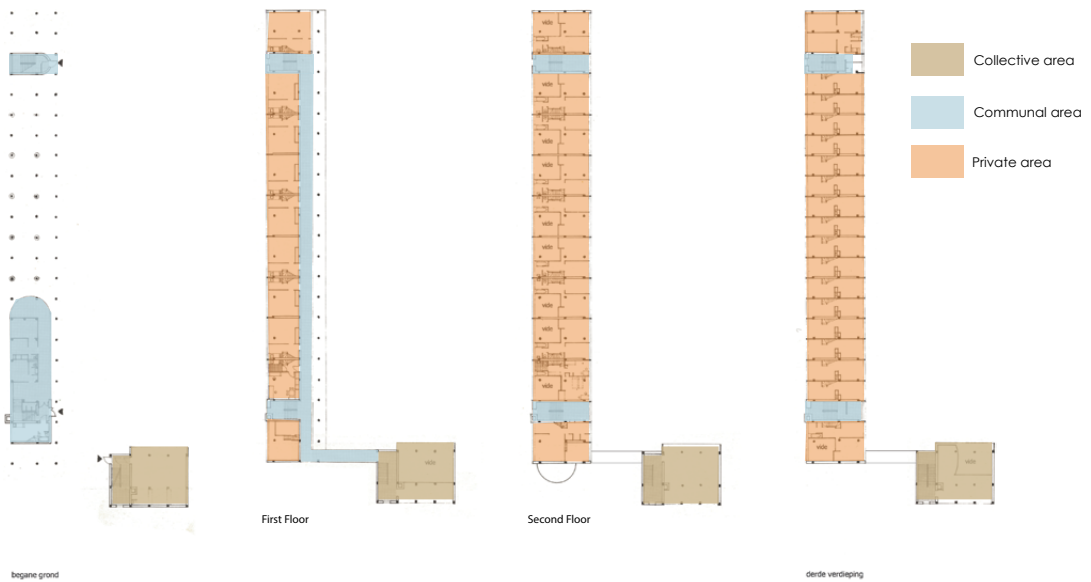


Narkomfin

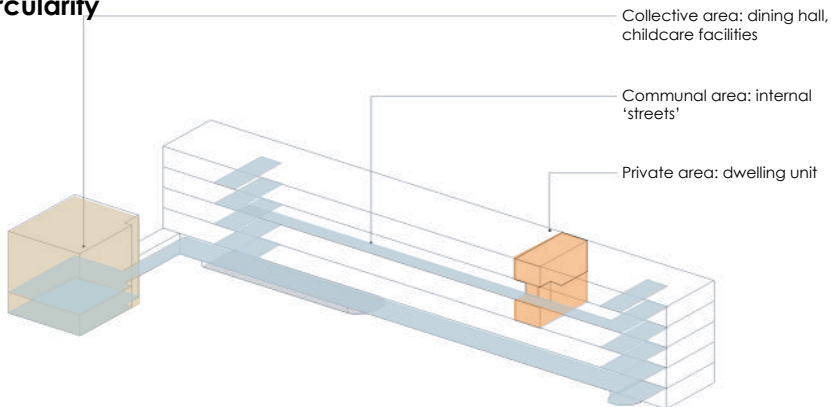
Year: 1930
 Architects: Moisei Ginzburg, Ignaty Milinis
 City: Moscow, Russia
 Type: transitional type of experimental house
 Amount: 54 units

Ginzburg had a clear vision about how architecture could play an active role in embracing the communal life. Therefore the living unit in the Narkomfin building must be redirected outwards towards society at large. This was achieved by moving many daily functions into communal areas, such as lounging, exercising, eating, child-care.

Floorplans

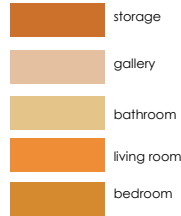
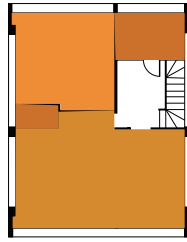
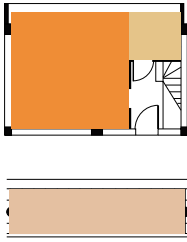


Circularity

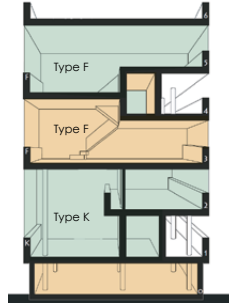
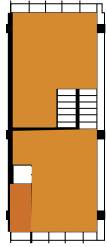
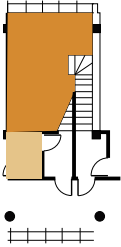
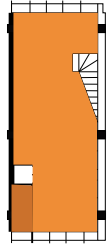


Dwelling units

Type F

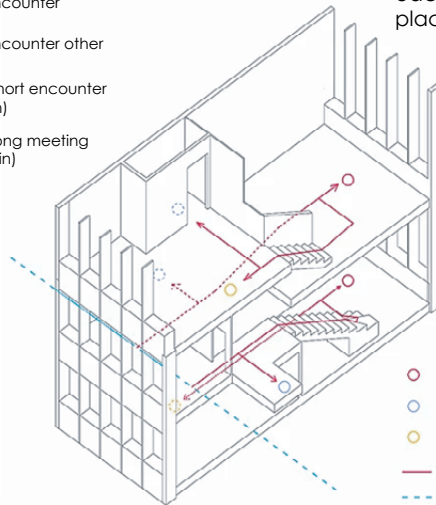
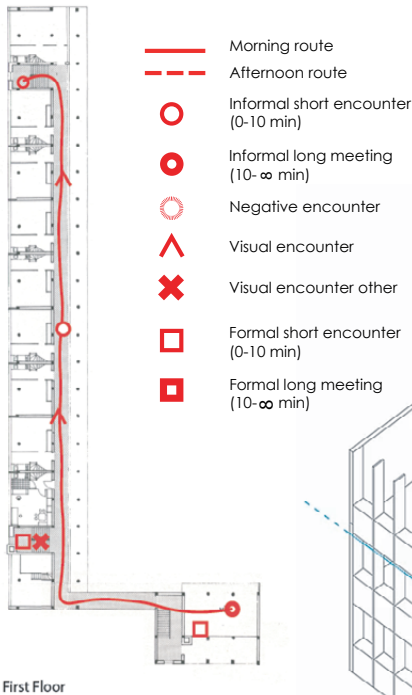


Type K



0 2 1:200

Collective encounters



Narkomfin

The interior features two level apartments, spacious entry halls and corridors, and a community terrace on the roof. The building stands on pilotis, and features ribbon windows, a plain facade and a roof that can be used for additional facilities. In communal apartment buildings, people would be free from individual household work and spend most of their leisure time in public. Narkomfin has five inhabited floor levels, but only two corridors, on the second and fourth level. The Narkomfin has two types units: F-type and K-type, both having the innovation of a split level. In section, each apartment forms the shape of an L, and interlock so that the central void becomes the access corridor. The F type units are minimal dwelling units – containing only a single room divided into a living and sleeping area as well as a bathroom. In each unit a small and removable kitchenette is included. Most of the units belong to the K-type (with a double height living room) and F-type connecting to an outdoor gallery.

Conclusion

Collectivity was very important in this design. The building has separated private areas from public areas and therefore separating living from working. By placing the communal spaces in a collective annex-building, the habitants are forced to interact with each other. Collectivity also takes place in the corridors and gallery.

Sources:
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- semi-public areas
- individual areas
- private areas
- apartment routes
- - - corridor routes



Kölner Brett

year: 2000

architect: b&k +

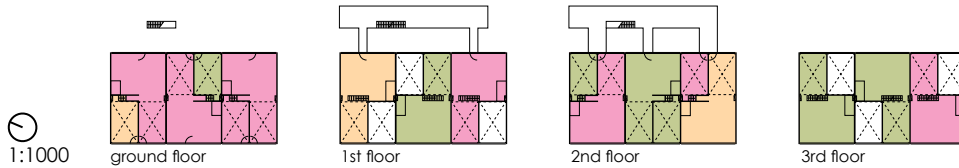
brandlhuber&knies GbR

location: Cologne, Germany

type: live-work building

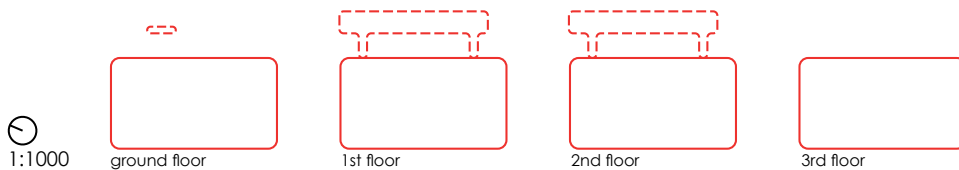
amount: 12 units

Kölner Brett is a response to the need to for live-work units in Köln by desgining possibility. The building is made up of 12 large units, each consisting of a horizontal and a vertical space. The units are entirely empty apart from pipes and electricity, so that the future inhabitant can completely design their own space. These units can then again be merged to create larger dwellings and offices. They are accessed through a large staircase-gallery that sits extened from the block on the east side.



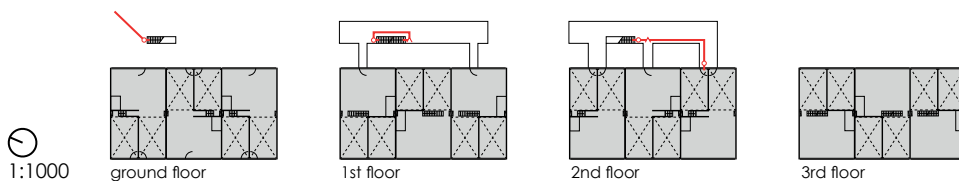
functions

The building is made up of 12 units that can either be entirely directed towards living, working or at a mix between the two functions. Nor of the sources, nor the architect, could give a clear indication of what the exact distribution was for living and working, so this is an estimation based on pictures. (Green: Live, Pink: Work, Yellow: Live-work)



public-private

Kölner Brett consists of private homes and an extended gallery at a distance from the homes, with the gallery being collective, but publicly accessible. It forms the transitional zone between the privacy of the live-work unit and the openness of the street.



route, moments of collectivity

The route that one takes from the dwelling to the exterior throughout the day sees a few potential moments of collectivity. These are mainly at points where the route intersects other routes, at doors and at stairs, and a greeting can be exchanged. There are no collective facilities that can provide for moments of collectivity.

in conclusion

Kölner Brett is not designed for collectivity, instead it puts a great focus on individuality. The owner can shape their unit or units to their own desire and make it completely unique. The only natural moments of collectivity consist of meeting one another on the gallery when exiting or entering the dwelling.

source and pictures: <https://www.brandlhuber.com/0019-koelner-brett>



De Hoge Heren

Wiel Arets Architects

year: 2001

architect: Wiel Arets Architects

location: Rotterdam, the Netherlands

type: Housing

amount: 285 apartment divided over two towers

Two residential high-rise towers are situated on a 6-story plinth. This plinth contains public and resident parking, a public gym and the main entry hall. A void in the centre of the building enables natural light to spill into the interior. The towers stand within a green terrace on the roof of the plinth, onto which the lobbies open, so that ample outdoor space is offered to residents, in addition to that of their private terraces. On the same floor, a collective fitness- and sauna room, a swimming pool, guest rooms and work spaces are situated.

