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Introduction

With the graduation studio Dutch housing we focus on the M4H-Area, which is intended to be a creative and innovative live-work area. With the central theme of collectivity of the studio, we strive to design for an inclusive society. This research report for the Dutch housing graduation studio consists out of an individual part and a collective part. By designing housing it is important to know who we are designing the housing for. This is related to the research we are doing individually. A specific target group is chosen: the residents whom we are designing for. The relevance of designing for this target group will be investigated. Thereafter a deep study about this group will be performed to gain wide knowledge about their wants and needs within housing. simultaneously, group research is performed. This research focuses on the collectivity of building complexes and how this relates to space, material, and function. Through individual research, it will become clear what is necessary to serve the needs of the chosen target group. The performed group research will support the collective theme and understanding of what kind of collective spaces could suit the chosen target group. This will closely relate to the collective activity: the function, as for the elaboration of the space on a material level.

Group research

Introduction

Relevance of this study

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 ample 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). Achtergrond document Opgaven in de fysieke leefomgeving: huidige situatie en ontwikkelingen. Retrieved from <https://ontwerpnovi.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>



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



Pullens Estate

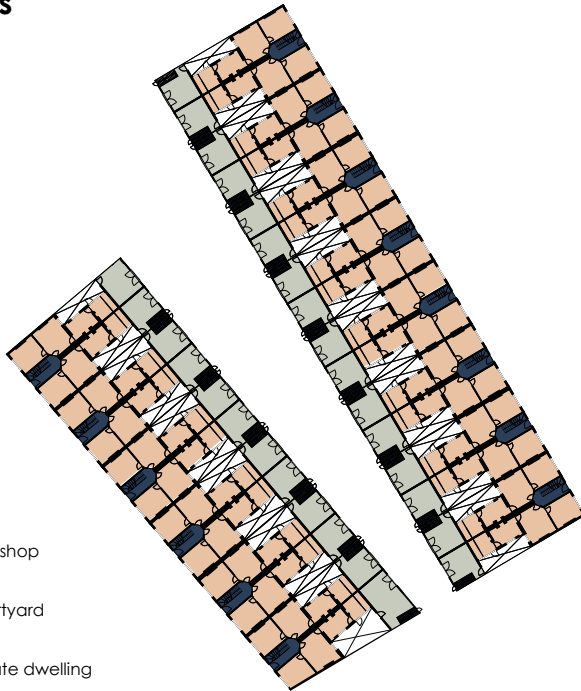
year: 1901
architects: James Pullen
city: London, England
type: Porch Apartments
amount: 351 units
plot size: 9354 m²
total floor area: 17.529 m²
FSI = 1,87

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.

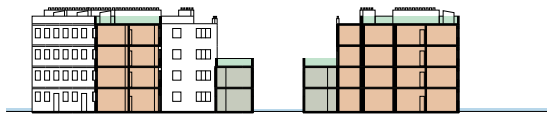
The apartments were built to provide relatively cheap but decent housing for poorer families. Each unit is 4 floors high and consists of 8 appartments and 4 workshops.

Originally 684 apartments 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. Apartments are situated facing the street, while workshops on the first two levels are facing the smaller so called yards.

The apartments are accessed via porches accessing two apartments 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 apartments on the ground- and first floor are directly connected to workshops. However in reality they were often sold separately.

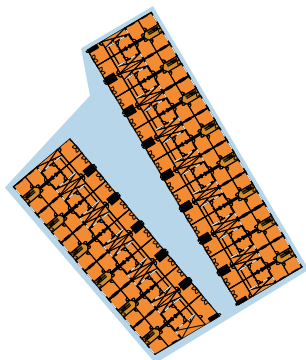
private-public

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 apartments, 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, supposedly 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



Narkomfin

Year: 1930

Architects: Moisei Ginzburg, Ignaty Milinis

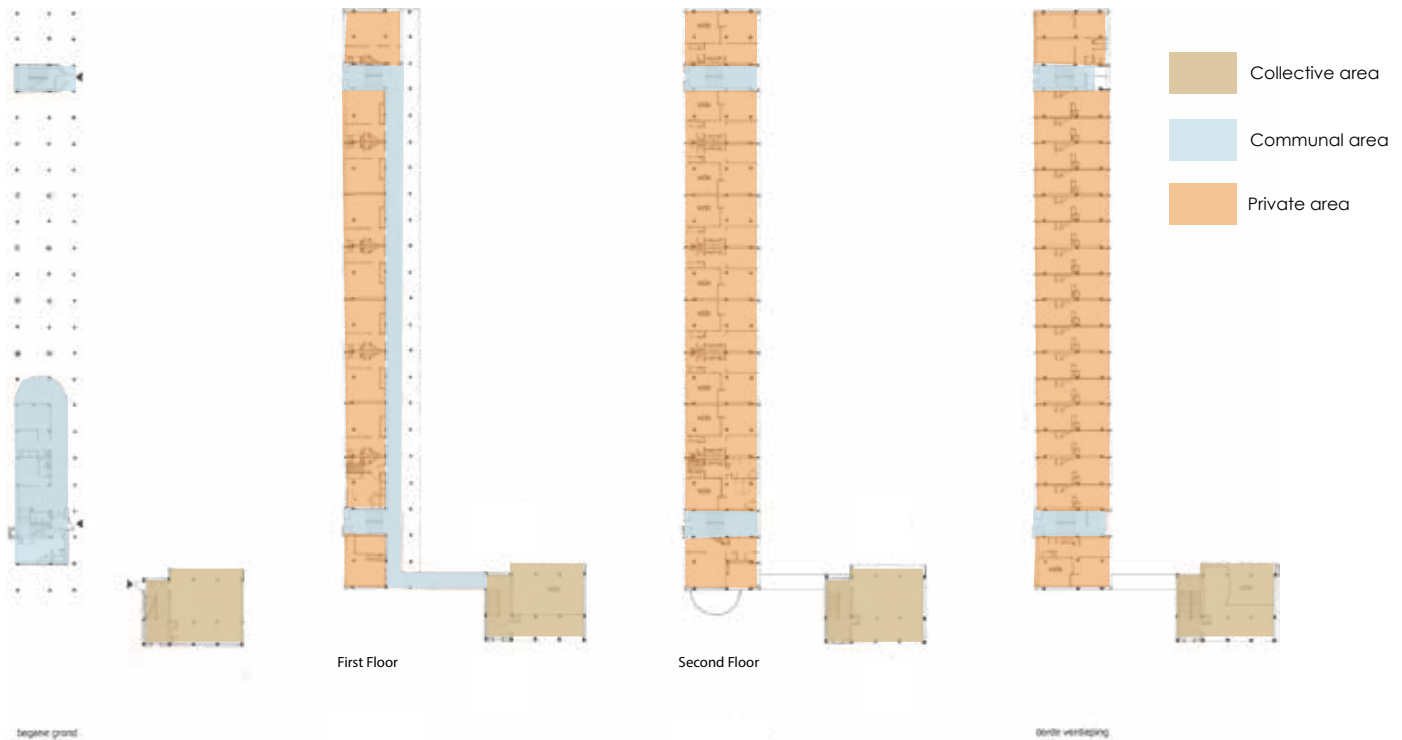
City: Moscow, Russia

Type: transitional type of experimental house

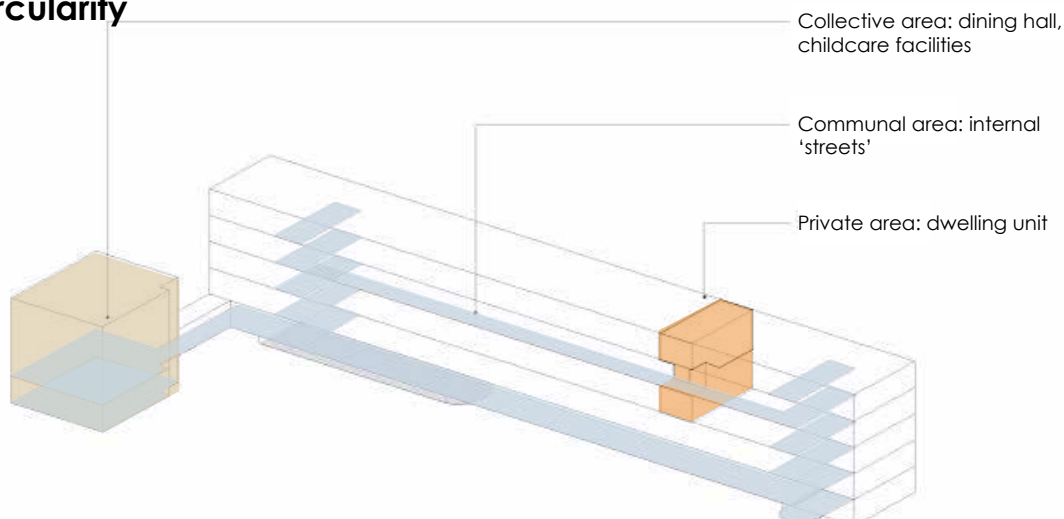
Amount: 54 units

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

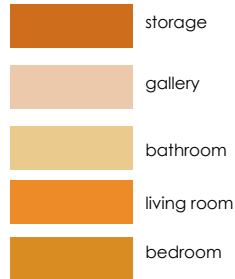
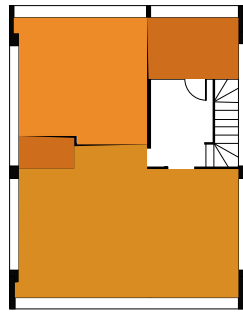
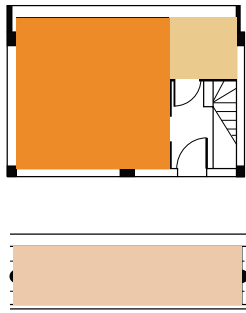


Circularity

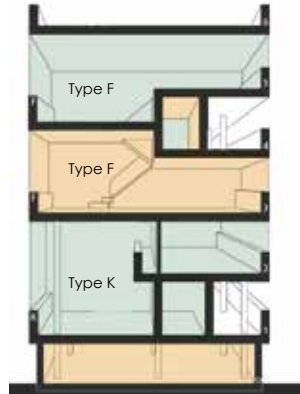
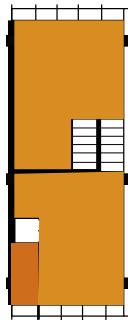
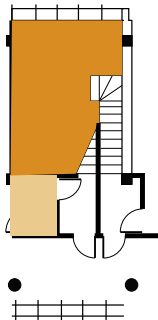
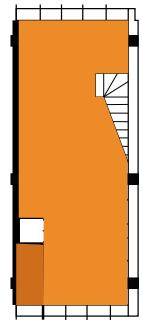


Dwelling units

Type F

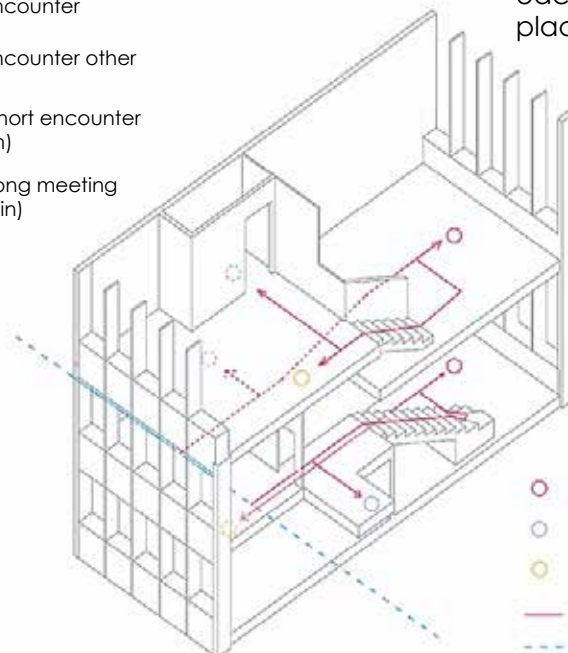
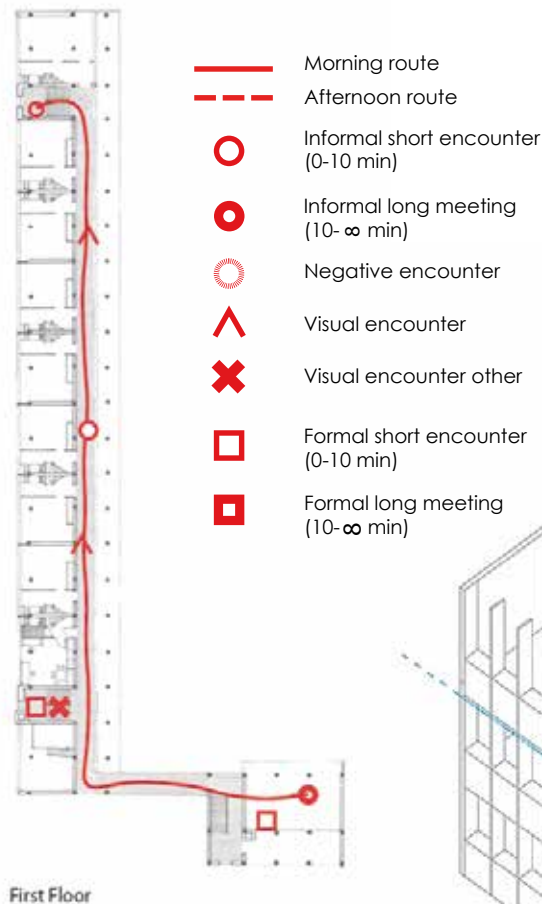


Type K



0 2 1:200

Collective encounters



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:
 archi.ru. (2018, 10 18). retrieved on 5 15, 2020, from archi.ru: <https://archi.ru/en/79374/15-fak-tov-o-dome-narkomfina>

architect jvr. (2015, 6 7). Retrieved on 6 5, 2020, from <https://architectjvr.wordpress.com/2015/06/07/welcome-to-moscow-welcome-to/>

de Architect. (2019, 10 1). Retrieved on 5 16, 2020, from <https://www.dearchitect.nl/architectuur-blog/2019/10/blog-ge-meenschappelijk-wonen-narkomfin-gebouw-1928-in-moskou-door-moisej-ginzboerg-en-ignaty-milinis-101230824>



Collectivity

Cité Montmartre

Year 1930 -1932

Architects Henry Résal & Adolphe Thiers

Location Paris, 189, rue Ordener

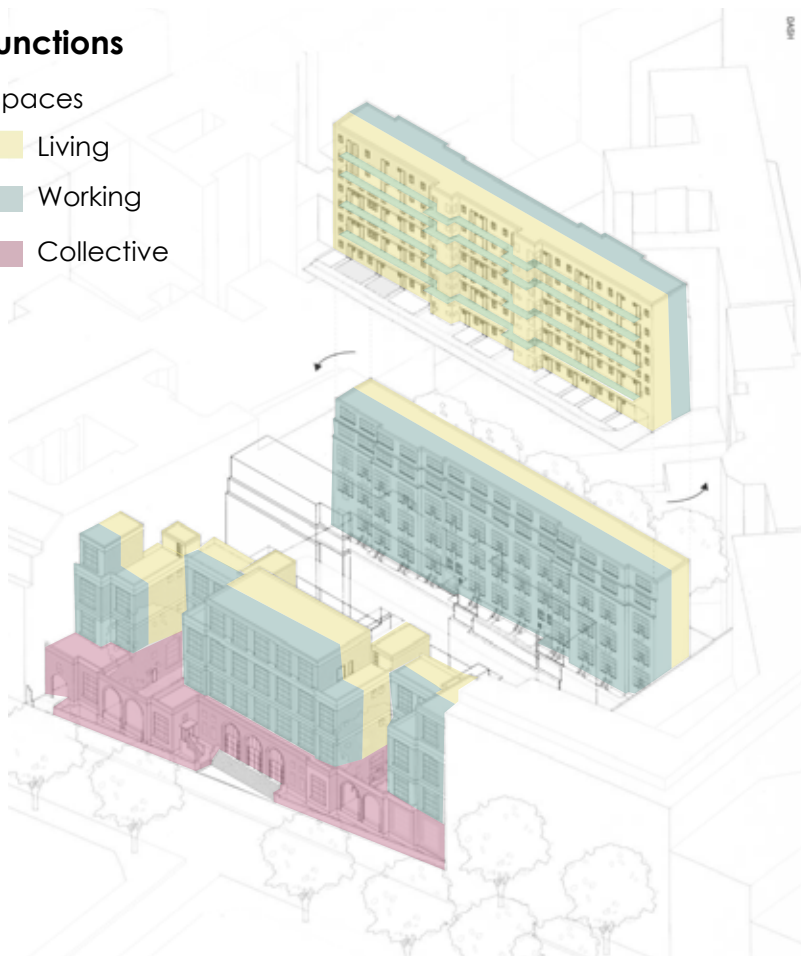
Type work homes - Atelier housing for artists

Amount 165

Functions

Spaces

- Living
- Working
- Collective



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.

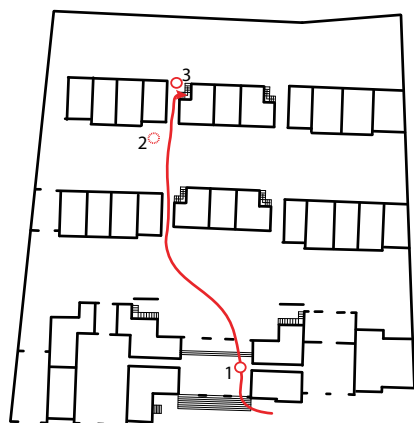
Cité Montmartre has three different acces typologies: the galerie, the ground bound and the porch typology (only in the first building).

Living & working

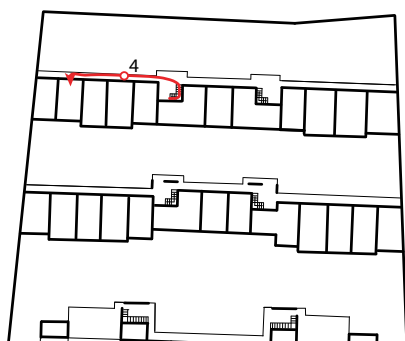
The blocks have two different sides. a side that could be interpreted as the living side: the side where the galleries and front doors are placed. And the side that could be interpreted as the working side: the side with the high ceiling windows for apartments, and where the ground bound dwellings have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

Routing in plan

Ground floor



Level 1



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 sit-

Collective spaces



Main entrance



The working side facing the outdoor space





Kölner Brett

year: 2000

architect: b&k +

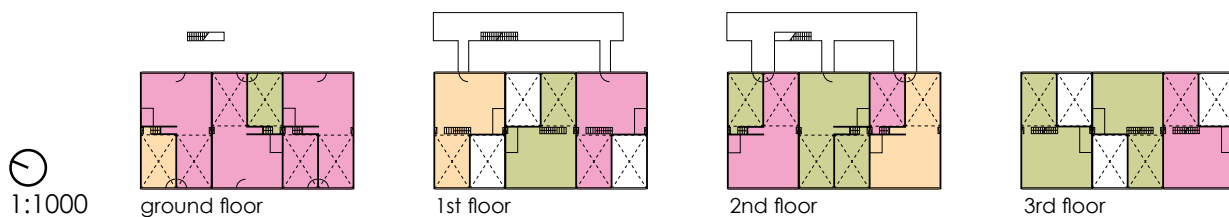
brandlhuber&knies GbR

location: Cologne, Germany

type: live-work building

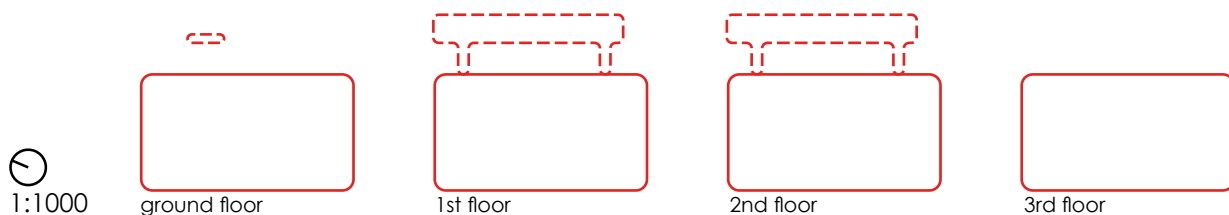
amount: 12 units

Kölner Brett is a response to the need to for live-work units in Köln by designing 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 stair-case-gallery that sits extended from the block on the east side.



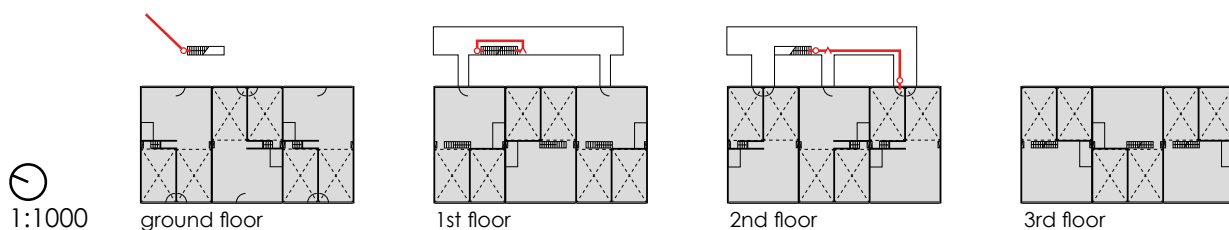
functions

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.

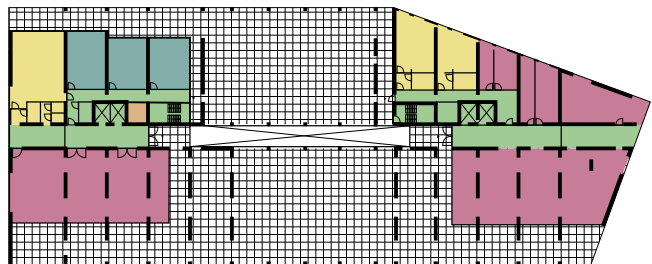
ground floor .
entrance
public gym



- 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.

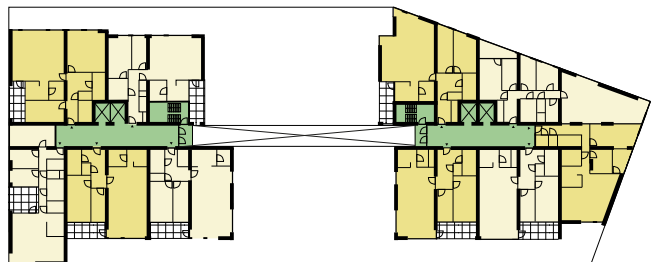
6th floor .
lobby
roof terrace



- housing

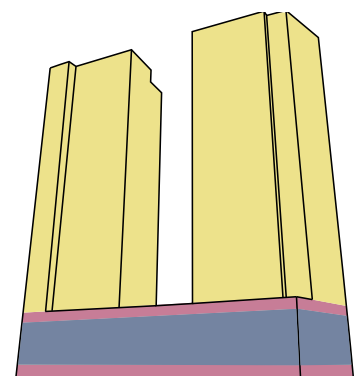
Royal sized appartments are housed in the two towers. Each floor contains 10 appartments, sizes vary from 122-143 square meters. The Hoge Heren houses a total of 285 appartments (160 rental, 50 furnished rental and 75 free-market). No other functions are housed in these towers.

