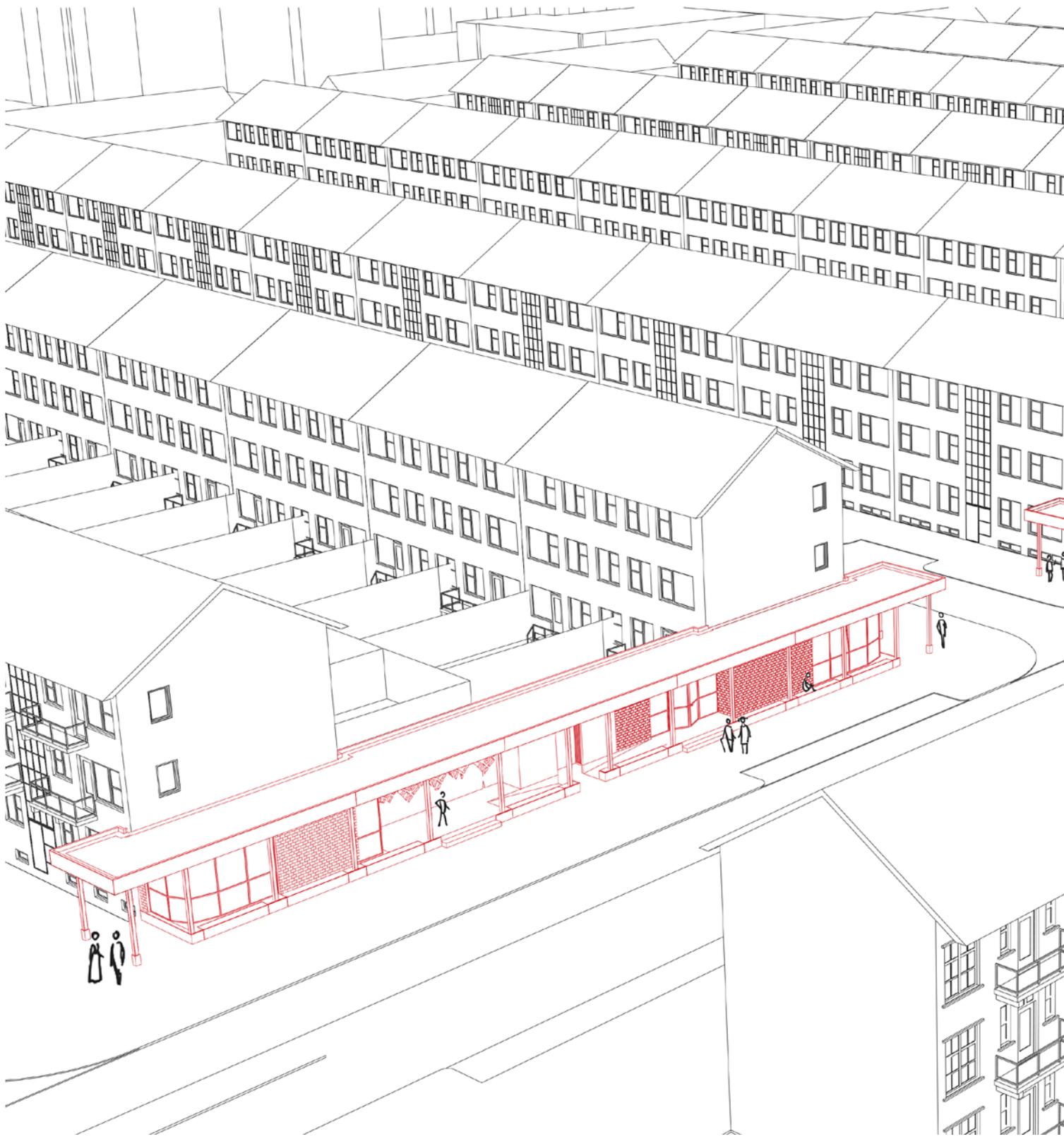


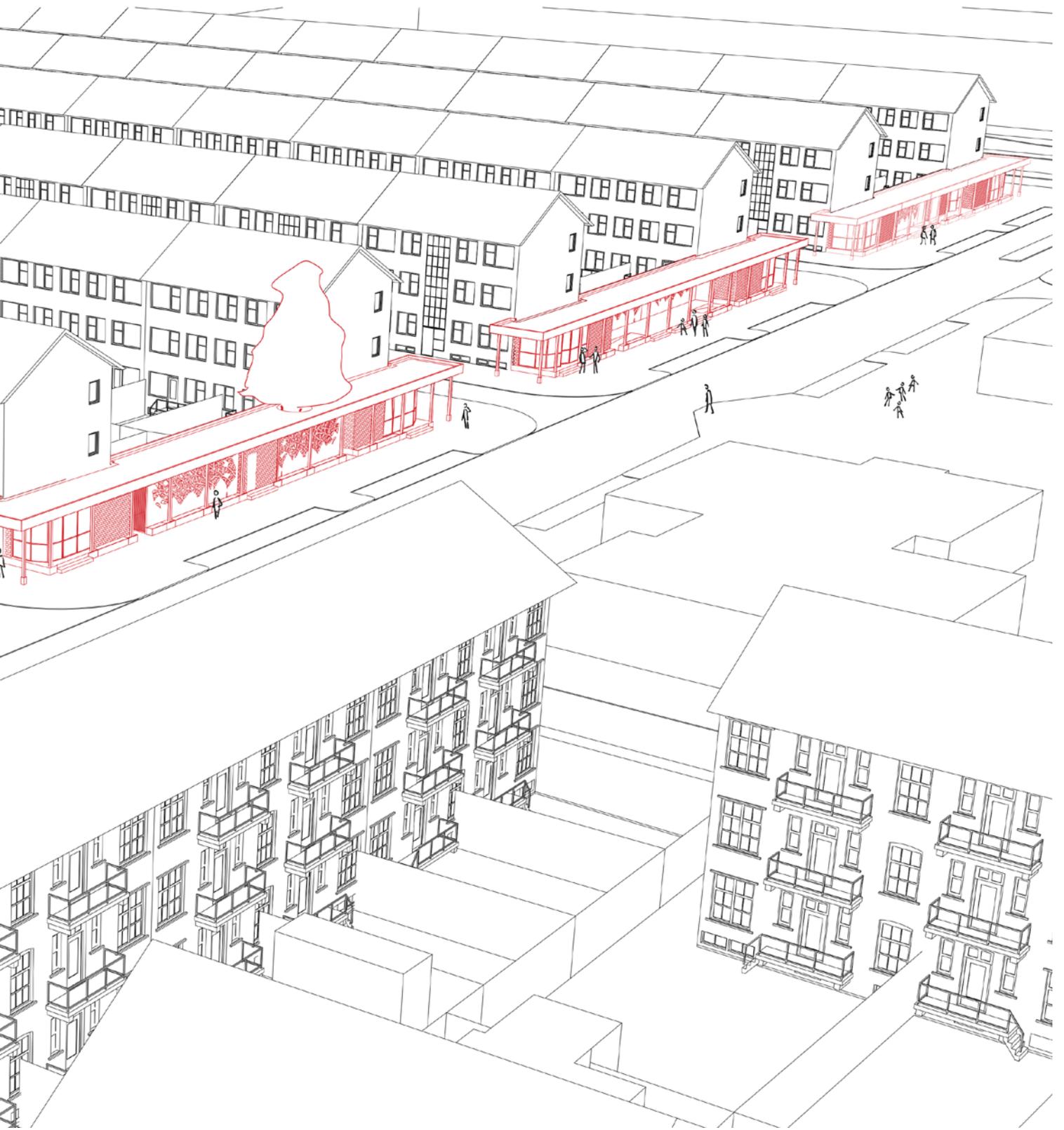
Werken aan de Wielewaalstraat

Transformation and activation of the organic urbanism on Rotterdam South



Graduation Report
Timo van de Ven





Preface

“It’s not just a matter of [...] summing up and thinking everything will be alright. That’s why I say it’s a delicate balance. You must know exactly which ingredients of what genre you have to put together.”

Alex Turner¹

I started my graduation process in February 2013 at the Veldacademie in Rotterdam. Because of a number of reasons, this did not go as planned and I decided to continue within the chair of RMIT. However, I discovered that I enjoy doing research and that there is a perfect mix between the realistic assignments in Rotterdam and the connection to the historical/contextual education which I have mostly focussed on in my MSc-trajectory.

That is why I was pleased to hear the chair of RMIT and the Veldacademie would cooperate in starting a new graduation studio towards transforming housing heritage in Rotterdam, a studio in which my personal fascinations are combined. I am convinced that within the profession of architecture in the Netherlands, the quest for transformation, intervention and renovation will be the most important task in the coming future, together with a demand for sustainability (however this could be very well combined). Within this quest for sustainability, transformation and modification towards modern standards, housing is one of the most important assignments because of the large amount of inadequate buildings.

The report that lies in front of you is the combination of research, essays and the design that has or have been created in a year’s time. At first, my research was very woolly² and general. Eventually I have taken these perspectives and starting points (for example the chaotic times in which the neighbourhood is created or probable qualities implemented by renowned architects such as van den Broek) as a fact and started to search within these topics for a topic that would come forth from all these elements. In a conversation with the late Karin Theunissen, she said “Are you sure that Van den Broek designed these blocks? Because he would never mix up these two typologies.”. With this quote as a concrete reason, I started to focus on the consequences of this observation. My special thanks go out to Pieter Graaff and Henk van Schagen, who showed me how valuable my work, made in the spring of 2013, was and how much I had learned that semester, even though I did not finish it.

1 OOR #9, 2013 p.30

2 zweverig

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Introduction

The final graduation report that lies in front of you is an overview and compilation of the work that has been done in the graduation process of the master Architecture, Urbanism and Building Sciences, specialised in the master track Restoration, Modification, Intervention and Transformation (RMIT). In the report, the chronological order of the education is largely maintained and therefore the structure is as follows:

Firstly, a chapter will be spent on setting the context of the graduation assignment with an introductory story about history, socio-economic problems and the present day situation of the area. Hereafter, the project will be framed by stating the problem description, goal and the used methodology of the research report 'the great strip block paradoxicality'. In the graduation process, a 'position paper' was written in which I described my position within the field of architecture in combination with my project. This paper is more or less integrated in this first chapter as well, since it functioned as a starting point to position oneself in the architectural debate.

The chapters hereafter are originally from the research report. In the studio of RMIT, the research is preliminary to the design and thus is written before the design got its final form. This has some consequences for the role of the research paper in this final graduation report. Firstly, the original introduction and conclusion have been left out, since this graduation report demands for a comprehensive introduction and conclusion, covering all aspects and not only research-conclusions. The original introduction and conclusion have been incorporated in the new introduction and conclusion. Secondly, it will be noticeable that the focus in the design has been narrowed down in comparison to the research. In other words, not all researched aspects have had an equal influence in the design, but I see the whole report as a starting point for my further development, which is why it has been placed in this graduation report in its totality.

Later on in the graduation process, the research report 'The great strip-block paradoxicality' has been used as a basis for an essay about 'organic urbanism'¹. This was an important piece of work for me, because it has been functioning as a 'connection' between my research and my design. That is why, in this final graduation report, that essay has been added as a follow-up of the research paper, even though it has been written in Dutch (since a possible publication required it to be in Dutch). After this paper, the outcome in the shape of a design is elaborated on. It will be mostly described by images, but always accompanied by a brief explanation and set out in different topics.

Finally, the comprehensive conclusion will follow which covers three topics. Firstly, the conclusion of the research report will be elaborated on. Secondly, the design and its link with the research is set out and thirdly a personal reflection will also be part of this conclusion.

1. Framing and structure of the graduation

1.1. Chaotic period of time

The Vogelbuurt has been erected in an enormous turbulent period of time. The first drafts were drawn up shortly after the bombing of Rotterdam and the neighbourhood was completed in 1947, just two years after the ending of the war, in a time in which most *Wederopbouw*-projects were yet to start.

On the 19th of October 1940, a document is published by the different housing associations, *patroonsverenigingen* and the *Regeringscommissaris voor den Wederopbouw* (Government commissioner of rebuilding) dr. ir. J.A. Ringers in which they set out an architectural competition in order to gain designs which could be mass-produced and would meet the special requirements set out by J.A. Ringers. These requirements mostly had to do with material-shortage¹.

The southern part of the city was at that point expanding according to the most recent plans set out by W.G. Witteveen in 1938. The chaotic period of time in which the project was constructed has had such a large impact that it seems that both competition entries as well as the urban plan have undergone changes between plan and execution, which inevitably changed the appearance and functioning of the neighbourhood.

The (relatively) flexible attitude of the different designers made these changes possible. The urban planner and architects felt it as their social duty to deal with the immense shortage of dwellings and therefore obliterate themselves for a greater purpose. It was only right after WWII that architects, for example J.H. van den Broek, openly criticised and attacked the principles of W.G. Witteveen, which shows us that, despite the earlier cooperation, both actors had very different ideas on urban design and dwelling development.

From a historical point of view, this leaves the Vogelbuurt with some paradoxes between the dwelling- and urban designs and the different principles and ideologies that were applied in these different designs.



Figure 1.1
*Sequence of overviews;
Rotterdam-South,
Carnisse and the
Vogelbuurt.*

1 “Het doel van de prijsvraag is [...] het verkrijgen van een ontwerp van woningen die in massa kunnen worden gebouwd en het verkrijgen van ideeën, omtrent de toepassing van constructie en materialen, waarbij als leidraad zijn genomen de eischen van den Regeerings-Commissaris, Dr. Ir. J.A. Ringers. [...] In het kort komen deze eischen hier op neer, dat bij het bouwen zoomin mogelijk gebruik wordt gemaakt van hout en ijzer, terwijl wordt aanbevolen zooveel mogelijk die materialen te kiezen [...] waarvan men zeker is, dat zij in groote hoeveelheden worden gemaakt en aangevoerd.” NAI Brochure p. 1-2 Depot 215G04 - Boeknummer 16049

1.2. Problem description

“... Zuid kent een omvangrijke stapeling van sociaal-economische problemen in het zwakste deel van de woningmarkt in Nederland. Deze stapeling is qua omvang en intensiteit ongekend op Nederlandse schaal... Het team vindt dat de schaal en de ernst van de opgaven vragen om een nationaal programma voor Rotterdam-Zuid. Een programma waar ook het Rijk zich intensief en op alle pijlers aan verbindt. Rotterdam kan het niet alleen en moet het ook niet alleen willen doen. Stevige rijksbetrokkenheid is onontbeerlijk om op Zuid resultaat te boeken.”
(Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2011-1 p.1)

The National Program for Rotterdam-South (published in 2011) describes with which problems Southern Rotterdam (an area as big as the whole city of Eindhoven) has to deal and which ambitions are thought to be realistic in order to make sure that the area reaches the ‘same level as Amsterdam and other cities’². All partners (chamber of commerce, municipality, government, housing associations and schools) contribute to an integral, long-term approach which is based on three pillars; development of talent, jobs and housing. The main ambitions – the so-called ‘spot on the horizon’³ - include the following, concerning housing;

- Replacement or improvement of privately owned dwellings, this concerns approximately 23.000 dwellings.
- Replacement, improvement, addition and management of social property; 12.000 dwellings owned by housing associations.
- Including: the accompanying outdoor area.
- Differentiation of the housing stock.

One should look at Carnisse (and the Vogelbuurt) in this context. Centrally located next to Zuidplein, Charlois, Tarwewijk and Maashaven, this is one of the seven focus areas which should be dealt with integrally according to the National Program (Figure 1.1). Carnisse, a neighbourhood where different spots and areas are improved gradually, lags far behind the rest of Rotterdam and even Rotterdam-South, according to the social index⁴. With a 4,5 (on a ten point-scale), Carnisse scores very poorly and is officially one of the 13 *probleemwijken* of Rotterdam. Only the neighbourhoods Bloemhof and Tarwewijk score worse (respectively 4,4 and 4,3).

The Vogelbuurt is a typical neighbourhood that holds a lot of characteristics of an Arrival City⁵. These ‘arrival cities’ are urban environments (neighbourhoods or districts) which are located in the periphery of the big city, originally built to accommodate new inhabitants who came into the city. The Vogelbuurt is developed to house dockworkers, mostly arriving from Zeeland and Noord-Brabant. This is a first home in a new city but with rising prosperity and/or social status people tend to move to other parts of the city very quickly. Often, these neighbourhoods are developed by housing associations which can rent the dwellings briefly and easily. The problem of the Vogelbuurt is that 54% of the inhabitants is also home-owner and most of the other dwellings are rented out by private landlords. However, people still tend to use the neighbourhood as an ‘arrival city’, which creates a lack of long-term interest among inhabitants.

2 “hetzelfde gemiddelde niveau scoort van Amsterdam, Den Haag, Utrecht en Rotterdam” (ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2011-2)

3 “Stip op de horizon”; stated in Ministerie van Binnenlandse Zaken en Koninkrijksrelaties (2011). Zuid Werkt! Nationaal Programma Kwaliteitsprong Zuid p.3.

4 These values are found in Rotterdam Sociaal Gemeten; 4e meting sociale index (april 2012), published by the municipality of Rotterdam (Cluster Maatschappelijke Ontwikkeling, Gemeente Rotterdam)

5 Arrival City is a term stated by Doug Saunders in his book Arrival City; The Final Migration and Our Next World.

In this light, you could state that the credit crisis may not be bad for the Vogelbuurt. In the last couple of years, the property prices have plunged tremendously, especially in this segment of the real estate market and in this region. There are examples in which the house was bought in early 2007 for over a ton (€ 110.000) and is estimated around €70.000 nowadays. The owners are forced to stay in their current dwelling due to the residual debt. The migration rate will therefore drop drastically. This could provide the grounds for investments in their dwelling, since inhabitants will probably be living there in the nearest future; slowly, a long-term interest is occurring among current inhabitants.

According to the National Program, the porch-dwellings in the Vogelbuurt do not meet the requirements for a liveable dwelling and should therefore be demolished⁶. There are two problems however. Firstly, the large parties who wrote the National Program have little influence on the privately owned housingstock and secondly, demolition and developing new dwellings is not an economical viable option at this moment and government, together with housing associations must look for other ways to cope with this existing dwellingstock. This invites students and professionals to come up with new types of solutions for this particular neighbourhood. These solutions should comprehend strategic investments that have a (long-term) positive influence on a street, neighbourhood and preferably the whole Carnisse-area.

Summarizing, the neighbourhood has a very problematic background, both from social and economical point of view. The neighbourhood is functioning as an arrival city, while circumstances normally wouldn't allow it from an ownership-point of view. For this reason, a long term interest in the neighbourhood is lacking among a lot of inhabitants. The co-writers of the National Program have to adjust their methods to improve Rotterdam-Zuid, since their suggested strategy of demolition and building new houses is not feasible.

It must be noted that with architectural or urban interventions, the integral problems of the Vogelbuurt won't be solved. These integral problems must be solved integrally between different fields of professions. Social workers, economists, policymakers and others all have their role. With that being said, this will be accepted as a fact in the further course of this graduation studio and the focus will lie completely on the scope of the architect.

1.3. The scope of the architect

Within the large socio-economic problematic in the region, the abilities of the architect must clearly be set out. The scope of the architect is a way to describe the part of society and the city on which the architect has an influence. For example, an architect does have an influence on the daily rituals of people (by designing their dwellings, workplaces, leisure facilities and exterior spaces in between) but not on the way all these rituals together form the way of living of an individual. Norbert Elias (Elias, 1978) described this in other, more general words. He states that societal developments are proceeding structured, but the results of these developments are not predictable, uncertain and unplanned⁷.

Concerning the scope of the architect, it can be translated as following; the architect, as a professional looking at the city and at society, has influence on the societal developments that concern the built environment or where the built environment takes part in, but the architect has no influence on the results of how it will be used or function.

This statement is underpinned by Leeke Reinders (Reijndorp & Reinders p.47-73). He states that living environments of residents are being developed after completion and they intertwine

6 Vulnerable housing stock characteristics: < 75m² surface; *WOZ-waarde* of <130.000; stacked without elevator.

7 Obtained via ir. Yap Hong Seng in N. de Vreeze Orde & Chaos in de stadsontwikkeling (1994) p.69.

with or alienate themselves from neighbourhood and inhabitants according to personal associations. In a more sociological way, this says that the influence of the architects is more of a starting point or an appealing basis for residents to further develop their own living environment.

When using other terms, it could be stated that one of the dual phenomena of Aldo van Eyck, namely order and chaos, is applicable on this topic. Order is somehow related to the influential part of the architect and chaos relates to all unforeseeable consequences and applications of the architects ideas and principles. Van Eyck stated that modern, technocratic urbanism tried to fully ban the phenomenon chaos by a rigid organization, but never succeeded in doing so. Sander Bais, professor of theoretical physics at the University of Amsterdam and member of the Santa Fe Institute, says that chaos can never be eliminated, but that it has a strongly defined place within the model-based description of our surrounding nature and is (in the form of coincidence) an intrinsic part of reality (de Vreeze p.20-21). Also, Yap Hong Seng states in the same book that urban concepts must be based on a subtle knowledge of the sometimes chaotic use- and managementphases⁸ of areas at different scales (p.70).

This should not be seen as a humble position or impotence of the architect in his role towards society, but as a notification of his role in a turbulent social context and as legitimacy of the –to be developed- strategy within the built environment. The architect has a guiding and steering role, but after setting a strongly guiding, appealing and activating principle, design or strategy one has to accept the unforeseeable and unpredictable use and application of his/her ideas.

1.4. Problem statement

As a logical consequence, this historical and socio-economic introduction leads towards a more specified problem statement which will function as a starting point for the research report ‘The great strip-block paradoxicality’ and the future design.

The development of the building block typologies has had different consequences for the urban layout. The endfaces of these building blocks are characteristic for the different types of building blocks and the organisation of these endfaces has a large influence on the adjacent urban structure. In the Vogelbuurt, J.H. van den Broek and Witteveen had different ideas about the solution for this ‘confrontation’. Nowadays, this leaves us with a few striking paradoxes between the dwelling- and urban designs in the Vogelbuurt. The development in housing, block-typologies and its implementation in the urban plan has offered some interesting locations on the borders between the domain of the city, the neighbourhood and the residential streets. The paradox between the principles of the semi-open building block and the strip housing, both implemented in the southern part of the Vogelbuurt by W.G. Witteveen and J.H. van den Broek, makes this location worthy of an extensive historical research.

Looking at the present day situation, two notions must be stated. At the Wielewaaistraat, one of those ‘confrontations’, Van den Broek has tried to make the rational urban layout more organic by implementing shops and other public functions at these endfaces. Nowadays, only 5 of these 9 shops have been filled in with a function other than housing. In addition, degradation of the garden borders, an unattractive program and unbridled customization of the shopvolumes has led to unattractive endfaces and streetscapes. Secondly, the suggested methods to improve whole Carnisse (and Rotterdam Zuid) by the writers of the National Program (demolition) is not feasible, but an alternative has not been offered yet or remains unknown to those important stakeholders.

1.5. Goal

This confrontation of typologies, the implementation of multiple design principles, should serve as a starting point for a design strategy. As stated in paragraph 1.3, the task of the architect (and what lies within his field of expertise) is to provide the neighbourhood with an activating, appealing and challenging strategy. This strategy must also provide an alternative for the (co-)writers of the National Program to improve the neighbourhood with other means than demolition.

This project has a strongly guiding function; it will be the first step in a longlasting development of the neighbourhood and should therefore steer the neighbourhood in a desirable direction for the future.

1.6. Methodology of the research report

In order to reach this goal, this report will elaborate on the paradoxes of the Vogelbuurt from a historical perspective in combination with an analysis of the present situations and the remains of its legislative history. The problem statement and goal are incorporated in a number of questions which will all be answered by the end of this research report. The main research questions reads as follows:

How can the confrontation of the typologies of the semi-open building block and strip housing serve as a motive and starting point for the development of an unleashing strategy in the Vogelbuurt, Rotterdam?

An unleashing strategy is a term stated by Hans Mommaas (Reijndorp & Reinders p.102-103). He distinguishes two different ways (strategies) to work in existing neighbourhoods and cities. Firstly, an unleashing strategy⁹ is a strategy which is in search of change and development. It is a quest for a story that is appealing, challenging and that generates energy (activates). It could be described as an *ontwikkelingsvector* (development vector). Secondly, a confirmatory strategy¹⁰ is in search of acknowledgement for a –once established- identity. It is important to specifically state the term unleashing, because this implies the guiding role of the architect in this research and design.

In order to answer this question, ofcourse a few intermediate steps have to be taken. In this report, seven secondary research questions will lead to an overall conclusion.

Firstly, the context has to be set out in all aspects. The context has already been explained a little bit in the earlier paragraphs but will be elaborated on more in the different chapters that will follow. Depending on the chapter, the approach and topic of context described will obviously vary. However, overall one could say an answer needs to be found on the question;

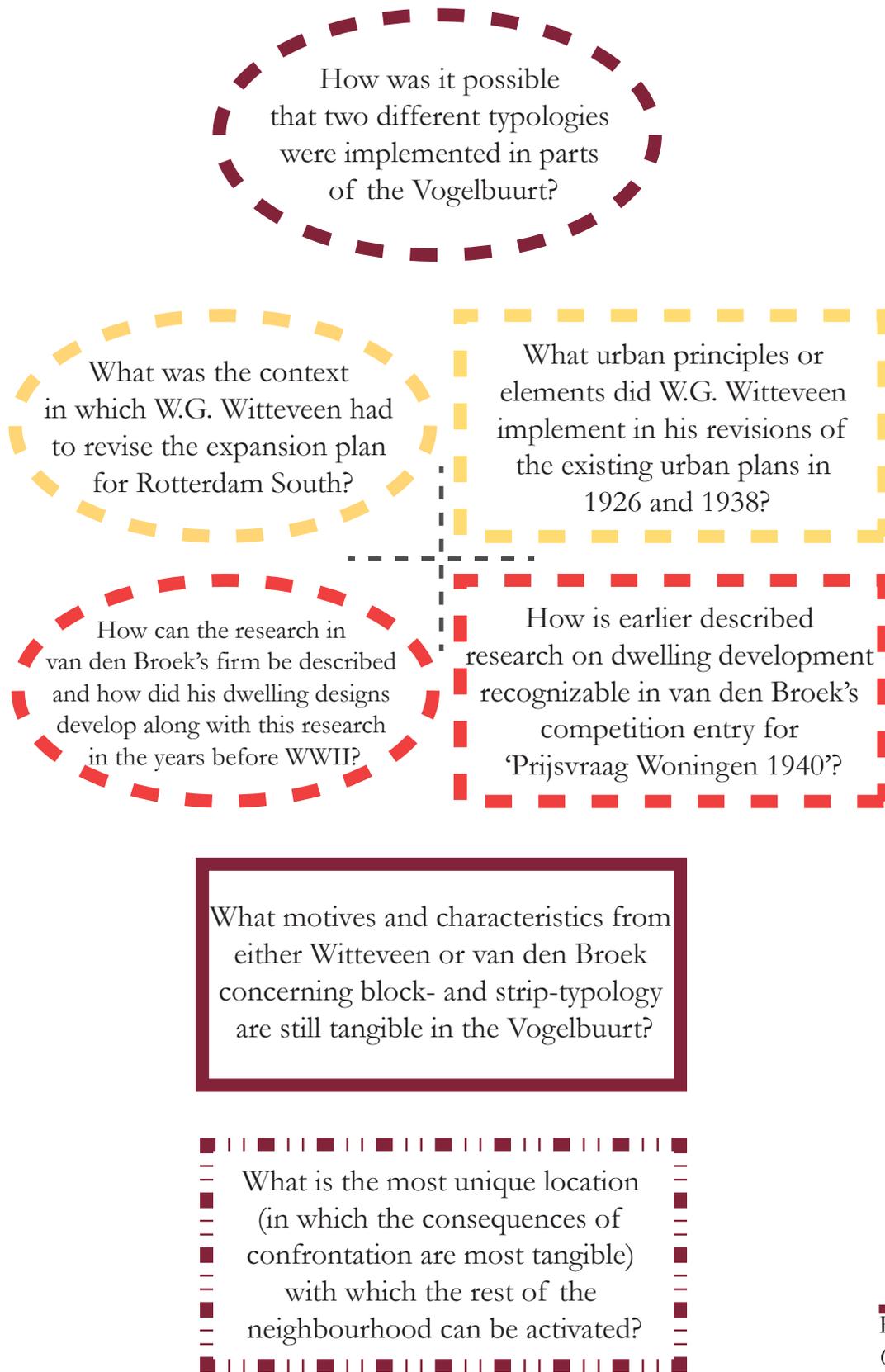
How was it possible that two different typologies were implemented in parts of the Vogelbuurt?

Moving from the context, the large scale of the city needs to be researched. The development of Rotterdam South during the '20's and '30's and the way urban plans were changed and revised during these times by different urban planners will set the scene in which W.G. Witteveen had to work in the late thirties and will also give an overview of how far Rotterdam South was developed when the war started.

What was the context in which W.G. Witteveen had to revise the expansion plan for Rotterdam South?

9 The book is written in Dutch, the original term stated here is 'ontketenende strategie'.

10 in Dutch; 'een bevestigende strategie'



Legend Time

- ■ ■ ■ Past
- Present
- ■ ■ ■ ■ Future

Legend Actors

- General/both
- Witteveen
- van den Broek

Legend Location

- Context
- Vogelbuurt

Figure 1.2
 Overview of secondary research questions and the relations between one another. Global order of appearance in the report from top to bottom.

More specifically for the Vogelbuurt, the urban principles must be set out that were used or were planned to be used in this area. Only after these discoveries can be found out which of these elements and ideas have survived the course of time. Therefore, also the next question concerning the urban design and context needs to be answered.

What urban principles or elements did W.G. Witteveen implement in his revisions of the existing urban plans in 1926 and 1938?

After the urban design being analysed from a historical point of view, the same should be done for the dwellings and building blocks designed by J.H. van den Broek. In the case of van den Broek, a lot of predecessors of the Vogelbuurt-design can be investigated, because within the firm of van den Broek there was a strongly dedicated search and research towards dwelling development in the thirties. Just like in the case of Witteveen, in this first question the context in which van den Broek designed can be set out.

How can the research in van den Broek's firm be described and how did his dwelling designs develop along with this research in the years before WWII?

Afterwards, we -again- need to specify this question more towards the Vogelbuurt-proposal to find out which characteristics are still tangible in the present situation in later chapters. In this last question concerning the architect, the competition entry is explicitly stated in order to research what changed between his original plans and the final outcome of the neighbourhood. The four questions about urban planner and architect will already provide us with some clues about the block-strip paradox and serve as motive for the coming chapters.

How is earlier described research on dwelling development recognizable in van den Broek's competition entry for 'Prijsvraag Woningen 1940'?

The historical perspective is then set out on both architect and urban planner. The logical next step is bridge the gap towards the present situation in order to find which of these ideas, principles or characteristics are still present in the Vogelbuurt. This should not be seen as a quest for authenticity of these elements (this would be the case in a confirmatory strategy) but more as a quest for the consequences of this confrontation of ideas, a search for possible motives or handles. The question focusses on the Vogelbuurt, but inevitably the research will cover a larger part of Rotterdam-South.

What motives and characteristics from either Witteveen or van den Broek concerning block- and strip-typology are still tangible in the Vogelbuurt?

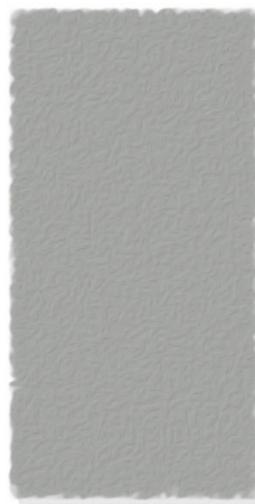
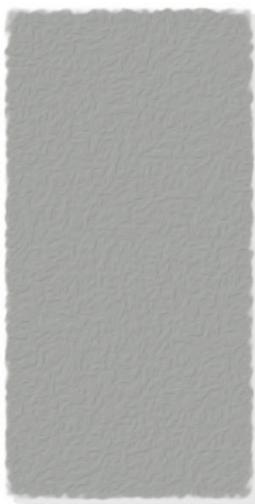
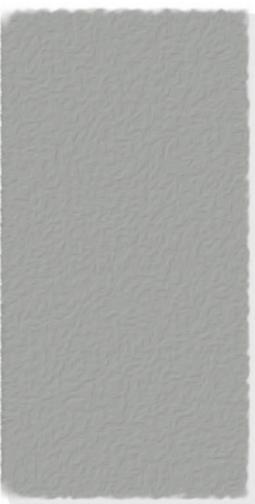
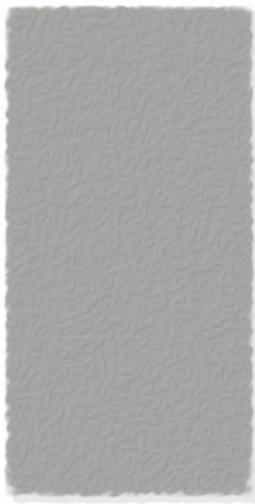
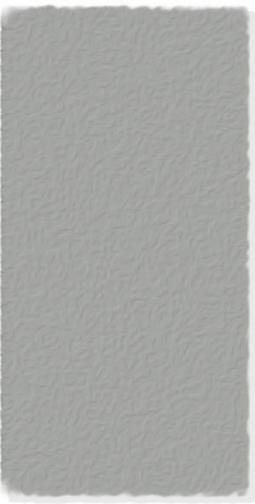
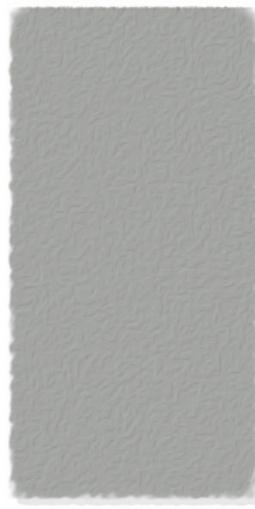
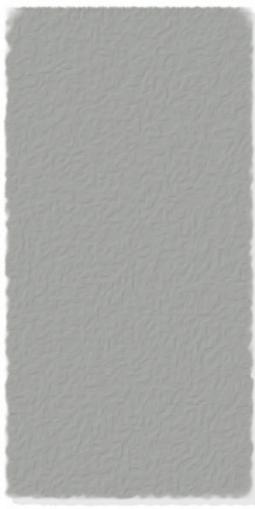
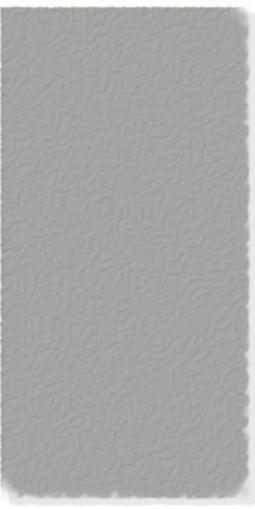
Lastly, an appealing chapter needs to be written in order to provide a direction for the future assignment(s) that are formed as a result of this research. So in the earlier chapters, all questions and analyses are considered from a researcher's point of view. In the last chapter, the approach will be more from a researching designer's point of view. Besides inventorising all different motives and characteristics, it is important to state in what part of the neighbourhood this unique confrontation also results in an unique location where the design intervention will take place. So before providing a general conclusion, an answer will be given for the following question.

What is the most unique location (in which the consequences of confrontation are very tangible) with which the rest of the neighbourhood can be activated?

In figure 1.2, all questions can be seen well arranged. Also it becomes clear how the different questions relate to each other in location, time and actors¹¹.

11 Please note that the main research question is not included in the overview; all questions mentioned are secondary to this one main question.

THE GREAT STRIP/BLOCK PARADOXIALITY



TIMO VAN DE VEN
1503693

RESEARCH REPORT
A R 3 A R I I I
OCTOBER 2013

TRANSFORMING
HOUSING HERITAGE
C A R N I S S E

PIETER GRAAFF
WIDO QUIST
LIDWINE SPOORMANS

2. Urban context on Zuid

2.1. Preface

In comparison with the rest of Rotterdam, Rotterdam-South developed rather slowly in the early twentieth century, when bit by bit, existing villages and ribbon- and diked developments in the south are annexed by the city of Rotterdam.

The growth of the city of Rotterdam (concerning the dwellings) always followed the development of the harbour. So after, for example, the Waalhaven was dug out, dwellings for future laborers were planned and developed. Most of these new inhabitants came from the isles of Zuid-Holland and Zeeland and the province of Noord-Brabant. To describe the immense scale of this growth after the digging of Maas- (from 1895) and Waalhaven (from 1908); in 1880, Rotterdam consisted of 150.000 inhabitants, in 1920 this number had grown to almost 500.000 (van Meijel et al p.55).

Apart from the fact that dwellings were always secondary to the harbour, it was a big struggle for the municipality to obtain the required lands for expansions. The expropriation of lands progressed rather slowly and this made, in combination with the economic crisis, that the development of Zuid was slowed down. This will be extensively explained in paragraph 2.6.

Summarizing, the development of Rotterdam-South was a struggle in a political, social and economical turbulent period of time. Concerning the urban plans that were projected on Rotterdam South, general literature (among others van Meijel et al (2008), Kraaij & van der Mast (1990), van de Laar (2000) and van Ravesteyn (1948)) state that Granpré Molière, Verhagen & Kok created a leading design with their “Tweede Totaalkoncept voor Rotterdam-Zuid”. With this design as motive, other urban planners further developed this plan according to new requirements or circumstances in time and for example W.G. Witteveen in 1926/27 and 1937/38 introduced drastic changes (van Meijel et al p.99-106 and Kraaij & van der Mast p.55, 64-67). After his last revision but before the collective application of the “neighbourhood-principle” (“wijkgedachte”), Carnisse is developed (Kraaij & van der Mast p.71-74). As head of the Gemeentewerken, Willem Witteveen was the urban planner who’s revisions were the basis for the development of the Vogelbuurt.

So in this chapter, the plans of Granpré Molière will be discussed first. Then a short biography-like description of Witteveen’s design tradition will be set out to serve as an introduction of the analysis of his revisions of 1926 and especially 1938. Finally, a paragraph will be devoted to the progress all of these plans made up until the bombing and the beginning of World War II. All in all, the urban context in which Witteveen had to work and his own influence and contributions will be set out, answering both ‘Witteveen-related’ questions from figure 1.2.



Figure 2.1

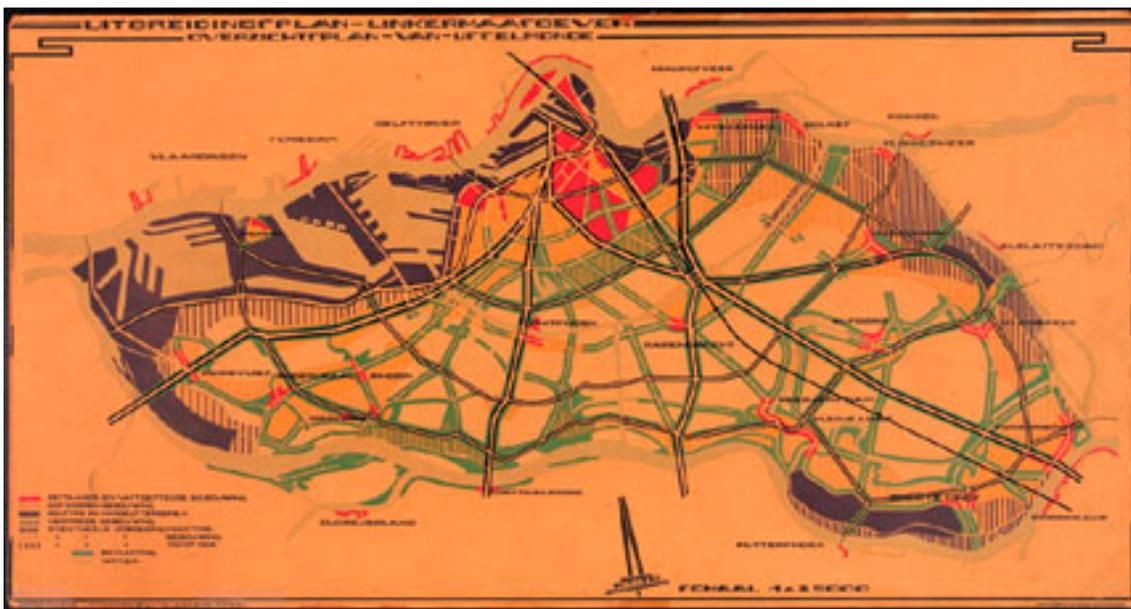


Figure 2.2

Figure 2.1
*Uitbreidingsplan Linker
 Maasoever. Granpré Molière,
 Verbagen & Kok (1921).
 Via GAR XIX E 45*

Figure 2.2
*Streekplan IJsselmonde.
 Granpré Molière, Verbagen
 & Kok (1921). Via GAR
 XV E 45*

2.2. The context set by Granpré-Molière

In 1921 Granpré Molière, Verhagen and Kok designed a very important version of the “Uitbreidingsplan Linkermaasoever” for the southern part of Rotterdam (Figure 2.1). The words ‘very important version’ (and not ‘most important’) are used because a lot of plans and urban layouts were made and succeeded each other very rapidly and this version had a lot of influences on the plans that were yet to come in the two decades after its making.

They were asked to do so by the *N.V. Eerste Rotterdamse Tuindorp* for which Granpré Molière designe the Vreewijk neighbourhood in earlier years. This neighbourhood is, in that time, situated at the south east of the to be developed city and the NV wants a vision of the developments in south (and especially south-eastern) direction (van Meijel et al p.99). This becomes clear in his *Streekplan IJsselmonde* (Figure 2.2), but in the drawings of the expansion plan itself, it also focusses mostly on the urban developments west of Vreewijk. After presenting the plan it was judged by the city council and other involved authorities (Gemeentewerken etc.) and, however they were positive about the idealistic plan, they doubted the feasibility. Together with de Roode, Granpré Molière adjusted the plan into a more workable plan (Kraaij & van der Mast p. 47).

Granpré Molière broke with his predecessors by stating that the Linker Maasoever should contain an distinguishing part of the city with its own facilities, shopping- and leisure area’s and neighbourhoods for all different classes. It should clearly be part of Rotterdam, but with its own characteristics and internal main structure (van Meijel e. This contrasts with the earlier designs by Burgdorffer, who wanted to create ‘nothing more than a laborers neighbourhood’¹. The plans are based on the ideologies of the Garden-Movement and the transition between city and rural areas are therefore decisive in the design of the urban fabric. By applying a gradual densification and reinforcement of the urban fabric towards the centre, a natural transition between city and surrounding land was achieved.

The layout then consists of radiating main traffic roads from the centre towards the southwest and southeast with crossing east-west girdle roads² and (describing from south towards north) first a ring of recreational- and green area’s and then housing, starting with an open character, densifying towards the north (figure 2.3). This housing is proposed to be developed district-like instead of the more common ‘annual rings’ and all together form a ‘decentralised urban layout’ all along the southern city limits.

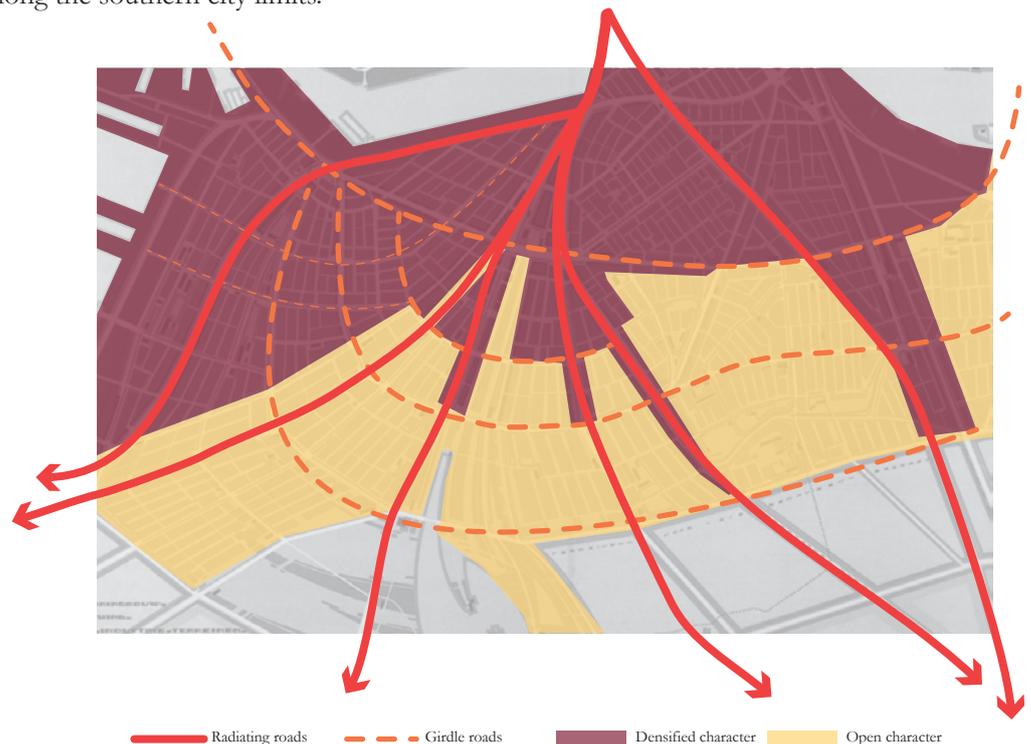


Figure 2.3

Analytical understanding of the expansionplan shown in figure 2.1.

1 “niet meer dan een arbeiderswijk” via Kraaij & van der Mast p.46

2 in Dutch; waaierwegen met doorkruisende gordelwegen

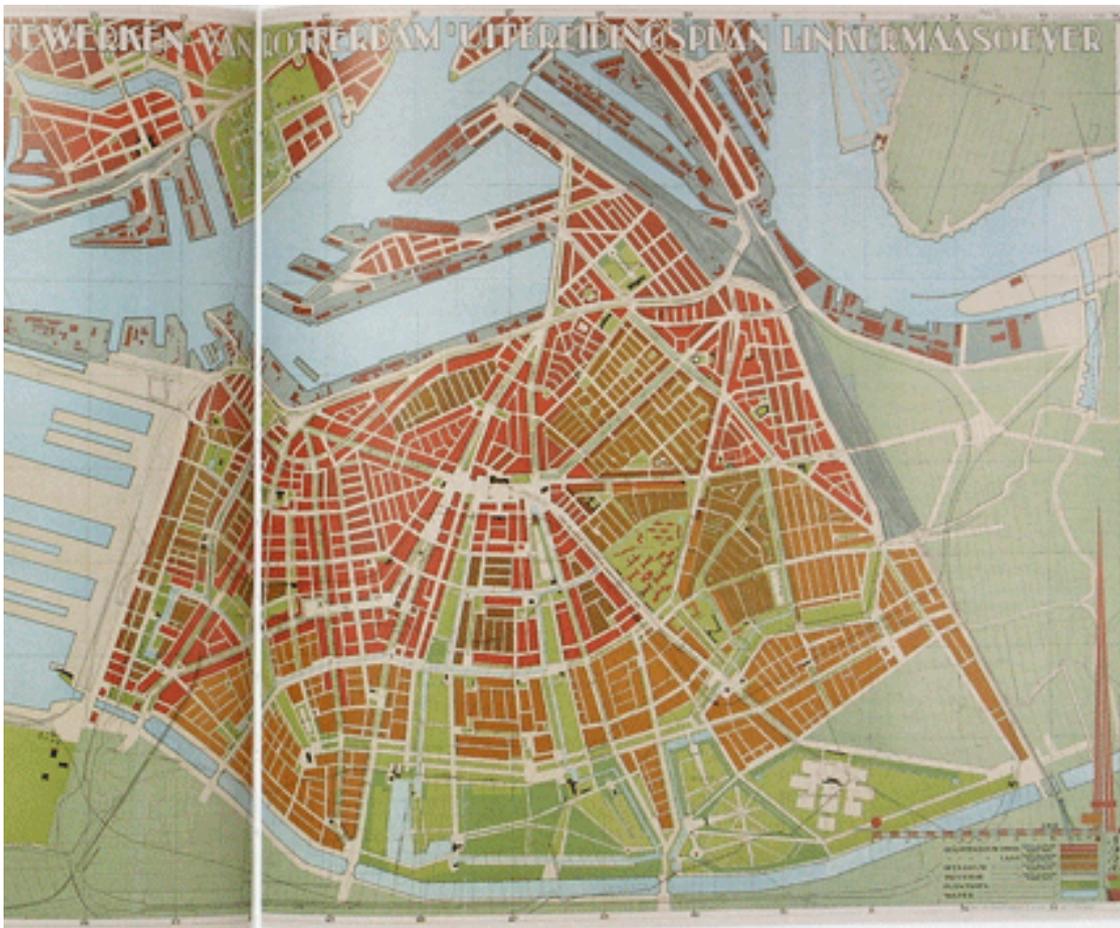


Figure 2.4



— Radiating roads
 - - - Girdle roads
 Densified character
 Open character
 Green

Figure 2.5

Figure 2.4
Uitbreidingsplan Linker Maasoever. Witteveen (1926). GAR via Mens p.174-175

Figure 2.5
Analytical understanding of Witteveen's expansion plan. (both figures are cropped images)

2.3 Witteveen's design tradition

A very strong urban design tradition can't be noted in Witteveen's oeuvre up until the point of his appointment for the city of Rotterdam, partially because the profession of urbanist was rather young so there aren't a lot of examples of earlier work. Rotterdam and Amsterdam even had a leading/exemplary role concerning urbanism after the International Urbanism Congress in Amsterdam in 1924 (Mens p.21). Until then, Witteveen had worked with the National Railways, designing among others stations and had only just started working the city of Rotterdam during the congress.