Functions

- entrance

The ground floor contains the entrance of the building, the first part of the parking garage, bike parking, privately owned storage rooms, garbage rooms, technical services and a public gym.

- parking

Parking space is situated on the four floors between the ground floor and the lobby on the sixth floor. The car-parking garage is accessible through an entrance on the ground floor at the north side of the building. The bike sheds are located on the south side of the ground floor.

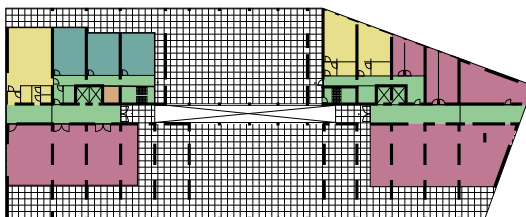
- housing

Royal sized appartments are housed in the two towers. Each floor contains 10 appartments, sizes vary from 122-143 square meters. The Hoge Heren houses a total of 285 appartments (160 rental, 50 furnished rental and 75 free-market). No other functions are housed in these towers.

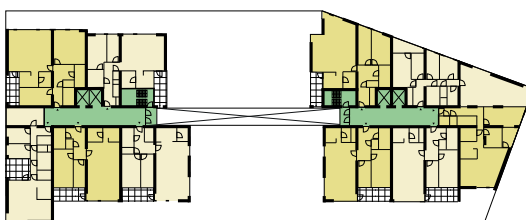
ground floor .
entrance
public gym



6th floor .
lobby
roof terrace



7th - 34th floor .
appartments



Public - Semi-public - Private

The lobby and roof terrace on the sixth floor contains various semi-private functions such as a swimming pool and sauna, a fitness room, workspaces, and guest appartments. This floor creates the border between partly public ground floor and parking garage and the privately owned appartments in the tower.

- Private
- Collective
- Work
- Circulation
- Public
- Parking
- Services

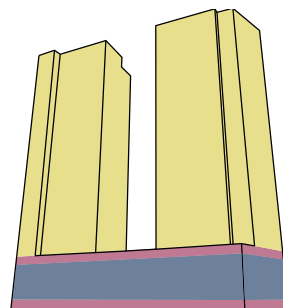
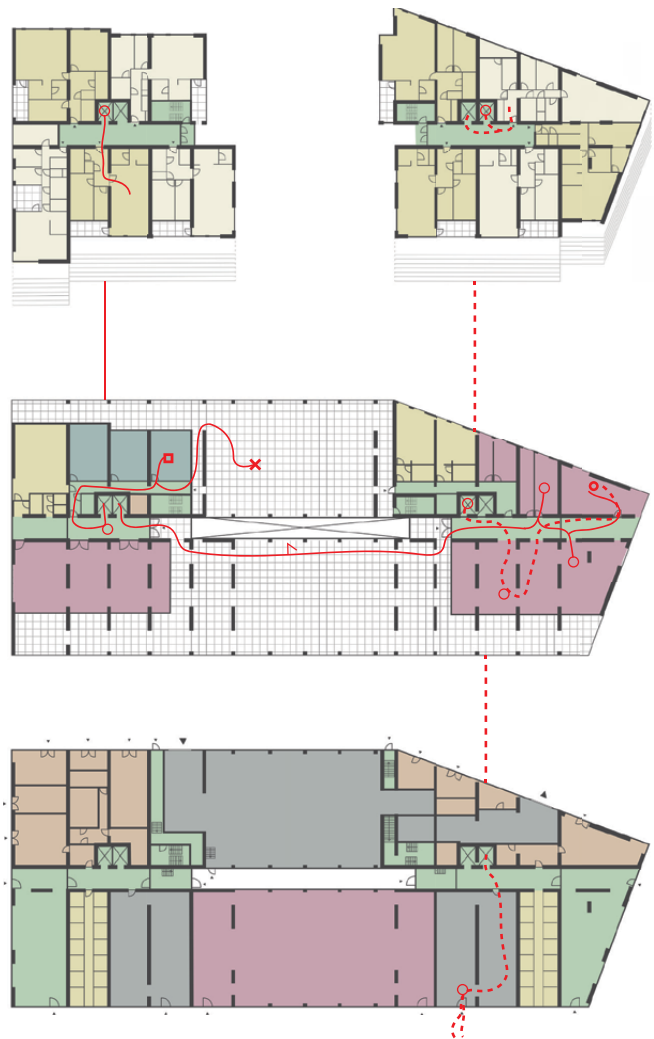


image from: Wiel Arets Architects. Hoge Heren. retrieved from https://www.wielaretsarchitects.com/en/projects/hoge_heren/

Collective Encounters

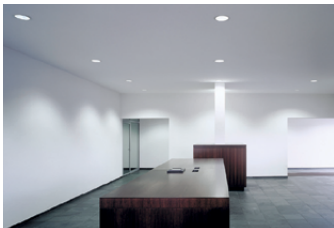
De Hoge Heren Wiel Arets Architects



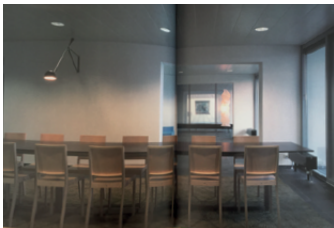
- Route resident A
- - - Route resident B
- Informal short encounter (0-10 min)
- Informal long meeting (10-∞ min)
- Negative encounter
- △ Visual encounter
- × Visual encounter other
- Formal short encounter (0-10 min)
- Formal long meeting (10-∞ min)

Conclusion

The programme of the Hoge Heren building has a strong distribution between public, semi-private and private area's. A public fitness facility is placed on the ground floor, separated from the rather functional semi-private spaces like the service rooms and storage sheds. The parking garage on the 2nd to 5th floors separates the ground floor from the semi-private 6th floor where all collective spaces are situated. This is the only floor where residents would meet each other besides the informal encounters in places such as the elevator or the bike sheds. The rest of the floors, in the towers, are completely private oriented. The residents can move through the building in a relatively anonymous way. They can choose to meet other residents themselves by making use of the facilities on the 6th floor.



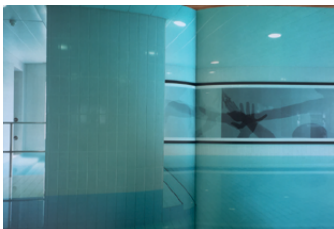
< The interior of the lobby on the sixth floor is open and clean. The palet of materials like natural stone and wood results in luxurious character.



< The interiors of the semi-private office spaces on the sixth floor are open and flexible.



< The outside area down the central void has a futuristic character through the use of aluminium finishes and green-coloured lighting, and dark tiles.



< The interior of the semi-private swimming pool is open and light. The luxurious atmosphere, light spots and art make it feel like a pool of an hotel.

imageS from: Wiel Arets Architects. Hoge Heren. retrieved from https://www.wielaretsarchitects.com/en/projects/hoge_heren/ (left)
Kim Zwarts, from: Hilverink, H. G. 2002. Hoge Heren. Rotterdam Wiel Arets. Maastricht: Vesteda. (right)



Svarthlamoen housing

year: 2005

architect: Brendeland & Kristoffersen arkitekter

location: Trondheim, Norway

type: Student dormitory & studios

amount: 22 dormitory units and 6 studios

Svarthlamoen is a residential complex for young people. When it was realized it was the largest building in the world made of solid wood. It made a statement about Norwegian housing policy, which did not pay enough attention to people of all ages with a low income.

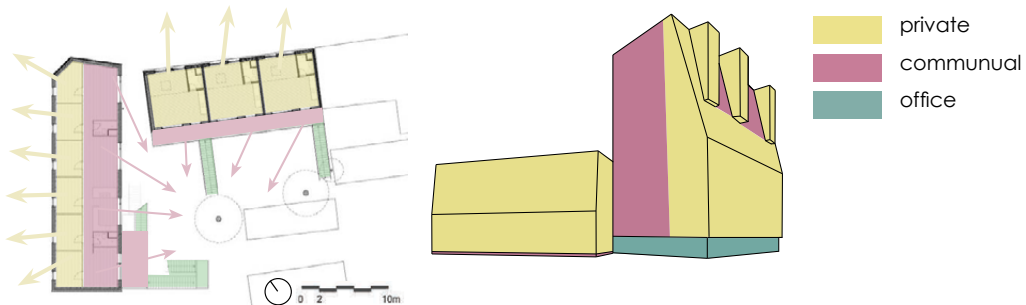
Functions

The whole complex contains 28 living units, whereby the main building consists of a half sunken plinth with office spaces and four group homes of 110 to 128 m² for 5 to 6 people. Half of the dwellings are communal spaces: the kitchen, living room, bathrooms and balconies. The average floor area per person is 22 m², which is considerably lower than the 50 m² which is the Norwegian standard.

The low two-storey block contains two sets of three studio apartments of 28 m². This building also has a laundry room and storage space in the basement.



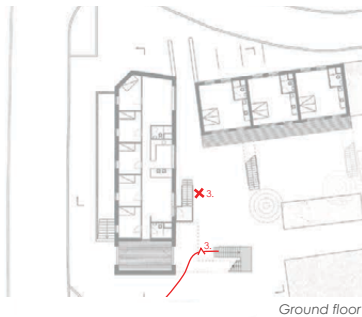
Private-public



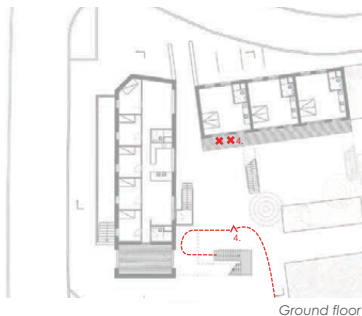
The housing complex is built around a courtyard, which is the collective centre of the site. The two housing buildings facing the court are closely connected to the court, which is therefore easy accessible from out of the dwellings. All the private spaces in the higher building are oriented to the outside of the complex, while all the communal spaces are oriented towards the central courtyard. Both buildings also have their own collective outdoor spaces alongside the courtyard. The high building with the group houses has a large steel stairs which serves as access to the houses and as balcony at the same time. The lower building with the individual houses has a collective porch at both floors.