7th - 34th floor .
appartments



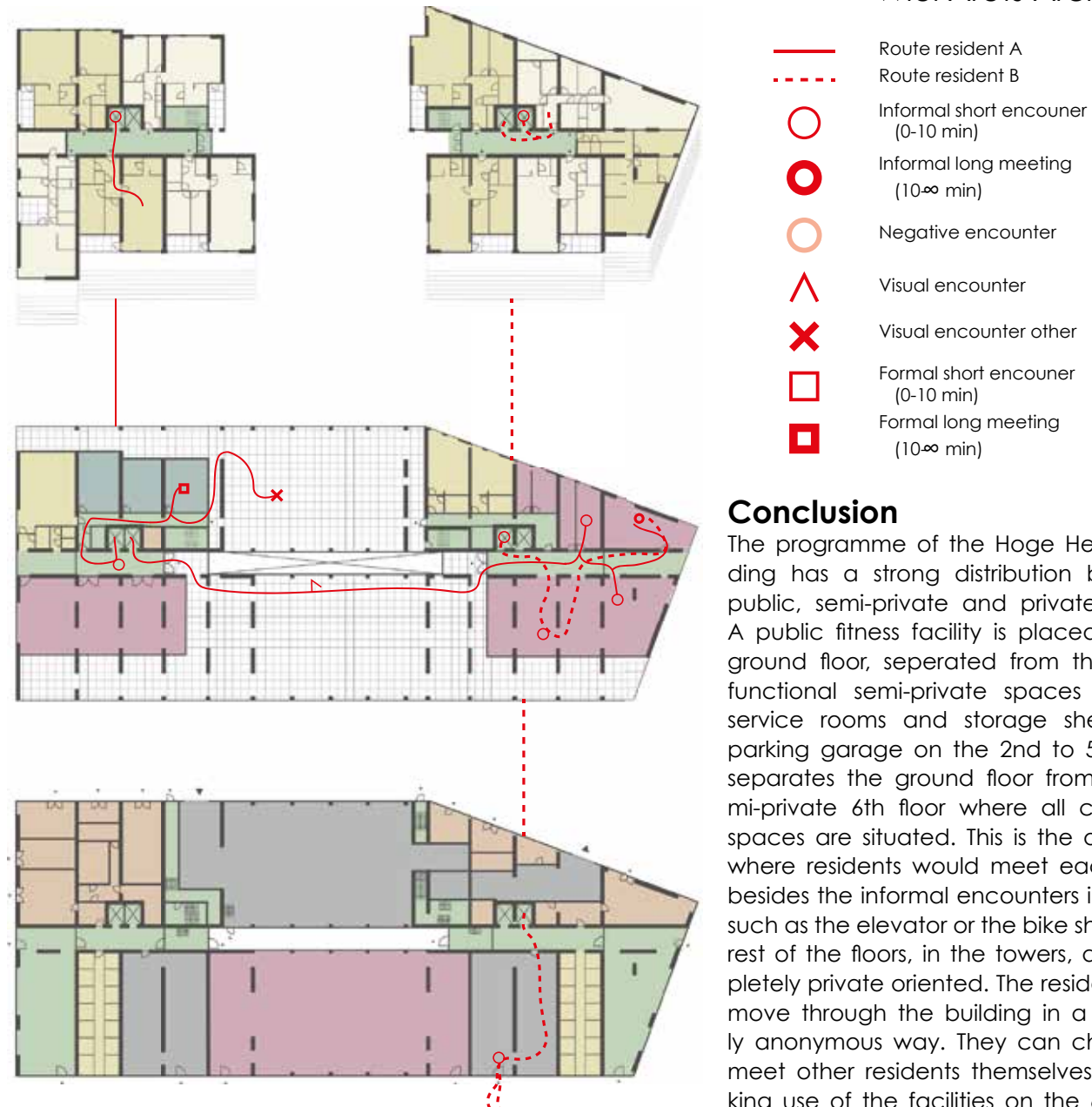
Public - Semi-public - Private

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.



Collective Encounters

De Hoge Heren Wiel Arets Architects



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 palette 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.



Svartholmen housing

year: 2005

architect: Brendeland & Kristoffersen arkitekter

location: Trondheim, Norway

type: Student dormitory & studios

amount: 22 dormitory units and 6 studios

Svartholmen 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.

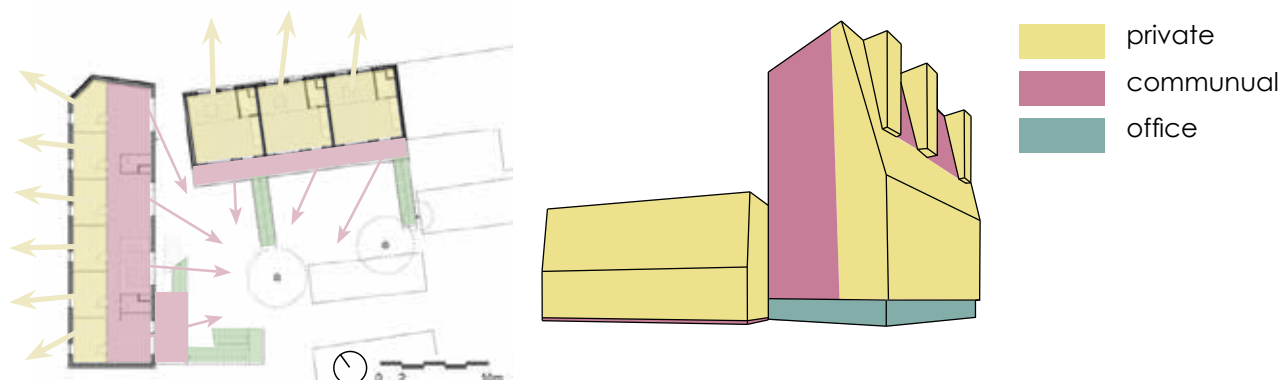
Functions

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.



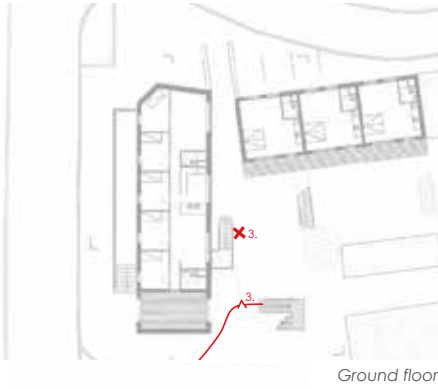
Private-public



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 easily 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.

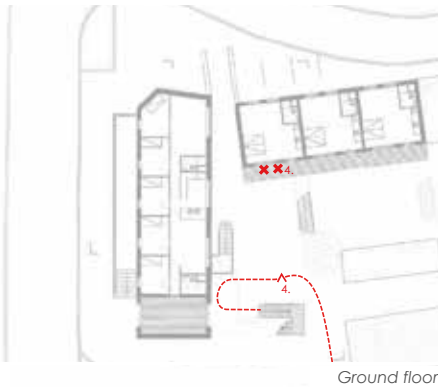
Collective encounters

Morning:



Ground floor

Afternoon:



Ground floor



First floor



First floor



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



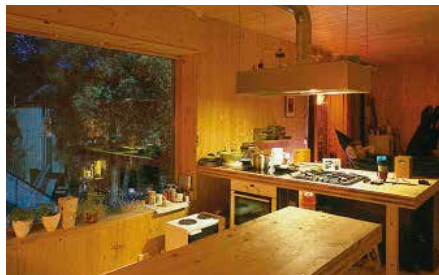
1. The communal livingroom is an open space which deliberately was left unfinished by the architects, so that the residents could make it their own by decorating the walls and placing furniture.



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

De Olieberg

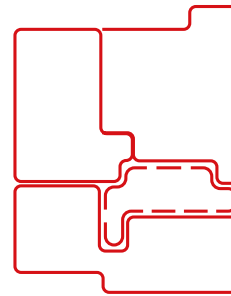
Theo Kupers Architecten

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.

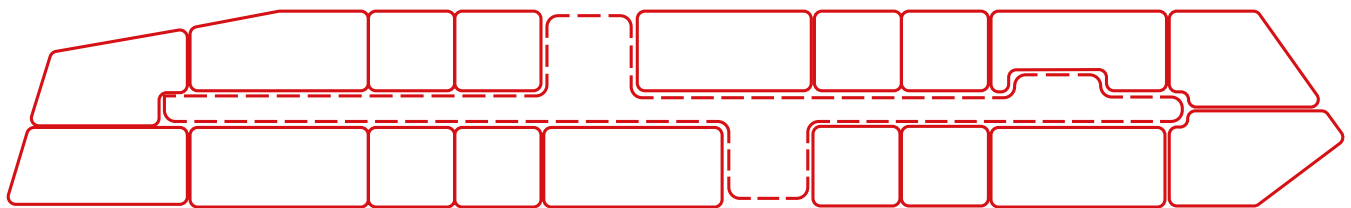
Various interventions have been made in the corridors. Firstly, there are voids so you can look on other floors and there is more light in the corridors. There are also recesses on each floor to both sides so that you have a view of the beach on one side and the city on the other.

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.

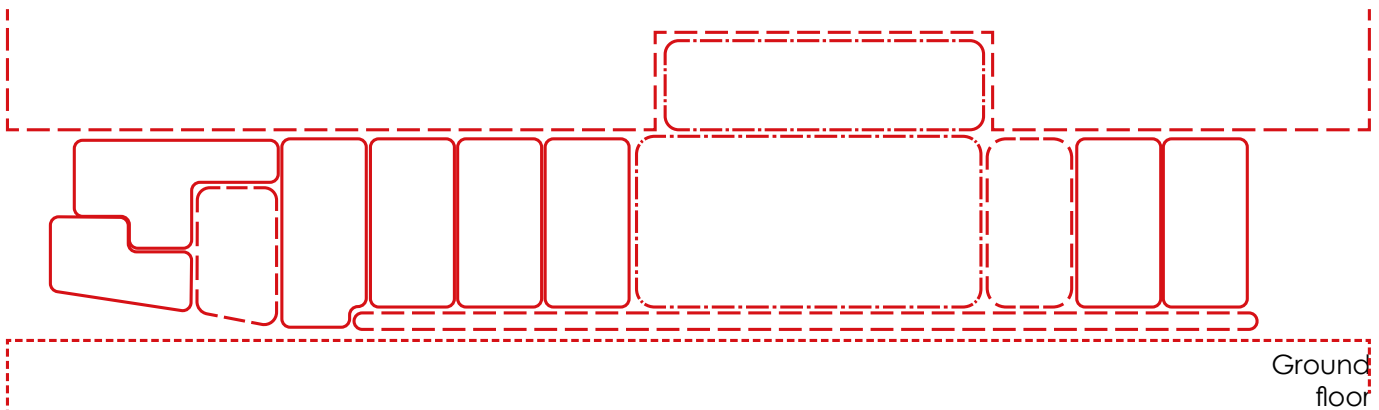
- _____ Private
- Collective
- .-.-.-.-. For specific public
- Public



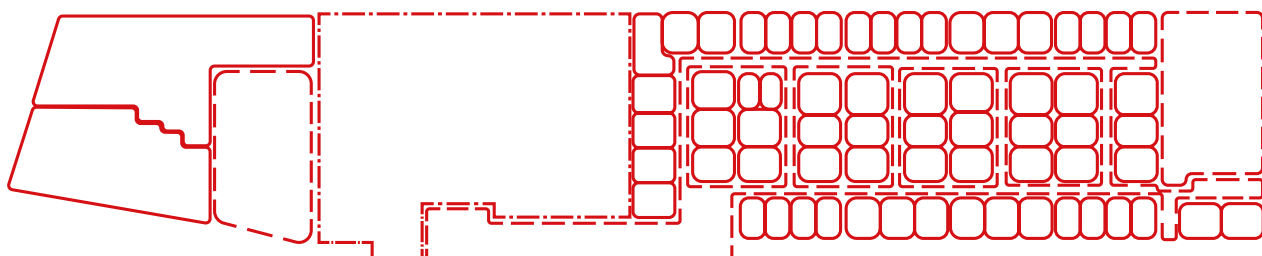
Seventh floor



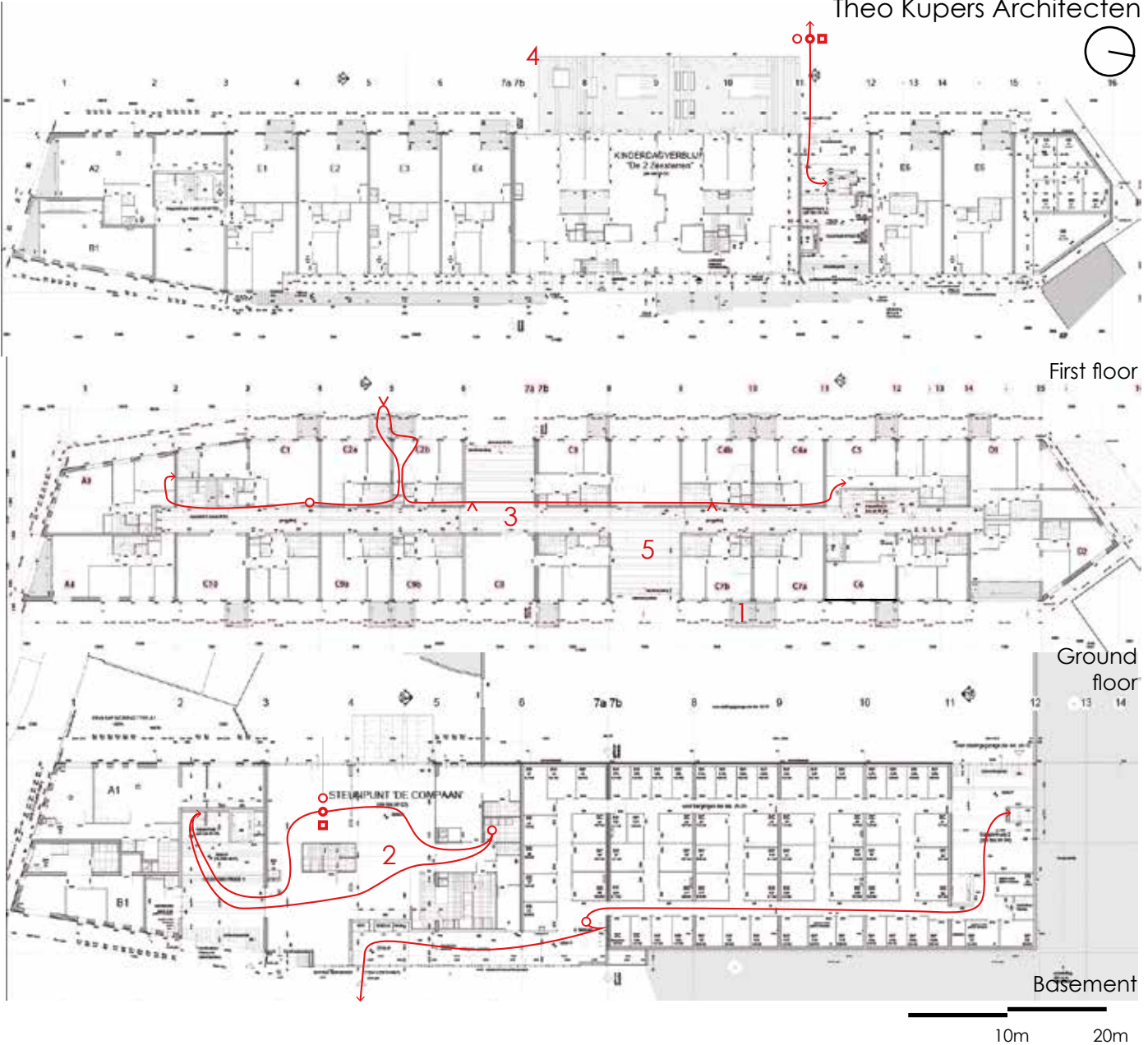
First floor



Ground floor

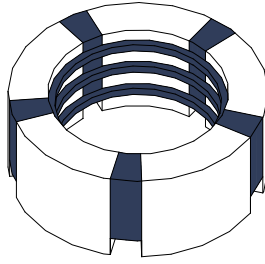


Basement





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

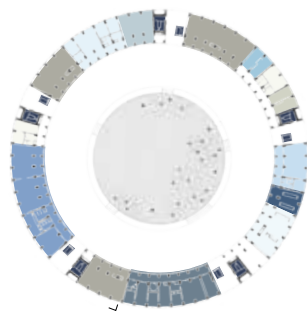


Tietgen Dormitory

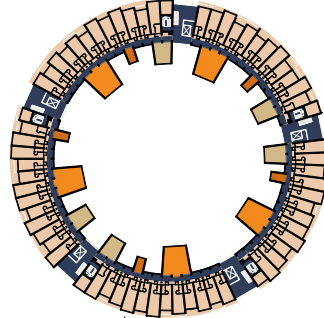
year: 2006
 architects: Lundgaard & Tranberg Arkitekter
 city: Copenhagen, Denmark
 type: student dormitory
 amount: 360 units
 plot size: 6.082 m²
 total floor area: 26.781 m²
 FSI = 4,4

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.

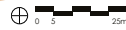
functions



0



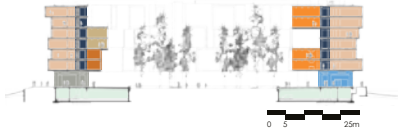
2



circulation
 letterboxes
 offices

assembly hall
 washing room
 room for groupwork
 reading room
 computerroom
 gym
 bike storage

workshop
 music room
 entertainment/study room
 private dwelling
 kitchen/living room
 utility room
 garage



0 5 25m

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

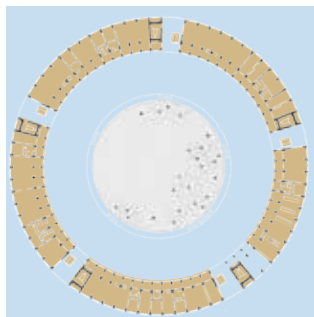
The center courtyard is publicly accessible, but can be closed off by fencing off the five access routes. It is not clear in whether this happens on a regular basis or only in particular cases such as during an event.

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.

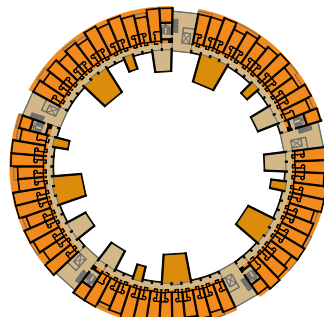
The first through sixth floor are only accessible to residents and their guests. Every hallway section, from one elevator to the next, is closed off with locked doors. Twelve residents per section form a group that shares a kitchen/living room and a utility room for hanging laundry.

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



2



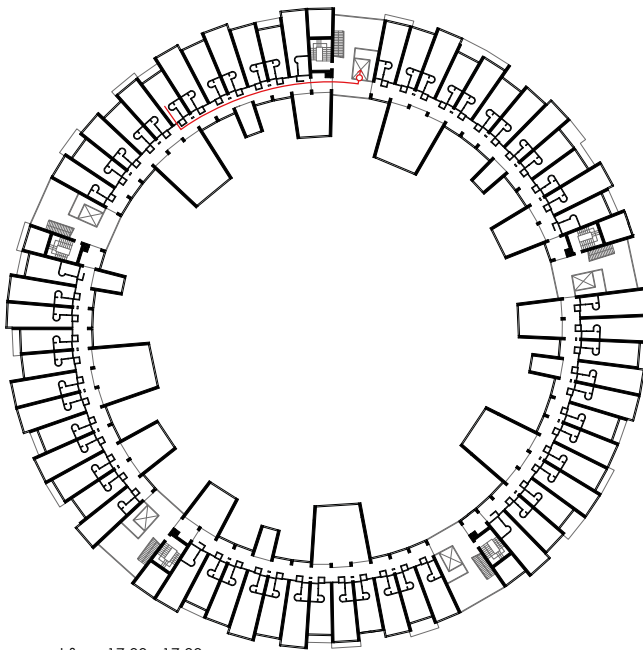
public
 communal (for all residents)

communal (for group of residents)
 private

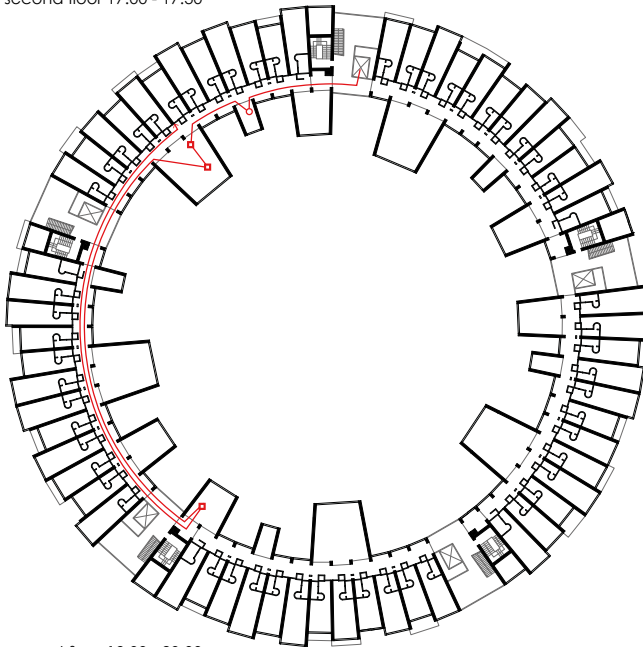
Courtyard Tietgen Dormitory (Lindhe, J. M., 2014a)



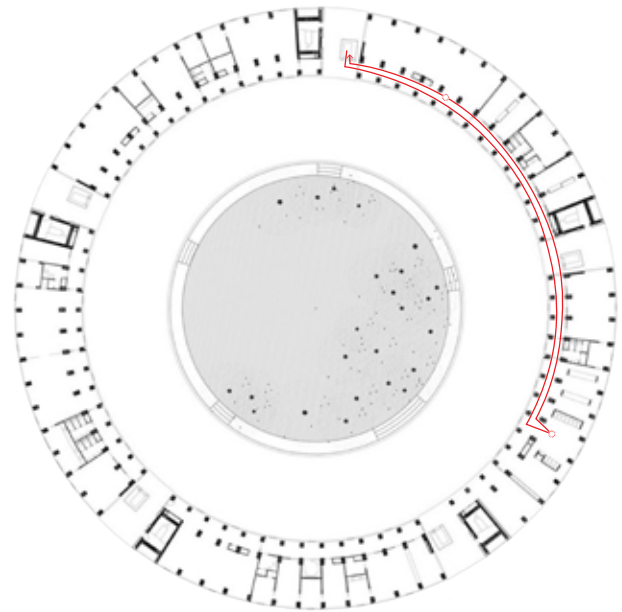
Tietgen Dormitory



second floor 17:00 - 17:30



second floor 18:00 - 20:00



ground floor 17:30 - 18:00



- 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)

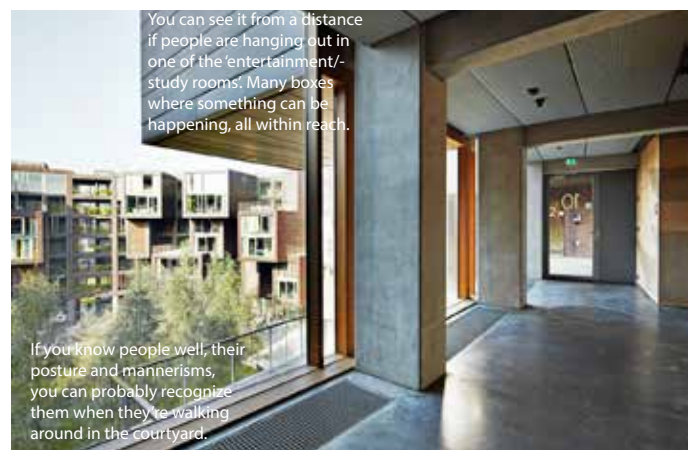
Conclusion

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



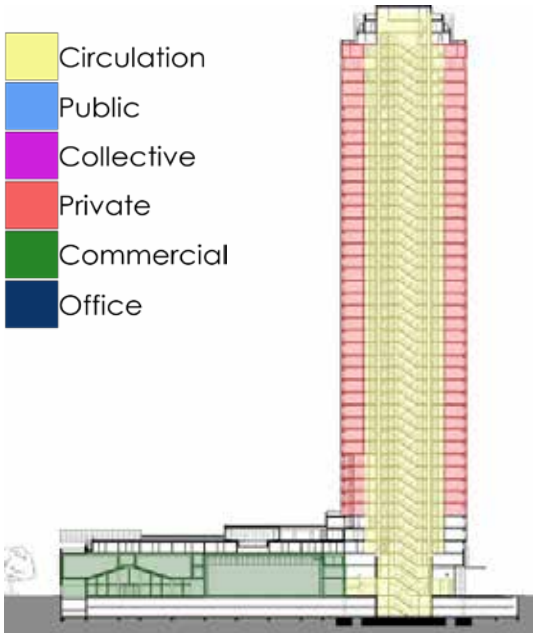
Tietgen Hallway 1 (Lundgaard & Tranberg Arkitekter, n.d.)