In 1920 he married the daughter of the alderman of public housing of Amsterdam¹, Anna Maria Wibaut via whom he most probably had his first serious encounters with the profession of urbanism. In 1922, Witteveen was assigned to redesign the viaduct of the high-railwaytrack² in the centre of Rotterdam and in this way, he became involved in the urban planning issues of Rotterdam for the first time. De Roode mentioned that Witteveen had taken in account different scenario's for future growth of the city in his proposal. In this way, and through his commitment in the *Nederlandsch Instituut voor Volkshuisvesting en Stedebouw*, he profiled himself as an expert on the matter and was most likely one of the reasons for his appointment as chief of the headdepartment III of city expansions and buildings³.

Within 10 years after his graduation in Civil Engineering in Delft, Willem Gerrit Witteveen (1892-1979) became chief of the department of *Gebouwen en Gemeentewerken*. Two years later, in 1926, he receives the title 'stadsarchitect' (city architect). His star keeps on rising, because in 1930 he becomes director of the department City Development (*Stadsontwikkeling*) and six years later, due to the economic crisis, this department is merged with a few others in the Municipal Technical Service (*Gemeentelijke Technische Dienst*) of which, again, Witteveen becomes the managing director (Mens p.231).

As city architect, he designs his first version for the expansion plan for Rotterdam South in 1926 (figure 2.4). In 1927 it was approved by the different councils and was the starting point for a big annexation plan.

2.4. The layout of Witteveen

As shown in figure 2.4, in 1926/27 the first expansion plan from Witteveen was published. As stated by Noor Mens (p.51-72), Vanstiphout (p.304) and van Meijel (p.101), the plan was strongly based on the layout of Granpré Molière and was in its nucleus a translation from an idealistic plan towards a more feasible layout. He kept all main guiding principles that his predecessors introduced intact and added some other intrinsic principles (figure 2.5). But before these additions are explained, it must be stated that Witteveen saw his plan as a comprehensive, spatial composition with streets, squares, parks and closed building blocks as his instruments (van Meijel et al p.101,123)

Firstly he created an inland shipping channel along the southern border of the city expansion (not emphasised in figure 2.5, but is preserved as southern border of the analyses area). This obviously creates a harsh border between city and rural outer areas but even more, by adding only a few bridges, the hierarchy and differences in importance between different radial streets becomes more clear.

1 dr. F.M. Wibaut, wethouder van Volkshuisvesting Amsterdam (Mens, p.231)

2 het aannemelijk maken van het bestaande viaduct van de hoogbaanspoorweg (Mens, p. 28)

3 Hoofdafdeling III, Stadsuitbreiding en Gebouwen (Mens, p. 34)



Figure 2.6

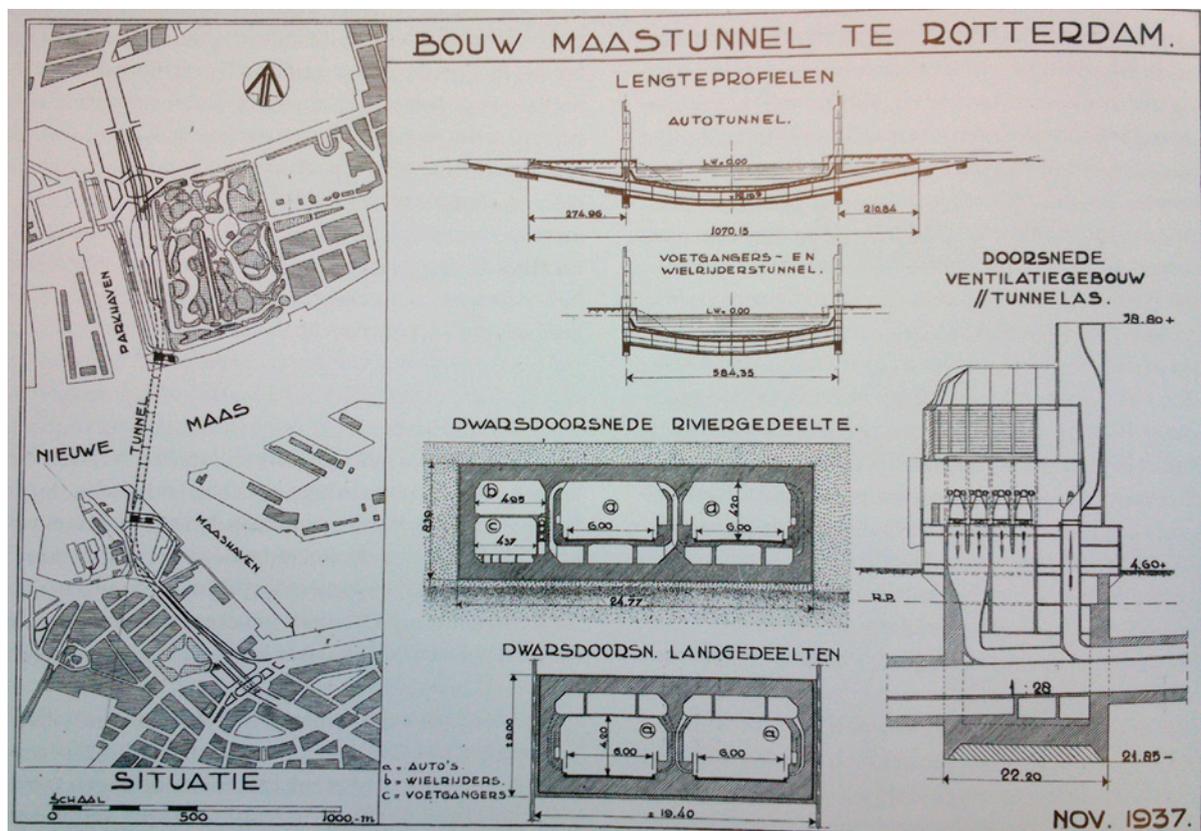


Figure 2.7

Figure 2.6
Streekplankaart IJsselmonde.
Witteveen 1938. Via Mens
p.124.

Figure 2.7
Bouw Maastunnel. 1937.
Magazine 'de Maastunnel'
via Mens p.134

These radial roads have been preserved in a less dominant form. Also, they all meet in a newly planned central square. The radial character of the expansion is more and more emphasised by the green wedges that come into the city in more places and which make clever use of the already existing green lines such as the Boergoensevliet (compare the green in figures 2.2 and 2.4). Also, this division of green wedges provides the plan with a more balanced distribution of green areas in general (Kraaij & van der Mast p.65). Concerning the roads, the main girdle roads didn't end in Charlois anymore, but deflected to the southwestern corner of the plan.

Concerning the southern border and the green structure a third new element is introduced; a large girdle of parks and parkways that cuts right through the green wedges and creates a buffer zone between the city, its outskirts and the new canal. In a more drastic way, this could be seen as a division between the dense city and the open edges as introduced by Granpré Molière. So in some other way as Granpré Molière intended, Witteveen preserves the distinction between the northern and southern parts of the expansion. But where Granpré Molière suggested to use density as a tool, Witteveen introduces typology. He plans closed parcelling and building blocks in the north and a more open or semi-open parcelling in the south. Witteveen intends to use density in a whole other way. Along the central square and along main traffic routes, Witteveen intended medium-high closed building blocks with lower laborer-dwellings in the inner area's (van Meijel p.101) behind it. This gives the plan different type of 'bowls'⁴ of dwellings.

2.5. The 1938 revision

Not long after the publication of Witteveen's first expansion plan, the economic crisis took place, which implied several changes in political, socio-economical and urban circumstances (Mens p.125, van Meijel et al p.103, Vanstiphout p.304). Two important changes are worth mentioning before elaborating on the revision.

In 1931 a revised *Woningwet* was introduced which offered the possibility to design new expansion plans in a global plan and more developed plans in separate parts⁵. This gave Witteveen the opportunity to design the part of Rotterdam-South between Maashaven and Carnissensingel/Kromme Zandweg more extensively and describe the more southern part only in main principles and a general layout plan (Kraaij & van der Mast p.61-64) as can be noticed in figure 2.8.

Together with the revision of his expansion plan (in the form of the two types of plans), Witteveen also designed a regional vision for IJsselmonde (figure 2.6), just as Granpré Molière did almost twenty years earlier. Although the circumstances and the results are different, there is a striking resemblance between the two visions. Both architects proposed the city to grow as a radial city, following main traffic routes. Along with this development, the growing distance towards the original city of Rotterdam would imply other types of industries and atmospheres, creating new zones. This would automatically add a concentric layer to the radial layout.

Secondly, in 1933 the construction of the Maastunnel is started. Up until that point, the two banks are only connected by one bridge and a few ferry-services, The tunnel provides a new connection between the two banks of the river Maas and could provide the south with a more connected and dominant role in the city. This would also imply a faster growth of the southern (left) bank. This is the argument of the planners to maintain the earlier expansion borders (from before the crisis) instead of reducing the area. Eventually a design from Witteveen (illustrated in figure 2.7), dating from 1936 is realised. This proposal did not include

4 in Dutch; kommen

5 in Dutch; Plan in Hoodzaak en uitgewerkte Plannen in Onderdelen



Figure 2.8



Figure 2.9

Figure 2.8
Herziening van het Uitbreidingsplan Linker Maasoever. Witteveen, 1937. GAR, via Mens p. 126.

Figure 2.9
Analytical understanding of the Herziening van het Uitbreidingsplan Linker Maasoever.

a tram-connection and therefore, the tunnel traverse could be executed half deepened, which gave the opportunity to design leveled intersections on both sides of the tunnel.

It appears that the layout of the plan is somewhat simplified in comparison to the earlier plan. The Maastunnel is the reason why some of the hierarchy of different roads has been changed or some main roads are laid out differently. Because of the Maastunnel, not only a radial structure has been laid out starting at the Willemsbrug (via the Maashaven banks) but also from the Maastunnel exit. It is striking to notice that, regardless of the tunnel, Witteveen still holds on to his proposal of a bridge at the location of the Parallelweg, almost the exact location of the future *Erasmusbrug*.

The canal on the south edge of the expansion is disappeared along with all secondary waterways that were planned in earlier stages. The greenstructure is also simplified; some of the wedges are less dominant and some are combined to concentrate the green more.

In the dwellingtypes there are also some notable changes. It appears that ground-bound dwellings are more-and-more appreciated by the public and the 'high-rise' of 4 or more stories is limited to the blocks adjacent to the main roads. In the layout of the building blocks it can be noted that Witteveen lets go of the idea of the city as a comprehensive composition but more as a rational layout of parcels. This rational layout implied identical and bland streets and the plan proposes to apply different streetprofiles (read; widths)(Mens p.125-126).

Witteveen proposed limited options for the application of row-housing. He stated that this could be extended, but he immediately posed that it was undesirable to have shops on every corner of the street (a often seen characteristic of row- or striphousing) but shops needed to be clustered. The plan was approved by city council on July 21st, 1938. How these layouts can be compared to or be still visible in the current situation (see for example figure 1.1) will be explained further in chapter 5.



Figure 2.10

A



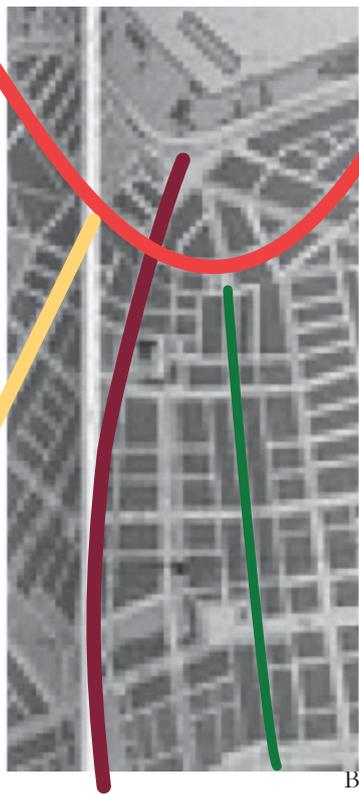
B



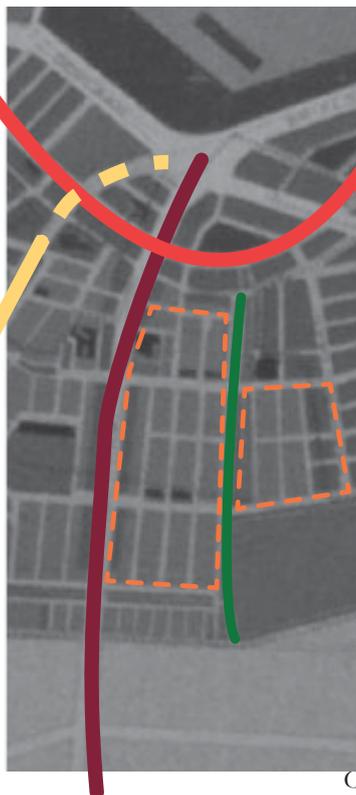
C



A



B



C

— Wolphaertsbocht — Lepelaarsingel — Dorpsweg — Boergoensevliet — Vogelbuurt

Figure 2.11

Figure 2.10 & 2.11

Croppings of the Vogelbuurt area in all expansion plans and the analytical understanding.

2.6. The development of the Vogelbuurt

Zoomed in on the Vogelbuurt in all expansion plans, one can observe a big shift between Granpré Molière ('A' in figures 2.10 and 2.11) and Witteveen ('B' and 'C') and even between the two individual plans of Witteveen.

Composition

Most directions of individual lines, roads, wedges and parcelling have been preserved in all plans, although their role in the bigger composition might have changed. The composition of the larger elements on the other hand have changed a lot. In the first plan of Witteveen (figure 2.10.B), the blocks come in all different shapes and forms, just like those of Granpré Molière (2.10.A) and form small districts within the boundaries of dominant roads. In Witteveen's last revision (2.10.C), the districts are bordered by multi-layered closed building blocks. Within these constraints, grounded dwellings are situated in a closed, 'protected' inner area and blocked from traffic and other pollution. These higher blocks also have a function towards the outside, namely to emphasise the roads or squares which they are adjacent to. With this composition-technique the Vogelbuurt as we know it, is visible on the maps for the first time. The blocks next to the Dorpsweg and the Carnissesingel are planned to be higher, so a sheltered innerarea around the Lepelaarsingel is created.

With the construction of the Maastunnel, the intersection of Brielselaan, Pleinweg, Dorpsweg and Doklaan has become much more important and a central crossing in the urban fabric.

Streets

Along with the change of this intersection of roads, there is also a big shift in the hierarchy of the streets. In the latest revision of Witteveen (2.11.C), the Dorpsweg is one of the most emphasised roads in the area, where in Granpré Molière's plan, the Boergoensevliet is the main radial road (2.11.A) and the Dorpsweg ends at the Wolphaertsbocht instead of the big crossing near the Maashaven (in the last expansion plan part of the Maastunnel trace). Another existing, historical line is the Katendrechtse Lagedijk, which Witteveen preserved but Granpré Molière would have cut through.

The girderroads Wielewaalstraat and Gruttostraat are in the latest version extra emphasised by locating 'special functions' on these roads (the dark brown spots in the plan). The most striking change is the fact that in the second plan, the difference between primary, secondary and residential roads seems lost in some areas. In the latest version, this distinction has been introduced again very clearly. The most constant and prominent street (except for the roads along the Maashaven) is the Wolphaertsbocht, which is most likely because this has always been a historical route through the area.

Green structure

Witteveen has introduced green wedges in the urban fabric, which divide the area in a whole other way than the roads in the first expansion plan do. In the last revision however, the strong green girdle on the southside has disappeared and only a small canal from the Lepelaarsingel towards the Wielewaal has remained. Nowadays, the Roerdomplaan is situated here. The Boergoensevliet and Lepelaarsingel still function as green wedges, respectively ending at the Karel de Stouteplein and the Katendrechtse Lagedijk.

The difference between Witteveen's versions is that the Lepelaarsingel is the border of a district of building blocks in 1926 and in 1938 it has become subordinate to the multi-layered or ground-bound housing typology.

Typology

The introduction of the -specifically defined- ground bound houses was possible because of the economic crisis. As stated, the housing development of Rotterdam always followed the development of the harbour. In the crisis, the unemployment rate was very high and therefore, no new houses were demanded because of the absence of new immigrants. This meant the density of the same expansion area (as said before, these borders did not change) could be lower. Where Witteveen drew medium high-rise (4-5 stories) in 1926 all over the area, in 1938 this could be reduced to the blocks adjacent to primary roads, squares and parks.

Furthermore, in this part of Carnisse, Witteveen desired “more architectural dignity”, because he wanted to attract middle class inhabitants.

2.7. Zuid up until the bombing

In 1925, commissioner of Dienst Plaatselijke Werken H.G. De Roode wrote a report with a plea for annexation of adjacent municipalities (GAR⁶) with extensive argumentation and proposed border amendments. Once annexated, the municipality still had to expropriate every single plot. Despite the intentions of the city of Rotterdam, which started a large expropriation campaign in 1928, they only end up with a rather fragmented ownership of land in Rotterdam-South. In 1928 Rotterdam was only able to expropriate the plots “welke tot redelijken prijs in der minne konden overgaan” (van Ravesteyn p. 248)⁷. When in 1930 the municipality wanted to expropriate 723 hectares of land based on the Woningwet, the government declined this request (Kraaij & van der Mast p.63). This, in combination with the economic crisis, made that the expropriation (and therefore the faster development of South) could not take flight.

When World War II commenced, the situation was most probably somewhat like the situation shown in figure 2.12. This map is also used by the *Gemeentelijke Technische Dienst* in 1940 to show the green structure (*Groenplan*) and is therefore considered as most recent map up until that date.

The levelled intersection at the end of the Maastunnel is already completed but both Brielselaan and Dorpsweg still have their oldfashioned profile, which is not connected to the new profile, layed out at the Maastunnelplein, yet. This is not required either, because the Dorpsweg is up until this moment still a rural thoroughfare. West of the Dorpsweg, Charlois is fastly developing southward, only a few blocks are still drawn as stains. The Nachtegaalplein is already drawn over the existing landscape but not yet constructed, most probably because there are a few plots along the Dorpsweg that still show a rural layout. These are most likely some of the examples which could not be expropriated in the years before the war.

Moving eastward, across the future location of the Vogelbuurt, we only come across fields and acres until we arrive at the Carnisselaan. The one thing that must be noted in this area is the presence of the *Kievitswatering*, a dug out watering that eventually would disappear during construction of the Vogelbuurt. This strip of closed building blocks east of the Carnisselaan was one of the first area's to be constructed south of the Wolphaertsbocht. The youngest of these blocks were consisted in the early '20's. East of these closed building blocks is the Eilandenbuurt with the Amelandsplein in the centre, at that time just one year old (realised in 1939). This neighbourhood was part of the *Algemeen Belang* plan and has a strong link with the Vogelbuurt, which will be elaborated on in paragraph 3.5.

6 Gemeentearchief Rotterdam; Book XXII F 361

7 which had a reasonable price after consulting with the owners

It must be noted that the Pleinweg, Mijnsheerenlaan and the Zuidplein have been constructed, but the southern part of where these roads meet is still only drawn in stains (*'vlekken'*). The fact that these stains are drawn shows that most probably, the priority of development in Rotterdam South lay there or this part was planned to be constructed soon after drawing this map. However, the area south of the Pleinweg located near Zuidplein would not turn out this way, one of the likely reasons is the fact that at this location one of the emergency villages, *het Brabants Betondorp*, was constructed during the war. Lastly, it must be emphasised that the development of the Vogelbuurt did not seem as a priority for Rotterdam South right before the war and the destruction of the centre was reason to develop the neighbourhood earlier than planned.

2.8. Conclusion

Granpré Molière, Kok and Verhagen provided Witteveen with a starting point for his own designs. This layout was ofcourse based on its own hypotheses and Witteveen implemented his own plans and adjustments into his own timeframe, but it is noticable that the plans, instruments and hypotheses from 1921 were the guiding principle for especially Witteveen's first plan from 1926. It is striking to see how Witteveen strongly continued on the ideas and principles and with the same tools set out by his predecessor but still managed to provide Rotterdam South with a more feasible and a less ideological, urban expansion plan than Granpré Molière did.

A change in approach can be found in the differentiation between the northern and southern part of the Linker Maasoever. Witteveen implements the typology of the building block as an instrument to create a more open environment towards the rural borders of the city, where Granpré Molière used density as a tool to achieve this.

Witteveen uses density of the city to emphasise important roads, squares and parks. He also designs an enormous square on the location of the latter Zuidplein, which is the primary crossing of radial roads that he preserved.

In 1938, more than ten years after his first expansion plan, he adapted the plan to fit in new political, economical, social and urban circumstances. It was at this moment also possible to develop the whole expansion plan in different parts. This way, he designed the part until the Kromme Zandweg more detailed and only designed the more southern part in rough sketches. In this last revision, the Vogelbuurt as we know it becomes visible. In the plans before, the layout was totally different in this area.

In the Vogelbuurt, a lot of his principles were preserved. The radial Dorpsweg is still the most important road in the area, combined with the girdleroads Gruttostraat and Wielewaalstraat and the Lepelaarsingel was preserved as a small green wedge into the urban fabric. The blocks on the Dorpsweg were designed with 4 to 5 layers and the rest of the area up until the Carnissensingel would be developed in two layers.

However, the development of the area and the Vogelbuurt in particular did not proceed smoothly and quick. It was a real struggle to get possession of the grounds and above all, the economic crisis and the war slowed down the process of urbanization. There is another large story to tell between Witteveen's last expansion plan and the current situation, but this will be told in chapter five.



Figure 2.12

Figure 2.12
Linker Maasoever.
Gemeentelijke Technische
Dienst (1939 or 1940)



ische
(1940)

3. Dwelling development

3.1. Preface

J.H. (Jo) van den Broek (1898-1978) was the son of a contractor and was raised during the heydays of housing within a thriving network of developers, executioners and designers. Besides, as can be derived from the former chapters, the development of housing for laborers from the rural areas of the southern provinces was one of the main architectural tasks.

With this in mind, a Rotterdam architect was wise if he embraced the housing as an architectural task and to agree with the words of Berlage from 1921, stating that “het arbeidershuis [...] het belangrijkste element zal blijken te zijn” in contemporary architecture (H.P. Berlage in Bock p.85 via Vanstiphout p.286)¹. And Jo van den Broek was one of the architects who understood this. In Rotterdam, the man grew out to be an architect with an enormous influence on the appearance of the city, even nowadays.

What is appealing about the work of van den Broek is that a strong relationship between the different projects can be found and that it is often noticeable how he learned from earlier projects. After this chapter, it will be clear in what context van den Broek submitted his competition entry for the *Prijsvraag Woningen 1940* and what lessons he learned, could or should have learned from earlier designs and proposals.

Firstly will be set out how a strong research division within his architectural firm engaged in research towards dwellings and dwelling typologies in the thirties. This will be related to the most important actor in this process (next to van den Broek himself) and that is the German architect Heinrich Leppla, who worked with van den Broek from 1929 until 1934 (Vanstiphout p.337-349).

Secondly a number of designs and proposals are investigated that either can be seen as predecessors of the competition entry or in which van den Broek made noticeable progress in his type of research. Because this thesis focusses mostly on the typology of the strip and the building block, this general subject will always echo through in all analyses and the projects are specifically chosen with this subject in mind.

De Eendracht is chosen as a first project to be analysed, because in this project a clear semi-open building block typology is still present and this design could serve as a reference point for the changes that will happen later on in the thirties.

Secondly, an entry for a competition in Amsterdam, 1934 is a very important predecessor for the Vogelbuurt. This entry was called *Optimum* (van Tijen et al p.34 & NAI²) and the later proposal for the Vogelbuurt was called *Optimaal Minimum*, so a direct relation is implied.

Within the context of Rotterdam the projects Algemeen Belang I and Algemeen Belang II are important to investigate. Eventually the Algemeen Belang II plan (also known as *1000-woningenplan* or 1000-dwellingplan) is expanded with 400 extra dwellings and later on with another 500 dwellings, which sums up the total to a 1900-dwelling plan of which the Vogelbuurt is part.

Lastly, Jo van den Broek wrote a study on new possibilities for housing in ‘the new Rotterdam’ together with van Tijen, Brinkman and Maaskant. Because this book is published just after the entry for the competition, it is not a predecessor for the Vogelbuurt. However, this book will provide us with another reference point. The outcome of the competition can be compared with the desires that van den Broek expresses in the study. What could he have wanted in the Vogelbuurt without all the additional requirements and restrictions?

1 The laborers-dwelling will appear to be the most important element.

2 NAI archives, BROZ 236

3.2. Research with Heinrich Leppla

In Rotterdam it was usual that the city council played an active role in the development of housing across the city. As a born *Rotterdammer*, van den Broek did not know better and since J.J.P. Oud worked for the city of Rotterdam for almost 15 years (1917-1931, the years in which van den Broek was just a starting architect), he took an example of this man. Besides that Oud considered housing as very important, he also wanted to introduce the scale of the building block in the scope/profession of the architect. He stated that building blocks should be considered as an architectural task (Vanstiphout p.289-291, Van Meijel et al p.123).

The German architect Heinrich Leppla (1905-1980) came with a detour to Rotterdam and the firm of J.H. van den Broek by the end of the year 1929 after his education at the Bauhochschule in Weimar (Vanstiphout p.337). The influence of two of his -worldfamous- teachers, Cornelis van Eesteren and Ernst Neufert, echoed through all the way to the Rotterdam firm. With the arrival of this young German guy, a strong research division was set up within the firm. This way, a more academic approach of housing was introduced. One of the researches consisted, for example, of needs and elements for inhabitants in their dwellings, the right proportions, measurements and relationships between the rooms. Another example is a research towards elements and circulation/walking routes within a dwelling (Vanstiphout p.342).

In this period, van den Broek is developing a lot as an architect. 'Between 1930 and 1933 a number of instruments disappeared from the toolkit of van den Broek and were replaced by others. The 'Hague porch disclosure', the apartment, the deep, narrow dwellingplans and Oud-like plasticity disappeared. The glass porch, the rectangular systematic plan, the functionalist detaillling and the visualized construction replaced them.' (Vanstiphout p.336)³. Also the isometric drawing is introduced in the plans of van den Broek, which could capture different scales and elements of the design in one drawing. The introduction of this 'new' instrument was perfectly in line with the perception of the building block as a architectural assignment, because of the connection of different scales.

Moreover, Leppla and van den Broek are in search of flexibility within the dwellings to meet the requirements of the inhabitants with changing household compositions. The problem here is that the original plans are designed too generous which makes the design unattractive for tenant and landlord (respectively due to rent or development costs). Concerning the fact that flexibility is most of the times desired for growing families, these large plans are even less desirable, because when the family grows, people automatically have to give up luxury in order to stay in the same dwelling. Another form of flexibility that the two introduce is the night- and dayplans. This way, rooms could change their function depending of the hour of the day.

When Leppla left the firm in 1934 to start his own firm in Schiedam, the research to different housing typologies was at full speed, especially the development of the semi-open building block. The large projects in Bergpolder and at the Vroesenlaan (*De Eendracht*) function as big try-outs and create a significant progress in the research. Later on, with the writing of *Woonmogelijkheden in het Nieuwe Rotterdam* (van Tijen et al) the results of and developments in this research are elaborated (paragraph 3.7).

3 Original quote (Vanstiphout p.336); "De Haagse portieksluiting, de bovenwoningen, de diepe smalle woningplattegronden en de oud-achtige plasticiteit verdwenen. De glazen portiek, de rechthoekige systematische plattegrond, de functionalistische detaillering en de zichtbaar gemaakte constructie kwamen er voor in de plaats."

3.3. De Eendracht, 1934-1935

In 1934/'35 Jo van den Broek designed 84 dwellings at the Vroesenlaan, adjacent to the Vroesenpark, commissioned by the housing association *De Eendracht*. The blocks are implemented in the layout of the expansion of Witteveen dating from 1926, which has only been partially constructed. *De Eendracht* lies in an integral constructed part of the plan around the Statensingel, one of the designed parkways in the area and is recognizable by six, very strict, orthogonal blocks on each side of the road (figure 3.2). Van den Broek suggested a counter-proposal (figure 3.3) in which all blocks open up towards the west, so all balconies could have a view of the park (Stroink p.86). In this proposal, also the corner houses have been omitted. The height of the blocks has been preserved: four layers adjacent to the parkway and three layers in the side roads. Ultimately, only the Eendracht-block has been designed this way and not all six blocks on the west side of the Statensingel.

Because of the high ground values and the, more expensive, particular for that time special building construction, it was soon decided not to aim for the cheapest rents as possible, but this block would function as an example of a well-functioning and well-designed building block (Komossa p.103).

In the inner-area, a collective space is designed. The traditional back entrances (*achterommen*) made place for a deepened area adjacent to and underneath the back-facade (figure 3.6). This way, storages and inner-area were accessible in two ways; via the inner area and via the porch. The inner-area has been divided in different area's which all have different atmospheres in openness and collectivity. This, however, also implies the special function of the porch; it is both access to the streets as well as the gardens.

The dwellingplans were designed with a day- and nightplan, based on an activity scheme of the family, made by Mart Stam (figure 3.4). The flexibility in the different functions of one space was achieved by using sliding doors and foldaway beds (Stroink p.86). Large rooms could be created during the day, with the beds folded away in deep walls and a large functional space. In the evening, this space could be divided by the sliding doors and the beds could be folded out to create several bedrooms (figure 3.5).

In line with his research, described in paragraph 3.2, the construction was visualized, the porches were accentuated by large glazed panels, the closed building block was opened up in a configuration of strips and the analytical-functional day- and nightplans were implemented (Komossa p.100-110).

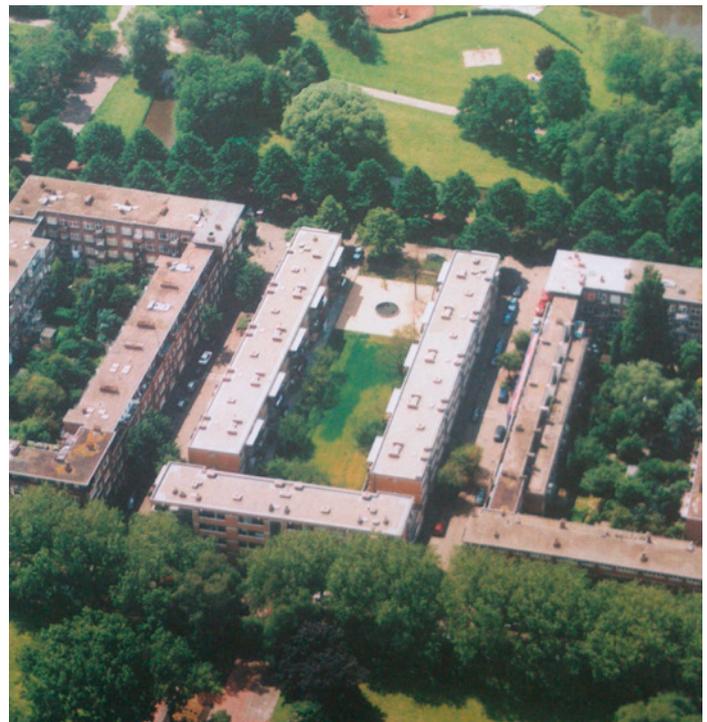


Figure 3.1
*Current situation building
block 'De Eendracht'.
Komossa p.111*

Figure 3.1

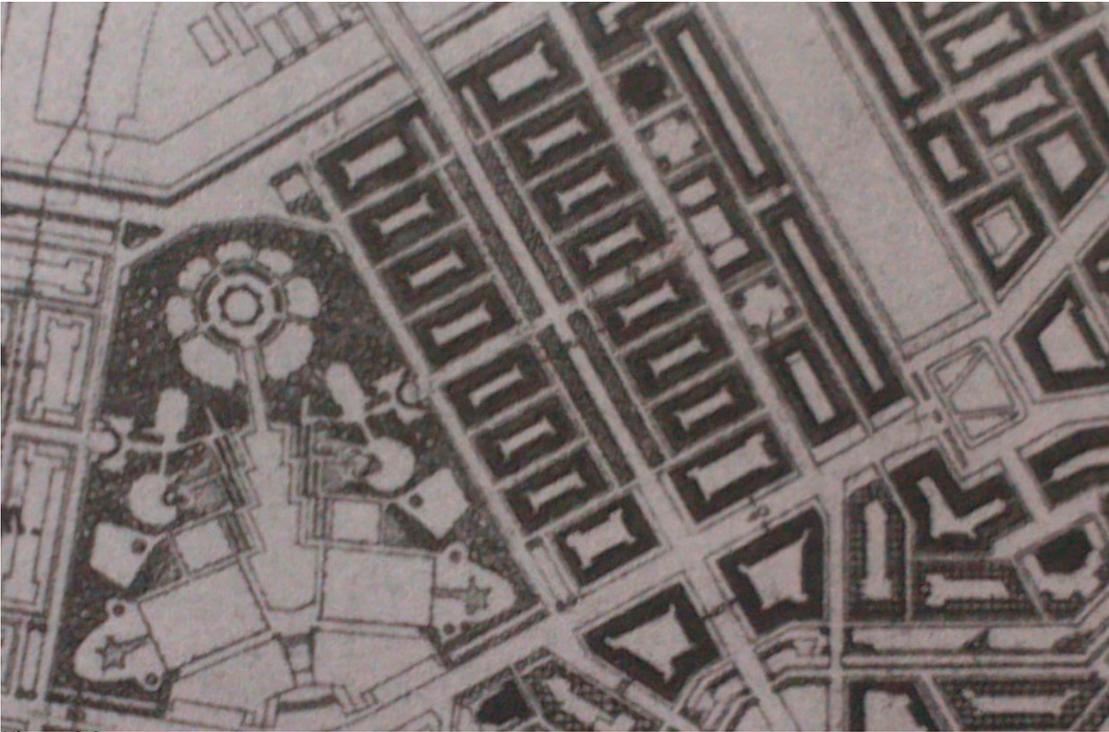


Figure 3.2

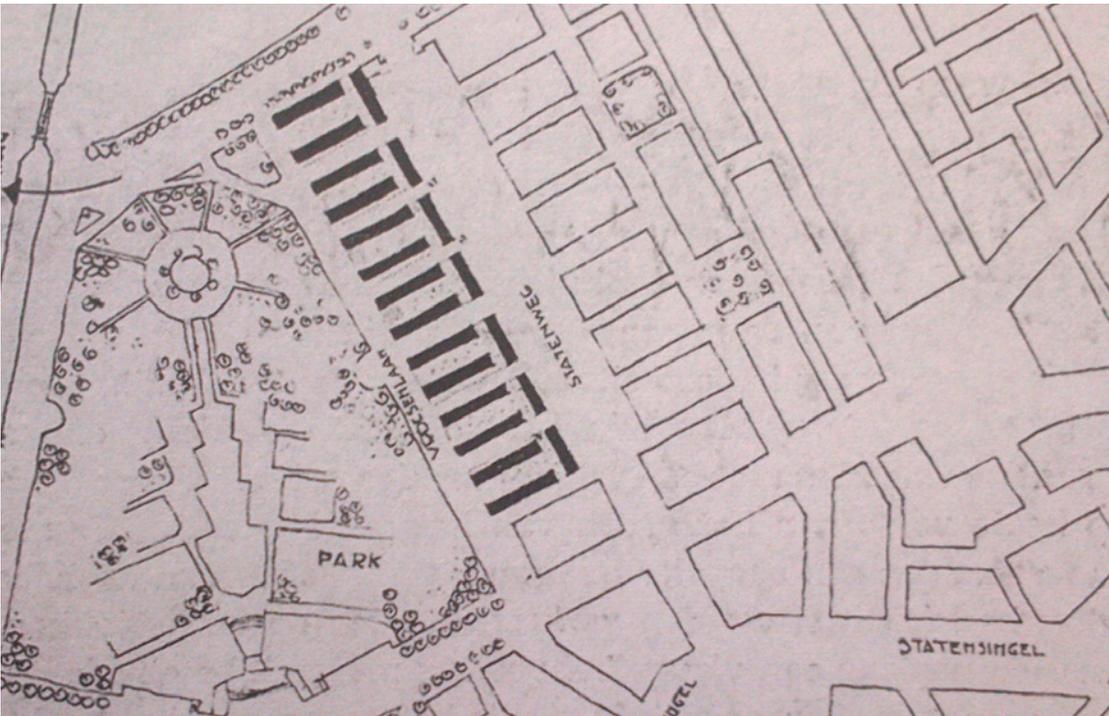


Figure 3.3

Figure 3.2
Witteveen's urban layout for Blijdorp (1926). Komossa p.104

Figure 3.3
Van den Broek's revised proposal for the Vroesenlaan-area. Komossa p.104

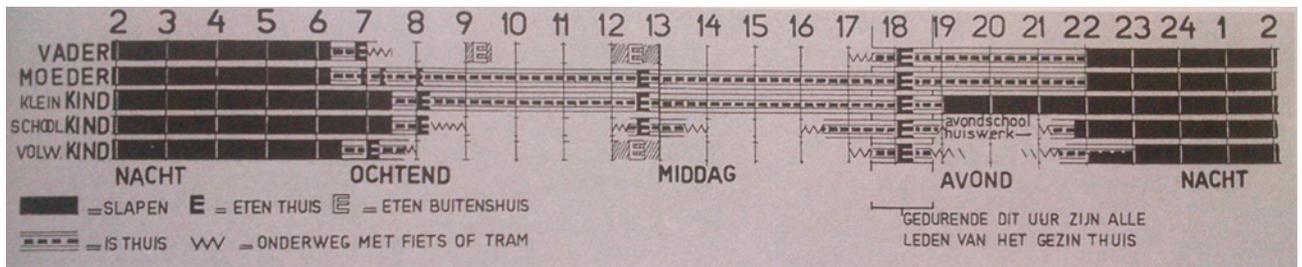


Figure 3.4

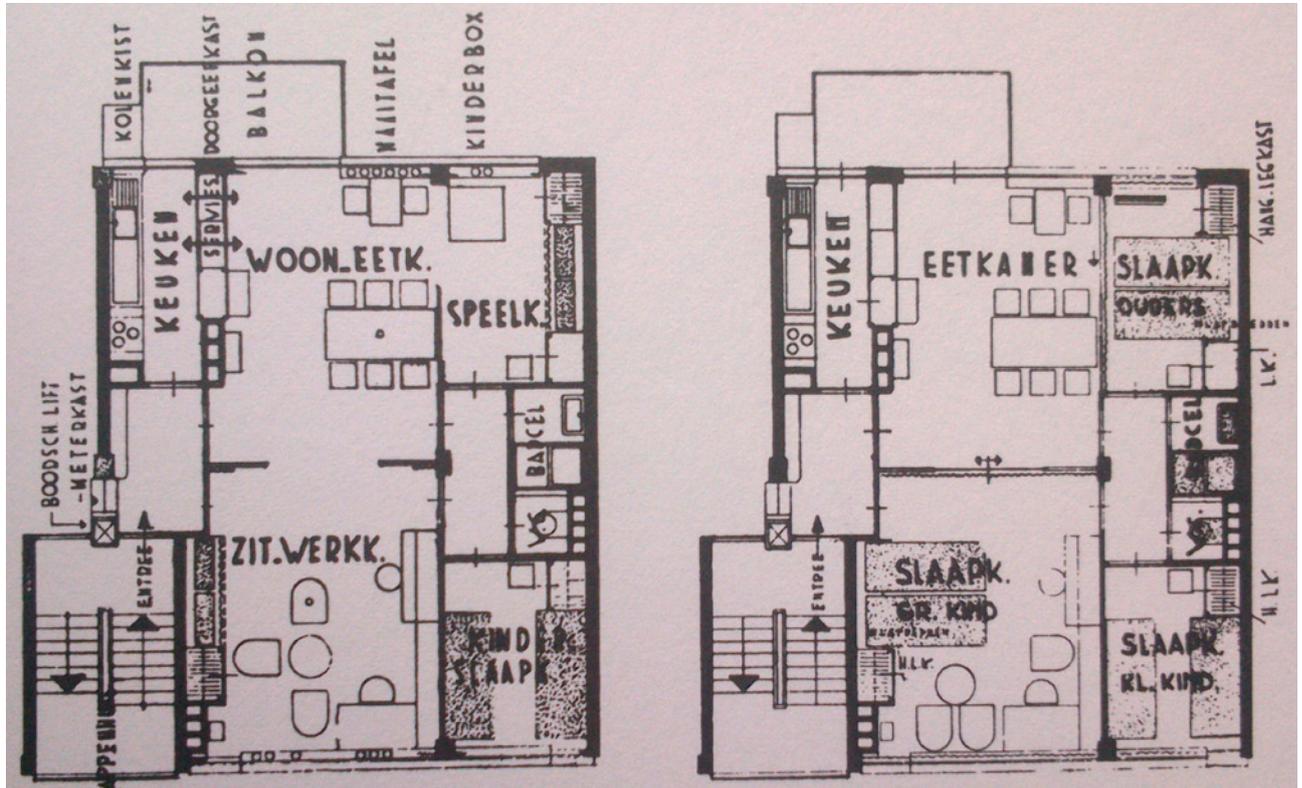


Figure 3.5

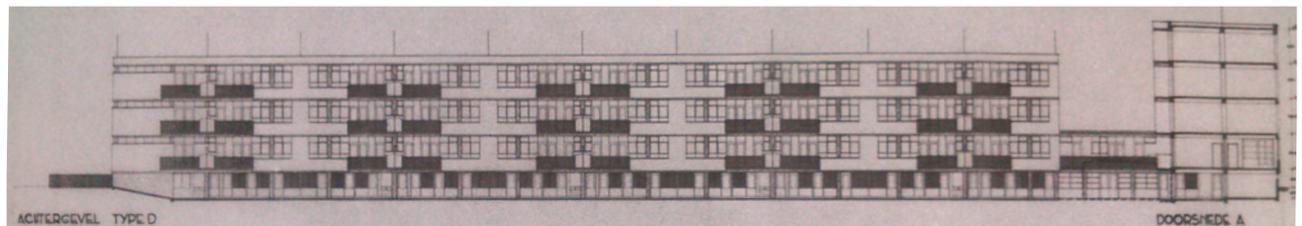


Figure 3.6

Figure 3.4

Activity scheme by Mart Stam, via Komossa p. 109

Figure 3.5

Day- and nightplans. Van den Broek (1934) via Komossa p. 109

Figure 3.6

Backfacades of de Eendracht and section of the block adjacent to the Statensingel. Komossa p.105

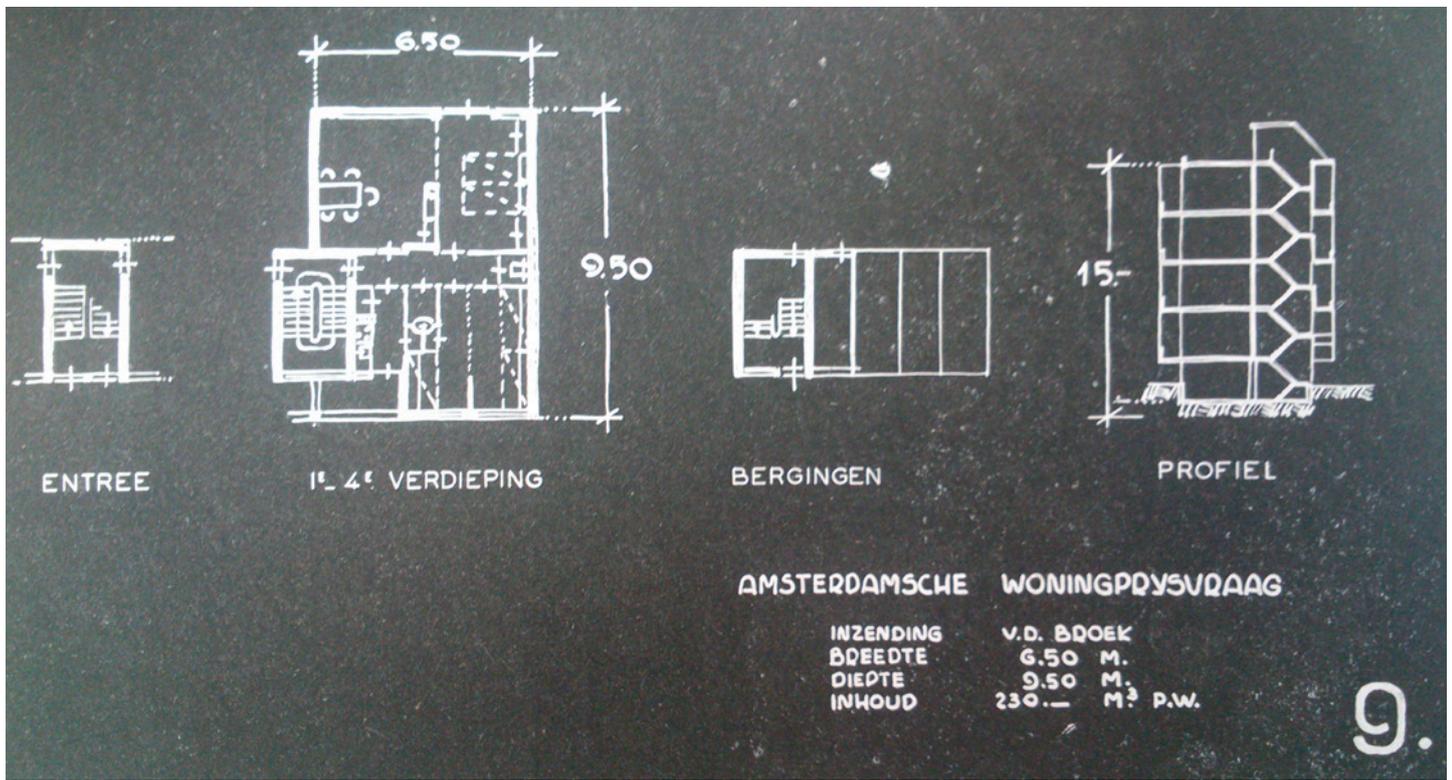


Figure 3.7

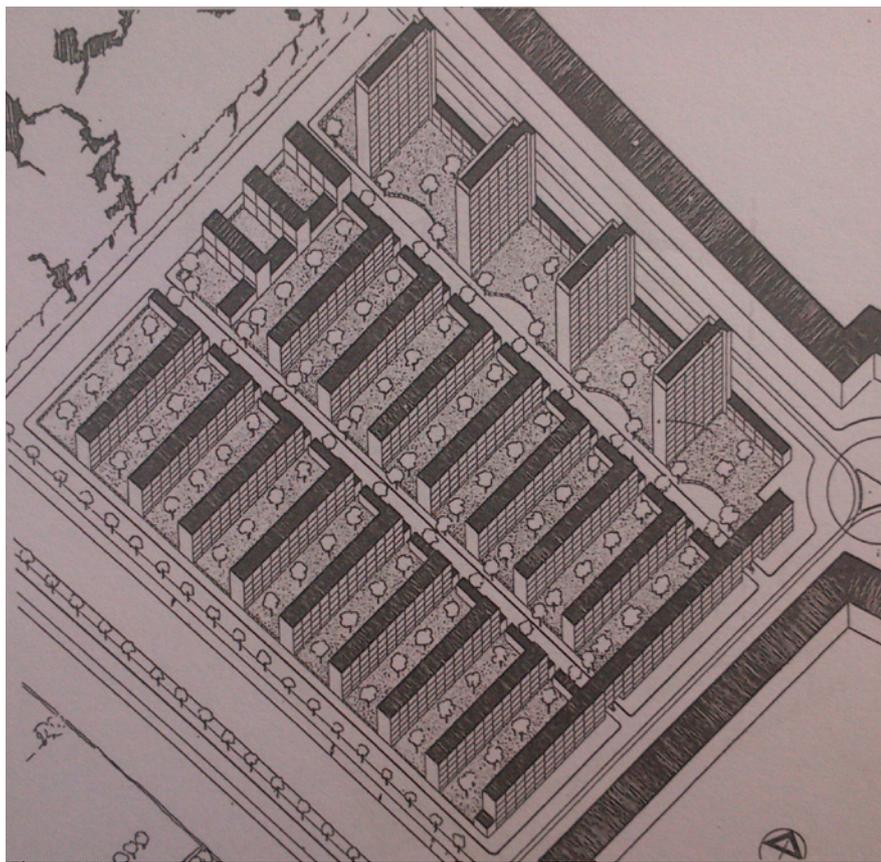


Figure 3.8

Figure 3.7
Entry of van den Broek for the Amsterdam Competition (1934). Via Van Tijen et al p. 34

Figure 3.8
Isometric drawing of the proposal. Van den Broek (1934) via Stroink p.93

3.4. Architectural Competition Amsterdam, 1934

This architectural competition was organised because of rising rents in the city of Amsterdam and the need for new, more profitable, solutions for both tenant and landlord (van Tijen et al p.33) and the competition should be seen as a quest of the city council for “the possibilities of more efficient housingplans” (Stroink p.91)⁴. The competition was therefore situated in a fictional situation of 300x250 meters, surrounded by roads and buildings in the perimeter.

This is the first plan in which van den Broeks uses a strip-parcelling, although other elements (such as building height and plans) are a continuation of earlier plans. This means in every street (and every dwelling) a drastic difference between garden-side and street-side (figure 3.8). All the strips are north-south situated so all gardens can benefit as much as possible from the sun. On the north side of the plan, he introduces four apartment buildings to ‘give orientation’ to the urban fabric and accentuate the most important lines.

On every end face of a strip, there is a transverse, low-rise strip designed with shops on the ground level and an extra layer of small dwellings on top of them. This would, according to van den Broek provide enough differentiation in dwelling types.

