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## P4 Reflection Paper

# **The Lasting Notion of Street : Vary, Adapt, Engage.** Transforming Eilandenbuurt Apartments

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Studio: Transforming Housing Heritage,  
Track: Heritage & Architecture (RMIT)

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## Part One Research Aspects:

### 1. The relationship between research and design

In my research phase my topic: The Last Notion of Street, looks into the historical fabric of streets surrounding my subject Eilandenbuurt, Rotterdam. My research focuses on the qualities that differentiate the 1939 portiek dwellings designed by J.H. Van den Broek (Knowing for later architects office Van den Broek and Bake-ma) and its urban context - city plans done by of W.G. Witteveen. By comparing to the older street fabric of the Zuid area, I concluding my P1 research with the close relationship between buildings and street and the open glazing portiek preserved the form of traditional Dutch street section.

The design phase is an attempt to extend the quality and form of traditional street- a place where close interaction happen between people in a series of enclosed space - into the floor plans of the 1940 building structure, as a answer to one of my design question: how to the sense of neighbourhood between the apartment dwellers.

### 2. The relationship between the theme of the studio and the subject chosen by student within this framework (location/object)

The research frame of Transforming Housing Heritage of the 2014 Spring studio focus on the single subject of portiek dwellings (portiekwon-

ing / portiekflat) by J.H. Van den Broek, located in Eilandenbuurt, Rotterdam Zuid. There was a series of mass housing plans constructed under Van den Broek's idea started from 1939 in Zuid, and the Eilandenbuurt is formed by the product of two phases: Algemeen Belang I & II.

The second phase "Products" of 1940 is chosen for implement my design concept. A row of three-portiek unites is linked as a whole in my design operation. The physical alternation of the existing structure is mainly happens in making new opening of existing "bay" walls and wooden joist floors to produce new circulation corridors and connecting two rooms that was separate in present/original design, both vertically and horizontally. A re-configuration of floor plan.

### 3. The relationship between the methodical line approach of the studio and the method chosen by student.

In RMIT there are multiple architectural approach can be chosen by individual students but under the singular guide "Research by design and design by research" (Zijlstra, 2013)

My research uses typology to identify the forms of the surrounding street fabric and the portiek dwellings, which forms the ideology part of my design. For the construction aspect the original 1939 achieved drawings by Van den Broek are investigated, from phase one to phase three (volgelbuurt), to form the storyline of his idea changing from floor plan to constructional tectonic.

### 4. The relationship between the project and the wider social context.

The central idea of my design is to visualising a possibility of an approach that can be repeat.

The mass-production insure the physical form of my model can be apply widely in. In Eilandenbuurt, There are 61 portiek-flat-unites share the same dimension and construction of my design model and 21 unites of them share the exactly same plans and sections. Total 147 in total in Eilandenbuurt can be apply with the same concept of my model with the very similar environmental context - location and street-block fabric.

The idea that brings the "street" into the portiek dwelling are not limited in Rotterdam but also can be a reference for all pre-war and after-war portiek dwelling in the Netherlands when the stakeholders - municipality, housing corporations and resident - make a decision between demolish and reuse these aged but beautiful structure.



## Part Two

### Design Aspects:

Problem of Eilandenbuurt:  
according to the knowledge of local field re-  
search:

1. Occupation rate is low.
2. Moving rate is high.
3. Sense of ownership is not well built.

### Problems Defined:

#### 1. Lack of Variety.

The 1939 concept of minimal housing is no longer appreciated by its targeted group. The Van den Broek design suggest the “double-use” of rooms for day and night, shrinks the floor area of conventional house to meet the limited budget of pre-war nuclear family. 70 years later it can no longer meet the spatial demand of nuclear families, in layout, partition and total floor area.

Also, as the whole urban block is the stack-up and repetition of one housing type, the apartment buildings are not flexible enough to targeting the various demands for smaller or larger housing types today.