Collective encounters

Morning:



Afternoon:



Svartlamoen housing



- Morning route
- - - Afternoon route
- Informal short encounter (0-10 min)
- Informal long meeting (10-∞ min)
- Negative encounter
- ^ Visual encounter
- × Visual encounter other
- Formal short encounter (0-10 min)
- Formal long meeting (10-∞ min)



Spatial characteristics



1. The communal livingroom is an open space wich deliberately was left unfinished by the architects, so that the residents could make it their own by decorating the walls and placing furniture.



4. The galleries in front of the buildings function also as the collective balconies. Because of the large dimensions it is possible to relax here in the sun on your own or with your roommates.



3. The central courtyard is an open space, flexible in use. It is used as a place to store bikes, to sit and to relax. A hammock in the middle is one of the items which can be used by all residents.



6. The communal kitchen is in the same space as the communal living room. From here large windows give a sight into the courtyard, so the inhabitants can always see what is going on there.

Conclusion

Collectiveness was very important in this design. The courtyard is literally central to the collectiveness of the complex. It is the space where the inhabitants of the entire complex can meet one another, when they store their bike, sit and relax or when they engage in any other activity they planned. The next layer of collectiveness consists of the outdoor spaces of the buildings adjacent to the courtyard. The shared 'balconies' evoke encounters between people who live on the same floor. The last layer consists out of the communal living rooms. To make sure that the people would actually make use of these spaces, the designers actively involved them during the design phase and afterwards by delivering an unfinished product, so the inhabitants could make it their own.

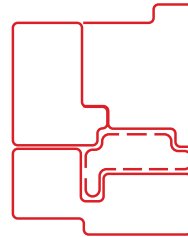
Images from:
Architecture norway (2005) Svartlamoen housing, Trondheim, retrieved from: <http://architecturenorway.no/projects/dwelling/svartlamoen-2005/>
Fourth door (2010) Svartlamoen, Trondheim – Harbinger to Norway's massive wood phase-change, retrieved from: http://www.fourthdoor.org/annular/?page_id=1269

The Olieberg is a building in which people with a certain disability can live in a 'companion' home. They live mixed with "normal" people through the building. There is a meeting point where supervisors can provide support 24 hours a day. You can also eat, wash or drink a cup of coffee there. So this is also the place where you could meet someone from the same building.

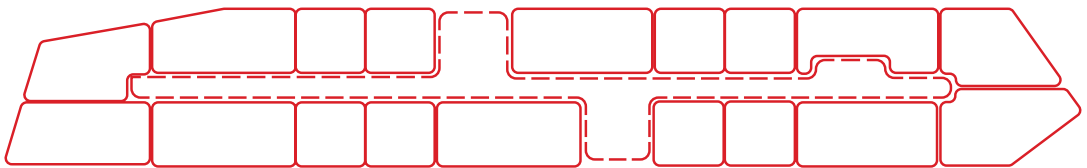
Various interventions have been made in the corridors. Firstly, there are voids so you can look on other floors and there is more light in the corridors. There are also recesses on each floor to both sides so that you have a view of the beach on one side and the city on the other.

The 'dune-garden' (the courtyard) is a collective for local residents and only accessible from the buildings. This is also the playground of the nursery. There is a fence around this.

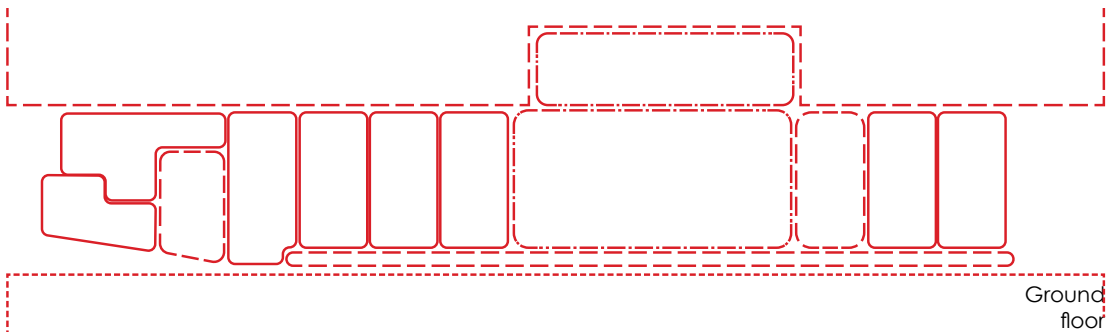
- Private
- - - Collective
- . - . For specific public
- - - - Public



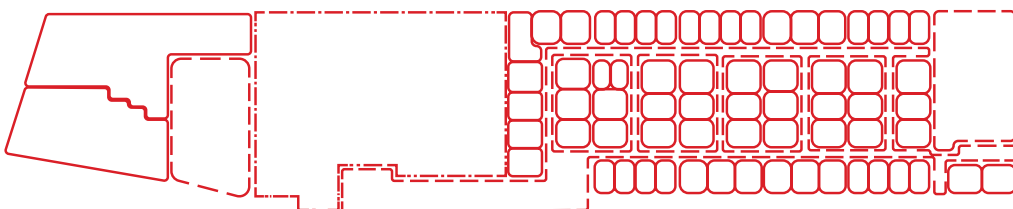
Seventh floor



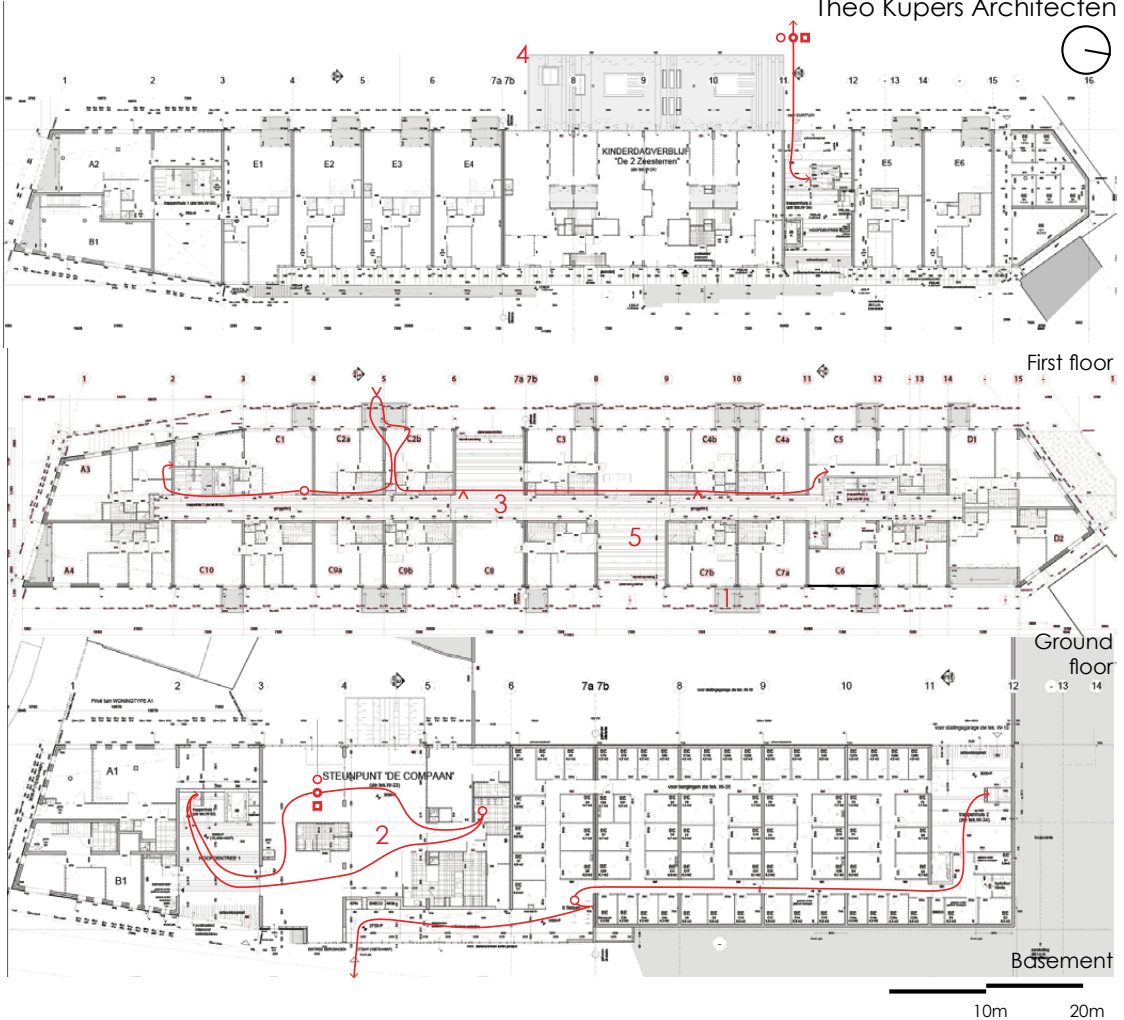
First floor



Ground floor

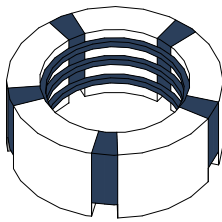


Basement





Exterior Tietgen Dormitory (Lindhe, J. M., 2014a)

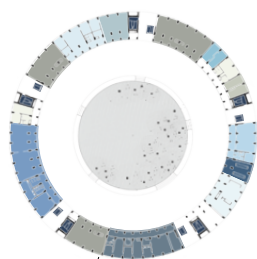


Tietgen Dormitory

year: 2006
architects: Lundgaard & Tranberg Arkitekter
city: Copenhagen, Denmark
type: student dormitory
amount: 360 units
plot size: 6.082 m²
total floor area: 26.781 m²
FSI = 4,4

The Tietgen Dormitory (Tietgenkollegiet in Danish) is a circle-shaped dormitory in Copenhagen, Denmark. The circular shape is meant to address all its surroundings equally, and makes private dwellings look outward and shared rooms look inward. The circle surrounds a public courtyard. On the ground floor, the building has many facilities that can be used by all residents such as study rooms, music rooms and a big multifunctional assembly hall where sometimes events take place. The upper six floors are student housing. Every group of twelve dwelling units shares common rooms such as a kitchen and a utility room. These rooms face the courtyard, possibly making the shared experience a communal experience.

functions



0

circulation

letterboxes

offices

assembly hall

washing room

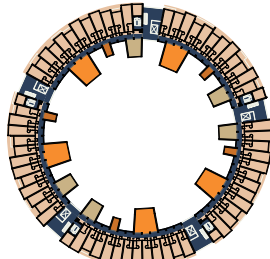
room for groupwork

reading room

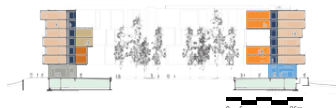
computerroom

gym

bike storage



2



workshop

music room

entertainment/study room

private dwelling

kitchen/living room

utility room

garage

functions

The ground floor of Tietgen houses many shared facilities that are accessible for all residents of the block. There are different kinds of study rooms, a shared washing room, workshops and even a gym.