The Vroesenlaan-project (paragraph 3.3) was the most important basis for the dwellingplans (Stroink p.91). The plan is a bit deeper and more narrow than other competitors such as van Tijen (figures 3.9) and offers less diversity in dwelling-types in one single porch (none while van Tijen designs six types). However his plan is very clear with a strict distinction between sleeping area (east side) and living-/diningarea (west). The entry was titled “Optimum” (Vanstiphout) and this shows a direct link to his entry of *Prijsvraag Woningen 1940*, of which the title was ‘Optimaal Minimum’, a reduced and more auster version of this optimal laborers-dwelling.

It must be noted that this competition is seen as the general acceptance of the ‘Nieuwe Bouwen’, which was only a sort of protest-movement in the period before. All four winners (among others van den Broek and van Tijen) were all affiliated with this movement. In the next paragraph will become clear that eventually, the Patroonsvereniging ‘Algemeen Belang’ would accept a standard-dwellingtype with the exact measurements of van den Broek’s original Amsterdam competition entry (van Tijen et al p.33).

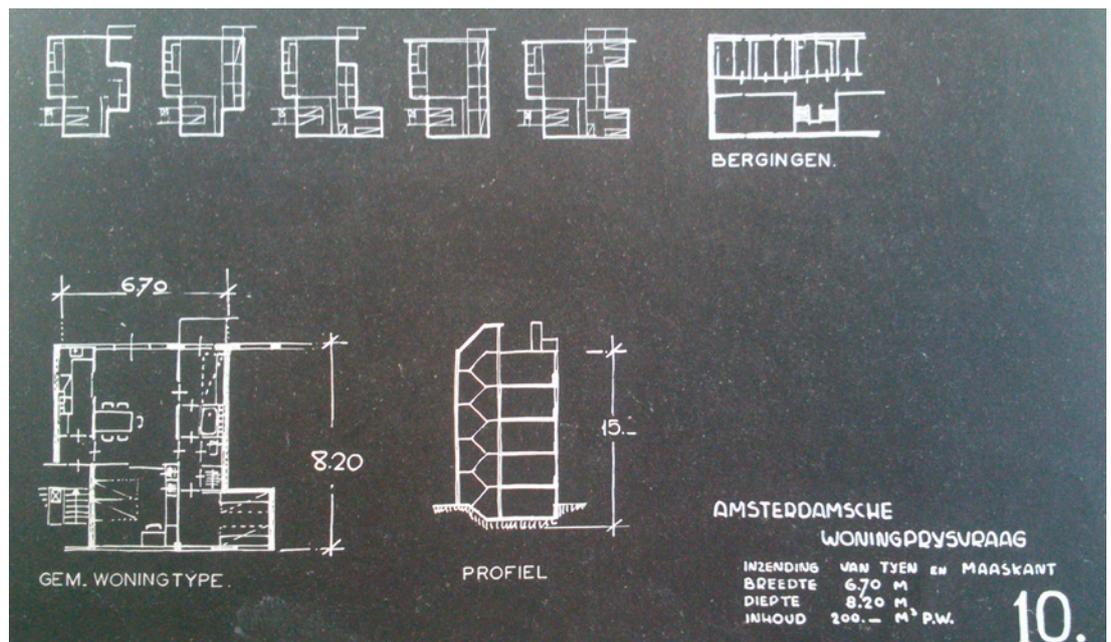


Figure 3.9

Entry of van Tijen en Maaskant for the Amsterdam Competition (1934). Via Van Tijen et al p. 34

Figure 3.9

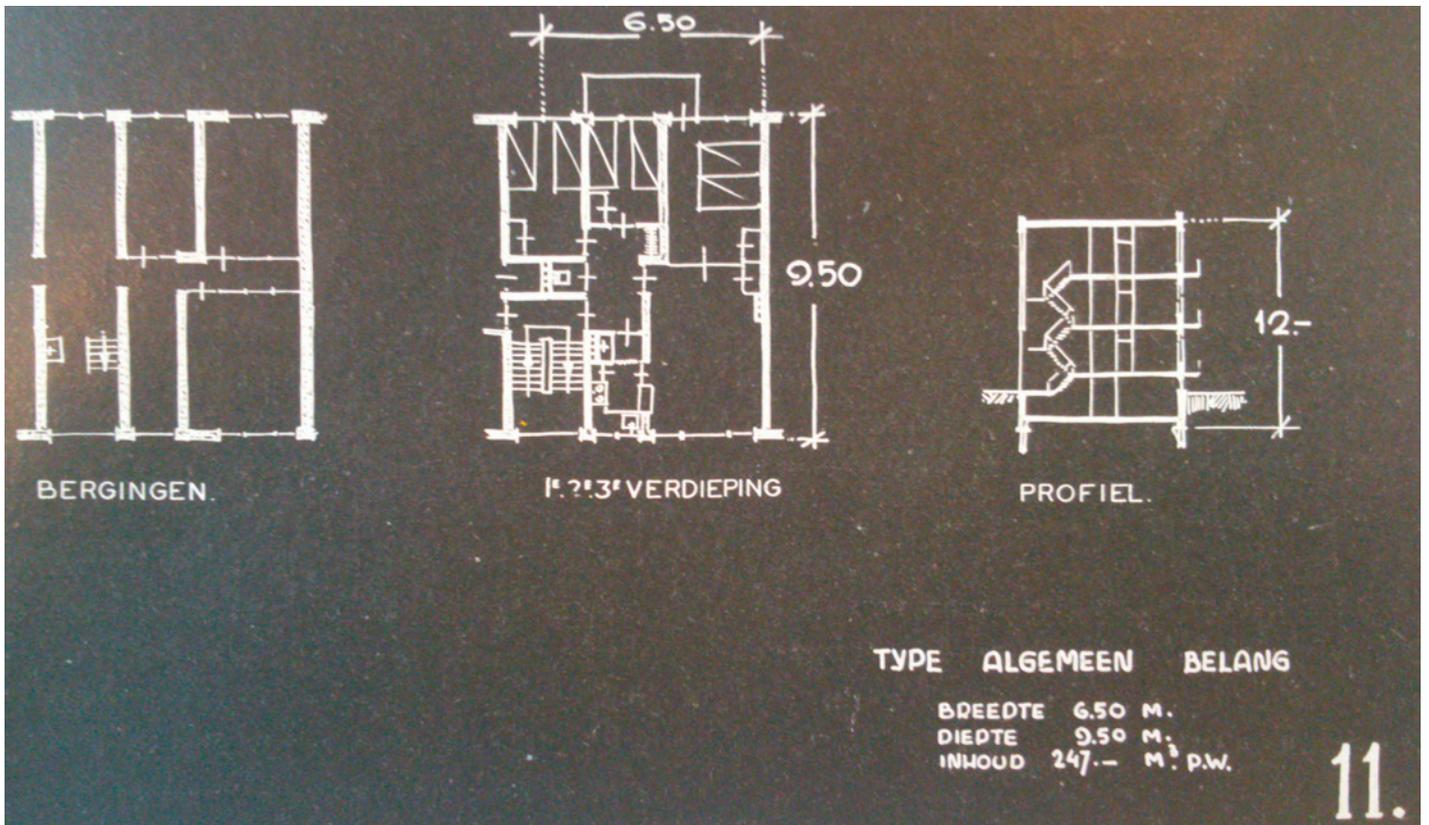


Figure 3.10

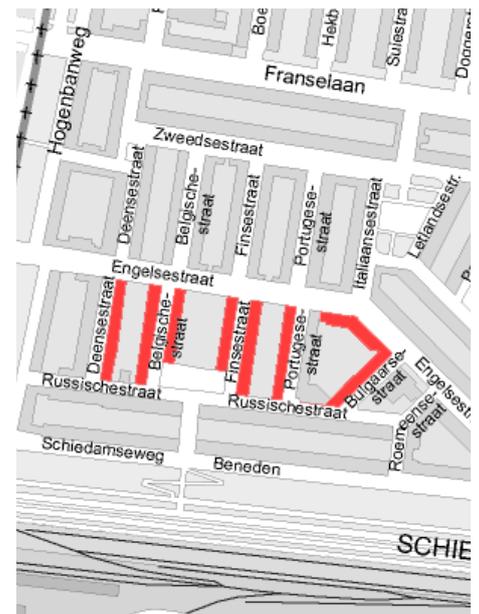


Algemeen Belang I

Figure 3.11



De Eendracht



1000-woningenplan

Figure 3.10

Overview of the Algemeen Belang-type (Van den Broek, 1938). Via Van Tijen et al p.35

Figure 3.11

Locations of 1000-woningenplan and Algemeen Belang

3.5. Algemeen Belang I

In 1938, the *Patroonsvereniging Algemeen Belang*, accepts their standard dwelling-type (figure 3.10) based on a design of van den Broek (the firm has been named Brinkman & van den Broek in the meantime). In the second half of the thirties, Rotterdam wanted to keep the dwelling development for laborer-dwellings on a certain level and therefore sold ground for a fairly low price. Together with an agreement on predetermined profit margins, laborer-dwellings could still be produced. Dwellings for the middle class were, namely, a more stable investment and a surplus for this type had emerged, while there was a enormous shortage of laborer-dwellings.

The design is a logical consequence of earlier experiments, described in paragraphs 3.3 and 3.4. The difference is that this design was made more economically feasible by removing all extra's such as the flexible plans, high-rise (Amsterdam Competition), modern construction methods (*skeletbouw*), planters etc.. The flexibility, such as day- and nightplans, is only introduced by the en-suite doors between master bedroom and livingroom (although these beds can't be folded).

The most powerful instrument of this design should be the standardization of this solution. It is designed in a way that it could be implemented in all urban situations without drastic adjustments (Stroink p.103, figure 3.10). By applying a *bajonet-type* (bayonet-type), two different dwellings per porch were created, one with two bedrooms and one with three bedrooms. Another advantage is the possibility to switch sides; the porch and the opposite bedroom can be interchanged depending on the situation (van Tijen et al p. 34).

This alluded to a north-south parcelling so bedrooms could be facing east and livingroom and kitchen could face west, although a specific orientation is not provided. This project could actually be seen as an ultimate result of the efforts of Leppla and van den Broek in the 10 years before, because van den Broek did not propose a solution for typical circumstances but actually sold a general design that can only be seen as the result of his research (Stroink p.103). This solution was implemented in the urban layout north and east of the Amelandsplein and these blocks were all completed in 1939 or early 1940 (figure 3.11).

3.6. Algemeen Belang II (1000-dwellingplan)

The next project, is called Algemeen Belang II but officialy is called *1000 woningenplan* (1000-dwellingplan), but the constructed dwellings are exactly the same as the ones shown and discussed in paragraph 3.5 except for a few aspects (Vanstiphout p.369). The configuration of windows is less wide (but separated by a strip of masonry), the orientation of the dwellings causes the streetprofile to be asymmetrical more often and the end faces, with the little volumes for the shops is different. Almost every block has one on its end, which profiles itself apart from the strip by a different kind of materialisation (more glass and wood) and marks every corner of the street. In Algemeen Belang I, this final volume is adapted to the specific situation (figure 5.33) and meeting with the street, where in Algemeen Belang II, they have become all identical (figure 5.32 and Vanstiphout p.369). The problems now (right after the start of the war) is the lack of materials. This concerns almost all building materials except for brick (Stroink p.109), which could also be noted from the *Woningen 1940* competition requirements (paragraph 4.2).

The plan was, in these turbulent times, still developed by private parties, but in this case the municipality of Rotterdam acted as guarantor in case of unsaleability (Stroink p.109), motivating private parties to keep on building. Eventually, across three locations spread over Rotterdam, 1008 dwellings were created in these circumstances (figure 3.11).

It is important to elaborate on the part of the plan near the Vroesenlaan (middle picture of figure 3.11). The block is developed as a closed building block, only two blocks north of the

earlier *Eendracht*-project. However, this closed block has been ‘exploded’ into three individual strokes. The Algemeen Belang-type is not projected on the sides of the Statenweg, because a higher building type was required.

Also, the orientation of these strokes is not, as common in closed building-blocks, towards the street, but towards the sun. So all livingrooms are situated towards the south- or west-side of the stroke. The standard application and repeatability is prior to tradition city typologies (Stroink p.110). Also, in order to design as much dwellings as possible, van den Broek did not repeat the opening of the block towards the park as in *De Eendracht*. This could be seen as a sign of an effacement of his own urban and architectural ideas in order to contribute to a greater good (decreasing the shortage of dwellings).

3.7. Woonmogelijkheden in het Nieuwe Rotterdam

In 1940 van den Broek, Brinkman, van Tijen and Maaskant publish a study towards ‘living possibilities in the new Rotterdam’. In the years before the war, these architects were associated with the *Nieuwe Zakelijkheid*⁵ which had the reputation of designing abstract, cold and even deterrent pure architecture (Stroink p.113 & van Tijen et al p.12) and with this study they tried to present their findings and research results of earlier years in a social and cultural setting and nuance their earlier work, especially in the case of van Tijen.

Besides elaborating ideas of the *Nieuwe Zakelijkheid*, the writers also tried to lead the question for new dwellings in the right direction. The publication was a way of trying to get a say in the *Wederopbouw*-plans for Rotterdam, because eventually it would appear the writers were not very fond of the plans of Witteveen, who immediately got the assignment to redesign the centre of Rotterdam after the bombing⁵. According to the writers, there were significant experiments with new building types or methods in the years leading up to the war, but due to crises and threatening circumstances, they always appeared to have a nostalgic element. A retrospect to a society which was not under all this pressure and there still was “a come together of reality and architectural beauty” (Van Tijen et al p.13). The study contains, besides disguised arguments against Witteveen, a study towards the neighbourhood-unit as a tool for the urban planner (after the war this would be a hugely important instrument in the rebuilding of Rotterdam) and a historical research towards public housing (most probably by van den Broek) and a case study for a fictional area (so they say) but is actually the Goudse Singel and its surroundings in Rotterdam (Vanstiphout p.273-280 & Stroink p.113-116).

In this case-study, new types of housing or a reorganisation of existing examples are implemented, which all are based on a study towards family composition and societal class. The goal was to make a comprehensive plan in which all classes of society had an underpinned type of dwelling on an underpinned location in the urban plan. This urban plan is a continuation of the introduction of the standardized dwelling, the large-scaled implementation of one type and even one particular design, which is a crucial breakpoint with the urban profession of the ‘20’s and ‘30’s. Later on in this report it will be noted that this shift is also noticable in Carnisse and Charlois. The Voornsevlief (also by van den Broek) seems more adapted to the urban situation, where the Vogelbuurt (part of the 1900-dwellingplan), Algemeen Belang and the 1000-dwellingplan are one of the first examples of mass-produced housing.

The upscaling of the dwelling type in an urban plan becomes clear in another example. Namely, that in this study the first example of the stamp⁶ can be seen for Rotterdam, which

5 Also Witteveen was no fan of the writers; it appeared he was rather angry about the publication of this study and its exposition in 1941 in Rotterdam (Stroink p.115).

6 In Dutch; stempel

was later famously introduced in Zuidwijk and especially Pendrecht. This stamp is the combination of different housing types in one identical spatial unity.

A few concrete issues need to be addressed that pop up in the study. Firstly, the writers state that with closed or semi-open building blocks, the corner houses are unpractical. Often the solutions for these dwellings are too luxurious or generous and therefore too expensive to serve as laborers dwellings. The solution is pulling the block apart in three (or four) different strips (Vanstiphout p.352 & Van Tijen p.55). An upcoming problem with this configuration is the often neglected end-faces of the last dwellings. They did not profit from their extraordinary position in the urban fabric, due to the priority of repetition above individual solutions. Most of the times, only a few small windows were added to a otherwise blind end-facade. In other words, the writers state that the cornerhouse brings along that many liveable and technical objections that a pulled-apart configuration is preferable. In the process of doing so, it is even more preferable to leave out the transverse strip for optimal insolation (see all possible options from the study in figure 5.7).

This brings us to the second issue; when introducing ‘option C’ from figure 5.7 (the option without transverse strip), the architects share the opinion that this will cause “deadly singular and mediocre streets in the most part of these layouts” (Van Tijen et al p.56). This could easily be solved, so they state, by applying variations and deviations within the strip to the base type. The size and types of the dwellings should vary in a single strip and that will cause different exteriors⁷ within the strip.

It could be said that this study was a translation and rephrasing of the ideologies of the *Nieuwe Zakelijkheid* or a combination of these ideas with a tangible context and the neighbourhood-principles⁸ and it gave this movement a social and analytical argumentation. After years of rebelling (and therefore stating more radical ideas), this was the moment for all architects to nuance their principles and as a consequence, making them more realistic and feasible.

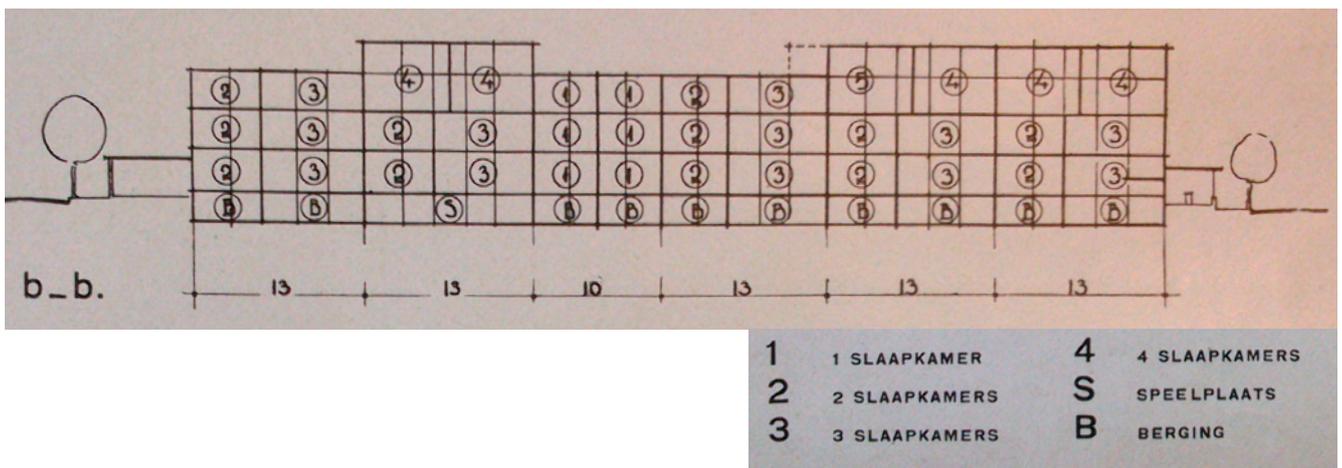


Figure 3.12

Figure 3.12

Schemes for different dwelling types in one strip.

Van Tijen et al p.58

7 “uiterlijkheden”
8 Wijkgedachte



Figure 3.13
*Selection of projects shown in
the present situation.
From top to bottom;*

*De Eendracht -Vroesenlaan
Algemeen Belang I -Amelandsestraat
Algemeen Belang II - Vroesenlaan
Vogelbuurt - Wielewaalstraat*

3.8 Conclusion

Concerning van den Broek's research and the development of dwelling designs, it is clearly visible that there is a strong connection between different large housing projects⁹ that van den Broek realized or proposed in the thirties. Even nowadays, this relationship is still visible between the different projects (see figure 3.13). He was inspired by, inter alia, the German researches that took place earlier and it is therefore no coincidence that Heinrich Leppla came to work in the office and a strong research division was set up.

After researching needs and elements in the household, this research was extended to the notion of flexibility and as a result day- and nightplans are produced in later designs. Another research, on the larger scale is set up towards the configuration of the building block. This is in line with prevailed views from, for example, J.J.P. Oud who stated that also the scale of the building block should be introduced in the scope of the architect.

One could state that eventually, the design for the housing association *Algemeen Belang I*, is the ultimate result of ten years of hard work. Van den Broek did not propose a solution for typical circumstances but actually sold a general design that can only be seen as the result of his research (Stroink p.103).

For the later implementation of standardized types such as *Algemeen Belang* in the urban fabric, van den Broek writes an important part of the study *Woonmogelijkheden in het Nieuwe Rotterdam*, together with van Tijen, Maaskant and Brinkman. In this study it becomes more clear how this standardized typology is supposed to work in a building block or strip. The result of this research could be characterised as following; van den Broek and others were almost convinced of the strip-typology as we know it. They reject the idea of the closed building block (for dwellings) and the semi-open building block is also not preferable. However, in their results they do not go as far as to give up the idea of an inner-area with gardens back-to-back and an outer area with the adjacent streets. This causes the final ideas to be not typed as 100% strip-type, but more of a strip-in-block-typology.

Lastly, what is very good about the study, is the fact that they acknowledge possible fears and weaknesses of their proposals. The most important one that they state is the notion that a standardized typology and strip-like configuration will cause 'deadly mediocre and singular streets'. They propose to tackle this weakness by introducing a patchwork of variations of one groundtype in one strip (figure 3.12) and by stating streets should be differently profiled to give identity to an area or street.

⁹ It must be stated that a very important project of van den Broek; Voornsevlief, dating from 1931, is not even elaborated but this project could also be placed in this trajectory of design and research towards the standardized types of *Algemeen Belang*.

4. Architectural Competition Woningen 1940

4.1. Preface

“Zoover waren wij, toen het onweer losbarste. Nu gaapt in Rotterdam de grote nationale wond. HET IS BIJ HET HELEN DAARVAN, DAT ZAL BLIJKEN, WELKE BETEKENIS NEDERLAND ALS CULTUURLAND BEZIT.” (van Tijen, Maaskant et al p.13)

It is war. The bombs have fallen on the centre of Rotterdam on May 14th, 1940 and the whole city centre is in rubble. There are emergency vilages thrown up around the current Zuidplein (Brabants betondorp) and the Wielewaal. As stated in chapter 1, the *Patroonsvereniging Rotterdamsche Bouwkring Algemeen Belang*, the *Katholieke Bond van Bouwpatroons Afdeeling Rotterdam* and the *Nederlandsche Aannemers- en Patroonsbond Afdeeling Rotterdam* wrote out a closed competition on the 19th of October in order to gain designs which could be mass-produced and would meet the requirements set out by J.A. Ringers¹, two months earlier.

The jury consists of the chairmen of all *Patroonsbonden*, ir. A. Aronsohn, who is an advisory constructor, and five non-competing architects. The organization will later be called ‘*Bouwbureau Arbeiderswoningen 1940*’, but does not call itself that way at the moment of launching the competition.

The following is important to state before elaborating on the structure of this chapter. Both organization and designer inevitably have to respect the decision of the jury, but nevertheless all competitors are obliged to conform to the rules set out by the organization, which are:

1. the contributor whose design is awarded, is obliged to cooperate in executing the proposal;
2. the contributor is also obliged to adjust his proposal in accordance with possible desires of the organization.

The original prizes and rewards were divided as follows;

1st prize;	fl 500,-
2nd prize;	fl 250,-
3rd prize;	fl 100,-

In the end however, it was divided in another order (Bouwkundig Weekblad 62:6 p.42);

1st prize; (Vermeer)	fl 400,-
2nd prize; (vd Broek)	fl 300,-
3rd prize; (Kammer)	fl 50,-
4th prize; (de Jonge)	fl 50,-
5th prize; (Sutterland)	fl 50,-

All of these five winning architects were given a part of the Vogelbuurt to develop their winning entries (figure 4.1). Vermeer obtained the central area between the girdleroads, west of the Lepelaarsingel, Kammer more or less a comparable area east of the Lepelaarsingel, van den Broek obtained the area south of the Wielewaalstraat and de Jonge and Sutterland obtained ‘leftovers’. Sutterland with his more monumental entry developed the block next to the Dorpsweg and de Jonge some small blocks north of the Gruttostraat.

Firstly, in this chapter will be analysed what the restrictions and the requirements were for the architects in this competition and how or if J.A. Ringers restricted the architects even further with his own guidelines. This could serve as an argument in a later analysis of the submission of van den Broek, which will logically be the second part of this chapter. A last part of the chapter will elaborate on possible changes or additions in the competition entry of van den Broek, because of differences between the built situation and the proposal of the competition

¹ All information about the architectural competition is directly from the competition brochure, called “Prijsvraag Woningen 1940” and can be found in the NAI Depot 215G04 booknr 16049 or in the archives of Sutterland in the GAR.

4.2. Restrictions and Requirements

The competition manual (NAi Depot 215G04, booknr 16049) consists of two parts. In the first part, the competition is set out by D. Buitendijk, J.A. Dessing and J.P. van Eesteren on behalf of the organization in thirteen articles, dated October 19th 1940. The second part is an appendix written by J.A. Ringers two months earlier, on August 21st, concerning measures to save building materials (*Maatregelen ter besparing op bouwmaterialen*). Both parts provide the contestants with restrictions, requirements and considerations and they will be discussed per article or paragraph in the original documents.

In the first part of the manual, the first four articles are more or less describing the competition organization and is for the more part described in paragraph 4.1. The articles 9 to 13 describe the products that should be handed in, how that should take place and the exposition and publication of these entries. The articles 5 to 8 are interesting considering tangible requirements for the design.

In article five, the demands for the layout of the dwelling are elaborated (p.2-3).

- The dwellings 'should be able to be build' in three layers².
- Every accesspoint should serve two dwellings per layer (which automatically implies a porch-like type).
- All dwellings together should have an average surface of no more than 62 m² (including staircases and entrances but without balconies). It must be noted that the average surface of the *Algemeen Belang*-type is 61,75 m².
- Every dwelling should at least contain 1 living room, 2 or 3 bedrooms, kitchen, toilet and a shower. The dwellings should be designed in blocks which contains as many 2-bedroom as 3-bedroom dwellings (implying a bayonet-type).
- Every dwelling should also have a storage of 12m², which preferably is connected to the street.

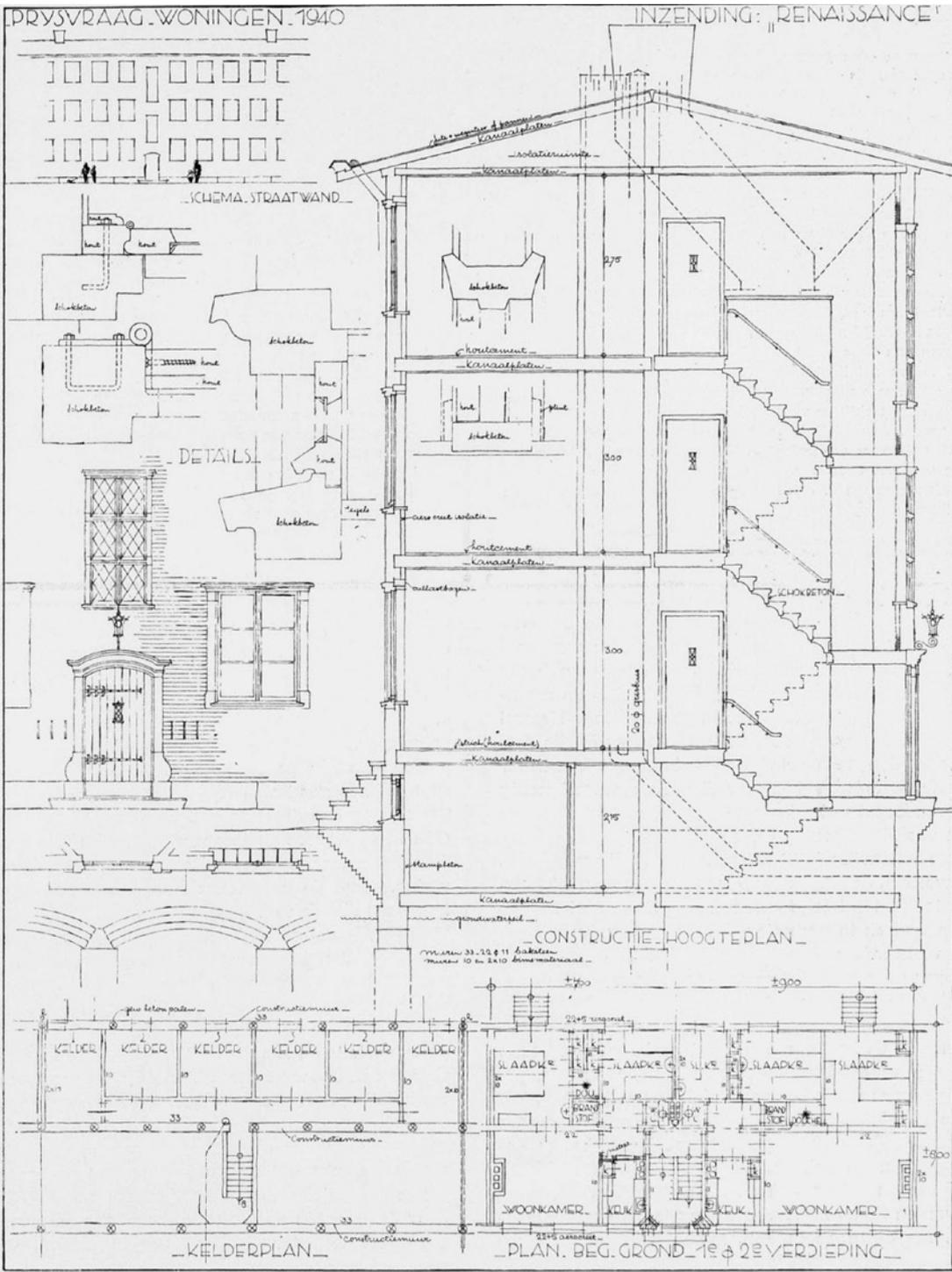
For every dwelling, the regulations of the *Bouwwerordening 1939* are in place and exceptions to this should be justified (article 7) and the building costs should not exceed fl 9.500,- (net, so exclusive architect's fees, profit etc.) (article 8).

In article six, requirements concerning construction and materials are set out (p.3).

- In all circumstances; wood and metal should be avoided as much as possible.
- Foundation; it should be considered that one can't apply wooden stakes and a foundation 'op staal' is also not possible. For the calculations of the foundation, it should be taken into account that steel is not available (reinforced concrete).
- When designing the staircases, roofs and floors, it also should be taken into account that steel and wood are not, or in very small amounts, available but the design should still meet standard requirements of insulation and permissible loads.
- Doors, window frames etc. should also be considered in other materials than wood.

In the appendix written by Ringers, four articles are written which can be summerized in short. The most important building materials are brick and concrete, secondary to those is reinforced concrete, if it can be argued that brick or normal concrete is not possible or disadvantageous. In four bullets, it is repeatedly emphasised to replace wood and steel with different building materials.

Specifically for construction, it is noted that elements in which only compression stress appears, must be constructed in brick or concrete. In the exceptional situation of using reinforced concrete, it can't contain more than 3% reinforcement. Bearing partition walls must be placed on top of each other to avoid extra constructions to bear the upper walls. Foundations, walls, floors, roofs and basements should contain no or as little wood and steel as possible. Ringers keeps emphasising this in all 16 points of his appendix.



PRYSVRAAG WONINGEN 1940 ROTTERDAM (OORSPRONKELIJKE TEEKENING 4 X VERKLEIND)
 ARCH. H. SUTTERLAND.

Figure 4.2

Figure 4.2
 Entry of Sutterland.
 Bouwkundig Weekblad
 (62:6) p.45

The frames of doors and windows can't contain steel or wooden lintels. This must be solved by either concrete, but more preferably by a stretch or arc in the masonry³.

Finally it is stated that requests for buildings, which (in Ringers' opinion) do not take these considerations in account enough, will be rejected. Ringers authorizes himself to use local services as *Bouw- en Woningtoezicht* to monitor the compliance of these regulations and guidelines.

4.3. Submissions of Vermeer and Sutterland

In order to further explore the context in the surrounding neighbourhood, the competition entries of Vermeer and Sutterland are shortly explained, because they are closest to van den Broek's area, bordering the other side of the Wielewaalstraat and thus influencing this part of the Vogelbuurt (figure 4.1).

The architect Hendrik Sutterland sr. (1889-1964) has used the name "Architectenbureau Sutterland" since 1924, but is in waged labor in other architectural firms until 1941. Initially, he worked in the firm of Granpré Molière as chief 'drawing room'⁴, where he participated in the design of buildings and subdivision of Tuindorp Vreewijk. In 1920 he moved to the architectural firm of P.G. Buskens, where he is named as architect on the payroll for the first time. Until 1920 he was only mentioned as drawer, employee or constructor, but from this year on he signs his drawings with "Sutterland, H. architect". Within the bureau of Buskens, the focus shifted from dwellings to churches. On the first of July, 1930 Sutterland is named *Directeur van Gemeentewerken en Hoofd Technische Dienst* (Director of Public Works and Head of the Technical Services) for the municipality of Overschie⁵. It is noticeable that, in 1942, son Huibert Sutterland -meanwhile risen within father's company as an architect- moves to the Provenierssingel in Rotterdam and that the architectural firm Sutterland moves with him. Thus should be taken into account that besides Sutterland sr. his son also had an influence on the design for the Vogelbuurt-building block.

Sutterland's submission (figure 4.2) for the competition carried the name "Renaissance" and the original drawings show enormous differences with the current look (figure 4.5a) and expression of the block. In the jury report⁶, a few points are brought forward. First, the plans of the dwellings are not optimal; the plan is not reflectable (with regards to sunshine), the master bedroom is not connected to the hallway, the shower is only reachable via the bedroom, the "kolenkist" (coal storage) is not acceptable, the living room is too small (according to the regulations at that time) and there are no balconies. Probably the design still managed to win the 5th prize, because the design of the facades "could be called succesfull" and the construction is well designed (except for the piping).

About Willem Vermeer, there is little to be found, except for the fact that his firm with ir. van der Tak later on changed into Vermeer & van Herwaarden. Nonetheless, this engineer still won the first prize in the competition "Woningen 1940". With the motto "1941" Vermeer had sent in his drawings (figure 4.3) and got the following, summarized, feedback from the jury⁷;

3 in Dutch; strek of boog in het metselwerk

4 In Dutch; tekenkamer

5 All biographical information comes from the Sutterland archive in the GAR, archive number 397.

6 *Juryrapport Prijsvraag Woningen 1940* p.11. Via Gemeentearchief Rotterdam, archive Sutterland (nr 397); written on December 20th 1940.

7 *Juryrapport Prijsvraag Woningen 1940* p.13-14.

The layout of the plan is praiseworthy, but also in this case a (this time the small) bedroom is only reachable through the living room. Besides, the staircase is not in accordance with building regulations and the adjacent walls are designed too small. As final critique concerns the furniture is mentioned, but immediately afterwards it is said that all these problems can easily be solved.

Construction-wise, the construction of the floors is praised, even though, according to the jury, a wrong number is used for payload (just as van den Broek, Vermeer used 150kg). Besides some minor flaws (not enough space for piping between ceiling and floor), the jury is strikingly enthusiastic about this submission. The report concludes with two short sentences: “The budgetting is correct. The architecture is the weakest link in this design.”. Apparently enough for Vermeer to obtain the first prize though. What is interesting to mention is the fact that in his proposal, Vermeer designed an asymmetrical entry of the porch. Nowadays, only the blocks of van den Broek have an asymmetrical entrance.

4.4. Submission by J.H. van den Broek

The submission of van den Broek (figure 4.4) was an exact copy of the *Algemeen Belang I* and *II*, as van den Broek states himself in the accompanying description published in *Bouwkundig Weekblad* (62:7 p.52); “The proposed dwellingtype has already been applied in 1750 dwellings by cooperating housing associations in Rotterdam.”. According to Vanstiphout (p.371) however, the number of developed dwellings at that time with this design is a bit lower. The description of requirements in the manual already showed a lot of overlap with the *Algemeen Belang*-project. It is no surprise that this design was copied one-on-one and handed in and even won the second prize.

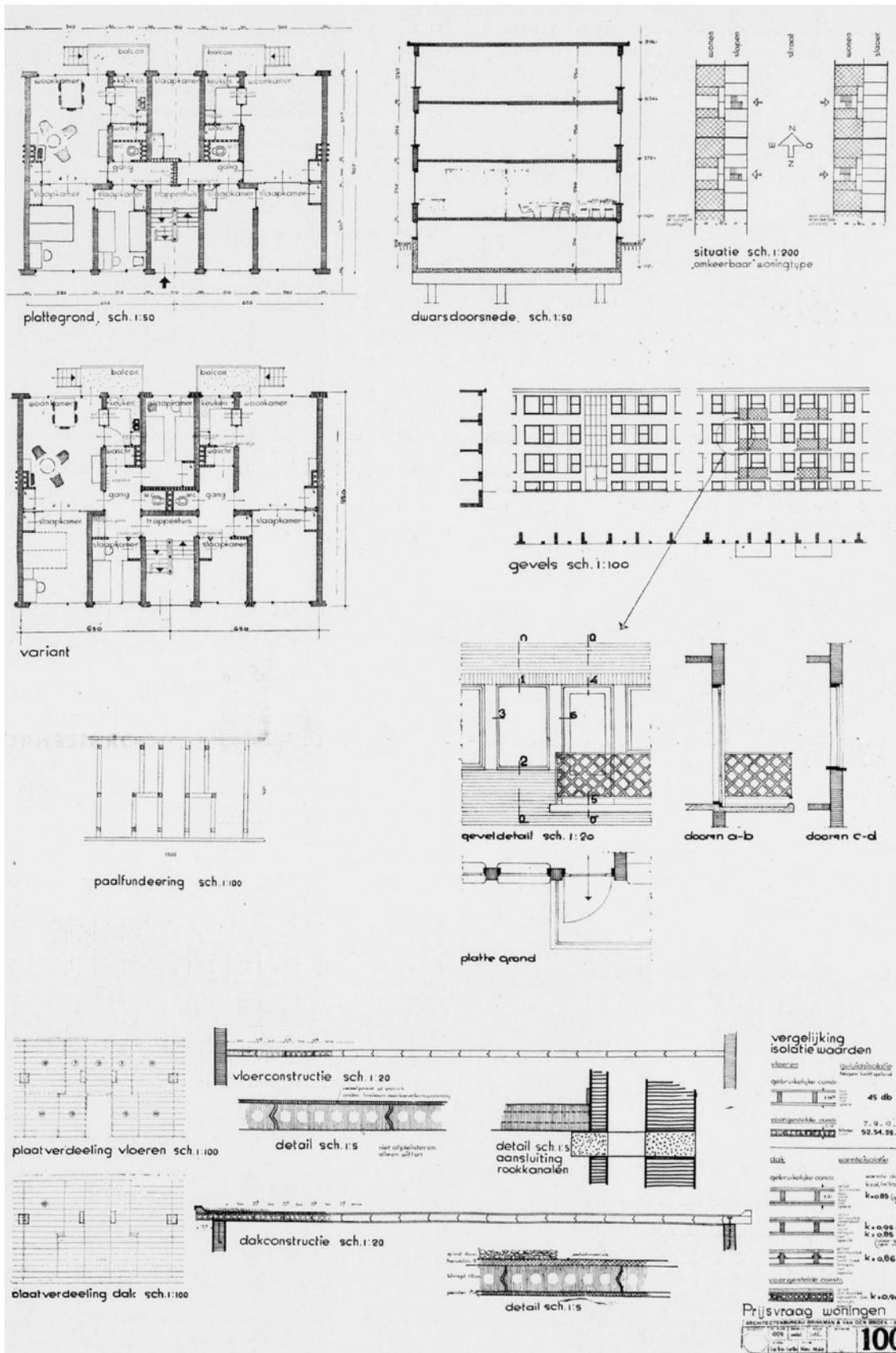
The difference is that van den Broek added a detailed technical description (Vanstiphout p.371). Because the dwellingplan is the same as earlier discussed projects (bayonet-type, en-suite living room by which the dwelling can adapt to any orientation, 2 or 3 bedroom-apartments and an average surface of 61,75m²), the focus will be on the technical description of the competition entry.

The foundation is constructed in concrete stakes of 34 x 34 cm and carry a reinforced concrete basement with minimal thicknesses of the walls (van den Broek thinks brick will not do in these measurements and bearing loads). This reinforced concrete is used all the way up to the ground floor, that has been raised 1,1 meter above the ground level.

For floors and roof, BIM-slabs are used. The house separating floors are designed without any finishing, but are argued to be insulating good enough. Van den Broek compares the used construction -of which is stated there is very little research published- with common used constructions as wooden beams and floor. Thermal insulation is argued to be comparable to wooden constructions and sound isolation is argued to be even better.

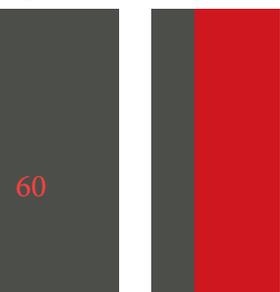
For the roof the BIM-slabs are plastered. It is said that BIM-slabs absorb water and this has a negative influence on the insulation-values. With a protecting plaster-layer, this could easily be resolved. This entry is the only prize-winning entry with a flat roof.

Furthermore some minor differences between earlier plans must be noted. The window frames are copied from *Algemeen Belang II* (with the masonry division) and not I. The balconies are detailed differently; in earlier plans, a steel beam is used to carry the balcony and now the same construction principle is executed in concrete and the fencing of the balcony is designed differently. On a larger scale, a specific urban context is missing and as a consequence, this proposal has all the elements of strip housing (concerning the dwellings), because of the orientation (the absence of an inner- and outer area) and the absence of cornerhouses or other specific corner solutions.



VRAAG WONINGEN 1940 ROTTERDAM (OORSPRONKELIJKE TEEKENING 4 X VERKLEIND). ARCH. BRINKMAN EN VAN DEN BROEK

Figure 4.4
 Entry of Van den Broek.
 Bouwkundig Weekblad
 (62:7) p.53



The feedback from the jury on Optimal Minimum could be summarized as following; In this plan (just as in other entries), the master bedroom is not reachable from the hall and is the piping not well solved (in this case it was suggested via the ceiling). Besides, the jury says that an extra finish to the floor and ceiling is necessary in this design and that the construction is not well proposed. Furthermore, the floor height is 2,50m instead of the required 2,70m which saves a lot of money in the plans, but the jury is not convinced that the Building Regulation Board will be persuaded by the arguments of van den Broek and that an extra 20cm of height each floor will also cost a lot of extra money.

Finally the jury states that “the architecture is not in accordance with the good qualities of the plans” but that on the other hand “the submission is, concerning care and execution, the best of all submissions”. Together with a fine detailing of windows and frames, this resulted in the second prize.



A



B



C

Figure 4.5

Figure 4.5

Pictures of the current situation of (A) Sutterland in the Tapuitstraat (B) Vermeer in the Fazantstraat and (C) van den Broek in the Tapuitstraat.

4.5. Conclusion; from entry to execution

On October 19th 1940, the competition is started and almost exactly one year later, on October 20th 1941, the *'eerste paal wordt geslagen'*⁸. In this year, the competition entries of the five winners have been adapted into an executable plan and made to fit into Witteveen's urban layout. As stated in the preface, the organization had the authority to demand changes in the proposal. The documents which show the demand or request for changes are, however, not (all) found in the chaotic archives that have remained from the period 1940-1945.

The results of the competition will be part of the larger 1400-dwellingplan (which is a continuation of the 1000-dwellingplan) and will be renamed in *1900-woningenplan* and later on *Hypotheekregeling*, as a result of the financial aid gained from the city government.

Answering the question stated in the introduction; how earlier dwelling development is recognizable seems very obvious. The submission of Jo van den Broek is an actual copy of his plans for the 1000-dwellingplan except for some minor changes. These changes had to be done in order to replace steel elements in the earlier design with concrete ones. Because in the situation-drawing of the submission, no location or context is drawn, the entry can be considered as a purely stroke-typology.

As we can read from the jury report, their emphasis is mostly on the technical aspects and the layout of the plan. The fact that all rooms must be accessible from the hallway (van den Broek and Vermeer) and the reflectable map (Sutterland) are the most important points of critique concerning the layout and floor construction and piping the most important concerning technical aspects. The jury does not take a position in concerning architectural style, composition or expression of the design, only a general value is attributed to the entries. The fact that, in the winning entry of Vermeer, this architectural value is described as 'the weakest link of the entry' shows that this was not a priority for the jury.

It is striking to see that the general feasibility and thus standardization is by far the most important issue in this competition. Characteristic is that there is no specific location given, so an urban layout could not be included and designs should be applicable everywhere.

A lot of changes have taken place after the feedback of the jury, for example plans have changed (in all cases), the layout of the facade of Sutterland has been adapted (figure 4.5.a) and they were -as said- fitted in Witteveen's plan which required other small adaptations. Another example is that van den Broek eventually conformed to the tilted roofs that Witteveen planned in the area (figure 4.5.c) and a last example from Vermeer is the changed placement of the front door in comparison to the porch. In the competition entry it is designed asymmetrical but in the present situation it is located centrally under the porch-window (figure 4.5.b).

5. The block/strip paradox

5.1. Preface

One could have grouped this chapter with chapter 4 because it could (and should) be read straight after the other. The last chapter ended with the notion that the entries needed adaptation and implementation in an urban fabric and changes instructed by the jury. However, this chapter both investigates on the competition entries as well as the urban layout of Witteveen. This chapter namely gives answer to the question which motives and characteristics of both Witteveen or van den Broek are still present or tangible, combining all historicizing answers of earlier chapters to the present day situation.

In this chapter it will be analysed what elements, principles and ideas of Witteveen are still visible, tangible or can still be experienced in Carnisse. Automatically, one will end up with the notion and the characteristics of the urban building block as an organizing typology in his work and its appearance in the present urban fabric. From this urban analysis, the analysis will be zoomed in more and more on the Vogelbuurt, the southern part of the Vogelbuurt and eventually specific characteristics of the van den Broek building blocks and individual dwellings.

The entries of Vermeer and Sutterland will not be analysed any further on the architectural scale, but they will play an important part in the more urban analysis of the neighbourhood and therefore, a small investigation towards their entries was required in chapter four.

Besides an analysis of the present situation, this chapter will also have to make the link to the legislative history in every aspect that is investigated. In other words; every finding, every discovered change or adaptation must be placed in time.

Please note that only a part of Charlois and Carnisse has been analysed in the following paragraphs. The historic centre of Charlois and older building blocks along the Wolphaertsbocht and Katendrechtse Lagedijk are much older and already taken into account in the first plans of Witteveen. In that sense, these areas had no influence on the outcome of newer parts of South or the way the urban structure of streets and building blocks ended up to be. An analysis of this part would therefore be useless.

In this chapter, different acknowledgements are set out and arranged per topic. The corresponding drawings or maps sometimes combine information that is relevant for more topics. The topics are more or less organized from the largest to the smaller scales.

First the main urban structure will be analysed. This mostly concerns the layout of the urban plan, answering the question if the organization of public space and streets have survived the course of time. Then secondly, within this layout of streets, the layout of whole other structures and elements take place.

The most important of them are the ones of the buildings and the building blocks. This issue is cut up in three topics. First the typology of the houses is set out as a context for the other topics, because most argumentation for next topics can be traced back to this issue. Secondly, the 'bowls' (or *kommen*) which were designed by Witteveen and accompanying that issue is the notion of building height is set out. This leads to paragraph 5.3 in which the building blocks and the typology of their layout will be elaborated. These blocks are analysed through the notion of typology and as a result, different orientations and streetprofiles are also analysed.

Further zoomed in, the architectural scale is analysed in close relation with the analysis (and its results) of the building blocks. And answer the question of how the standardization of dwellings was fitted in an urban fabric by architectural means. The last step in this analysis is the zooming in on the details. It will show that this rather rough division in typologies can be nuanced and it will show that even in details the urban layout of Witteveen can be (and is being) emphasised. Within these typologies but on a smaller scale, again some differentiations can be noted, which create unique contexts everywhere in the urban fabric.



Figure 5.1

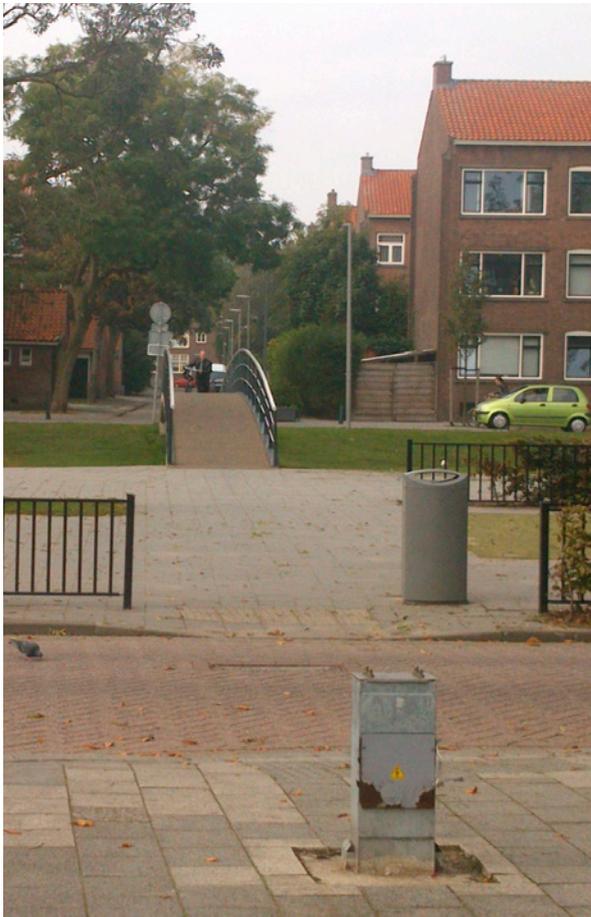


Figure 5.2



Figure 5.3

Figure 5.1
Analytical understanding of the urban structure

Figure 5.2
View on the Lepelaarsingel and the Roodborststraat and the new footbridge connecting both.

Figure 5.3
View on the Boergoensevliet from the Voornsevliet. One can notice the perfect connection with the Gruttostraat cut through.

