

# THE USE OF TRANSITION ZONES OF THE OPEN BUILDING CONCEPT THROUGH TIME

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## **ABSTRACT**

*Transitional zones in architectural developments of the last decades seem to focus more on the private domain of the user than on the collective whole. This research is carried out by a precedent study of the former Open Building projects Lunetten 4D, Gespleten Hendrik Noord and Solids 11. It is focusing on the enabling and encouraging of users to appropriate, modify and participate in the transition zones of the support and tissue level through time. Observation, literature study and rephotography were used as methods in this precedent study. The valuation of privacy in transition zones has increased over time. Collectiveness and interaction between users became less important. The research created a set of conditions for the design and use of future Open Building concepts.*

**KEYWORDS:** *Open Building, Transition Zones, Participation, Modification, Appropriation, Support Level, Tissue Level*

## **I. INTRODUCTION**

This research thrived from the urgent necessities in the spectrum of contemporary housing. In current developments there is a lack of places for residents to connect with each other and with their built environment. As Habraken, founder of the Open Building concept, in 1961 said: “mass housing demands unity, and an average design of the architects.” People have the urge to claim but in these mass housing projects, they do not have any influence, they are submissive to the building system. This has a negative effect on the connection between the user and his surroundings (Habraken, 1972). The zones between the private and public domain, the transition zones, aren’t enabling or encouraging residents to appropriate, modify or participate in them. Developments of the last decades seem to focus more on the private domain of the user than on the collective whole. A starting current trend is aiming for more participation of users and interaction between users.

This research paper is about the implementation and use of certain characteristic aspects of former Open Building projects in transition zones of the support and tissue level. Open Building is the standardization between building systems in a sustainable way, together with the increasing individual choice of the user. The Open Building concept distinguishes several levels of decision making which are about technical, social, aesthetic and financial aspects.

The first level is the tissue level. This level has to do with the public domain, including the urban patterns of the built environment and space. It addresses for example the placement of streets, character of façades or location of public buildings. The next level is the support level. This level is common to all the users of the building. It includes for example the load bearing structure or shared traffic space. The last level is the infill level. This level is most up to change because of preferences of the user or a technical upgrade for example. The infill is about all that is related to the individual housing units, for example the partitioning walls, kitchens or ducts (Kendall, Teicher, 2002).

Key aspects of the Open Building concept include the participation of residents on various levels of the design process and the measures that are integrated to enable residents to change parts of the building to their preferences. Another aspect that will be looked at in this research is the process of enabling participation and processing it up till today. How were the residents involved in the design process and what was their role after the completion? Did the residents make use of this possibility to change? And how was this managed?

This research is done by a precedent study on former projects with the Open Building concept. The objective of this research is to observe if and how intentions of a certain architectural movement were adopted by its users over time. It is focused on the transition zones. The transition zones are zones which have a cohesion between the private and public spaces. Within these zones, there is a transition going on, where multiple stakeholders meet each other and affect the use of the zone. The research question is:

*'How is the Open Building concept over time enabling and encouraging residents to appropriate, modify and participate in the transition zones of the support and tissue level?'*

The research question is substantiated by the following questions:

*'In what way were the users participating in the design process?'*

*'How were the users enabled and encouraged to appropriate, modify and participate in the transition zones?'*

*'How did the users appropriate, modify and participate in the transition zones over time?'*

The outcome of the research paper will create conditions for the design and use of future transition zones within the Open Building concept.

## **II. Method**

This research is based on a precedent study. This approach seeks to understand the qualities of a piece of architecture, how it came about in terms of its design and commissioning, and how people used it once built (Lucas, 2015). This approach will be used to find out how former Open Building projects expressed the key values of its architectural movement in the transition zones.

The precedent study will consist out of three different methods, a literature study, an observation and rephotography. To get an answer to the first sub-question, about how the process of participation towards the completion of a project went, a literature study will be done. To get an answer to the last two sub-questions, an observation, rephotography and a literature study will be done. To find out how users were and still are enabled to participate, appropriate and modify in the transition zones, an observation of the site will be done. The observation is the most up to date way to find out the status quo. Prior to the site visit, a search will be done for photographs of the particular project over time, to use this as a reference point for rephotography. Rephotography is retaking an old photograph from the exact same angle. Stewart Brand for example used this method to observe what has changed over time. It is not just about the buildings itself, but also the relation with its setting which is interesting. Other aspects than buildings, such as people or cars do give an era to the photograph (Brand, 1994). These old photographs, which are sometimes quite scarce, will be re-taken and looked at in detail what changed through time.

Three projects of the Open Building movement will be picked which are mostly residential. These projects will be chosen based on three criteria: 1. a location within The Netherlands with an acceptable travel time (due to the coronavirus) in order to do a site visit, 2. various years of completion to see how the ideas of the Open Building concept were interpreted and expressed differently over time and 3. various ways of ownership to find out how this affects the process and see what is the most suitable way.

The interest is in which actors, such as various ways of ownership, or which factors, privacy or thresholds for example, had effect on the appropriation, modification and participation in the specific transition zones. A distinction will be made between different types of transition zones which are generally present in most projects. These zones are chosen according to their different functions and locations between the private and public domain. The transition zones are collective, circulation, outdoor and entrance zones. In order to get an answer to the last two sub-questions, these zones will be subjected to the following sub-subquestions:

- Is there an enabling zone?
- Are there thresholds and how do they work?
- What did the user do within this zone?
- What else did the user appropriated and how?
- How is the relation between privacy and interaction?

A clear way of analysing the types should give a distinct insight in the way the transition zones were used. It has to show how the residents were encouraged and enabled to appropriate, modify and participate in the transition zones. In order to get a clear picture of how these zones were used, drawings in combination with text to support this will be applied.

This precedent study with a descriptive and visual approach will give a clear insight in how the particular project copes with participation, appropriation and modification by and with its users. First, the analysis will be done per project. Secondly, the results will be compared per zone according to the sub-questions. This comparison will help to formulate an answer to the research question.

At last, as a conclusion, the comparison and answer to the research question will lead to a summary of optimal conditions in order to enable and encourage residents to appropriate, modify and participate in the transition zones.

### III. Participation and Commissioning

#### 2.1. Lunetten 4D

##### 2.1.1. Background information

Lunetten was an expansion of the city of Utrecht which should accommodate 5000 new houses. This was commissioned by Lunetten BV, a partnership between some housings associations and the municipality of Utrecht (van der Werf, 1993). The zoning plan was based on recognizability, walking distance, possibilities to interact between adults and between children, and playground for the kids. The clusters were elaborated by various architects (Nio, Jutten, Lofvers, van der Wilk, Treffers, 2011). Five architects and urban planners developed three thematic spaces for the tissue level and formulated it in patterns: the residential street, the small square and spacious enclosed courtyards. Lunetten 4D was the subplan designed by architect Frans van der Werf. He designed five blocks (figure 1) with houses which were intended for people with less capacity to rent or buy houses (van der Werf, 1993). The plan consisted of 273 houses, 173 rooms and 360 m2 office space. The urban tissue was based on a former project of van der Werf (Molenvliet) a stacking of three levels plus caps, the courts for access and gardens and the low buildings on the south side of the courts. The support level was also partly adopted in terms of the galleries around the courts, roof terraces and big caps over two bays. The top two levels are designed as two under one roof houses with in between huge terraces (figure 2). The architect was responsible for the allocation of the dwelling types, the entrance, basic dimensions and the private outdoor space. The aim of this project was not necessarily the flexibility in parcellation, but the mixture of different housing types appropriated to different household types and the flexible infill in favour of the user (van der Werf, 2017).

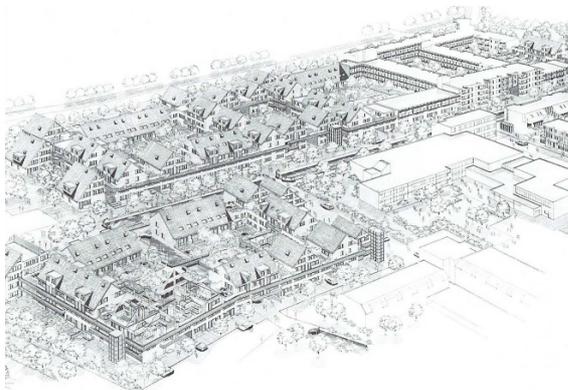


Figure 1. Lunetten 4D



Figure 2. Block designed by van der Werf

### 2.1.2. Participation in the design process

Future residents were participating in six rounds on all levels (Barzilay, 2016, 11 november). This had to result in better contact with future neighbours and increase the affinity with their house (Barzilay, Ferweda, & Blom, 2018). The future residents could participate on four levels: zoning plan, building plan, construction plan and installation plan (figure 3). The patterns of the thematic spaces were discussed with future residents. The collective spaces were important elements in the plan, because it should enhance social goals such as encountering, hospitality and own development. On the support level, residents were asked to participate as well. They were asked which street type, for example pedestrian, residential or car street, they preferred. They also detailed the participation even more, by asking if they preferred living next to the water or preferred having an optimal orientation. The architect and the housing association were responsible for the coherent whole of the building. The residents were the clients of the infill level and could choose for example if they wanted the living room at the front or the back. The zones between the public and private domain were defined as margins. In Lunetten these margins were the front and back yard. The margins were elaborated by the architects into patterns, which seek for a balance between privacy and collectivity and a formal front side and informal back side. These margins gave freedom to the architects and clients to design it themselves (Nio, Jutten, Lofvers, van der Wilk, Treffers, 2011). The process started with an information evening and showing the participants the movie of Molenvliet, their former project. Secondly they showed them the housing types and the location of the parcels. At this time a deposit of the users was also necessary (van der Werf, 2017). The final plan was calculated with a computer, which gave the architect more time with the clients. This resulted in a lot of insight in how people wanted to live. This demanded trust between the architect and the clients because intimate things were discussed (Arnold, 2016, 6 july). After this the private consultation began. This soon resulted in a full size mock-up. At last they reached an agreement on the layout, fit-out and facade infill. In the end, 67% was designed by participation of the users and 33% got the fictional layout. The facade was also part of the participation of the users. They had a choice to fill in a wooden frame with doors, windows, glass and panels in various colours. The meeting with the participants showed that their choice was based on the indoor activities, views and daylight. This was contrary to the 'normal' approach (van der Werf, 2017). After the first year of adjusting the houses and their built environment to the wishes of the future residents, it could be noticed that they did have influence but it couldn't be indicated to what extent. Because of the participation, future residents already got to know each other. Future neighbours of a courtyard were already meeting and discussing the garden fencing for example (Molenaar, 2016).

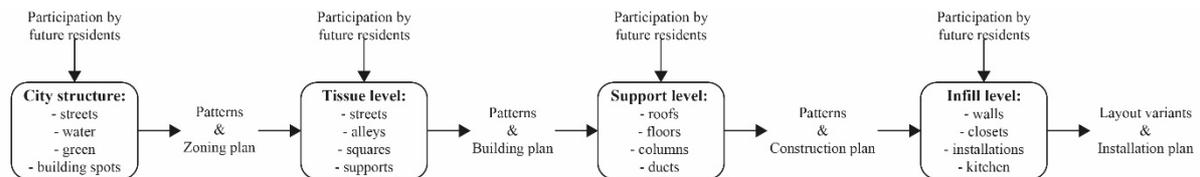


Figure 3. Diagram of participation

### 2.1.3. Enabling transition zones

One of the original themes devised by the assigned architects were spacious enclosed courtyards of which they said: *"the backside of a house is an interesting outside area for the residents. At this place there is a need for shelter, privacy and freedom to act, but also half of the residents desire a spout of the private garden in to the semi-public domain with communal green, sandbox, playground and water."* This had to be a safe place for kids to play in contrast to the streets at the front side of the houses. The space between the private gardens created some communal space as desired. The corners also had to be built, in order to strengthen the enclosure (van der Werf, 1993). The accesses to the courtyards are through portals and alleys. The access courts are accessible through portals like in figure 4. The portals are two levels high and serve as a buffer. The courtyards give access to individual houses and to the next courtyard, the garden courtyard. This access is via alleys, which are always tapered to indicate more privacy (figure 5).