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



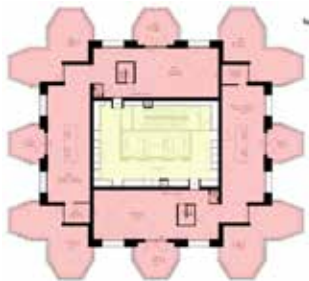
- Circulation
- Public
- Collective
- Private
- Commercial
- Office



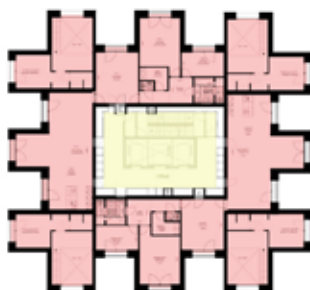
Architect: Alvaro Siza
Built: 2007
Adres: Van der Hoevenplein 9-243
 Wilhelminapier (postcode 3072)
Client: Vesteda
Contractor: Besix Branch Nederland
Typology: 234 appartementen

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.

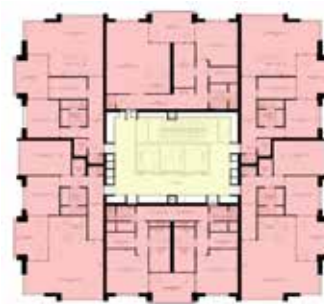


Floor 45

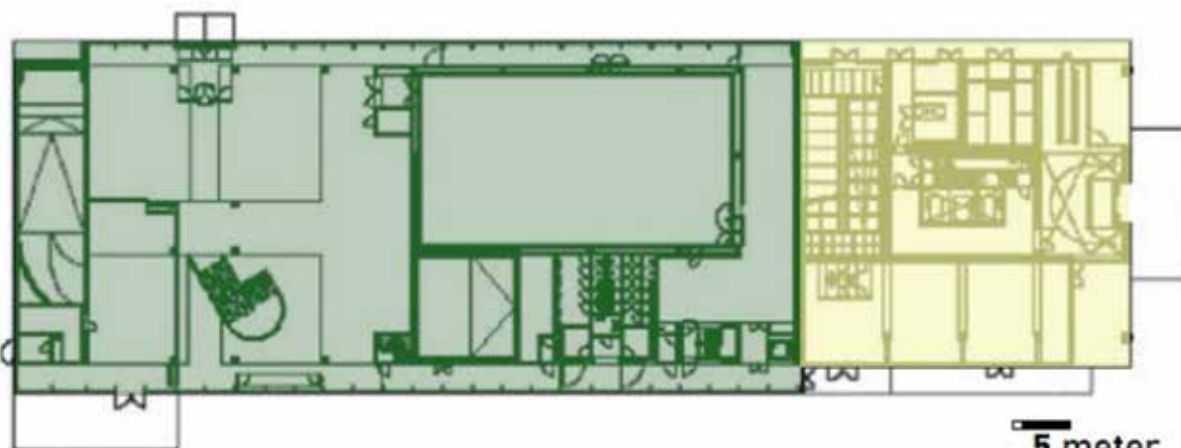


Floor 41

30m



Floor 22



5 meter

Groud Floor



Meeting

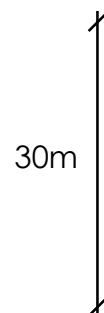
The building does not have much in the form of short term formal meeting spaces. Formal meetings can take place in the formal places of activity such as the swimming pool and cinema as mentioned earlier. Informal meetings can take place in the garage and stairwell, or in the elevators and spaces before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



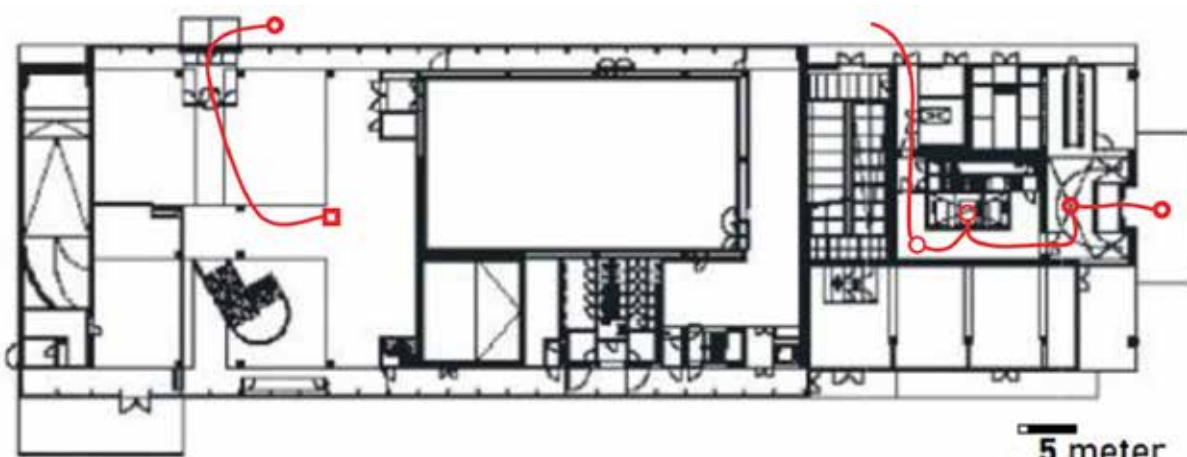
Floor 45



Floor 41



Floor 22



Ground Floor

Piazza Céramique



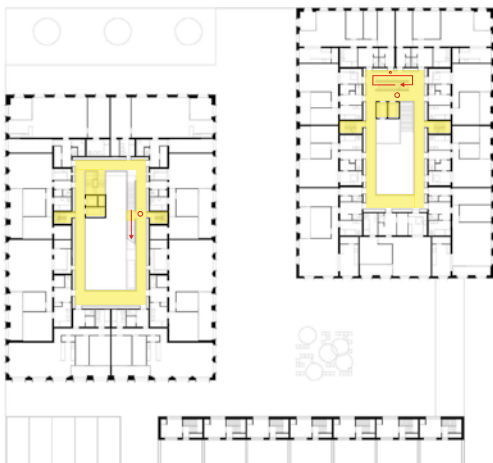
Architects: Jo Janssen & Wim van den Bergh
Built: 2001 - 2007 tender first price
Address: Boschcour, Maastricht
Client: Vesteda Project BV, Maastricht
Typology: 92 dwelling and working spaces
Buildings: 3 volumes
Area: 18.970 m2
 920 m2 commercial space



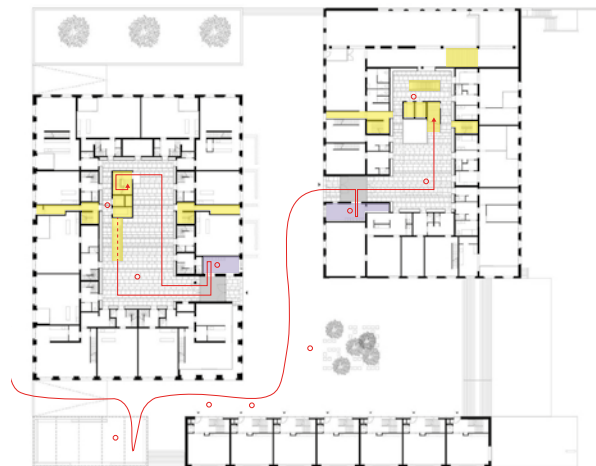
Basement



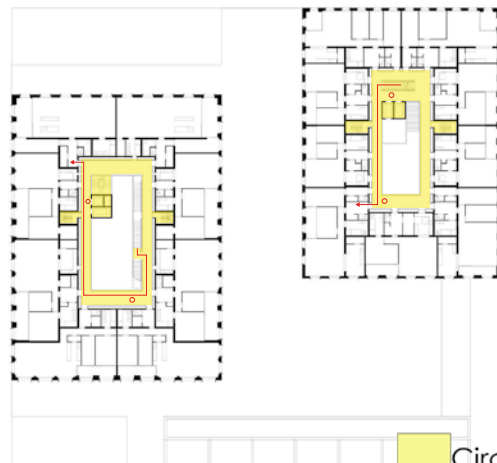
Level 3



Ground Floor



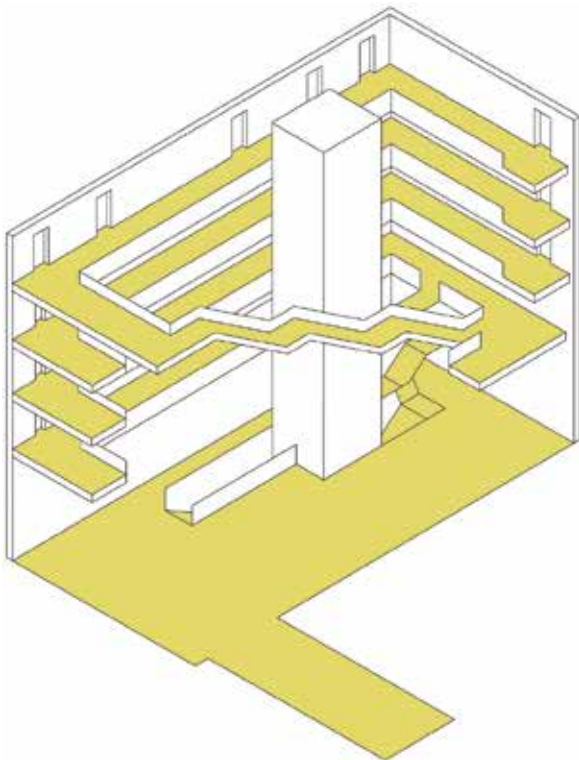
Level 4



 Circulation



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.

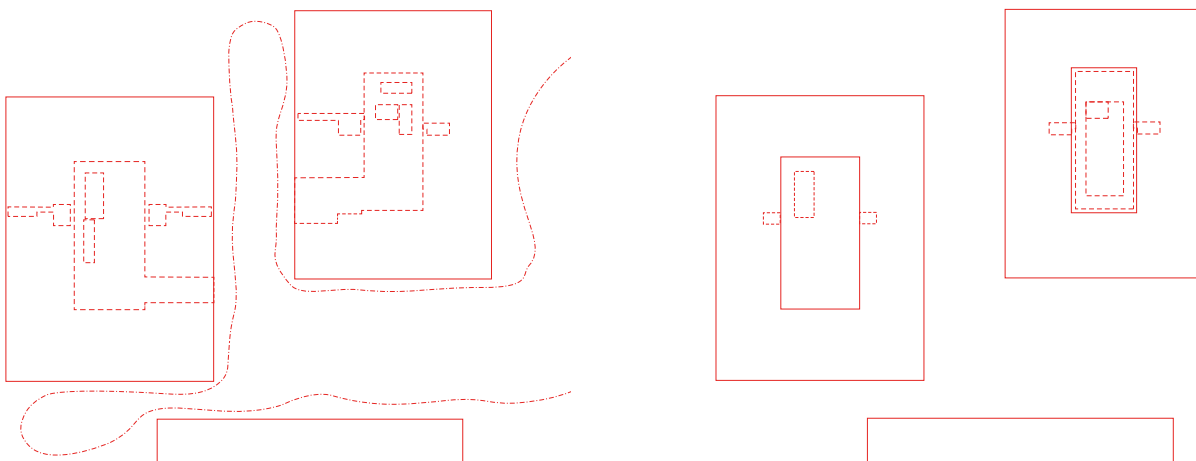
Due to the separate entrances of the buildings which are outside on the lifted deck in the inner area between the three buildings people are more forced to meet each other. Instead of on street level at the street side. On the deck there is a place to sit and meet.

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 ground level 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 floor level.

- Private
- - - Collective
- - - Public

Ground Floor

Level 1



General

St. Jobsveem



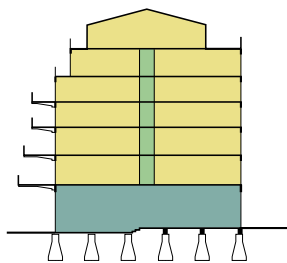
St. Jobsveem exterior (Mei Architects, n.d.)

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

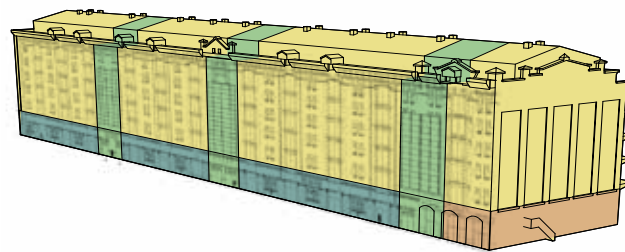
The St. Jobsveem is a listed monument and a former warehouse along the St. Jobshaven in Rotterdam. In 2007 it has been transformed to dwellings. The largest intervention has been the opening of the brick facade, on three locations in the long building. Behind these openings are now the stairs located.

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



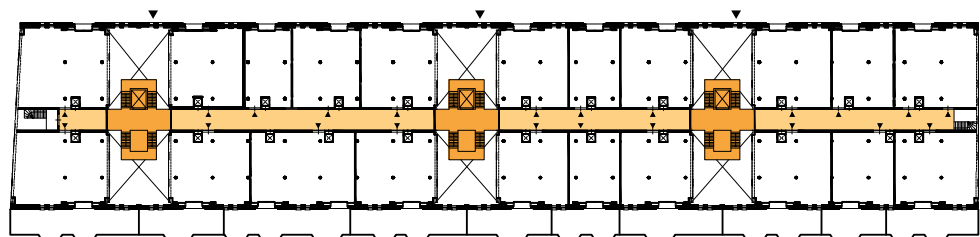
- Living
- Working
- Mobility
- Storage

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



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



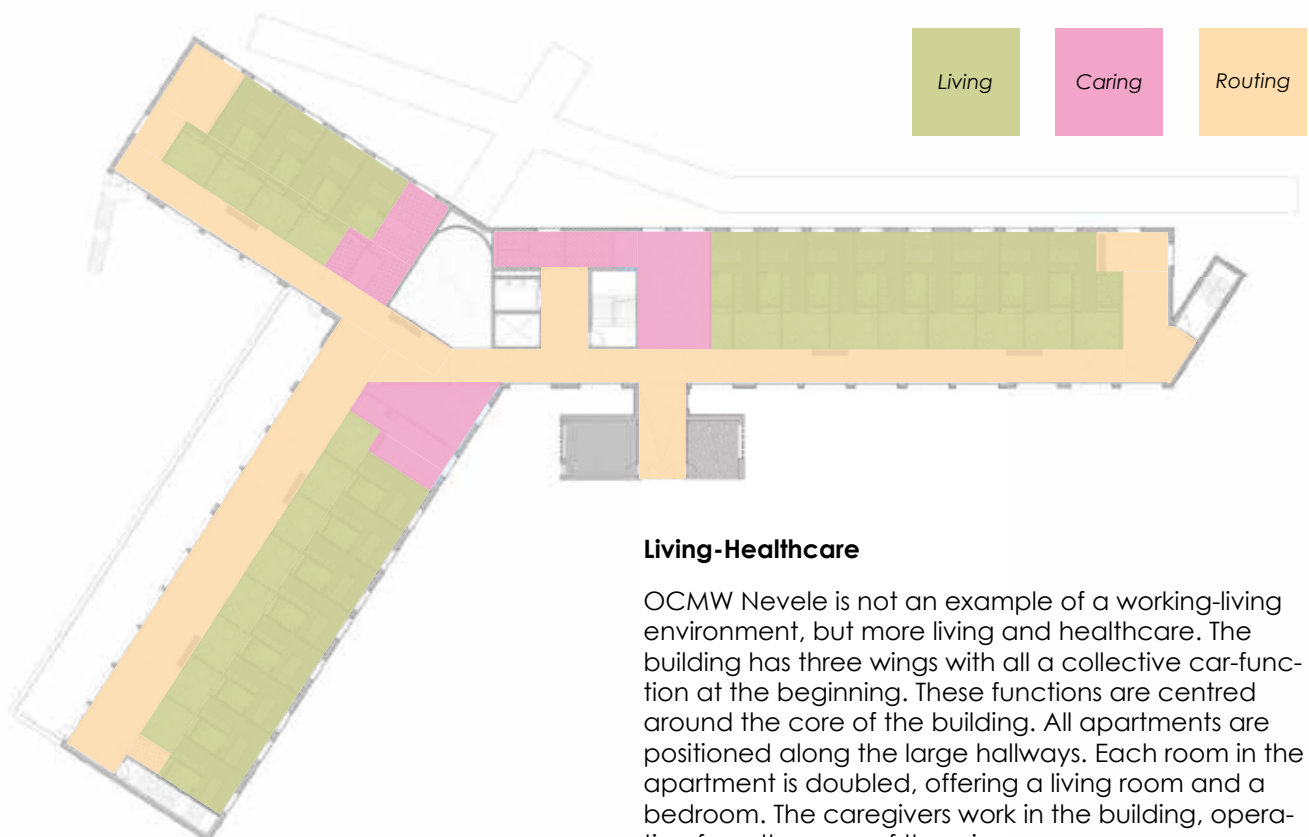
© Filip Dujardin



© Filip Dujardin

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.