5.2. Appearance of the urban layout

Urban structure

As already suspected, the main layout of the urban structure (figure 5.1) was preserved. The main radial roads move from the Maastunnel-trace and Maashaven Oostzijde in both southeast and southwestern direction. The most important radials in the neighbourhood of the Vogelbuurt are the Dorpsweg and the Pleinweg. A bit further along and not specifically designed as a radial, Waalhaven Oostzijde is also an important road. Also there are still some green wedges to be found like the Boergoensevliet, the Lepelaarsingel and Urkersingel. These wedges end up in the -still present- green girdle. This girdle of green area's also starts at the Wielewaal, a pond-like surface in the west and flows through lanes, the Zuiderpark, sport accommodations and allotments towards the Ahoy and all the way to Vreewijk.

The Waalhaven Oostzijde is mentioned earlier because at this street, besides the green girdle, also a few girdleroads start and end near the Zuidplein; identical to the ideas of Witteveen in both 1926 and 1938 and even with quite a similar execution, compared to the original design. These roads play an important role in dividing and connecting different neighbourhoods. Furthermore, these roads are -besides the main traffic routes- the locations for other functions than housing to locate themselves.

There is a distinction between primary and secondary girdleroads to be noticed. This distinction has to do with the type of streets that are part of the girdle and whether the girdle still functions as one connecting line in the urban fabric. These two aspects both lead to a division based on the dominance of the girdle in the urban fabric. The most northern girdleroad (Voornse Vliet, Gruttostraat, Utenhagestraat & Markerstraat) and the only girdle that is not cut up (Van Blommesteijnlaan, Arendsweg, Fuutstraat, Wielewaalstraat, Carnissensingel) are the two main girdleroads. The one in between and on the southern border with the green girdle are secondary, but still worth mentioning because they reflect the shape of the other girdles in the exact same way.

It can also be noticed that all girdle roads are cut up at some point(s) between Waalhaven and Zuidplein. The secondary girdleroads are broken up in pieces more often and seem to do so at the location of the green wedges, another primary urban structure in the city. There are two exceptions; there is also a cut at the Sutterland-block and at the elongated building block, just west of Zuidplein. The most northern primary girdle road is cut up twice (the breaking point at the Boergoensevliet for example is seen on figure 5.3). At the point of the Boergoensevliet one is sure there used to be a connection if both sides of this green wedge could connect so perfectly. The introduction of the tram (and more modern safety measurements) most probably made it not worth it for the city council to maintain a crossing at this point.

A development the other way around can be seen at the Lepelaarsingel (figure 5.2), where only a few years ago a footbridge has been developed and is now connecting the Roodborststraat with the Meester Arendsweg. This way the continuation of this particular secondary girdleroad has been enhanced.

Typology of the dwellings

In figure 5.5 (page 64) it is roughly noticeable what kind of typology was designed at what location. The categories are family-dwellings (groundbound), *beneden-boven woningen* (three layers and four+ layers), porch dwellings (three layers, three layers with tilted roof and four+ layers) and special which includes all non-residential buildings, elderly housing etc.

This rough division has been made and not every other dwelling type has been set out because these are the most dominant types. Also; if in the present situation a *beneden-bovenwoning* has been merged into one, from the streets it still feels like one of the *beneden-bovenwoningen*,



Figure 5.4

Figure 5.4
Analytical understanding of the bowl-structure.

although it should be placed in the single family-dwelling (groundbound). In other words; for an accurate investigation of the way dwellings are used nowadays this is not the right map, this map shows in what concept these dwellings were constructed.

What is most striking is the pattern of colours one can observe in the west of Charlois, while more eastward, these patches of colours are getting larger and larger. This has to do with the upscaling of urban and architectural assignments¹ and larger parts of the city were developed all at once. The only observation worth mentioning in comparison to Witteveen's layout plans is that there is no clear differentiation in typology between a denser northern-part and a more open southern-part. Only south of the Nachtegaalplein and along the Roerdomplaan it is slightly noticeable due to the familydwellings. However, this part of the plan changed a lot and does not even look anything like the original plans, which makes these parts uncomparable.

Bowls of blocks

On July 29th 1940, just before the competition-start, it is noted in the minutes of the meeting in question of the *Commissie voor den Technischen Dienst* that in the west of Carnisse, the land is suitable for 400 dwellings with two layers to be constructed. This is, nowadays, nowhere to be found in this area; only three layered blocks and strips (figure 5.4). However, it is not clear what was the reason for changing the number of layers in this area. In the *pandkaarten*-archives of the GAR, a lot of drawings are found in which the two-layered proposals are fully worked out which means the blocks were supposed to be two-layered for a long time.

The web of questions becomes even more complicated after November 2nd 1940, where in minutes of a meeting is referred to the transaction of the lands for the neighbourhood. It is said that the grounds are bought by the municipality and are sold to the united *Patroonsbonden* for a standard prize per dwelling over three layers (fl 2400,- per building). However, the option and financing of two layered blocks is also mentioned later on in the minutes. Finally, these numbers and figures are translated into a price per meter facade, which differs according to the number of layers.

In the minutes of the meeting of the *Commissie voor den Technischen Dienst* on February 17th, 1941 there has been a topic about the grounds for the *Carnissebuurt*. It is stated by the chairman (alderman Brautigam) that there is a mistake in the drawings; all along the Dorpsweg 3-layered buildings will be erected, no blocks and dwellings with 4 layers which apparently were drawn. The reason behind or the decision that the rest of the building blocks should be raised from two layers to three still remains a question.

Regardless of the reasons behind the decisions, we can assume the decisions were made because the Vogelbuurt is erected with only three layered building blocks with a tilted roof (figure 5.4). When this type of building block and four layered blocks or higher are drawn in one category and are plotted against lower building blocks (the other category), the bowls of dwellings which Witteveen intended in this area might or might not appear. It can be seen in the figure that in earlier projects, this bowl-instrument (*kommen* als ordenened principe) is still recognizable. Around Zuidplein and the Pleinweg, higher blocks protect the Eilandenbuurt and the Amelandsplein is now a sheltered area for the neighbourhood. In the far west, a large bowl is also still visible, with higher and older buildings sheltering the area from the Boergoensevliet and buildings on the historical dike (Verboomstraat and Zuidhoek) which make the block already elevated more.

Moving towards the Vogelbuurt, there is a higher western border of the Dorpsweg with a sheltered area around the Nachtegaalplein, but on the east side (the Vogelbuurt) of the Dorpsweg, one big patch of denser blocks is created and the idea of the bowl has been

1 Although around the Carnissesingel, there are all *beneneden boven-woningen* (of which you could say that this is also a large-scale assignment), but they are almost all individually designed and constructed.

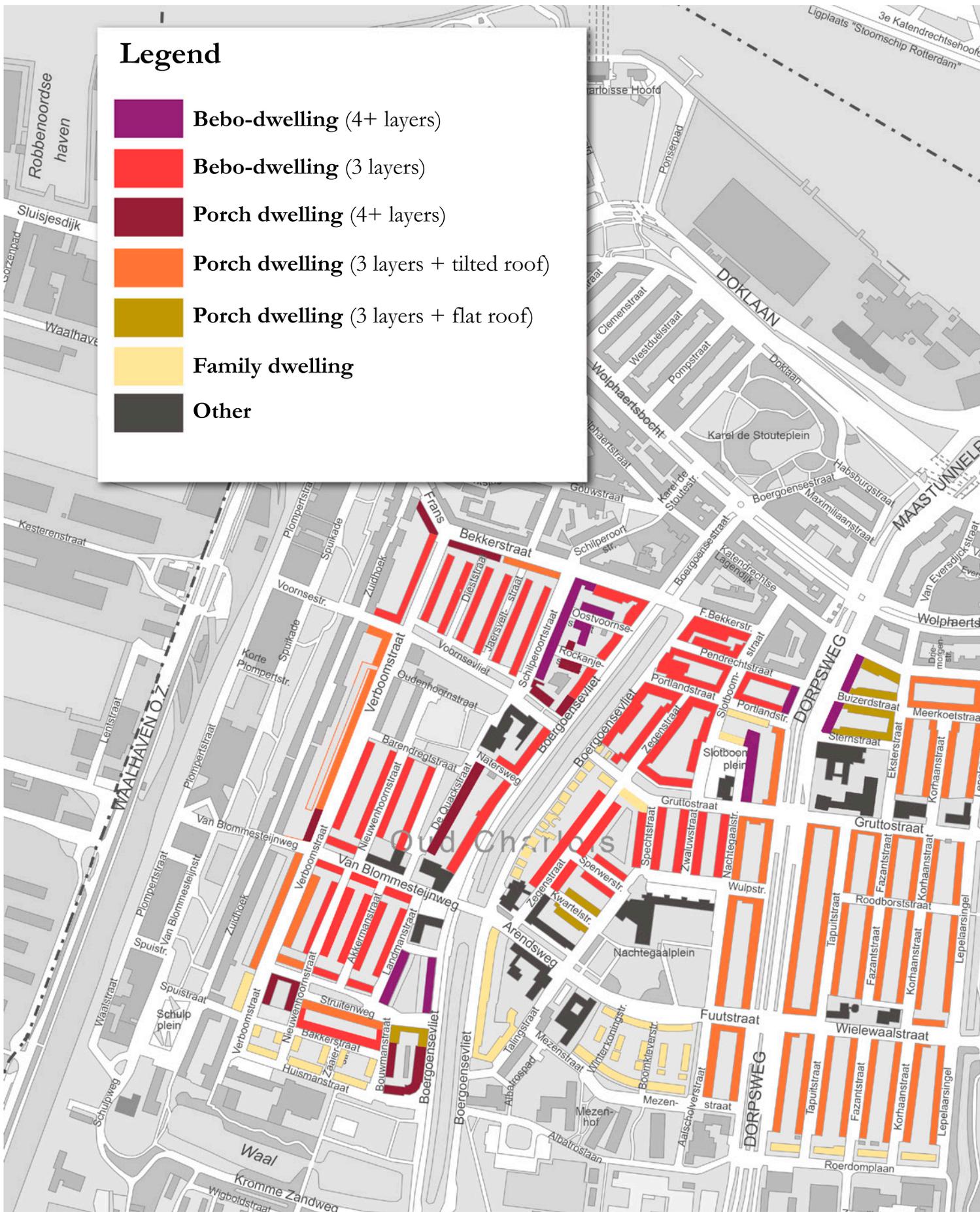
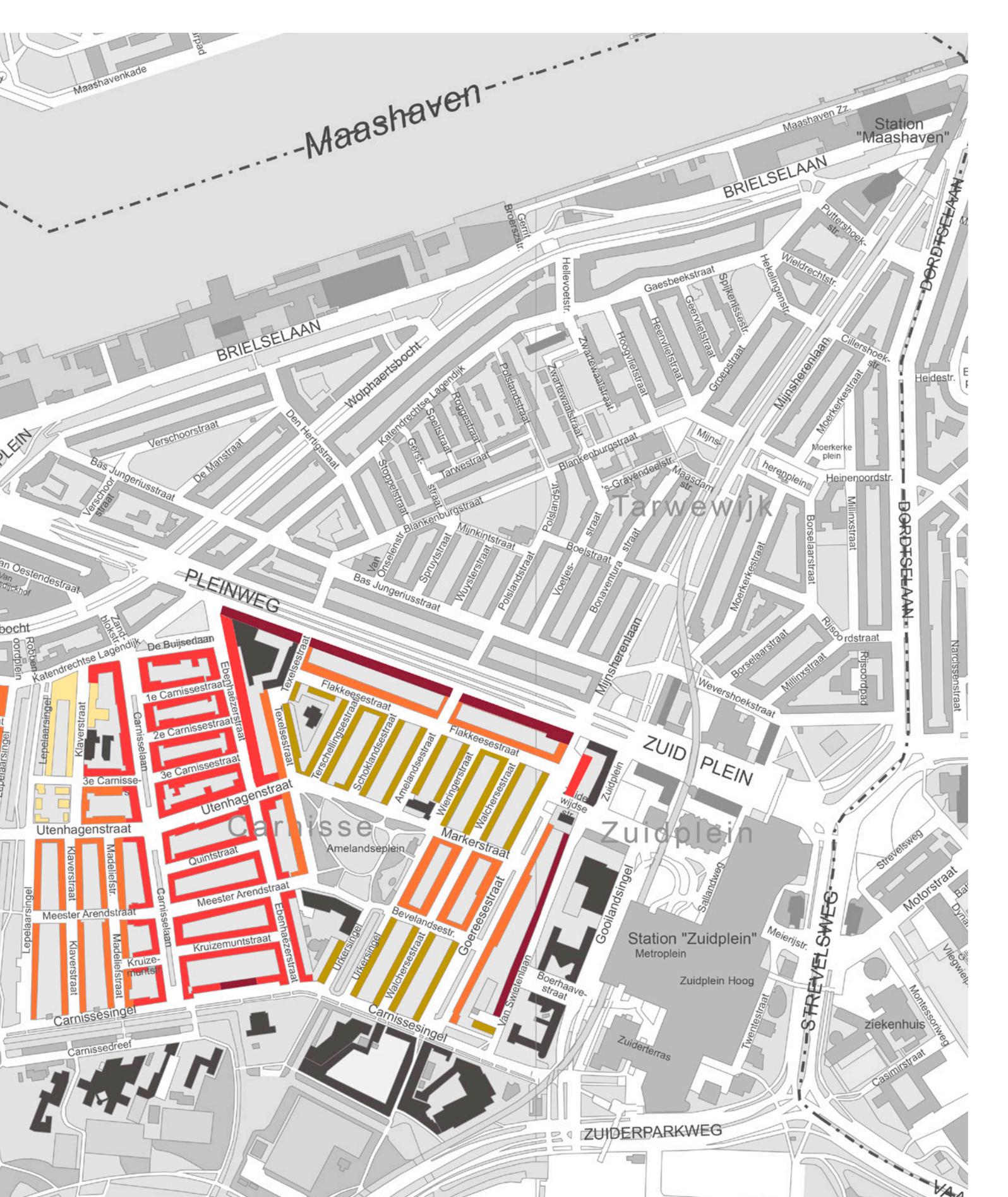


Figure 5.5

Figure 5.5

Analytical understanding of the dwelling typologies



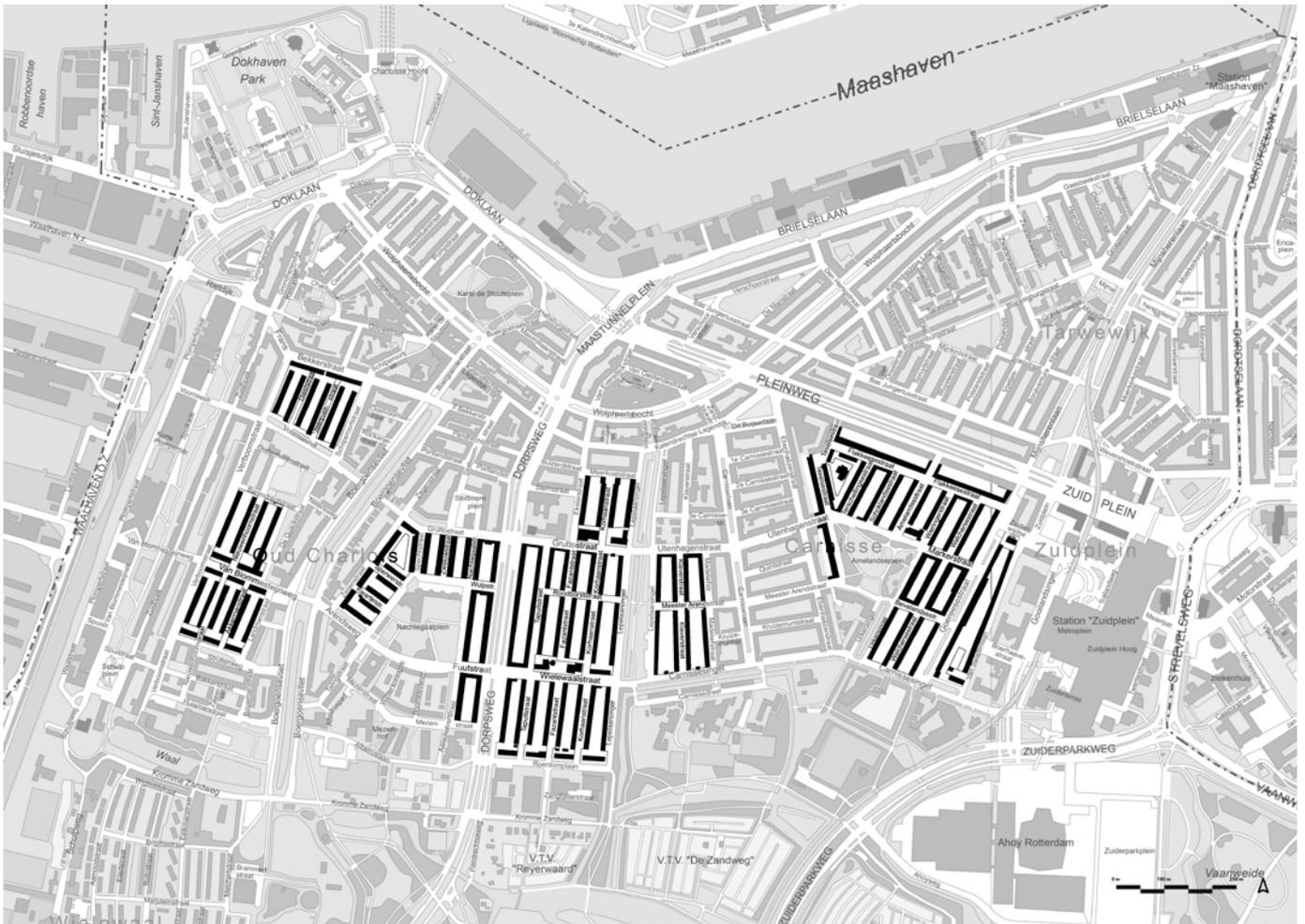


Figure 5.6

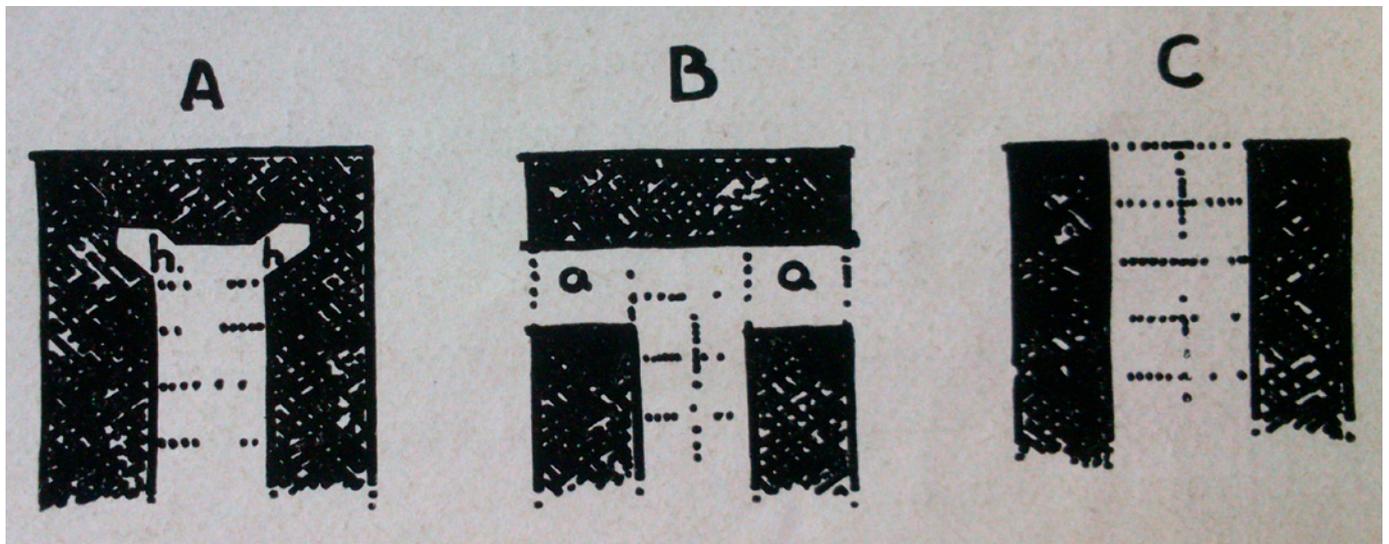


Figure 5.7

Figure 5.6
Highlighted comparable building blocks.

Figure 5.7
Schemes for solutions on the transverse side of a building block. Van Tijen et al p.55

abandoned. Summarizing, the characteristics of the bowl of building blocks as an instrument for urban planning from the detailed expansion plan of Witteveen are most tangible in the oldest parts of the area. The younger the neighbourhood, the less keynotes the neighbourhood shows with the 'bowl of building blocks'. This also shows that van den Broek eventually came to terms with the demand of Witteveen to introduce 'more architectural dignity' in this area, and therefore added the tilted roof on his design.

5.3 Appearance of the building blocks

In order to zoom in more on the building blocks, it must be notified first that there are a lot of comparable building blocks in the immediate surroundings of the Vogelbuurt (figure 5.6). This is a logical consequence of the fact that van den Broek also designed the 1000-dwellingsplan and blocks at the Voornsevlief for example. In the west, in Charlois, the selected blocks are comparable in their shape and connection to the girdle roads (Voornsevlief and Van Blommesteinweg). However not in typology, because they mostly consist of *benedenbovenwoningen* (figure 5.5). More towards the east, the blocks are also comparable in typology. Almost all blocks consist of three-layered porch dwellings (regardless roofing).

It must be noted that Witteveen's principles were preserved in designing inner- and outerarea's. All gardens in the Vogelbuurt and all comparable blocks are still back-to-back and form a sheltered inner area. In the meantime, the street functions as a central arrival point for two strips (of different blocks) at the same time. The strip-typology consists, in his core layout, of a strip with an accompanying backyard, but both elements are located next to a street. This way, every street is an arrival point for one strip and at the same time, a back entrance for the gardens of the opposing strip. This is nowhere in Carnisse or Charlois the case, and was practiced far more often after the war.

Block typology

What is interesting in comparing building blocks as unity with one another, is finding out where they can be placed in the timeline of Jo van den Broek his research-development concerning the building block scale. In order to connect that research to real building blocks is comparing them to the proposed solutions for the transverse side of a building block (figure 5.7). In this proposal, three steps can be seen in the progress from closed building block (type A) towards a more strip like typology (type C). This is however not the ultimate strip-typology because the gardens are still drawn back-to-back and in a total strip configuration, all gardens will face the same direction.

In type A, the building block remains its original form and so do the corner houses. However, this situation implies the undesirable situation of these corner houses and therefore also propose 'special design interventions' in the original closed building block. This can have any shape or could for example also be solved by designing another function than housing in this corner. Another possibility, which also belongs to this first situation, is the situation in which the transverse side is designed in a whole other way than the long sides, but still strongly acts as a continuation of the building block. So, if one applies situation A, an architect should always design an intervention to better the position of the corner house in the closed building block and that intervention could come in very different proposals and forms.

In type B, the closed building has been pulled apart into four strips and the corner plot is 'adopted' by on the two adjacent strips. In figure 5.7 the transverse strip adopted the corner plots, but one could also imagine the situation in which the long strips adopt the corner plots and the transverse strip will be shortened. The fact that there is a strip that is transverse to two longer strips, does not automatically mean it is comparable to situation B. The transverse strip in situation B will esthetically, programmatically or otherwise still function or have a strong



Figure 5.8



Figure 5.9

Figure 5.8

Categorisation of the comparable building blocks in the three types of figure 5.7.

Figure 5.9

Orientation of the balconies. R. van Tatenhove (2013) via Veldacademie Workshop.

relationship with the other strips.

Type C in figure 5.7 is then a situation where the long strips have adopted the corner plots but the transverse strip has fully disappeared, a strong argumentation concerning the insulation of the inner-area. This would later also become a strong principle for the strip-typology. The gardens form the border with the street on the transverse side.

In figure 5.8 it can be seen how these blocks are categorized. The results are not as clearly divided as one might suspect. A reason for this could be the fact that in the lifespan of 70 years buildings were refurbished, demolished, extended etc. which causes some of the results. An example could be the appearance of two types in one single block.

For the Vogelbuurt the following can be concluded; Sutterland clearly followed the layout of Witteveen, who wanted to accentuate the main radial routes with more-layered, closed building blocks. This has also taken place in the blocks next to the Pleinweg. The shops at the Gruttostraat are very well connected to the adjacent strips and therefore can also be considered as Type A, although the scale and function of the transverse strip is totally different. The transverse side of the block next to the Lepelaarsingel on the Gruttostraat, only consists of a transformer box, which allows the gardens to be the most dominant border with the street and is therefore categorised as type C in figure 5.8.

The Van den Broek blocks are categorised in type C, even though there are transverse strips on the south side, adjacent to the secondary girdle road, the Roerdomplaan. The blocks are still placed in type C because of four reasons. Firstly, these dwellings are much smaller than the long strips behind them and are therefore less dominant in the configuration. Secondly, they are located far away from the long strips, which makes the connection in the configuration harder, especially because these dwellings have a total different appeal to them than the strips of van den Broek. Thirdly, due to the front gardens, the green is still a dominant element in the border between block and street (which could indirectly be seen as a characteristic of type C) and lastly, because the north endings of the blocks completely follow the properties set out by type C.

The next step concerning end-facades and transverse strips is researching the influence of the urban layout on the architectural design and expression, by combining this categorisation with results from paragraph 5.2. This will be elaborated on in paragraph 5.4.

Orientation

Another important aspect is the orientation of the dwellings. Although this mostly takes place in the plans of the dwellings (and therefore should be addressed in paragraph 5.4), the placement of the balconies in this plan is interesting for the appearance of the street. It is noticeable that the blocks north of the Wielewaalstraat all have their balconies facing the inner-area, just like an standard block-typology (figure 5.9).

The strips designed by van den Broek, south of the Wielewaalstraat, have their balconies orientated on the west (and the sun), except for the strip along the Lepelaarsingel, which focusses on that particular green wedge (figure 5.9). Besides the fact that an orientation on the west is an aspect of the strip-typology, it also is one of the elements which create an asymmetrical streetprofile.

Streetprofile

The symmetrical streetprofile is usually an element in the building block typology and the asymmetrical streetprofile is said to be a characteristic of the strip typology. This is quite logical, because in the strip typology the road is bordered by the strip on one side and backgardens of another strip on the other side.



Figure 5.10

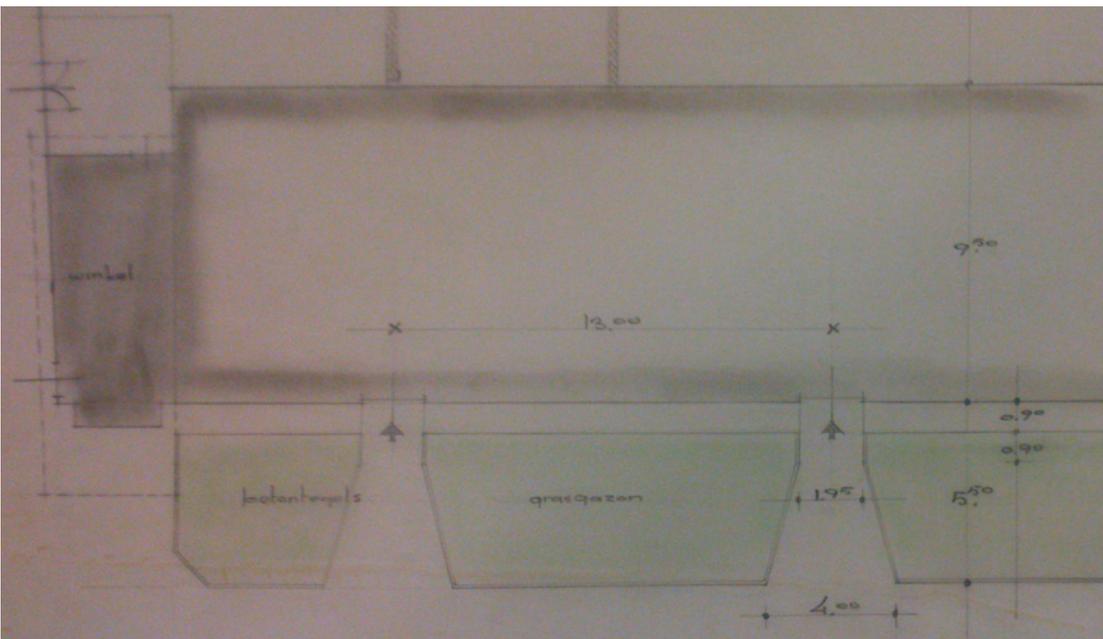


Figure 5.11

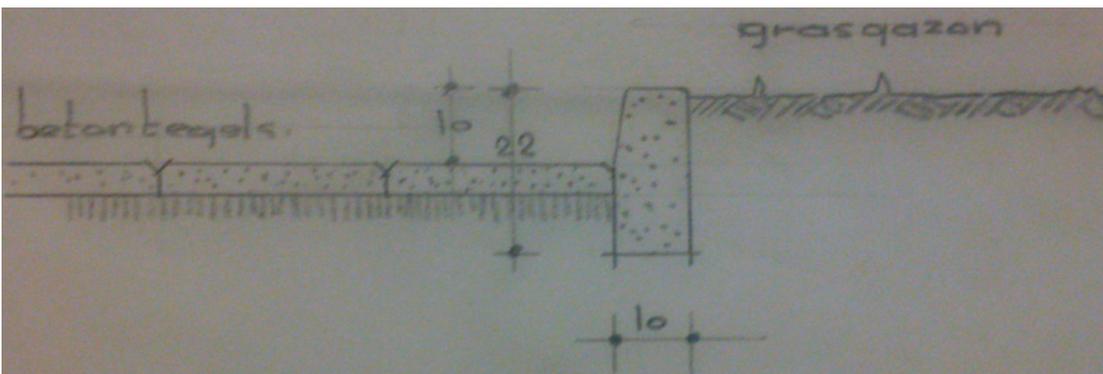


Figure 5.12

Figure 5.10

Picture taken from the current location of the elementary school to the south. Obtained via a flyer, source unknown.

Figure 5.11

Map of sidewalk design. Van den Broek (1946) via NAI, archive BROX 648.

Figure 5.12

Detail of sidewalk design. Van den Broek (1946) via NAI, archive BROX 648.

In the original design of the streetprofiles in the Vogelbuurt three situations can be found. First, drawings are found from van den Broek's further elaborated design for the Vogelbuurt. In these drawings, dating from 1946, one can see the large flowerbeds and converging tiled paths towards the front doors of the porches (figure 5.11 and 5.12). These flowerbeds could only be placed on a very wide sidewalk. In figure 5.10, an undated photograph of what seems to be the early years of the Vogelbuurt (no buildings in the background and very small trees and low vegetation). In the shadows of the left strip, a vague outline of possible flowerbeds can be seen. In other pictures, the angle in which the picture is taken doesn't provide a clear sight in to the sidestreets so this picture is the only clue.

What we can conclude is the fact that the streetprofile was asymmetrical due to the balconies, the width of the sidewalk, the design of the sidewalk (it is clear that the western sidewalk did not have any flower beds and was smaller), the design of the shops (which will be further elaborated on in the next paragraph) and the trees. Nowadays also the way of parking (parallel and cross parking) is an added element which enhances the asymmetry, however this caused the sidewalks on both side to become more or less identical (figure 5.27).

5.4. Appearance of the dwellings and end-faces

In the urban fabric, we can find different ways and designs which 'complete' the strips or blocks at its endface (*kopse kant*). This was done by almost all architects that worked with standardized designs in the urban plan of Witteveen and what they did was trying to fit the standardized blocks or strips in the layout, in which every block had its unique measurements. The solution is different every time, depending on the amount of residual space. In the case of the blocks of van den Broek, these consist of small shop-facilities that are adjacent to the strip. This way of emphasising important roads can also be found in his urban plan for the competition in Amsterdam (paragraph 3.4). This was (or became) also a distinctive element in the strip-typology, especially when this ending would distinguish itself from the strip². In order to prove block-like or strip-like characteristics, this paragraph will elaborate on some of the researches.

First, the research towards block typology and the urban structure is translated into a research towards the ending of these strips near the girdleroads. Secondly, the focus will shift towards the volumes that finish the strip around the Wielewaalstraat. Later on, the architectural plans that were found in the GAR from a later date (the revised competition entry) will be analysed and lastly, the situation of these volumes nowadays with regards to their function, the connection with the strip and ownership is mentioned whenever this can contribute.

Completion of the blocks

First, we must notice that a lot of comparable building blocks (from figure 5.6) end at one of the girdle roads (see figure 5.13). These 15 points where blocks meet the girdleroads are analysed on the sketches on the pages 74-75 (figure 5.15). It is noticeable that very different solutions are used to fit the blocks in the urban plan or to fit the blocks in one of the earlier discussed building block typologies.

In the blocks of type A, the least interesting comparison in this case, the transverse side is closed of by either dwellings (Fuutstraat), shops (Gruttostraat east) or garages (Gruttostraat West). There is a middle form between type A and type C (which is not type B). This is a form which was found in the Gruttostraat and others, and consists of two strips without a transverse strip, so in essence type C. However, the border of the gardens is somehow part of

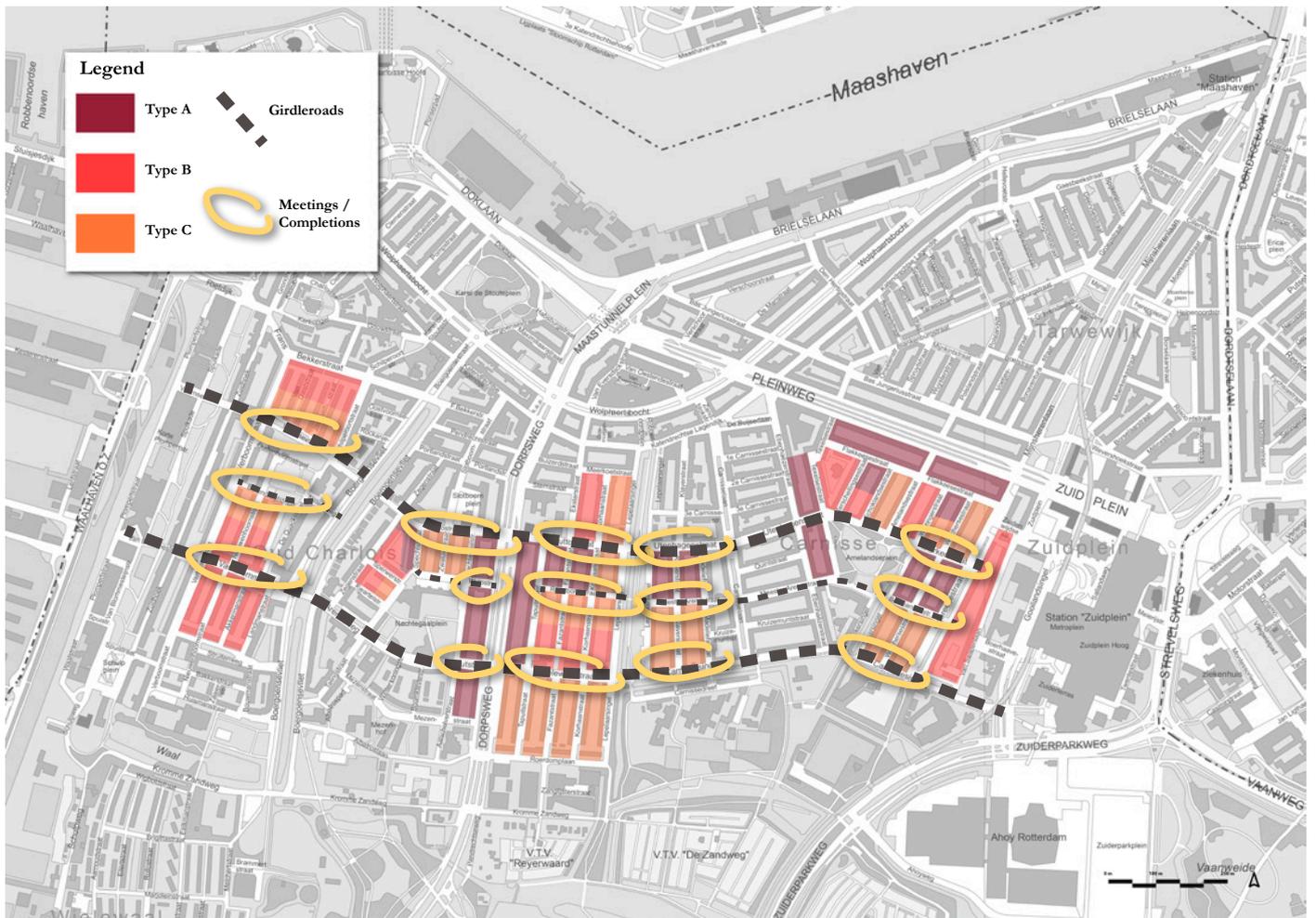


Figure 5.13



Figure 5.14

Figure 5.13

Locations of meetingpoints between girdleroads and comparable blocks

Figure 5.14

Collective boundary of the gardens. In the middle is the entry to the back alley.

the strips; it is the same brick and the same style and it comes across as a collective boundary of the inner-area (figure 5.14). It was no coincidence that in this block, a narrow alley was present with back entrances to all the gardens.

Type B is found in the Van Blommesteinweg (5.15) and the result, concerning the connection with the girdle road, is that one is not very aware of the strips behind the transverse strip due to a lack of visual connection. In another B-type (at the Wielewaalstraat), one is more aware of the strips behind the transverse ending because of the lower transverse strip and the bigger distance between the long strips and the (in this case) elementary school. So a visual connection is an important characteristic in this B-type.

In the C-type blocks, there is even more diversity in solutions. Kammer designed bay windows and garageboxes at the Carnissensingel and accentuated the Meester Arendsweg with balconies and two seemingly random shop- or officevolumes (5.15). Van den Broek used the angled steet of the Voornsevlief to add volumes to the strips on one side of the block but a few years later designed volumes that seem to be slid halfway under the building volume (Markerstraat).

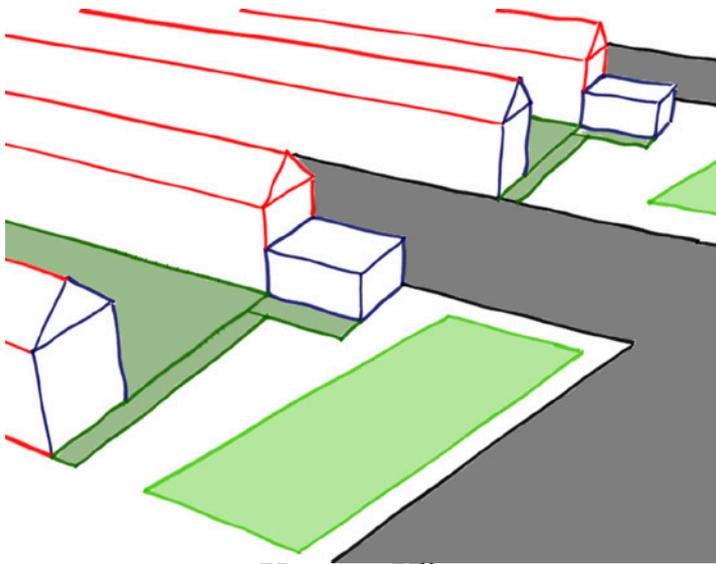
In the Vogelbuurt one can see all kinds of completions on blocks (see figure 5.15 and 5.16). At the northern girdle road, the Gruttostraat east, the blocks are closed off with transverse sides with different heights with the highest closest to the Dorpsweg. There was almost no residual space here, because the shops only point out just over a meter. In the Roodborststraat, there was a bit more residual space and Vermeer designed garage boxes on the end of every strip. At the Wielewaalstraat, the north side is bordered by the closed building block of Sutterland adjacent to the Dorpsweg, the elementary school that in some way functions as a closure for the four strips behind it and the transverse strip that closes the block next to the Lepelaarsingel. On the south side the completion of the blocks is more one-sided. The blocks are all completed by small office- or shopvolumes (with the exception of one transformer box). These differ all in width and length due to refurbishments over the course of time (noticeable in the *Kadaster*).

The design of the endfaces

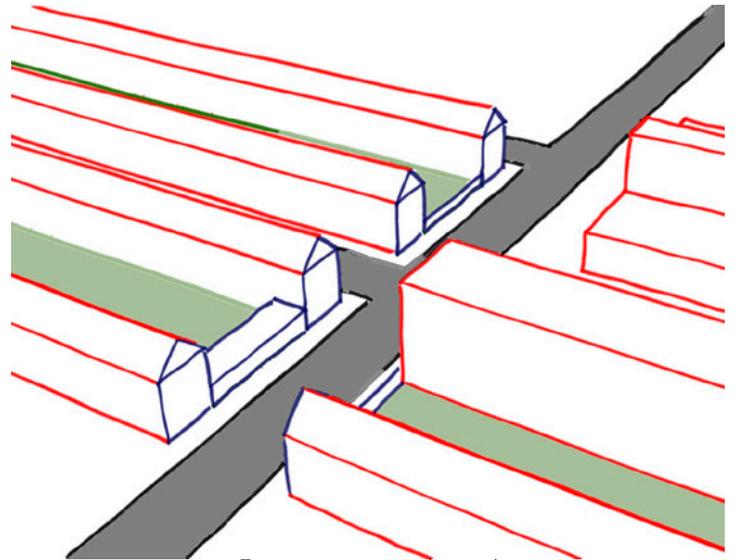
In the middle of the Vogelbuurt, the primary girdle road the Wielewaalstraat divides the neighbourhood in van den Broek's southern part and the northern part of Vermeer and Sutterland. What is striking firstly, is the outcome of fears stated in *Woonmogelijkheden in het Nieuwe Rotterdam*. Van den Broek himself stated that an upcoming problem with this configuration (of the strip) was the often neglected end-faces of the last dwellings. They did not profit from their extraordinary position in the urban fabric, due to the priority of repetition above individual solutions. And in the Vogelbuurt this has become reality. Literally, van den Broek writes as an example; the total blind facade with only one or two small windows per layer, which is exact the outcome of the Vogelbuurt (5.16 and 5.18-22).

However, with the diversity of the volumes added to the strip (5.17-22), van den Broek creates a lively and diverse streetside. There are two groundtypes to be found in these volumes and they differ in their size and relation to the streets. The first type is the smaller one, which is as wide as the strip behind it and has a small canopy, with an equal overhang on all sides of the volume (see figure 5.16 and figure 5.20 - 5.22). The other type is sometimes widened and also borders a part of the gardens (not in all cases) and the canopy is widened on the side of the sidestreet, executed with two supporting columns (figures 5.17-5.19). These columns and this extra large overhang creates also another effect. From the street this element accentuates the end of the block and symbolizes the transition between residential street and thoroughfare. Because of the visibility in the whole street, this strips have a better accentuated start- or endingpoint.

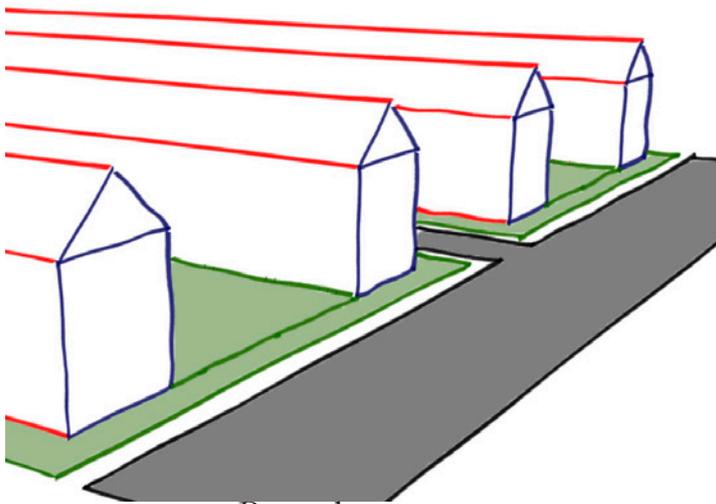
This differentiation in volumes and shape is a consequence of the asymmetrical streetprofile. On the eastside of each road (and on the Lepelaarsingel), the sidewalk was designed wider



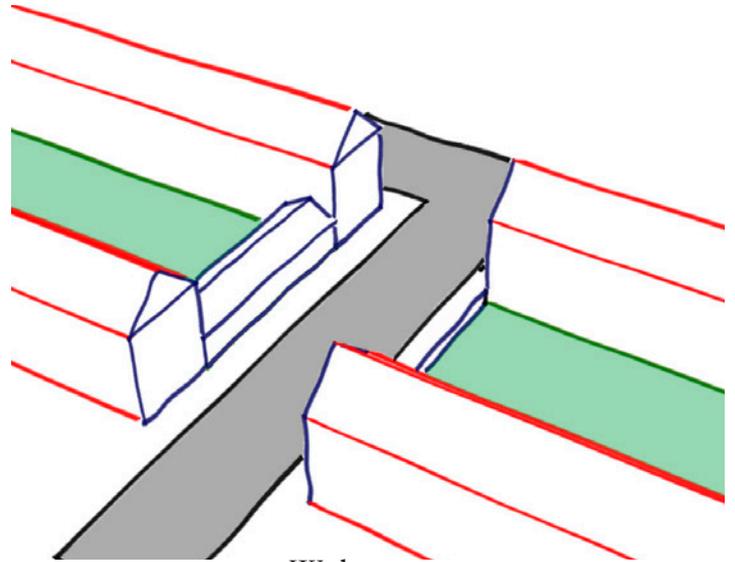
Voornse Vliet



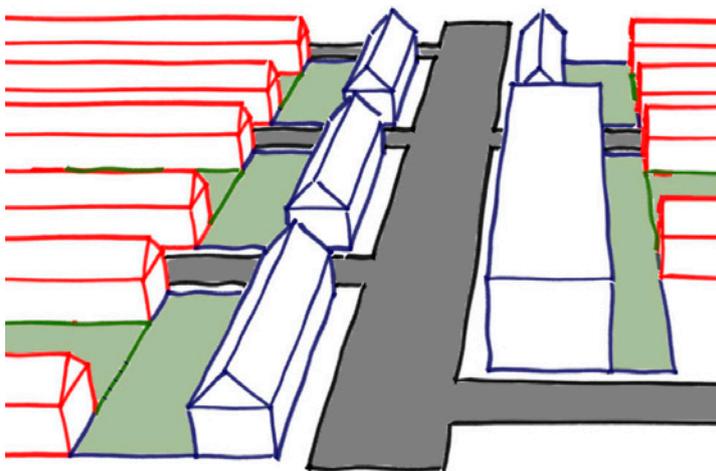
Gruttostraat (west)



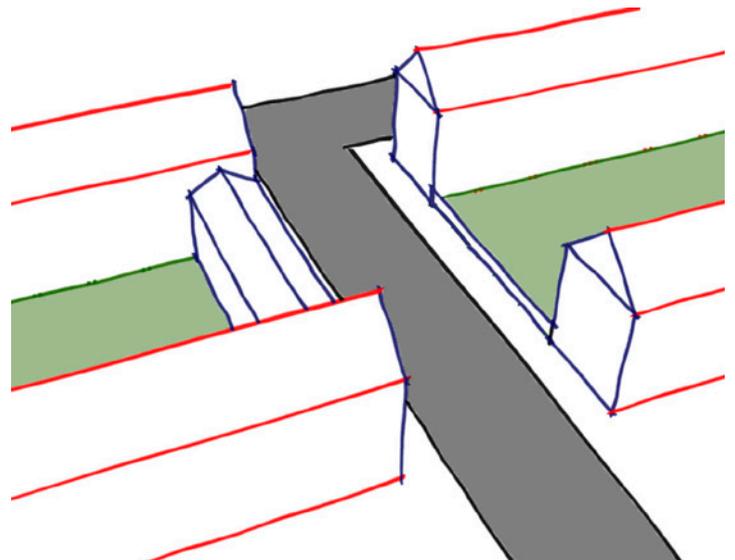
Barendregtseweg



Wulpstraat



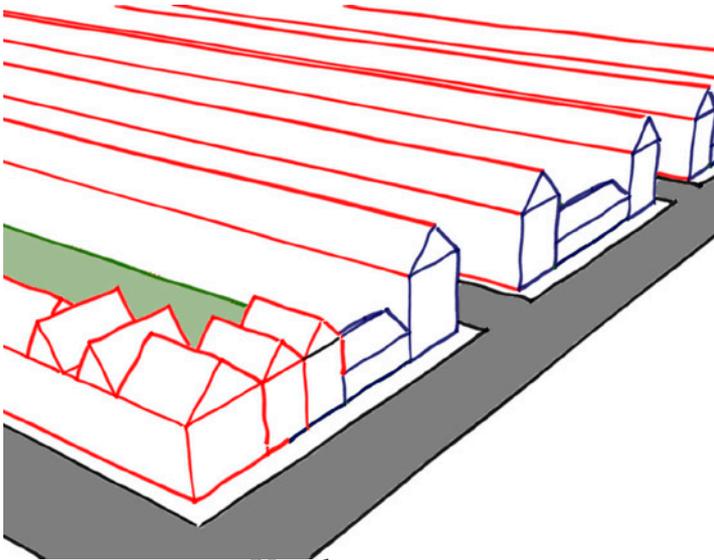
Van Blommesteijnweg



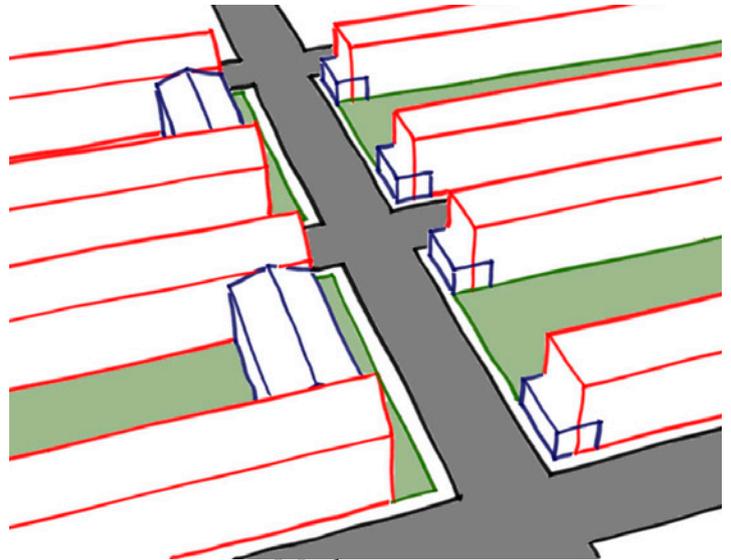
Fuutstraat

Figure 5.15

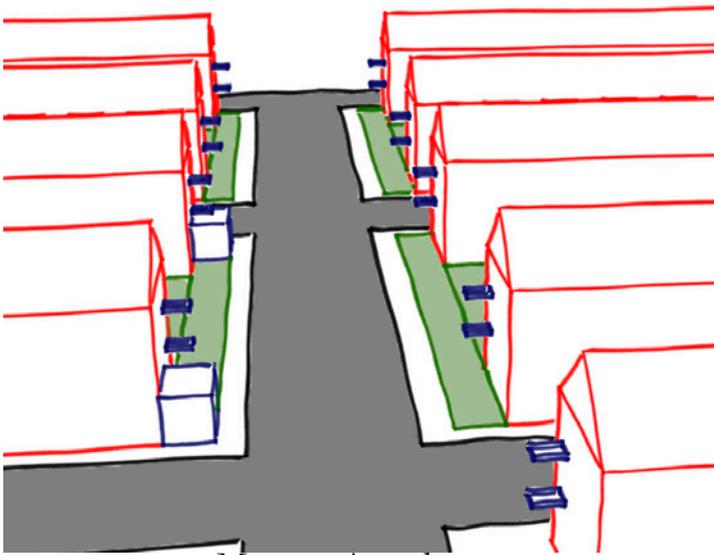
Analytical understanding of all completions of comparable blocks at girderroads except for the ones of the Vogelbuurt itself. Green surfaces are private gardens, red stands for the strip or block and the blue stands for what is considered to be the end face.