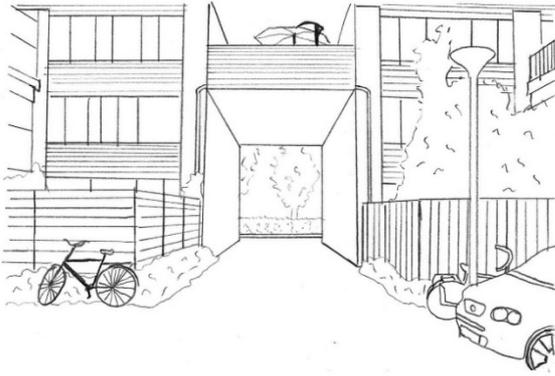


Figure 4. Entrance portal

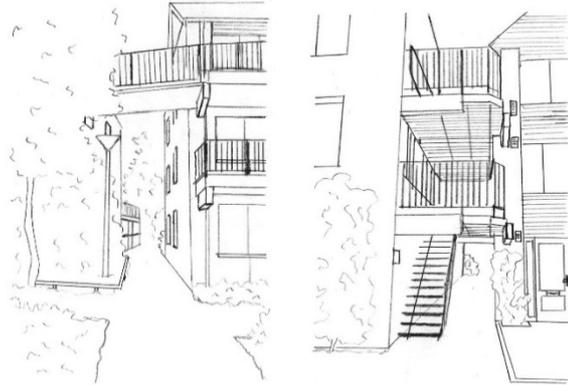


Figure 5. Alley Figure 6. Staircase between two blocks

A path at the back of the houses was used to access the private gardens, garage or terraces. Back then there was little to no green and there was actually a smooth transition between the private and public domain. A threshold was indicated by a little fence and there was a lot of interaction possible (figure 7). In terms of outdoor spaces, there is some variety. There are gardens, balconies and terraces. These are the places which were up to be modified by the residents. In the original plan there were just a few fences (figure 8). There is also a lot of variety in entrances. The ground bound houses have a threshold in which they can modify their way of approaching the entrance. Some have a garden in front of their house, others have got pre-designed elements to increase the privacy (see Appendix, Entrances, Lunetten 4D). The residents of the upper apartments don't have a threshold in which they can modify. In the original plan the buildings had a variety of colours, mostly mustard yellow with sometimes blue, green or red accents. The apartments are accessible by a circulation via a staircase and a gallery. There are numerous types of staircases, one of which is the staircase between two blocks (figure 6). This staircase creates a lot of interaction because of its openness. It serves six houses of which two student houses with multiple rooms. The stairs and landings are made of wood which creates a gentle threshold. The underpass leads to a half open courtyard. The upper apartments are accessible by galleries. These galleries don't have thresholds in which the residents can modify.



Figure 7. Back gardens towards courtyard, 1985, little fence and little green



Figure 8. Apartment blocks, 1983, first fences

#### 2.1.4. Commissioning transition zones

The collective garden courtyards are not appropriated at all by the residents. Most of the time these places are overgrown by green or mostly paved. The connection between the private garden and the courtyard is nowhere to be seen (see Appendix, Collective, Lunetten 4D). Nowadays this space has a function-less and opportunity-less character which is not inviting. This changed through time which can be seen when figures 7 and 9 are compared. Nowadays, the path isn't used as can be seen from the abandoned shopping cart in the middle of it. The transition and openness have changed as well, the residents enhanced their privacy with big fences and the public green is overgrown (figure 9).

The same applies to the in-between green beds. These collective courtyards and green beds are owned by the municipality, they are responsible for it. One of the residents indicated that the municipality,

most of the time, forgets that she is the owner of these beds and doesn't even know exactly where they are located.



Figure 9. Back gardens towards courtyard, 2020, big fences and overgrown green

Figure 10. Apartment blocks, 2020, current modification

Some residents of the ground bound houses with a front garden prefer to create a privacy buffer between the private inside and the public outside by adding a lot of green in their entrance zone, also to enhance the view. Other residents prefer a paved garden because of less maintenance or optimal use. The residents of the upper apartments sometimes act creative in expressing and introducing the spirit of the resident himself in their entrance zone as we can see in figure 11. What is striking is that through time residents are more devoted to privacy. As nowadays, almost all of the gardens are fenced off, which can be seen when figure 7 and 9 are compared to each other. What stands out the most, is the increase of green. The framed and little green from the start ended in sometimes green oases (see Appendix, Outdoor Space, Lunetten 4D). In terms of circulation, although the gallery has no thresholds which are up to be modified, the residents do appropriate it with small expressions like planters (figure 12). Some of the smaller alleys aren't used much as a passage, so residents appropriated it a bit by placing personal items and use it as bicycle storage (figure 13). The ownership of the houses is still divided. There are private and rental houses. Currently the housing association is selling some of the houses to the private sector. Besides the housing association, within the complexes there are several owners associations. They all decide separately about the appearance of the complex. Figures 8 and 10 show that through time the frame colours changed. Nowadays most of all the frame colours of the complexes have changed. The housing association coloured most of it white and grey. Now and then residents used the opportunity to change the layout of the facade frame, for example replacing closed panels with glass (see Appendix, Through Time, Lunetten 4D).



Figure 11. Personalised entrance in staircase



Figure 12. Access gallery



Figure 13. Alley

From the beginning of the design up till the management of the buildings nowadays, the residents always have been participating in Lunetten. In the early stages of the development of the plan, future residents were participating on both the neighbourhood level as on the individual house level. The participation was not only about the control of future residents, but the positions and roles within the process of designing as well. The participation led to an active neighbourhood organization and great

affection with certain elements of the neighbourhood such as the green, courts and ongoing processes (Nio, Jutten, Lofvers, van der Wilk, Treffers, 2011).

## 2.2. Gespleten Hendrik Noord

### 2.2.1. Background information

Located in the western part of Amsterdam, a group of buyers created a foundation to develop 28 apartments. By taking matters into their own hands, specific users' needs were met without paying too much money. The starting point of the foundation was to get the owners involved as early as possible. The main ideas of the concept were: contemporary architecture, a flexible layout and participation of users. A corridor was chosen because this didn't affected the façade and created the aimed feeling of privacy, community and safety. With this principle it gradually changes from the public space to the private space. A lot of attention was paid to the architecture of the building (figure 14). Besides private outdoor spaces such as loggia's, balconies or terraces, there was a strong desire for a shared courtyard as well. The idea of the architects, J. De Jager, W. van Seumeren en E. van der Werf, was to gradually shift from private to less private to public space. They also included collective facilities such as laundry rooms, nurseries, guest rooms, offices and bicycle storages. Most of the owners didn't want this, they didn't want to live in such a collective way and preferred bigger houses. At the end only a big shared entrance and collective courtyard prevailed (figure 15) (Stichting Medio Mokum Amsterdam, 1996).



Figure 14. Gespleten Hendrik Noord



Figure 15. Courtyard

### 2.2.2. Participation in the design process

The participation process was divided into two parts (figure 16). In the first part, the users decided together about general functions, such as the facade, shared facilities and the amount of houses. The second part was about the wishes within private houses. There wasn't a total participation. The owners couldn't participate on every little detail. Issues about the shared spaces and the complete building were first discussed in small committees, before tested with everyone else who was involved. The individual participation was designated to the individual apartments. To succeed in collective decision making, six committees were set up. Each owner was designated in a minimum of two committees. One of which was the outdoor space committee. Via a survey they made an inventory of the wishes of the owners towards to the courtyard. It had to be a part of the coherent architecture. The maintenance was also part of the discussion. During private consultation hours between the architects and the owners, the owners expressed their preferences. Because every owner had his own desires, this fragmentation led to a incoherence were everything was unique. A critique afterwards was that the participation sometimes created too much expectation and took too much time, which led to losing overview. On the other hand the participation and the forming of committees led to a community feeling. Residents were more likely to address neighbours about inconvenience that they were causing. This early involvement and encounter of future neighbours created a bigger support base for the management of the houses and the built environment. This resulted in an strong social structure which is beneficial for the liveability. This improved the involvement on the neighbourhood level as well. The co-development of future neighbours created early bonding's (Stichting Medio Mokum Amsterdam, 1996).

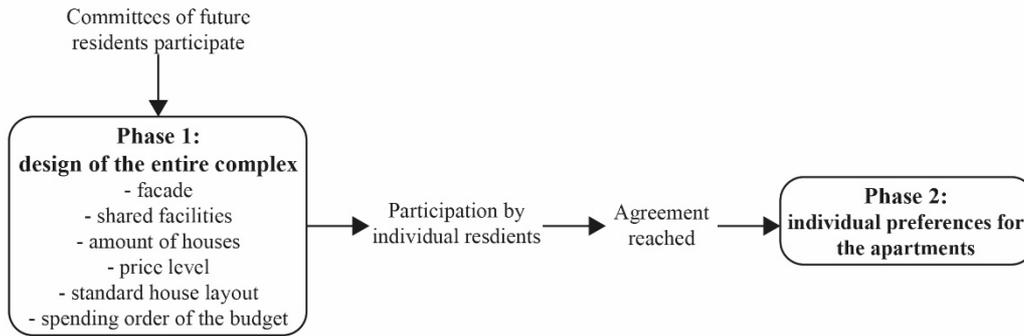


Figure 16. Diagram of participation

### 2.2.3. Enabling transition zones

The main entrance is recessed and has a rigid appearance (figure 17). This creates a threshold and introduction for the private domain of the complex. The rest of the plinth is rigid and flat and creates a hard transition zone. A minimal amount of interaction is possible through the glass. The circulation towards ones private entrance is through a corridor, either on the ground, first or fourth floor. Not all floors have corridors, as in all houses are duplexes. The corridors are accessible by an elevator or in case of emergency by an external staircase (figure 18). The private entrances are recessed, which create an introduction to one's private house (figure 19). The corridor and entrance zones don't enable modification (see Appendix, Entrances, Gespleten Hendrik Noord). The circulation zones are small, which results in a lot of interaction with neighbours (see Appendix, Circulation, Gespleten Hendrik Noord). The outdoor spaces on the other hand are creating a balance between privacy and interaction, where architectural elements are forming the thresholds (see Appendix, Outdoor Space, Gespleten Hendrik Noord). Because most of the residents didn't agree with the plans of the architect to create a lot of collective space, only a few places remained. One of which was the multifunctional space on the first floor (figure 20). The size of the space is gently marked by a change of materials in the ceiling. The courtyard is the biggest collective space, which isn't up to be modified. There is a lot of interaction going on between the houses and the users of the courtyard, because all the houses do have one side facing this yard (figure 21). Because they do their own management, residents have to address neighbours about inconvenience that they are causing.

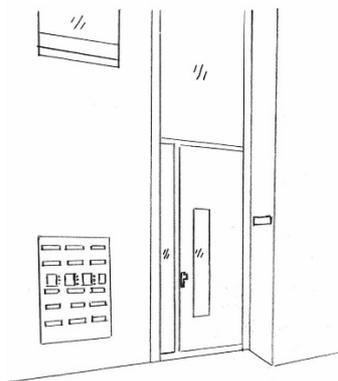


Figure 17. Main entrance complex



Figure 18. External staircase

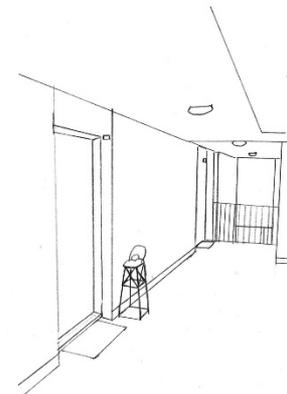


Figure 19. Access through corridor

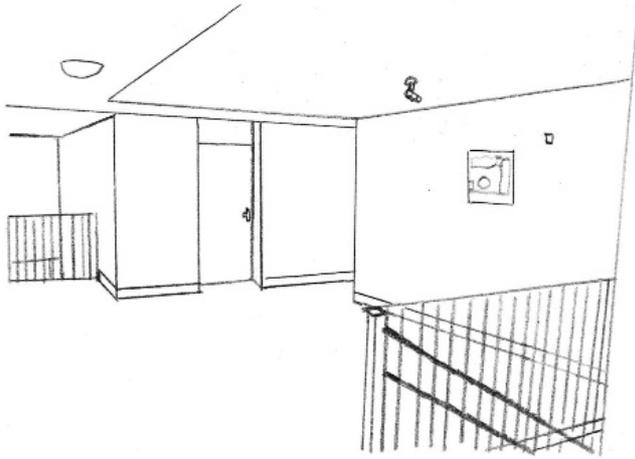


Figure 20. Multifunctional space



Figure 21. Armpit of the complex, 1997, no modification

### 2.2.4. Commissioning transition zones

Outside spaces that are already quite closed from themselves are only personalised with items. Outside spaces that are more open are closed off with the use of green to create privacy. Through time we can see that residents are more attached to their privacy by the use of green as a fence for example when figure 21 and 22 are compared with each other (see Appendix, Through Time, Gespleten Hendrik Noord). Some residents did appropriate parts of the corridor with personal items (figure 19). The multifunctional open space in figure 20 is mostly used for circulation, but is sometimes used as a place for the meeting of the owners association. Although modifying the collective garden isn't allowed, residents did appropriate the zone with planters and children's toys (see Appendix, Collective, Gespleten Hendrik Noord). The courtyard is enclosed by wooden fences with a small strip of vegetation and trees, which creates some privacy related to neighbouring buildings (figure 23). During a site visit, one of the two remaining residents who lived here from the beginning marked that after the original enthusiastic residents had left, new residents settled who didn't have the same affection with the building.



