REVISIT
TO MOLENLIEFT PROJECT

2014. 10
CONTENTS

INTRODUCTION
Historical Source & Objective

GENERAL IMPRESSION
Living Environment

LIVING STORIES
Renovation Activity
INTRODUCTION

Derived from a prize-winning design, Molenvliet Project (Papendrecht, the Netherlands) was realised in 1976. This project coalesced the merits of Support Building in an all-sided scope of tissue, support and infill level, and was appraised by Prof. John Habraken as “the first blown Support/Infill project”.

Original Photos (Provided by Mr. Frans van der Werf)
GENERAL IMPRESSION
Living Environment

Element 1: Courtyard
Arranging dwellings in both east-west and north-south directions helps to improve the density. What's more, the concentric open space is created to promote neighbourhood communication.

Element 2: Parking street
The four courtyards were divided into two groups by a central road.

Element 3: Connecting Alleys
The four courtyards are never isolated, but with obvious breaks according to the original environment and existing buildings.

Basic Elements
There are three basic elements, which shaped the community, were involved: the courtyard, the parking street and the alleys.
COURTYARD

The courtyards as the concentric open space were adapted not only to promote neighbourhood communication, but also to achieve high density.

Two kinds of courtyards were designed. All the entrances for each apartments were organised in the entrance courtyards, while garden courtyards consist of private or shared gardens. They were completely different design. However, one garden courtyard were changed without the users approval.

Two big breaks were made as response to the existing buildings.

Break in courtyard 2 was created for the primary school nearby. Consequently, the courtyard is connected with the entrance square to the school. In lunch time, the children eat their meals, play and talk in this place.
PARKING STREET

The cars are planned to be parked in the street. This form is attributed to a car-free neighbourhood, and in addition indicated a low speed on the street. Influenced by Alexander, the footway along the street was raised.

The central way is for cars, their driving and parking. This pattern is inspired by Christopher Alexander’s pattern language. According to it, the walking road should be at least 1.8 inches (45.72mm) above the driving road. In Molenviset, the height is only 300 mm.

Parking on the street is not considered 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.

Interview with Family 67.
ALLEYS

Alleys were designed to connect both the adjacent courtyards and courtyard with the street. Once needed, these alleys could also be blocked conveniently by adding some doors.

The ways created by the alleys.

“Different alleys lead us to different directions”. This is a representative comment which was echoed in the interviews with users. From this image, we may find how many ways is allowed in this project. Walking in this community is also a way to have fun.

The alleys can be open or partially closed.

Alleys were designed to connect both the adjacent courtyards and courtyard with the street. Once needed, these alleys could also be blocked conveniently by adding some doors.
## LIVING STORIES

The current living situation of fifteen families is recorded.

<table>
<thead>
<tr>
<th>Class</th>
<th>Location</th>
<th>Period</th>
<th>Family</th>
<th>Duplex</th>
<th>Renovation</th>
<th>Plan of change</th>
<th>Plan of move</th>
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Table: The selection of interviewees.
Infill (upper floor): Colour and materials of the window were selected by original users.

Infill (upper floor): Partitions were designed according to original user’s demand.

Remove (upper floor): by the user. A small part of partition in the bathroom was removed.

Add (upper floor): by the user. A new partition was added.

Support (upper floor): by architect

Infill (lower floor): Colour and materials of the window.

Infill (lower floor): partitions were designed according to original user’s demand.

Remove (upper floor): by the user. A small part of partition in the kitchen was removed.

Support (lower floor): by architect

Separation of Support from Infill

It was a son’s bedroom. Now a baby’s cot is placed under the window. When the little granddaughter comes, she will use this room as her bedroom.

The equipments in the bathroom were completely changed by the tenants. In order to hold the washing machine, a partition was moved a little.

As the original design, the living room is still combined with the dining room. Till now, the tenants are very satisfied with this spacious space.

The equipments in the kitchen was changed by the users. And the housing corporation paid some fee.

1. Main bedroom
2. Second bedroom
3. Second bedroom
4. Bathroom
5. Living room & Dining room
6. Kitchen

Fig. Current living situation

This apartment is on the second and third floor, facing the central street.