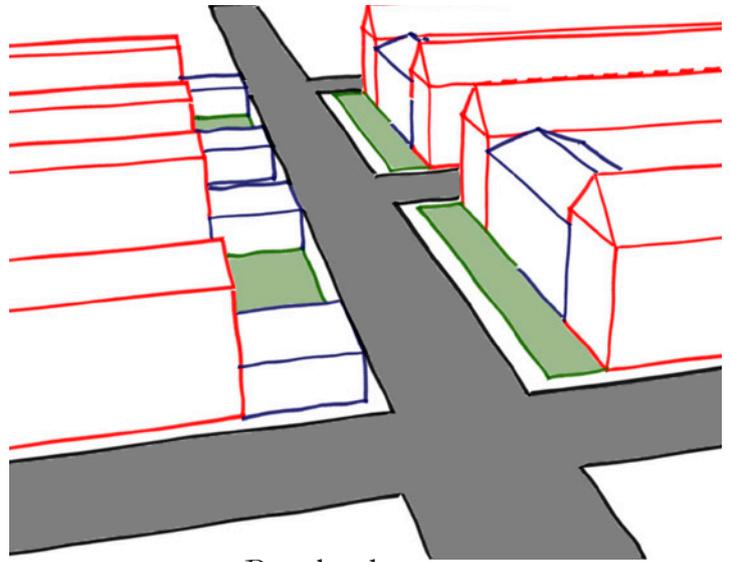
Utenhagestraat



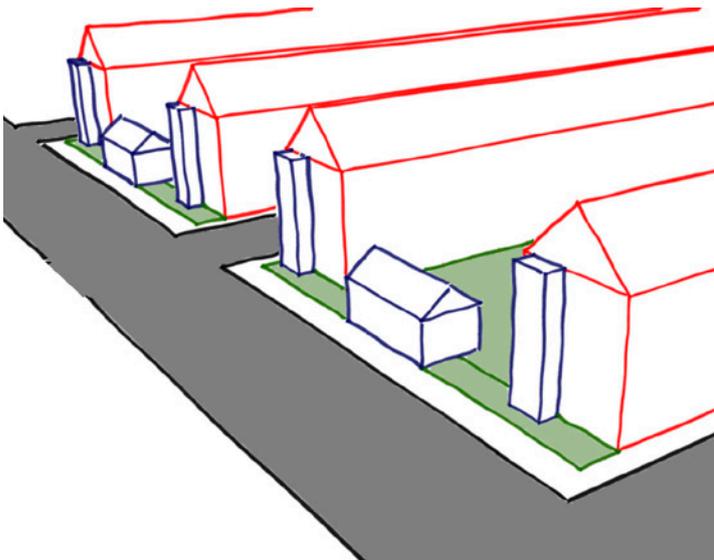
Markerstraat



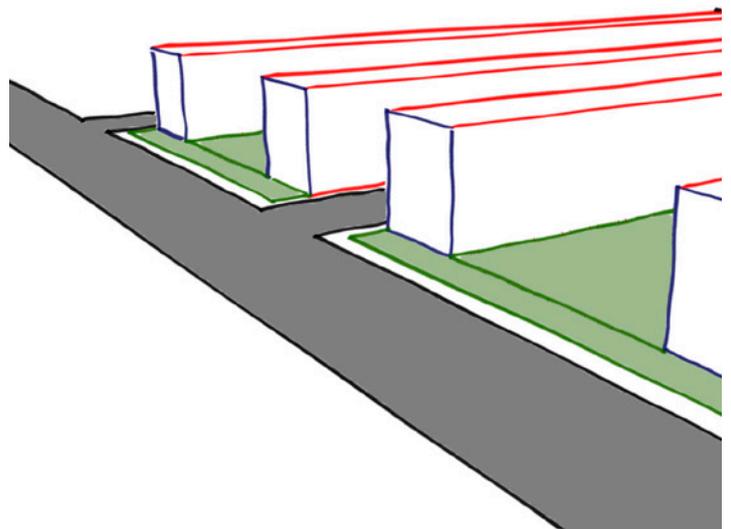
Meester Arendsweg



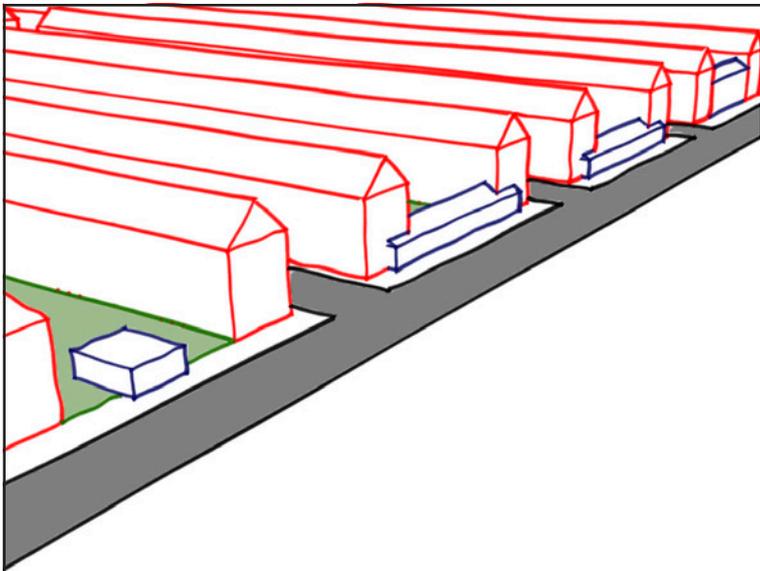
Bevelandsestraat



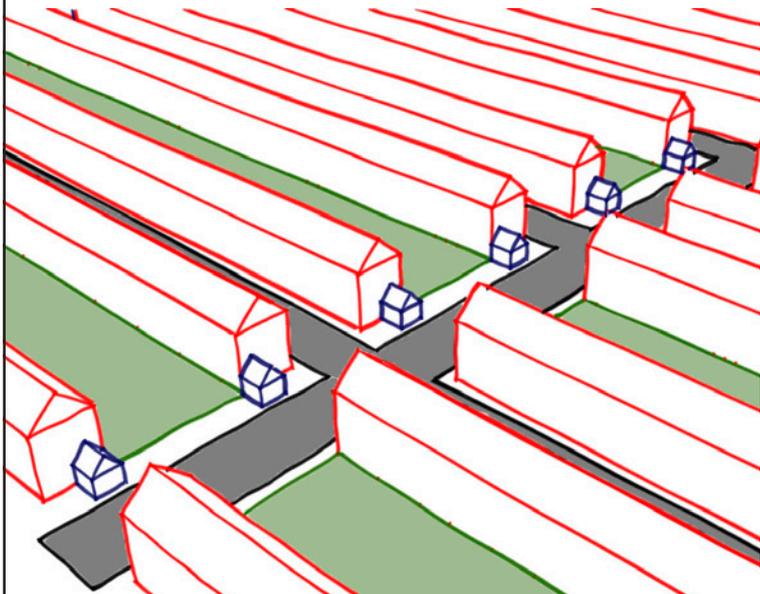
Carnisseseingel (west)



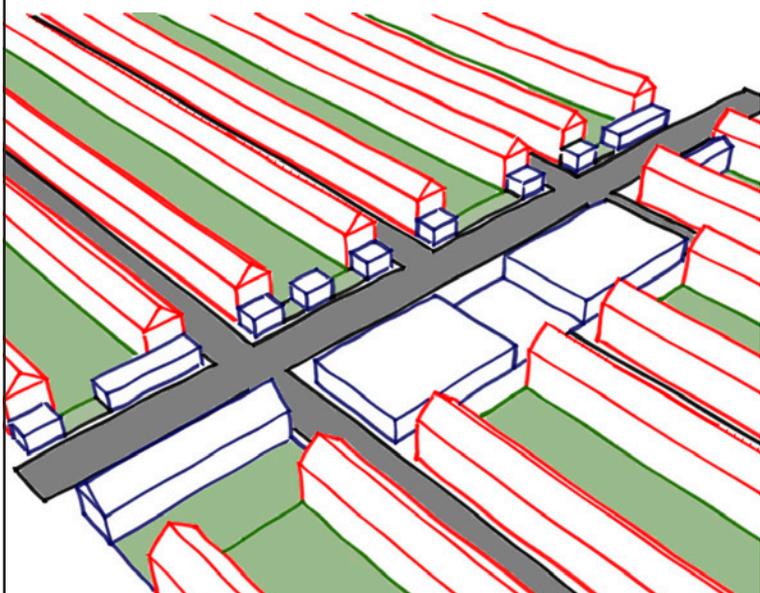
Carnisseseingel (east)



Gruttostraat (east)



Roodborststraat



Wielewaalstraat



Figure 5.16

because of optimal use of the sunlight in the afternoon. This offered space to design a larger canopy than on the west side of the street. The canopies on the west side would also not provide the shops with the desired shading on the hottest moments of the day; it would only provide shading in the morning.

Besides the canopies, some other interesting aspects of the end faces need to be set out. Firstly, just like the strips, the shops have a basement (figure 5.23). This is, according to drawings from the van den Broek archives of the NAI³, done in the same concrete as the basement of the strips. In paragraph 5.5 the materialisation and design will be further elaborated on. Important to state on this scale is that the shop is connected to the dwelling behind it (figure 5.24).

In the present day situation, it can be assumed that this connection between shop and dwelling is still present. For example, one of the shops is for sale together with the adjacent ground-level dwelling. Another argument is the fact that Lepelaarsingel 123 is mentioned in the Kadaster as *dienst- en bedrijfswoning* or that the Wielewaalstraat nr. 8 and adjacent Korhaanstraat 107A are mentioned in one set of information. Korhaanstraat 107A is not mentioned in the set of 107B and 107C. In appendix 7, a table can be found of all the owners and users of the shops and the adjacent ground-floor dwellings. It must be noted that in as much situations, the shop has no connection to the dwelling at all in the present situation.



Figure 5.17



Figure 5.18



Figure 5.19



Figure 5.20



Figure 5.21



Figure 5.22

Figure 5.16

Analysis of the Vogelbuurt-girdleroads and the completion of the blocks.

Figure 5.17-5.22

Pictures of the different shapes of completions at the Wielewaalstraat-southside.

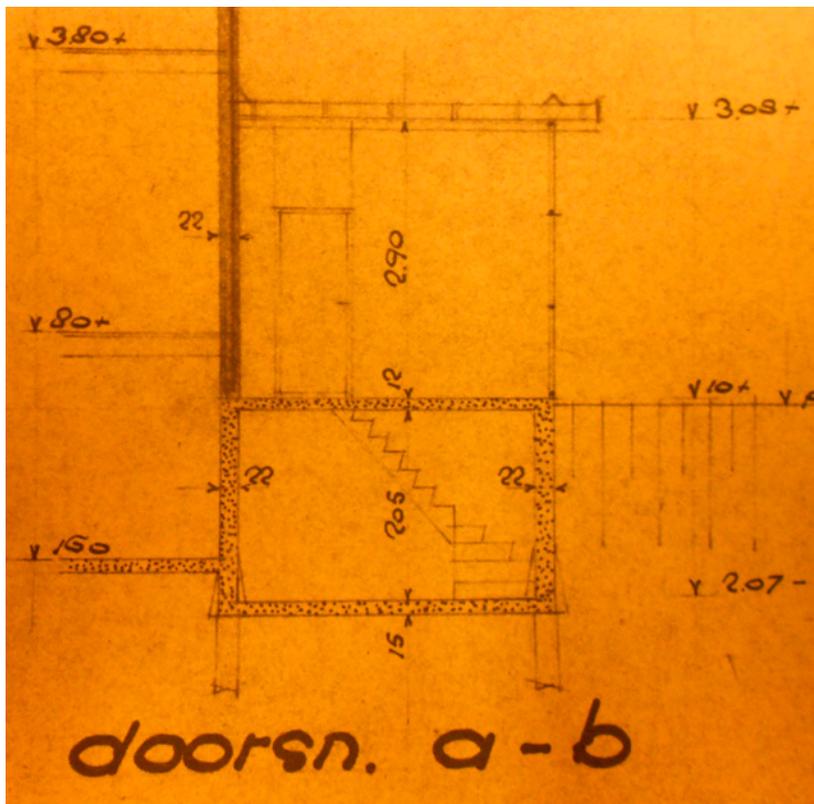


Figure 5.23

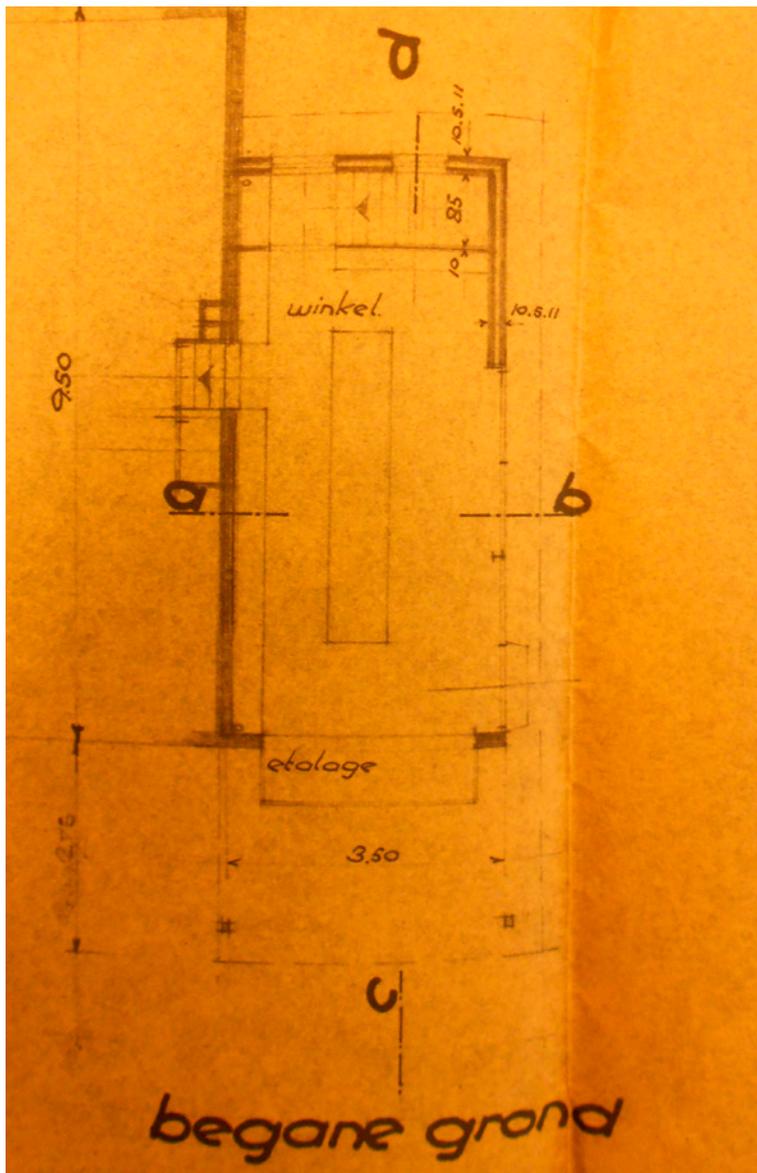


Figure 5.24

Figure 5.23

Section of the shops. Van den Broek (1941), obtained via GAR, P13-24-41.

Figure 5.24

Plan of the ground floor. Van den Broek (1941), obtained via GAR, P13-24-41.

Changes

As stated in the last indentation, some of the shops are not connected to the dwellings behind it anymore. This means that the entrance, shown in figure 5.24 has been bricked or otherwise closed off. Furthermore, in figure 5.10 and 5.25 we can see two nicely developed shops at the corner of the streets, where in figures 5.17 till 5.22 only see a functioning snackbar and driving school; the other four shops are empty. It must be said that three functioning shops (a landscaping business; Floradek Hoveniers, a nailstudio and a telephone-/grocerystore) are also located in the street. This leaves us however still with the half of these endfaces not used to their full potential. This most likely has to do with a centralisation of shopping area's and a strong dilution of inhabitants. Where first families of 4 to 6 persons lived in this area, nowadays this is mostly 1- or 2 persons per household.

Another change comes from the growth of the gardens and its plants. All gardens have high fences or hedges and huge trees behind them. This is a whole other atmosphere than for example figure 5.10. This does not imply a positive or negative quality, but as an observation that the border has become more harsh and dominant between street and gardens.

Lastly, it is striking to see how little has changed in the appearance of the dwellings. The blind end-faces with their two small windows are exactly the same, just as the shops kept their intrinsic form (regardless of some enlargements) and although window frames changed over the course of time, the overall exterior of the strips has been completely preserved.



Figure 5.25

Figure 5.25

Undated picture from the Wielemaalstraat. Obtained via a flyer, source unknown.



Figure 5.26

Figure 5.26
Materialisation of the public space in the Vogelbuurt.x

5.5. Appearance of the urban and architectural detail

Streets; profile and materialization

First, the asymmetric profile of the Fazant-, Tapuit- and Korhaanstraat needs to be elaborated. This has already been done a little, but the car changed more in the profile over the course of time that has been mentioned until now (figure 5.27). The wider sidewalk on the eastside of the streets has disappeared and is now providing cross parking, so a lot of cars can park right in front of the door. The smaller western sidewalk has also been narrowed and has become partially parallel-parking spaces. This gives a situation with an enormous amount of parking for the dwellers, even though CBS states that on an average, every household in this area only possesses 0,5 cars. Due to different ways of parking, the remaining sidewalks are comparable in size (figure 5.26 and 5.27).

The streets, both trafficroads and residential roads, totally focus on movement and transport and forget the social aspect of the street, which is underpinned by researchers such as Richard Sennet, Leeke Reinders, Christopher Alexander and Jan Gehl in different works they published. The car is deadly for the street, van den Broek already stated in *Woonmogelijkheden*. Also Richard Sennet worries about this phenomenon, he states that this, amongst others, causes a strong “erosion of public life” in his book *The Fall of Public Man*. This austerity of public space and street causes meetings and interactions with strangers to decline. The car is symbol for the paradox between isolation and unlimited freedom and has an incredibly hard influence on public space. In the Vogelbuurt, public space is a space to move through and is nothing more than “a derivative of movement” (Sennet, 1992-2 p.14).

However, trafficroads are also needed and the Wielewaastraat functions as one of them. In the detailing of the Wielewaastraat it is clearly noticeable that this road is designed as thoroughfare and as one strong line in the urban fabric, prior to the sidestreets of the Vogelbuurt. The Wielewaastraat is, together with the Gruttostraat, the only asphalted road in the neighbourhood, the rest of the roads is paved (see figure 5.26). Also the detailing of the border between asphalt and pavement causes dominant lines in the urban fabric. This way, the Wielewaastraat (figure 5.28) is profiled more dominant than the Gruttostraat (figure 5.29) in the same area. All details in pavement and borders of dwellings align which create some visual lines which emphasise the Wielewaastraat and not the adjacent sidestreets.

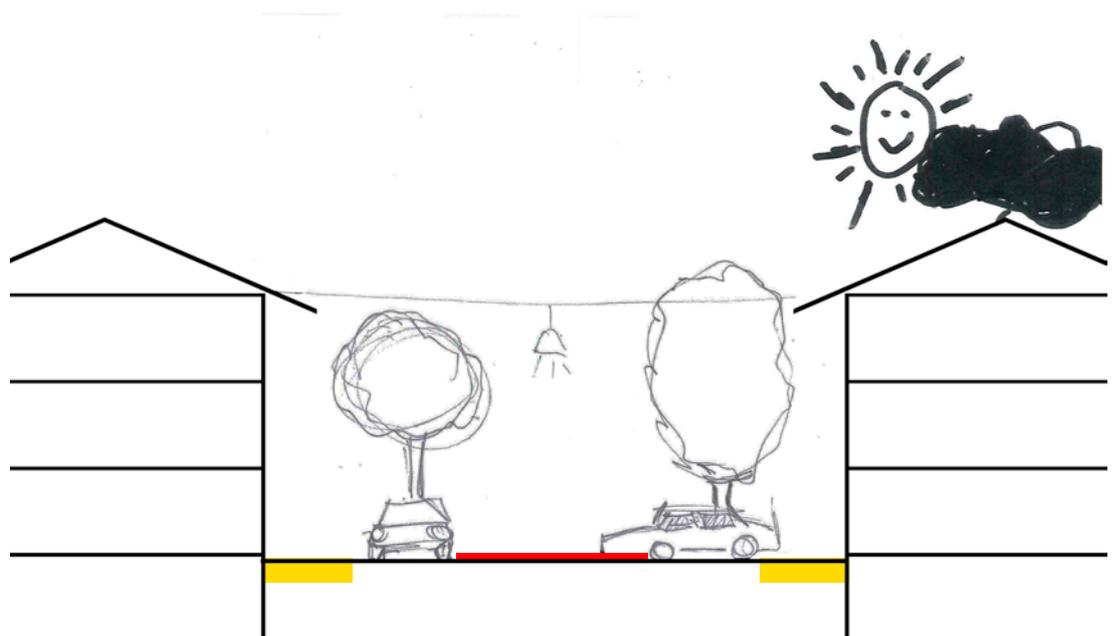


Figure 5.27

Profile of the southern Tapuitstraat, comparable to the Fazant- and Korbaanstraat.

Figure 5.27



Figure 5.28

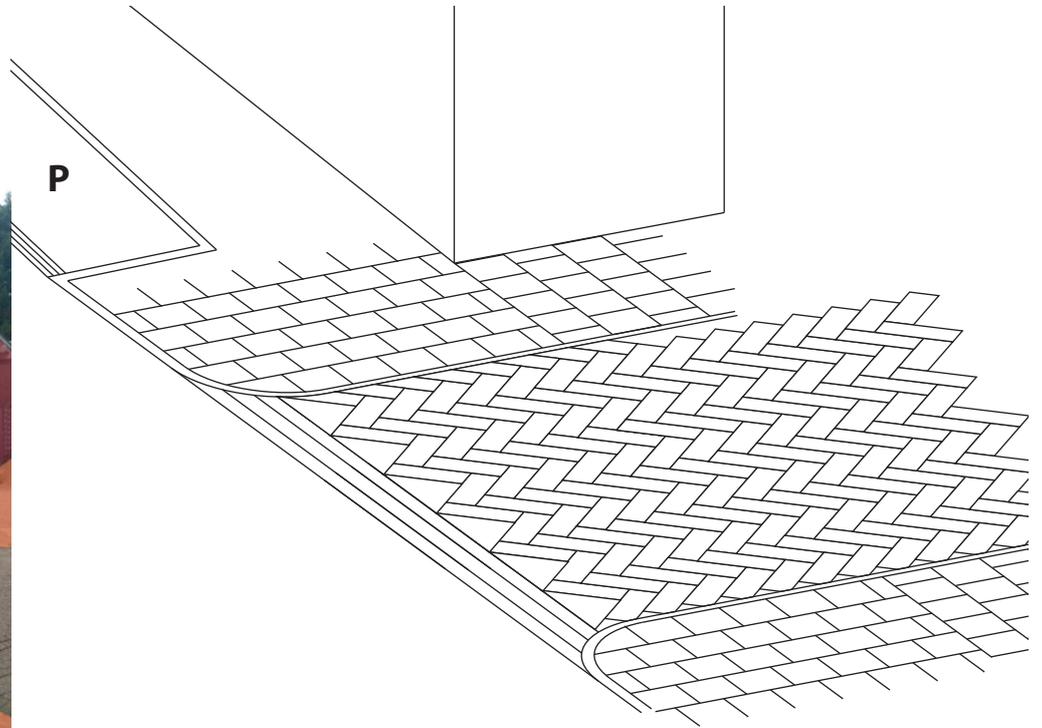


Figure 5.29

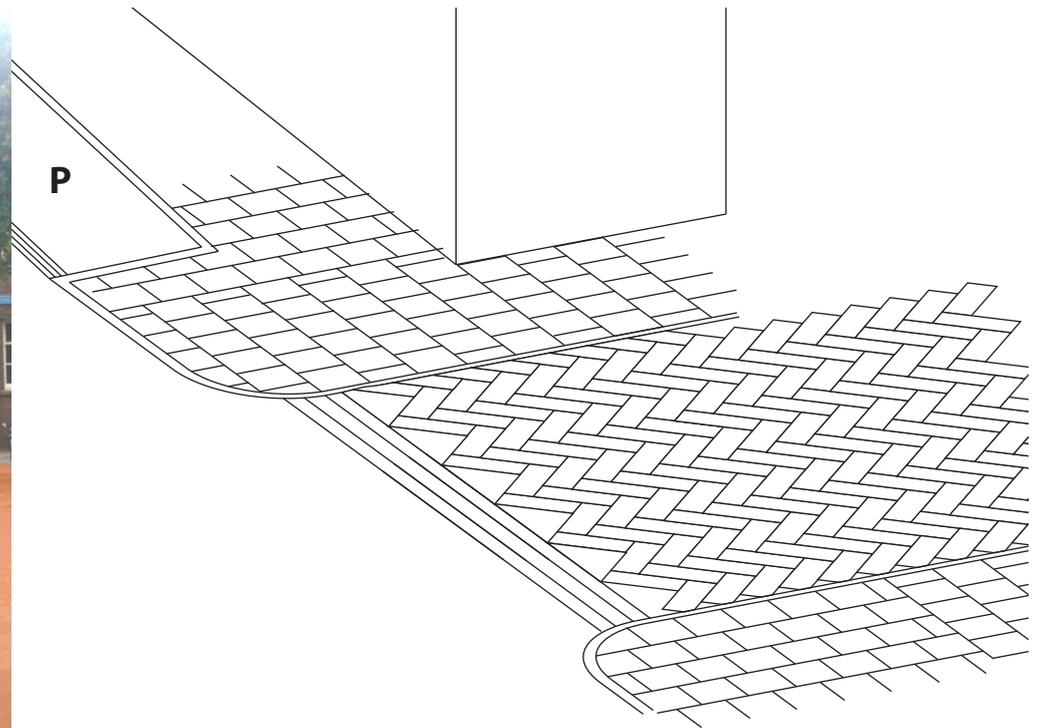


Figure 5.28
*Alignment in the
Wielewaalstraat*

Figure 5.29
*Alignment in the
Gruttostraat*

At the Gruttostraat, this alignment is not as dominant as in the Wielewaastraat. Last mentioned street is most probably redesigned and repaved as a whole. This causes the Gruttostraat to have the same directions and same principles in its layout, but it does not provide a comparable strong image as in the Wielewaastraat. All because the alignment of details in the Gruttostraat is not as straightforward and complete as in the Wielewaastraat.

It must be noted that parts of the Gruttostraat are also aligned real strongly, but the fact that the Wielewaastraat has only one exception (because of a threshold at the Fazantstraat) and the Gruttostraat way more, creates the different conclusions for both streets.

Shops; details and materialization

What could be expected in a strip-typology is that the completion of the block (in this case the shop) is distinguishing itself from the strip behind. Both in function, design and detail. That detail consists in this case of the materialization and the connection to the strip behind it.

It is striking to notice that the shops seem to be completed earlier than the strips behind it. According to the *Kadaster*, these shops were completed in 1941, where the strips are completed in 1947. This most probably has to do with the fact that the building process was horizontally oriented; first all basements of a strip were constructed, then the ground floor of the whole strip, then the whole first floor etc.⁴. Because the shop is on the ground level and is connected to the dwellings, this was completed first. However, the kadaster also holds a lot of uncertainties. The application of steel and wood suggests these shops were also completed after the war, just like the strips they are attached to. Also, some documents in the GAR suggest that the shops were finished first, but were also only completed right after the war (most probably 1946).

What is even more interesting is the fact that these shops are the only elements in the strip which include steel in another function than reinforcement of concrete. The columns (figure 5.31) that bear the large canopy are plain I-profiles. This is very extraordinary, because all requests for the use of steel and wood in this project should comply with the requirements of J.A. Ringers.



Figure 5.30

Connection between shop and strip (Fazantstraat).

Figure 5.31

Steel column bearing the larger canopy.



Figure 5.31

4 In a few documents in the archives of the GAR (amongst others archive 1190.213-215) progress reports of 1943 and 1945 are shown. In these documents it is clearly noticeable that the building methods were as described. The intermediate state of progress in 1945 is also described per block (or set of strips), and each block is on a certain level; for example, the block X has walls up until the gutter and they have started with the construction of the attic.



Figure 5.32

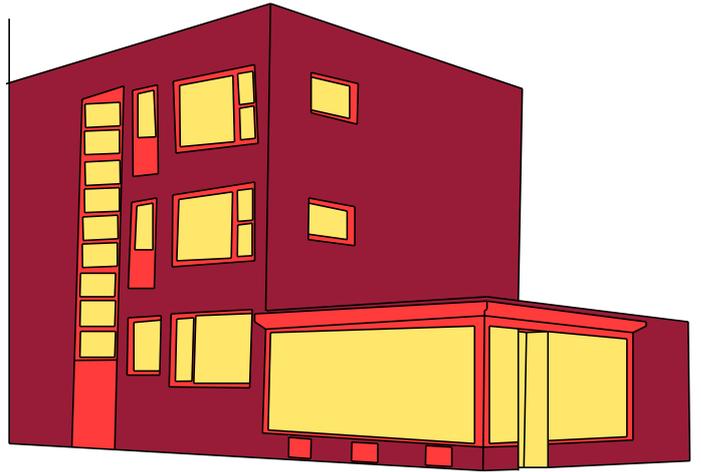
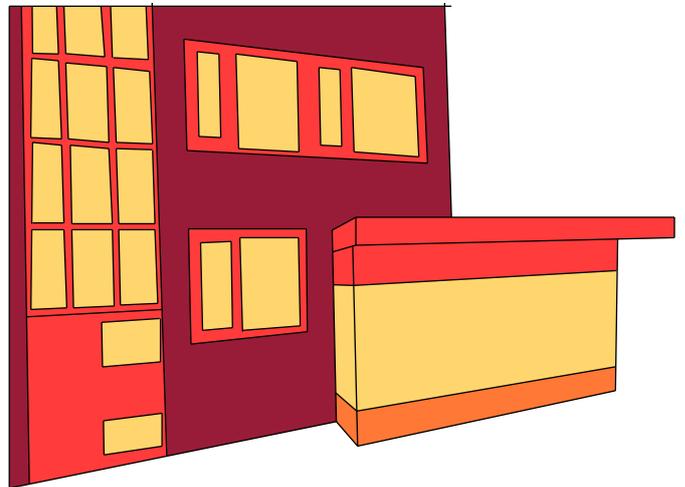


Figure 5.33



	BRICKWORK
	FRAMEWORK (WOOD ETC)
	NATURAL STONE/CONCRETE
	GLASS
	STEEL

Figure 5.32
Bevelandsestraat

Figure 5.33
Markerstraat

With the extensiver use of wood and in some cases steel, the shops distinguish themselves a little bit from the strips behind it. Only a little bit, because it is noticeable in figure 5.30 that in the design of the masonry, the shop still is an small extension of the strip in a residual space and not a strongly profiled element that finishes the block. The shop is not independent of the strip, where in some other cases this differentiation is worked out stronger and the end-faces really provide the strip with a start or ending point. This is already noticeable in the older parts of the Carnissebuurt and especially the Bevelandsestraat (figure 5.32) and the Markerstraat (figure 5.33).

In these two streets, the endings (in these cases shops, offices or small catering) distance themselves in materialisation more than in the Wielewaalstraat. The most likely reason for this phenomenon is the fact that the Vogelbuurt is more or less an auster version of the Eilandenbuurt. Firstly it must be noted these shops are bigger; in the Bevelandsestraat they are square-like and in square meters almost comparable to one dwelling. In the Markerstraat, the elements are a bit smaller and shifted halfly under the building block it seems.

Secondly, because the Vogelbuurt is more auster, the windows are designed smaller with automatically more frames, which also have another effect on the appearance of the shop. The bigger windows cause a transparency which is quite remarkable, if placed next to a fully bricked strip of dwellings (Bevelandsestraat).

Summarizing, due to smaller measurements of the shops and a auster execution, the windows that are present show another proportion and relationship with the strip. Also, the application of brick (even though it is not a huge amount) at the small facades immediately creates a strong connection with the masonry endface of the strip. In the Markerstraat or Bevelandsestraat, the differences between strip-proportions and shop-proportions are bigger.



Figure 5.34

Figure 5.34

Wielewaalstraat large canopy



Figure 5.35

Figure 5.35

Wielewaalstraat small canopy

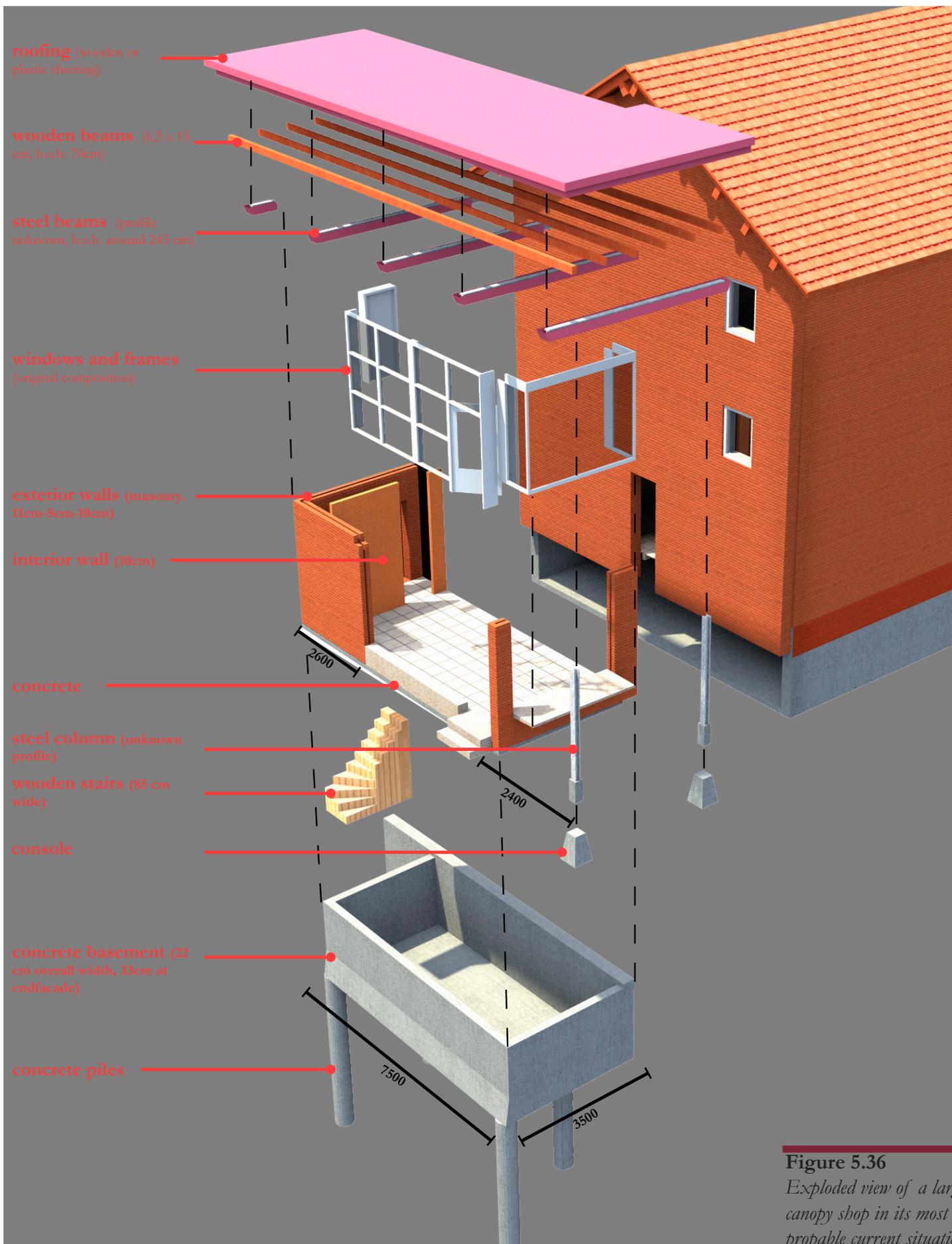


Figure 5.36

Figure 5.36
 Exploded view of a large-canopy shop in its most propable current situation.

Shops; construction

Before heading to the conclusion, the building technology and especially the construction of the shops needs to be set out further. The exploded view of figure 5.36 is based on the observations of the current situation, completed with information from the latest drawings which were found in the GAR⁵. From figures 5.23 and 5.24 (some of these mentioned drawings) it is already clear that the shops share one side of the building with the strip; from the foundation piles to the concrete basement walls up until the masonry of the ground floor.

It is further noticeable that the basement and groundfloor are at different heights than the floors of the strip; which causes the strip and shop to be connected by a few steps (figure 5.37). Via a small flight of stairs behind the only inner-wall of the shop, the basement can be accessed. A case of doubt concerning the height of the levels is the fact that in all drawings; a height-difference of 12 cm is given between shopfloor and outside paving. In the current situation two steps are needed to access the shops which suggests a difference of more than 30 cm. Ofcourse, the current situation has been leading in the analysis.

The masonry exterior walls are constructed with a 11 cm outer slab, 5 cm cavity and 10 cm innerslab and is around 50% of the facade. The rest consists of windows (and its frames) and a small part of concrete. In the present situation, almost all shops are more or less adapted and refurbished. There are however two large-canopy shops which even have the original framing of the windows. These are *Wielewaaistraat 2* and *Wielewaaistraat 12*. Of the small-canopy shops there are also some originals to be found. What must be noted is that at the backside of the shop (adjacent to the basement-stairs in figures 5.36 and 5.37) a door is designed. But this facade is nowadays almost always refurbished, extended or roofed so in none of the cases, a clear observation of the present-day situation of this facade could be made.

What is striking to see is that the columns mentioned earlier are not the only steel objects in the shops, although they are the only ones directly noticeable. The main beams, bearing the roof, are also steel according to the drawings (however no clear profile or size can be noted) but are wrapped in wood or plastic sheeting, alike the ceiling and roofing. Not only does this hide the steel elements from sight, but also emphasises the beams more (see for example 5.19, 5.20 or 5.34) because they seem bigger. These beams carry wooden beams (not noticeable from the exterior) of almost the same size as used in the strip, which carry and complete the roof. The steel beams are carried by the exterior walls and in one case a column, implemented in the framework of the frontfacade. On the backfacade the main beams are all connected to the load-bearing wall of the strip. So besides programmatical and visual dependency of the shop towards the strip, the shop is also dependant on the strip in terms of construction.

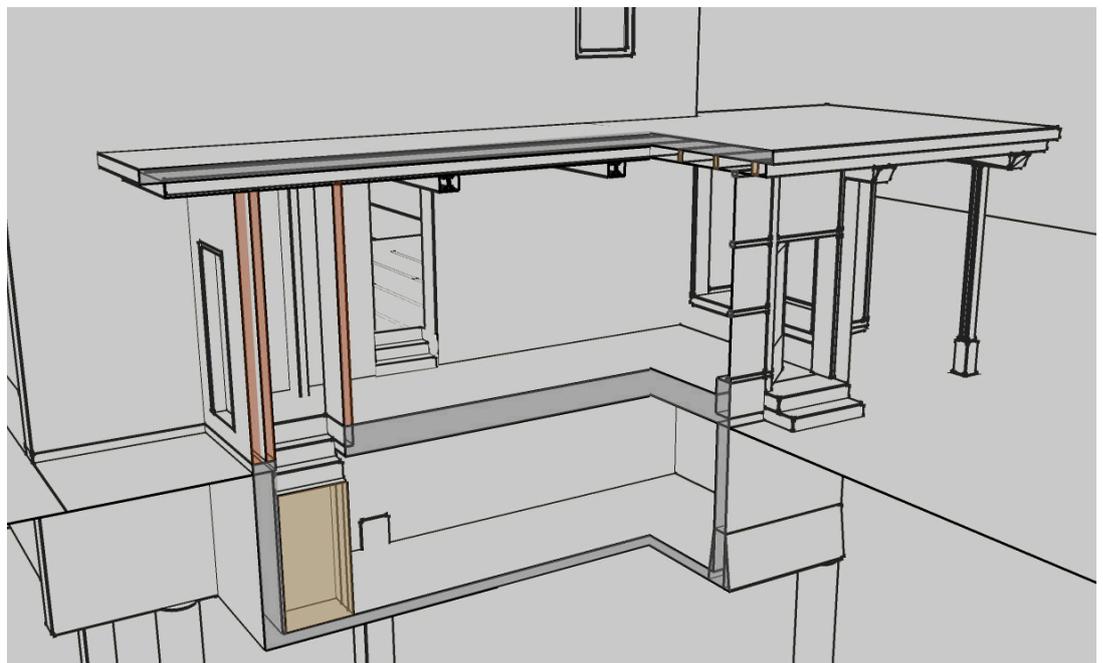


Figure 5.37

*Section of a large-canopy shop
in its most propable current
situation*



Figure 5.38



Figure 5.39

Figure 5.38
Wielewaalstraat impression

Figure 5.39
Gruttostraat impression

5.6 Conclusion

First of all, it is noticeable that the larger urban structure of Witteveen, as well as the architectural expression of the blocks and strips, has been preserved in Carnisse and Charlois. The radial roads, girderroads and green wedges all appear in some form. Also the use of blocks as an instrument in defining the city is still clearly visible. Along the main radial roads, a lot of closed building blocks can be found and more towards the south, the blocks open up bit by bit (figure 5.8). This would suggest that Witteveen's plans were fully executed.

However, with the application of the standardized building type in the Vogelbuurt (and even a bit in the Carnissebuurt) it seems the idea of the bowl of building blocks has been let go. The Vogelbuurt and the blocks on the other sides of the Gruttostraat and the Lepelaarsingel are all executed in the same number of layers. This way, the characteristics of the bowl of building blocks as an instrument for urban planning from the detailed expansion plan of Witteveen are most tangible in the oldest parts of the area. The younger the neighbourhood, the less keynotes the neighbourhood shows with the 'bowl of building blocks'. Van den Broek also came to terms with the demand of Witteveen to introduce 'more architectural dignity' in this area, and therefore added the tilted roof on his design.

Zooming in more, one must admit the Wielewaastraat has a special function within the fabric of the Vogelbuurt. It is, with the Gruttostraat, the only asphalt road (it was originally paved, see figure 5.38) but has a very clear alignment and distinction with regards to the sideroads. These sideroads are all paved and still have an asymmetrical streetprofile, although this used to come forward in other elements than it does nowadays. One should fear the changing function of the street in this context, where it is just a derivative of movement.

All over Carnisse and Charlois, there are blocks that are comparable to the ones in the Vogelbuurt with regards to their urban layout, the dwellings, their placement adjacent to the main girderroads or a combination of these. They show a large palette of different solutions in completing the strips or blocks and their endfaces. At the Wielewaastraat, all kinds of solutions are introduced. This differentiation comes from the different amounts of leftover space after the repetition of the porch dwellings in the urban layout of Witteveen. The endfaces of van den Broek, the little shops and offices, are precursors of a later element of strip-typology where the *keoppen* were emphasised by other functions and distinguishing buildings.

However, due to the auster detailing of the Vogelbuurt, these volumes do not profile themselves as much as you would expect from a strip-like completion. Therefore, they are too well connected to the dwellingstrip behind them and not profiling themselves as independent elements enough. In earlier examples of Van den Broek, where the materials were at hand and so was probably more money, this distinction between dwelling and shop/office is more obvious and seems more successful.

In the last technical paragraph (especially in figure 5.36) it becomes clear that the shops are not only programatically and visually but also technically dependant on the strip behind it. The shops are constructed in a smart but economical way. Furthermore, this technical layout of all present elements shows us that a lot has been preserved in a lot of shops, regardless of refurbishments here and there.

As the figures 5.38 and 5.39 illustrate, the historical pictures can be laid out over the current situation without much of a hassle. In other words; a lot of the executed elements and principles from 1940 up until 1947 are still recognizable in the urban fabric. Regardless of scale, the whole neighbourhood seems contact through time. This provides the neighbourhood with a strong basis, but is also a sign that the neighbourhood did not anticipate or change along with different economical, social or political circumstances over the course of time.

6. The hallway of the neighbourhood

6.1. Preface

In this final chapter a lot of elements will come together from the earlier chapters. Eventually this chapter will provide the research with a vision towards the -to be designed- unleashing strategy (as described in paragraph 1.5). Where in earlier chapters the past and the present situation are researched, this chapter should be a stepping stone towards the future. A general direction will be set out, with which the design research can be started.

A lot of findings and topics from earlier chapters are cited and will be elaborated further with a translation towards a tangible design vision or are given a value judgement. This will be done in three paragraphs.

First, the crucial detail will be elaborated, which is a way of finding a location in the Vogelbuurt on which an unleashing strategy would probably have an influential outcome. The crucial detail is a term used by Frits Palmboom and Arnold Reijndorp (de Vreeze p.126-129). The crucial detail is a place, quality, image or experience that is intrinsic for the quality of a design. In an urban plan, the crucial detail is a carrier of the overall picture, it is a place that is symbol for the rest or from which you get an impression of the whole. A good metaphor for this term is the hallway of a house. From this hallway, one cannot overlook the whole house, but one gets a good overview of the whole in a glance. Furthermore, I want to relate this to the design for the following reason. By refurbishing or improving this hallway, the impression of the whole will be improved without having any of the rooms redone. And secondly, once the hallway is improved, it will be more likely that one of the adjacent rooms will be improved next. This way, the notion of the crucial detail is combined with the idea of an unleashing strategy.

Then, another term needs to be set out. That is the notion of the critical mass of the neighbourhood. The critical mass is a term stated by Paul Meurs in a lecture¹. The critical mass of a city, neighbourhood or house is an intrinsic quality, experience or image (or a set of these) that is constant through time. Everything else can change and is flexible but the critical mass lets (for example) Amsterdam stay the way Amsterdam is seen/experienced. There are of course some elements found through time which have proved to be constant, whether they have a good or bad influence on the area. These elements need to be set out and it must be concluded whether they should be kept or they should have already been gone a long time ago.

All in all, these subjects will tell us what the most unique location (in which the consequences of the confrontation of typologies are most tangible) is, with which the rest of the neighbourhood can be activated and finally the kickstart or preliminary outline of a vision, set out as a conclusion for this chapter. It must however be pointed out that this chapter will demand for further research-by-design in anticipation of an architectural intervention.