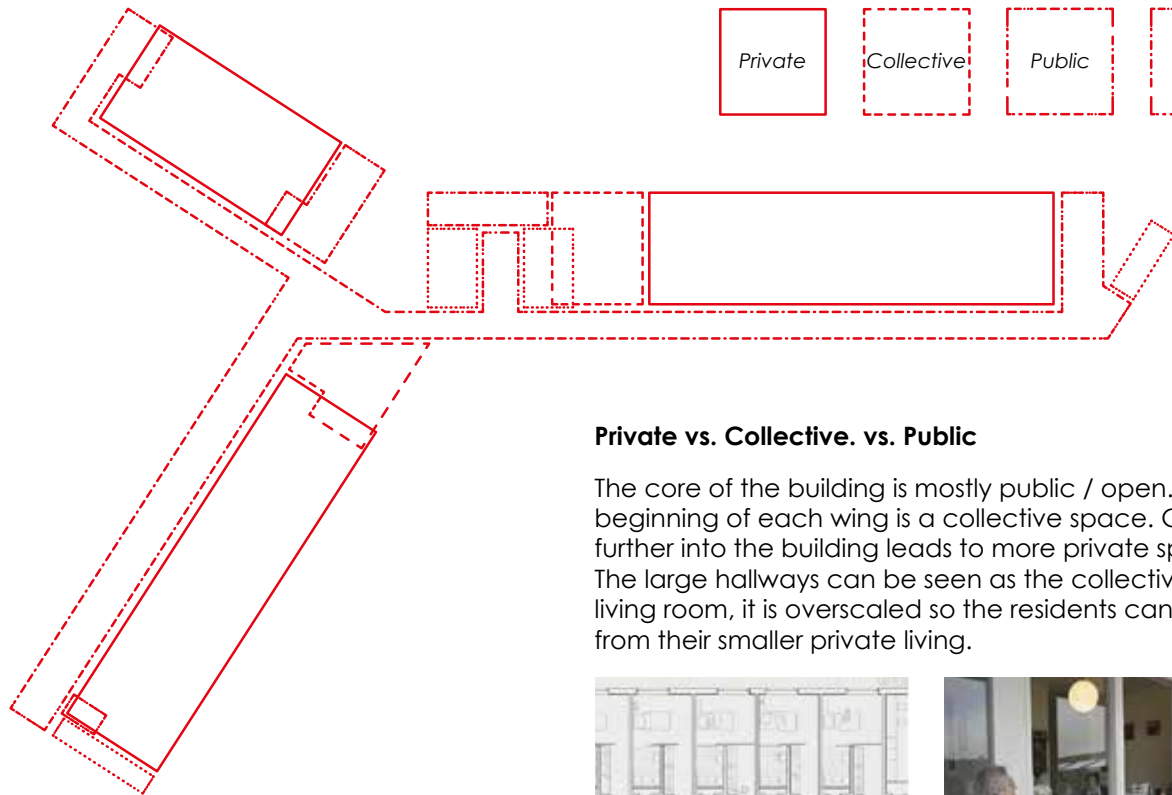
The Collective

OCMW Nevele

51N4E



1:500



Private vs. Collective. vs. Public

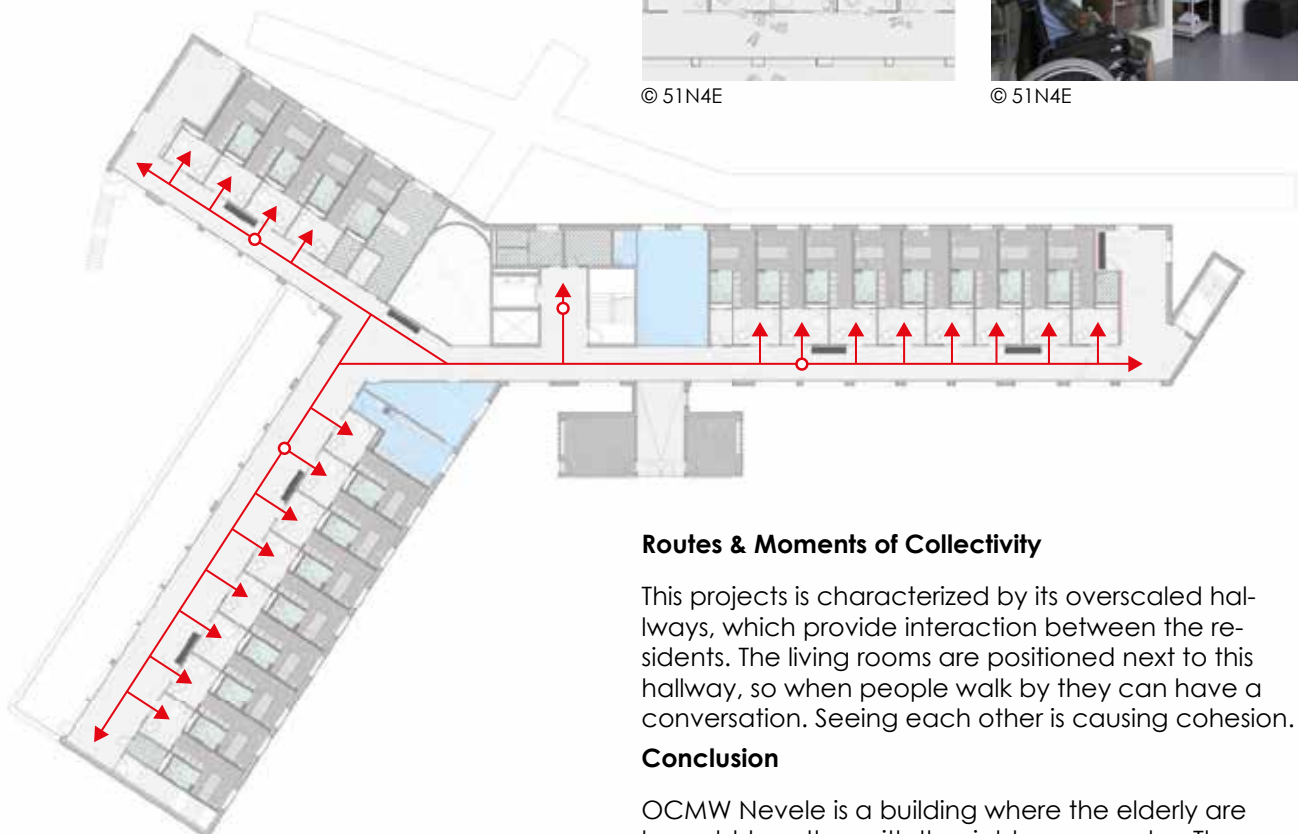
The core of the building is mostly public / open. At the beginning of each wing is a collective space. Getting further into the building leads to more private spaces. The large hallways can be seen as the collective living room, it is overscaled so the residents can join from their smaller private living.



© 51N4E



© 51N4E



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

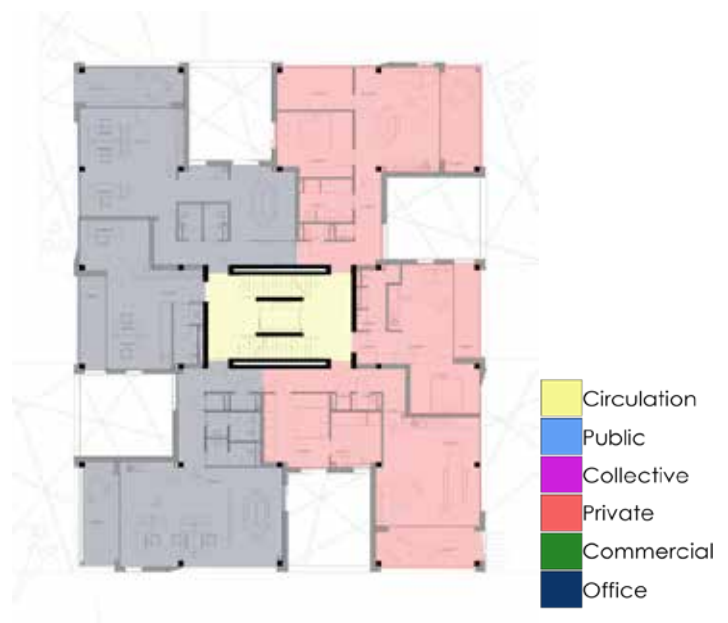
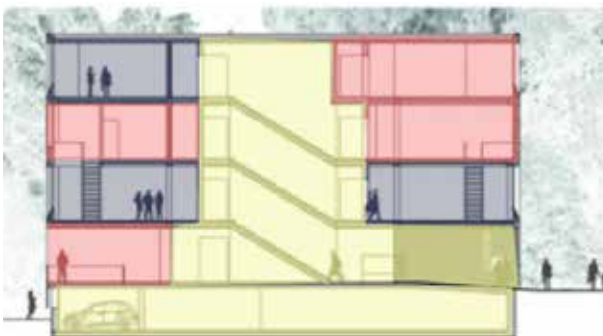


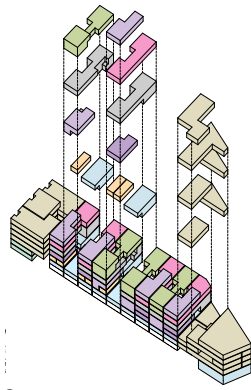
Architects: Bieling Architekten
Built: 2011 - 2013
Address: Hamburg
Client: IBA Hamburg
Typology: 16 dwelling and working spaces
 12 maisonettes and 4 apartments
Area: 2.040 m²
GFA: 2.500 m²



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.



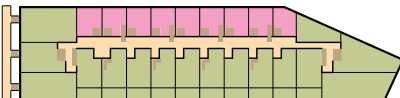
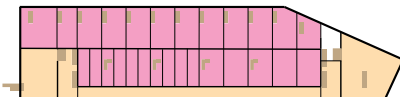
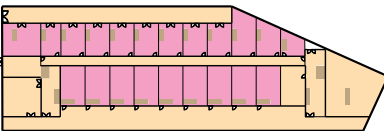
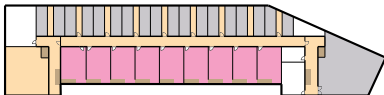


IBeB



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), maisonette, 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.

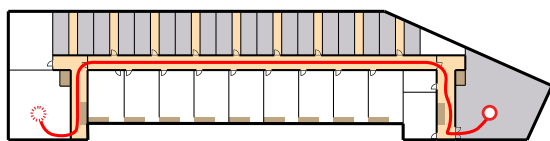
Every home also has its own workspace, which is what makes this building so special. Living and working is usually divided over 2 layers per combination. This means that there is still a separation between living and working, but the spaces are directly connected through an internal as well as an external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

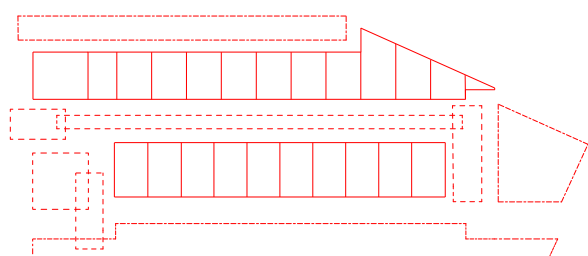
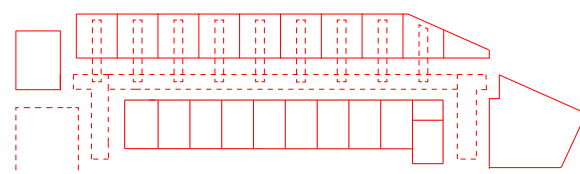
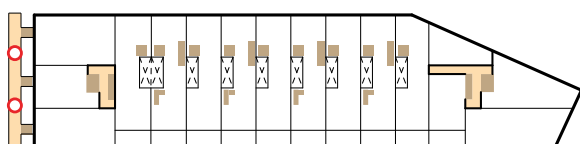
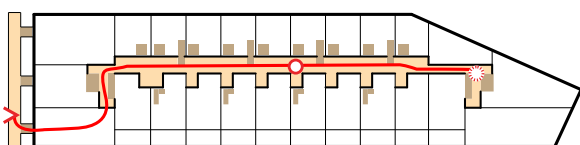
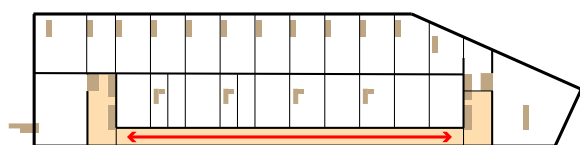
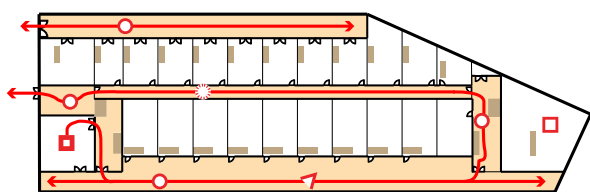
Within this access structure the typologies vary of living and working spaces. 20 workshops for business and home-work use are situated in the plinth. All workshops that are directly accessible from the ground floor have direct access to a publicly accessible street for pedestrians and cyclists and can 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.

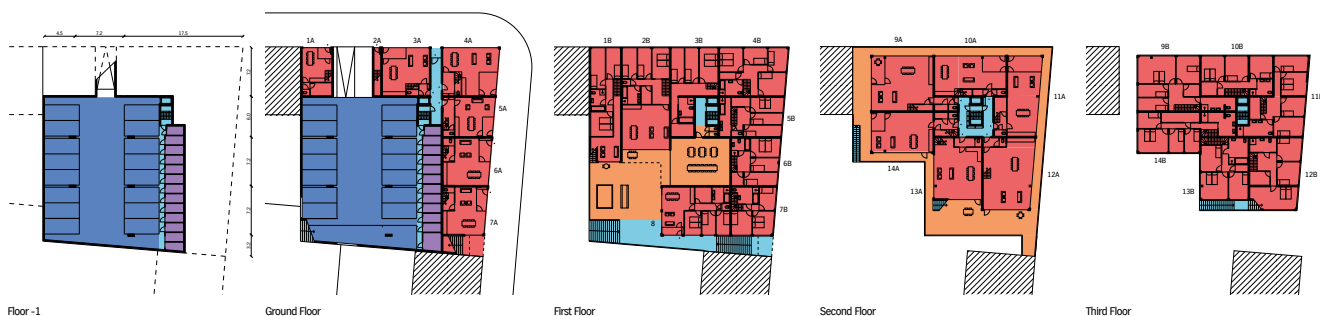
Spread over 12 floors, the family homes varying in size from approx. 90 to 145 m². The ground floor apartments have an entrance at street level, the other houses are accessible by elevator. The size of every floor is different, which accommodates the stair and terraces around the building.



Laurens Boodt Architecten



Laurens Boodt Architecten
1:500



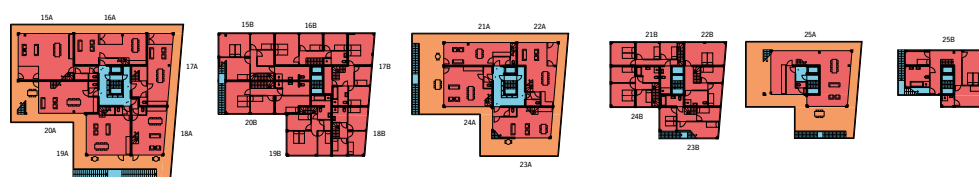
Floor -1

Ground Floor

First Floor

Second Floor

Third Floor



Fourth Floor

Fifth Floor

Sixth Floor

Seventh Floor

Eighth Floor

Ninth Floor

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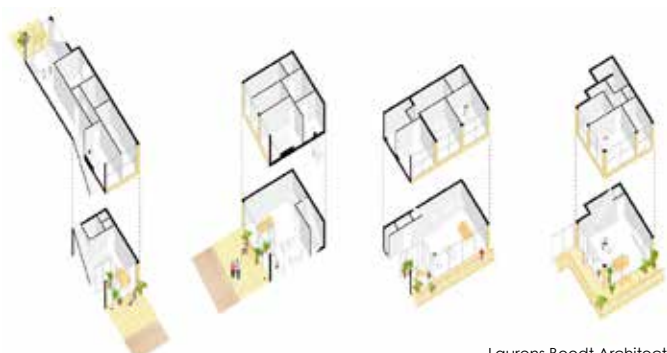


- Private
- Communal
- Work
- Access
- Parking
- Storage
- Green

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.

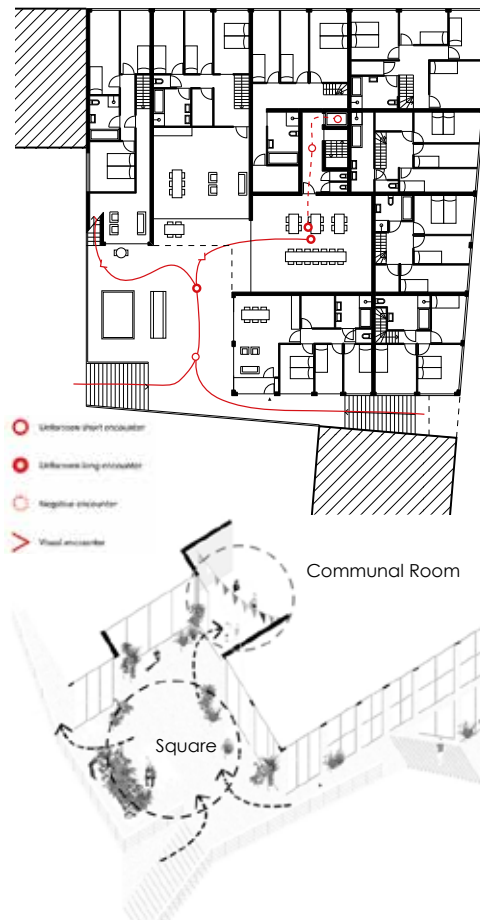
The street space continues upwards along the houses, with the stairs connecting the different platforms. The stairs are a reason for play, seating and viewing point.

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.



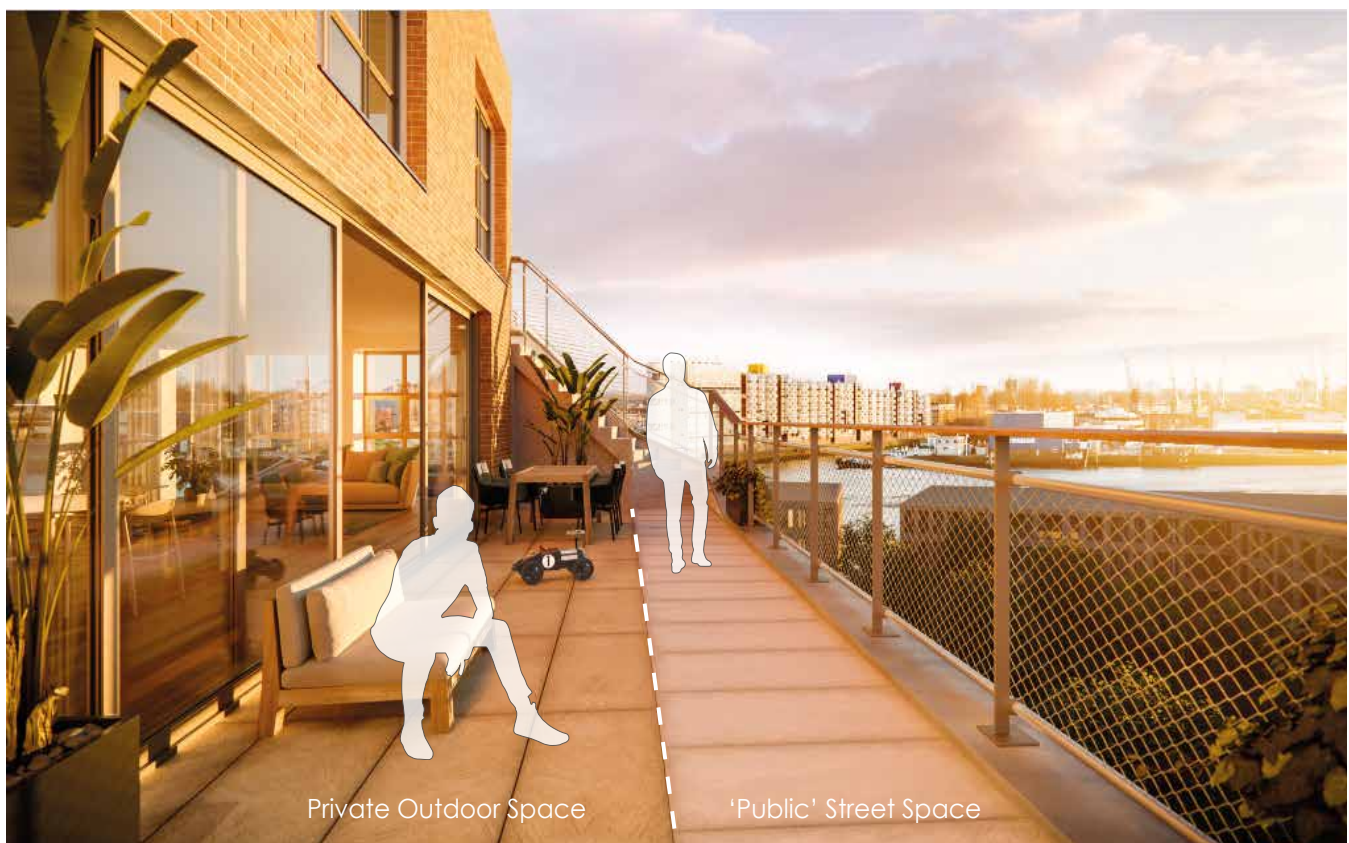
Conclusion

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.



Conclusion

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.

Divorcing families



Introduction

One out of three.

In our contemporary society, one out of three marriages ends up in a divorce. This counts for roughly 30.000 married couples getting a divorce, each year, in the Netherlands (CBS, 2019). Roughly, because the number of divorces changes every year depending on different factors and occurring events. Currently, it is the corona-crisis that impacts the number of divorces. According to the vFAS, divorce lawyers got fewer divorce requests in this moment of crisis. The divorce lawyers explain that couples are postponing their divorce due to fear of financial problems (NOS, 2020).

The majority of divorcing persons are experiencing financial problems due to the division of finances, property, and belongings (CBS, 2017).

Simultaneously, the search for another house has started. It is the tight housing market which makes it difficult to find something affordable and available in the short term. This can cause problematic situations in which divorcing people end up being homeless (deMonitor.KRO-NCRV, 2018).

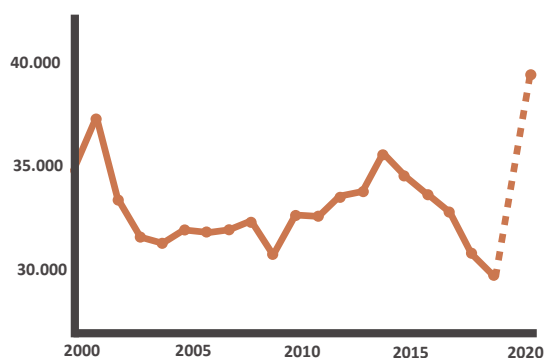


Figure 1. Numbers of couples getting a divorce. (CBS, 2019). Including the estimated number (vFAS, 2020).

Additionally, most study results show that divorced adults and their children experience more mental and physical health problems than do married adults and their children (Amato, 2012).

New built areas, inhabiting freelancers, and people working in the creative and innovative industries contain the highest rate of divorces. There seem to be less of a taboo about getting a divorce in these areas, assumed by Peter Hoogeven (NOS, 2016), chairman of Parents-houses; a foundation that provides temporary shelter for divorcing parents.

To contribute to an inclusive society, divorcing families should be represented in the development of new areas. The design location given in for the studio Dutch Housing is the M4H-area in Rotterdam. The M4H-area is planned to be an innovative live-work environment, intended to bring creativity, innovation, and making together. This live-work environment is ambitioned by the municipality of Rotterdam to provide collectiveness. That makes M4H eminently a convenient place to include divorcing persons.

The notion of collectiveness and the experience of financial, mental, and psychological problems of divorcing persons and involved children, deserves a deeper investigation and understanding. This raises the research question:

How can we create collective housing that meets the needs of divorcing families?

Research method

To answer the research question, several subquestions are formulated.

‘Who are the divorcing families?’

‘What do divorcing families need financially?’

‘What do divorcing families need to sustain in their mental and physical health?’

*‘What are the housing preferences of divorcing families?’
(individually and collectively)*

Several research methods have been performed to investigate the needs of divorcing families to create collective housing.

To get a better understanding of the financial situation of divorcing families, the problems and necessities are investigated through news articles, literature reports in combination with consulting interviews. The same method is used to investiga-

te the well-being of divorcing families. The housing preferences for divorcing families are investigated through literature research, consulted interviews, and case studies.

Due to corona, these interviews are consulted through the phone or zoom. In total, 12 different persons are interviewed. The interviewed persons are a mix of persons that I know personally and persons I have approached through internet platforms. All of these persons are divorced and shared their stories about the divorce, their living situation, feelings, and problems they have faced. * The research concludes with the answer to the research question:

How can we create collective housing that meets the needs of divorcing families?

**Because of personal information all of the interviews are processed anonymously with fictional names. Personal references, like pictures, are personally allowed by the interviewee.*

Who are the divorcing families?

Divorce trend

Since the introduction of the divorce law in the Netherlands in 1971, there has been an immense increase in the number of divorces each year (Figure 2). This increase is related to the changing role of women in society in combination with the easy possibility of getting a divorce, because of this law (VPRO, 2014).

A variety of reasons could lead to a divorce; cultural differences, abuse, or financial problems are some of the many reasons why people get a divorce. Currently, it is the corona-crisis that has an impact on the divorce rate. Divorce lawyers made their expectation at the beginning of the corona-crisis that, in 2020 40.000 couples would request a divorce (VFAS, 2020). Up to now (November 2020) the high amount of divorce requests haven't taken place yet. The explanation given by the divorce lawyers now is that couples postpone their divorce due to fear of getting into financial problems during the pandemic (NOS, 2020).

Study results of the CBS (2012) show the complicated relationship between the divorce rate and the economy. On the one hand, an economical crisis could result in tension and stress between partners. On the other hand, these financial problems make it too difficult and expensive to divorce. CBS (2012) concludes that up to the year 2000, it was the bad economical times that increased the divorce rate. After the year 2000, the reverse is the case. Nowadays more couples divorce in better economical times.