Fig. Location in the community

Family 228 Elder couple 38 years
Family 220
Elder Couple
(38 years)

Upper Floor

One son’s bedroom is now used as the woman’s hobby room.

The other son’s bedroom is now used as the man’s hobby room. And a special table is placed for his model toys.

A partition was added to separate the spacious hall from the kitchen. Correspondingly, the lower floor was separated from the upper, so that the former could have better insulation performance.

Lower Floor

1. The man’s hobby room;
2. The woman’s hobby room;
3. Bedroom
4. Kitchen
5. Living room & Dining room

Current Living Situation

The shared courtyard in front of the hall was separated when the old neighbour moved out.

Infill (upper floor): partitions were designed according to original user’s demand.

Infill (upper floor): Colour and materials of the windows were selected by original users.

Support (upper floor): by architect

Infill (lower floor): partitions were designed according to original user’s demand.

Infill (lower floor): Colour and materials of the windows were selected by original users.

Add (lower floor): A partition was added to separate the living room from the kitchen.

Support (upper floor): by architect

Separation of Support from Infill

This family is located in the ground floor and first floor, “connecting” a garden courtyard with an entrance court.

Location in the community
Infill (upper floor): The colour and materials of the window are selected by the user.

Infill (upper floor): partitions were designed according to the user's demand.

Support (upper floor): by architect.

Infill (lower floor): The colour and materials of the window are selected by the user.

Infill (lower floor): partitions were designed according to the user's demand.

Support (lower floor): by architect.

This apartment is located in the ground floor, along the city street.

Fig. Location in the community
Current Living Situation
1. Bedroom
2. Bathroom
3. Storage
4. Bedroom
5. Living room
6. Kitchen

This room is filled with rice and other food. As all the grandchildren will come every weekend, they have to prepare more food.

This door was blocked with a desk by the current user.

This room seems to be empty. There is not any furniture and a television except a double bed. When the householder’s grandchildren come, they will sleep on the floor.

There is not a special dining room in the unit. The dining table is placed in the living room.

It is located in the ground and first floor, facing the central parking street.

Infill (upper floor): Colour and materials of the windows were selected by original users.

Infill (upper floor): Interior space was divided according to first users’ requirement.

Remove: A partition between two bedrooms were removed by one user.

Support (upper floor): by architect

Infill (lower floor): Colour and materials of the windows were selected by original users.

Infill (lower floor): Interior space was divided according to first users’ requirement.

Support (lower floor): by architect

Separation of Support from Infill
Family 290
Middle-aged madam
31 years

Current Living Situation

1. Living room
2. Kitchen
3. Bedroom
4. Bathroom
5. Corridor

Add: A new partition with lower height was built.

Support (lower floor): by architect

Separation of Support from Infill

Infill: Colour and materials of the windows were selected by original users.

Infill: Partitions were designed according to original user's demand.

Remove: A partition of the kitchen was removed.

The clothes hanger is placed in the bedroom. The user may take it to the living room when she prefers more sunshine.

The corner of the living room is now occupied by a desk with a computer. It is the user's study room.

It is located in the ground floor, facing the central parking street.

Location in the community
Family 97
Elder man
31 years

Introduction:
This is the smallest apartment in the community. The current user is an elderly single man, who cooks a wonderful soup. He did not make any change in the past 31 years.

Infill:
including partitions, and the colour and material of windows.
(by original users)

The living room is with a big fence window, facing the shared garden.

For the limited interior area, the space for sleeping is not strictly separated from the living room.

For the limited area, the dining room is not separated from the kitchen. There is a big bowl on the table of the kitchen. The user cooks a very delicious soup.

Support
(by architect)

Fig. Current living situation
1. Kitchen & Dining room
2. Living room
3. Bedroom
4. Bathroom

Fig. Location in the community

Fig. The separation of Support and Infill
It was the four daughters’ bedroom. Now the tenants plan to add a kitchen, before the man’s mother comes.

The partition of the son’s room was changed a little.

It was two sons’ bedroom. Now it is used as a granddaughter’s room.

The interior staircase was shut off, so that the heating air will not completely go to the upper floor.

Infill (upper floor): Colour and materials of the windows were selected by original users.

