

REFLECTION

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Graduation Studio: Rehousing,
Heritage&Architecture

Project:
Rehousing of Intervam

Location:
Camera Obscuradreef Overvecht

Tutors:
Lidwine Spoormans (architecture)
Bas Gremmen (building technolgy)
Nicholas Clarke (cultural value)
Anne Lacaton (Visiting professor)

1. On theme of the graduation lab & the subject chosen within this framework

Due to the housing shortage after the Second World War, Various building systems with non-traditional-building-methods were invented and built on a large scale for the post-war mass housing. The Graduation Studio Re-housing has worked with the post-war housing upgrade since many of them lack programmatic, technical and aesthetic quality. The topic of this studio is to find new interpretations of housing in existing buildings.

Within the great frame of topic, I took the re-housing of Intervam flats at Camera Obscuradreef, Overvecht Zuid, Utrecht as my graduation project. (Figure 1)



Figure 1 overview of the Intervamflats from Taagdreef in 1978 (Photo: the Utrecht Archive)

For housing scarcity after WWII, the city council of Utrecht had believed that the Hoograven and Kanaleneiland estates would provide sufficient accommodation for many years to come, but the actual needs were far more than expected. Overvecht, which situated at the corner of the city, became the largest estate processed for the mass housing construction. To solve the urgent demands, VAM, as one of the non-traditional- building methods, was introduced by contractor Intervam N.V. and implemented on a large scale in Overvecht during 1960s. With the industrialized standardization, prefabrication and assembly system, 6 houses could be built in one day. The housing estate with middle rise Intervam portiekflats (except one with 2 storeys) at Camera Obscuradreef was constructed under such context. In the meanwhile, the notion of “Light, Air and Space” of the Nieuwe Bouwen movement was programmed on both urban scale and building scale to the housing project. Large window, balcony, garden and generous green space in-between buildings were designed with openness and transparency representing an optimistic pursuit of better life after WWII.

Since the completion in 1965, the buildings has been renovated for several times, mainly dealing

with the skin (The biggest renovation was in 1984.). The demography of the estate changed from middle class to low income families and nowadays to students since the demolition plan failed in 2008. After 2008, the passages and some gates were closed and the playground was fenced for security reason. Currently, the community is inflicted with problems including lack of use, maintenance and security in the open green space, poor energy performance of the building, inconvenient circulation and poor transition link between spaces (indoor and outdoor, public and private) etc. Such great amount of VAM “heritage” loses quality and requires change for its future evolution.

2. On Research & Design

The development of the graduation project has undergone specific research and analysis attempting to understand the value and dilemma of the existing Intervam housing stock so as to properly incorporate them into the design strategy for renewal and upgrade.

The first research is building system and value assessment in the framework of “7s+value”. The evaluation is assimilated into a matrix which is scaled on the y-axis according to the 7 S based on 6’s system of Stewart Brand (Figure 2): site, structure, skin, service, space plan, stuff + 1’s of “story”; and different heritage values are designated on the x-axis: age, historical, artistic, commemorative, use, newness, conflict value regarding Alois Riegl’s theory (Figure 3). The matrix has helped me to gain the knowledge of VAM system, the history and the comprehension of values and Limitations of the Intervam housing block on different layers (Figure 4).