The floor plan of the second floor is exemplary for all other floors. The hallway which gives access to the individual dwellings outlines the center courtyard. Shared spaces such as kitchens, utility rooms and multifunctional rooms are placed on the other side of the hallway, opposite the individual dwellings. One has to pass through the hallway to go to their kitchen.

private-public

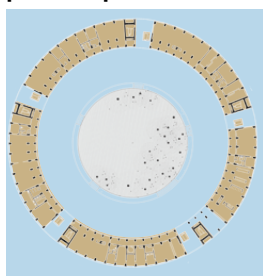
The center courtyard is publicly accessible, but can be closed off by fencing off the five access routes. It is not clear in whether this happens on a regular basis or only in particular cases such as during an event.

The ground floor building parts can be used by any of the residents of Tietgen. The staircases can only be accessed by residents as well. It is unclear whether the elevators can be used by outsiders, but that does seem to be the case.

The first through sixth floor are only accessible to residents and their guests. Every hallway section, from one elevator to the next, is closed off with locked doors. Twelve residents per section form a group that shares a kitchen/living room and a utility room for hanging laundry.

The third shared space in a section can have various functions; cinema room, billiard room, study room. They can be used by all residents, although they do need to ring the group's bell.

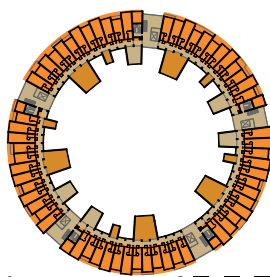
private-public



0

public

communal (for all residents)



2

communal (for group of residents)

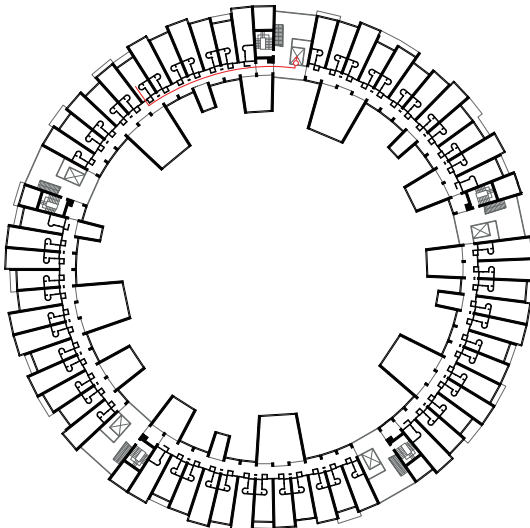
private

Courtyard Tietgen Dormitory (Lindhe, J. M., 2014a)

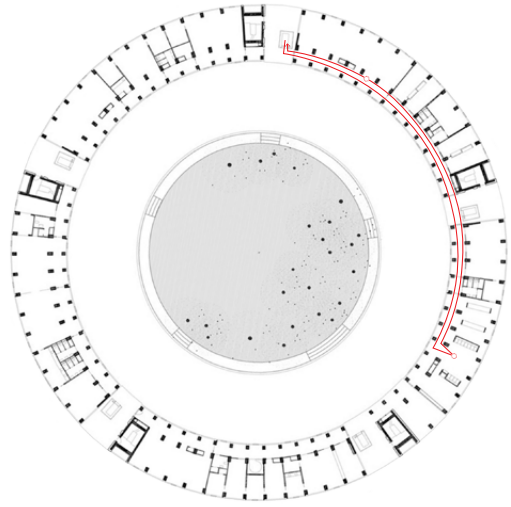


Lindhe, J. M. (2014a). [Exterior Tietgen Dormitory]. Retrieved from <https://www.archdaily.com/474237/tietgen-dormitory-lundgaard-and-tranberg-architects>
Lindhe, J. M. (2014b). [Courtyard Tietgen Dormitory]. Retrieved from Lindhe, J. M. (2014). [Exterior Tietgen Dormitory]. Retrieved from <https://www.archdaily.com/474237/tietgen-dormitory-lundgaard-and-tranberg-architects>

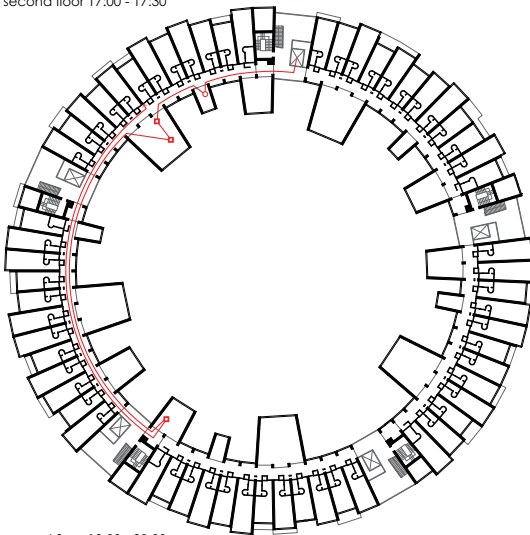
Tietgen Dormitory



second floor 17:00 - 17:30



ground floor 17:30 - 18:00



second floor 18:00 - 20:00

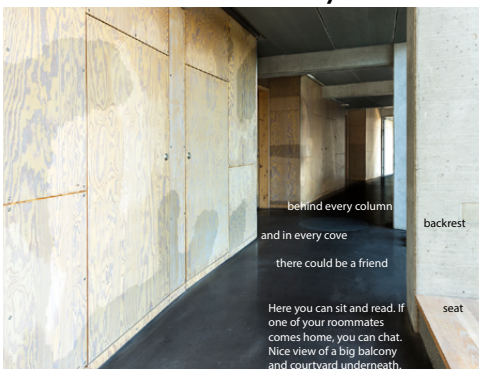


- 17:00 - 17:30
(picking up laundry from room)
- greet at elevator
- 17:30 - 18:00
- greet at laundry room
- greet in ground floor hallway
- 18:00 - 20:00
- chatting in utility room
- cooking with roommates
- dining with roommates
- hanging out in cinemaroom with fellow students and roommates
(back to private room)

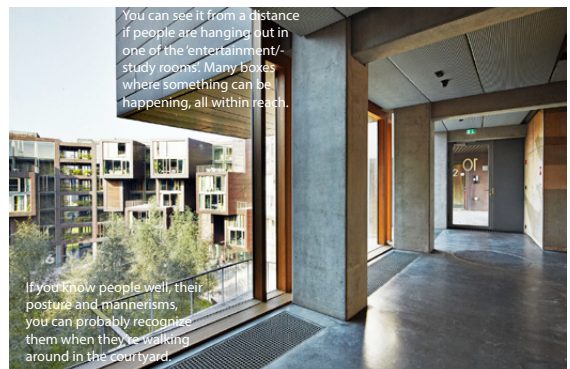
Conclusion

There are three 'rings', from outer to inner they are; private rooms, communal hallways, and communal facilities. Having privacy directed outward and communal practices directed inward (to a courtyard) can be beneficial to a sense of community.

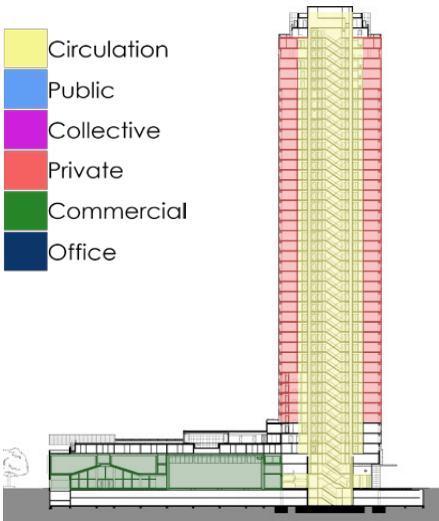
architecture and sociability



Tietgen Hallway 1 (Lundgaard & Tranberg Arkitekter, n.d.)



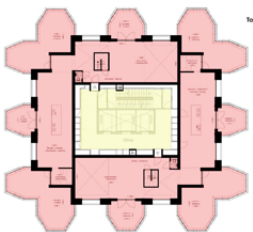
Tietgen Hallway 2 (Vahle A/S, n.d.)



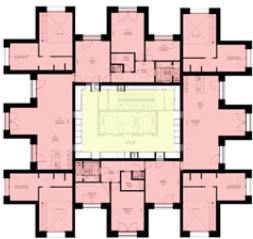
Architect: Alvaro Siza
Built: 2007
Adres: Van der Hoevenplein 9-243
Whilhelminapier (postcode 3072)
Client: Vesteda
Contractor: Besix Branch Nederland
Typology: 234 appartementen

Functions

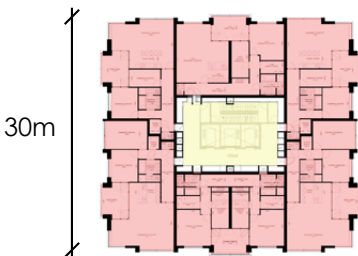
The building has very formal collective spaces in the form of collective functions such as a swimming pool and a commercial-collective function in the form of a cinema.