Figure 22. Armpit of the complex, 2020, green for privacy

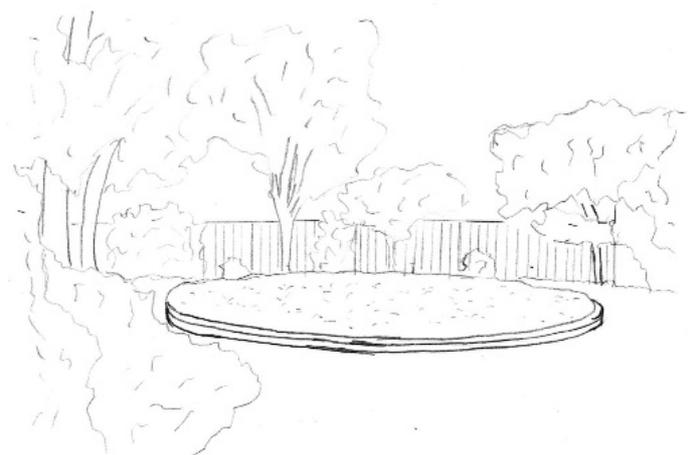


Figure 23. Courtyard

## 2.3. Solids 11

### 2.3.1. Background information

The housing association 'Stadgenoot' build several Solid projects across Amsterdam. This Solid, designed by architect Tony Fretton, is a concept of Frank Bijdendijk (figure 24) (Kendall, 2013). It is based on two constant values for people: freedom and collectiveness. These two values are expressed in the differentiation between 'the support' and 'the infill'. 'The support' expresses the collectivity and

is in ownership of Stadgenoot. The infill is up to the tenant, who can give any function or layout to it (Wallagh, 2013). The economic concept is based on the idea that occupants rent a space and buy and build their own infill as desired. The architectural concept is based on the idea that the buildings will be energy efficient, adaptable and loveable, in other words: SOLID (Kendall, 2013). On forehand it was possible to rent a space with neighbours who used their spaces with totally different purposes, such as a dentist, hotel, family or a veterinarian. The freedom in functions didn't really set out as planned, as there are now almost only houses and hotels. A minimum of 15% of the spaces were destined for the social sector. The building has seven levels of which the top floor exists out of two extensions (figure 25) (Wallagh, 2013).



Figure 24. Solids 11

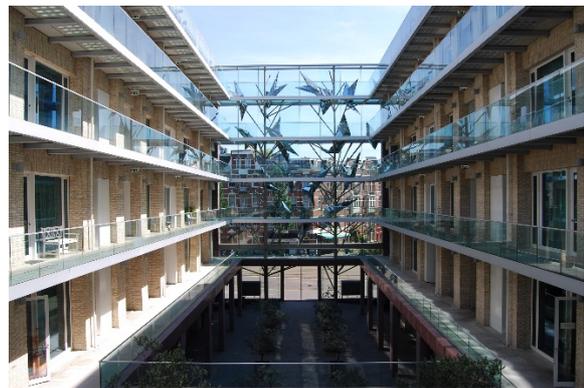


Figure 25. Courtyard

### 2.3.2. Participation in the design process

The participation process started with meetings between future users and ‘Stadgenoot’ after the buildings were completed (figure 26). First there were a few physical meetings and workshops. When they were interested they could participate in a bidding system. All the spaces were separately up to the market. Users could decide for themselves how much the space is worth in terms of rent. After the bidding was done, an extensive infill protocol for the users was made, a bit too late according to the users (Wallagh, 2013). The residents had to enlist an interior designer themselves. The other way was to do it on your own. The residents acted as contractors. Within four months the space was fitted out (Kendall, 2013). In the end, 125 potential users bid on 46 spaces of the Solid building. The limits for the tenants were bound to the construction, skin, circulation, shafts and collective infrastructure. After the allocation of the separation walls of the units, these are part of the support as well. Everything else is up to the tenant to change (Wallagh, 2013).

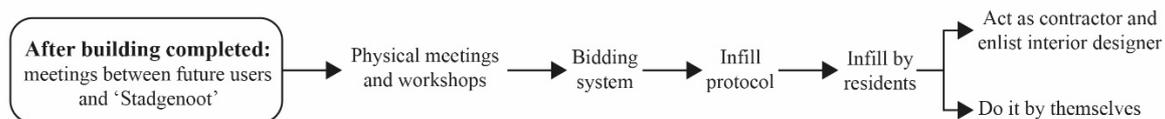


Figure 26. Diagram of participation

### 2.3.3. Enabling transition zones

The main access of the complex at the street is a sliding door in a curtain wall, which creates a lot of interaction between the street and the courtyard. The collective courtyard is used only for circulation as can be seen in figure 27. Adjacent to the courtyard, beneath the first floor there are two arcades where the columns serve as a threshold and create a balance between privacy and interaction (figure 28). The main entrance of one of the hotels is quite closed (figure 31). The circulation on every floor is by galleries, of which both sides are connected with bridges (figure 29). The galleries are accessible by two staircases and a total of four elevators. Because all the galleries are facing the courtyard, a lot of interaction is going on (see Appendix, Circulation, Solids 11). Most of the entrances to private houses or rooms are accessible through these galleries. They all have a transition zone in front of the façade and in between two columns of which its boundary is marked by a gutter like in figure 30. This zone creates a small buffer between the private inside and the collective courtyard, but nevertheless, this zone

is up to a lot of interaction. Another entrance is directly from the hallway (see Appendix, Entrances, Solids 11). With this access there is no enabling zone present, interaction is inevitable. On the first floor there is a terrace that belongs to the hotels. The outdoor spaces vary from a transitional space adjacent to the gallery, private balconies or roof terraces. The roof terraces do have a lot of privacy in relation to its surrounding, but not in relation to the adjacent apartments. The balconies have a glass railing, this results in a lot of interaction with its surroundings and neighbouring balconies (see Appendix, Outdoor Space, Solids 11).



Figure 27. Courtyard, 2011, no modification

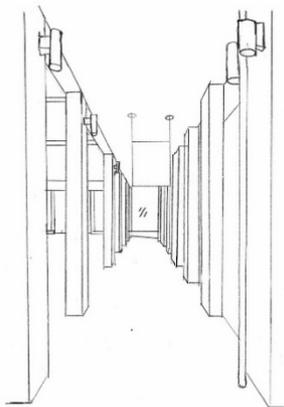


Figure 28. Arcade

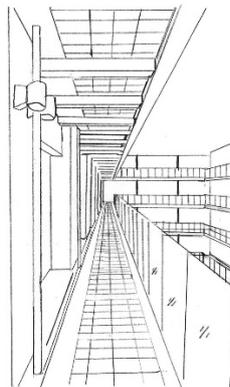


Figure 29. Gallery

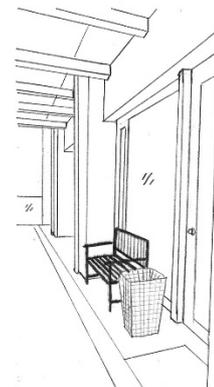


Figure 30. Gallery access

#### 2.3.4. Commissioning transition zones

The housing association promised the residents that the building would be largely occupied by families. This didn't happen, which resulted in conflicts between the residents and the hotels. Since an accident occurred with one of the hotel guests, the tenants association is setting up more regulations about the use of the collective spaces. In the meantime the fifth floor is sold and now fully occupied by buyers. The rest of the building is fragmented with houses, hotel rooms and a dentist. Although the entrance of the hotel is quite closed, the hotel appropriated some of the niches and the street (figure 31). The rest of the plinth isn't modified or appropriated at all. Also the arcades from figure 25 are underused because of its closed plinth which is part of a hotel. The courtyard is modified through time with planters and signs with regulations for visiting guests which can be seen when figures 27 and 32 are compared (see Appendix, Through Time, Solids 11). The corners are partly used by the hotel and appropriated with furniture (figure 33). This is not according the rules of the housing association, they don't accept the appropriation of collective space at all. The terrace on the first floor is likewise underused and belongs to the hotels as well (figure 34). Using this space is accepting the lack of privacy, because it is totally open and only modified with a few planters. The transition zones in front of the façade at the gallery side are used as outdoor space as well. This recessed entrance creates just enough space to place some furniture and planters. Through time the bridges at the front were decorated by artwork made by one of the tenants who is an artist (see Appendix, Collective, Solids 11). Most of its users actually define the courtyard however as empty and inhospitable. Here and there some benches are showing up as a claim of the transition zone. Besides that, users do complain about the hotel guests who are passing by and

do not have any affection with the building or its users. A re-asses showed that the private outdoor spaces and the transition zones between the private and public are not appreciated by its users (Wallagh, 2013).



Figure 31. Hotel entrance



Figure 32. Courtyard, 2020, added planters and signs

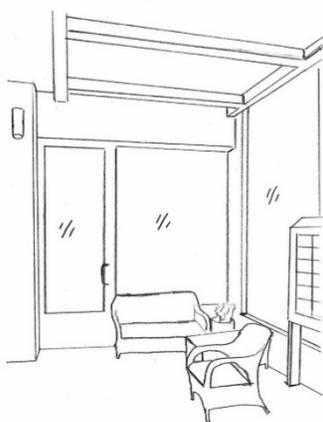


Figure 33. Sitting/entrance area



Figure 34. Terrace

## IV. CONCLUSIONS

The research question of this paper is: ‘how is the Open Building concept over time enabling and encouraging users to appropriate, modify and participate in the transition zones of the support and tissue level?’

This paper is focussed on three projects: Lunetten 4D, Gespleten Hendrik Noord and Solids 11.

The first sub-question is: ‘in what way were the users participating in the design process?’ In all three projects, the participation process was quite extensive. Future users were involved on various levels in different stages of the design process. In Lunetten 4D, they could participate on the tissue, support and infill level and indicate their preferences. This led to an active neighbourhood nowadays. In Gespleten Hendrik Noord the residents participated on the support and infill level and managed that within the support level collective spaces were unwanted. The participation and involvement of the residents is decreasing nowadays. Within the Solids 11 there was only participation on the infill level after the completion of the building. Users mostly depend on ‘Stadgenoot’. Yet, because some of the spaces are sold, these buyers are teaming up for more participation within the complex. Overall the participation process of the original users led to a better relation with the level of in which was participated. Early involvement creates more affinity with the levels in which was participated. Likewise, when users are involved on multiple levels of a building, it creates more affinity with the whole building and the other stakeholders of that building. In projects of the Open Building concept over time the focus changed of the ability for users to participate on all levels, including the tissue, support and infill level, to only the

infill level. This is in line with the change within the society, which is getting more concerned about the private domain.

The second sub-question is: ‘how were the users enabled and encouraged to appropriate, modify and participate in the transition zones?’ In Lunetten 4D the collective spaces between the private and public domain, for example the garden courtyards, should enhance the collectiveness, but there was an ability to close gardens off with fencing. Some entrance zones had clear pre-designed thresholds, some didn’t. According to Gespleten Hendrik Noord, the residents didn’t want zones that enable more interaction than necessary with fellow owners within the building. This interaction was only desirable in the small circulation or collective courtyard. The collective and open zones in the Solids 11 complex are not predestined. Also appropriation is not possible because of the strict policy of ‘Stadgenoot’. In general, the ability to modify predestined and pre-designed transition zones didn’t change, but the reasons why users modify did. Architects of the Open Building concept and the users of these projects through time valued their privacy more. Projects are more focused inwards to the private domain and aren’t publicly accessible anymore. The transition zones between the building and its surrounding became more rigid as well. Architects and users attach less value to the importance of a community which results in less collective zones. The use of collective zones, where interaction is happening, is dependent on initiatives of the users and the rules they have to follow.