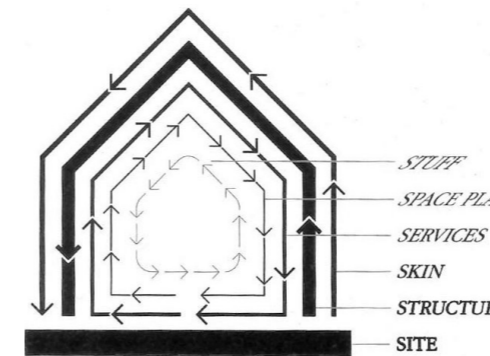


Figure 2 The ‘S’-system of Stewart Brand

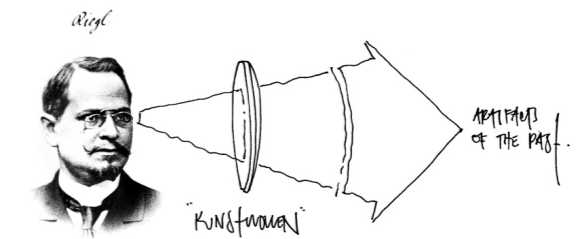
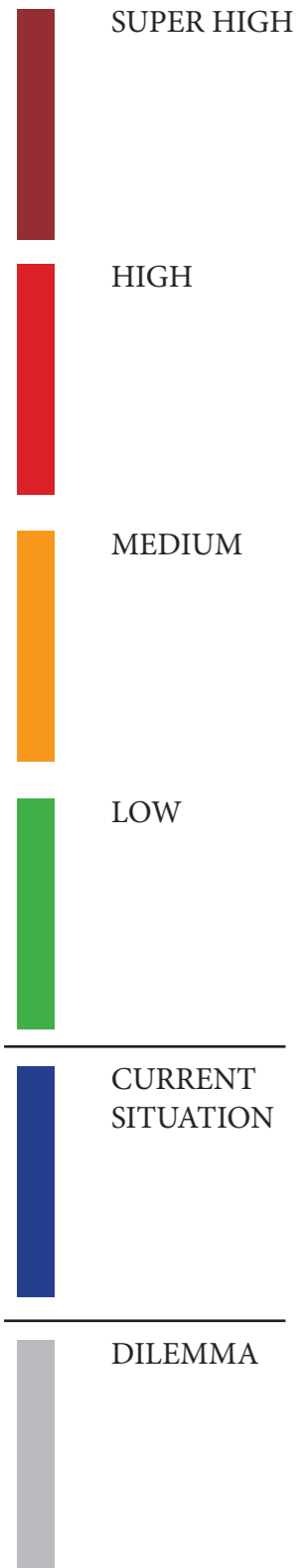


Figure 3 Alois Riegl and the Modern Cult of the Monument

The second is a individual interpretation of what is quality of living for the present and future. Tracing back to the history, the essence of the ideal of “Light, Air and Space” in the Nieuwe Bouwen movement was the pursuit of better quality of living therefore to improve its past living condition which was dark, dirty and crowded. Light, air and space were something extra respecting its

Differentiation of the Significance of Cultural Values



Value \ System	Conflict	Age	Historical	Artistic	Commemorative	Use	Newness	Current Situation	Dilemma
Site			Open green structure following the principle of "Light Air Space"	LOW		HIGH		1. Inconvenient Route and Use 2. Lack of Use 3. Lack of Maintenance 4. Insecurity	openness & transparency VS privacy & sense of security
Structure			Vam structure	LOW		HIGH		1. Rigidity 2. Thermal Bridges 3. No sound proof	exposed VS insulated
Skin			Grid character; large window and balcony embody "Light Air Space"			LOW		1. Chaotic appearance 2. Lack of Maintenance 3. Poorly insulated & Energy Loss	openness & transparency VS privacy
Services						LOW		1. Limited Service Space 2. Poor Energy Performance 3. High Energy Consumption	
Space Plan			Rooms with large window, balcony and garden represent "Light Air Space"			LOW		1. Inconvenient use 2. Poor transition link between spaces 3. Lack of privacy in some space	openness & transparency VS privacy
Stuff						LOW		Lack of Storage Space	
Story			HIGH	LOW				Neighborhood Quality Decay	

Figure 4 Cultural value assessment matrix (individual)

former living condition (Figure 5, 6). With more than half a century passing by, it is evident that the existing housing legacy can not satisfy the contemporary modern life in terms of the quality of living and quality of comfort advancing with time.



Figure 5 (Left) Large Strip Windows Provide Ample Daylight to the Interior, approx. 1933. Photograph: NAI Collection, BIHS Archive.
Figure 6 (Right) Balconies and Terrace at the Rear of the House, undated. Photograph: © Jan Kamman. Collection: Nederlands fotomuseum.