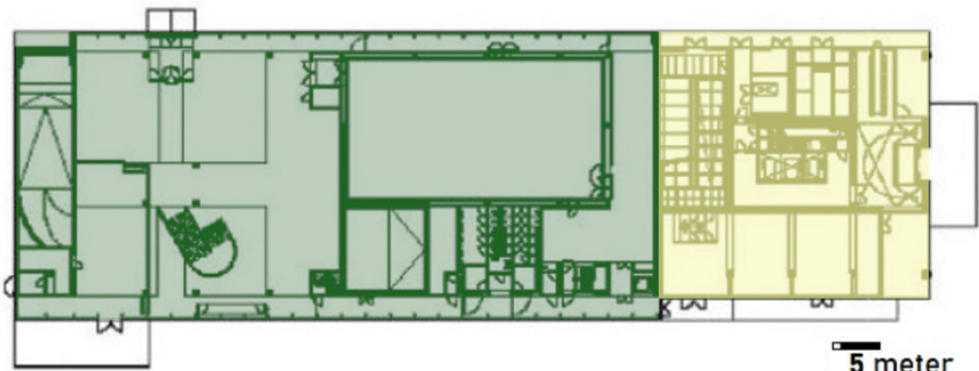
Floor 45



Floor 41



Floor 22

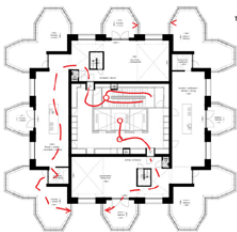


Groud Floor

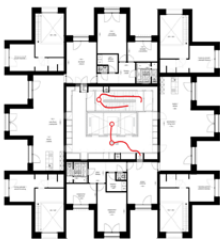


Meeting

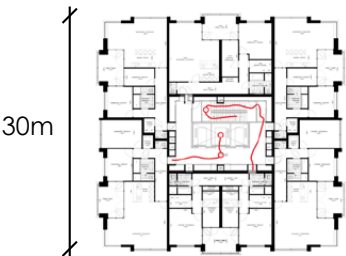
The building does not have much in the form of short term formal meeting spaces. Formal meetings can take place in the formal places of activity such as the swimming pool and cinema as mentioned earlier. Informal meetings can take place in the garage and stairwell, or in the elevators and spaces before the entrance of the homes on each level.



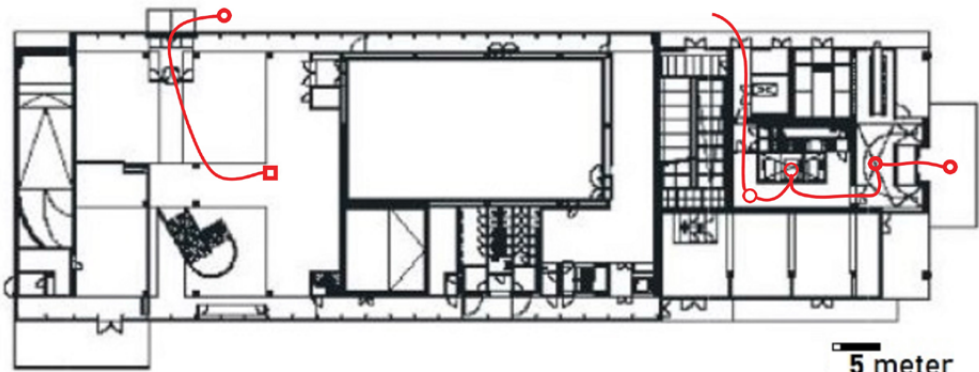
Floor 45



Floor 41



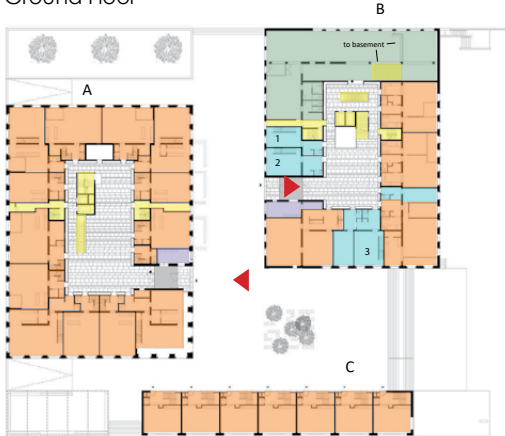
Floor 22



Groud Floor

Piazza Céramique

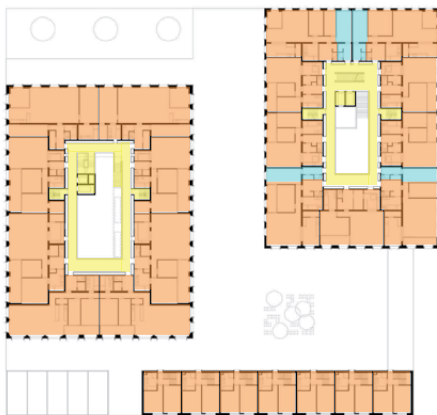
Ground Floor



year: 2001 - 2007 tender first price
architects: Jo Janssen & Wim van den Bergh
city: Maastricht, The Netherlands
type: dwelling & working
amount: 92 dwellings and workspaces
plot size: 60.000 m²
total floor area: 18.970 m²
FSI = 3,16

Block A Dwelling
Block B Dwelling + Working
Block C 7 workhomes designed by Lijiten/Verheij architecten

Level 2

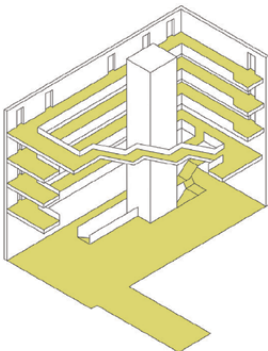


Living
Working
Circulation
Mailboxes
Commercial



Both blocks have a collective entrance lobby in an atrium. Surrounded around the atrium the dwellings and workplaces are situated. The parking is under an elevated deck in the basement, which is beneath the whole plot, so under the three blocks.

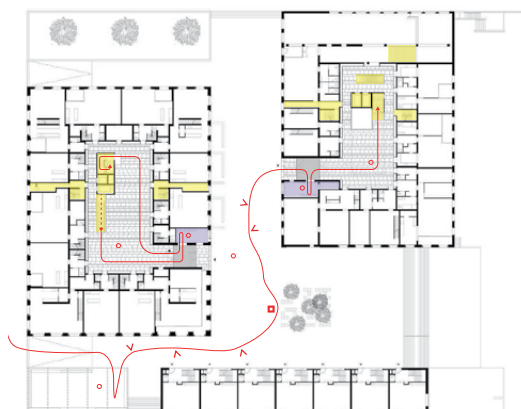
the lifts and stairs are in the middle of the atrium, the piazza's. The circulation of both blocks A and B comes down to the basement. In Block A on the groundfloor are maisonnettes so they don't have an access on the second floor. The stairs and galleries circulate around the atrium so you have always an overview of what is happening on the other side or on the groundfloor.



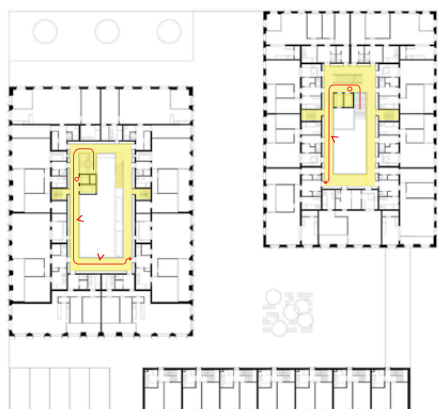
Circulation



Atrium and deck outside. Jo Janssen Architecten. (2007). Piazza Céramique. Retrieved from, <https://jojanssenarchitecten.nl/project/92pc>



Ground Floor

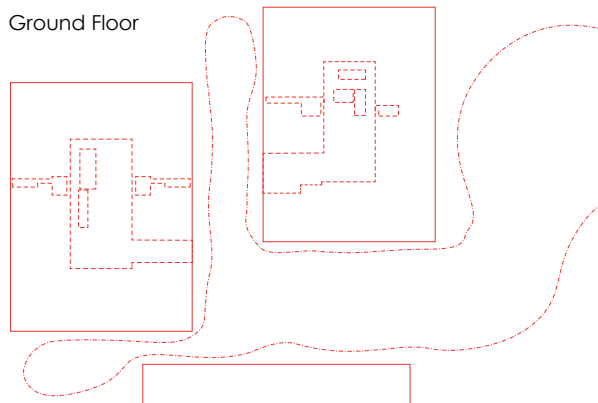


Level 2

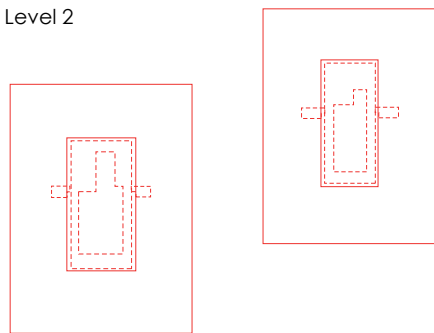
0 2 5m



Ground Floor



Level 2



0 2 5m



Conclusion

The building has a collective atrium with gallery access to the dwellings. The buildings are situated on a public deck and a public garden.

Due to the separate entrances of the buildings which are outside on the lifted deck in the inner area between the three buildings people are more forced to meet each other. Instead of on street level at the street side. On the deck there is a place to sit and meet.

However, thanks to closed walls and doors on the galleries in the atrium, people only accidentally meet each other when someone's steps out of their house or is waiting in front of the lift.

People who come from the parking garage below groundlevel can go up to their floor level invisible with the lift. When taking the stairs and walking to their mailboxes they can meet some people in the lobby in the atrium. Going up the stairs to the higher levels people walk up in the atrium and have a view over the atrium the whole time. So people can see each other even when you are not on the same floorlevel.

General

St. Jobsveem



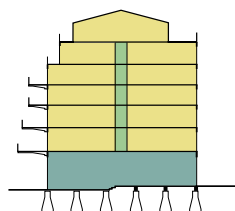
St. Jobsveem exterior (Mei Architects, n.d.)

Year of construction: 1913
 Year of transformation: 2007
 Architects: Mei architects, Wessel de Jonge
 Location: Rotterdam, The Netherlands
 Type: Luxury lofts and penthouses
 Plot size: 3.250 m²
 Total floor area: 21.000 m²
 FSI: 6.46

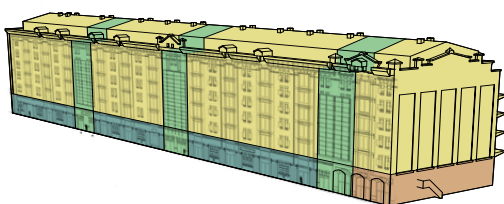
The St. Jobsveem is a listed monument and a former warehouse along the St. Jobshaven in Rotterdam. In 2007 it has been transformed to dwellings. The largest intervention has been the opening of the brick facade, on three locations in the long building. Behind these openings are now the stairs located.

Functions

The largest part of the building has a residential function in which 99 loft apartments and 10 penthouses are located. All dwellings have an open floor plan. All dwellings, except from the penthouses which are a new addition, have a large depth. This has to do with the size of the original warehouse. The only communal space for the residents in the building are the storage boxes on the ground floor. In the plinth of the building are office spaces located, for external companies. They barely have a connection with the rest of the building as both working and living have a separate entrance.