Infill (upper floor): partitions were designed according to the original user’s demand.

Support (upper floor): by architect

Infill (upper floor): Colours and materials of the windows were selected by original users.

Add (by current user): The interior staircase was shut off.

Support (lower floor): by architect

Infill (lower floor): Partitions were designed according to the original user’s demand.

Separation of Support from Infill

Infill (lower floor): Colour and materials of the windows were selected by original users.

Add (by current user): two bedrooms were redivided.

Support (upper floor): by architect

Infill (upper floor): Colour and materials of the windows were selected by original users.

Add (by current user): two bedrooms were redivided.

Support (upper floor): by architect

Infill (upper floor): Colour and materials of the windows were selected by original users.

Add (by current user): The interior staircase was shut off.

Support (lower floor): by architect

Infill (lower floor): Partitions were designed according to the original user’s demand.

Separation of Support from Infill

Infill (lower floor): Colour and materials of the windows were selected by original users.

Add (by current user): two bedrooms were redivided.

Support (upper floor): by architect

Infill (upper floor): Colour and materials of the windows were selected by original users.

Add (by current user): The interior staircase was shut off.

Support (lower floor): by architect

Infill (lower floor): Partitions were designed according to the original user’s demand.

Separation of Support from Infill

Infill (lower floor): Colour and materials of the windows were selected by original users.

Add (by current user): two bedrooms were redivided.

Support (upper floor): by architect

Infill (upper floor): Colour and materials of the windows were selected by original users.

Add (by current user): The interior staircase was shut off.

Support (lower floor): by architect

Infill (lower floor): Partitions were designed according to the original user’s demand.

Separation of Support from Infill

Infill (lower floor): Colour and materials of the windows were selected by original users.

Add (by current user): two bedrooms were redivided.

Support (upper floor): by architect

Infill (upper floor): Colour and materials of the windows were selected by original users.

Add (by current user): The interior staircase was shut off.

Support (lower floor): by architect

Infill (lower floor): Partitions were designed according to the original user’s demand.

Separation of Support from Infill

Infill (lower floor): Colour and materials of the windows were selected by original users.

Add (by current user): two bedrooms were redivided.

Support (upper floor): by architect

Infill (upper floor): Colour and materials of the windows were selected by original users.

Add (by current user): The interior staircase was shut off.

Support (lower floor): by architect

Infill (lower floor): Partitions were designed according to the original user’s demand.

Separation of Support from Infill

Infill (lower floor): Colour and materials of the windows were selected by original users.

Add (by current user): two bedrooms were redivided.

Support (upper floor): by architect

Infill (upper floor): Colour and materials of the windows were selected by original users.

Add (by current user): The interior staircase was shut off.

Support (lower floor): by architect

Infill (lower floor): Partitions were designed according to the original user’s demand.

Separation of Support from Infill

Infill (lower floor): Colour and materials of the windows were selected by original users.

Add (by current user): two bedrooms were redivided.

Support (upper floor): by architect

Infill (upper floor): Colour and materials of the windows were selected by original users.

Add (by current user): The interior staircase was shut off.

Support (lower floor): by architect

Infill (lower floor): Partitions were designed according to the original user’s demand.

Separation of Support from Infill

Infill (lower floor): Colour and materials of the windows were selected by original users.

Add (by current user): two bedrooms were redivided.

Support (upper floor): by architect

Infill (upper floor): Colour and materials of the windows were selected by original users.

Add (by current user): The interior staircase was shut off.

Support (lower floor): by architect

Infill (lower floor): Partitions were designed according to the original user’s demand.
**Family 304**

*Single woman*

*19 years*

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**Infill (upper floor):** partitions were determined by the original users.

**Infill (upper floor):** the material and colours of the windows were selected by the original users.

**Support (upper floor):** by the architect.

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**Infill (lower floor):** partitions were determined by the original users.

**Infill (lower floor):** the material and colours of the windows were selected by the original users.

**Support (lower floor):** by the architect.

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**Separation of Support from Infill**

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**Location in the Community**

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**Current Living Situation**

**1. Bathroom**  
**2. Storage room**  
**3. Bedroom**  
**4. Terrace**  
**5. Kitchen & Dining room**  
**6. Living room**
Family 177
Single woman
16 years
Family 67
Middle-aged couple
with their daughter
8 years

Current Living Situation

The users complained about the visible pipelines just under the ceiling.