For the housing block in Camera Obscuradreef, “Light, air and space” are realized in a large **quantity** by large windows, balconies, gardens and open green space in between buildings. However, a certain level of **quality** is missing now. Something extra needs to be added to upgrade and increase the value again. For my understanding, **Quality of Living= Something Extra**. Quality can be recognized if there is something more than or beyond what is usual, normal, expected, or necessary. For instance, a large window facade is not only for a flood of natural light, but also embeds something extra such as privacy regulation, temperature and ventilation control thus to meet the multiple demands of quality and comfort. A balcony not only opens up the domestic life to the outside world, but also provides generous space and supports the territory behavior in which people can selectively control the light and privacy. The understanding on quality of living let me realize the gap between the existing and the expecting and assists me to set the design goals for the project (Figure 7)

- | |
|---|
| <p>Quality of living=Something Extra</p> <ul style="list-style-type: none"> Privacy regulation Generous private outdoor space(health/view/social link...) Bonus space Generous storage Comfort (light/ air/ thermal/ acoustic...) Easy to maintain/less maintenance/durable material Low energy and maintenance cost in a long run Social interaction |
|---|

Figure 7 Design goals for quality of living

The third research is on the theory of privacy. Privacy is conceived of as an interpersonal boundary process in which a person or group regulates interaction with others. (Altman 1975: 6). In other words, it is a selective control of access to the self or to one’s group’ (Altman 1975: 18). This defini-

tion of privacy is all about degree of access. (Physical, visual, auditive access & info access). This process can be supported by a physical environment in which territories for residents, visitors and passers-by can be identified. (Sundstrom and Altman, 1974).

Why privacy matters in the project? Based on the analysis of cultural value, current situation and dilemma in the first research, we could realize that most of the dilemmas lie in the transition link between the exterior and interior, the public and private. Improper privacy degree in the open green structure and facade zone is an influential factor that decreases the historical value of Light Air Space and use value (lack of use or unpleasant use).

For the open green space, lack of use and maintenance (Figure 8)is a major issue of dilemma. The use of a territory depends on the usability (degree to which something is able or fit to be used) of space, the accessibility(degree of access) and legibility(degree to be identified) of the physical territory. Whether it is too open or too close would tend to go two extreme ends. One would bring about sense of insecurity, the other would result in segregation, indifference and loneliness. Both of them were examined on the site through history. This implies a relation between control over social interaction and the prevention of the insecurity and segregation that goes with this.



Figure 8 lack of use and maintenance in the open green space at Camera Obscuradreef, Overvecht

Aspects of cause:

- groups of tenants (students have less tendency to access)
- poor link/transition between physical spaces(from private dwelling to open green structure to the public streets)
- formal intervention (Figure 9) (gated entrance & garden, fenced playground, closed passage)



Figure 9 gated intervention at Camera Obscuradreef, Overvecht

For the facade zone, chaotic appearance of the balcony faces pressure from exterior. It seems like an excessive and unpleasant display of the private and mundane minutiae of life. Clothes, storage, satellite dishes and even garbage clutter the small bonus space of the balcony(Figure 10). Sense of quality declines sharply accordingly.



Figure 10 chaotic appearance of the balcony at Camera Obscuradreef, Overvecht

Aspects of cause:

- conflict between space and privacy
- lack of space for privacy
- residents lack control/regulation of the degree of visual access

With those research and analysis, I arrived at the **conclusion** in the following:

The structure and the grid form on the skin, as two main characters of the post-war non-conventional VAM system, were the product of rationalization for mass housing. With the historical and use value, they can be preserved for the future. Large window, balcony, garden and generous green space in-between buildings were designed with openness and transparency embody the vital historical value of “Light, Air and Space”, representing an optimistic pursuit of new collective and domestic life after war. Although the notion is implemented with a certain quantity, the quality of “Light, Air and Space” has suffered from deterioration and can hardly cater for the contemporary needs. Especially the “space” is confronting with most of the dilemmas which lie in the transition between the exterior and interior, the public and private. The essence of the ideals “Light, Air and Space” is a seeking of quality of living at that time. However, there is something extra that needs to be add to the present and future living qualities. Privacy is one of the most fundamental qualities. In the meanwhile, it is an influential factor of the dilemmas where improper degree of access takes place. These existing elements which embody the value of “Light, Air and Space” need something extra with privacy regulation so as to revitalize their use value and fulfill the quality of living.