The third sub-question is: ‘how did the users appropriate, modify and participate in the transition zones over time?’ In Lunetten 4D the garden courtyards worked out differently than intended, nowadays they are not appropriated at all by its users. Because of its lack of responsibility and its function-less and opportunity-less character it is not inviting. Through time the importance of privacy increased a lot. From marking your own place and having some interaction with its surroundings it changed to a more complete privacy. The ability to close gardens off with fencing resulted in less interaction with the environment and less accidental encounters are definitely appropriated. Zones without clear thresholds sometimes are appropriated by the users themselves. This is depending on the degree of use of the zone. Through the years, the owners of Gespleten Hendrik Noord closed their private zones in favour of their privacy. Additionally, the enthusiastic original residents left, where now new residents have settled who do not have the same affection with the building. The collective and open zones in the Solids 11 are not predestined, which results in unused zones without identity or character. In general, privacy became much more of importance, which resulted in more fencing for example. The amount of appropriation of shared zones is dependent on the degree of use of the zone and the policies of the owners. The effect of different ways of ownership wasn’t completely clear. Generally, too much policy led to underuse and no clear policy led to no appropriation of transition zones.

To design future transition zones within the Open Building concept, the following conditions can be used. Create predestined transition zones with pre-designed frameworks that are subject to policy. Early involvement and participation on multiple levels will clarify ones responsibilities and possibilities within that framework. Communication between owners, users and committees lead to a shared valuation and affinity of collectiveness. This will result in a balance between privacy and interaction that origins from the users themselves.

The limits of this research are bound to these three projects. The observation with the use of photographs is a snapshot in time. Further research could diverge into other projects of the Open Building concept and study the explicit use periodically through time to get a better overview.

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All other figures are personally made

# APPENDIX

# Rephotography, Lunetten 4D



1982

Figure 35. Backside Zevenwouden, Lunetten



2020

Figure 36. Backside Zevenwouden, Lunetten



1983

Figure 37. Flexible facade system row houses, Zevenwouden, Lunetten



2020

Figure 38. Flexible facade system row houses, Zevenwouden, Lunetten



1983

Figure 39. Facade, Zevenwouden, Lunetten



2020

Figure 40. Facade, Zevenwouden, Lunetten



1983

Figure 41. Flats and duplexes around half entrance courtyard, Oldambt, Lunetten



2020

Figure 42. Flats and duplexes around half entrance courtyard, Oldambt, Lunetten



1983

Figure 43. Oldambt, Lunetten



2020

Figure 44. Oldambt, Lunetten



1984

Figure 45. Furkabaan, Lunetten



2020

Figure 46. Furkabaan, Lunetten



1984

Figure 47. Twente, Lunetten



2020

Figure 48. Twente, Lunetten



1985

Figure 49. Zevenwouden, Lunetten



2020

Figure 50. Zevenwouden, Lunetten



1985

Figure 51. Oldambt, Lunetten



2020

Figure 52. Oldambt, Lunetten



1999

Figure 53. Hondsrug, Lunetten



2020

Figure 54. Hondsrug, Lunetten



2016

Figure 55. Oldambt, Lunetten



2020

Figure 56. Oldambt, Lunetten



2016

Figure 57. Hondsrug, Lunetten



2020

Figure 58. Hondsrug, Lunetten

## Through time, Lunetten 4D



Figure 59. Oldambt, Lunetten

- back gardens and green bed (1983)
- ownership: private - municipality
  - user: residents
  - use: private outdoor space
  - enabled zone: private gardens and bed
  - thresholds: property border is marked by pavement and fencing
  - modified: n/a
  - appropriated: n/a
  - privacy / interaction: the little fence is there for some privacy between the gardens. Nevertheless, a lot of interaction is possible



Figure 60. Oldambt, Lunetten

- back gardens and green bed (2020)
- ownership: private - municipality
  - user: residents
  - use: private outdoor space
  - enabled zone: private gardens and bed
  - thresholds: property border is marked by pavement and fencing
  - modified: most gardens are all fenced off. More green has grown.
  - appropriated: bench and bicycle shed on side of the house
  - privacy / interaction: most of the private gardens are fenced, possibility to interact decreased



Figure 61. Backside Zevenwouden, Lunetten

back gardens towards courtyard (1983)

- ownership: private - municipality
- user: residents
- use: under construction
- enabled zone: n/a
- thresholds: n/a
- modified: n/a
- appropriated: n/a
- privacy / interaction: n/a



Figure 62. Backside Zevenwouden, Lunetten

back gardens towards courtyard (2020)

- ownership: private - municipality
- user: residents
- use: skylights are replaced with a dormer
- enabled zone: n/a
- thresholds: n/a
- modified: n/a
- appropriated: n/a
- privacy / interaction: green creates privacy



Figure 63. Facade, Zevenwouden, Lunetten

front facade (1983)

- ownership: private
- user: residents
- use: private outdoor space
- enabled zone: facade and front garden
- thresholds: n/a
- modified: n/a
- appropriated: n/a
- privacy / interaction: the curtains are all closed for privacy. The garden is open for interaction



Figure 64. Facade, Zevenwouden, Lunetten

front facade (2020)

- ownership: private
- user: residents
- use: front garden as bike storage
- enabled zone: facade and front garden
- thresholds: n/a
- modified: the most right panel is replaced with glass. Also the colours of the frames changed
- appropriated: n/a
- privacy / interaction: grown green creates more privacy



Figure 65. Flexible facade system row houses, Zevenwouden, Lunetten front facade (1983)

- ownership: private - municipality
- user: residents
- use: front garden
- enabled zone: facade and front garden
- thresholds: marked by pavement and little fence
- modified: little fence and green
- appropriated: n/a
- privacy / interaction: a lot of interaction between the private and public domain



Figure 66. Flexible facade system row houses, Zevenwouden, Lunetten front facade (2020)

- ownership: private - municipality
- user: residents
- use: front garden
- enabled zone: facade and front garden
- thresholds: marked by pavement and green
- modified: little fence and green
- appropriated: n/a
- privacy / interaction: more green and grown trees, so some interaction between the private and public domain



Figure 67. Zevenwouden, Lunetten

back gardens towards courtyard (1985)

- ownership: private - municipality
- user: residents
- use: access of back garden, parking garage and terraces
- enabled zone: back garden
- thresholds: marked by pavement, green and little fence
- modified: little fence and green
- appropriated: n/a
- privacy / interaction: smooth transition from private to public domain. First sign of bigger plants



Figure 68. Zevenwouden, Lunetten

back gardens towards courtyard (2020)

- ownership: private - municipality
- user: residents
- use: access of back garden, parking garage and terraces.
- enabled zone: back garden
- thresholds: marked by pavement, green and fence
- modified: fence and green
- appropriated: abandoned shopping cart
- privacy / interaction: all private gardens are fenced. Public green creates more privacy for the pathway.

## ENTRANCES, Lunetten 4D

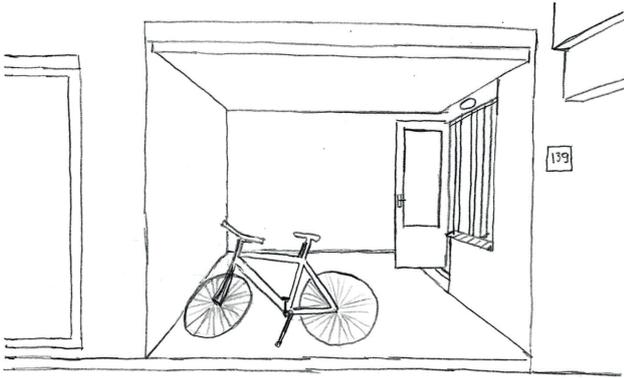


Figure 69.

- access through loggia, ground bound apartment
- ownership: housing association
- user: tenant
- use: as loggia, access and bike storage
- enabled zone: the whole loggia
- thresholds: raised floor creates an introduction to ones private loggia.
- modified: bike storage
- appropriated: n/a
- privacy / interaction: loggia serves as barrier and creates privacy between the inside and outside. Nevertheless, the loggia is all open for interaction.



Figure 70.

- access with big front garden, row houses
- ownership: private
- user: buyer
- use: the gardens with green are used to enhance the view and the garden with the pavement is used because of less maintenance
- enabled zone: the whole garden
- thresholds: the pavement at the street marks the boundary and the plots are marked by a fence
- modified: the garden is personalised with green or pavement
- appropriated: n/a
- privacy / interaction: a lot of privacy because of the big garden who serves as a threshold. Interaction is possible because of height green.



Figure 71.

- access with small front garden, duplex
- ownership: private
- user: buyer
- use: the small front garden is almost entirely paved, the gallery on the second floor serves as a shelter.
- enabled zone: the whole garden
- thresholds: the pavement at the street marks the boundary and the plots are marked by a fence
- modified: the garden is personalised with green or pavement
- appropriated: some green is overhanging
- privacy / interaction: medium privacy, small threshold



Figure 72.

- access through raised stairs, duplex
- ownership: housing association
- user: tenant
- use: as a threshold between the continuous street and the private access
- enabled zone: zone between the wall and the door
- thresholds: stairs and wall, to introduce ones house and privacy
- modified: n/a
- appropriated: personalised by adding some planters in a plant rack
- privacy / interaction: the ground floor is raised from the street level, which creates more privacy. Nevertheless, there is interaction between the street and the entrance/interior.

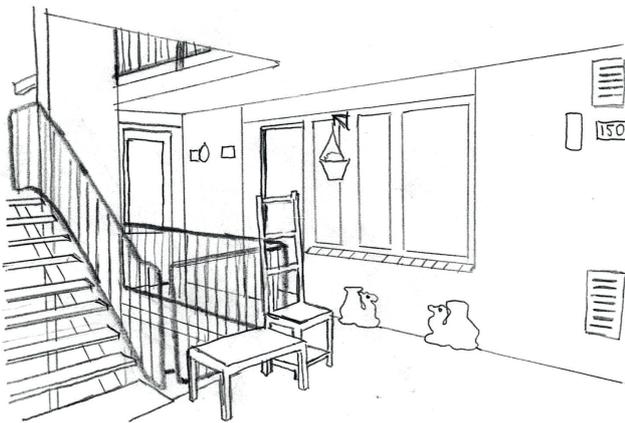


Figure 73.

- access through stairwell, first floor apartment
- ownership: private
- user: buyer
- use: the gallery is used as an expression with personal items and is used as a place to sit
- enabled zone: n/a
- thresholds: n/a
- modified: n/a
- appropriated: although there isn't that much space, users expressed themselves with personal items
- privacy / interaction: no privacy, doors and windows are directly adjacent to the stairwell



Figure 74.

- access through gallery, second floor apartment
- ownership: housing association
- user: tenant
- use: the gallery in between these apartments are made of wood, gaps in the floor are made for stairs or the connections with the floor below.
- enabled zone: n/a
- thresholds: n/a
- modified: n/a
- appropriated: users are expressing themselves with some planters
- privacy / interaction: this gallery has two dead end, so residents only use this for their destination. No threshold between the doors and gallery.

## OUTDOOR SPACE, Lunetten 4D

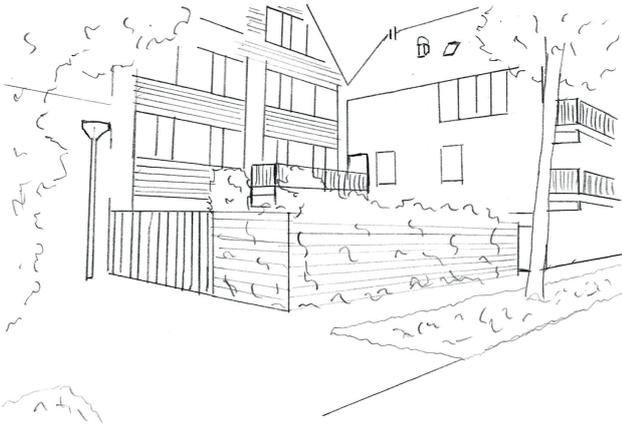


Figure 75.

backgarden towards the street, ground bound apartment

- ownership: private
- user: buyer
- use: outside space
- enabled zone: the whole garden
- thresholds: the pavement at the street marks the boundary and the adjacent plots are marked by a fence
- modified: about 75 % of the garden is paved, the fence is partly overgrown by green
- appropriated: n/a
- privacy / interaction: the garden is totally fenced for privacy



Figure 76.

backgarden towards the courtyard, ground bound apartment

- ownership: housing association
- user: tenant
- use: outside space
- enabled zone: the whole garden
- thresholds: the pavement at the street marks the boundary and the adjacent plots are marked by a fence or green
- modified: the gardens are green and the fences are partly overgrown by green
- appropriated: n/a
- privacy / interaction: the garden are partly fenced for privacy. Some interaction is possible through the passages and open fencing.