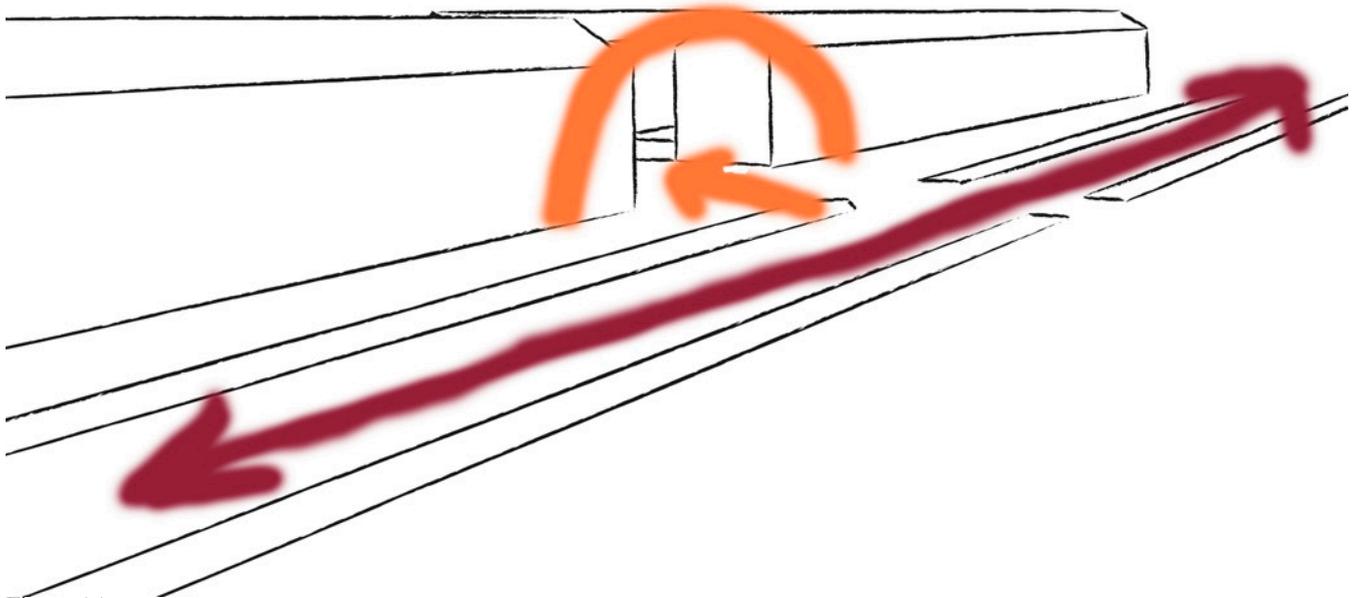


Figure 6.1

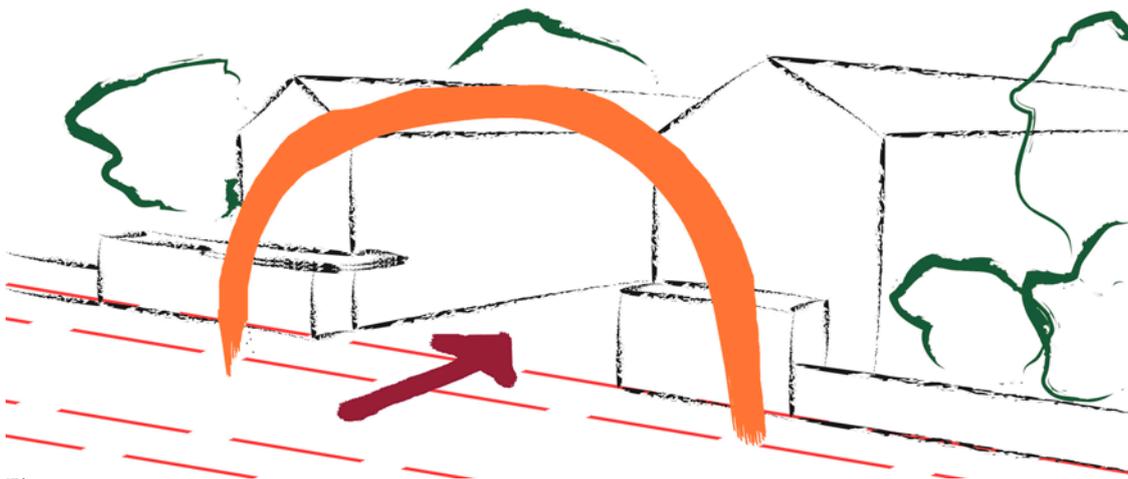


Figure 6.2

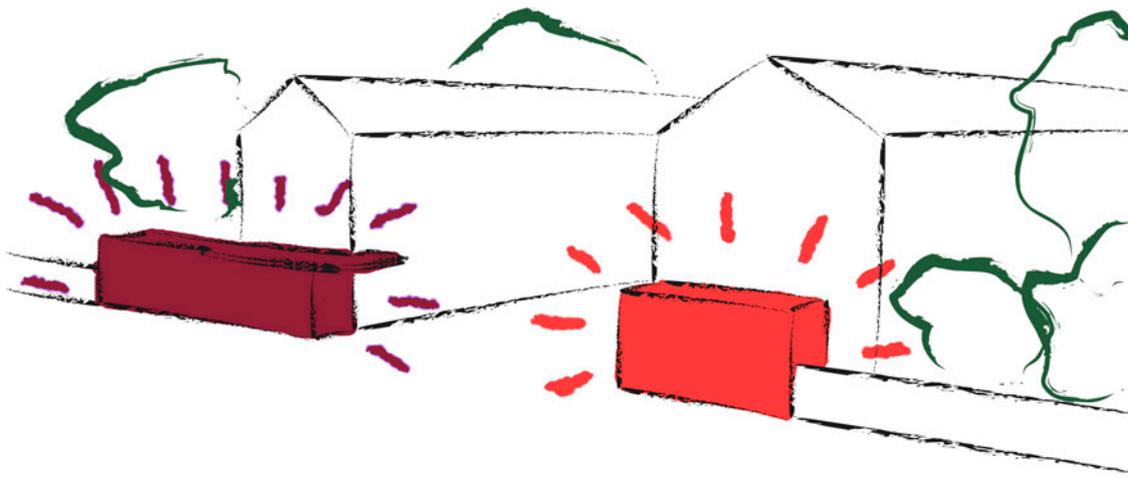


Figure 6.3

Figure 6.1
*Entrance of the
Wielewaalstraat from the
Dorpsweg*

Figure 6.2
*Entrance of the residential
roads from the Wielewaalstr.*

Figure 6.3
Unique volumes/functions

6.2. Crucial detail

The crucial detail in the Vogelbuurt in this research is a location in which the consequences of the historical processes are most tangible. In other words; at what location is the paradox between strip- and semi-open buildingblock typology and their different characteristics the most tangible.

First, it must be acknowledged that Witteveen's principle of emphasising of the Dorpsweg has worked. While driving or walking on that road, the dwellings adjacent to the street feel as a closure, a continuous wall in which the Gruttostraat, but especially the Wielewaaistraat seem to cut through. As a consequence, the point where the Wielewaaistraat crosses the Dorpsweg feels like an entrance of the neighbourhood (figure 6.1). Once you arrive on the Wielewaaistraat, you still have the feeling of being on a thoroughfare due to the alignment and profile described in paragraph 5.3 and 5.5 (figure 6.2). The real distinction between residential road and traffic road takes place on the crossroads of the Wielewaaistraat and respectively the Tapuitstraat, Fazantstraat and Korhaanstraat. It is at these crossings that an inhabitant enters 'his' or 'her' street. However, these streets are accessible for two strips of houses. This means that an inhabitant shares the street with other 'neighbours' than with whom he/she shares the inner-area (or the view on the inner-area) with. An inhabitant is in this way dependent on the kindness and good will of a lot of people to keep the living environment attractive.

The entrances of the residential streets are emphasised by the shops and offices on the south side of the Wielewaaistraat and by a closed building block, elementary school and transverse strip of housing on the north side (figure 5.16). The shops on the south side however seem to have the intention to function as a *kop-staart*-principle with the strip behind it. This does not work due to the lack of dominance of the end-face/end-volume. In other examples in the surrounding neighbourhoods this works better due to clear differences in materials and proportions. All of these other examples are also bigger, which is of big influence. At the southside of the Wielewaaistraat is just too little residual space. The strength however is that these endvolumes are all unique and provide the streets already with a minimal amount of differentiation/identity. These volumes on the southside are even more interesting to redesign because of the vacancy; apparently there is no need for small shops in this street anymore, or maybe only after a translation to a more usable space.

What lastly invites to reinterpret this south side of the Wielewaaistraat is the fact that it is the literal outcome of a fear stated by the designer. Namely that the houses on the end of the strip do not profit from their exceptional position in the urban situation (figure 6.4). In this particular situation, there is much more potential in the endfacades than just two small windows (figure 5.34/5.35).

Because of the different functions and volumes adjacent to the Wielewaaistraat and its dominance in the urban fabric (which is stronger than for example the Gruttostraat, this street could be a place to propose an unleashing strategy. It has a central atmosphere within the neighbourhood, with a lot of passers, whether this is traffic, picking up children at the elementary school or picking up the french fries in the snackbar. This street could really function as a central hallway from which you get an overview of the whole neighbourhood.

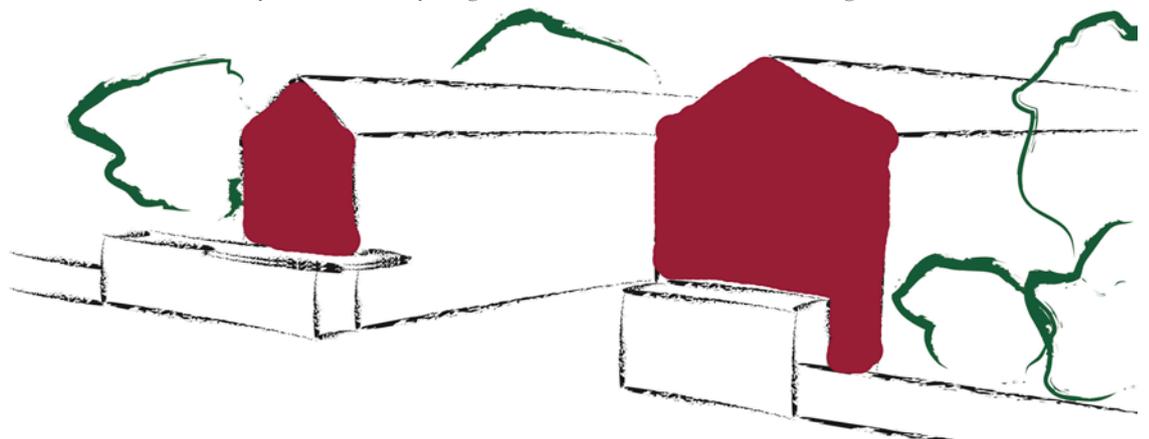


Figure 6.4

Blind endfaces of the strip

6.3. Critical Mass

Now that the crucial detail has been set out, it is good to point out some elements in the neighbourhood that could and should be part of the critical mass.

First of all, the urban structure and layout seems to work well. The residential streets seem quite sheltered even though the bowl of buildingblocks has disappeared. The girdleroads still have a connecting function between neighbourhoods and in the case of the Wielewaalstraat, it still divides the north and south part of the Vogelbuurt very clearly.

The design of the street itself does not seem to be part of the critical mass, except for the notion of asymmetry which has always been part of the image of the streets (but was achieved in different ways in different times). The car was the reason the original design and execution did not survive the test of time. However, the households in the neighbourhood are getting smaller, the car-use in this neighbourhood is very low and furthermore, various sources provide us with information that the use of car will become less dominant in the near future (de Volkskrant, Edwalds & Voncken) which could be used as a motive to reinvent these streets.

The volumes at the end of the strips are ofcourse very characteristic but the concrete shape of these functions nowadays does not belong to the critical mass of the neighbourhood in my opinion. Every single one of these spaces has been adapted and changed during its lifespan and even more, they don't seem to function in the present situation (with a few exceptions). However, the fact that the strips is 'completed' by an architectural intervention or image is surely part of the intrinsic values of the neighbourhood. From the researches becomes clear that this task was worked out in very different ways all over Carnisse and Charlois. So not the volumes themselves are part of the critical mass, but the search for a solution to deal with residual space when standardized housing is implemented in an urban plan is part of it.

When moving further along into the residential streets and the dwellings the first important part of the critical mass is the implementation of orientation and insolation. It has been extensively elaborated that the dwellings were reflectable and therefore could always be oriented on the sun. The north-south orientation of the strips is also preferable. Besides the dwellingplans and the urban layout, also the streetprofile took insolation into account. The sidewalk on the east was wider with flower beds, because this side was nicely shone on in the afternoon. Nowadays, this last aspect has disappeared due to parking but insolation as a principle to take into account is still noticable in the trees² and the dwellingplans.

It has not been elaborated a lot but within the strip, there are a few aspects that are part of the critical mass. First of them is the basement. This semi-deepened concrete basement (figure 6.5), divided in different storage spaces for every apartment, is the reason there are no or almost no bicycles on the street. It is a quality that adds an enormous amount of value to the small apartments, where all square meters must be used for living accomodations. The shops on the Wielewaalstraat also have a separate basement, which is not connected to the adjacent dwellings (contrary to the dwelling itself which initially was). In a lot of other projects with cheap housing the basement is one of the first elements to be cut away³.

The second aspect is the uninhabited attic under the tilted roof. This is ofcourse a great paradox as well on which I haven't focussed in this research. The functionalist van den Broek, strong promotor of the *Nieuwe Zakelijkheid*, must have had a lot of problems with constructing a non-usable space just for architectural dignity. At some point however, he must have come to terms with this addition to his original design. On the original drawings, the escape route was designed here via one dormer per porch (see figure 6.5).

2 The research report of Susanne de Zwart elaborates more on public green in the Vogelbuurt.

3 in Dutch; wegbezuinigd

What has also, sadly, been a constant through time is the fact that in the Vogelbuurt, households and inhabitants have mostly adapted to the dwelling and not the other way around; the dwelling did not adapt to the households. Van den Broek and Leppla did research towards flexibility and diversity in order to deal with different type of inhabitants. The acknowledgement of this diversity is also one of the basic principles of the study *Woonmogelijkheden*, at page 19 it is stated that “het besef van diepgaande verschillen tussen bewoners” (the notion of intrinsic differences between inhabitants) leads to different needs and typologies. In the Vogelbuurt, one standardized type survived the course of time (with the exception of some individual refurbishments and merges of dwellings).

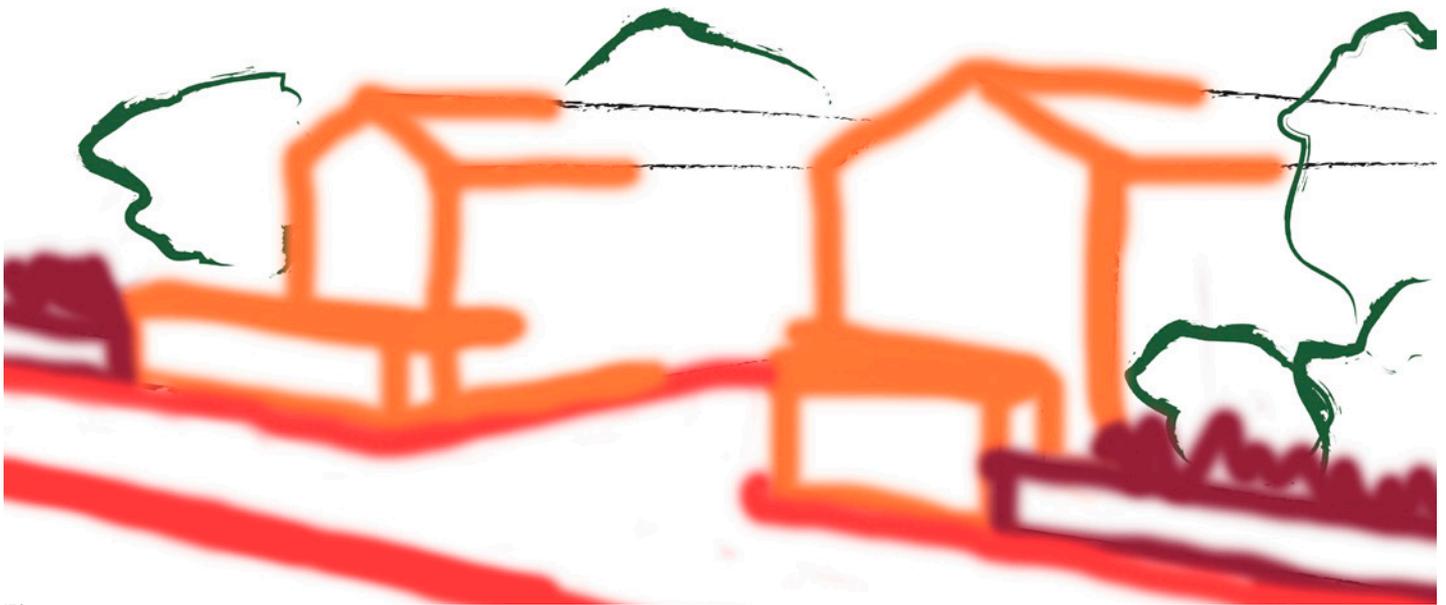


Figure 6.6

Figure 6.6

Different design assignments; the street, the transverse borders and the endface.

6.4. Conclusion; a vision on the assignment

Besides the answer on the question *How can the confrontation of the typologies of the semi-open building block and row housing serve as a motive and starting point for the development of an unleashing strategy in the Vogelbuurt, Rotterdam?* that is given in the final conclusion, I could imagine these last two paragraphs hold some sort of tangible grips which provide a direction in an unleashing strategy, answering the question stated in the introduction of this chapter.

By intervening in the 'hallway of the neighbourhood', I can set an example from which other people can get their motivation and inspiration to improve their own living environment. In this paragraph, I would like to brainstorm a little bit on possible directions for that unleashing strategy. By doing so, I will state that -in my opinion- there are three main design assignments (figure 6.6) that can be based on this research assignment and would help achieve the goals that are set out in the first chapter.

The first assignment and probably the most important is the intervention, strategy or redesign of the end faces and volumes of the blocks, designed by J.H. van den Broek (orange in figure 6.6). As a predecessor of the strip-typology and with a strong research at its basis, there is way more potential in this 'crucial detail' than is shown in the present situation. It still has to be found out what has to happen here in order to improve these important points in the neighbourhood, but that will be one of the design assignments. It must be taken into account that these spaces/objects/volumes are physically and historically connected to the strip behind it. A strategy that proposes ideas for the endface should automatically propose ideas for the adjacent dwelling(s). This first assignment consists mostly of a technological and architectural scale.

The second assignment is in line with the opinions of van den Broek and Oud concerning the scope of the architect, namely the building block. The transverse borders of this building block to be precise (purple in figure 6.6). The way of the bordering of gardens has a large influence on the atmosphere of the street. Originally, the gardens were bordered by *ligusterhagen* (slightly visible on figure 5.10), but nowadays it is a mess of all kinds of borders. This can have its benefits (recognition etc.) but a clear proposal or strategy should be made when an architect also redesigns the endfaces. All because the endfaces and the borders of the gardens together form the type of building block which is researched in paragraph 5.3.

The last assignment is that of the street (pink in 6.6). Although the Wielewaal is already a strong line within the neighbourhood, the sidestreets could do a lot better. There are a lot of motives from the historical research which are more or less still present but not exploited. If already the endfaces and the transverse borders are redesigned in an unleashing strategy, the street should react and develop with it.

Moreover, by improving the street, which is the total responsibility of the municipality of Rotterdam, the city council can provide the inhabitants with a positive message by investing in their specific neighbourhood. It will generate a lot of confidence and trust amongst inhabitants if a large party shows that they see progress or potential in an area. This message, instead of the threat of demolition, will encourage the inhabitants to improve their own dwellings as well.

7. “De Kopse Kant”

de menselijke maat in gestandaardiseerde
woning- en stedenbouw

Introductie

Vanaf de jaren '20 is de woningbouw in Nederland langzaamaan geïndustrialiseerd naar voorbeeld van woningbouwontwikkelingen in Duitsland. Deze standaardisatie werd echter in sommige projecten op een dermate grootschalige, rigoureuze en rationele wijze toegepast dat vrijwel elke vorm van individualiteit of aanpassing aan de context verloren ging. Denk hierbij bijvoorbeeld aan projecten als Siedlung Westhausen in Frankfurt (Figuur 7.1).

In Rotterdam-Zuid wordt de schaalvergroting van bouwopgave duidelijk in de stedenbouwkundige plannen van Witteveen uit 1938. Allereerst zal de schaalvergroting duidelijk worden wanneer dit plan naast eerdere plannen voor de Linkermaasoever wordt gehouden. Uiteindelijk zal dit leiden tot een hoop vergelijkbare bouwblokken verspreid over Rotterdam Zuid. Vanaf eind jaren '20 is Jo van den Broek ook zeer actief in de woningbouw binnen en buiten Rotterdam, zowel ontwerpend als onderzoekend. Zo reist hij onder andere naar Frankfurt eind jaren '20 met van Tijen om daar de eerdergenoemde Siedlungen te bezoeken. Vanaf dat moment zullen beide architecten pleiten voor een meer humane (ook wel organische) gestandaardiseerde woning- en stedenbouw en willen dat verkrijgen door interventies op de kopse kant van het bouwblok.

In dit artikel zal eerst worden stilgestaan bij de implementatie van de gestandaardiseerde woningbouw in de oorspronkelijke stedenbouwkundige uitleg van Witteveen, de kritiek op deze plannen en de uiteindelijke implementatie in de Vogelbuurt door van den Broek. Ten slotte wordt kort stilgestaan bij de huidige situatie van de kopse kanten van de woningblokken en tot wat voor opgave de bevindingen in de Vogelbuurt kunnen leiden.

Uitbreidingsplan Linker Maasoever 1938

Witteveen ontwerpt in 1938 zijn meest recente versie van het stadsuitbreidingsplan voor de Linker Maasoever (Figuur 2.8). Ondanks de grote verschillen in politiek, sociale en economische omstandigheden vertoont dit plan veel overeenkomsten met zijn eigen eerdere versie uit 1926/1927 en het plan van Granpré Molière uit 1921 (Figuur 2.1). Beide architecten stellen zich de stadsuitbreiding voor in een radiale uitleg die de bestaande uitvalsroutes volgt. Daarnaast worden nieuwe stadsdelen onderling verbonden door een stelsel van gordelwegen. Dit leidt bij beide architecten tot een concentrische laag die over de radiale uitleg is gelegd.

Over het algemeen is te stellen dat de stedenbouwkundige uitleg van Rotterdam Zuid in Witteveen's laatste versie versimpeld is op allerlei aspecten. Op het gebied van de stratenuitleg heeft de komst van het Maastunneltracé gezorgd voor een andere hiërarchie tussen de verschillende straten. De vele groene wiggen uit zijn 1926-versie zijn in veel gevallen minder



Figuur 7.1
*Westhausen Siedlung,
Frankfurt*

Figuur 7.1

dominant of samengevoegd om het groen meer te concentreren. Op het gebied van de woningbouw is Witteveen qua opvatting van 'de stad als allesomvattende compositie' meer en meer overgegaan naar 'de stad als rationele uitleg van percelen'. Zo zijn variaties in bouwblokken alleen nog langs de monumentale assen terug te vinden, is het clusteren van winkels wenselijk en was de traditionele buurtwinkel op de kop of hoek ongewenst. Deze rationele uitleg heeft het in zich om eentonige en saaie straten voort te brengen maar dat probeert Witteveen tegen te gaan door variatie in het straatprofiel en dan voornamelijk in de breedte ervan (Mens p.125-126).

Door deze rationele uitleg van gestandaardiseerde percelen zijn er door heel Rotterdam-Zuid een hoop vergelijkbare bouwblokken te vinden, ook al verschillen die van elkaar door het feit dat ze door een keur aan architecten zijn ontworpen. Van den Broek heeft echter een grote stempel kunnen drukken op deze blokken omdat hij in dit gebied de plannen voor de Voornse Vliet, het plan Algemeen Belang, het 1000-woningenplan en later het 1900-woningenplan heeft ontworpen en ontwikkeld. Ondanks onderlinge verschillen in architectuur en typologie zijn de blokken zeer verwant aan elkaar door de afmetingen, de stedenbouwkundige uitleg en de connectie van de blokken met strategische radiaal- en gordelwegen (Figuur 5.13).

Kritiek

Kritiek op deze stedenbouwkundige uitleg, die sterk voortborduurde op de eerder genoemde Duitse traditie, komt uit de hoek van Merkelbach, van Tijen en van den Broek. Zo wordt in het boek *Architect W. Van Tijen 1894-1974* beschreven dat "De schematisch aandoende woonwijkenontwerpen van rond 1930 [...] zijn louter opgebouwd uit verticale steepjes, de woonblokken, zonder aandacht voor andere elementen. Verstarring treedt op, aldus Merkelbach, waarmee de plannen hun doel voorbijschieten. 'Aan werkelijke stedenbouw zijn ze eigenlijk nog geen van alle toe, daar ze slecht één onderdeel der stad regelen, namelijk het wonen.' Vandaar de poging van Van Tijen en Merkelbach om met Stams 'wooneenheid' en het opnemen van diverse voorzieningen enige variatie aan te brengen in de strokenbouw; niet alleen om starheid te voorkomen, maar ook om een principiële reden: een woonwijk is onlosmakelijk deel van de stad als maatschappelijk organisme en moet daarom naast woningen voor diverse gezinssamenstellingen ook aan andere elementen plaats bieden, zoals winkels, scholen, speelvelden, kerken." (Idsinga & Schilt p.240).

Inpassing in de Vogelbuurt

In de meer gedetailleerde stedenbouwkundige uitwerking van de Vogelbuurt is iets opmerkelijks te zien. Waar eerst enkel nuts-gebouwen waren gepland langs de Wielewaalstraat zien we in de latere plannen van van den Broek dat de buurtwinkel is geïntroduceerd. Het is van den Broek dus gelukt om gemeente en Witteveen te overtuigen van het belang van de buurtwinkel en de meer organische vorm van stedenbouw dan het enkel star bouwen van identieke (woning)bouwblokken.

Verder is te zien dat met de verder opengewerkte configuratie van het bouwblok dit principe van organische stedenbouw nog meer tot zijn recht komt. "Organisch in de betekenis van organiseren, het scheppen van eenheid in de verschillende stadselementen waarin zich het maatschappelijk leven afspeelt." (Idsinga & Schilt p.241-242). Diverse voorzieningen worden volgens de schrijvers op de schaal van de wijk als bouwstenen in het geheel opgenomen. In de oorspronkelijke plannen van Witteveen was er weinig ruimte voor strokenbouw, maar tegelijkertijd beargumenteerde van den Broek, van Tijen, Brinkman en van der Vlugt in *Woonmogelijkheden in het Nieuwe Rotterdam* dat deze configuratie vele voordelen had op bouwtechnisch, financieel en klimatologisch (bezonning) aspecten. Dit heeft als gevolg dat de blokken aan de gordelwegen zijn opengewerkt en dat dus naast diverse functies zoals winkels, de gordelwegen ook grotendeels begrensd worden door tuinen in plaats van woningen. Naast belangrijke strategische logistieke routes zijn de gordelwegen met deze veranderingen ook strategische programmatische routes geworden.

Dit ligt in lijn met wat van Tijen (van den Broeks vriend en verwante in diens gedachtegoed) in Rotterdam-Zuid doet in diens Etagebouwplan Rotterdam-Zuid, zoals beschreven in het eerder genoemde boek over van Tijen; “Drie uitgangspunten blijken te zijn gehanteerd; 1. alle ruimten moeten juist georiënteerd zijn: woonkamers west, slaapkamers oost, buurtwinkels noord, scholen zuid en doorlopende straten oost-west; 2. een maximum aan openheid en groen; 3. de woonwijk dient een duidelijk organisch karakter te hebben. [...] Het etagebouwplan is daarom [...] een antwoord op de starre klinische woonwijkontwikkeling in Duitsland.” (Idsinga & Schilt p.241-242).

In de Vogelbuurt heeft van den Broek de uitgangspunten van zijn collega probleemloos overgenomen. Allereerst heeft hij zijn, op de zon georiënteerde, gestandaardiseerde woningplan kunnen inpassen in Witteveens plannen voor de Vogelbuurt. De buurtwinkels heeft hij ten noorden van zijn bouwstroken geplaatst. Aan de noordzijde van de gordelweg (ten zuiden van de volgende blokken) is dit tot op heden goed geslaagd; hier is een mix van basisschool, wonen en middenstand aan de gordelweg te vinden. Door volledig opengewerkte bouwblokken toe te passen wordt een maximale openheid langs de gordelweg gecreëerd.

Huidige situatie

In de huidige situatie is de stedenbouwkundige opzet vrijwel onveranderd gebleven. De primaire waaiervegen in de nabijheid van de Vogelbuurt zijn de Pleinweg en de Dorpsweg. De gordelwegen die lopen van de Waalhaven naar het Zuidplein hebben nog steeds een belangrijke rol in het verdelen en tegelijkertijd verbinden van de wijken. Verder zijn de programmatische uitzonderingen in de wijken (lees; functies behalve wonen) in veel gevallen nog steeds en alleen langs deze gordelwegen te vinden. Echter, door tal van redenen, is de behoefte aan winkelruimte minder geworden, waardoor de volumes vaak leegstaan of een minder sprekende, publieke functie hebben. Denk bijvoorbeeld aan een winkel die verbouwd is tot berging van de achtergelegen woning.

Langs de gordelwegen zijn 15 clusters gevonden van vergelijkbare bouwblokken die grenzen aan primaire of secundaire gordelwegen (Figuur 4). Geen enkel cluster is identiek en velen hebben een totaal verschillende uitwerking, zowel programmatisch als visueel. Vaak hangt dit samen met een toevallige hoeveelheid ‘restruimte’ die na herhaling van standaardtypes overblijft. In alle projecten van van den Broek is te zien dat hier kleine winkelfaciliteiten zijn ontwikkeld in verschillende types. In andere gevallen kan deze kops kant bijvoorbeeld ook uit een erker, een buurthuis, garages of een rij huizen bestaan.

Deze veelzijdigheid aan functies en de uniekheid van deze kops locatie aan een gordelweg raakt in veel gevallen echter ondergesneeuwd. Óf de gordel- en waaiervegenstructuur is verwaaierd door het opbreken van de gordelwegen waardoor die minder als één lijn worden ervaren óf de functies zijn verloren geraakt waardoor de volumes zich minder distantiëren als ‘organisch punt in de wijk’. Dit leidt er toe dat, ondanks inspanningen van van den Broek in het verleden, de kops kanten met diens volumes en aangrenzende woningen niet profiteren van hun unieke ligging in de stedenbouwkundige context en de kansen die dat –zeker binnen een rationele uitleg van gestandaardiseerde percelen- met zich meebrengt.

Opgave in de Vogelbuurt

Aan de Wielewaalstraat in de Vogelbuurt leiden deze vaststellingen tot een volgende mogelijke opgave. Op deze locatie is met winkelvolumes aan de zuidkant en speciale, publieke functies aan de noordkant getracht de rationele uitleg organischer te maken. Aan de zuidkant is echter getracht de ‘buurtwinkel op de hoek’ zo lang mogelijk in het straatbeeld te houden, maar van de 9 mogelijke vestingsplaatsen zijn er tot op heden maar 5 met een andere functie dan wonen gevuld. Daarnaast heeft verloederende van de tuingrenzen, een onaantrekkelijk programma en het ongebreideld aanpassen van de winkelvolumes geleid tot een weinig aantrekkelijk straatbeeld en is dit één van de concrete locaties aan de gordelwegen in Rotterdam Zuid waar met relatief kleine investeringen door grote partijen snel en veel resultaat geboekt kan worden.

8. Design Implementation

8.1. Design Concept

The development of the building block typologies (from closed to semi-open to strips) is tangible in the current urban context. The implementation of the opened building blocks -in combination with efficiency-driven repetition of the portico's- has led to an interesting meeting on the border of the residential streets and the larger scaled girdle roads. These end-faces of the building blocks are the crucial location in which the concept of 'organic urbanism' has (or should have) been applied. This means that at these endfaces, the other functions of the city than housing were (or should have been) organized. In addition, these are locations which have a large impact on the area and the adjacent streets without demanding a very large intervention. In other words, maximum effect with minimum effort.

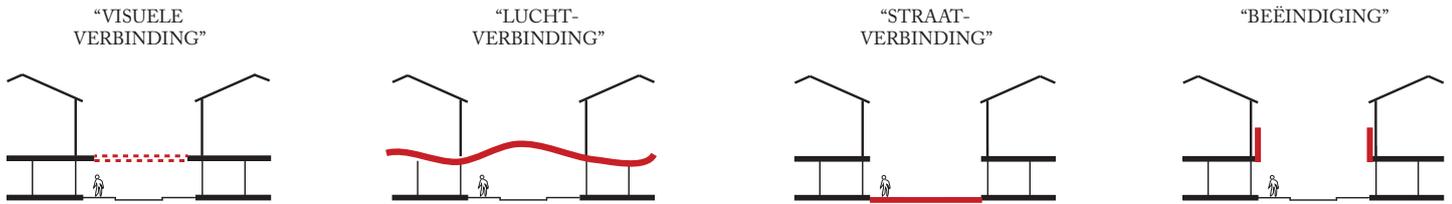
Activating and transforming the principle of the organic urbanism of Van den Broek, a strategic investment in the Vogelbuurt will have a large impact on the neighbourhood and the girdleroad. This translation of organic urbanism is designed as follows;

By introducing a classic colonnade typology in the residual space between the girdleroad and the endface of the last portico (the location of the current shopvolumes), a uniform border is introduced in an otherwise largely undefined transition between public and private. A colonnade typology basically consists of flooring, columns and roofing. These floors and roofs are the horizontal lines which can accentuate the important line of the girdleroad and also connect multiple buildingblocks (either visually or physical).

Finally, the colonnade is designed in a way that the buffer zone between public and private can function in service of public or private functions (f.e. gardens, public space or program). The colonnade can facilitate different kinds of program en has to be welcoming for a wide range of functions.

FASE 1.1 - Locatie (*consortium*)

1. Stedenbouwkundige configuratie (*verbinding/beëindiging*)

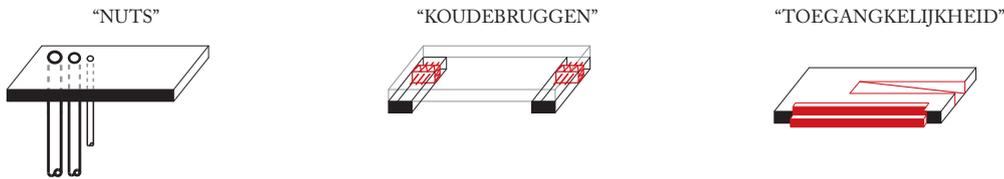


FASE 1.2 - Toekomstbepalende beslissingen (*consortium*)

2. Vormgeving dak- en vloerpakket (*variaties in het vloer- & dakpakket van de buffer*)

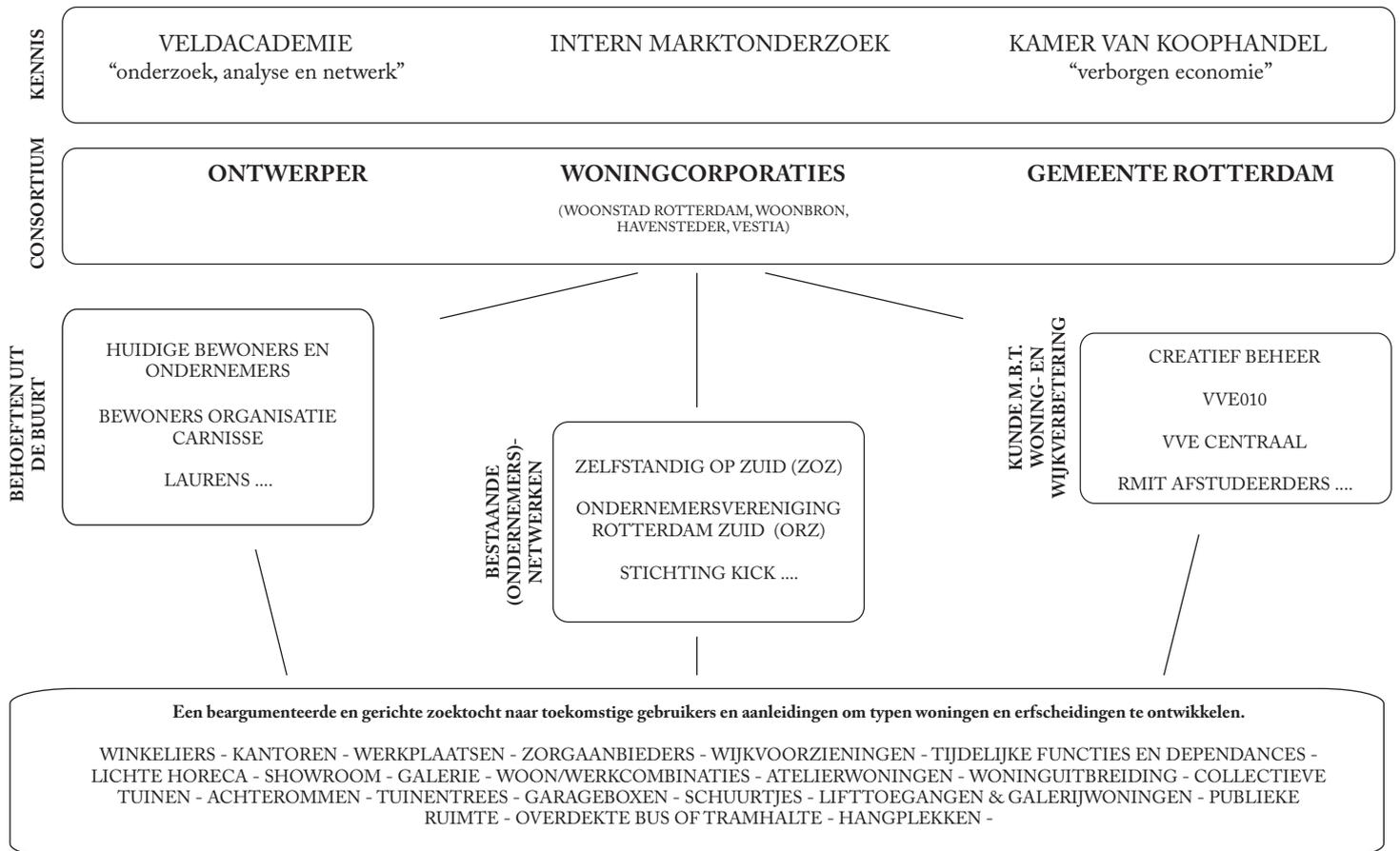


3. Voorzieningen (*voorbeelden van invloedrijke installaties*)



FASE 2 - Netwerk (*initiatief vanuit consortium*)

"Het consortium heeft de taak om actief kennis en kennissen bij elkaar te brengen omdat, uit een onderzoek voor de Veldacademie omtrent winkelleegstand bleek dat het vaak ontwetendheid is dat leidt tot niet functionerende publieke ruimtes en winkelruimtes"



Figuur 8.1

8.2. Strategy

As said earlier, this design has to be an alternative for the (co-)writers of the National Program, so the strategy is based around those actors. These writers consist of the national government, municipality, educational institutes and housingcorporations, but only the municipality and the housingcorporations can (and must) take the lead in this strategy. It is not excluded that an external investor or developer can take part in the consortium.

The strategy is divided in four phases, based on the actors who have to take initiative in the particular phase.

In the first phase, the consortium of housingcorporations and municipality have decided to develop the endfaces of a particular part along the girdle road. The urban configuration is always a first step to determine, because this has a large influence on the outcome of the colonnade but it automatically demands for an urban analysis, which is helpful for the next steps. The second step in this first phase is organizing and designing 'future-defining interventions'. These consist of design interventions in the flooring and roofing of the colonnade which have a strongly guiding, inviting or excluding function for future developments within the colonnade. It must be noted that these decisions are crucial for the influence these big actors have on for example future individual adjustments of the shopvolumes.

The second phase has no direct design consequences because it consists of creating a network. In a research on retail vacancy in Rotterdam South in coöporation with other students and the Veldacademie, we found out that ignorance is for a big part responsible for vacancy. Future tenants do not know about the offer in their price range and landlords do not know these possible target groups. That is why I have created this second phase and in the figure on the left page, you can see for example which networks and actors can be used or contacted. The goal of this network to define underpinned, realistic goals for the completion of the bufferzone/colonnade.

So after these two phases the possibilities from the location have beome clear, the goals and ambitions of the consortium has been designed in the shape of 'future-defining interventions' and this has been combined with goals and ambitions from the network; after these phases it becomes -for example- clear if there is a big demand for shopvolumes or garageboxes etcetera.

In the third phase, the initial fill-in of the colonnade is designed. The first step in this process is defining the public-private border that is always a part of the bufferzone. The bufferzone can be wholly adopted by the public or private domain, but also a mixed can be suggested in which the border lies somewhere halfway the bufferzone. The fourth option is to introduce program in the bufferzone in the form of a volume (step 4.1).

The decision in step 4.1 must lead to a specific program. In step 4.2 some of the options have been set out, organized by type of public-private bordering and ambitions/goals that the different actors could have. It is noticable that after the network that has been set up in the second phase, this table requires a third column for the possible external actors who want to take part in the development. For the most part, they will be interested in the -to be developed- volumes, since that is where they could develop for example shops, offices and workshops.

Figuur 8.1

Phases 1&2 of the strategy of The defined fill-in leads to the last step in this third phase, in which the completion/detailing of the bufferzone is dependant on the program of the bufferzone. A tangible example is the design of the edge of the floor of the colonnade, at the gardensides integrated flowerbeds and benches are of added value and near shopvolumes, some extra accesspoint might be beneficial.

The final phase consists of the individual development of the volumes. In this phase, future owners or occupants can finalize their shop or office by choosing the amount of insulation

FASE 3 - Initiële invulling bufferzone* (*consortium + externe partijen*)

voordat aan fase 4 wordt begonnen, is er eerst binnen net niet op te zetten netwerk een grondige analyse en raming gemaakt van bestaande wensen en eisen en te verwachten ontwikkeling

4.1 Definiëring publiek-privaat (*globale toekenning van domeinen*)



4.2 Definiëring programma (*specificatie aan de hand van betrokken externe actoren*)

	OVERHEID	WONINGCORPORATIE	EXTERNE INVESTEERDER
	Nuts-gebouw 	Wijkvoorziening 	Winkel, kantoor, werkplaats, horeca etc.
	Publieke ruimte 	Tuin 	(collectieve) toegang tot het binnengebied
	Publieke ruimte 		(collectieve) toegang tot het binnengebied
		Tuin 	(collectieve) toegang tot het binnengebied

5. Vormgeving bufferrand (*als directe consequentie van stappen 4.1 en 4.2*)



* Vormgeving entree (*apart genomen vanwege invloed van en op omgeving*)



FASE 4 - Individuele uitwerking (*externe partijen*)

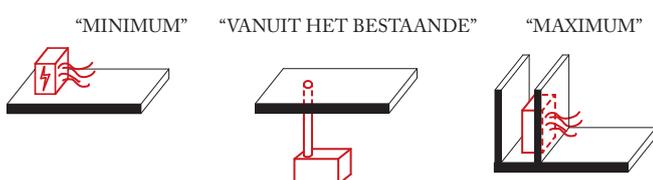
6. Isolatie



8. Personalisatie (*voorbeelden van personalisatie van de invulling*)



7. Installaties



Figuur 8.2

Phases 3 & 4 of the strategy

and the way climate control systems are organized, which has a relatively large impact on the small spaces of the volumes.

In this strategy, the first two phases (steps 1-3) are constant and provide the basis for future developments. These phases are also the phases on which the consortium has the biggest influence and amount of participation.

Phases 3 and 4 are more and more cyclical, since the program could change within time. The phases are more influenced by future developments and users, and thus the consortium loses part of its control. But as stated in the introduction of this report; these actors can and must have a strongly guiding role in the developments but are powerless towards unforeseeable future developments and the unpredictable use of their ideas. By providing the instruments to guide, exclude and steer future developments in the first two phases, this unpredictability and 'powerlessness' can be largely coped with.

8.3. The colonnade

The colonnade is the basis for all future developments, so this design must be able to cope with a lot of developments. This colonnade is the element that provides the connection between the building blocks, that offers the homogeneous solution for the public-private border and that facilitates a wide range of functions. This demands for a clear and strong design of the colonnade while maintaining a neutral expression, since there can't be variety without consistency or chaos without order. That, the fact that the colonnade offers a lot of repetition and the fact that the Wielewaaistraat could function as a sort of 'centre for the neighbourhood' and thus required an 'urban feel', were decisive to execute the colonnade in precast concrete. Since the colonnade has to persuade future users, the colonnade has to be of a very high quality. With a attractive, persuading basis, future developments are more likely to have a positive contribution as well.

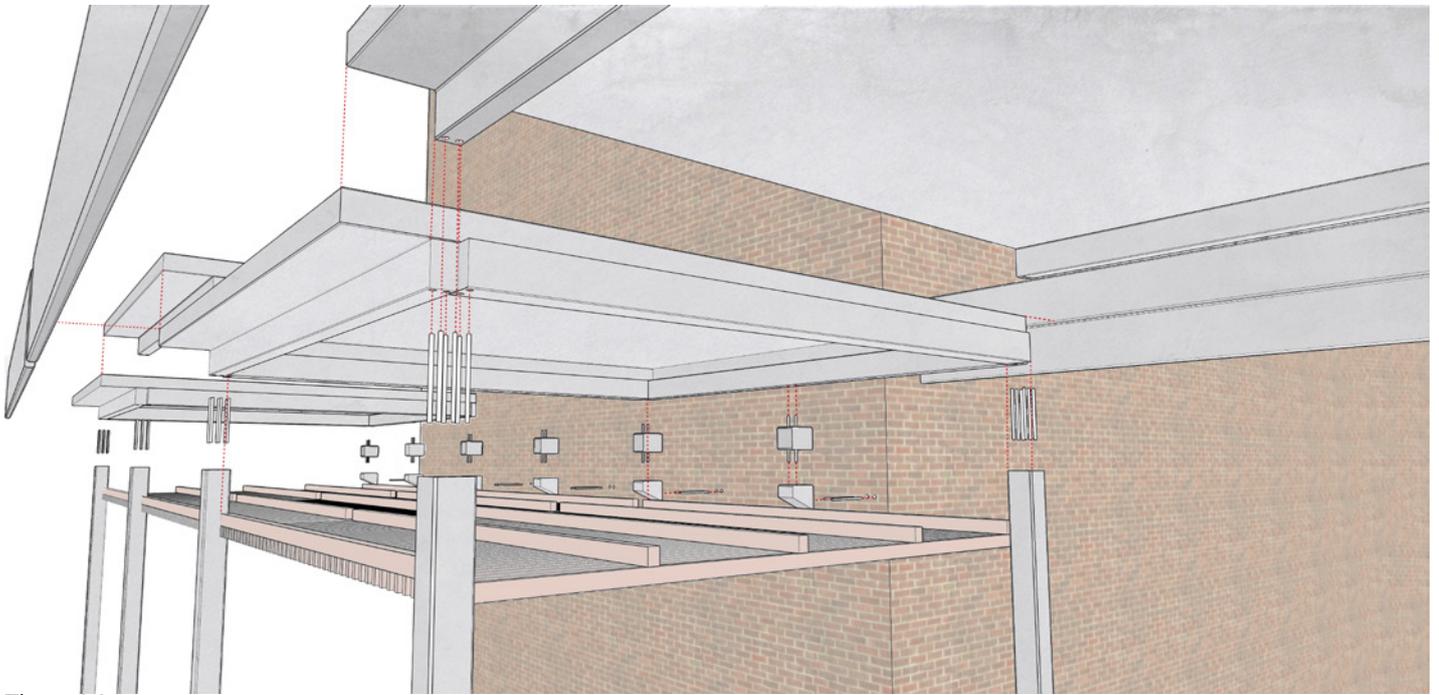
Columns

The colonnade is based on a grid of columns that had to be outlined to various aspects. The most important one is the outline of the existing basements, which caused the grid on the longitudinal side to be 3700 millimeters. On this longitudinal side another important aspect was the 'wall-effect' of the columns from a far point of view. The smaller the grid would be, the columns would sooner start functioning as a wall visually than as a colonnade.

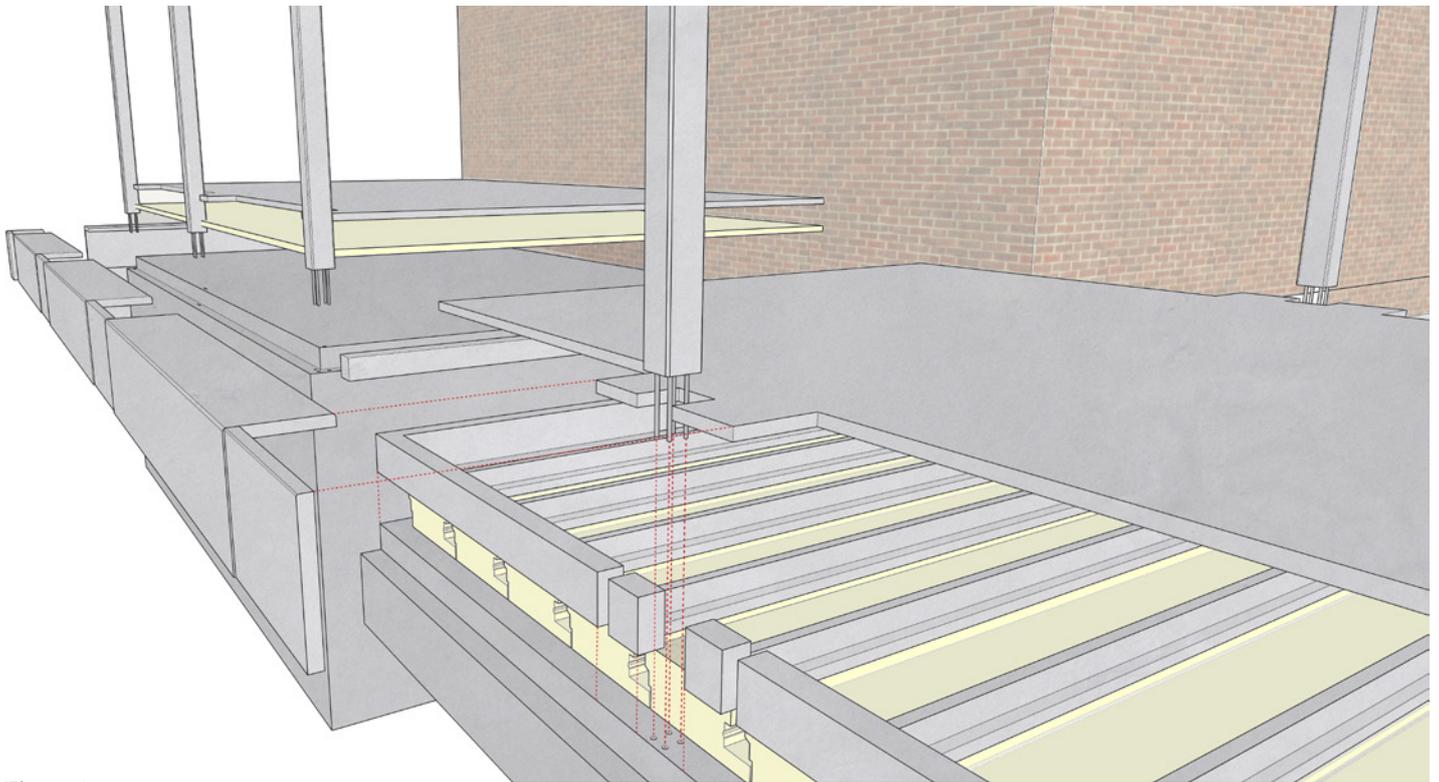
On the transverse side, the distance between the columns is 3300 mm. First of all, it was important to keep the two dimensions close to each other to become as much a square as possible. Because the residual space is fairly small at the Wielewaaistraat, the current shop volumes seem 'compressed', which gives an appearance of 'leftover', a volume being designed and built with minimum effort. By staying close to the square, this effect is for a large part diminished.

