said, "no problem. I can give you a deal. We put the toilet, and the hole with the shower together, and build a wall around them. It is for you and for your mother." He said, "it is a good agreement, I accept them. Anyhow, nothing more than that." So in his apartment, no entrance hall, no bedroom, nothing, just an empty space.²⁰

Each week, the architect spent two afternoons on the consultation with users, and the whole process lasted six months. Sixty percent of selected families took part in designing their dwellings while the remaining had been selected too late to be involved and instead received a finished apartment. Furthermore, about one-third of layouts had to be altered at a different level before construction in order to acquire the approval of related organisations. These changes, however, were not discussed with the tenants²¹. The sociologist, Ans Gotink, audited some of the working meetings, and made the first sociological investigation on this project. According to her, although participation was not necessary for the users before being involved, a great majority held a positive attitude towards the result. Negative comments were inevitable from the insufficient information provided prior to participation and the limited period for them to make an immature decision. However, a higher satisfactory and lower rate of demand for moving was found in the families who were involved in this process.

3. Users' Feedback

Towards the community | The architect's strategy of the exterior living environment, including parking on the street and living with a courtyard, was recognised by the inhabitants (Fig. 8).

According to the interviewees, parking in the street is safe and quiet. "Parking on the street", as a popular pattern in Holland, was well accepted, whilst some tenants praised this form highly since it excluded the cars from the courtyards.

You have to drive very slowly, a maximum of thirty kilometres per hour. Driving fast is not allowed. Since we lived here, there have not been any traffic accidents.²²



Fig. 8a: Parking street. (Source: by author.)



Fig. 8b: Entrance courtyard. (Source: by author.)

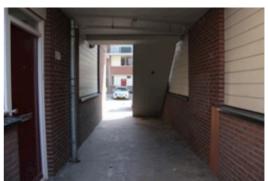


Fig. 8c: Allay. (Source: by author.)

Fig. 8: Photos of open space.

²⁰ Interview with Mr. Frans van der Werf. September 19th, 2014.

²¹ Ans Gotink. Commentary on Molenvliet. *The Scope of Social Architecture*. (ed C.R. Hatch). New York: Van Nostrand. pp. 38-39.

²² Interview with Family 228. Sept. 20th, 2014.

It (the street) is good. It is not busy all day. People use this street only at specific times, in the morning when people go out for work, for example. In most cases, it is very quiet. I never feel that the street disturbs me $(\dots)^{23}$

Parking on the street is not a problem, of course. It is normal in Holland. We have to park on the street before we enter the courtyard. That means the car is not allowed in the neighbourhood. When we came here, we had little children. (.....) In the courtyards, there is no traffic. It is good especially for the children.²⁴

The collective courtyards did not receive any criticism, however, they were not absolutely imperative for the tenants. It was found that a garden courtvard was completely renovated by the housing corporation without the discussion with users. Most of the interviewees expressed their indifference to this change. When about the courtyards, talking some interviewees, particularly the original users, sympathised with the fading of the "community" concept, and attributed it to the frequent turnover of tenants. Due to the weakened sense of community, the shared yards were separated, and a great majority of private gardens in the ground floor were enclosed by high fences.

> It (to make a community) was the whole idea in this project. But from about 1986, the tenth year after its realisation, a lot of people left. All those years, people come, people move. It is a rental housing. (.....) So the idea of the community, with elder people, younger people, with mutual help and communication, that kind of thing did not work anymore. Every year, we have new neighbours. But several years later, they bought houses

and moved out. So the principle of community has gone.²⁵

When we live together for a long time, we will know each other and trust each other. However, the new comers usually live here for a short time, for example one or two years. We cannot trust them and make friends with them. Furthermore, the rent in this community is expensive for the new comers, much higher than us (who lived here for a long time). It may be another reason of their leaving.²⁶

(.....) At the very beginning we had a shared garden with our neighbour. After they left, a new neighbour came. To protect the privacy, we built a fence to separate the shard garden into two. For the same reason, we also built a fence, which isolated my garden from the collective courtyard. We seldom stayed in the collective courtyard. Because most neighbours, with which we have contact, moved. (.....) So now the neighbourhood contact is minimum.²⁷

The alleys, which made the courtyards open, excited the tenants. Some interviewees thought that an alley brought certain delight to their life.

Different alleys lead us to different directions. For example, when we go to the car, we go downstairs, and go through one alley. When we go shopping, we can utilise the other alley. (.....) It is interesting to have many alleys and many ways. On the weekend when my little granddaughter comes to visit me, we will walk around the community, from one courtyard to the other courtyard, through one alley to the other.²⁸

²³ Interview with Family 220. Sept. 20th, 2014.

²⁴ Interview with Family 67. Sept. 20th, 2014.

²⁵ Interview with Family 220. Sept. 20th, 2014.