Figure 77.

backgarden towards the courtyard, row houses

- ownership: private
- user: buyer
- use: outside space
- enabled zone: the whole garden
- thresholds: the pavement at the street marks the boundary and the adjacent plots are marked by a fence or green
- modified: the gardens are green and the owner placed a shed at the end of ones property.
- appropriated: n/a
- privacy / interaction: the shed is creating more privacy, although the rest of the boundary is open and allows interaction.



Figure 78.

- balcony, duplex
- ownership: housing association
- user: tenant
- use: outside space, extension of ones living room
- enabled zone: the whole balcony
- thresholds: railing and glass screens
- modified: planters with green
- appropriated: n/a
- privacy / interaction: no privacy and a lot of interaction with the rest of the courtyard

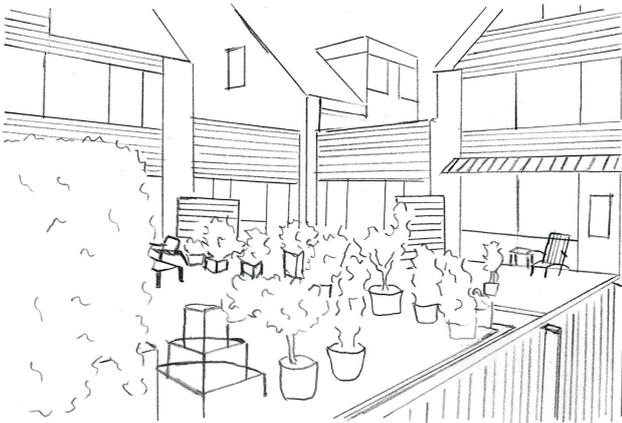


Figure 79.

- shared terrace, first floor apartments
- ownership: housing association
- user: tenant
- use: outside space on top of the garage, used by multiple households
- enabled zone: the whole terrace
- thresholds: threshold marked by lines on the pavement. It is also accessible by stairs from the ground floor.
- modified: furniture and planters with green
- appropriated: n/a
- privacy / interaction: privacy relative to its surroundings, but no privacy between the multiple users.

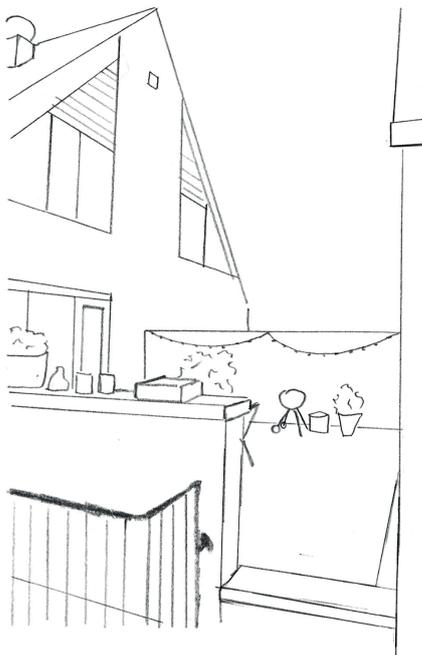


Figure 80.

- terrace, second floor apartments
- ownership: housing association
- user: tenant
- use: outside space between two apartments, also accessibly through gallery
- enabled zone: the whole terrace
- thresholds: a gap in the wall is used as a threshold
- modified: furniture and planters with green
- appropriated: n/a
- privacy / interaction: a balance between privacy and interaction with the few users of the gallery

## CIRCULATION, Lunetten 4D



Figure 81.

- open staircase between two blocks
- ownership: private
- user: residents
- use: vertical circulation for six houses, of which two student houses with multiple rooms. It is also used as underpass.
- enabled zone: n/a
- thresholds: The stairs and landings are made of wood which creates a gentle threshold
- modified: n/a
- appropriated: n/a
- privacy / interaction: a lot of interaction because of its openness.

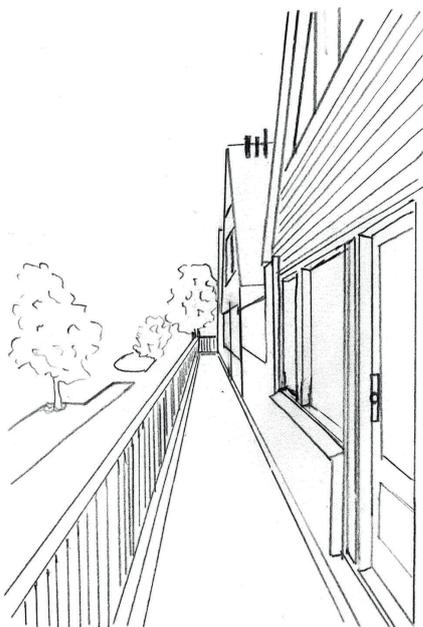
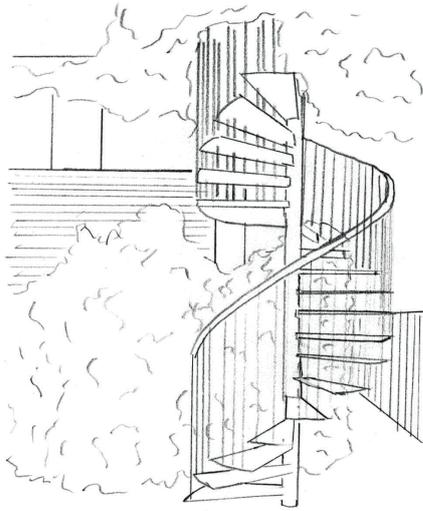


Figure 82.

- open gallery
- ownership: private
- user: residents
- use: horizontal circulation
- enabled zone: n/a
- thresholds: railing
- modified: n/a
- appropriated: n/a
- privacy / interaction: almost no interaction, top floor with only four entrances. This gallery also has a dead end.



- open spiral staircase
- ownership: private
- user: no one
- use: at the end of most galleries, these stairs are placed. Here the staircase is blocked on the ground floor, causing it not use able for the residents of upper floors in case of emergency.
- enabled zone: n/a
- thresholds: n/a
- modified: n/a
- appropriated: big plant is blocking the staircase
- privacy / interaction: a lot of interaction because of its openness. Probably the plant is this bug because the residents of the ground floor don't want other people to use this staircase and come close to their windows.

Figure 83.

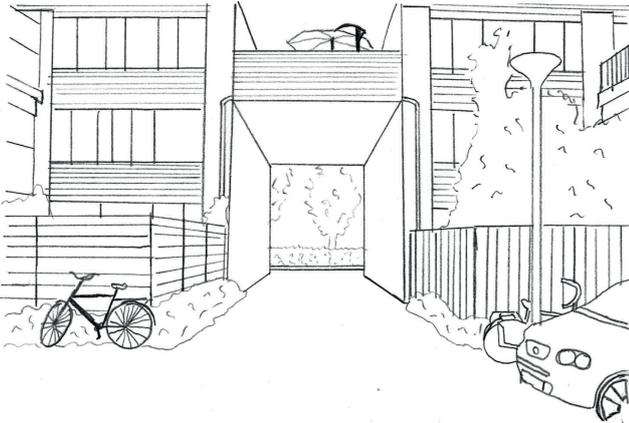


Figure 84.

entrance portal

- ownership: municipality
- user: residents of the neighbourhood
- use: these entrance portals give access to the access courtyards
- enabled zone: n/a
- thresholds: the portal serves as a first threshold. Still the courtyards are public.
- modified: n/a
- appropriated: in the neighbourhood there is a bicycle storage problem, bikes are placed everywhere
- privacy / interaction: although this is a more private space, the residents closed of their gardens, interaction is not possible



Figure 85.

alley

- ownership: municipality
- user: residents
- use: these alleys give access to the garden courtyards.
- enabled zone: n/a
- thresholds: the alley serves as a second threshold. Still the courtyards are public.
- modified: n/a
- appropriated: n/a
- privacy / interaction: the alleys are tapered shaped to indicate more privacy

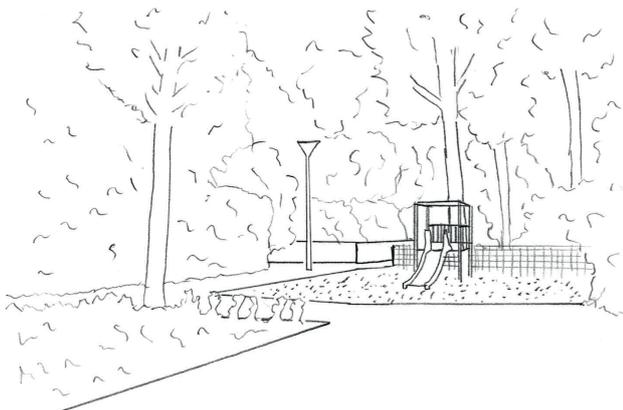


Figure 86.

garden courtyard

- ownership: municipality
- user: residents
- use: these garden courtyards are located in between the back gardens. The courtyards are mostly green, with sometimes a small playground.
- enabled zone: n/a
- thresholds: the residents closed their gardens of with green
- modified: n/a
- appropriated: n/a
- privacy / interaction: because it is surrounded by green, it is a very private space for the residents. Within this courtyard, interaction is only happening with users of the playground.

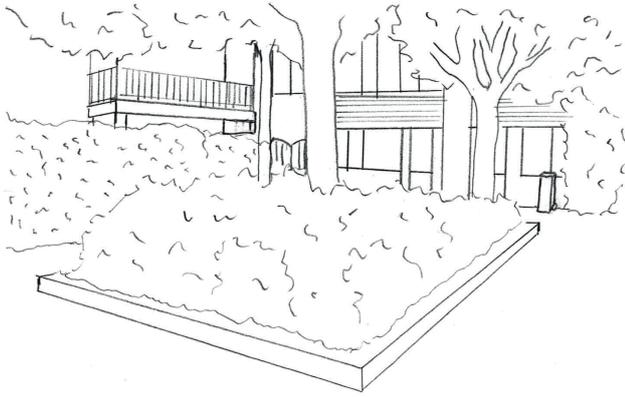


Figure 87.

green bed

- ownership: municipality
- user: no one
- use: these green beds are officially in ownership of the municipality. Because they are scattered around and sometimes quite hidden, the municipality often forgets to maintain it.
- enabled zone: n/a
- thresholds: raised and framed green bed
- modified: n/a
- appropriated: n/a
- privacy / interaction: n/a

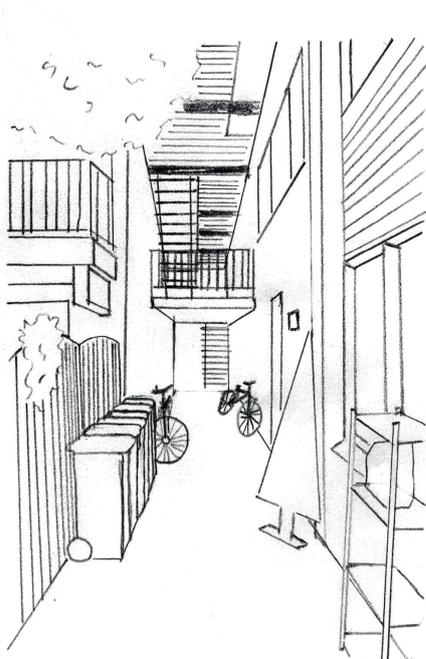


Figure 88.

alley

- ownership: private
- user: residents
- use: as storage for waste containers, bike storage and personal items. This alley also gives access to a few storages.
- enabled zone: n/a
- thresholds: no clear threshold between the private and public domain
- modified: n/a
- appropriated: personal items
- privacy / interaction: enclosed and only used by a few, so a lot of privacy