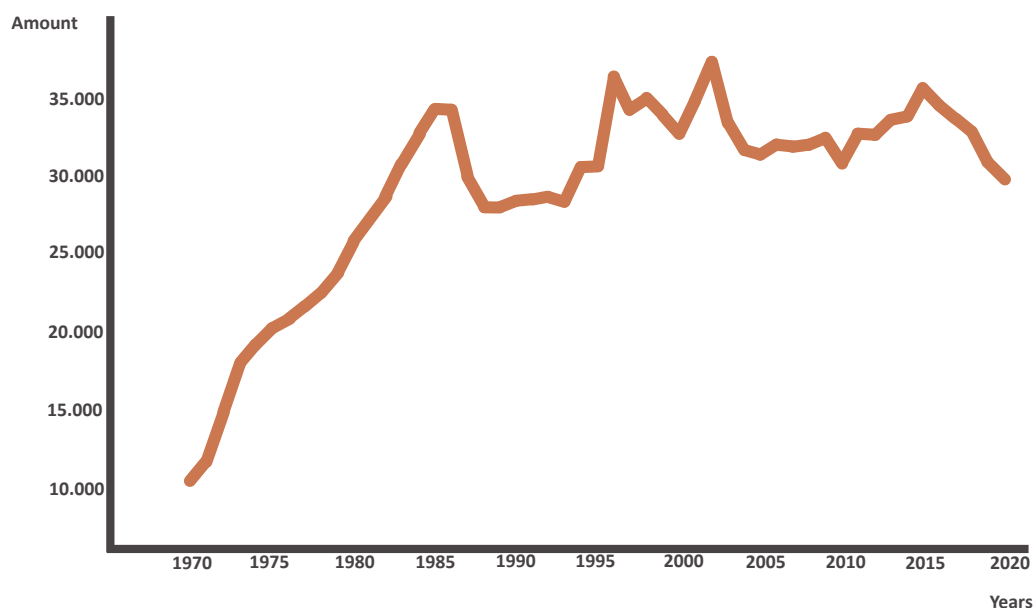


Figure 2. Numbers of couples getting a divorce since 1971. (CBS, 2019).

Who are the divorcing families?

Who divorces?

The divorce rate is not equal in different areas. New-built areas that inhabit young families and self-employed people working in the creative and innovative industries contain the highest number of divorces. In the neighborhood IJburg Amsterdam, the chance of getting a divorce is around 36%. The cause of this high number isn't specifically studied, yet, Peter Hoogeveen, the chairman of Parents'houses (NOS, 2016) assumes that the taboo to get a divorce is smaller for people working in the creative industries. Another city with a high divorce rate is Amersfoort. Neighborhoods of Amersfoort where specifically young families live had a divorce rate of 40%. The challenge of taking care of young children is stated as the main reason to get a divorce (Eenvandaag, 2016). The assumptions and findings of which families are more likely to divorce are still not giving hard evidence for a stereotypical family that is likely to divorce. The divorce law and the diverse reasons (figure 3) of people make it that all types of families have the possibility of a divorce.

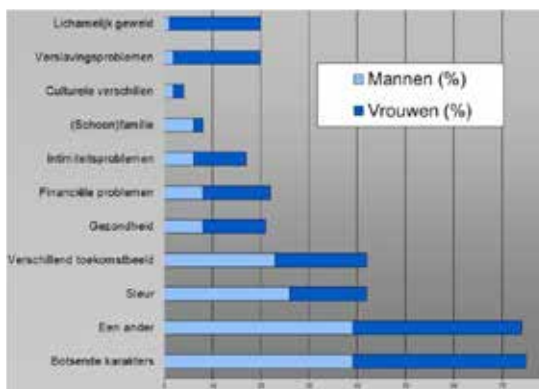


Figure 3. Reasons of a divorce. Source: FVPI, 2019. consulted from: <https://www.fpvi.nl/scheiden/scheidingsstatistieken/>.

Divorcing spectrum

The divorce situation does not solely apply to the two adults. Children are involved in half of all the divorces (Figure 4). In Rotterdam, out of the 1077 divorces in 2018, 969 children were involved (CBS, 2019). In 75% of the cases, children continue living with their mother after the divorce (Spruijt, 2010). The other parent, in most cases the father, will continue seeing his children through visits him. These visits can differ from one weekend each month to every weekend and even some weekdays if possible. In 20% of the cases, parents choose co-parenting. With this co-parenting arrangement, both parents are still considered as the primary spend and spend an equal amount of time with their children (Spruijt, 2010).

The decision about when the children stay where is a part of the legally required parenting plan (Rijksoverheid, 2020). Children above 12 have a say in this as well and can decide for themselves what they want. Commonly, young children will stay with each parent at the same time. This could change when the children can choose for themselves when they want to stay with which parent.

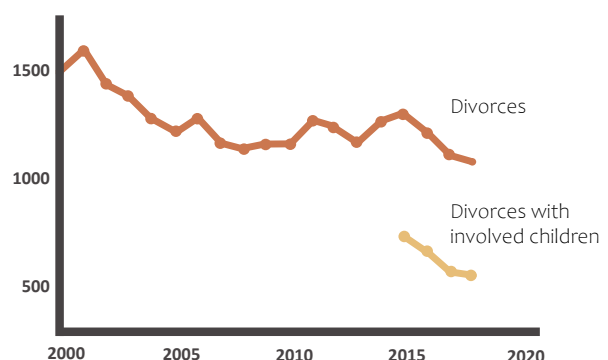


Figure 4. Numbers of couples getting a divorce compared with the number of divorces with involved children. (CBS, 2019).

Who are the divorcing families?

I interviewed two women, Rose (24) and Sara (25) whose parents divorced when they were younger. Rose explains to me her experience with the visiting schedule; *'I was 11 when my parents decided to divorce. My two younger sisters were then 9 and 7. We continued living at the house with my mom, and my dad moved around 7 km away. In the beginning, the three of us went to my dad every weekend. That changed when I became 16. I joined a sports club close to my dad's house and started to stay there one night during the normal weekdays. Sometimes I had a party close to my mom's house at the weekend, and then I decided to stay at her house during the weekend. I was happy I could choose for myself as my sisters continued with existing the weekday/weekend schedule.'*

Sara shared a different experience; *'I was 15 when my parents divorced. My dad found a new house 2 minutes away from my mom's house, which made it very easy to commute. I continued living with my mom and my older brother (19) decided to live with my dad. I didn't have a room at my dad's house and as my mom's house was so close I decided to not stay*

at his place overnight. I visited him during the day or in the evening to keep in contact with him. My brother still had his room at my mom's house, so when he came over he usually stayed overnight.'

We can conclude that these visiting schedules exist in myriad ways and can change over time. These diverse options result in something I consider to call a spectrum, in which every divorcing family is different and will develop its schedule and visiting dynamic.

To define the divorcing families that are part of this research, this spectrum of divorcing families is divided into two divorcing family categories:

1. The family with the parent that is the primary caretaker of the children: the Primary Parent family - The PP family.
2. The family with other parent; the secondary parent family - the SP family.

Figure 5 shows the two families and an example of the dynamic of the visiting schedules of different children at their parent.

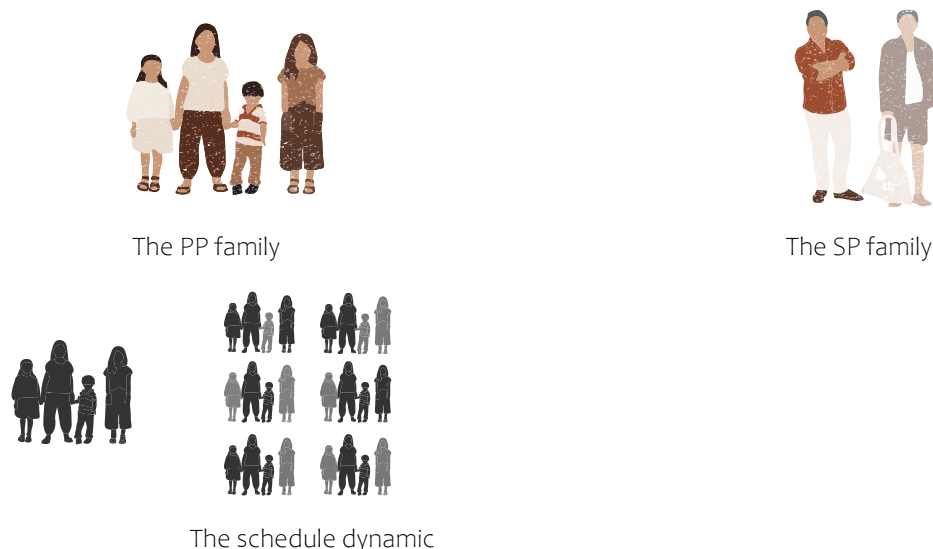


Figure 5. The PP family and the SP family with an example of the dynamic of the visiting schedules from the children of the PP family. (own illustration)

The financial situation

Problematic situations

The problem of finding an affordable house in short term counts for everyone. While many of these house-seekers can continue living where they stay at the moment, the people that just got a divorce are forced to find someplace else to live. News articles show stories of divorcing persons who have no family members or friends to go to when they need a place to stay (DEmonitor.KRO-NRC, 2018. & RTL Nieuws, 2019). They are forced to sleep in their car, office, or even on the streets. It is hard to conclude how many of the divorcing persons are finding themselves in this situation. In most cases, these people feel ashamed to share

their living situation with their colleagues, friends, or children. Therefore their story will remain unknown. However, articles show the rising numbers of homeless people at the crisis shelter, partially because of a divorce. Even a housing foundation for divorcing persons has started called 'Parentshouses Nederland' (2013). This initiative started in IJburg (Amsterdam). Pastor; Rob Visser, started to notice the increasing number of divorcing persons that were trying to find a house in this area, without any success (Trouw, 2014).

Drukke bij daklozenopvang stijgt, mensen op straat na scheiding of faillissement

DOETINCHEM/ NIJMEGEN/ ZEVENAAR - Steeds meer mensen belanden in de noodopvang voor daklozen in deze regio. Door de krapte op de woningmarkt zien veel mensen geen andere oplossing meer als ze hun eigen huis ineens kwijt raken door bijvoorbeeld een faillissement of een scheiding.

20-08-2019 De Gelderlander

Op straat na je scheiding: 'Soms slapen mensen stiekem op kantoor'

30-01-2019 RTL Nieuws

Dakloos na scheiding: 'Uiteindelijk sliep ik met mijn dochter in de auto'

19-01-2018 De Monitor, KRO-NCRV

Steeds meer dakloze mannen na scheiding: druk op daklozenopvang in Groene Hart

29-10-2018, AD

The financial situation

Financial problems piling up

The personal consulting interviews for this research uncovered more problems. One interviewee; Simon told me that he had married someone living on the other side of the Netherlands. He moved towards that area and bought a house together, which he mortgaged for 80%. Their divorce was the decision of his wife. He explained that after her decision he wanted to move back to where he originally came from. However, this was a difficult decision. The mortgage payment and the monthly family costs had to be provided by him. This made it impossible to find an affordable place with little time and budget. He ended up living with his parents, in his old room stating that ‘if it wasn’t for my parents, I would have lived on the streets’. He was grateful for the place that his parents could offer him, but adapting to their household and not having an extra

room for his children when they came to visit him was experienced as problematic. During his stay with his parents, it was uncertain how long he would find himself in this situation. Simon concluded with ‘I can’t go anywhere else before the house, where my wife and children live, is sold’.

Frank, another interviewee told me that ‘I absolutely don’t want my children to move and I will try everything I can to sustain them living in that house.’ Unfortunately, he had a difficult time finding another place to live and to have his children over. Due to his small budget, he had moved over 5 times in the past 7 years. Because of the income and expenses, of which alimony is a big part, related requirements, he wasn’t able to rent anything in the free rental sector nor in the social rental sector.



Figure 6. Picture sent by one interviewee who stayed at his parents. When his kids came to visit they had to stay over in the same room, (june 2020).

The financial situation

The finances of both parents

The interviewees Simon and Frank could be defined as the SP family. They do not have the primary care of the children but sustain their children with alimony. This is a deep cut in their budget. However, a study was done by Pommer, van Leeuwen en Ras (2003) determined that the primary parent family decreases financially while the secondary parent experiences a financial increase. The difference could be explained that this study includes the results over a long term period after the divorce. These numbers confirm this in case the children live with their mother, which happens in most cases (CBS, 2017). CBS argues that it is more common for women to not have their own income before the divorce or when they work, they work part-time. This means that it is the mother who usually ends up with a social assistance payment (bijstandsuitkering) and not the father. (CBS, 2017). However, men are more likely to end up in depths, as they have to buy out their partner (CBS, 2017). Due to the financial disadvantages that are experienced by both men and women, it could be concluded that the need of increasing their income and/or lower their expenses is therefore important to financially sustain themselves and their children.

Finding a new home

The social rent sector is for some of the divorcing persons the only option suiting their budget. Problematic is the long waiting list of the social rent sector. These houses are not available in the short-term without an urgency declaration. The urgency declaration policy differs between municipalities. Unfortunately, the municipality of Rotterdam doesn't see

divorce as a reason to get an urgency declaration (woonnetrijnmond, 2020).

Paying rent for another house and child alimony is a deep cut in a person's budget. However, this is not the only expense while moving to another house. Furnishing a new house could be a costly expense as well, especially with children. Some interviewees stated that furnishing the house during their divorce was a deep expense and that they could not afford it. Frank said that he rather make his own furniture if he had the tools for that.

Financial necessities

According to this research about the finances, divorcing families have financial problems with the expenses of paying rent and buying furniture and the amount of their income. The logical solution would be to decrease their expenses and to increase their income (figure 5). This could be possible to create affordable housing accessible for divorcing families, which offer these financial benefits to help them to sustain. Financial benefits could for example be found in shared collective spaces such as a work spot or generating jobs. Also, housing equipped with furniture and the opportunity to make their own create financial benefits.



Figure 7. The offer of financial benefits through the decrease of the expenses and increase of income. (own illustration)

The well-being of divorcing families

The well-being of parents

Many studies have been performed about the negative consequences that a divorce has on the well-being of the family members. Paul Amato (2012), professor at the Pennsylvania State University, who focuses with his research on marital quality, divorce, and other family-related issues, proposed a model in which a divorce should not be viewed as an event, but rather as a process which could unfold over months and even years after (Amato, 2012).

Several stressful experienced events occur during the divorcing period. One frequent is the decline in the standard of life, due to the financial situation. Moving out is another event that is experienced as stressful and time-consuming. While living alone, the primary parent experiences the difficulty of parenting alone, because the other parent isn't present to share daily tasks. In accordance, the secondary parent experiences the loss of daily contact with their children to be difficult (Amato, 2012). Divorcing also results in the loss of benefits that are associated with marriage. Marriage provides for much emotional support, companionship, and economic security. Also, married couples tend to socialize with other married couples. The divorcing adults find themselves here in a difficult situation by feeling drifted apart from their former friends. All of these stressful events can pile-up and affect people's mental well-being (Amato, 2012).

Another research (Anthony, 1997) has been done, in which specifically the living experience of divorced mothers and children were investigated through interviews. This research has been performed by Kathryn H. Anthony, an American professor of architecture, author, and spokesperson specializing in gender issues in architecture. The research results show that the most stressful experienced events for mothers and their children were house-repairs, house-hunting, and moving. The research also concludes that the insecurity of not knowing what to do and where to go and time-consuming events were so stressful that it negatively affected their mental well-being (Anthony, 1997).

The consulted interviewees all had their unique experiences about their divorce. The literature (Amato, 2012; Anthony, 1997) and interview results show that the primary and secondary parents experience different losses. However, loneliness was something that both the primary parent as the secondary parent experienced. One interviewee: Kim, told me that she had to move to another neighborhood. While she already felt alone in taking full care of her two children, feelings of isolation began to rise by not knowing anyone nearby.

The well-being of divorcing families

The well-being of children

The divorce does not only affect the parents. The involved children experience stressful events as well which could have negative effects on their well-being (Amato, 2012). A large number of studies has been done from all kind of countries about the well-being of children with divorced parents. The research of Amato (2012) shows that children with divorced parents, compared to children with married parents, are more likely to have emotional and social problems and have lower school grades. One of the mental difficulties these children face is the weaker emotional ties with the secondary parent, which could create negative feelings, like loss and/or anger. Another difficulty is the confrontation of the negative emotional feelings of their parents. Their negative moods could strongly influence their children's mental health. Studies that have been performed about Dutch children of divorced parents show poorer outcomes in their well-being, like drug use, crime, school problems, depression, and suicidal thoughts (Dronkers, 1999).

These results show that how parents perform the divorce affects the well-being of their children. Amato (2012) states that all children benefit when authoritative parenting is engaged. Positive co-parental relationship, also in the post-divorce years, makes children feeling better. In particular, parents mustn't involve their children in problems they have about the children's living arrangements, visitations, and child support. because children thrive on stability. The necessities for children

where Amato (2012) concludes with is to support a positive environment to live in and the possibility to let them live in the same neighborhoods and schools.

Well-being necessities

According to the research, both parents experience different losses because of divorce. However, loneliness is experienced by both of them and considered as most problematic. To sustain the divorcing families in their well-being, both parents and children, need opportunities that enable them to have social interaction. This could take place in collective spaces designed to enable the desired social interaction of divorcing families.

Housing preferences - primary parent family

The housing preferences are investigated and divided into two different preference categories: the housing preferences of the primary parent families and secondary parent families.

The primary parent family

The housing preferences of the primary parent families are investigated with the literature of Anthony (1997), interviewed parents and a case study.

Anthony (1997) describes interviews with children and the importance of having their own room. Her research explains that it is hard for a child to feel at home when he or she doesn't have his/her own space to sleep. Their deepest desire is to have their own room with each parent, which makes them feel welcome. Some of the children interviewed by Anthony (1997) felt ashamed of having no room at their parent's house. An interviewed teenager said: *'I feel bad for my mom because she tries hard.. and she fixes up the place nicely, but her apartment just lacks space. I don't really get along with my sister, and it's really hard at mom's apartment because we share a room there. My sister is screaming and she wants to go to bed, but I can't go to*

bed because I have to do my homework. This causes a lot of problems.' (cited interview answer out The journal of architectural planning, Anthony, 1997.)

On interviewed father explained that the house of his ex-wife had been a big factor in his daughter's adjustment to the divorce, simply because she had no adequate room. She had to share that with her mother's boyfriend's hobbies: train sets (Anthony, 1997). The personally consulted interviewees for this research emphasized the same preference of having separate bedrooms for each child. One of my interviewees, Sandra, mentioned that she turns the living room into her own bedroom during the night, just to provide all of her teenage children to have their own room (Interview, June 2020).

Outdoor spaces are considered important as well. High preferences are nearby parks and convenient playgrounds for the children (Anthony, 1997). The consulted interviewees which have younger children emphasized the importance of having an outdoor space easy to access for her children and close by for their children to play (June, 2020).

Housing preferences - primary parent family

Case study- The Brussel Flat

This case study research is performed through personal site visits, documental analyses and interviews. 2 interviewees Kim and Sandra have lived here. Both of these women ended up in this apartment building because of their divorce.

The floorplan shows a spacious apartment (Figure 8). Both of the interviewees, Kim and Sandra, confirm that they were lucky to end up so fast in such an apartment for little money. However, it was not the number of square meters of the apartment that created issues. Feelings of loneliness, isolation, and disconnection from the neighborhood were mentioned as most problematic. Especially Kim, who had two young children experience a difficult time finding her way to take care of her children and socialize.

Interviewee Kim was at first very positive and grateful to get this apartment so fast. She told me 'I was so lucky to get this apartment so fast. I was at the top of the list because I was already signed up for years. All the apartments were just renovated, so it was very clean and it looked well maintained.'

Sandra also confirms that she is very happy she found this apartment. 'All of my children, I have three, have their own room. I sleep in the living room, which I turn into my bedroom at night. I don't experience this as a problem. I am just very happy that I have my own place now.'



Figure 8. A typical designed floorplan of the Brussel flat. (Consulted from: EKZ Makelaars).



Figure 9. The Brussel flat. Uithoorn. (Consulted from ooze.nl).

Housing preferences - primary parent family

Besides the positive stories about finding an apartment like this so fast, Kim ran into several issues while living there. She continues *'Whenever my children wanted to play outside, I had to go outside as well to keep an eye on them. Because to go to the play facilities you had to walk quite far around the building (figure 8). For me, that was very hard as a single parent to do so every day. Especially with little children who have a lot of energy and who want to play outside. The balcony and gallery didn't suit that'* (figure 9).

Asking Kim about the contact with her neighbors, she told me that there was barely any. *'I didn't know anyone who lived there and I had the feeling I couldn't relate to them. The only one I knew was my direct neighbor at the left. I lived in the corner and when the sun was shining, I sat at the gallery and so did she. But that was it. I usually tried to spend a lot of time with friends of mine who were also divorced. We were able to do things together with the kids outdoors. In this apartment, I felt really isolated and I am happy I don't live there anymore.'*

According to the research results, the Brusselflat does not provide a strong social interactive environment. With no collective spaces and small galleries, feelings of isolation and loneliness could easily occur when being a single parent. The results show that it is important to have easy access to a safe playground for children and the possibility of having easy interaction with neighbors. A private bedroom for each child is also highly preferred.

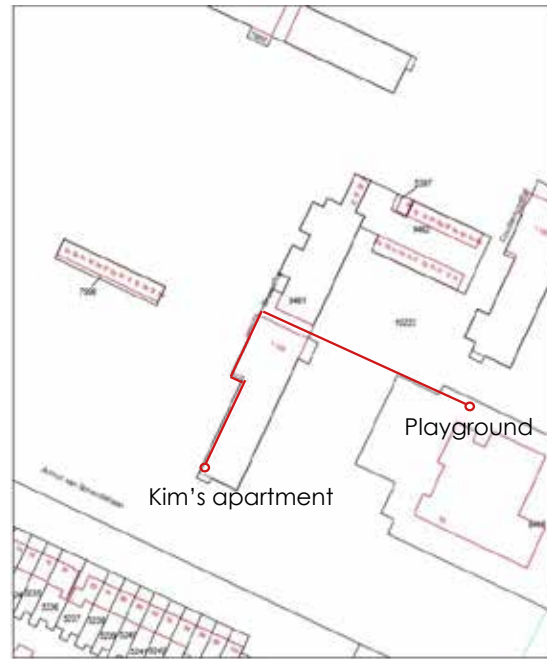


Figure 8. The walking route from the house towards the playground. Consulted from: EKZ Makelaars.



Figure 9. The gallery of the Brusselflat. (Consulted from: EKZ Makelaars)

Housing preferences - secondary parent family

The secondary parent family

The housing preferences of the secondary parent families are investigated through the case-study Parents-houses which includes an interview.