However, it could not be 3700 mm on the transverse side, since all portico's meet the residual space in an unique way both in angle as in dimensions. With 3700, the colonnade would have blocked some of the windows of the first dwellings. 3300 mm was a dimension that caused the eaves to meet the portico's in the most beneficial way.

This dimension on the transverse side however demanded the columns to disappear at the location of the current shops, where the colonnade would meet the endfaçade of the portico. There, the longitudinal grid is densified to 1850 mm and instead of columns, the load bearing structure consists of cantilevers attached to the existing endfaçade.



Figuur 8.3



Figuur 8.4

Figuur 8.3
*Exploded view roof
construction*

Figuur 8.4
*Exploded view floor
construction*

Flooring

The floor is also based on the existing shopvolumes at the Wielewaaistraat. The existing floor height (varying but around 300 mm) is raised to 400 mm in order to add a thermal break and a new top floor. The new-built parts of the colonnade are of the same height to acquire the unity throughout the colonnade. The height difference also accentuates the difference in function of the colonnade (bufferzone) in comparison to the sidewalk (purely public) or the garden (purely private). In the new-built parts, the foundation consists of vibration-free piles and a foundation beam that runs along all edges of the part that is located between the existing basements. On this beam the concrete *combinatievloer* is laid out. The *combinatievloer* is chosen because it can be combined with a thermal break in the form of insulating slabs between the concrete ribs and because a top layer of concrete needs to be poured on top, but in this layer utility connections (*NUTS-aansluitingen*) can already be laid out. The columns are directly attached to the foundation beam in order to hide away the anchors (*stekankers*).

The floor ends are completed with precast floor-edge elements. This has everything to do with the appearance of the colonnade and the possibility to adjust the edge to the program that is organized in the colonnade itself. About the appearance the following has to be said; the load bearing structure provides the colonnade with a rhythm along the Wielewaaistraat. However, dilatations in the concrete also have consequences for this rhythm. I have used the dilatations to my advantage instead of trying to hide them. The dilatations have become a secondary rhythm in the colonnade and are decisive for the dimensions of the fill-in of the colonnade.

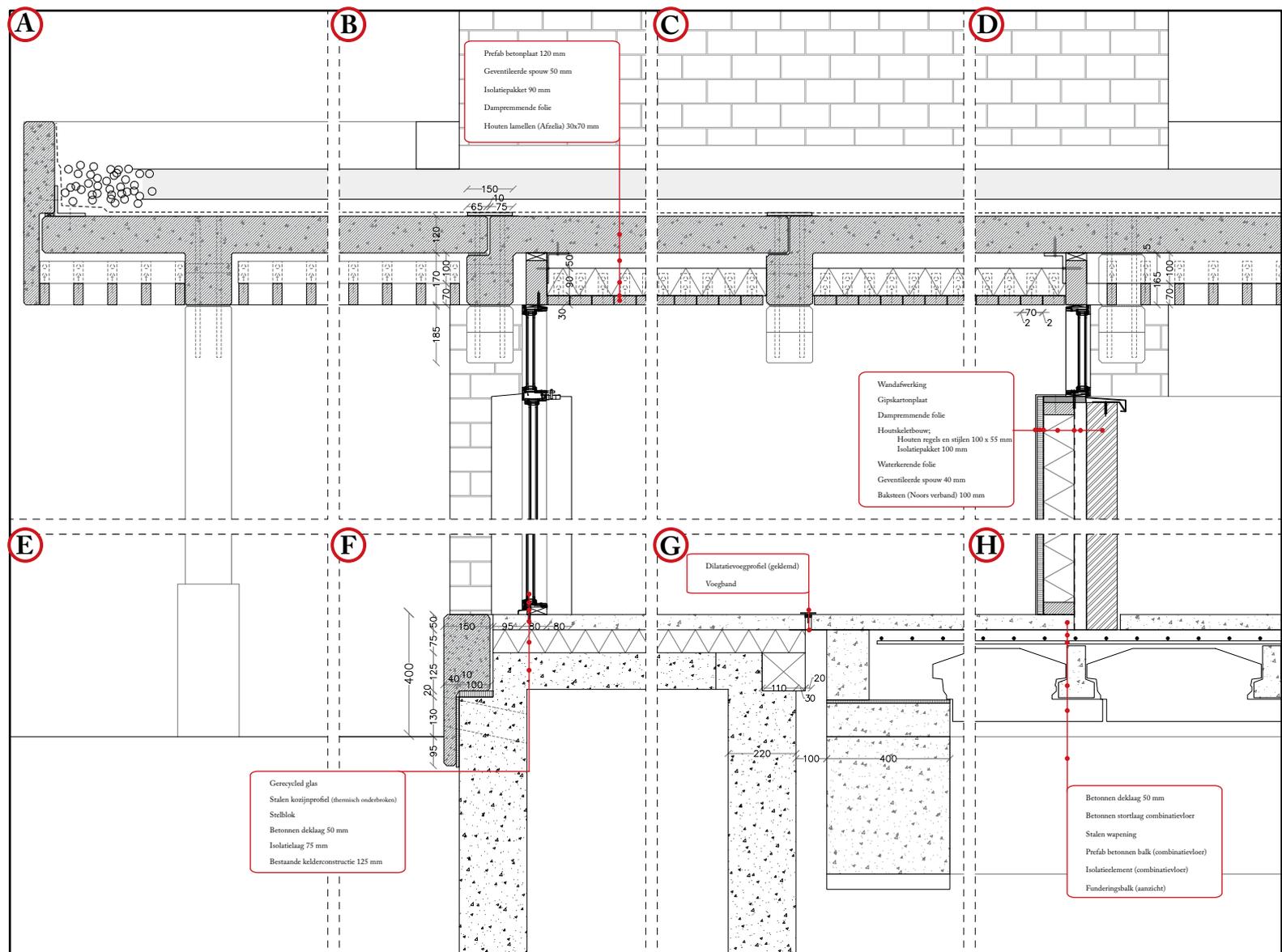
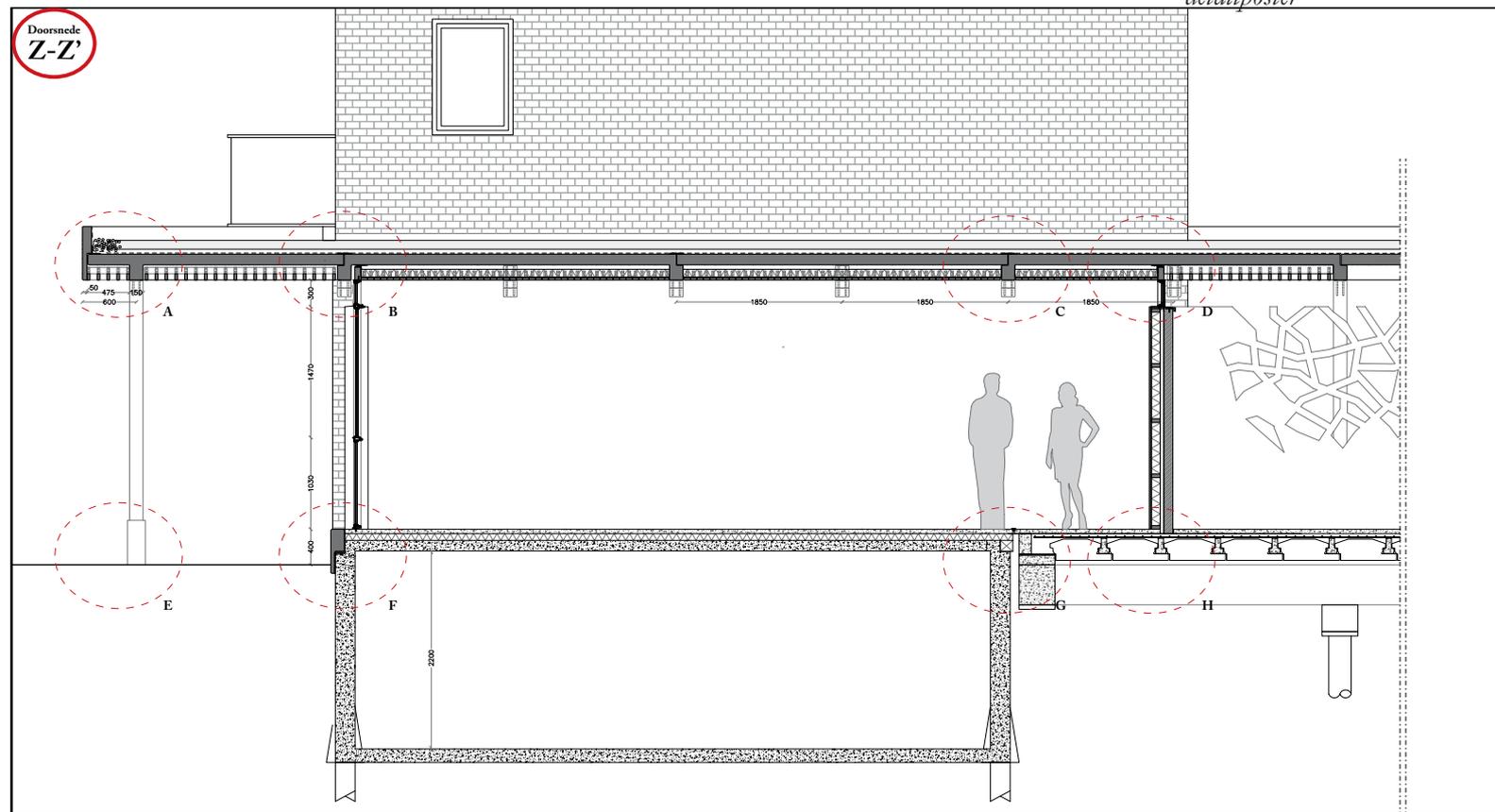
Between the columns an L-shaped element gives the suggestion of a seat (400 mm) while being nothing more than a dilatation. Around the columns, the element is shorter and smaller, but giving the idea of the column standing on a pedestal.

Roofing

The roof consists of two types of precast elements. One consists of a concrete roof slab supported by beams in both directions (a mega-cassette) and the other consists of a roof slab with only beams in longitudinal direction. This last element lies partly on the other but both elements are supported directly by the columns. The roof slab extends the columns and floor edge to create a (small) canopy on all sides. The roof is also bordered by precast elements. The floor and roof needed to have some sort of dominance in order to cope with the randomness in its direct surroundings (gardens, trees, streetlights, program of the colonnade etc.). That is why the roof also has to act as a thick monolith in order to function as a neutral 'connector' in the plan. The 600 mm high roof edge conceals the roofconstruction and the possible fill-in of the ceiling. The concrete slab is namely topped by a semi-intensive sedumroof. The sedumroof (even though it is heavy) is applied because this also creates a thermal break for functions underneath the roof. Besides, because it is elevated the green view of inhabitants further on in the strip is extended and a part of the Wielewaaistraat is shielded from their sight.

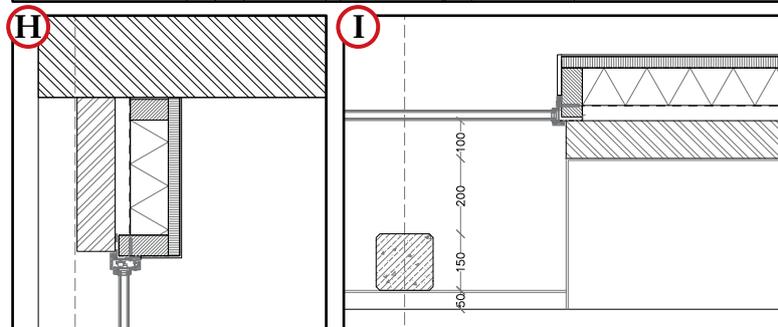
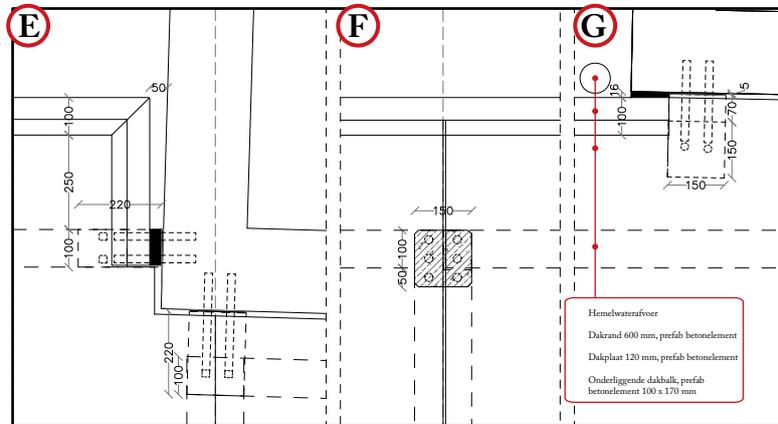
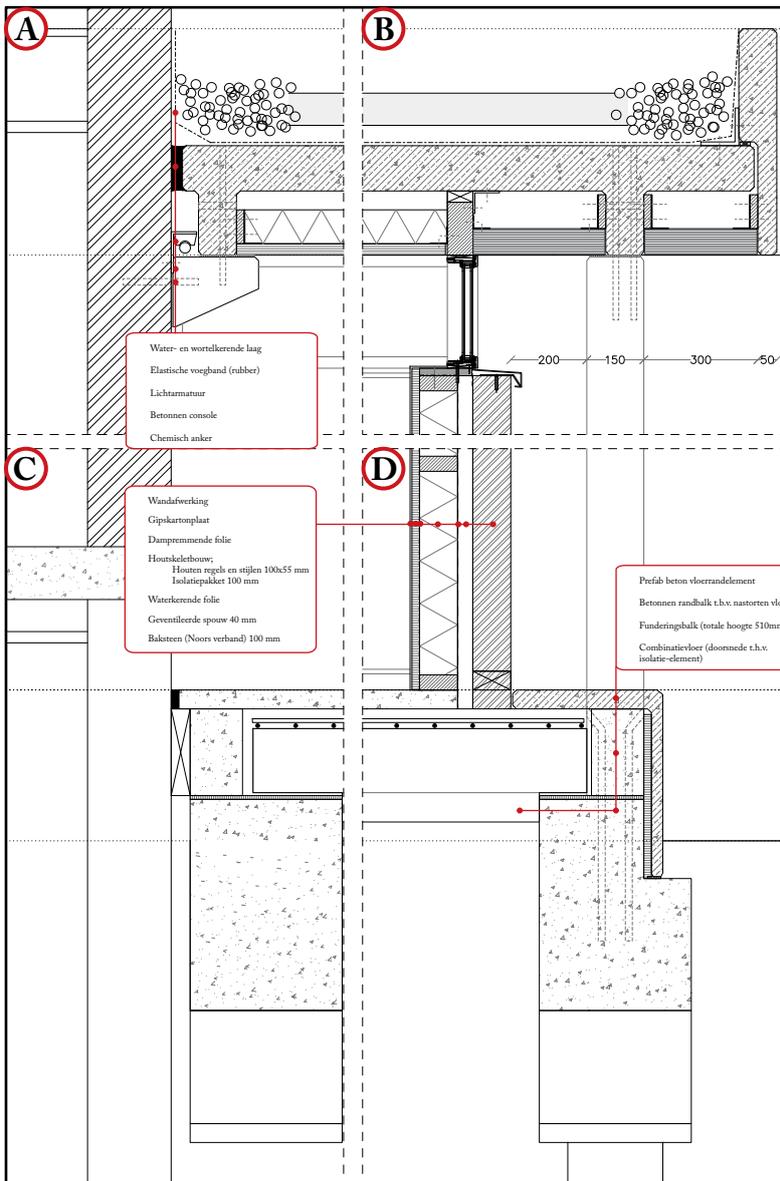
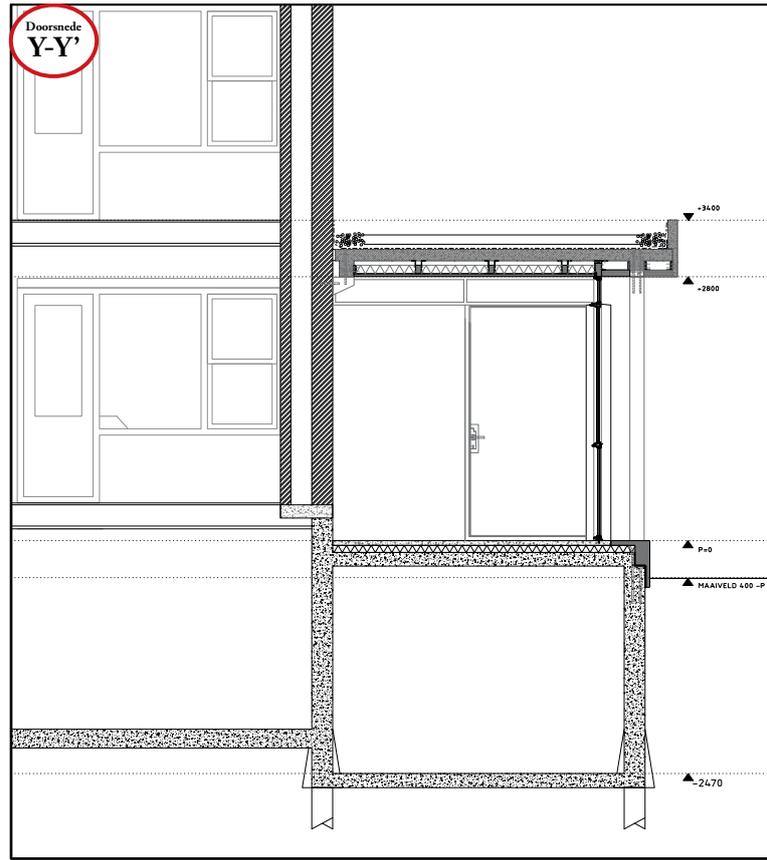
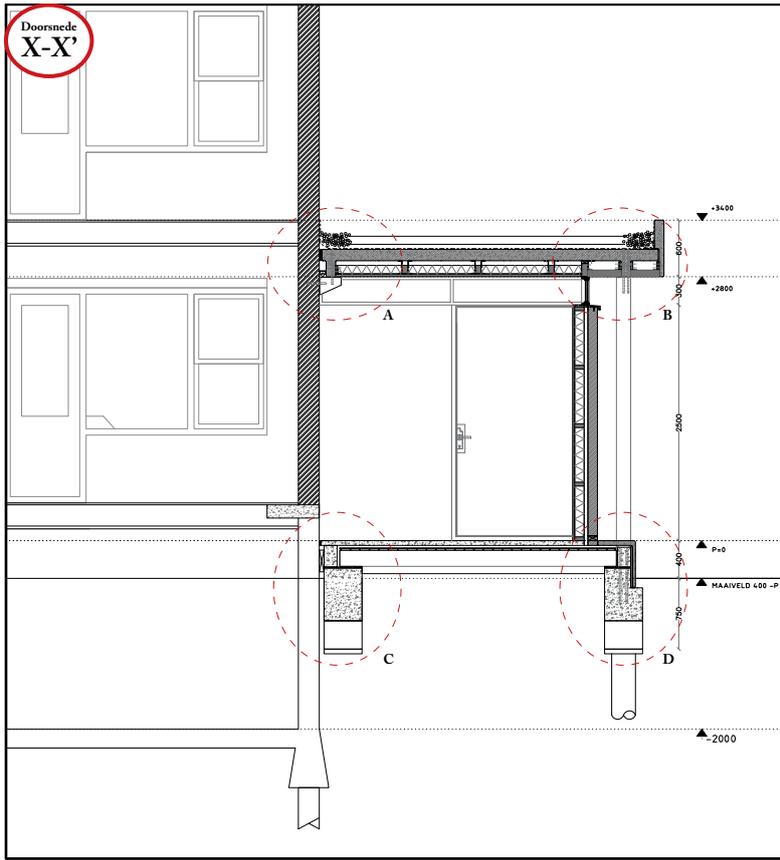
Underneath the roof, the voids in the concrete construction are filled with wooden slats. This offers a visual 'closed' monolith from a far point of view while from up close, the 'honest' construction can be seen. In combination with the slabs, lighting can also be detailed in a high-quality way. The lighting will be integrated in the slats and are constructed of a simple light source, but finished with a translucent plastic sheet in order to provide a diffuse and even light spread.

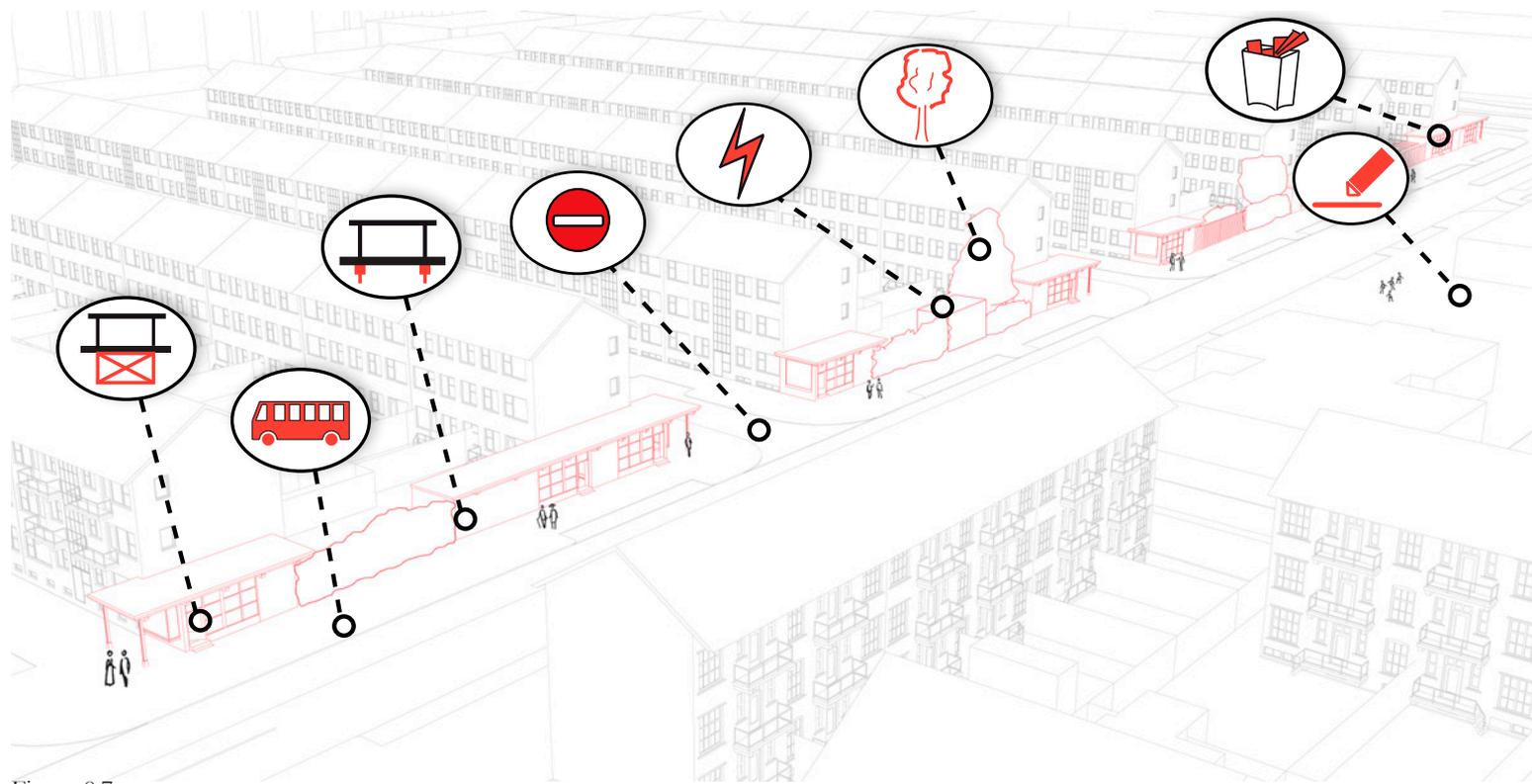
Figuur 8.5
Scaled visualisation of the
detailposter



Figuur 8.6

Scaled visualisation of the detailposter





Figuur 8.7



Figuur 8.8

Figuur 8.7
*Examples of designmotives
 in the Vogelbuurt*

Figuur 8.8
View of a shopvolume

8.4. The content of the colonnade

Observations and triggers from the direct surrounding are the arguments for further design decisions concerning the content of the colonnade. The most important of these observations are visualised in figure 8.7. Underneath the original shops, there are basements which should be used, since they double the floor area of most shops. Underneath the adaptations and expansions of the shops there are also existing foundations which should be used again in the colonnade.

Furthermore, the existing program of the volumes should be appreciated and be given a place in the new plan. This concerns a cafeteria, two small shops, a driving school and a nailsalon. Also there is a transformate unit, which should be redesigned in the colonnade, since a lot of existing networks are based on the location of this unit.

On a larger scale it is important to notice that all residential streets are one-way-streets, so a physical connection between the building blocks on the level of the roof (+3,8 m) is excluded. A bus stop can also be an important place in this neighbourhood and the fact that there is an elementary school across the street has also implications and opportunities. Finally, one should take the iconic (*beeldbepalend*) trees and/or green into account.

In the Vogelbuurt I have chosen to develop shops at all the locations with a basement. In those locations, the original shop volumes were located, all located on the corner of the colonnade, thus emphasising the intersection between grid road and residential streets. Also the basement provides the shop with a functional floorspace and won't be too small. The larger shopvolumes are developed on the locations where there's already an existing foundation.

The busstop and the elementary school were arguments to design public spaces in the colonnade, respectively to provide people a sheltered place to wait for the bus or to wait for their children to come out of school. By interior design of these spaces, both public spaces have been 'profiled' to their function.

The volumes

The facades of the volumes consist of clear open and closed parts. The glazed parts consist of a translucent lower part of recycled glass and an upper transparent part of high quality glass. The window frames are steel, thermally insulated frames with enough space to use different types of high quality glazing (double, HR or HR+ etc.). The closed facades are made of the brick of the current shop volumes, which are chipped off and used again in the same masonry bond but have a rougher appearance because of this recycling process. Both parts of the facade 'stop' 30 cm under the roof and are closed off by a strip of glazing. This way, the volume automatically becomes secondary to the colonnade itself and the horizontal line of the roof is emphasised more because it is 'lifted' from the content of the colonnade.

In the view, plans, details and sections it can be noted how the rhythm of the dilatations in the concrete influence the outlines of the volumes. This way, all the volumes have a similar expression and relationship with the colonnade even though every volume is unique in its size and shape. The accessibility of the colonnade (the steps and the ramps) are also lined out with these dilatations.

The volumes are small, varying in their floor space (basement included) between 40 and 66 m². The current shops are still smaller, but the shops haven't been expanded too much in order to meet the wishes of small retailers, who don't want too much space, because rents will increase significantly with more square meters. On the next few pages, the plans of the four different blocks can be seen. In order to fit them in this graduation report, they are shown scaleless, but originated from 1:100 drawings.

I want to elaborate on a few design decisions concerning the detailing of the volumes. Firstly, the wooden slats from the roof construction are turned 90 degrees in the case when a volume is located underneath (details B and D on page 118). This way, the wooden slats evolve in



Figuur 8.9



Figuur 8.10

a ceiling and the space that is created in the voids can be used to introduce extra insulation. In the design of the concrete elements, recesses have been placed in the beams in order to ventilate the cavity and to organize wiring above the ceiling.

To the bricked parts of the façade, a wooden framework is attached on the inside of the façade, separated by a cavity (page 119, details B, D, H and I). This way, the walls are thicker and more stable and this way there is another possibility to insulate the volume better. The wooden framework is closed off by plasterboard with which the future user of the volume can finish his shop or office in his/her personal style.

Lastly it must be mentioned that the designed functions in the volumes on pages 122-129 are not fixed. It could be possible that these volumes are filled with a different program. However, I wanted to prove that all of these kind of functions (small catering, shops, offices and community facilities) could take place in these volumes.

The public spaces

I have designed two public spaces in the colonnade. First is a sheltered busstop (figure 8.9 and in plan on page 124). This rather small public is designed on the current location of the busstop bus instead of intervening in the sidewalk, it is placed within the colonnade. This small public space is designed with a characteristic bench and an information sign that is in line with the rest of the space in dimensions and simplicity. The space is accessible by ramp and steps so all people can use this place.

The other space is located directly across the entrance of the schoolyard (figure 8.10). This is located here because everyday a lot of parents wait for their children on the small sidewalk since they may not enter the schoolyard and thus obstructing other passers. With this public space, there is a space for parents and children to linger before and after school. Sheltered and instead of a cramped sidewalk, a public space in a large set-up. Accessible by three steps and two ramps and designed with two benches and typical detailing in the concrete. This detailing is lining in the concrete in order to create a hopscotch place for children (hinkelspel) and to give an illusion of painting canvasses, so children can literally create 'street-art' with chalk.

Both public spaces are designed with three principles in the back of my mind; space, sight and light. These three principles will prevent the locations to become unsafe, hostile hangouts. Sight is created by a large field of view from the street and a perforated property boundary so even inhabitants of the portico's can have a view on the public space. Light is created by repeating the same lighting-principle as in the roof, but exploded to larger dimensions so the whole public space is evenly lighted. The principle of space is used by preventing the public spaces to have narrow spaces and corners that are barely visible. It is possible to have an overview of the whole public space in one glance so a passer or inhabitant doesn't have to be afraid of unwelcome surprises.

The property boundaries

The property boundaries have one conceptual design along all the parts of the colonnade. This design solution is a concrete cast perforated wall with a strong visual expression towards streets and garden. This is based on the 'simplification-process' of Piet Mondriaan, in search of the essence of a shape. Because this is the border of the gardens, I have chosen to search for the essence of the shape of treetops. By simplifying this shape and repeating it next to each other, a playful image of surfaces and lines was created in which, according to the placement within the colonnade, these surfaces were perforated or not.

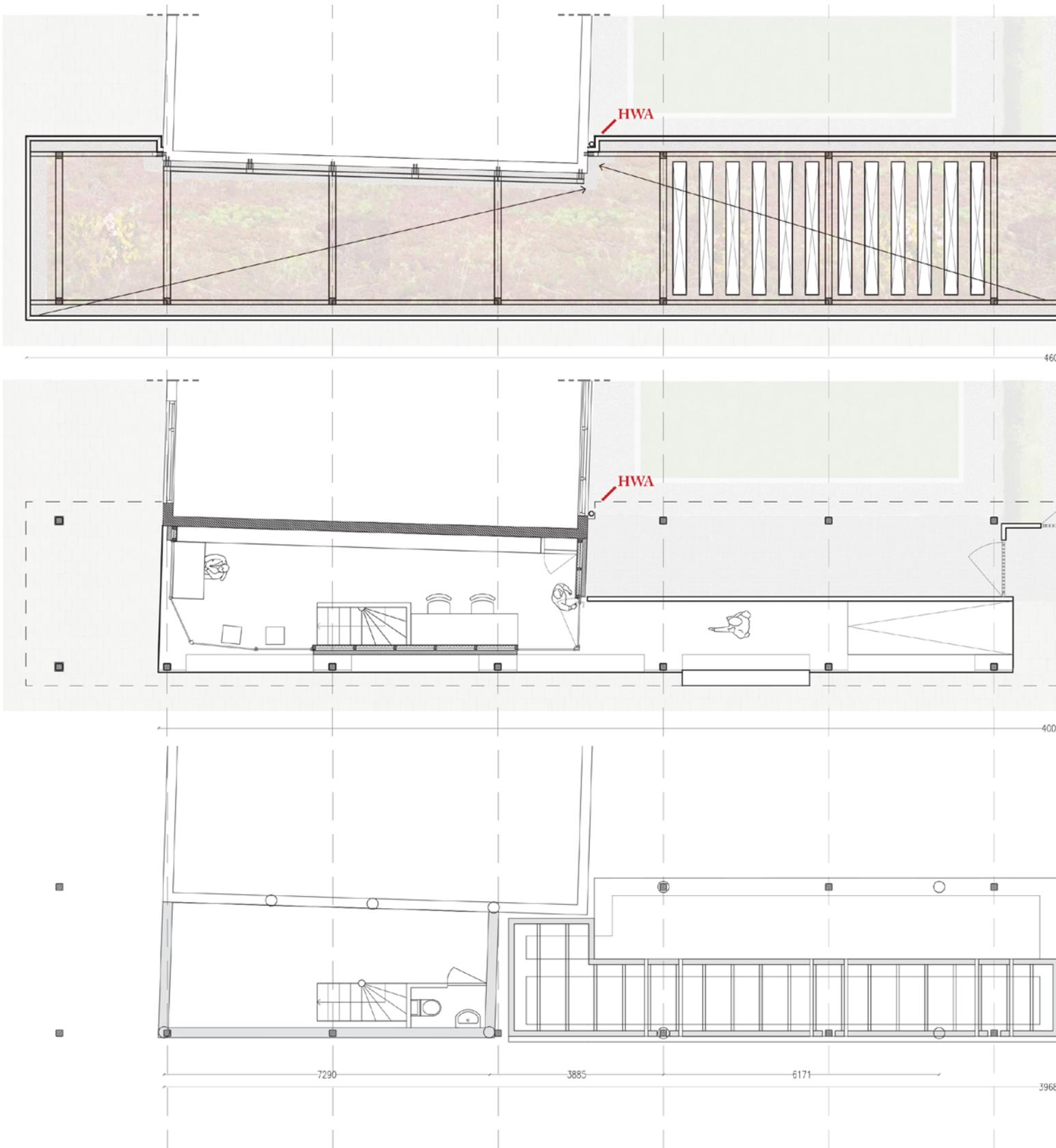
Figuur 8.9

Impression busstop

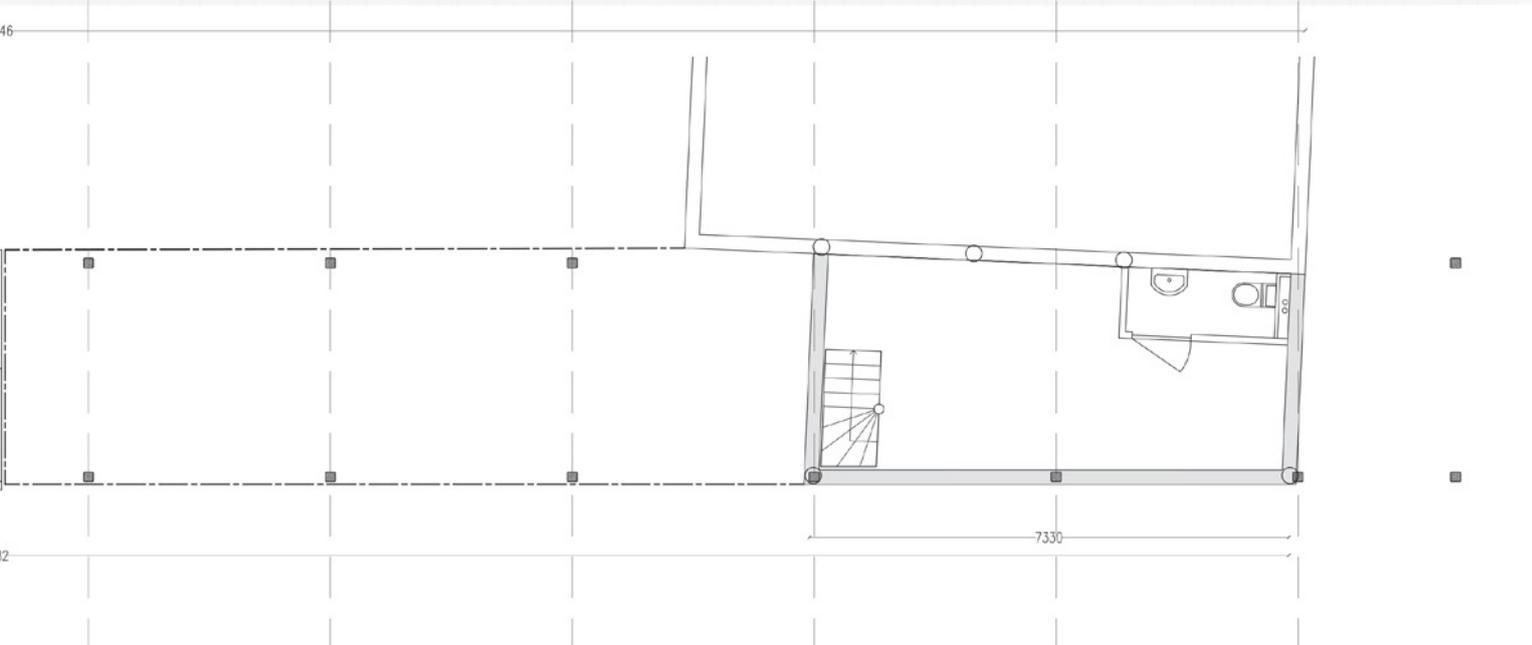
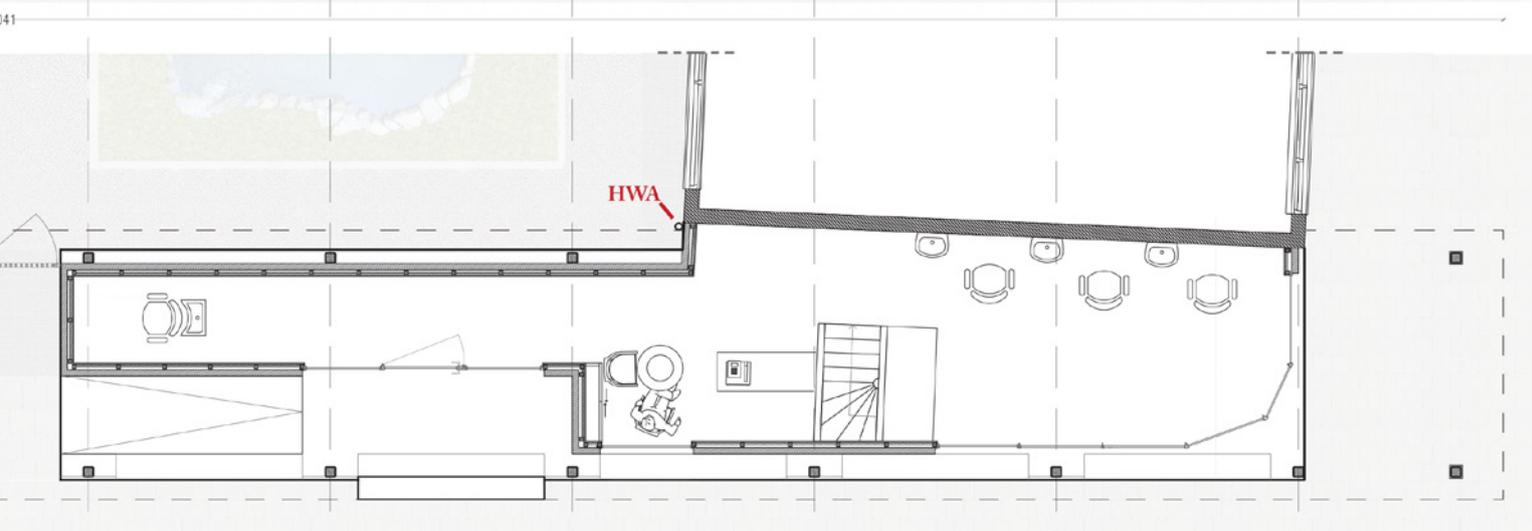
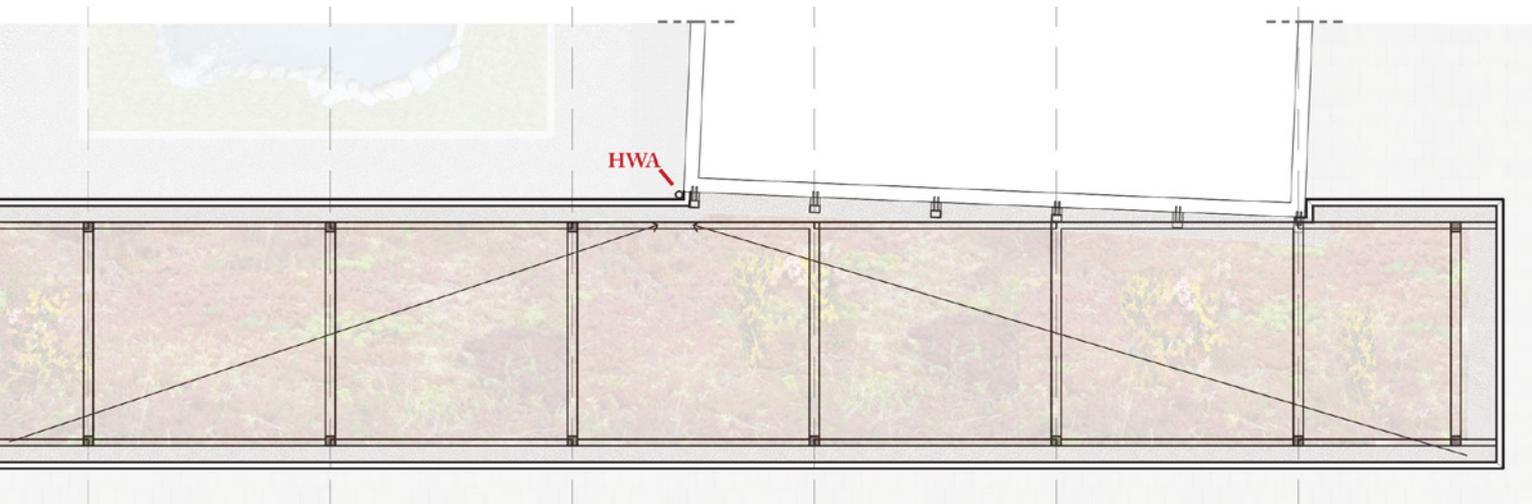
Figuur 8.10

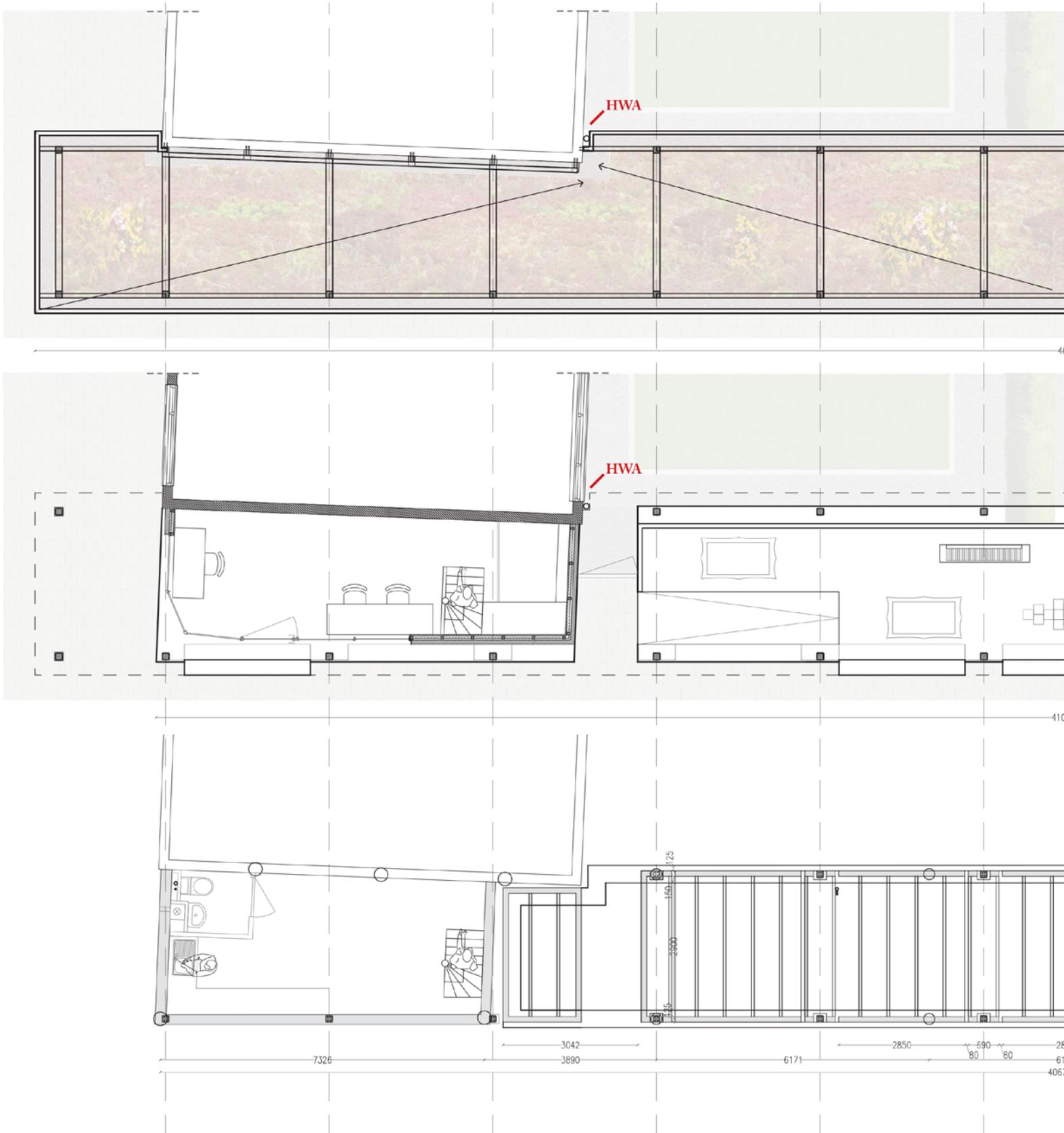
*Impression public space
across school*

This element is used as a connecting element in the colonnade. This element can cope with the chaos that evolves in all the different gardens along the Wielewaalstraat, for the gardens are people's private space and they're free to do whatever they like. By putting this element in front of it, the consistency of the colonnade is guaranteed no matter what happens behind it.