²⁶ Interview with Family 95. Sept. 24th, 2014.

²⁷ Interview with Family 316. Sept. 24th, 2014.

²⁸ Interview with Family 228. Sept. 20th, 2014.



Fig 9: Changes to deal with the poor performance of heating caused by internal staircase. (Source: by author.)

(.....) It is good to have the courtyard open. The alley breaking the courtyard is very nice. The courtyard will be a jail without these alleys. But now, children are free - they can play wherever they want. Furthermore, when there is a fire, we can escape very fast.²⁹

The housing | Almost all of the tenants gave a high evaluation for their apartment. Some emphasised their spacious living room that had bright sunshine and a private garden. The wonderful condition of living facilities, for example water, electricity, gas, was another factor attributing to the high evaluation. Besides, their particular layout was highly evaluated especially by the newcomers.

I have a unique apartment in this community. Actually every apartment is unique. No two are found to be anything alike. It is a surprise. When you walk around the community, you think every apartment is the same. But when you enter some houses, you find they are somehow different.³⁰

²⁹ Interview with Family 67. Sept. 20th, 2014.

In the upper floor, I have a main bedroom and a bathroom. If you visit my neighbour, you will find their layout is similar with me. But in their upper floor, they have a main bedroom together with a small room. Every apartment in this community is different from the others, so that you will have more choice.³¹

However, unavoidable complaints were sporadically found, which could be concluded as three aspects as follows.

Firstly, although without any fierce criticism, certain inconveniences caused by duplex dwelling were indicated. It was understood that the lower floor always had a poor performance of heating in the winter. Some tenants immediately attributed this phenomenon to their exposed staircase. Correspondingly, due to this, most families had made certain changes, such as adding a door curtain on the entrance of the upper floor; building a partition with a sliding door to separate the spacious space in the lower floor as an isolated part; or shutting off the stairway completely (Fig. 9).

³⁰ Interview with Family 304. Sept. 25th, 2014.

³¹ Interview with Family 177. Sept. 25th, 2014.

Meanwhile, the duplex form might compel the elders to move out. Alternatively, some were planning to add an internal elevator. If the change was conducted, the change of support could not be avoided.

> We may only change our house, or move out when we are too old to take the stairs. When we cannot walk anymore, we have to go to a place with an elevator, or a house in the ground floor and without interior staircase.³²

> (.....) I got used to the house and everything nearby, after spending so many years here. I do not want to move out. Not yet. Probably after ten years, I will have to think about this question. Otherwise, I may add a small elevator.³³

Secondly, the biggest complaint was about the location of source, which was either just below the ceiling or merely above the floor. This problem was criticised by users of all ages (Fig. 10).

The biggest mistake in this house is that some sources are too low, almost on the floor. I even have two sources under the heater. I have to be on my knees to reach them.³⁴

The house is very strange since it placed the electricity either too low or too high. The source is never in the appropriate location. Do you see the source on the top of this wall? How can I reach it?³⁵

Thirdly, although being well maintained by the housing corporation, this project still suffered from quality problems. Some windows were not well linked with the walls and caused water seepage of the window. In addition, several partitions made with board were out of date (Fig. 11).

(.....) We have had a leakage problem for a long time. Whenever it rains, the water can come into our house from this window. I have told the owner of the house. They checked but even the specialists cannot find the cause. Since we live here, all the years, we have this problem. Our neighbours have the same problem with us.³⁶



(a) Source under the heater.



(b) Source on the top of the wall.

Fig. 10: The source in inappropriate locations. (Source: by author.)



Fig. 11: The mouldy wall. (Source: by author.)

³² Interview with Family 316. Sept. 24th, 2014.

³³ Interview with Family 286. Sept. 25th, 2014.

³⁴ Interview with Family 316. Sept. 24th, 2014.

³⁵ Interview with Family 163. Sept. 25th, 2014.

³⁶ Interview with Family 246. Sept. 26th, 2014.

	Basic Information				Activity		
	Location	Period	Family	Duplex	Renovation	Plan of change	Plan of move
Class 1	228	38	Elderly couple	\checkmark	\checkmark		
	220	38	Elderly couple	√	\checkmark		
	95	38	Elderly couple	√			
	316	38	Elderly couple	√			
Class 2	286	33	Elderly couple	√	√		
	290	31	Middle-aged madam				
	97	31	Elderly man				
	246	29	Elderly couple	√	\checkmark	√	
	304	19	Elderly madam	√	\checkmark		
	177	16	Middle-aged madam	√	\checkmark		
Class 3	67	8	Family of three	√	\checkmark		√
	193	3	Office				
	173	1	Young couple	√			√
	163	1	Young lady	√	\checkmark	√	√
	314b	1	Family of three	√			√

Table 1: The selection of interviewees. (Source: by author.)