Section
 1:1000



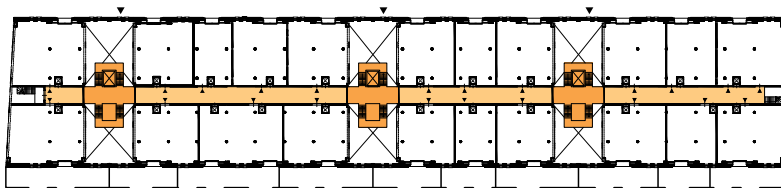
Living
 Working
 Mobility
 Storage

Accessibility

The building is cut by three atriums. These atriums are the entrance points of the building. To make the atriums in the old monumental warehouse, some major adaptations have been made during the transformation in 2007. In the light atriums a staircase and elevator provide access to the floors above. Here a corridor leads to the front door of the dwellings.



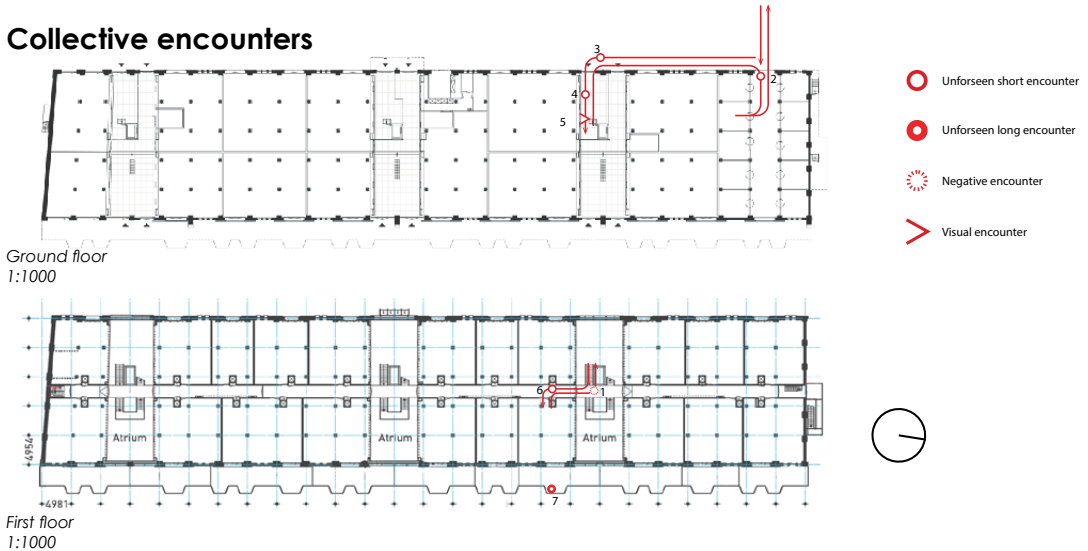
First floor
 1:1000



Collectivity

St. Jobsveem

Collective encounters



Spatial characteristics



1. The stairs are the meeting place in the building. Residents from all floors come together here. The skylight and the big glass facade make it the lightest space in the building, which make it a comfortable space.



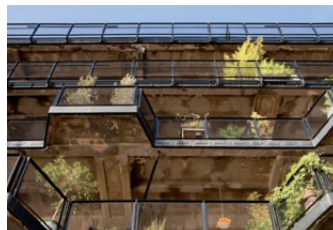
3. The entrances of the residential part and the office part are situated right next to each other. This provides some kind of encounter in front of the building.



4. Mailboxes are located on the ground floor in the atrium. This increases the chances of residents meeting each other in the atrium. It becomes a place where longer conversations could take place between residents.



5. The dwellings adjacent to the atriums have a glass facade facing the atrium. This is done for extra daylight in the dwellings, but also provides a visual connection with people on the stairs. It can strengthen the sense of community, but also decreases the privacy in the dwelling.



7. Although located inside the dwelling itself, the balconies provide a space where collectivity can take place. The cantilevered balconies with an decreasing depth on the higher levels make it possible to have interaction with the neighbours above or below.

Conclusion

Collective encounters take place in the mobility spaces of the building. The light atriums are the cores of the collective cores for in which residents meet. It might be stated that glass is in multiple ways used to bring in some form of collectivity within this massive, closed monument. The shape of the building, the long corridors and the closed structure of the building do not stimulate collectivity. However, this is not so strange bearing in mind that it was not build as a residential building.

Images from Mei Architects and Wessel de Jonge Architecten

The Building

Year: 2012

Architects: 51N4E

Location: Nevele, Belgium

Type: Elderly Homes

Amount: 54 Apartments

Plot size: 7.460 m² **Programme:** 4.400 m²

OCMW Nevele

51N4E



1:500



© Filip Dujardin



© Filip Dujardin



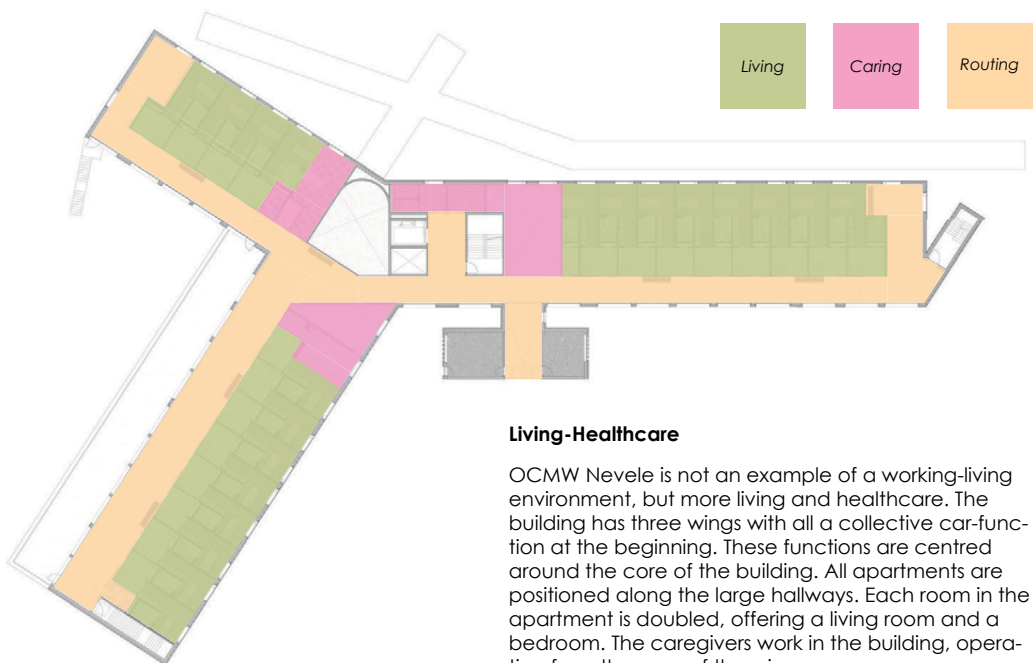
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General

OCMW Nevele is an elderly home project in Nevele, Belgium. It houses 54 apartments over 3 levels, with a total programme of 4,400 m². Characterizing is that the building exists of three wings with large hallways. Because of the large windows, a lot of light is infiltrating in the hallways. On the other site, the bedrooms contain smaller windows, creating more intimacy.



Living-Healthcare

OCMW Nevele is not an example of a working-living environment, but more living and healthcare. The building has three wings with all a collective car-function at the beginning. These functions are centred around the core of the building. All apartments are positioned along the large hallways. Each room in the apartment is doubled, offering a living room and a bedroom. The caregivers work in the building, operating from the core of the wings.

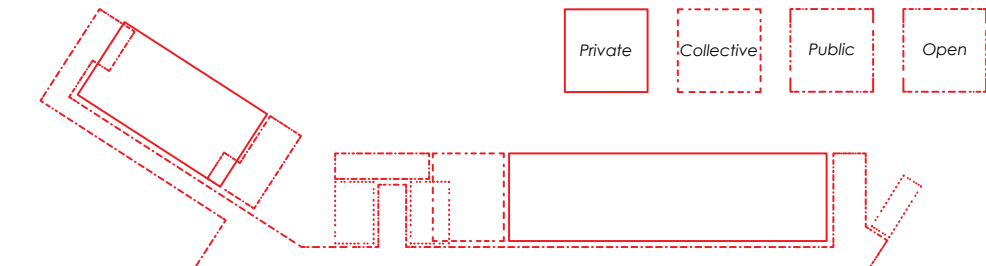
The Collective

OCMW Nevele

51N4E



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Private vs. Collective. vs. Public

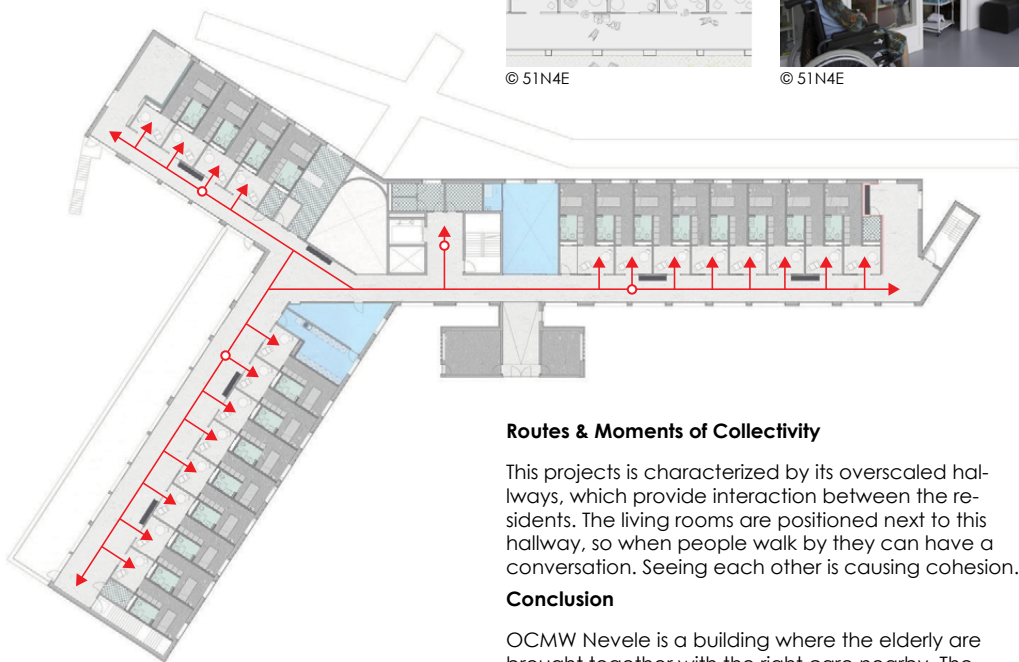
The core of the building is mostly public / open. At the beginning of each wing is a collective space. Getting further into the building leads to more private spaces. The large hallways can be seen as the collective living room, it is overscaled so the residents can join from their smaller private living.