This family has an individual storage for bike. It is quite different from other families as they use the shared ones.

This family does not have a special dining desk. Normally, they have meals on the table in the living room.

The door of the kitchen was removed by the current user. This is the only changed space by this family.

1. Bedroom
2. Bedroom
3. Storage
4. Bathroom
5. Bedroom
6. Housework
7. Living room
8. For bike
9. Bathroom
10. Kitchen

This family is located on the ground and first floor, and “connects” two courtyards.

Fig. Location in the community

Infill (upper floor): Colour and materials of the windows were selected by original users.

Infill (upper floor): partitions were designed according to original user’s demand.

Support (upper floor): by architect

Infill (lower floor): Colour and materials of the windows were selected by original users.

Infill (upper floor): partitions were designed according to original user’s demand.

Support (lower floor): by architect

Separation of Support from Infill
Small corporation

3 years

This was a bathroom, but now is used as storage. Some equipments were placed.

The kitchen was reserved, now the officers use it to make office and lunch.

The old living room together with dining room are now used as open office.

The old storage is now still used as storage, but for some valuable machines.

1. Office
2. Storage
3. Kitchen
4. Open office
5. Bathroom
6. Office
7. 8.

Fig. Current Living situation

This unit is located on the ground floor, and along the central parking street. The customers can enter the corporation without disturbing other inhabitants.

Location in the Community

(1) (5) Infill: the colour and materials of the windows were determined by the users.

(2) Infill: partitions designed by the original users. According to the original drawing, they were not changed in the past years.

(4) Support: designed by the architect.

Fig. The separation of Support from bulid...
Infill (upper floor) interior space was designed according to the original user’s demand.

Infill (upper floor) the colour and material of window are selected by original users.

Support (upper floor) by the architect.

Infill (lower floor) interior space was designed according to the original user’s demand.

Infill (lower floor) the colour and material of window are selected by original users.

Support (lower floor) by the architect.

Location in the Community

Current Living Situation

The young couple may divide the bedroom into two, when they have a baby in the future.

The small room can be used as a secondary bedroom. However, the young couple never plan to use it as their future child’s bedroom, since the equipment inside seems to be dangerous. Now it is a storage and the cats’ room.

The dining table is placed at the corner, and makes the kitchen somehow crowded.

A big glass tank for a lizard is placed under the staircase.

1. Bedroom
2. Bathroom
3. Storage
4. Living room
5. Kitchen & Dining room
6. Terrace

Family 173 Young couple 1 year
Family 163
Young lady
3 year

Infill (upper floor): The colour and material of windows were selected by the original user.

Infill (upper floor): Interior space was divided according to the original user's demand.

Support (upper floor): by the architect

Infill (lower floor): Interior space was divided according to the original user's demand.

Support (lower floor): by the architect

Separation of Support from Infill

Enough storage is welcomed.

A curtain in the bedroom always keeps closed to prevent the strong sunshine.

In the sunny afternoon, the tenant and her boyfriend would like to chat on the sofa.

1. Storage
2. Storage
3. Bedroom
4. Bathroom
5. Living room
6. Kitchen
7. Entrance

Current Living Situation

Location in the Community
Family 314b
Family of three
2 year

Infill (upper floor):
Interior space was divided according to the original user’s demand.

Infill (upper floor):
The colour and material of windows were selected by the original user.

Support (upper floor): by the architect.

Infill (lower floor):
Interior space was divided according to the original user’s demand.

Infill (lower floor):
The colour and material of windows were selected by the original user.

Support (lower floor): by the architect.

Separation of Support from Infill

The corner of the spacious living room is filled with the son’s playing.

The son’s bedroom is in the upper floor. As the son is very young, it is not convenient for the parent, who live in the lower floor, to take care of him.

A steel bar was installed by the current users for the young child.

The parent’s bedroom is located in the lower floor.

The entrance is located in the ground floor.

Current Living Situation

Location in the Community