Rest on the research, I propose to provide every dwelling something extra with privacy control by

the transformation focusing on facade zone (window, balcony, entrance, garden) (Figure 11-15).

Every architectural element bases and responds to the research. From research to design, I understood my interest in constructing the physical environment with all sorts of signals to clearly identify the existence of territories at various scales (borders, entrance and areas), to bridge the missing link between the urban public and private dwelling and to support the group of residents to regulate their interaction with others.

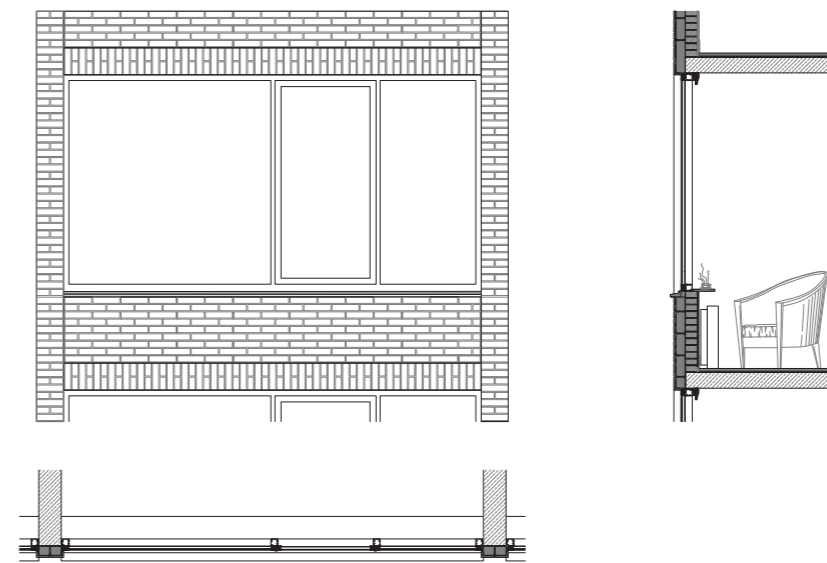


Figure 11 transformation of skin with thin brick and window zone with privacy, heating and ventilation regulation for every household