© 51N4E



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Routes & Moments of Collectivity

This project is characterized by its overscaled hallways, which provide interaction between the residents. The living rooms are positioned next to this hallway, so when people walk by they can have a conversation. Seeing each other is causing cohesion.

Conclusion

OCMW Nevele is a building where the elderly are brought together with the right care nearby. The hallway forms the essential element in the connection between the private and the public.

Hybrid House

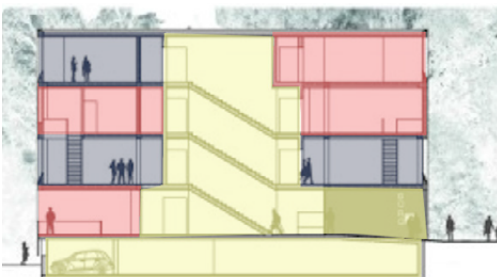
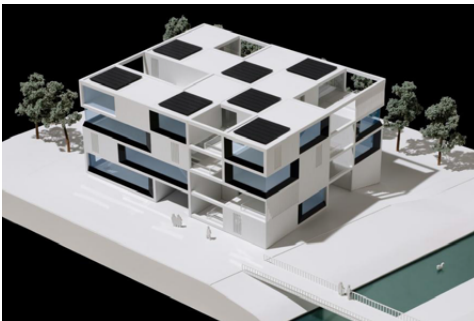


Architects: Bieling Architekten
Built: 2011 - 2013
Address: Hamburg
Client: IBA Hamburg
Typology: 16 dwelling and working spaces
 12 maisonettes and 4 apartments
Area: 2.040 m²
GFA: 2.500 m²



Functions

The Hybrid House is a hybrid, as the name suggests, of living and working. The homes in the building have office areas that can be accessed separately from the circulation. This results in a somewhat checkered pattern of living and working. The circulation is unique as the staircase functions as a helix. However it is important to note that from one floor you still only have one stairwell option as the two are separated from each other. It is still possible to access another stairwell via walking through the home to the other side or to the floor above/below where you will have access to the other stairs. Or ofcourse through the elevator however this is not safe.

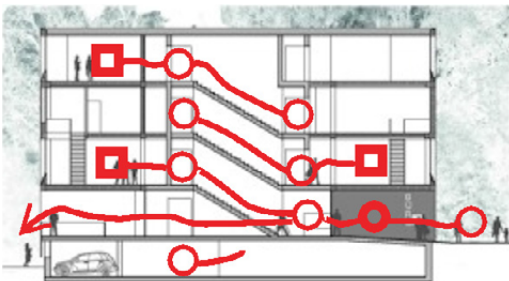
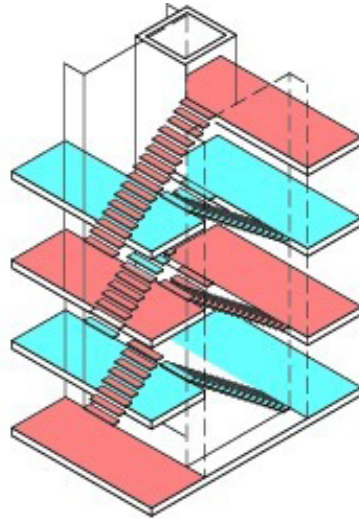




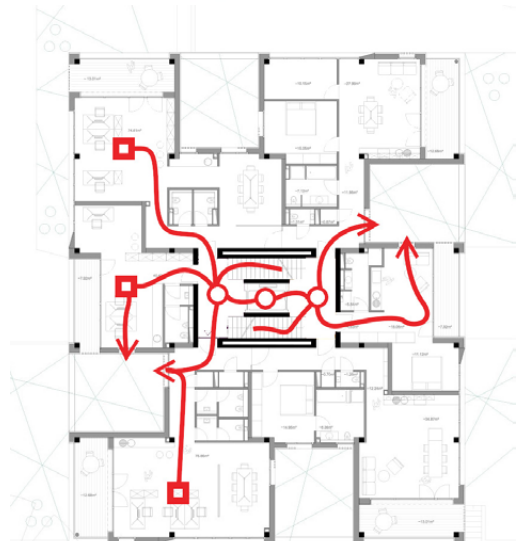
Meeting

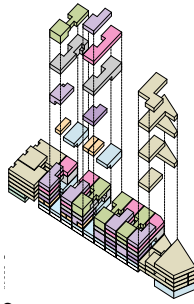


Informal and short meetings can take place in the parking area, in the stairwell or elevator and at the entrance of the building. Formal meetings take place inside the work area of the houses. There are no short term formal meeting spaces.



○ Informal Short Meeting
● Informal Long Meeting
⊙ Negative Meeting
^ Visual Meeting
□ Formal Short meeting
■ Formal Long meeting



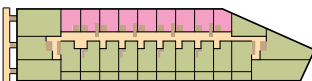
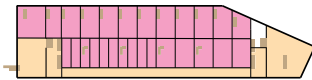
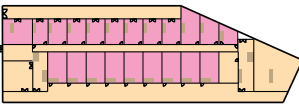
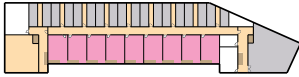


IBeB



year: 2018
architects: HEIDE & VON BECKERATH
city: Berlin
type: home-work building
amount: 87 live-work dwellings
plot size: 2798 m²
total floor area: 8.945 m²
FSI = 3,2

Functions and typologies



The IBeB is a home-work building in Berlin, completed in 2018. IBeB stands for Integratives Bauprojekt am ehemaligen Blumengroßmarkt.

The home-work building is set up to link living and working, which is why there are no separate workspaces. The building is five storeys high and has 87 live-work homes. It is mainly characterized by the special access from the center. At 3 levels, the digestion is formed by "Access roads". The construction process is also special. During the design process, the architects continuously consulted with the future residents.

Functions

The building has different typologies that are connected through interweaving between living and working. This makes it difficult to define each typology separately but roughly there are four to differentiate: workshop, apartment small (+studio), maisonnette, apartment large.

- 57% owner-occupied homes
- 25% Cooperative living / studio use
- 10% Social rent
- 8% Commercial spaces.

Living and working is distributed throughout the building.

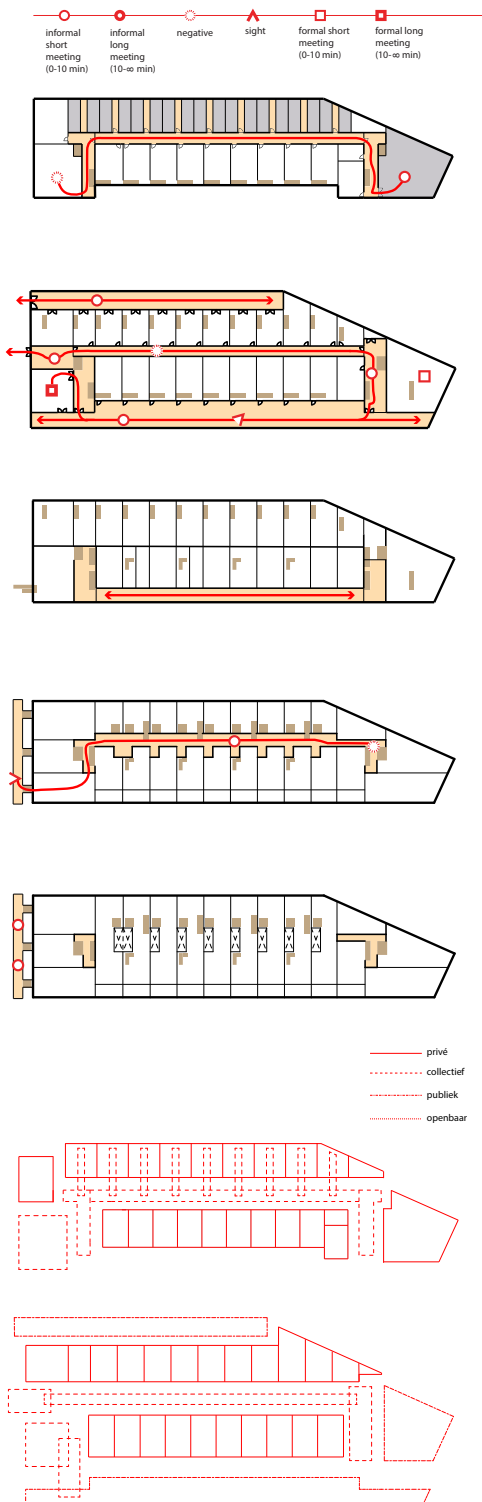
Every home also has its own workspace, which is what makes this building so special. Living and working is usually divided over 2 layers per combination. This means that there is still a separation between living and working, but the spaces are directly connected through an internal as well as an external staircase.

Private-public

The baseboard is higher than the other layers and is together with the split level almost completely raised from glass. A roof garden is located on top of the building, which is not visible from street level.

The craftsmanship with which this building was designed lies in the intelligent access structure. The architects created four horizontal 'access streets'.





Private-public

Werkstraat and Atelierstraat

On the mezzanine level ("split level"), the wide gallery on the south side also provides access to work and living spaces that are internally linked with work-spaces on the ground floor and on the first floor.

Central Corridor

On level 1 (that is, above the mezzanine level) they designed a central corridor to which five atriums (lichthoven) are linked that lead daylight deep into the building. This rue intérieure also opens up levels 1 and 2 via stairs and entrances that are connected to this corridor.

Roofstreet

Finally, on level 4 there is a 'roof-street' giving access to the living-working units on levels 3 and 4, separate studios, a collective space and a hortus conclusus on the roof.

Within this access structure the typologies vary of living and working spaces. 20 workshops for business and home-work use are situated in the plinth. All workshops that are directly accessible from the ground floor have direct access to a publicly accessible street for pedestrians and cyclists and can be set up as a workshop, office, gallery or shop. The transition from the double-height Souterrain Ateliers on the south side to the public space is formed by a cleverly situated, deepened patio, over which a bridge is stretched from the street to the entrance of the studio.

Conclusion

Both heads of the building have an urban sculptural quality. In the elongated south facade, the brick facade is interrupted by cantilevered balconies, which emphasize the horizontality of the facade. The plinth is strikingly transparent with space for public-oriented functions. By putting these functions in the plinth, the building acquires a collective character that is directly visible from the ground level.

In addition, part of the basement under the commercial area could possibly be used for a collective function. The open playground on the north side also contributes to the collective character of the building.

Furthermore the three horizontal streets on ground level stimulate the most collective encounters. These streets connect all the other communal spaces (i.e. gym, gemeinschaftsraum etc.). The large dimensions of the street on the south facade makes this more than just an access route. People will actually use this space for longer informal meetings. The light characteristics of the street emphasize this long stay use.