# Rephotography, Gespleten Hendrik Noord



1996

Figure 89. Gespleten Hendrik Noord



2020

Figure 90. Gespleten Hendrik Noord



1996

Figure 91. Balconies, GHN



2020

Figure 92. Balconies, GHN



1997

Figure 93. Front façade, Gespleten Hendrik Noord



2020

Figure 94. Front façade, Gespleten Hendrik Noord



1997

Figure 95. Back façade, Gespleten Hendrik Noord



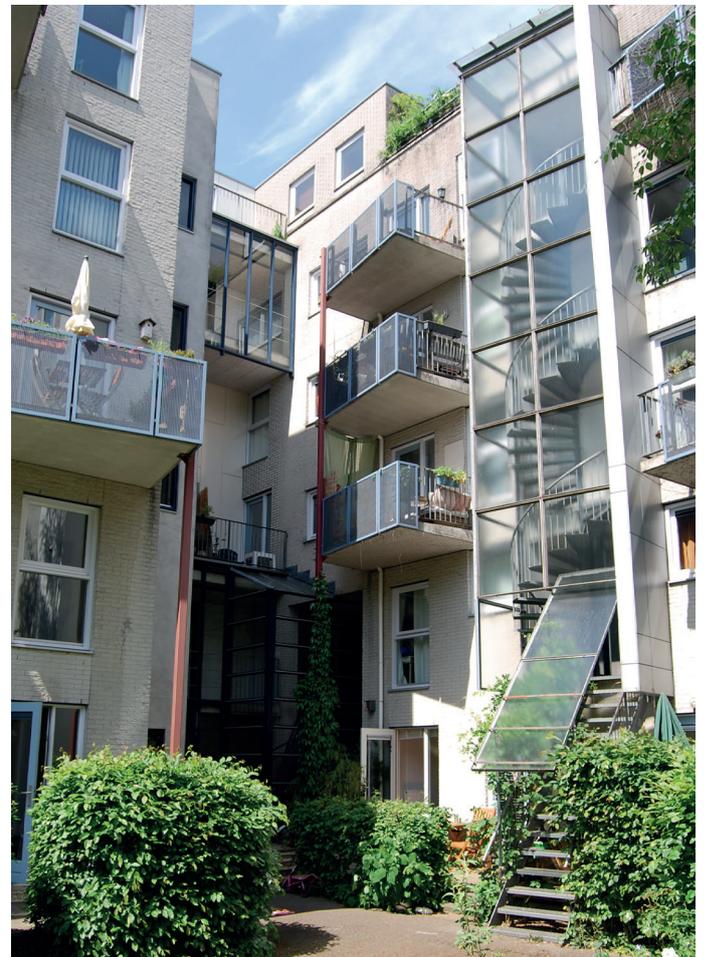
2020

Figure 96. Back façade, Gespleten Hendrik Noord



1997

Figure 97. Entrance hall, GHN



2020

Figure 98. Entrance hall, GHN

Rephotography, Gespleten Hendrik Noord



2005

Figure 99. Entrance hall, GHN



2020

Figure 100. Entrance hall, GHN



2005

Figure 101. First floor, GHN



2020

Figure 102. First floor, GHN



2005

Figure 103. Entrance courtyard, GHN



2020

Figure 104. Entrance courtyard, GHN



2005

Figure 105. Courtyard, GHN



2020

Figure 106. Courtyard, GHN



2014

Figure 107. Ground bound house, GHN



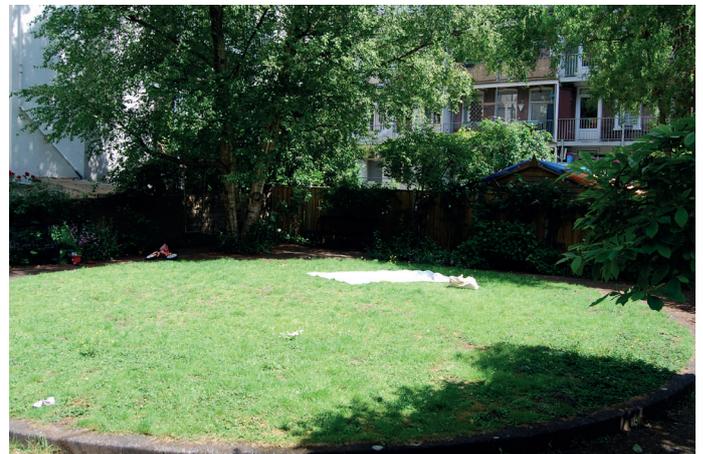
2020

Figure 108. Ground bound house, GHN



2019

Figure 109. Courtyard, GHN



2020

Figure 110. Entrance hall, GHN

## Through time, Gespleten Hendrik Noord

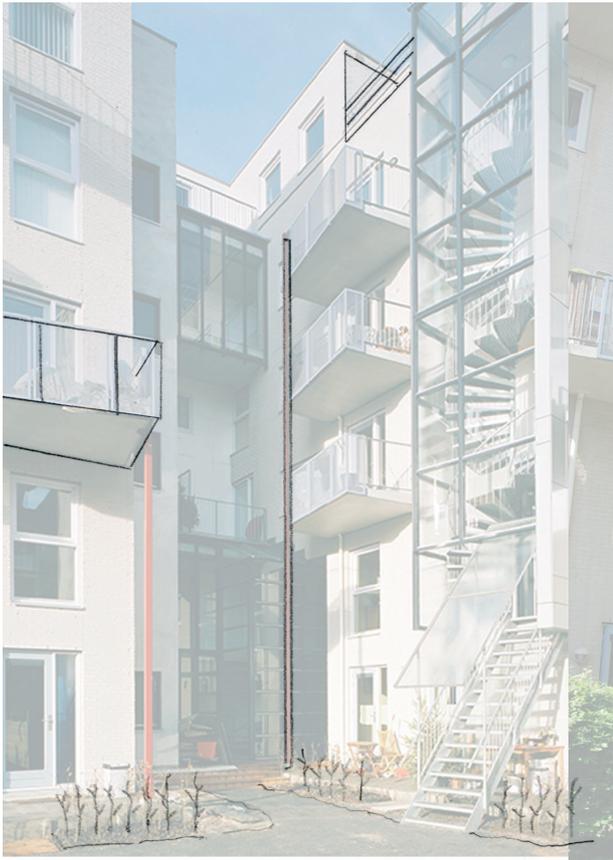


Figure 111. Armpit of the Gespleten Hendrik Noord



Figure 112. Armpit of the Gespleten Hendrik Noord

### armpit of the complex (1997)

- ownership: private and owners association
- user: buyers
- use: outdoor spaces
- enabled zone: terraces on the ground floor and balconies
- thresholds: pavement and hedges for the terraces and fences for the balconies
- modified: n/a
- appropriated: n/a
- privacy / interaction: on the ground floor a lot of interaction because of small hedges. Balconies create privacy.

### armpit of the complex (2020)

- ownership: private and owners association
- user: buyers
- use: outdoor spaces
- enabled zone: terraces on the ground floor and balconies
- thresholds: pavement and hedges for the terraces and fences for the balconies
- modified: planters with green on the balconies
- appropriated: green is climbing up the column
- privacy / interaction: on the ground floor less interaction because of big hedges. Balconies created more privacy with green.



Figure 113. Entrance hall, GHN

entrance hall (2005)

- ownership: owners association
- user: buyers
- use: undefined space
- enabled zone: n/a
- thresholds: n/a
- modified: n/a
- appropriated: planters with green underneath the stairs and exterior niche is empty
- privacy / interaction: n/a



Figure 114. Entrance hall, GHN

entrance hall (2020)

- ownership: owners association
- user: buyers
- use: undefined space
- enabled zone: n/a
- thresholds: n/a
- modified: n/a
- appropriated: planters are gone and the exterior niche is used to store children's bicycles
- privacy / interaction: n/a

# ENTRANCES, Gespleten Hendrik Noord

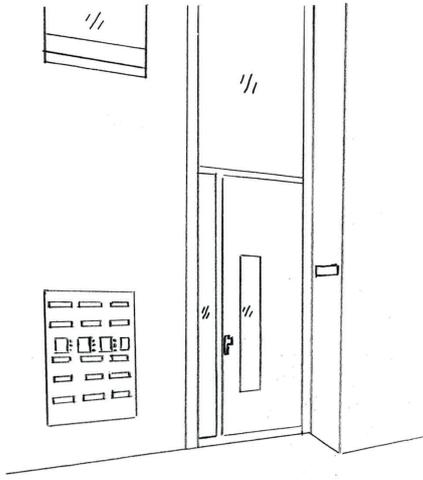


Figure 115.

- main entrance complex
- ownership: owners association
- user: buyer
- use: collective entrance
- enabled zone: n/a
- thresholds: recessed entrance creates some shelter when entering the complex
- modified: n/a
- appropriated: n/a
- privacy / interaction: a minimal interaction between the inside and outside is made through the glass.

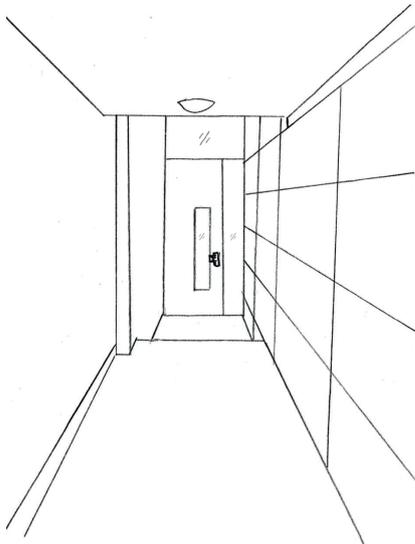


Figure 116.

- main entrance complex
- ownership: owners association
- user: buyer
- use: collective entrance
- enabled zone: n/a
- thresholds: raised floor of one step as introduction to the inside of the building
- modified: n/a
- appropriated: n/a
- privacy / interaction: because of its narrowness, there is close interaction between residents. The connection with outside is minimized.

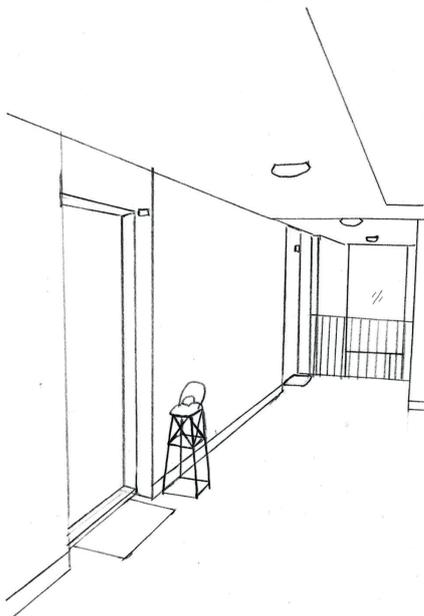


Figure 117.

- access through corridor
- ownership: owners association
- user: buyers
- use: private entrance
- enabled zone: n/a
- thresholds: recessed front door creates a introduction ones private house.
- modified: n/a
- appropriated: doormats are places in front of the doors, together with some personal things.
- privacy / interaction: private houses do not have a connection with the corridor. Only neighbours who use the same corridor encounter each other here. The corridor has an open connection with the entrance via the recessed floor.

## OUTDOOR SPACE, Gespleten Hendrik Noord



Figure 118.

### loggia first floor

- ownership: private
- user: buyers
- use: private outdoor space
- enabled zone: all of the loggia
- thresholds: the set backed exterior walls are half closed and half glassed. The wooden framework towards the street is open.
- modified: chairs and plant
- appropriated: n/a
- privacy / interaction: the transparency creates a connection from inside the house through the loggia towards the street. On the other hand, the privacy is ensured.

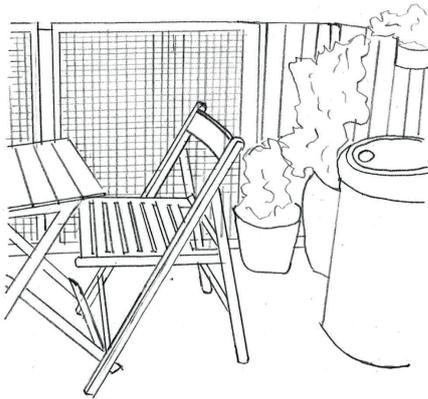


Figure 119.

### balcony

- ownership: private
- user: buyers
- use: private outdoor space
- enabled zone: all of the balcony
- thresholds: the fencing of the balcony
- modified: chairs, tables, bin and planters with green
- appropriated: n/a
- privacy / interaction: the fine-meshed fence at the front creates privacy towards the courtyard, so one can sit here in private. On the side, the fence is more open, the owners are closing this of with green. Nevertheless, when standing there is a lot of interaction with its surroundings and nearby other balconies.

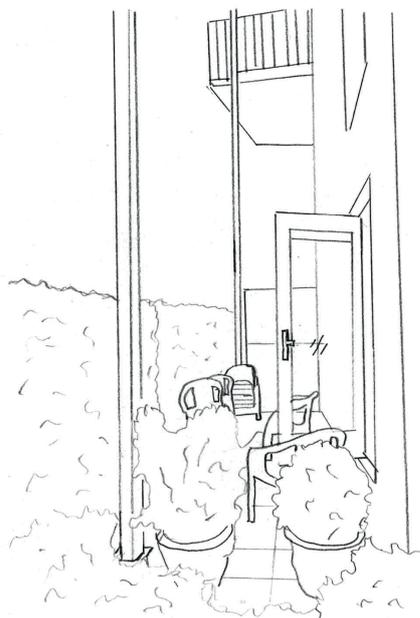


Figure 120.