Parentshouses Nederland

This research doesn't consist of specific case-studies designed as housing for divorcing parents. The fact is that there is no such way of housing that is designed with the original intention for divorcing families yet. However, there is one important housing foundation, as mentioned earlier, for divorcing parents called 'Parentshouses Nederland'. This foundation supports housing for divorcing parents which can be accommodated on a short term (Parentshouses, 2020). The organization Parentshouses exists because of volunteers. Started with the first Parentshouse at IJburg in 2014, more Parentshouse organizations have started over the years by people from the local community. Now there are Parentshouses in Amsterdam, Amersfoort, Nijkerk, Olst-Wijhe-Raalte in Zutphen. The initiated Parentshouse organizations started up separately and joined the overarching foundation Parentshouses Nederland. Parentshouses Nederland provides (financial) support and is willing to help locals starting up a Parentshouse. However, they do not initiate starting up a new Parentshouse themselves (Parentshouses, 2020). A short interview with Edgar Koning, one of the initiators of Parentshouse Amersfoort, was consulted with Coen Gordebeke and I. Mr. Koning told about the difficulty of finding suitable housing for divorcing parents and their preferences. The Parentshouse foundation works with the concept of buying a single-family house in

which the house provides several private spaces for 3 to 4 adults to live.

Needless to say, is the gratitude of divorcing people for being able to live there, but conflicts between residents while sharing facilities do occur. From out of the experience of earlier Parentshouse initiatives, spatial requirements are created for starting a Parentshouse. The dwellings should provide a certain amount of private space, preferably a private bathroom for every adult. Extra bedrooms for visiting children should be provided, so they have the opportunity to visit their parents. The rent price Parentshouses handle ranges between 390.- up to 750.- depending on location and facility. This rent price is an all-in price.

Experiences of people have been shared about Parentshouses. As these parents are considered as the SP family, they will have their children visiting them at the weekends. Parents point out that when the children come to visit, they want to spend time alone with the children. For example, a Parentshouse in Amsterdam; the two parents that live there share the kitchen, but don't eat together. One family eats upstairs and one family eats downstairs (Trouw, 2017).

Out of the interview with Mr. Koning, it became clear that they try to reflect on the living situation within the Parentshouses. With this reflection, they make up guidelines about what Parentshouses provide with a private room and the collective space. The newest project of Parentshouses: Maanglans 22, is thereby chosen as a case study to see how they use these guidelines.

Housing preferences - secondary parent family

Case study - Parentshouses Nederland

Maanglas 22 has been bought and renovated by the foundation (Figure 5-10) to function as a Parentshouse. In the interview, Mr. Koning explained that reflecting on previous experiences, Parentshouses wants to provide a private room for every parent. The new guidelines for this private room are that this room provides a toilet and a shower. Another important guideline is providing bedrooms for the children. Apart from the private rooms, the kitchen and the living room will be shared. Because of financial reasons, Mr. Koning said that it is hard to find a house that matches these guidelines. This is their

main problem because rowhouses simply don't fit with guidelines anymore. The Maanglas 22, located in Amersfoort shows the change of a single-family home into a Parentshouse, through the application of these guidelines. Mr. Koning said to be very lucky finding this house and the possibilities of renovating it. The private rooms available in Maanglas are around 15 m² per person. Mr. Koning (2020) mentioned that the rooms are equipped with a bed and a closet. This furniture was experienced as the most important while moving on the short term.

Before renovation



After renovation



Figure 5 & 6 . Ground floor plan of Maanglas 22, Parentshouses Amersfoort. (Consulted from Parentshouses, 2020).

Figure 7 & 8. First floor plan of Maanglas 22, Parentshouses Amersfoort. (Consulted from Parentshouses, 2020)

Figure 9 & 10. First floor plan of Maanglas 22, Parentshouses Amersfoort. (Consulted from Parentshouses, 2020)

Housing preferences - flexibility

Flexibility

Parents mentioned flexible solutions when they were talking about their new living spaces. The interview results show that the divorcing parents had their own opinion about flexibility. Their preference was different depending on if they were the primary parent or the secondary parent.

The Primary parent

The interviewees who were the primary parent do take care of their children most of the time. That means that the majority of the children and their belongings are most of the time in the room at the house of the primary parent. I asked these parents about their preferences for flexibility and what they mean by that. One interviewee: Amber, said that her young children had a great time in the beginning after moving in by sharing a bedroom as they didn't have that before. But as the children grew, they were more inclined to have their own space. So the opportunity to create an extra bedroom was important for her as well.

The Secondary parent

The interviewees that were the secondary parent explained that they would like to have a room for each of their children, but as the children are usually visiting a couple of nights a month, the bedroom is most of the time empty. Asking these interviewees what their

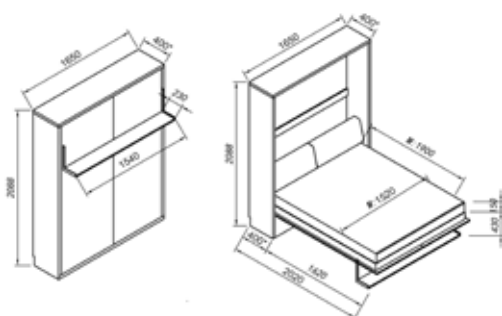
preferences about flexibility contains, the interviewee Frank explained that he would like to have foldable furniture, so he is able to turn the room into a working space. Another interviewee: Jeff, stated the same fact about the foldable furniture and mentioned the flexibility of taking down a wall where he can adjust this room to another room or living area.

Flexibility for the secondary parent is considered as a fast changeable space with walls and folding beds. This room may be added to the living room or may function as a separate study room.

Flexible preferences

The definition of flexibility is emphasized in creating more or fewer bedrooms through foldable furniture and the possibility of making more bedrooms, for example, creating two bedrooms out of one. But there are differences between the PP family and the SP family.

As the primary and secondary parents begin to explain their preferences of flexibility, both of them mentioned the opportunity of creating an extra room. For the secondary parent, this room has a different function during different times in the week when the children are coming to visit. The primary parents point out the flexibility of splitting one bedroom into two over a much longer time period when the children are grown up.



The making of

The making of participation

The M4H-area in Rotterdam is planned to be an innovative live-work environment and is the area where the collective building for divorcing families is located. The M4H-area intends to bring creative, innovative, and making industries together. Bringing this intention together with the necessities of divorcing families has led to the choice of furniture makers. These makers are providing a workshop area including a store and cafe.

Divorcing families living in the building will have the possibility of learning and making their own furniture in the wood workshop area. The corresponding store provides space where the furniture could be sold. The store and cafe will offer an opportunity to generate an extra income for the divorcing families living in the building. The research results about the financial necessities conclude offering financial benefits through collective spaces.

In the American social housing arrangement, several funding strategies are made (Macauley, 2004). These funding strategies ask for participation and generating money for low-income families. The makers situated on the ground floor could be considered as the indirect money generator. Offering a workshop space and a store/selling area where divorcing families could make use of, the participation of these families is stimulated through the makers. With this strategy, the makers are playing a part as one of the financial benefits that are offered.

The furniture makers on this plot will have the opportunity to extend through working with the existing maker Joep van Lieshout. The new wood workshop space should be a place for both, the existing and new maker community, which connects with the living community in the building.



Figure 9. Indicational woodworkshop atmosphere. (Consulted from: <https://hdk-valand.gu.se/english/education/bachelor-s-programmes/wood-oriented-furniture-design-bfa/>)



Figure 10. Joep van Lieshout and his design. (consulted from: <https://www.dezeen.com/2019/01/21/video-interview-joep-van-lieshout-liberty-lounger-chair-moooi-movie/>)

Collectivity

The collective preferences

Out of the performed research of divorcing families, it becomes clear that it is likely that divorcing families suffer from loneliness. Having the opportunity to have social interaction with neighbors is desired and considered as necessary. The interview results show that the desired social interaction of divorced parents with their neighbors ranges from small talks at the front door, to sharing facilities for having coffee and to perform hobbies and learn new skills. The opportunity for children to have social interaction is also considered as necessary. This interaction between children is based on convenient outdoor play facilities where children can play together.

These different moments of collectivity should be created to provide the necessary social interaction of divorcing families. The performed case studies by the group research show different approaches of designers to create certain moments of collectivity. A space to meet and spend time combined with access routes, a collective area like a kitchen/living room, a collective outdoor playground, and a shared space like a workshop, are spaces that should be considered to implement in the design of collective housing for divorcing families.

The collective and the makers

The makers located on the ground floor area of the building also facilitate the opportunity to stimulate social interaction. Research of Kwaliteits Instituut Nederlandse Gemeente shows that connections within the neighborhood are very important. Connecting and participating is important to make people feel meaningful again (Gremmen, 2015).

Opportunities that enable social interaction are considered to range widely within the building; from small talks with neighbors to interact with strangers in the making area. This kind of social interaction is facilitated by offering collective outdoor spaces that are easily accessible for children and visible to the parents. But also the chosen wood workshop containing furniture makers. Here they take part in the possibility of sharing the workshop space, and the corresponding store and café.

Conclusion

This research has been done to provide an answer to the following question:

How can we create collective housing that meet the needs of divorcing families?

This question is answered through the following subquestions:

‘Who are the divorcing families?’

‘What do divorcing families need financially?’

‘What do divorcing families need to sustain in their mental and physical health?’

‘What are the housing preferences of divorcing families?’

The divorcing families that are taken into account for this research are married couples with children, that decided to get a divorce. The research concludes that divorcing families create a spectrum. To enable further research, this spectrum of divorcing families is divided into two divorcing family categories. The Primary Parent family-The PP family and the Secondary parent family-The SP family.

The financial necessities of these families include the decrease of their expenses and the increase in their income. This could be possible to create affordable housing accessible for divorcing families, which offer these financial benefits to help them sustain.

To sustain the divorcing families in their well-being; creating opportunities that enable divorcing families; to have social interaction is necessary. This could take place in collective spaces designed to enable the desired interaction of divorcing families.

The housing preferences of the primary parent family and secondary parent family have several overlaps and differences. Both families wish for having a private bedroom for each child and safe outdoor areas where children can play. How these bedrooms are configured is different. The Primary parent families wish to for the possibility to create more bedrooms out of one. The Secondary Parent family would like to use the bedroom as an additional room when the child is not there.

To conclude, we can create collective housing that meets the needs of divorcing families through making affordable housing connected and combining it with different collective spaces offering financial benefits and stimulates social interaction.

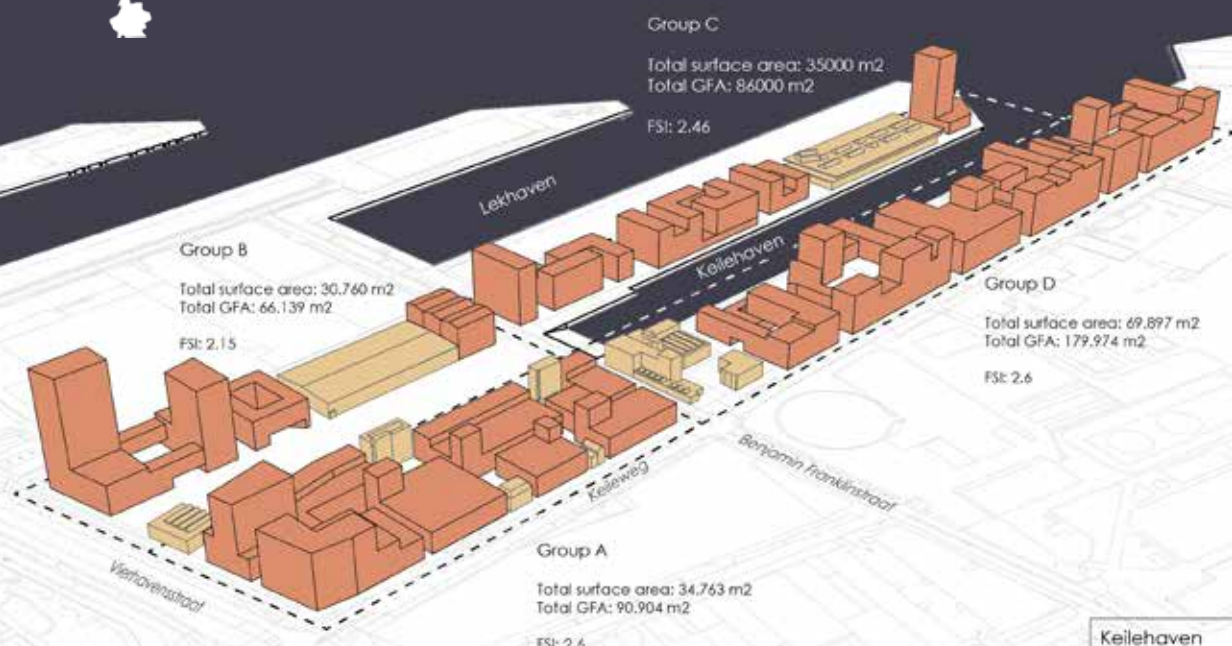
Based on these conclusions the design hypothesis is formulated. It is expected that:

‘Designing affordable housing that offers financial benefits and enables divorcing families to have social interaction’ will meet the needs of divorcing families.



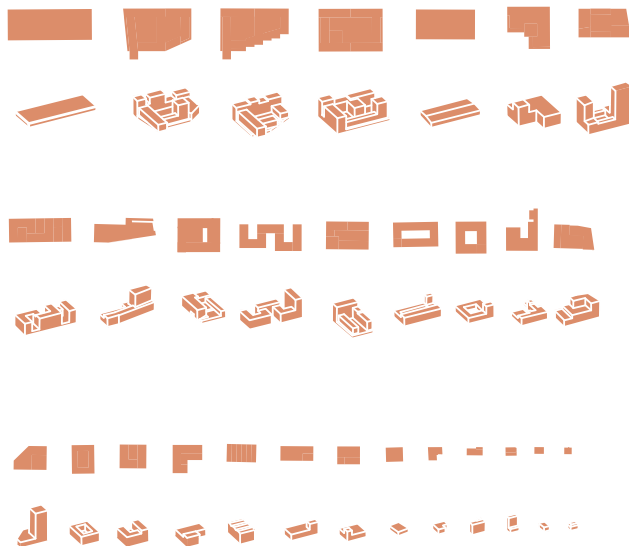
Urban plan Rotterdam. M4H

Nieuwe Maas



Urban plan general

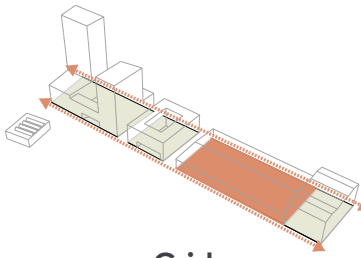
The urban plan is located in the M4H- area in Rotterdam, The Netherlands. This plan consists of four quadrants connected while having each their own unique approach. An important connecting aspect is the Keilepark in the middle. The slow traffic route going through this park is connected with Rotterdam by a bridge between 'dakpark' and 'Keilepark'. This route will continue to the waterfront. Within the urban plan, there are some existing building structures preserved. These structures vary in size and height and all respond in their own manner with the new surrounding building blocks. The new building blocks represented in the drawings vary from size and height and thereby function as well. The south-west and south-east corner are suitable for a landmark and taking the sun orientation into account, these locations suit best for highrise buildings to reach the desired FSI of 2.5.



The urban plan offers a variety of buildings. Each building has a different grain size as well. Shown in the scheme besides, there are closed building blocks, open building blocks, rectangular and squared. The existing structures are responsible for most of the smallest grain size footprints. The new buildings all seem to have a certain grain size.



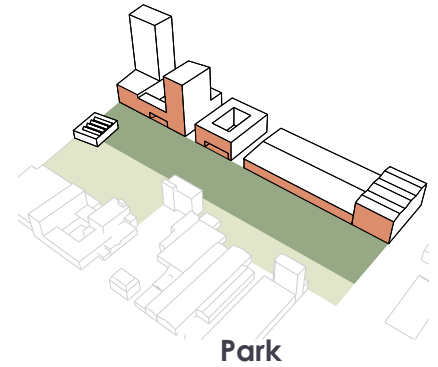
Group B - Starting points



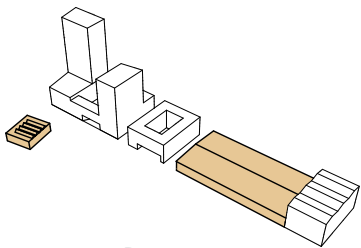
Grid

1. The new building plots follow the alignment of the preserved keilepand.

2. The park is preserved and clear by the frame created by the buildings. The Studio Roosegaarde serves as a beacon in the park zone, as a hint to the past.



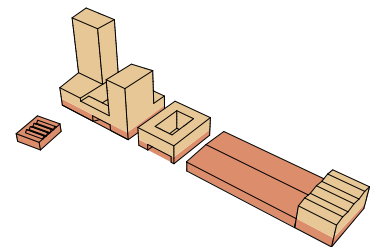
Park



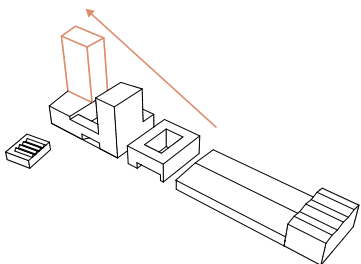
Preserve

3. The image-defining aspect: Studio Roosegaarde and the future municipal monument: the Keilepand will be preserved and not affected by building on it

4. The new buildings will contain a mix of functions inside. The plinth of the buildings will focus more on public / collective / work functions. On top of that the building mass will mainly consist of homes.



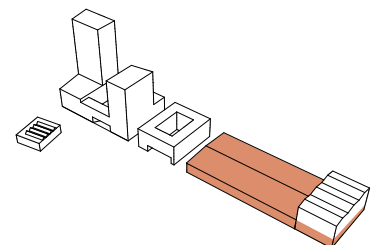
Functions



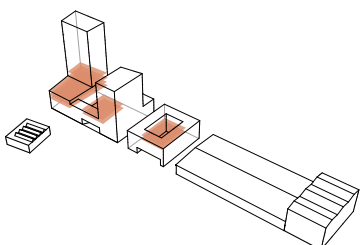
Landmark

5. A high tower will be built at the top corner; this is the eye-catcher of the area (it may not be higher than the Marconitoren).

6. The existing making zone in the keilepand will be extended to the new building, built directly next to it. The plinth of the new building will also have a public function



Making zone



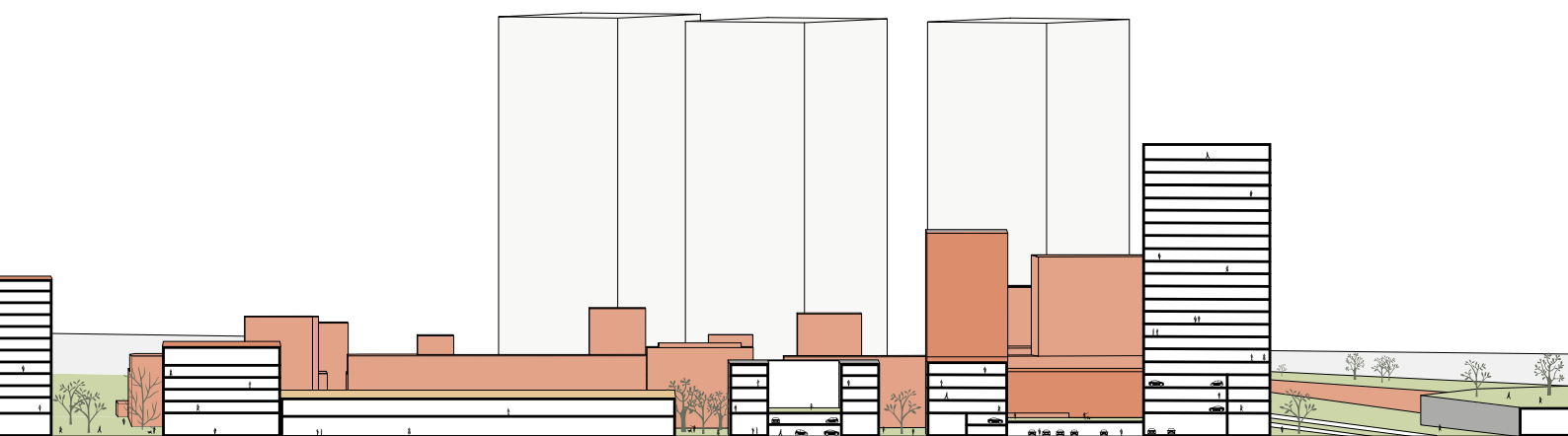
Parking

7. Parking is integrated and spread over the two first building blocks.

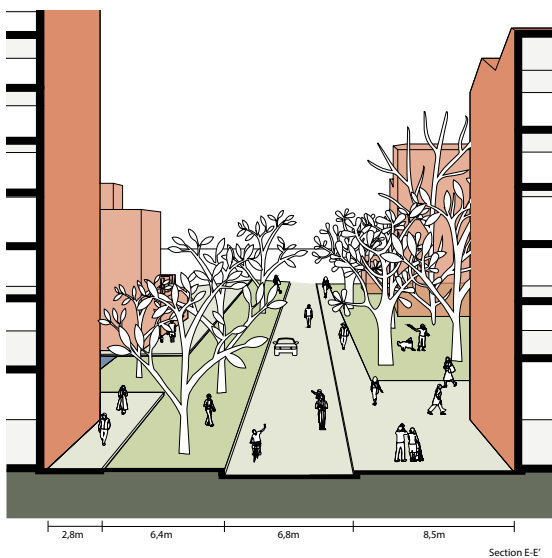


Plan & section

Quadrant B consists out of 5 building blocks. 2 preserved structures and 3 new structures. The building blocks follow the alignment of the existing Keilepand and each has a different character. As shown in the section, the height rises from south-west to south-east to provide direct sunlight entering the park.



Group B Buildings & FSI



Quadrant B has a big part of the park which was undesirable to built on and it is important to provide enough direct sunlight. To provide the park as a quality of the urban plan, the choice is made to not built more in this quadrant to reach a higher FSI. The overall FSI is therefore compromised with other quadrants. The park and the waterfront will connect through a street crossing in between. This part faces all quadrants and emphasizes the importance of the quality of the park within the urban plan.