Dwelling Type

Babel

Laurens Boodt Architecten
Rotterdam, The Netherlands
Maisonettes, Vertical Street

The Tower of Babel is a design for a new residential tower with 24 family homes on the Kratonkade on Lloydpier in Rotterdam. A special feature of this residential tower is the street that goes up around the building and which connects the various private terraces.

Spread over 12 floors, the family homes varying in size from approx. 90 to 145 m². The ground floor apartments have an entrance at street level, the other houses are accessible by elevator. The size of every floor is different, which accommodates the stair and terraces around the building.



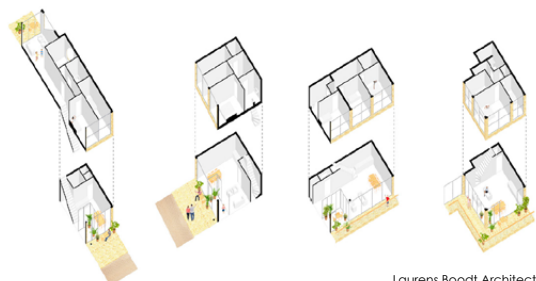
Laurens Boodt Architecten
1:500



Houses

All the houses in this building are maisonettes and consists of two floors. The ground floor of every house is connects to the street space. Here are the living roos and the kitchen.

On the second floor of every individual house you can find the bedrooms, bathrooms and storage.



Laurens Boodt Architecten

Communal

Babel

Street space

At the street level there is a gate with a staircase that forms the entrance to the street space around the building. The street space is widened on the first floor to a square, for a vegetable garden, picnic area, etc.

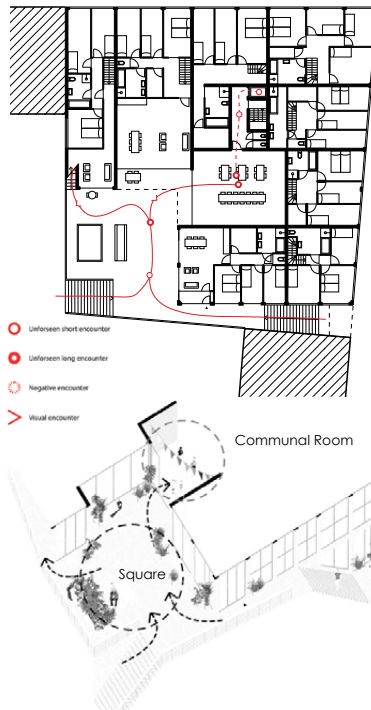
The street space continues upwards along the houses, with the stairs connecting the different platforms. The stairs are a reason for play, seating and viewing point.

On the square there is a common room for children's parties, (flex) workplace, meetings, etc.

Private Outdoor Space

The houses have loggias that can be fully opened, making these private outdoor spaces. These also function as an entrance on the ground floor.

In addition, homes have a private outdoor space on the street space, which is indicated by a number of thumbtacks.



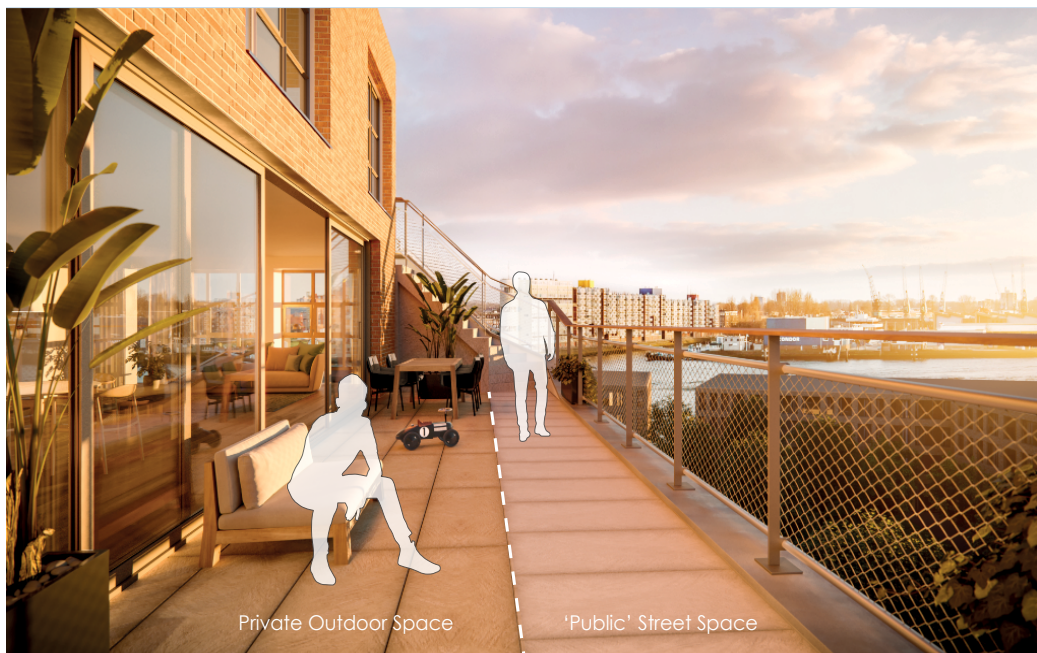
Conclusion

In the design for this building there are a lot of opportunities for communal space use. The vertical 'street' is leading you along all this communal spaces, like a large square, a communal room and the roof terrace.

But because of the fact that this residential building isn't built yet, it is hard to say if this vertical street will work that good in real life.

The residents living on the higher levels probably will park their car and take the elevator situated in the core of the building, and will never use the street to go up.

If the communal spaces will work the way they are designed will totally depend on the residents living in this building.



OVERALL CONCLUSION (CASE STUDIES)

As the preceding case studies show, there are many different ways to respond to the inclusion of collectiveness in a building. While all preceding buildings are complexes with multiple residences and sometimes workplaces, they don't all directly include a collective element. Some buildings are collective in the sole aspect that they share a common staircase or hallway. Buildings like Kölner Brett, St. Jobsveem, Piazza Céramique and Hybrid House make these moments of collectivity incidental, with no specific space designed for meetings, but them occurring where paths cross on their ways through the building.

A different approach to this common staircase or hallway is to specifically design it so that it becomes a space where people meet and spend time. Examples are places like the hallway of de Olieberg, with its small squares where people can place benches, and the wrapping vertical street of the Babel building, where there will be space for picnics and children's parties.

Another way designers create moments of collectivity is by adding facilities to the building that draw the residents and create the collective interactions that can occur within such an environment. These facilities can include fitness areas or swimming pools, like in Hoge Heren or New Orleans. But they can also consist of more general communal areas like in Narkomfin, actively serviced collective facilities like in OCMW Nevele, or the independently organised variety of special room functions in the Tietgen dormitory. In that last building, as well as in de Olieberg, another potentially shared facility appears: The garden.

A fourth approach is one step more intimate. This step can be seen in Tietgen Dormitory and Svartlamoen housing. This approach revolves around communal living, where some of the living spaces are shared. This can include a kitchen, living room and laundry room. This step reduces the size of the private space, which means that the costs are shared. This can lead to more affordable housing.

More implicit ways of approaching collectivity are achieved through the visual senses. Many projects connect different spaces visually. This can enhance one's experience of safety as well as to actually improve safety. Visual connections can also stimulate actual meetings. However there are situations (like on the roof terraces of the Pullens building) where visual connections have been mitigated by inhabitants to increase privacy.

These five approaches to collectiveness and the shaping of moments of collectivity thus revolve around the design decisions for two aspects of the building: The collective access (ontsluiting) and collective facilities. How these are shaped and shared can be the determining factor in how the collective aspect of the building take shape.

Intention and result can also fail to meet each other through design when (but also in general) designing for collective use. This is the case especially with more ambitious designs considering collectivity. Demanding a lot from your users as a designer can cause them to resist the design. This does not mean that the ambitious is impossible. It rather points out that the ambitious design should be critically reviewed.

IMPRESSION SOUTH FAÇADE



IMPRESSION SOUTH FAÇADE



IMPRESSION PLAZA



IMPRESSION PRIVATE COURTYARD



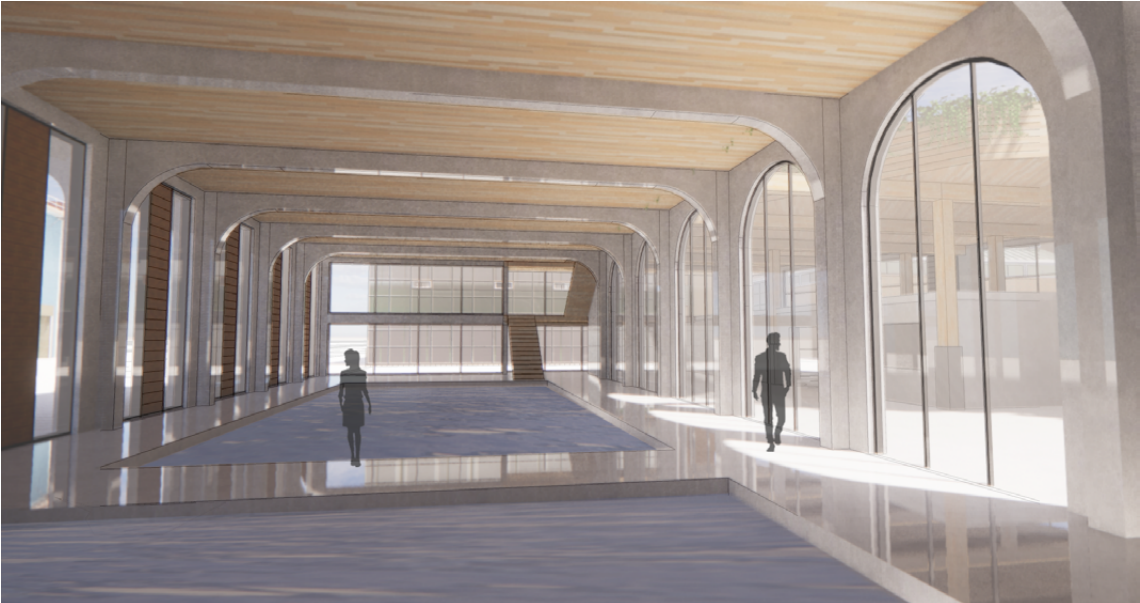
IMPRESSION INTERIOR (INNER STREET)



IMPRESSION INTERIOR (INNERSTREET)



IMPRESSION SWIMMINGPOOL



IMPRESSION BACKSIDE