#### 2. Lack of long-term resident

The main body of today’s new residents - starters, can nether secure the occupation rate nor the moving rate in the future, because they are forced to move as their demand for space grows.

#### 3. Lack of Engagement

Shared by 6 households, the staircase (portiek) is now a place where residents can hardly meet each other on their daily routing. It is one of the obstacles toward a strong-bounding neighbourhood.

### Design approach:

Design approach in three actions:

#### 1. Variate

Can the block target not only the starters, but also singles and larger families?

#### 2. Adapt

Can the occupation rate keeps high during the building’s lifespan, by changing the proportion of small and large typologies?

#### 3. Engage

Can we increase the individual residents’ sense of belonging to a community in the apartment?

### Design Solutions:

1. Full Occupation & Equipped to Adapt:  
provide Five housing types from studio to 4 rooms apartment to attract different house searcher.

The distribution of amount of each type can be change so the whole block can meet not the demand today but also for the future. The housing corporation can calculate and alter the proportion of the 5 types when it is necessary. Merge

two smaller types into a larger type can be done with minimal intervention.

#### 2. Presence of Neighbourhood:

More chance for the residents to meet their neighbours during the daily routing: in circulation, during the use of common floor area or shared facilities. The basement is exploit for more liveable floor area in the apartment, and the fragment floor area between circulation are converted into patios and light well.

#### 3. Engagement

Among the variant housing types always provide at least one large house for keeping long-term resident  
Although it is not easy to acquire the next-door anytime, the starters can always choose from the larger house in the Eilandenbuurt than moving out the neighbourhood.

# Origianl

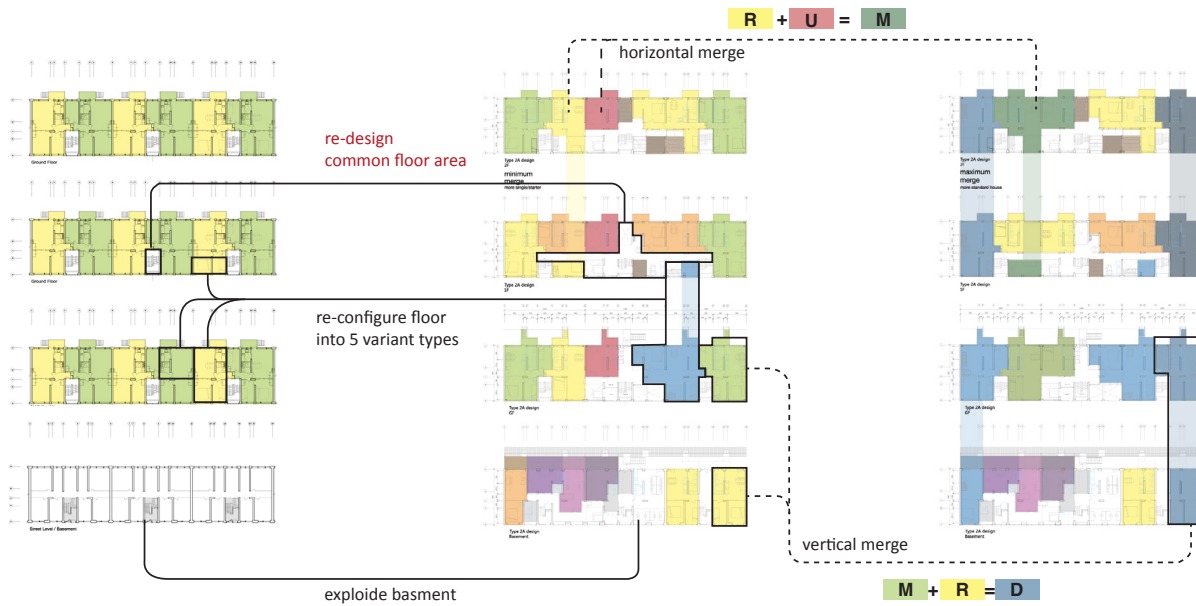
Minimal, functional housing of Van den Broek