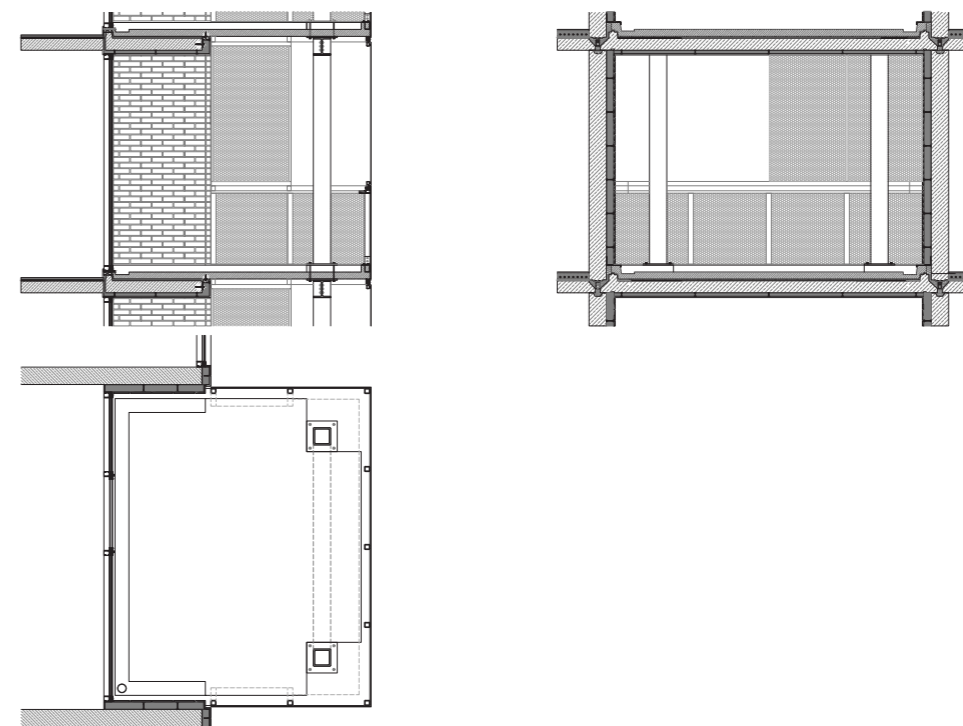


Figure 12 New balcony with adjustable perforated aluminum screen system for 1-4 floor apartment

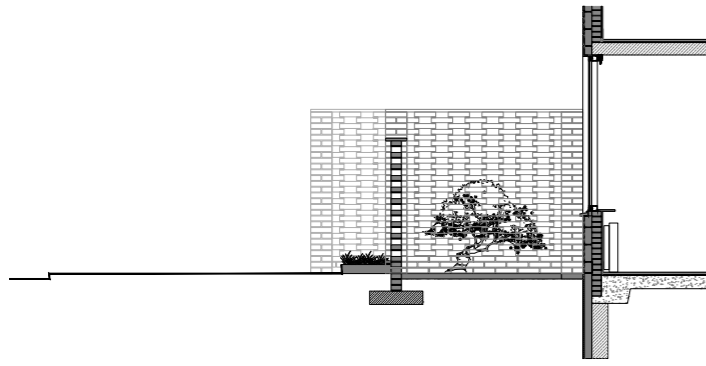


Figure 12 entrance of ground-floor one-bay house as a buffer zone between public and private

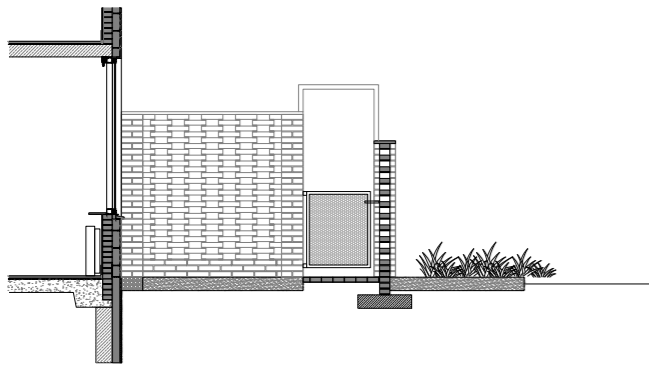


Figure 14 garden of ground-floor one-bay house as a link between interior and exterior

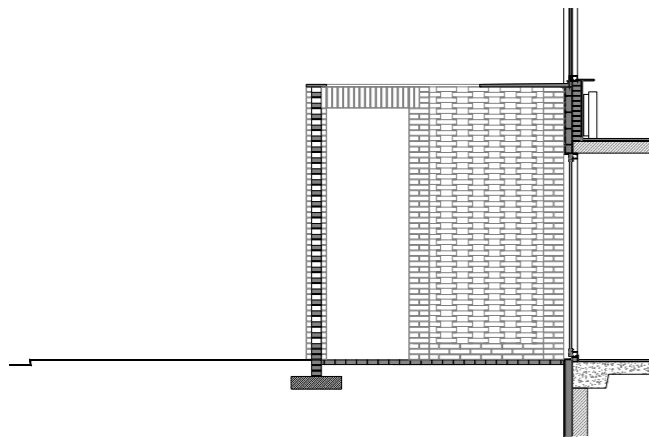


Figure 15 portiek entrance as a transition between public and shared private

Figure

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Figure 14 garden of ground-floor one-bay house as a link between interior and exterior

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