### terrace

- ownership: private
- user: buyers
- use: private outdoor space
- enabled zone: all of the paved terrace
- thresholds: the paving is raised from the adjacent collective garden. The terrace is surrounded by hedges at the front and a glass fence on the right. The columns who are attached to the balconies are also marking the terrace zone.
- modified: chairs and planters with green
- appropriated: n/a
- privacy / interaction: the hedges in front are tall, which creates privacy. In between the hedges there is a passage to the collective garden. On the left side, the original open space is a bit closed of with green, interaction is still possible.

## CIRCULATION, Gespleten Hendrik Noord

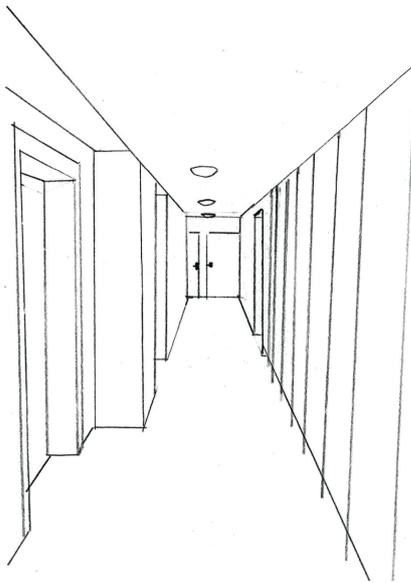


Figure 121.

### corridor

- ownership: owners association
- user: buyers
- use: collective circulation
- enabled zone: n/a
- thresholds: recessed front door creates a introduction ones private house.
- modified: n/a
- appropriated: n/a
- privacy / interaction: private houses do not have a connection with the corridor. Only neighbours who use the same corridor encounter each other here.



Figure 122.

### external staircase

- ownership: owners association
- user: buyers
- use: emergency exit
- enabled zone: n/a
- thresholds: height difference by steel stairs.

### Housing by glass panels

- modified: n/a
- appropriated: n/a
- privacy / interaction: when used there is no privacy, everyone can see ones use it. Interaction is possible because it leads to the courtyard and because of its transparency.

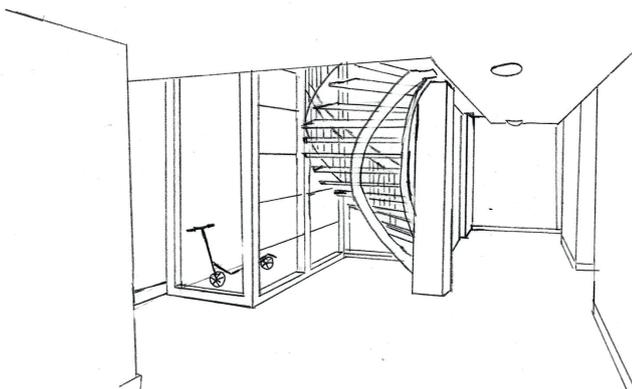


Figure 123.

### entrance hall

- ownership: owners association
- user: buyers
- use: collective entrance hall. At the end on the right side is an entrance to a house. At the end on the left is the elevator. The stairs lead to the corridor on the first floor.
- enabled zone: n/a
- thresholds: n/a
- modified: n/a
- appropriated: the exterior niche is used to store children's bicycles
- privacy / interaction: a lot of interaction between the residents because of its small size. The curtain wall creates interaction with the courtyard.

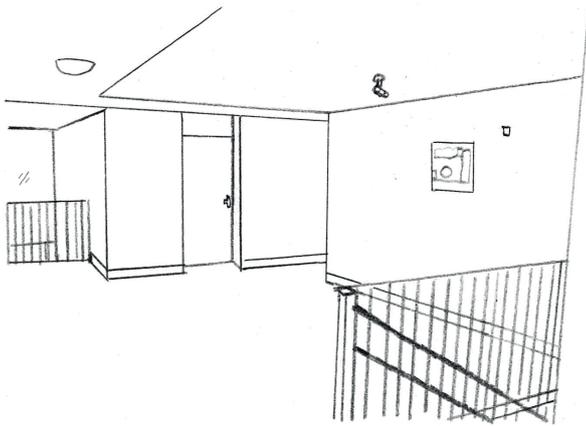


Figure 124.

- multifunctional space
- ownership: owners association
  - user: buyers
  - use: space marked by the plane on the ceiling is of multifunctional use. Normally used for circulation but sometimes for meetings of the owners association.
  - enabled zone: undefined open space
  - thresholds: marked by the plane on the ceiling
  - modified: n/a
  - appropriated: painting on the wall
  - privacy / interaction: because of its openness, a lot of encounters with passing by residents.



Figure 125.

- stairs and landing
- ownership: owners association
  - user: buyers
  - use: to reach the courtyard and for green
  - enabled zone: n/a
  - thresholds: stairs and landing create a threshold between the building and the courtyard
  - modified: n/a
  - appropriated: by multiple planters with green on the stairs
  - privacy / interaction: the hedges create some privacy for the adjacent private gardens. Nevertheless there is interaction between the residents with a private garden and the residents who use the courtyard.

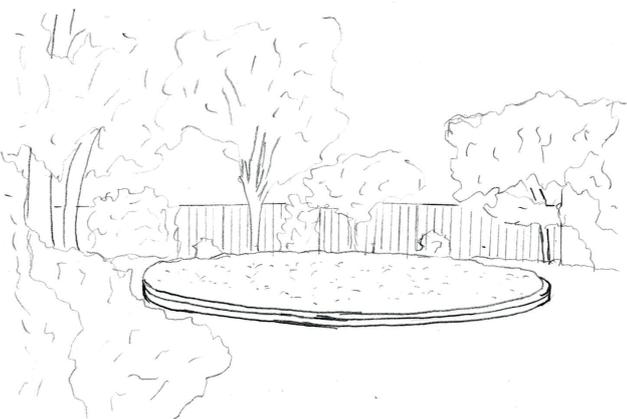


Figure 126.

- courtyard
- ownership: owners association
  - user: buyers
  - use: collective courtyard for the residents, no gardening
  - enabled zone: n/a
  - thresholds: raised circle of grass in the middle for use, surrounded by pavement for use. Courtyard is enclosed by wooden fences with a small strip of vegetation and trees.
  - modified: n/a
  - appropriated: some children's toys and a swing.
  - privacy / interaction: There is a lot of interaction between the houses and the users of the courtyard, because they all have one side of the house facing this courtyard. Trees and fencing create some privacy for the residents in between the neighbouring buildings of the block.

Rephotography, Solids 11



2011

Figure 127. Courtyard Solids 11



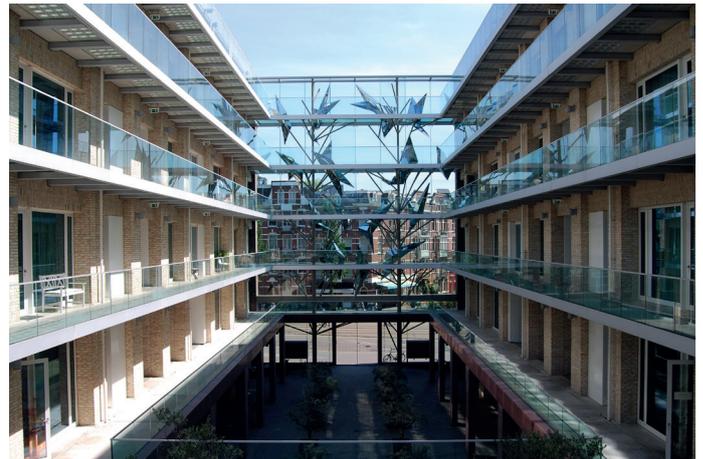
2020

Figure 128. Courtyard Solids 11



2011

Figure 129. Courtyard, Solids 11



2020

Figure 130. Courtyard, Solids 11



2011

Figure 132. Front façade, Solids 11



2020

Figure 132. Front façade, Solids 11



2011

Figure 133. Balconies, Solids 11



2020

Figure 134. Balconies, Solids 11



2011

Figure 135. Balconies, Solids 11



2020

Figure 136. Balconies, Solids 11



2013

Figure 137. Solids 11



2020

Figure 138. Solids 11

## Through time, Solids 11



Figure 140. Courtyard, Solids 11

courtyard (2011)

- ownership: housing association
- user: tenants
- use: courtyard
- enabled zone: n/a
- thresholds: n/a
- modified: n/a
- appropriated: n/a
- privacy / interaction: n/a



Figure 141. Courtyard, Solids 11

courtyard (2020)

- ownership: housing association
- user: buyers and tenants
- use: courtyard
- enabled zone: n/a
- thresholds: n/a
- modified: planters with green
- appropriated: signs with routes and regulations
- privacy / interaction: n/a



Figure 142. Front façade, Solids 11

front facade (2011)

- ownership: housing association
- user: tenants
- use: gallery bridge
- enabled zone: n/a
- thresholds: n/a
- modified: n/a
- appropriated: n/a
- privacy / interaction: n/a



Figure 143. Front façade, Solids 11

front facade (2020)

- ownership: housing association
- user: buyers and tenants
- use: gallery bridge and artwork
- enabled zone: n/a
- thresholds: n/a
- modified: artwork by one of the tenants
- appropriated: n/a
- privacy / interaction: n/a

## ENTRANCES, Solids 11



Figure 144.

### hotel entrance

- ownership: housing association
- user: guest
- use: hotel entrance at the street
- enabled zone: n/a
- thresholds: recessed entrance which creates a little shelter
- modified: n/a
- appropriated: bicycle stand, doormat and planters with green.
- privacy / interaction: the closedness and robustness alternate with transparency. The glass is mirroring and the entrance is very timid, which doesn't create a lot of interaction between the inside and outside.

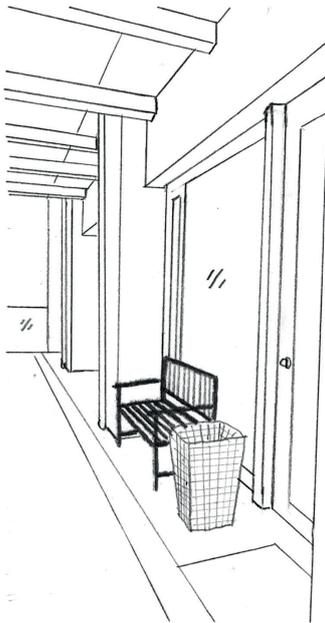


Figure 145.

### gallery access

- ownership: housing association
- user: buyers, tenants and guests
- use: entrance from gallery to private space and outside space towards the courtyard
- enabled zone: recessed facade creates a zone between the two columns up till the gutter of the gallery.
- thresholds: the gutter marks the boundary. The gallery above creates a shelter.
- modified: a doormat in front of the door and a bench and a basket in front of the facade.
- appropriated: n/a
- privacy / interaction: the transitional space doesn't have any privacy and creates a lot of interaction. The interaction between the inside and outside of a house is mostly shielded with a curtain.

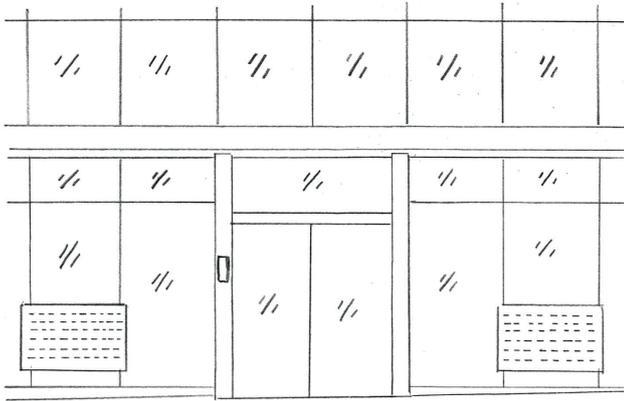


Figure 146.

main entrance

- ownership: housing association
- user: buyers, tenants and guests
- use: main entrance at the street
- enabled zone:
- thresholds: the curtain wall, to keep outsiders out
- modified: n/a
- appropriated: n/a
- privacy / interaction: the curtain wall maintains interaction between the inner courtyard and the street.