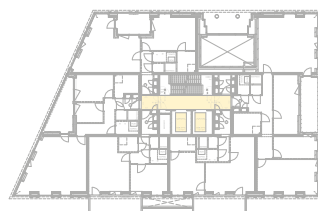
Group B References



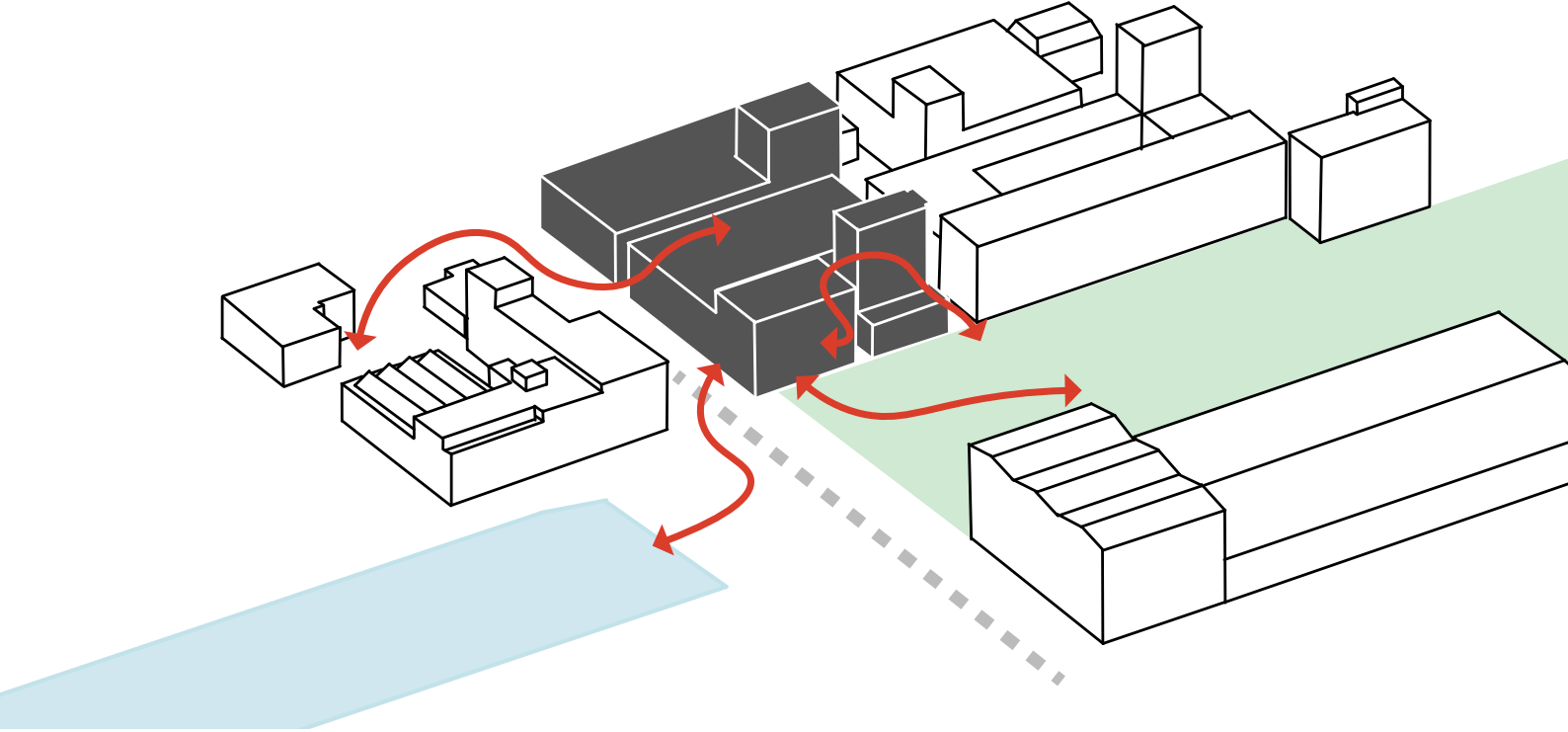
- B1** Building B1 will extend the already existing making zone of the Keilepand. This connection and extension are possible within the building mass by making a light transition area between old and new. The places around the building are suitable for terraces that connect the park with the building.



- B3** Building B3 creates a courtyard within the building volume, which gives the residents a communal space. The spaces between the buildings are meant for pedestrians and offer space for facilities in the plinth and spaces to place greenery linking this street to the park.

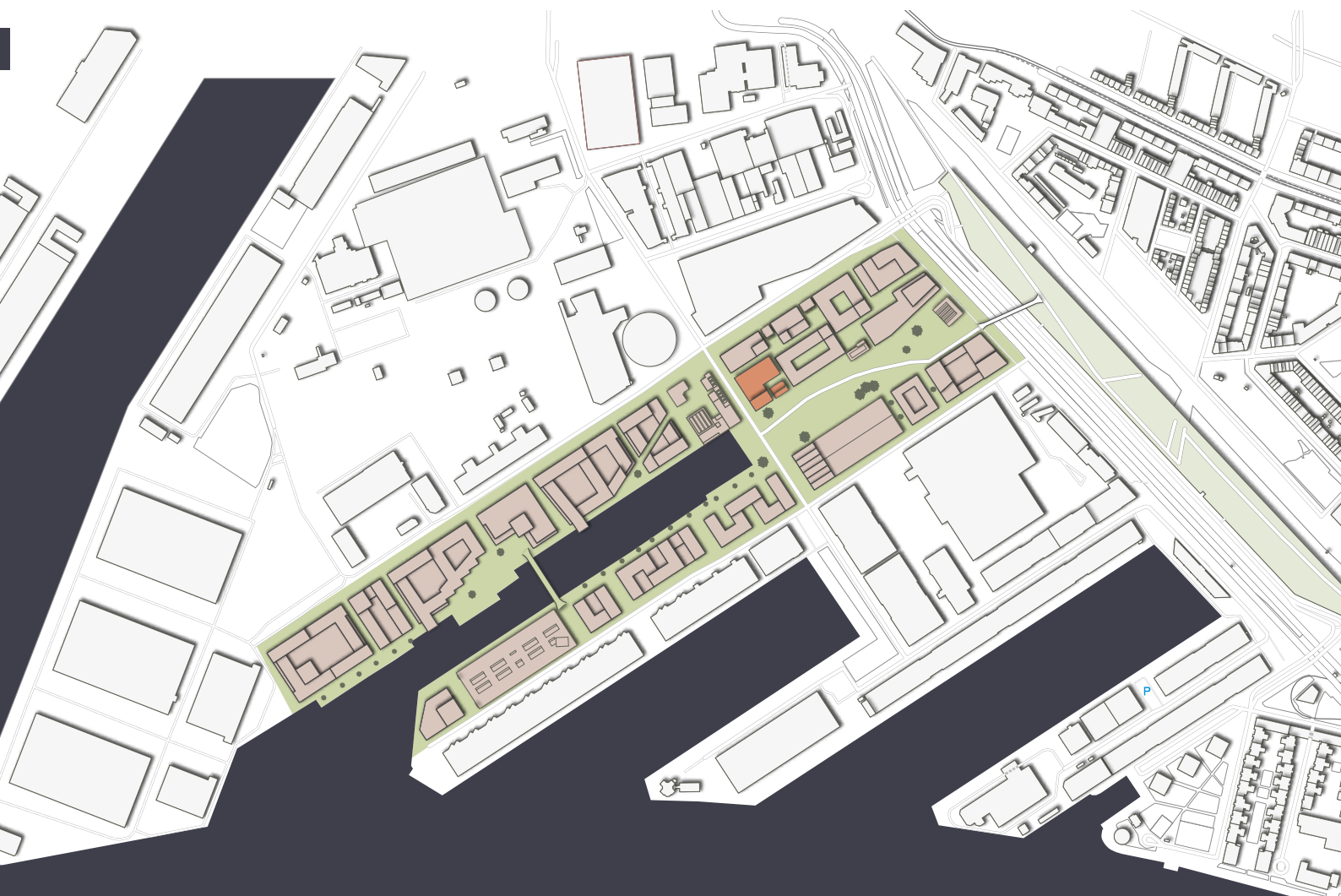


- B4** Building B4 suggests a highrise tower, which offers a location for luxury apartments with a beautiful view of the city. Horeca facilities are suited in the plinth of the building where a lifted courtyard could provide a collective space for the residents of the building, potential for other collective facilities around the level of this courtyard.



Building block

Plot A1

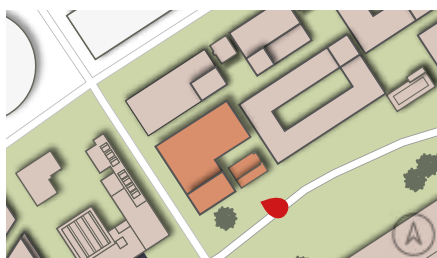


Choice

The plot contains an already existing building with an interesting function: Atelier van Lieshout. The raw exterior atmosphere of the existing building is an interesting aspect to let the new buildings around respond and it gives the space around a specific character. As the residents that will live here are divorcing families, they desire to relax and sort out things. Nature is proven to have impressive relaxing features and makes us feel happy. The plot is thereby chosen because of the close connection between the park and the waterfront. As feelings of loneliness occur, the central spot is chosen as a metaphor to not hide these people at the edge but to locate this building at the two central directions: the park and the street across. The makers that will be located here are the furniture makers. This could seek interaction with the already existing function of AVL and increase the ability to divorce people to fix things in their house themselves and work with certain tools to create bigger confidence.

Plot A1 is part of Quadrant A and is characterized by a very small street structure: 'the Steeg'. At the end of this street, there is a small tower located on top of the average building height.

Shape and form



10



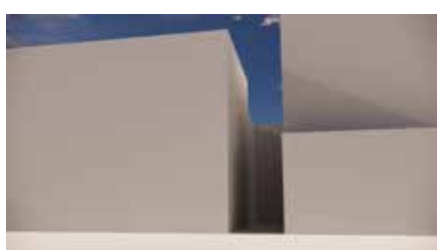
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12



14



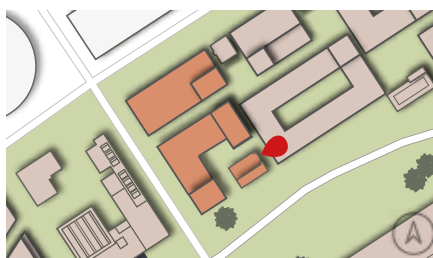
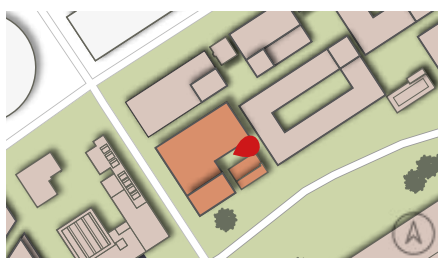
16



Understanding the building plot and its qualities, different sun and eye height studies are done.

To create different areas between the existing building of Atelier van Lieshout and the new building mass the width has been changed. The eye-height renders on the right suggests a street walkthrough, which is mostly dark during the day. The eye-height renders on the left suggest an actual place to stay, more direct sunlight is provided and the place seems lighter. By making space wider between the existing AVL building and the new mass, it can provide a function that connects the old and new through an outdoor space. As the new building mass has been made smaller in width, it responds in proportion to the existing AVL building.

Shape and form



11



13



Through widening the space, it does not only affect the lighting of that space itself but the connected space behind as well. It is now conceived as a lighter space, which doesn't seem to look into a corner as a setback is created. This space seems to look into that space which is brighter and wider. It suggests the play of narrow and wide streets in combination with a play of light and dark.



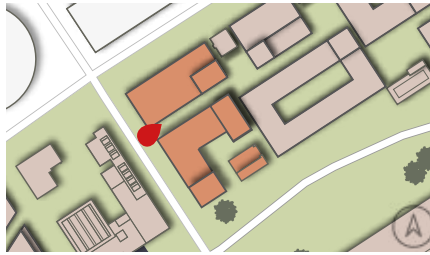
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17



Shape and form



Plot A1 consists of more narrow streets. They are located in a way that still there is a certain amount of direct sunlight coming and at a certain time of the day, it lightens up the whole street and spotlights the towers sticking out in the back of the area. The play of sunlight in the afternoon reveals the rhythm of the towers that are placed on the corners of the building mass facing the street.

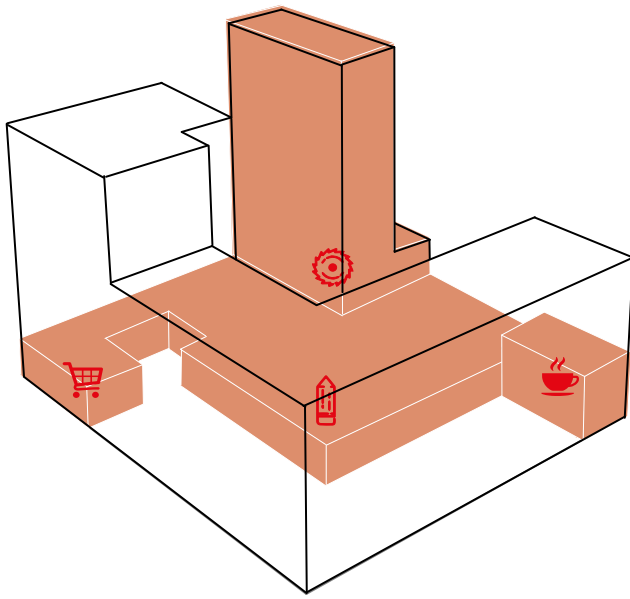
Conceptual design

How can we create collective housing that meets the needs of divorcing families?



‘By designing affordable housing that offers financial benefits and enables social interaction.

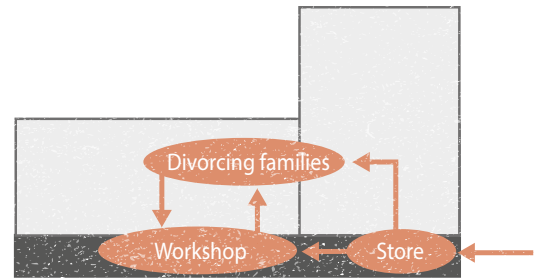
The maker



The social maker

The social interactive environment exists out of several collective spaces and the furniture maker area on the ground floor. The furniture makers exist out of workshop spaces and a store. The residents of the building; the divorcing families will have the opportunity to make use of the workshop space. The maker area offers different kind of workshops which stimulates participation and social interaction between the divorcing families and strangers by learning new skills.

This maker area allows working as a porous membrane where there is an open flow between inside and outside. Implementing open forms of Richard Sennet (2018), the maker area in this building should function as a border where different groups interact. The new and existing maker will mix and the opportunity for people themselves to make furniture, join workshops, and visit the store makes that this maker community should face outwards. Opening the corners at both of the blocks towards, the park and the street encourage activity. The open is also referring to the open form of leaving the space open to let this community arrange their place within the maker area.



The income generating opportunity

The financial maker

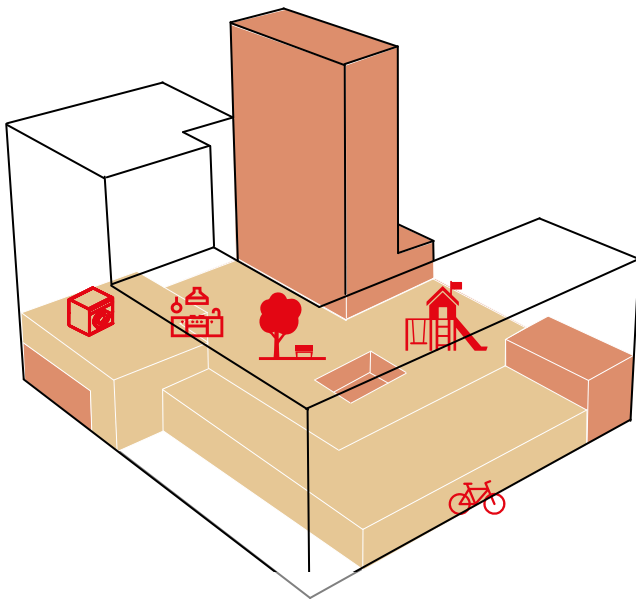
The divorcing families can use the workshop located in the maker area and learn new skills for making furniture products. By making furniture themselves, divorcing families have the opportunity to cut down costs on furniture, which they had to buy otherwise.

Another facility the maker offers is the store. The divorcing families can make use of this facility to work and to sell their made furniture. Through this option, they can also generate extra income.

Connecting the makers

The plot houses the existing artist maker Joep van Lieshout. The new maker area will connect the new and the old inside with the existing building. Extra space and more social interaction between different makers will be created and by sharing the new workshop space, the existing maker Joep van Lieshout can stay.

Collectivity



Collective facilities



offers financial benefits and enable social interaction

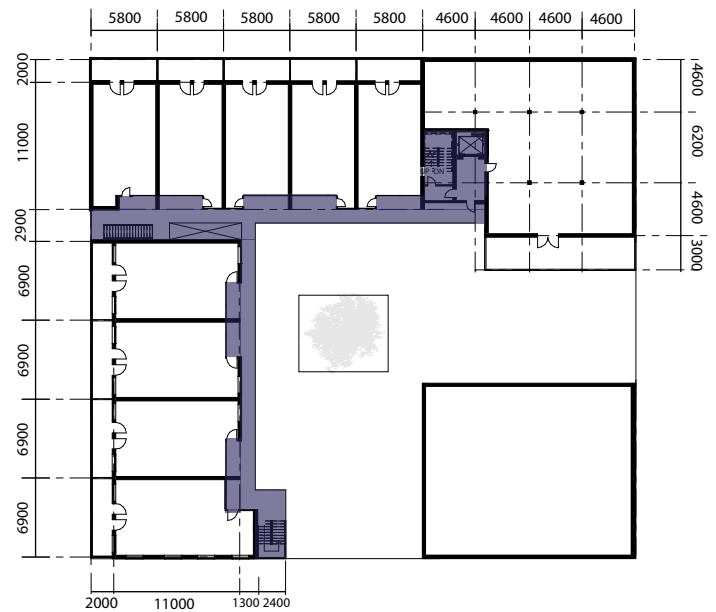
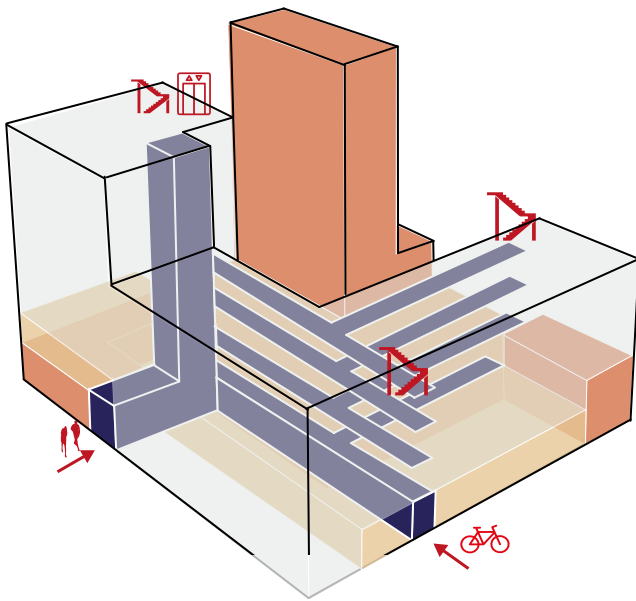
Lifting the collective

The interactive maker area on the ground floor created the opportunity for a private collective courtyard on the first floor. The courtyard area suits the needs of divorcing families by providing a safe and convenient outdoor space for children to play and stimulates social interaction through the located kitchen/living area at the courtyard.

Collective benefits: financially and socially

The collective spaces offer financial benefits by providing several facilities for the inhabitants. The shared laundry room takes into account that not everyone owns a washing machine while divorcing. It also makes it possible to make housing more compact, as there is no space needed to place washing machines, dryers, laundry racks, and the supply for ironing. Shared bike storage on the ground floor makes it possible for everyone to store their bike within a safe place. The storage spaces located on the ground floor could thereby be made smaller. Another important collective space is the coffee area and outdoor space. With the coffee area connected to the laundry room and overlooking the collective outdoor space, parents could easily have coffee with their neighbors while the children play.

Access system



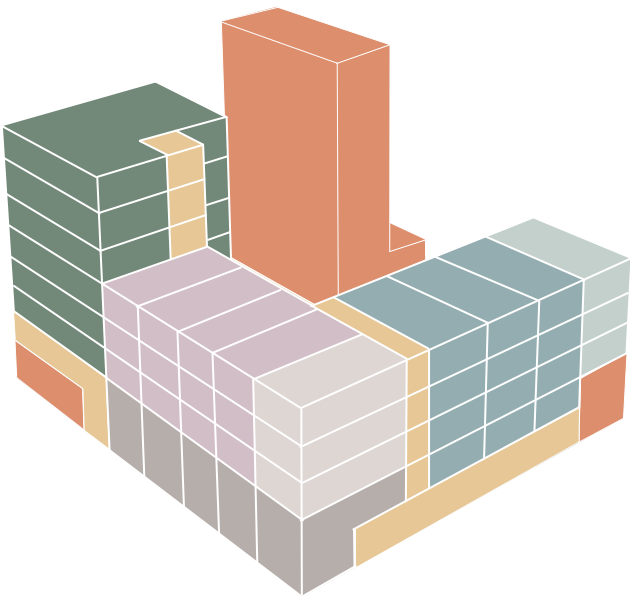
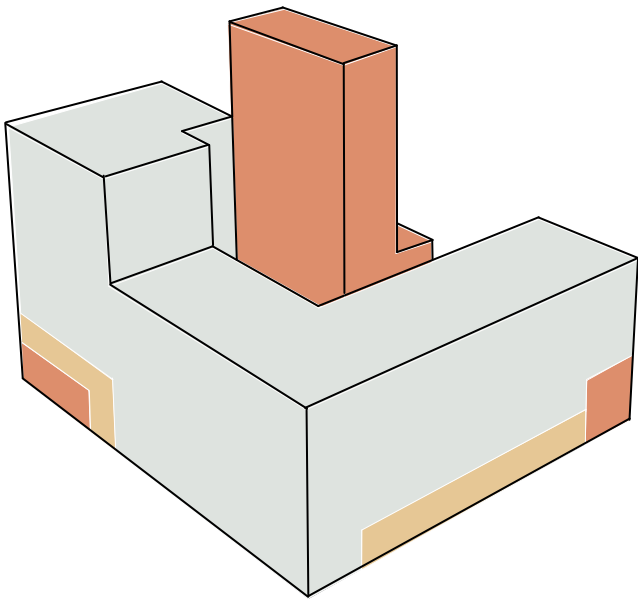
Access

The access route implements the affordable and social interaction component. One vertical elevator shaft is placed to decrease costs and use of space. The elevator is placed in the corner of the low tower, connecting both the tower and the other apartments through gallery access.

Social access route

Galleries are placed at the side of the courtyard. The width of the galleries makes it possible for younger children to play outdoors. The galleries are connected through outdoor stairs with the courtyard to provide a better physical connection by having easy access to the courtyard space. The gallery has the width to function as a frontal garden, where people can place objects, like a bench or plants. The gallery gets a more residing kind of atmosphere where divorcing families can have easy social interaction with neighbors.

Dwellings



Dwellings







The apartments are starting from the first courtyard level. The dwellings in the tower start at the second level because of the shared facilities underneath.

Important are the costs and size of the dwellings suiting the needs of divorcing families. Two different types of dwellings are implemented in the building to create affordable housing. The tower provides housing according to the concept of the foundation ‘Parentshouse’. These dwellings will mainly focus on parents in non-custody over their children.