I am afraid there is something wrong with the partition. Sometimes, you may even hear the mouse running in the cavity.³⁷

User's Initiatives | In total, there were fifteen families interviewed. They can be classified into three categories according to their subsistence in Molenvliet Project (Fig. 12; Table 1).

For the first class, four families were found who lived in this project from the very beginning. They all had the

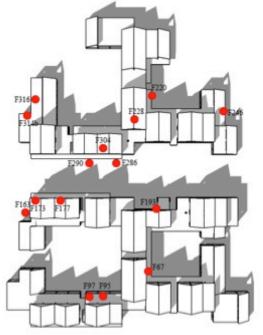


Fig. 12: The selection of interviewees. (Source: by author.)

³⁷ Interview with Family 173. Sept. 25th, 2014.

opportunity to participate in the design process and work with architects. Their lifestyle and personal demand was expressed dramatically in this process. Even the special requirements, which were opposite to the architect's idea, could possibly be realised. Family 316 was a wonderful case in this aspect (Fig. 13)

This is a duplex apartment accommodating four people at the very beginning - a middle aged couple and their two sons. The couple, particularly the husband who possessed profound curiosity on housing design, played an important role in designing this unit. According to their requirements, the ground floor held space for family gatherings, while the second floor was subdivided into four bedrooms with a bathroom.

The architect asked us what we wanted for our house. We liked a spacious space in the ground floor, where we could cook, eat and watch TV. The height of the living room was particularly high, forming a patio space. It was designed by my husband and made our living room so different from the others. We did not want to subdivide the ground floor. The architect told me that people outside might see through this space. I accepted it.

On the second floor, we needed four bedrooms. One was very small, which was reserved for our father or mother. The other three were comparatively larger. We could connect two of them into a very spacious one. But we did not do it; we have two sons.³⁸

The main disagreement between the users and the architect was concerning the toilet on the lower floor. Although with a different opinion, the architect accepted their choice and designed the toilet for them. Their choice was testified to be great especially when the users got older.

My husband and I fought with the architect for a toilet on the ground floor. The architect preferred only one bathroom upstairs, but it was not for me. I prefer two, so now I have two. But it is necessary. It is direct to the kitchen, and I like cooking. Now as I am getting older, it is increasingly important (.....) I like my toilet here.³⁹

However, the users did not always prosper in their battles. Their preference was limited and controlled by the "Support" and building regulations. For example, the windows for kitchen and bathroom upstairs were not built following their requirements in order to avoid destroying the load-bearing walls. In addition, their request for a special door in a bedroom was declined.

> The architect did not always yield to us. (.....) In the kitchen, we asked for another window for sunshine. No. The same thing happened in the bathroom upstairs, which was without direct external daylight. We asked for a window, but got nothing. The architect refused to open the window on the concrete wall. But we need a window here especially when we have shower. Now we use a ventilation to take away the heat and the steam. But it does not work so well because it is too far from the tap.

> We asked for a small door on the wall separating my son's bedroom and the space above the living room. As you see, there is a narrow platform there. We need to an access to reach it so that we can clean. But the architect was with a different opinion. Now how can I clean the dirty platform?⁴⁰

³⁸ Interview with Family 316. Sept. 24th, 2014.

³⁹ Ibid.

⁴⁰ Ibid.

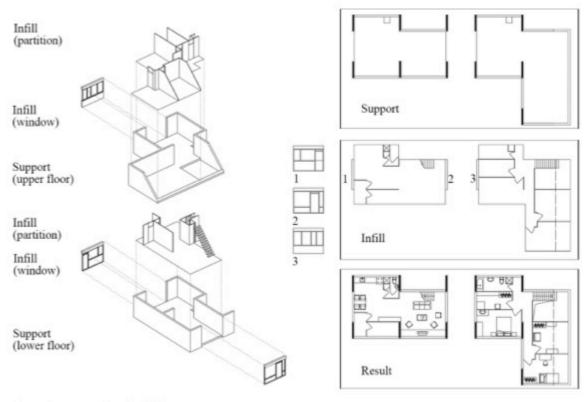


Fig. 13(1): Separation of Infill from Support

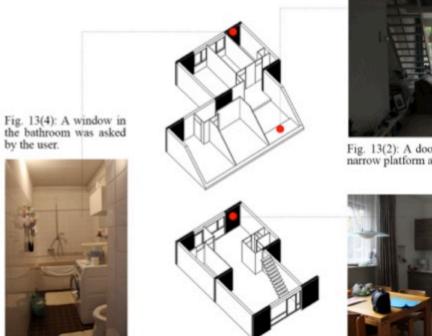




Fig. 13(2): A door was proposed to clean the narrow platform above the living room.



Fig. 13(3): Another window was proposed in the kitchen for sunshine.

Fig 13: Family 316. (Source: by author.)