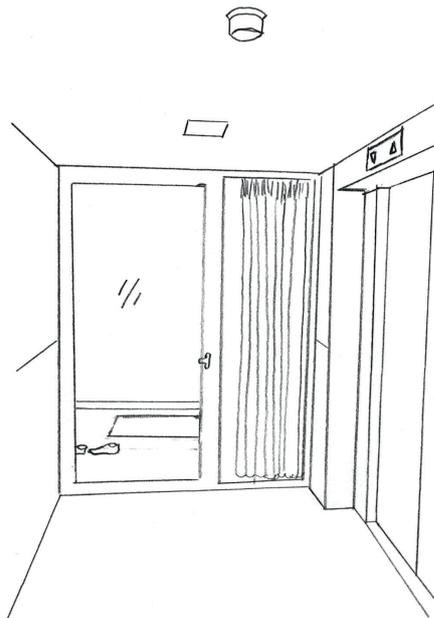


Figure 147.

hallway access

- ownership: housing association
- user: buyers, tenants and guests
- use: entrance in hallway, next to the elevator
- enabled zone: n/a
- thresholds: n/a
- modified: n/a
- appropriated: n/a
- privacy / interaction: the glass wall creates a lot of interaction between the private domain and the domain of circulation. Users closed the walls with curtains to create more privacy.

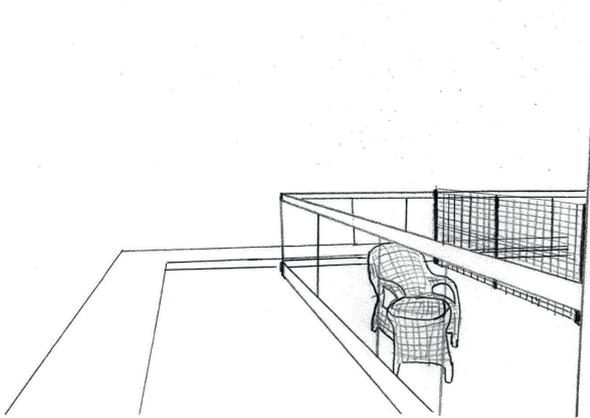


Figure 148.

- roof terrace
- ownership: housing association
- user: guests
- use: private roof terrace
- enabled zone: the whole roof terrace
- thresholds: glass railing to prevent from falling of the building
- modified: steel railing between the private outdoor spaces of the hotel rooms. Lounging chairs and tables.
- appropriated: n/a
- privacy / interaction: because its on the roof there is a lot of privacy. Nevertheless, between the rooms there is a lot of interaction.

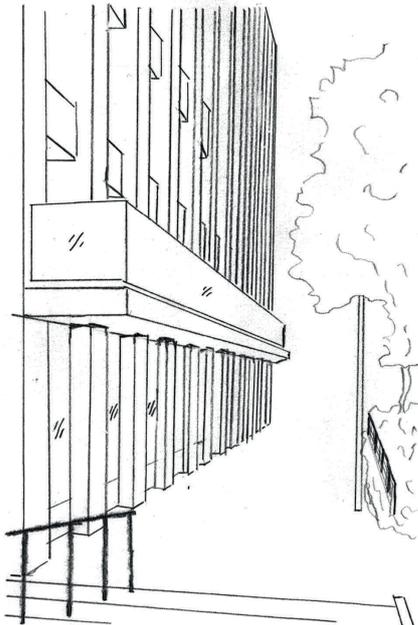


Figure 149.

- balcony
- ownership: housing association
- user: guests
- use: private balconies
- enabled zone: the whole balcony
- thresholds: glass railing to prevent from falling of the balcony
- modified: steel railing between the private outdoor spaces of the hotel rooms. Lounging chairs and tables.
- appropriated: n/a
- privacy / interaction: A lot of interaction with the street and between the balconies

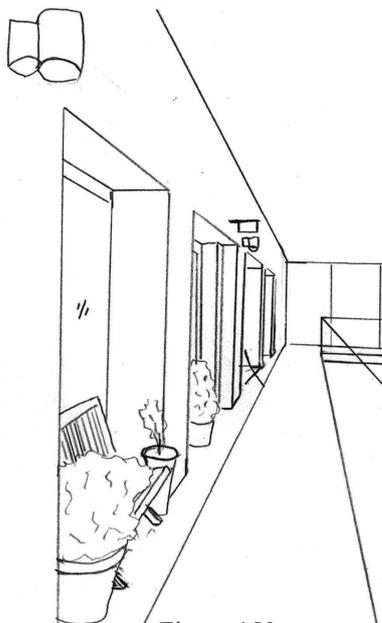


Figure 150.

- niche
- ownership: housing association
- user: buyers, tenants and guests
- use: outdoor space between columns
- enabled zone: recessed facade creates a zone between the two columns
- thresholds: the gutter marks the boundary
- modified: benches, chairs and planters with green in front of the facade
- appropriated: n/a
- privacy / interaction: the transitional space doesn't have any privacy and creates a lot of interaction.

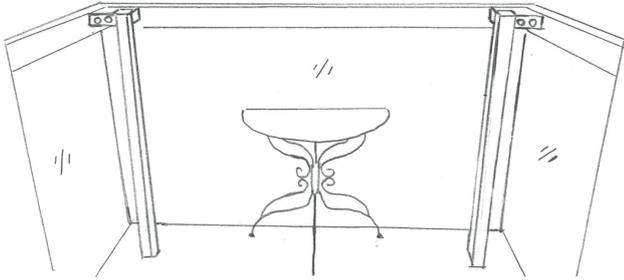


Figure 151.

### balcony

- ownership: housing association
- user: buyer, tenants and guests
- use: private balcony
- enabled zone: the whole balcony
- thresholds: glass railing to prevent from falling of the balcony
- modified: a table
- appropriated: n/a
- privacy / interaction: A lot of interaction with the nearby buildings and between the balconies

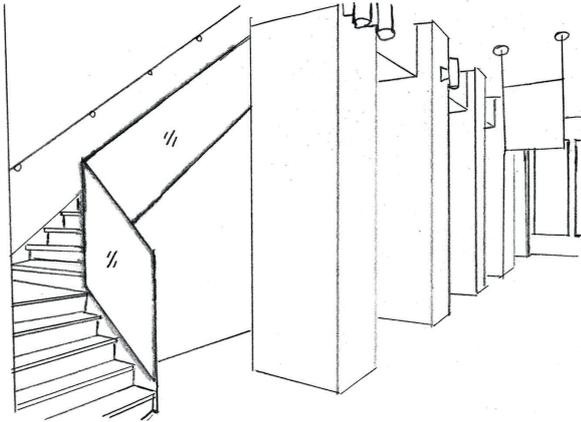


Figure 152.

open staircase

- ownership: housing association
- user: buyers, tenants and guests
- use: circulation to first floor
- enabled zone: n/a
- thresholds: recessed staircase behind the columns to indicate a transition in zoning
- modified: n/a
- appropriated: n/a
- privacy / interaction: recessed staircase indicates the introduction to more privacy on the next floor. The openness allows interaction between the users.

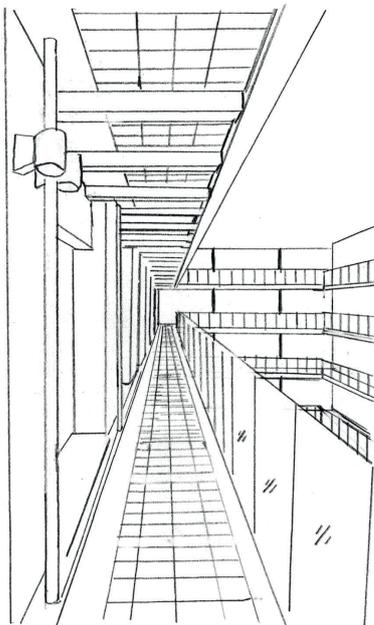


Figure 153.

gallery

- ownership: housing association
- user: buyers, tenants and guests
- use: circulation on every floor, both sides connected via bridges
- enabled zone: recessed facade creates a zone between the two columns
- thresholds: the gutter marks the boundary
- modified: n/a
- appropriated: n/a
- privacy / interaction: the gallery is open and creates interaction with all the galleries and the whole courtyard

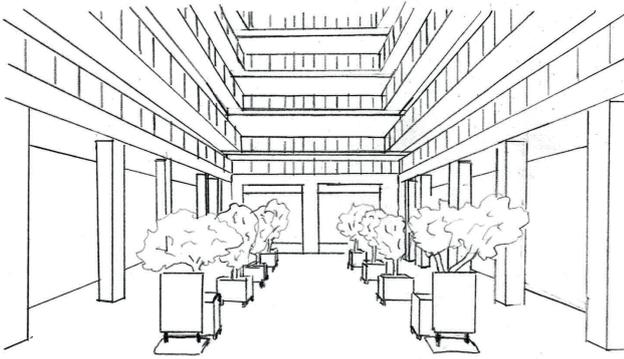


Figure 154.

courtyard

- ownership: housing association
- user: buyer, tenant, guests
- use: as circulation and to look at, no real function
- enabled zone: n/a
- thresholds: n/a
- modified: planters with green
- appropriated: signs with routes and regulations
- privacy / interaction: a lot of interaction with the rest of the building. No interaction with functions in plinth, all closed off.

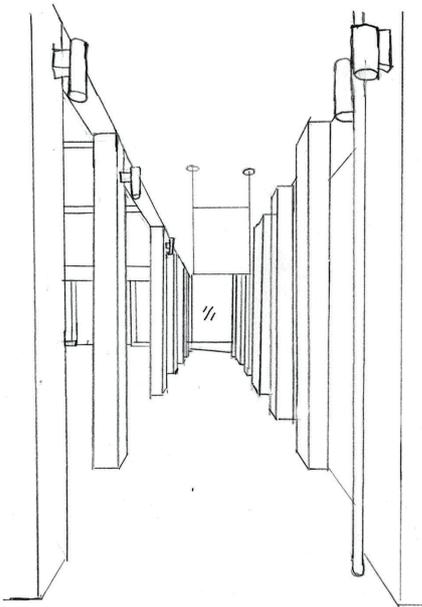


Figure 155.

arcade

- ownership: housing association
- user: buyers, tenants, guests
- use: for circulation, plinth is closed off because of use by hotels
- enabled zone: n/a
- thresholds: columns create a threshold between the courtyard and the plinth
- modified: n/a
- appropriated: n/a
- privacy / interaction: arcade creates a balance between privacy and interaction



Figure 156.

terrace

- ownership: housing association
- user: guests
- use: private terrace for hotel guests, not used at all
- enabled zone: the whole terrace
- thresholds: glass railing and gallery
- modified: planters with green
- appropriated: n/a
- privacy / interaction: a lot of interaction with the rest of the building.

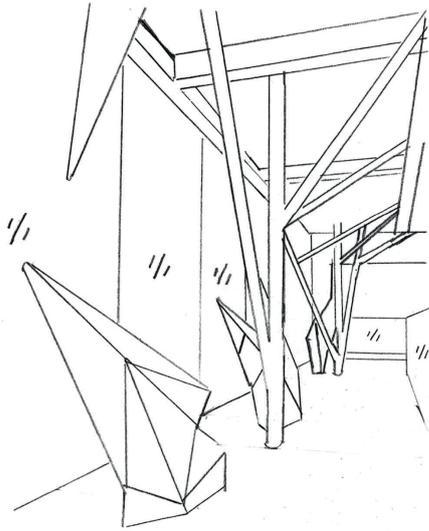


Figure 157.

gallery bridge

- ownership: housing association
- user: buyers, tenants and guests
- use: a gallery bridge with artwork
- enabled zone: n/a
- thresholds: curtain wall and glass railing
- modified: artwork by one of the tenants
- appropriated: n/a
- privacy / interaction: a lot of interaction with the rest of the building and the outside because of the glass

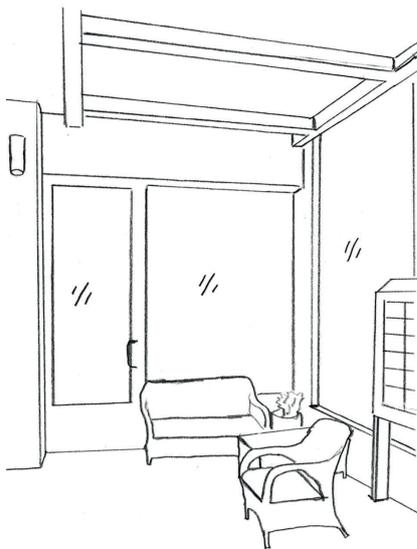


Figure 158.

sitting/entrance area

- ownership: housing association
- user: buyers, tenants and guests
- use: next to the mailboxes there is a sitting area of the hotel
- enabled zone: n/a
- thresholds: n/a
- modified: n/a
- appropriated: a bench, chair, table and planter with green in front of the facade
- privacy / interaction: a lot of interaction between the guests and the buyers and tenants