Configuration

All the dwellings face the collective courtyard. From the courtyard, one could reach their home through the galleries. Going into the private zone, the living area is placed on the courtyard side. and the bedrooms face the other side. Making it a transition from private to collective.

Types

	Type P 280m2 ; 28m2	6x -> 24x
	Type G1A 60m2	12x
	Type G1B 60m2	3x
	Type GM 90m2	5x
	Type G2A 71m2	12x
	Type G2B 80m2	3x

Capacity

The building had a total capacity of 41 dwellings. With the inclusion of parentshouses, this building can place 56 divorcing families.

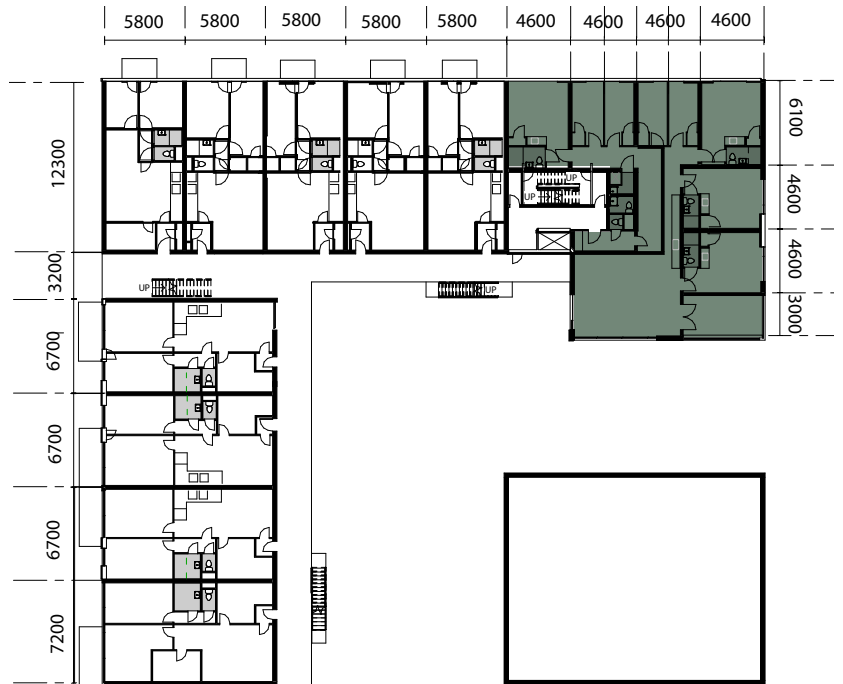
Dwellings - Concept Parentshouses

The parenthouse

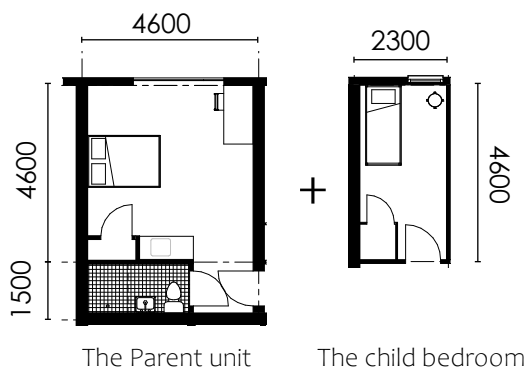
The first type of dwelling is a concept based on Parenthouse's guidelines and concept. This type of housing suit especially the needs of non-custody parents who are still paying for the house where the children and the other parent live in.

The parenthouse will offer housing for 4 parents on each floor. Every parent has their own private space unit with the equipment based on the requirements set out by Parentshouses. The unit contains a small bathroom, toilet, kitchenette, built-in closet, a bed, and a table. The unit has a grid of 4.6 x 6 m, offering each parent a private space of 27.6 m².

For each parent unit in this house, there is a child bedroom made. This makes it possible for the child to visit their parent at any time needed. The child bedroom will be equipped with beds and a built-in closet.



Floor plan Level 3-5
scale 1:500



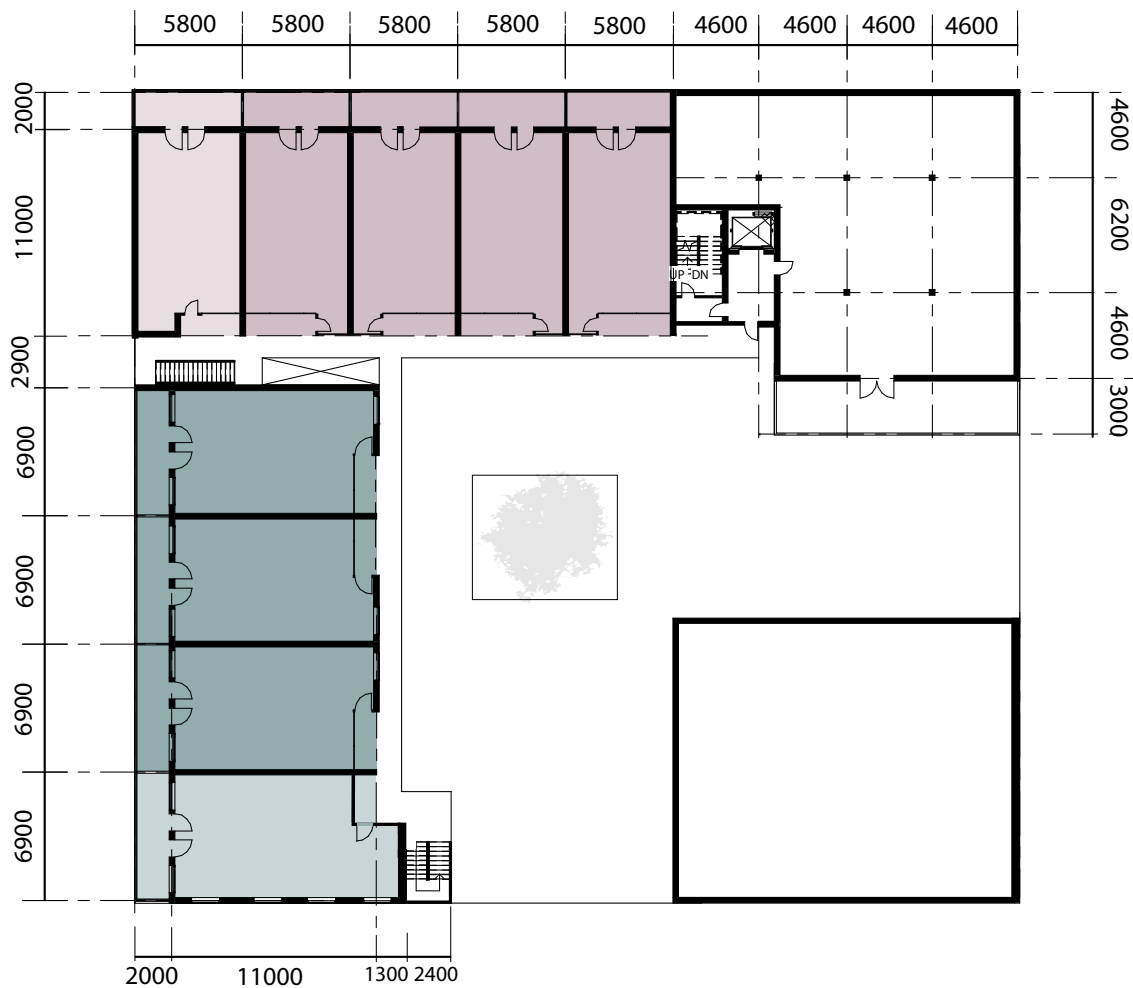
The Parenthouse unit

Room system: for every parental unit
one childroom should be created



The Parenthouse 3-8th floor
scale 1:200

Dwellings - Gallery types



Concept :

Primary Parent family dwellings

The overall design hypothesis 'Designing affordable housing that offers financial benefits and enables social interaction.' finds its way in the dwellings itself as well. The two different repetitive grid sizes create the opportunity for different housing sizes and keeps the affordability in mind. The gallery and the transition zone should seek to connect inside with outside to enable social interaction.

*The options of flexibility through foldable furniture and walls should also play part within the dwelling design.

The maisonettes and gallery apartment are located in the lower wing of the building. These are dwellings that will be designed for the primary parent family in different sizes.



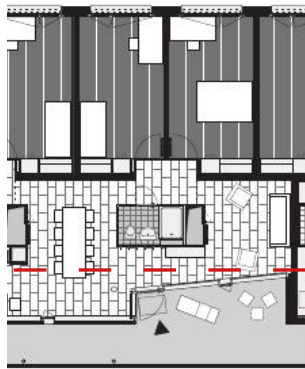
The primary parent families



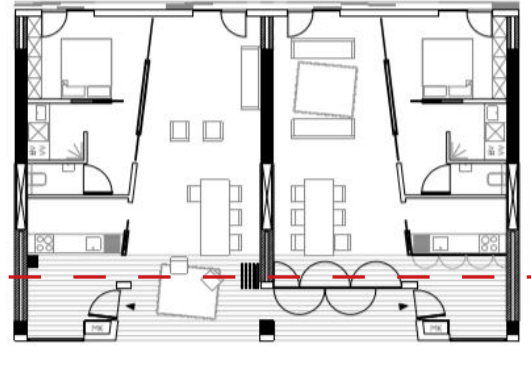
Dwellings - transition zone



1. Project Zijdekwartier Architects
Sumatra straat Leiden (2020)



2. Bülachhof residences, Zürich
March Langenegger (2003)



3. Student graduation project
drempelzone
Maria Benine (2014)



Example of a small seating area.



Example of the use of this zone by the residents.

The transition zone

As mentioned earlier, the gallery will expand in width at the front door of the dwellings. It creates a transparency with the live inside towards the collective area and creates a small place to sit outside. Located at the side of the courtyard, this should enhance the social interaction between courtyard - gallery - inside.

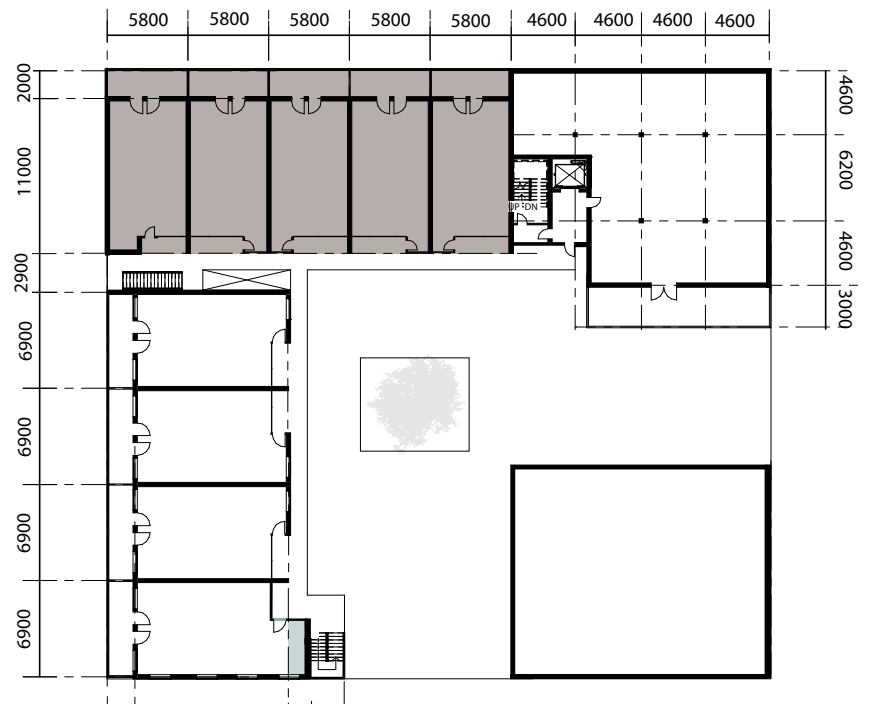
Dwellings Maisonettes

The maisonettes - Type GM

The first type are the Maisonette dwellings. The front door will still be located at the collective courtyard instead of the street level. This front door area is considered as the transition zone, that every dwelling located in the lower wing should have.

This dwelling offers 4 bedrooms, in which the rooms at the ground floor (connected with the street) could be used as a home office by the parent. This dwelling type could house a family of 4. One parent and 3 children.

The bedrooms and the private balcony are located at the back of the dwelling. This is the area where flexibility will play an important role.



Floorplan level 1

Scale 1:500

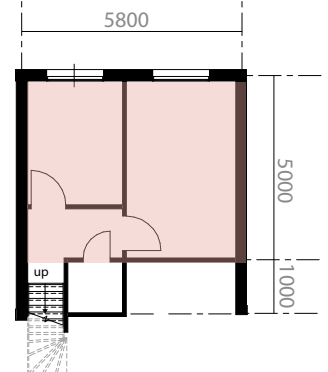
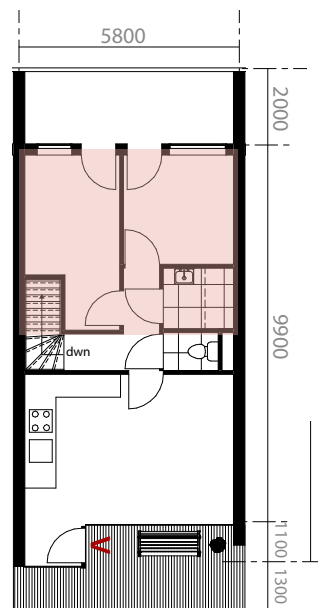
Maisonette - Type GM

First floor

Ground floor



Reference
Project, Stadstuin overtoom (2016)
Overtoomse veld, Amsterdam.
KOW Architecten.



Scale 1:200

The bedrooms and the private balcony are located at the back of the dwelling. This is the area where flexibility will play an important role.



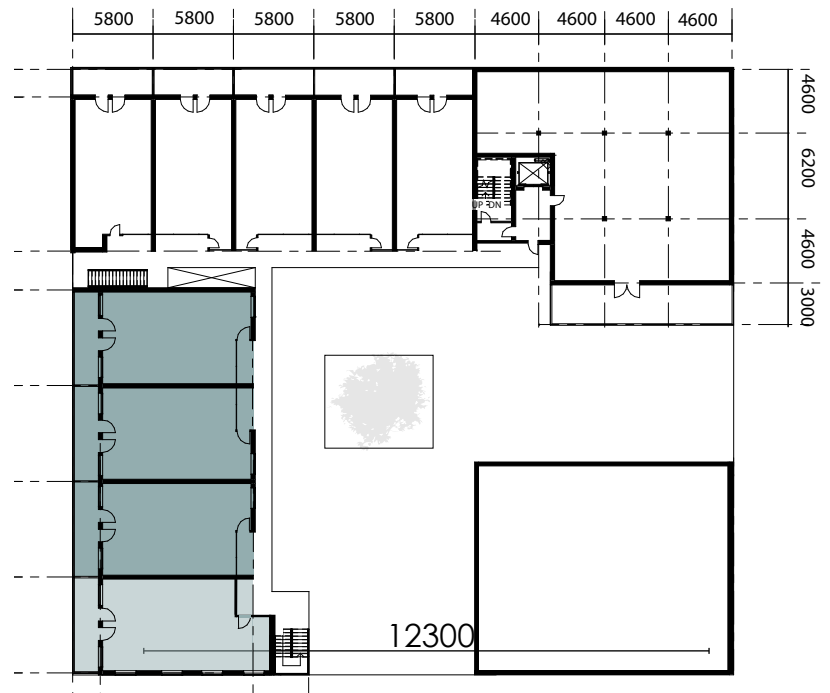
74

Dwellings

Gallery apartments

Type G2

The grid size of this apartment is bigger, which makes it possible to create at least 3 bedrooms. For this, some typical floorplans with the same width are compared. These plans usually have the livingroom on the other side of the apartment. Finding a way within the width of this apartment to create the living space at the gallery, will be ambitious. Flexibility will play an important role here to create 3 bedrooms. The dwelling type on the corner is ambitious to be a 4 bedroom apartment because of having more sides where sunlight is coming in.



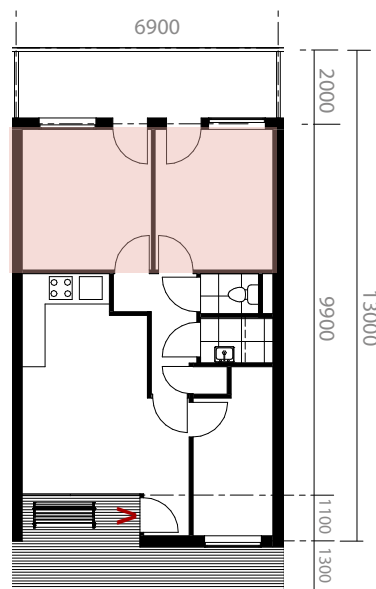
Floorplan level 3-5

Scale 1:500

Reference

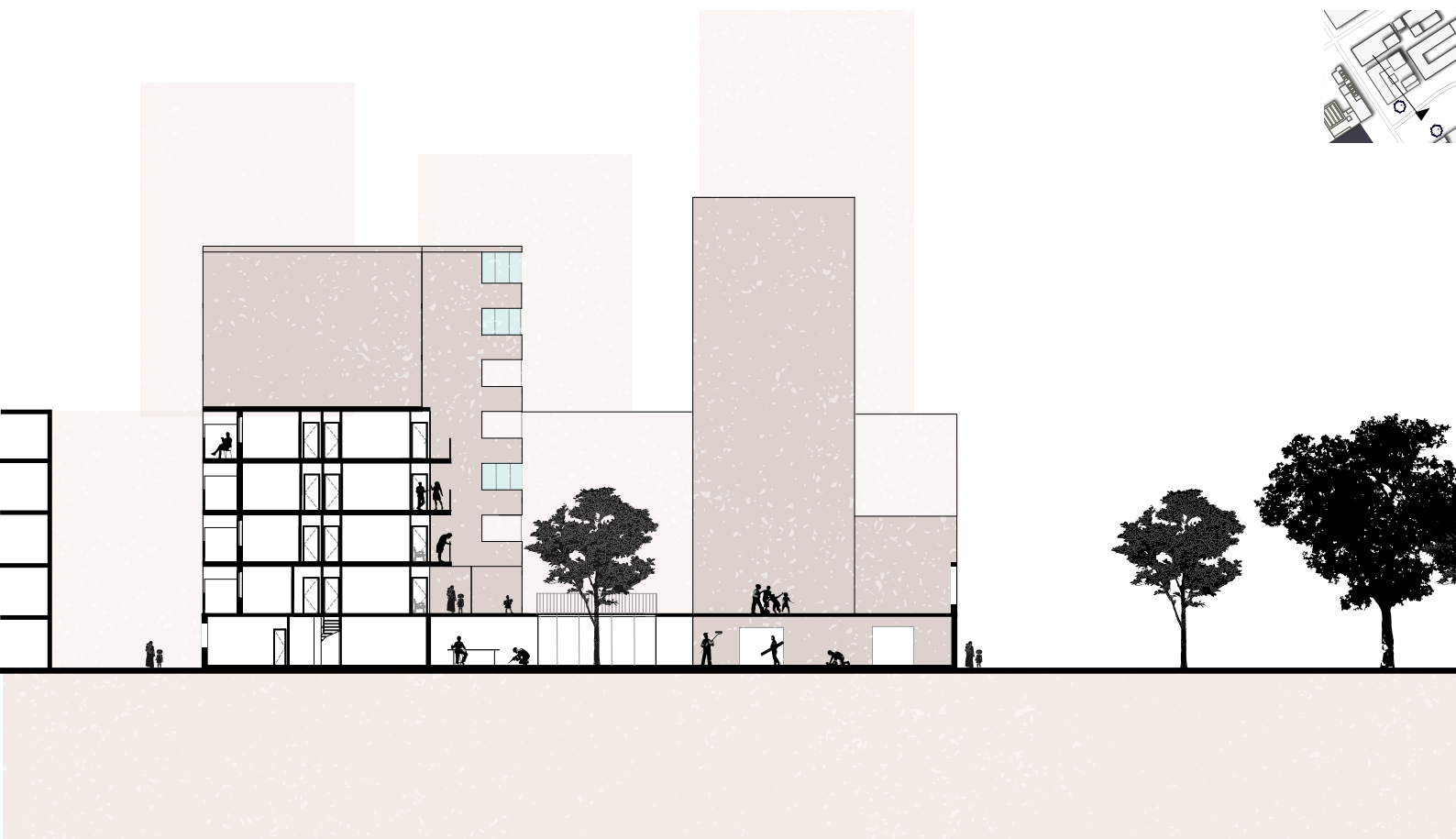


Dwelling type G2



scale 1:200

section
Scale 1:400



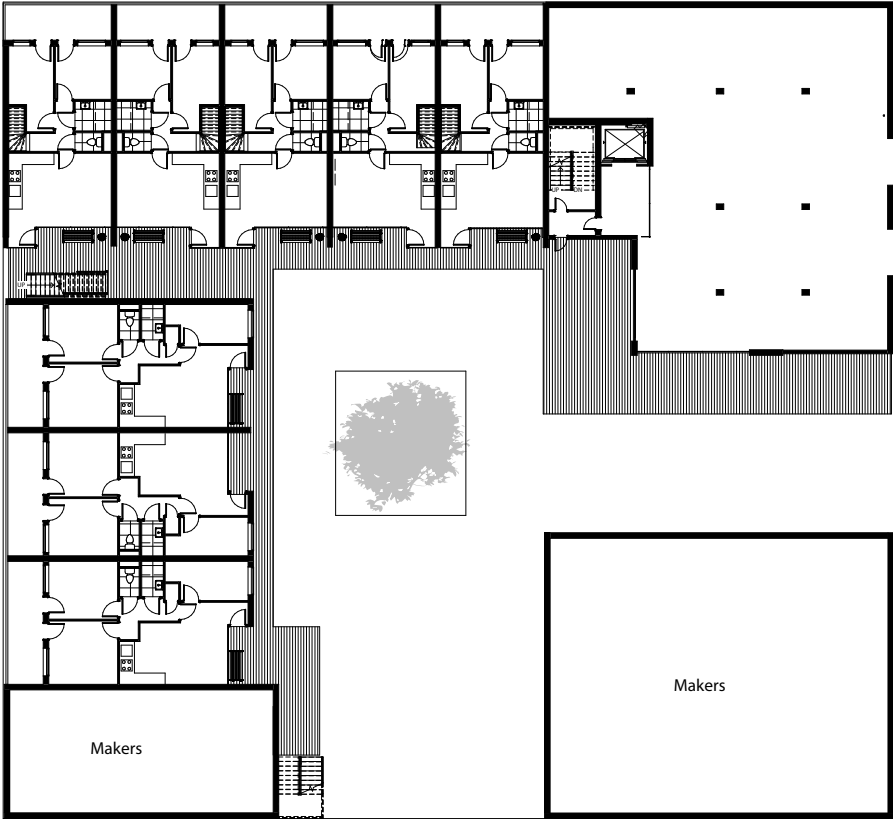


View from park



Courtyard

Plans
Scale 1:400



L1



L2-4

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