# Stage 1

Making variant types  
**Making common floor area**

# Stage 2

Adapt to new type proportion by market demand



number of unites  
total 18 households

- U
- G
- R
- M
- D

number of unites  
total 21 households

- U
- G
- R
- M
- D

number of unites  
total 13 households

- U
- G
- R
- M
- D

## Stage 1



## Stage 2



## Section - Standard

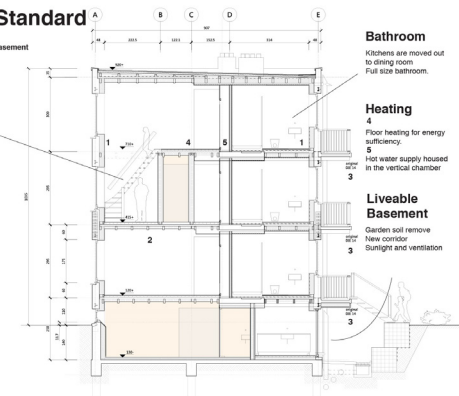
1/40 Wall 4-5  
Merged house, Bathroom, Basement

Merge  
Fragment floor area cut by the indoor corridors

Monumental

- 1 Facade as monumental component, all insulation are added on the interior side.
- 2 Original timber joist revealed.
- 3 Joist for Balconey is revealed at exterior and insulated at interior, except the basement.

LNS EI



# Meet-up

2nd Floor, Perspective Section  
Presence of the Neighbourhood

# Opened floor

Except the shared laundry space, most common floor area are not enclosed, letting speaking and coffee cent to be spread between floors.

# Elevator

The installation of an elevator is not only an accessibility measure but also to promote unexpected meetings between neighbours to happen on daily routing.



# Coffee floor

An invited meet-up can use these space if they want more passer-by to join.

# Patio

A small green landscape on the apartment floor that can be seen from different corners.

# Entrepreneur office

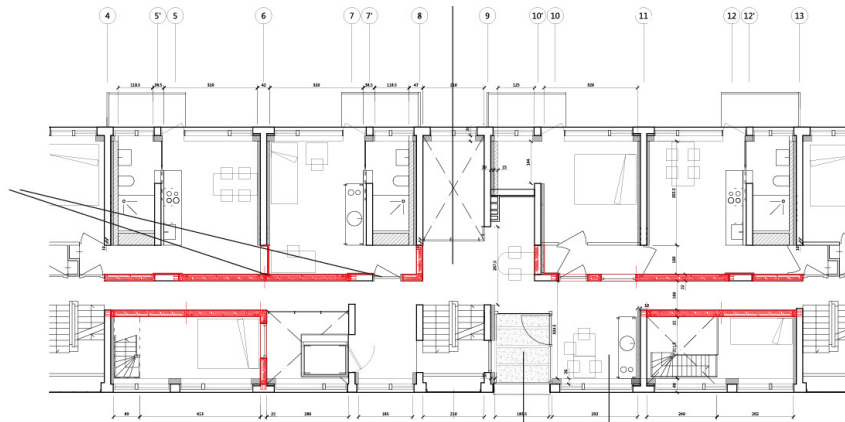
The basement floor is 1,5 meter lower than the street, which 'invites' the pedestrian to stop and speak. It is good for start-up offices who wish to draw more attention from the street.

# For 2nd stage

Door-wall component can be switch

# New wall structure

Pre-fab and assemble on site,  
Wooden stud structure  
Adjustable tolerance



# Elevator

The installation of an elevator is not only an accessibility measure but also to promote unexpected meetings between neighbours to happen on daily routing.

# Patio

A small green landscape on the apartment floor that can be seen from different corners.

# Coffee floor

An invited meet-up can use these space if they want more passer-by to join.

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