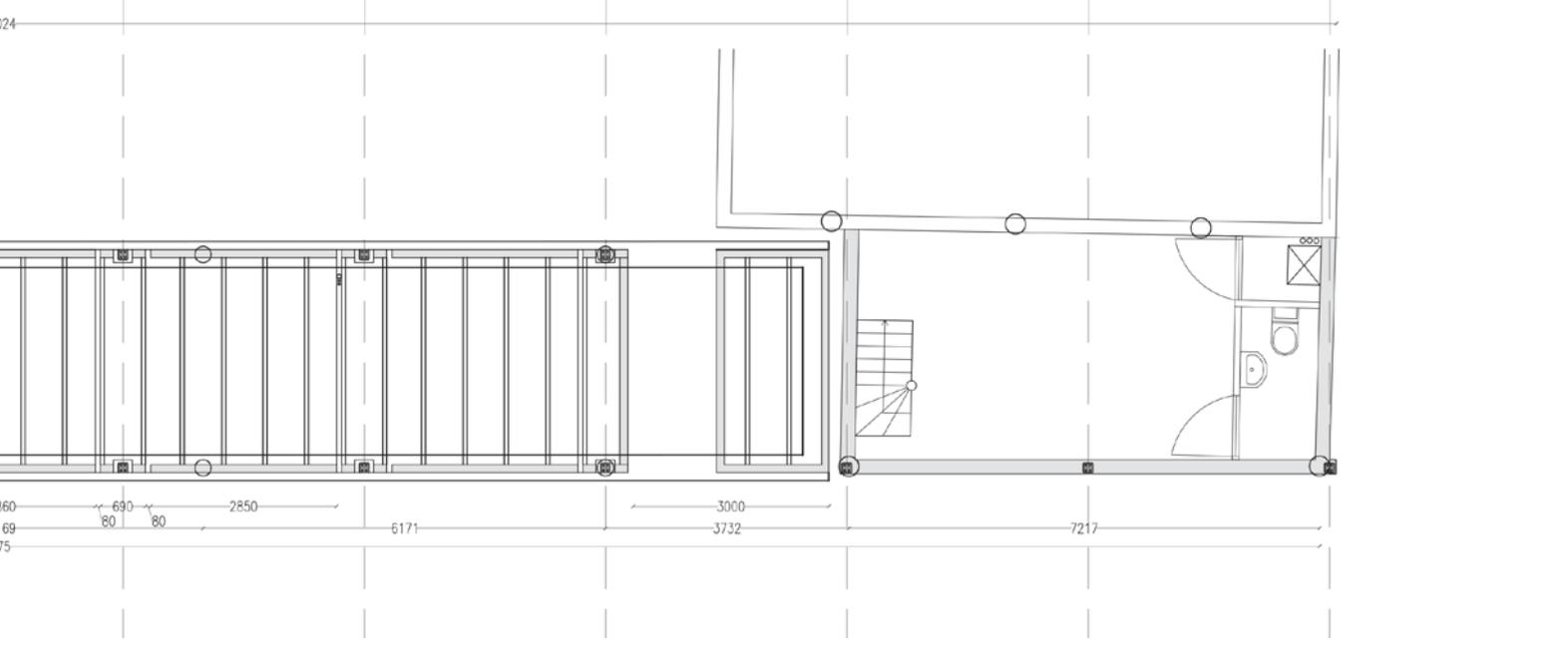
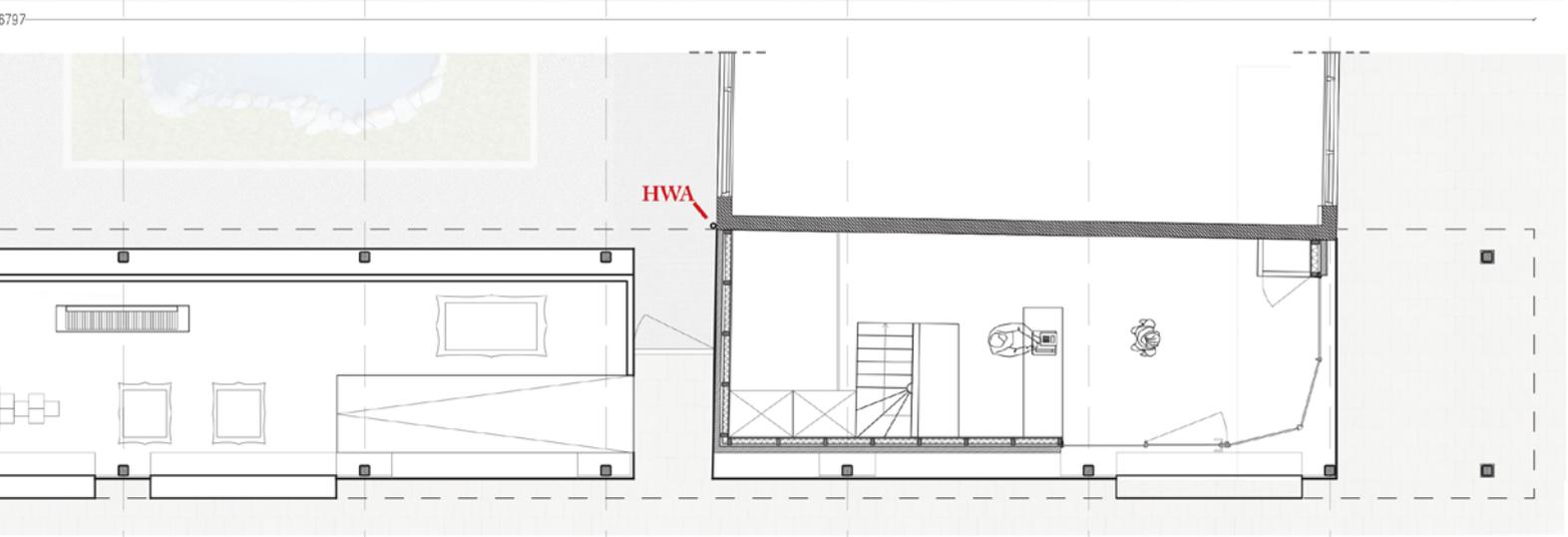
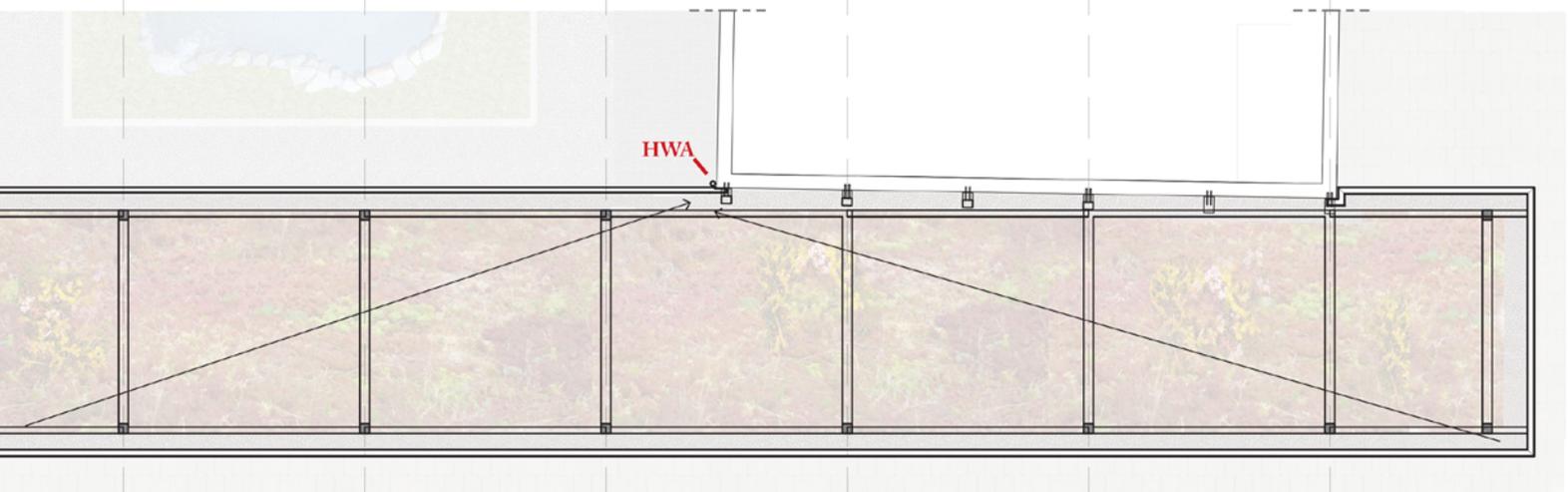


Figuur 8.11
*Scaled visualisation of the
maps of block X*

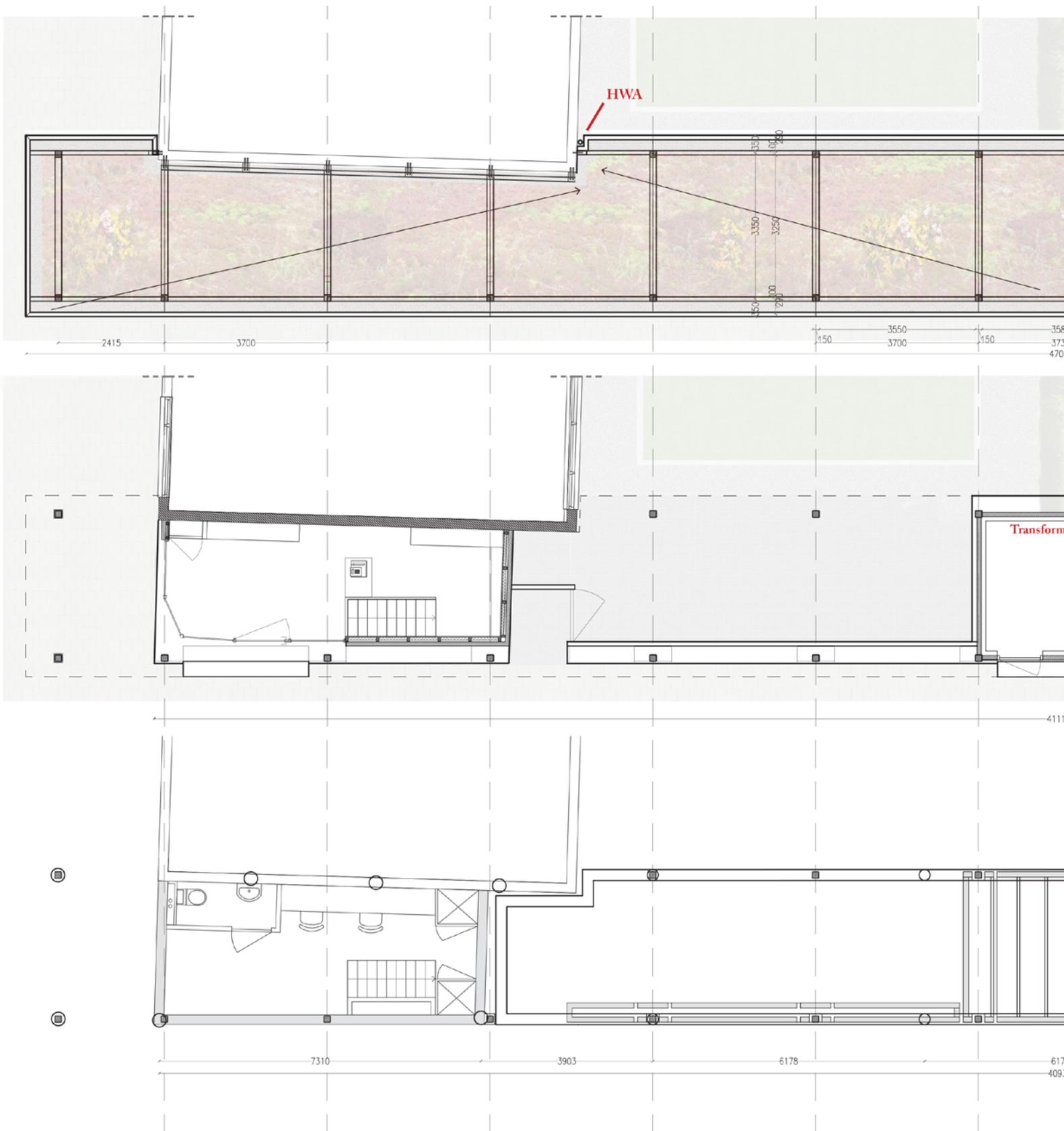




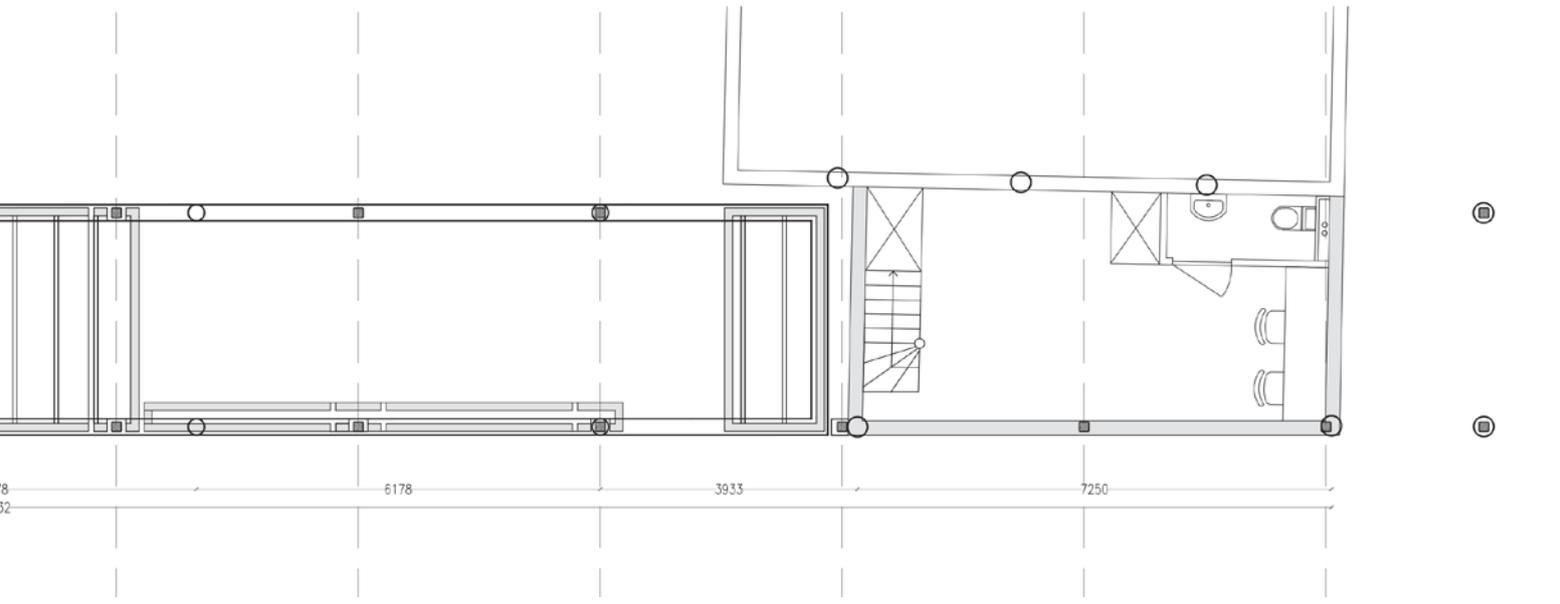
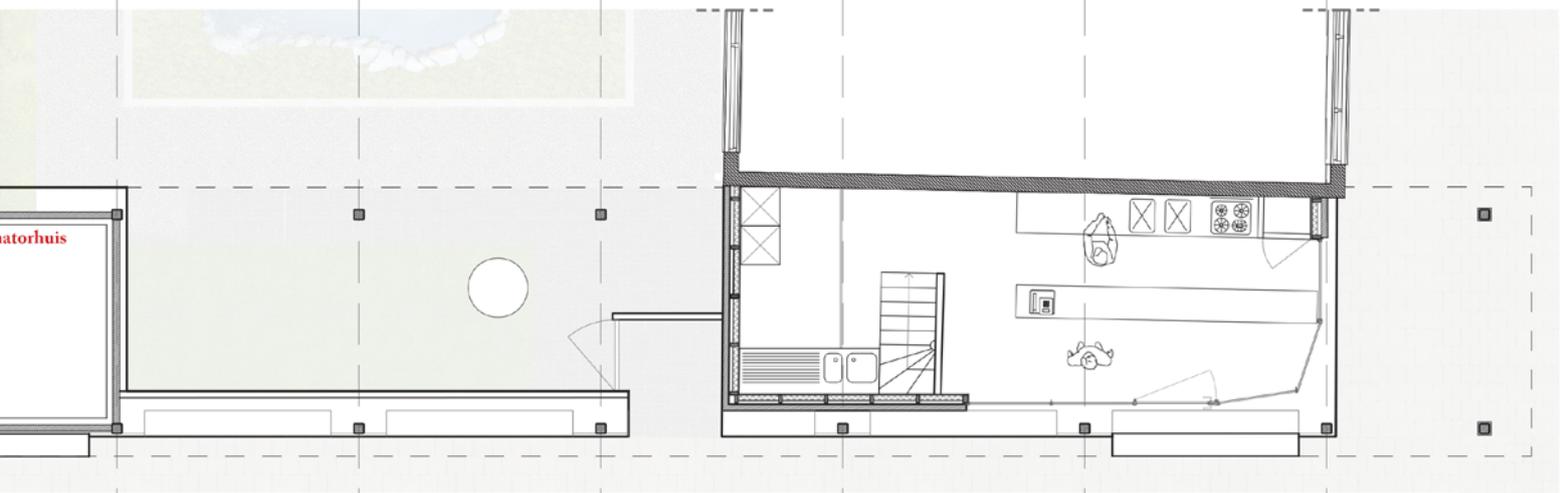
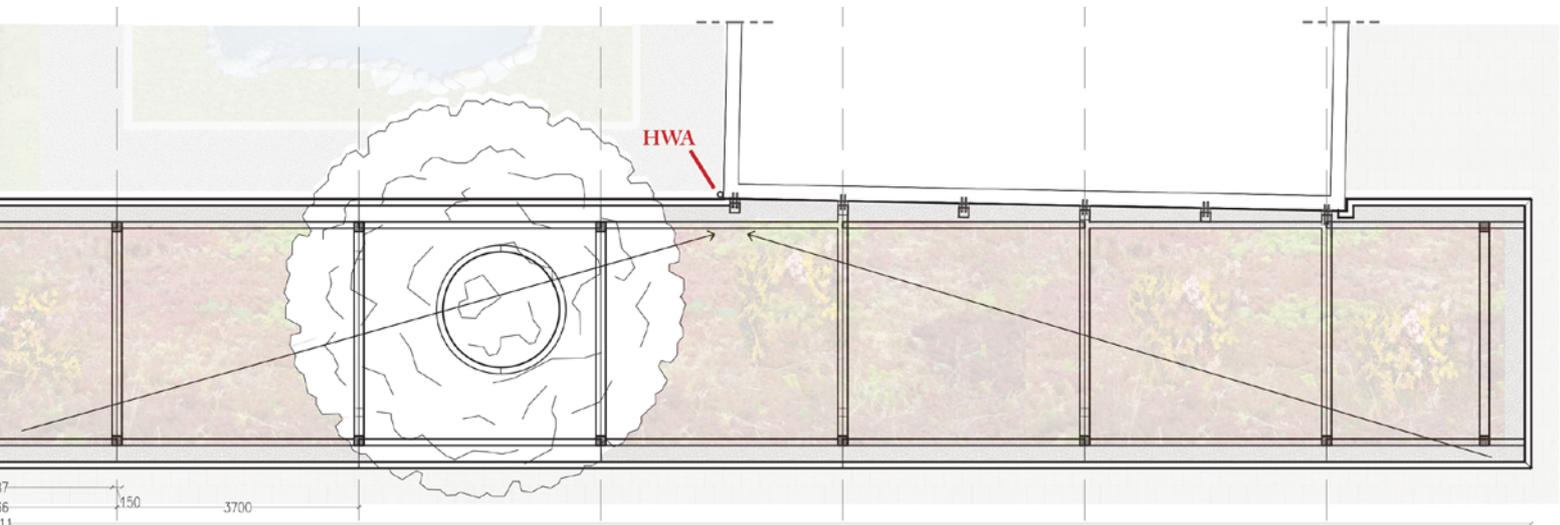
Figuur 8.12
*Scaled visualisation of the
 maps of block Y*

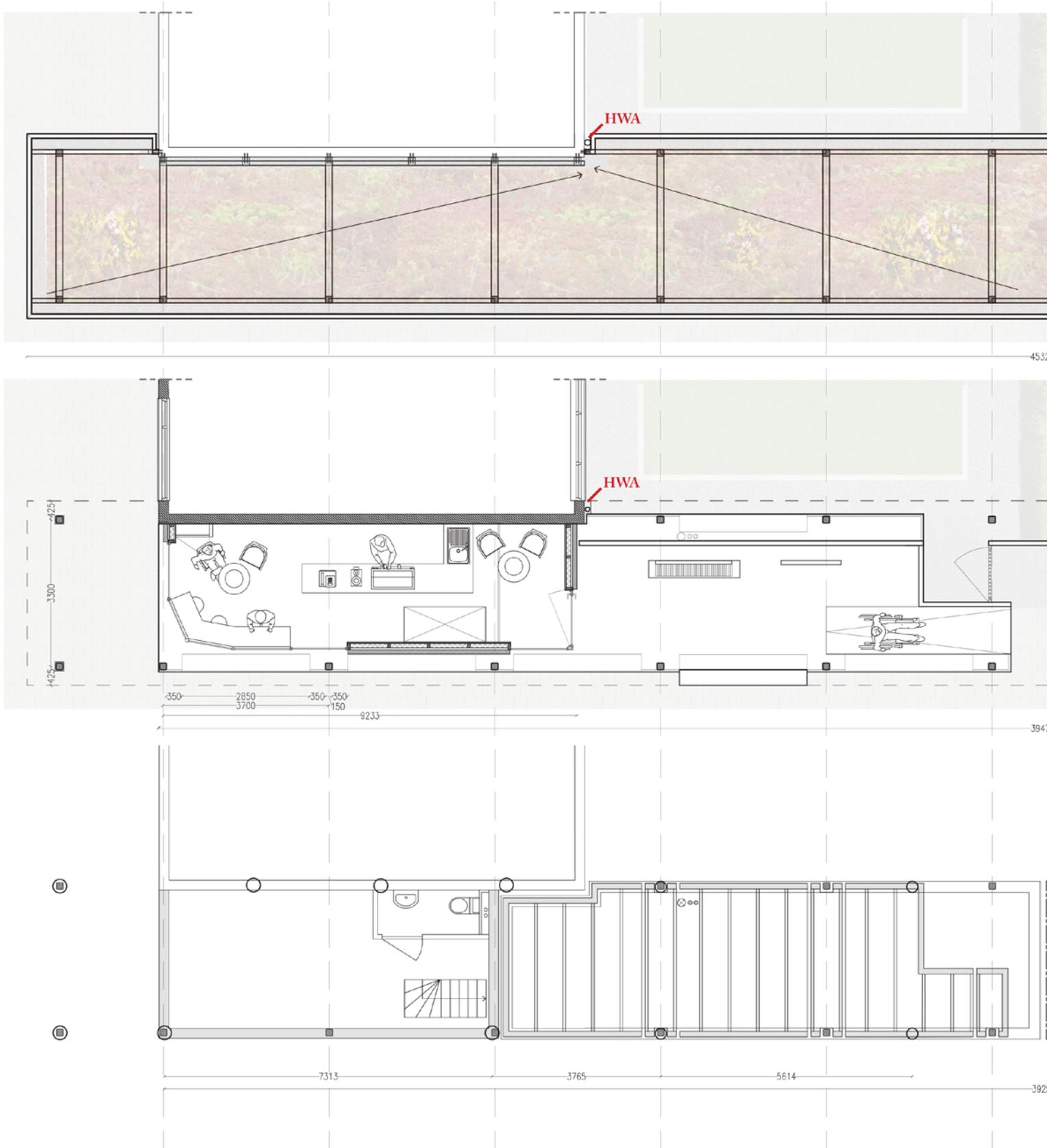


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3732
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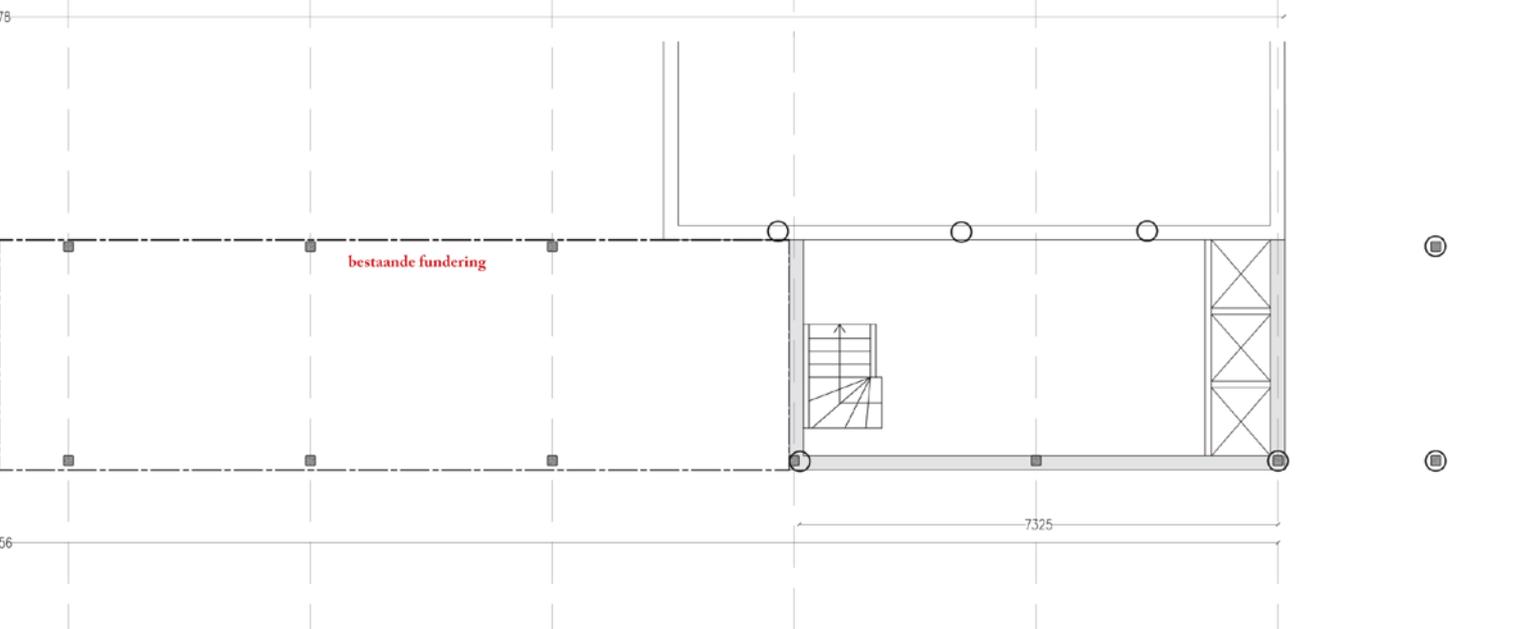
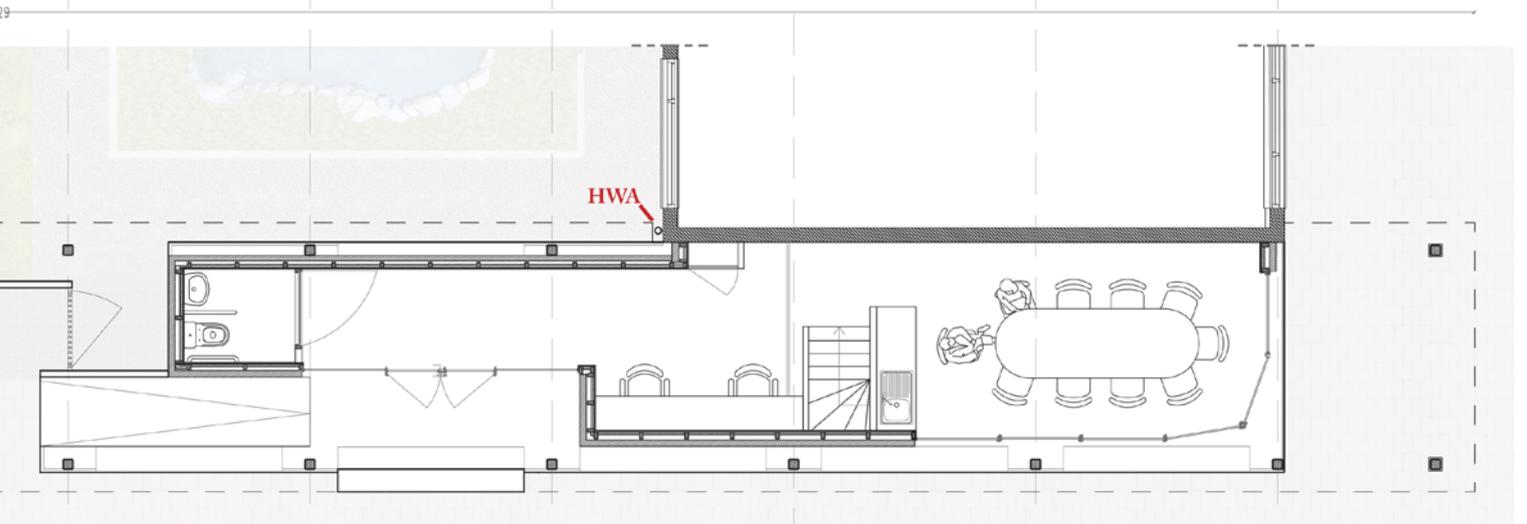
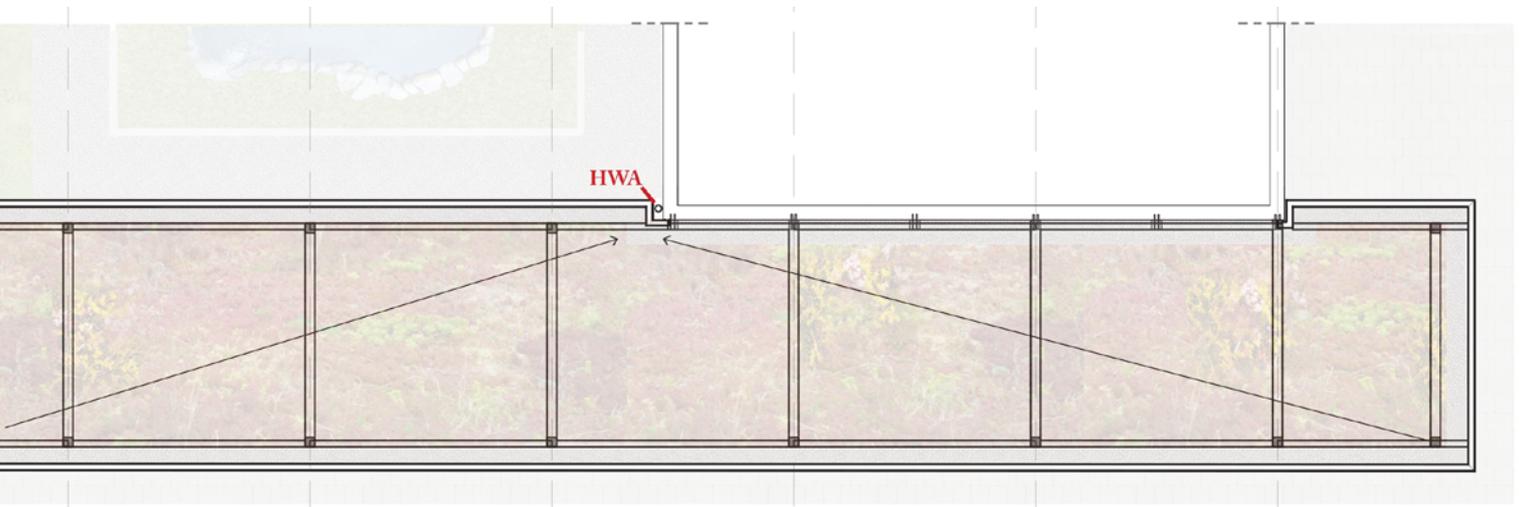


Figuur 8.13
*Scaled visualisation of the
 maps of block Z*





Figuur 8.14
Scaled visualisation of the maps of block AA





Figuur 8.15



Figuur 8.16

Garden side

Seen from the garden, the colonnade can have a different impact according to the location and the content of the colonnade. When the space of the colonnade is adopted by the garden and the boundary is set directly next to the sidewalk, the colonnade is a unique element in the garden, giving the possibility to create a roofed terrace, a sheltered place for garden equipment and bicycles and since it is located on the north side of the garden and is leveled 3,8m, it is even still possible to let green grow underneath the colonnade.

In other cases, the boundary is set on the inner side of the colonnade, leaving the inhabitants with the possibility to personalise the floor-edge elements or use it as a pedestal for potted plants for example.

For other inhabitants, who do not live on the ground floor of the first poirtica, the colonnade has another impact. People who live on the first or second floor look out over green innerarea of the buildingblock and also over the new sedumroof. Because it is lifted, it blocks the view of the Wielewaalstraat partly and visually enlarges the 'greenarea' of these inhabitants.

8.5. Anticipating future developments

In the concept it was stated that the colonnade should be able to facilitate different functions and program, but what if the future developments are extremely unexpected and not anticipated on? That is why I have also designed a few future scenarios in order to test how my design could react to such developments. The different scenarios were vacancy in the colonnade, demolition of the content, a colonnade completely filled with volumes and a scenario in which the portiek-dwellings are refurbished into gallery-dwellings with elevator access (figures 8.17-8.20).

What is noticeable is that longlasting vacancy is killing for the plan. There are even less chances and possibilities noticeable in comparison to the demolition-scenario. That is why I have not designed too much volumes in my plan and I emphasised the fact that a strong network has to be build up by the consortium. In expression and shape, the concept is preserved in the vacancy-scenario but stakeholders must be warned that an intrinsic part of this plan is the concept of organic urbanism and thus the colonnade should always function in service of functions and program other than dwelling.

On the other hand, the scenario of the gallery dwellings will have as a consequence that the colonnade will be expanded vertically (figure 8.19). In this scenario, the colonnade can facilitate the collective entrance to the inner-area and thereby strenghtens its programmatic concept by offering solutions on another scale than the single dwelling or purely private solutions. In shape and form this scenario can however have a negative influence on the concept. Since the building block will be an exception to the horizontal articulation of the colonnade, the horizontality of the girdle road can be broken up unless the galleries are for example designed in the same dimensions and rhythm as the underlying colonnade or if they are placed further within the inner area so they are not dominantly in sight from the Wielewaalstraat.

Figuur 8.15
*Impression from
a garden*

Figuur 8.16
*Impression from
a balcony*

Lastly, the scenario in which the whole colonnade is filled with functions must be explained. In this scenario there is the risk that the colonnade will lose its function to organize the transition between public and private. This should be resolved by the consortium in the first phases of the strategy. In these first steps they have the power to apply voids in the floor and roof and these voids could prevent the colonnade of fully clogging and guarantee that the garden-entrances are maintained. But still, the transition between public and private will be a much harsher one and instead of a hybrid zone, the colonnade will more and more function as a closure.



Figuur 8.17



Figuur 8.18

Figuur 8.17

*Scenario:
demolition*

Figuur 8.18

*Scenario: completely
filled colonnade*



Figuur 8.19



Figuur 8.20

Figuur 8.19

*Scenario: from portico
to gallery*

Figuur 8.20

*Scenario: vacancy and
dwelling-functions*



Figuur 8.21



Figuur 8.22

Figuur 8.21
Testcase:
Amelandseplein

Figuur 8.22
Testcase:
Carnissesingel

8.6. Application at other locations

Besides anticipating on future developments it is also interesting to see whether and how this concept can be applied on other locations in Rotterdam Zuid, since it was stated that the Wielewaalstraat is just one of the locations where this interesting collision of ideas takes place.

That is why the concept is tested in two other locations; one with an even more central function within its neighbourhood, the Amelandseplein and another one with no cause for an active public domain. These two scenes are chosen so it could be tested how the content of the colonnade would differ if it was totally assigned to respectively the street and public domain and in the other case to the gardens and the homeowners.

In the Amelandseplein (figure 8.21) this led to a design in which the current shopvolumes are maintained (they are significantly more successful than the Wielewaalstraat) and the colonnade is placed over the shops. The roof is purely a connecting element in this case and providing the shops with a sheltered walk-by in front of the shop. The park on the other side of the street (including a busstop) is the reason to copy the concept to this part of the plan. This way, with a colonnade on both sides of the road, the girdle road becomes even more a central place in which all kinds of functions and program are collected within a unified expression (namely the colonnade as a characteristic element for this place).

On the park side, the colonnade is perforated to resemble a pergola-type, which strengthens the relationship with the green more than just an urban colonnade. On the location of the busstop, this perforation can be paused, so the shelter function of the concept is used again. Furthermore, instead of following the line of the girdle road, the park-side colonnade follows the waving shape of the path.

At the Carnissensingel, figure 8.22, the residual space between garden and girdle road is admitted to the gardens, which is logical since in the direct surroundings, there is no reason for a active public life on this location. Therefore, the concept is also fully adopted by the gardens. This way, the colonnade becomes an unique garden-element. The floor is totally left out and the roof has been reduced to only the beams to apply strength, dimension and rhythm to the design. This way, the translation of the concept really works as a pergola. In this case, at the point of the end-faces of the portico's the colonnade is articulated by the expressive (and physically) strong property-boundary from paragraph 8.4 that could be used as a carport. Repetition, rhythm and measurements are the connecting elements in this application of the concept. However, I think these three principles are enough for this location to absorb the chaos and randomness of the gardens behind it and still articulate the girdle road and provide an appealing and uniform design for this location.

Both the designed scenarios are not bound in their materialisation; wood and concrete are the main materials used in the colonnade in the Wielewaalstraat and in these two testcases, but the ratio between these two is free. The beams and columns at the Carnissensingel are executed in wood with concrete pedestals to create a colonnade which is closer to the garden in its expression. At the Amelandseplein, the colonnade is concrete but the floor- and roofedges are designed in wood.

9. Conclusion

In this concluding chapter the conclusions will be threefolded and will follow the structure of the research report. Although the subjects might overlap, the general structure is that firstly the conclusions from the research report will be set out. Then, the connection between the research and my design will be summarized and finally the design itself is shortly reflected on. The conclusion will end with some general acknowledgements in the form of a reflection.

The goal of the research report is to elaborate on the paradox between the typologies of the semi-open building block and strip housing in the Vogelbuurt. The hypothesis is namely that there are present qualities and characteristics of both typologies in the Vogelbuurt, but they dilute each other. By combining them in a dual phenomenon (term of Aldo van Eyck), they could strengthen each other and the whole neighbourhood could benefit.

To underpin this hypothesis, the research question *How can the confrontation of the semi-open building block and strip housing serve as a motive and starting point for the development of an unleashing strategy in the Vogelbuurt, Rotterdam?* must be answered.

Findings in the research

Historical research shows that the urban planner, W.G. Witteveen used the building block as an instrument to organize the urban fabric. He strongly elaborated on the earlier plans of Granpré Molière, Verhagen & Kok but translated these idealistic plans into a feasible plan that was incorporated in the social, political and economical circumstances of that time, both in 1926 and at the time of his second revision in 1938. Besides the building block, Witteveen tried to use density as an instrument to create monumental areas and dense lines adjacent to the most important roads and in between, sheltered areas would be created.

The work of J.H. van den Broek one of the architects of the porch-dwellings in the Vogelbuurt in the thirties of the 20th century shows a clear development in his projects which lead up to the competition entry for *Prijsvraag Woningen 1940*. This development is emphasised by his research in that same period towards housing and the building block as an architectural unit. These developments show that van den Broek more and more let go of the idea of the closed and semi-open building block and moved towards the strip-configuration.

The competition entries were all designed without context and standardization and repetition in different circumstances seemed to be of great importance to the jury. As a consequence, the standard types were fitted in the urban layout as much as possible but there always remained residual spaces. In these spaces, different solutions are brought up all over Carnisse and Charlois and van den Broek proposed a solution which could be a predecessor of the later *kop-staart* principle that became also intrinsic for striphousing.

Van den Broek designed 'other functions than dwelling' in these locations. After a trip to Germany with Van Tijen and the observation that in the modern, efficiency-driven *Siedlungen*, only housing was organized and not all other functions of a city, which are needed to let it function as an organism; work, education, religion, neighbourhood facilities etc.. Van den Broek stated that the meeting of these opened building blocks and the girdle roads from Witteveen's plans were the chosen locations for these other functions. The larger girdle roads (of which the Wielewaalstraat is part of) in a modern, linear, efficiency-driven city district is from historical point of view a subject which Van den Broek (together with Van Tijen, Merkelbach and others) valued and investigated a lot. The finishing of this 'cross connection in the city' and the way neighbourhoods and building blocks are connected by this connection was an important point of discussion and has a close relationship with the development of the typology of the building block itself.

During the WWII, Witteveen still had a lot to say in the city of Rotterdam¹ and thus his layout of blocks was maintained and the mostpart of his other principles as well. Van den Broek seems at that time to be already convinced of the strip typology, even if it has to be fitted in an building block-layout. However, he does not go as far as proposing also another urban layout that later would become typical for strip housing, but he does not conform to designing a closed building block adjacent to the Dorpsweg. Witteveen is openly against the small neighbourhood-shops at the streetcorners, but in the end, Van den Broek is able to develop his little shop volumes at the Wielewaalstraat. Due to the auster execution, which was a result of material- and money shortage and the resistance Van den Broek received against his plans for the implementation of 'organic urbanism', a lot of principles of van den Broek were not or not fully executed which he did propose in earlier plans and are commonly praised in literature.

In the current urban layout of Rotterdam Zuid, this larger urban structure still functions in the same way and the encounter of neighbourhoods and girdle roads is still an encounter of inhabitants and passers. For the municipality and other large parties from the 'Pact op Zuid', this is an strategic location with a large potential to get 'maximum profit with minimum resources'; it has a very large impact on the neighbourhood as well as on the whole girdle road and these encounters should be developed systematically. The auster execution of the 'organic urbanism-principles' have led to an unattractive street with no added value for the neighbourhood or girdle road. That was the reason for me to focus on these encounters, where I have transformed and activated the organic urbanism principles and meanwhile improving the transition between public and private.

My design proposal as a consequence of the research

In my design I wanted to bring these old principles back and translate them to a new, modern architectural plan. In doing so, I quickly came to the conclusion that if you analyse the original plan and the current state and conclude that it was too auster executed and nowadays the ideology is lost or weakened, there is no reason to cling to the current shops as something very valuable. What was really valued was the basements that are underneath these shops, the location as an end or startingpoint for the housingstrip and the horizontal accentuation that was expressed in the lining of the roof and canopies. The basement was for example a physical influence for determining the measurements of the main load bearing structure and placement of the shopvolumes.

I have come to mind that this project was not a restauration or modification project and maybe not your typical 'RMIT'-project, where in a lot of cases, the existing physical building or context is maintained unless it's in terrible shape. In this project I have been recycling and translating ideas and principles. Lidwine Spoormans formulated it once as 'gestallt-recyclen', which means that reinterpreting and reusing the underlying ideas and principles is the most important asset of that method. Secondary to that is the physical state of the existing stock or context. All design decisions and interventions must in the first place contribute to that reinterpretation of original design principles. In the case of the current shopvolumes along the Wielewaalstraat one should ask himself 'do these shopvolumes still contribute to the organic urbanism principles and do passers and inhabitants also percieve it that way?'. With that method, I was able to suggest a total new design concept and in order to do so demolish the current shopvolumes without losing the connection to the original plans and intentions.

1 this would drastically change right after the war.

My place in the RMIT-studio

But why am I focussing on this specific subject while I take part in the *Transforming Housing Heritage* studio, since this has nothing to do with the dwellings? I have interpreted the term *Housing* very broad. I have written a Sociological Appendix (appendix 8), inspired by Arnold Reijndorp and Leeke Reinders. In this appendix I have explored what influences the perception of inhabitants. An interesting argument from this essay is that in a city district with comparable or even identical dwellings, it is not the dwelling which determines the liveability or appreciation, but the specific location of the dwelling in the urban layout in relation with other urban facilities and services.

Besides that, in the introduction I have written about the scope of the architect, wherein was written that “The architect, a professional looking at the city and at society, has a structured influence on the societal developments that concern the built environment or where the built environment takes part in, but the architect has no influence on the results. The architect has a guiding and steering role, but after setting a strongly guiding, appealing and activating principle, design or strategy he/she has to accept the unforeseeable and unpredictable use and application of his/her ideas.” This project is a great improvement for the neighbourhood and the perception of the inhabitants without doing interventions in their dwellings. That way, this project is in line with the position I have taken in the start of my graduation.

Within our group of graduates in RMIT, there were three students completely focussing on dwelling improvement. A fourth student, Susanne de Zwart, focusses on dwelling improvement, but by means of offering this possible improvement in the public space. This focusses on another girdle road but the development of that little piece of girdleroad is also of great value for her project. The difference between our approaches is that Susanne uses individual dwelling improvement as means to regain the hidden potential of the location, whereas I try to reach that goal by activating the organic urbanism-principles.

Social relevance

Via the Veldacademie I was able to speak to a lot of interesting stakeholders from all angles: municipality and government, housing associations, inhabitants and business owners. With the *Pact op Zuid*, governments and key stakeholders have agreed to work together towards a better Rotterdam Zuid by focussing on employment, education and the housing stock. However, the parties are not able to systematically improve the latter. It is striking that -now it appears that demolition and rebuilding is not a feasible option- the stakeholders are not able or have not yet come up with an alternative for their original strategy. Strategic investments (and demolition) are still possible because the parties have originally agreed to invest many millions a year in Rotterdam Zuid. I took the legitimation for my project from a notion from one of the managers of Woonstad Rotterdam who stood with hands in her hair at a presentation and said; “You tell me, because we do not know what we should do”.

Personal lesson

I found out that I love doing research. Within a practical study as Architecture, there is only little space in the curriculum for this field of work and suddenly in the graduation there is need and freedom to fully explore this type of work. I have spent many hours in the archives with Pieter Graaff and Henk van Schagen, already from June 2013 on as a preparation for this RMIT studio.

The beautiful and interesting thing about architecture is the multidisciplinary possibilities of the profession and by doing research you can get a broader view on the project and the

profession. Besides the fields of profession I have used in my graduation project (history and sociology), a lot of other connections could have been made (for example economy or arts). Even the design itself makes connections to other fields of profession. It is an architectural project but it manifests itself on the large scales of urbanism while the design had to have an interior-like approach to detail and design the colonnade precisely enough. I am glad I found out what I love about architecture in my graduation; architecture can be a lot more than just architecture and I hope that I'll be able to keep this multidisciplinary attitude in my future career.

In summary..

Summarizing, design motives and a tangible starting point can be derived from a theoretical research towards building block typologies. However, it has become clear that it is not the confrontation between the different building block typologies that has given me motives and startingpoints for a strategy in the Vogelbuurt. It is more important to acknowledge that the Vogelbuurt has been designed and developed by different architects in a period in which the research towards building-block typologies was rapidly developing. It is the confrontation between these developments in the building block typology on one hand, and the large-scaled, efficiency-driven, modern and linear urban layout on the other hand that caused the 'confrontation', although in this stage I would rather call it 'encounter'. The process of standardization of dwelling types and the adaption to a specific urban layout have lead to non-standard solutions for residual spaces. Those encounters are the interesting locations that lend themselves for strategic investments and by transforming and re-activating the organic urbanism principle, a lot of result can be gained due to the possible implementation of the concept in all of these interesting encounters and the impact of the plan on different scales and people.

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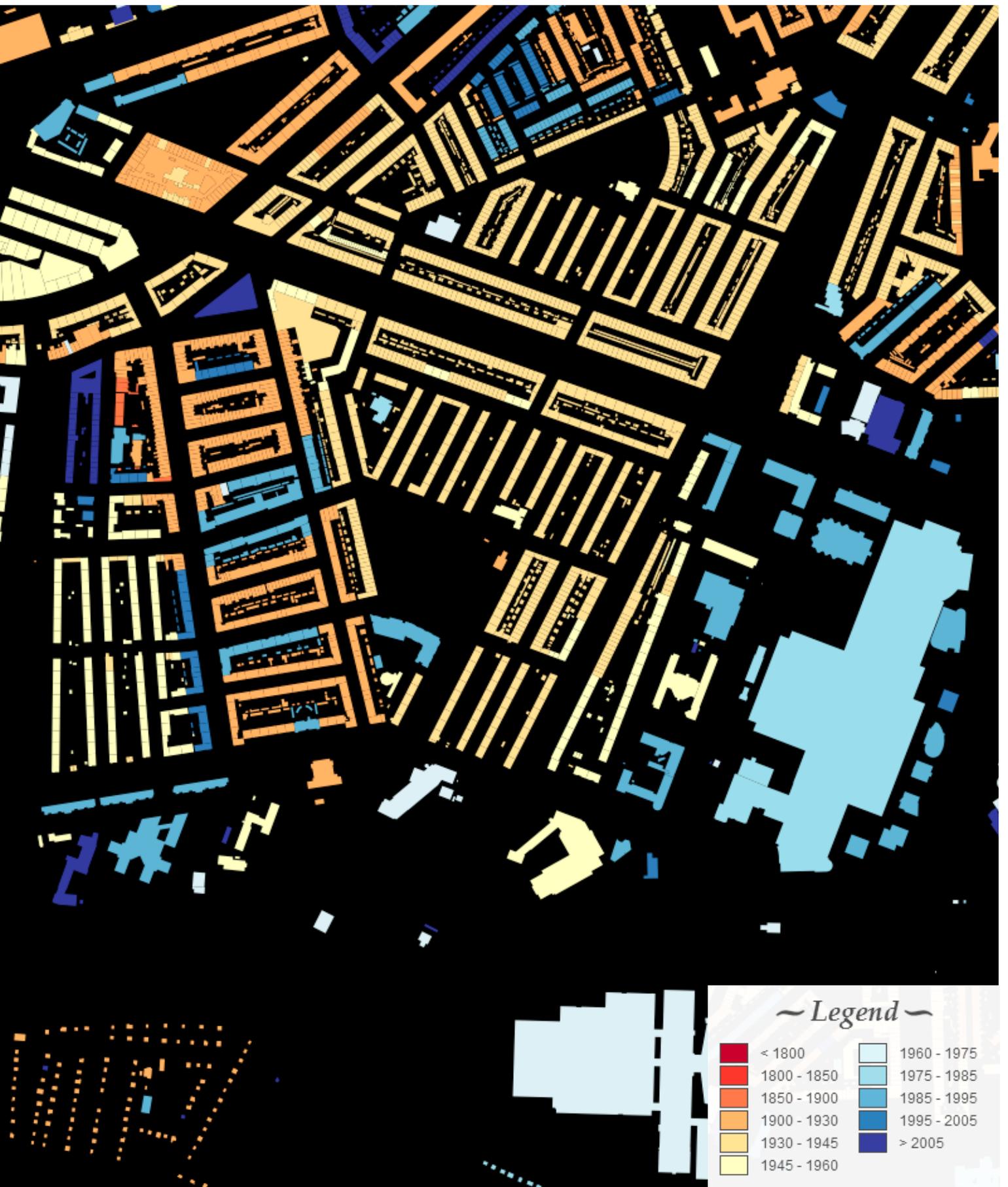
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Appendix 1

Overview of buildings in Rotterdam South, sorted by year of completion according to the Kadaster. It must be noted that the information is not always correct but nonetheless provides a clear, global overview. Obtained via <http://citysdk.waag.org/buildings/>





Appendix 2

Expansion plan of Granpré Molière, Verbagen & Kok (1921). "Uitbreidingsplan Linker Maasoever" Via GAR XIX E 45. Also visible in figure 2.1.





Appendix 3
Streekplan IJsselmonde.
Granpré Molière, Verbagen
& Kok (1921). Via
GAR XV E 45. Also
noticable in figure 2.2

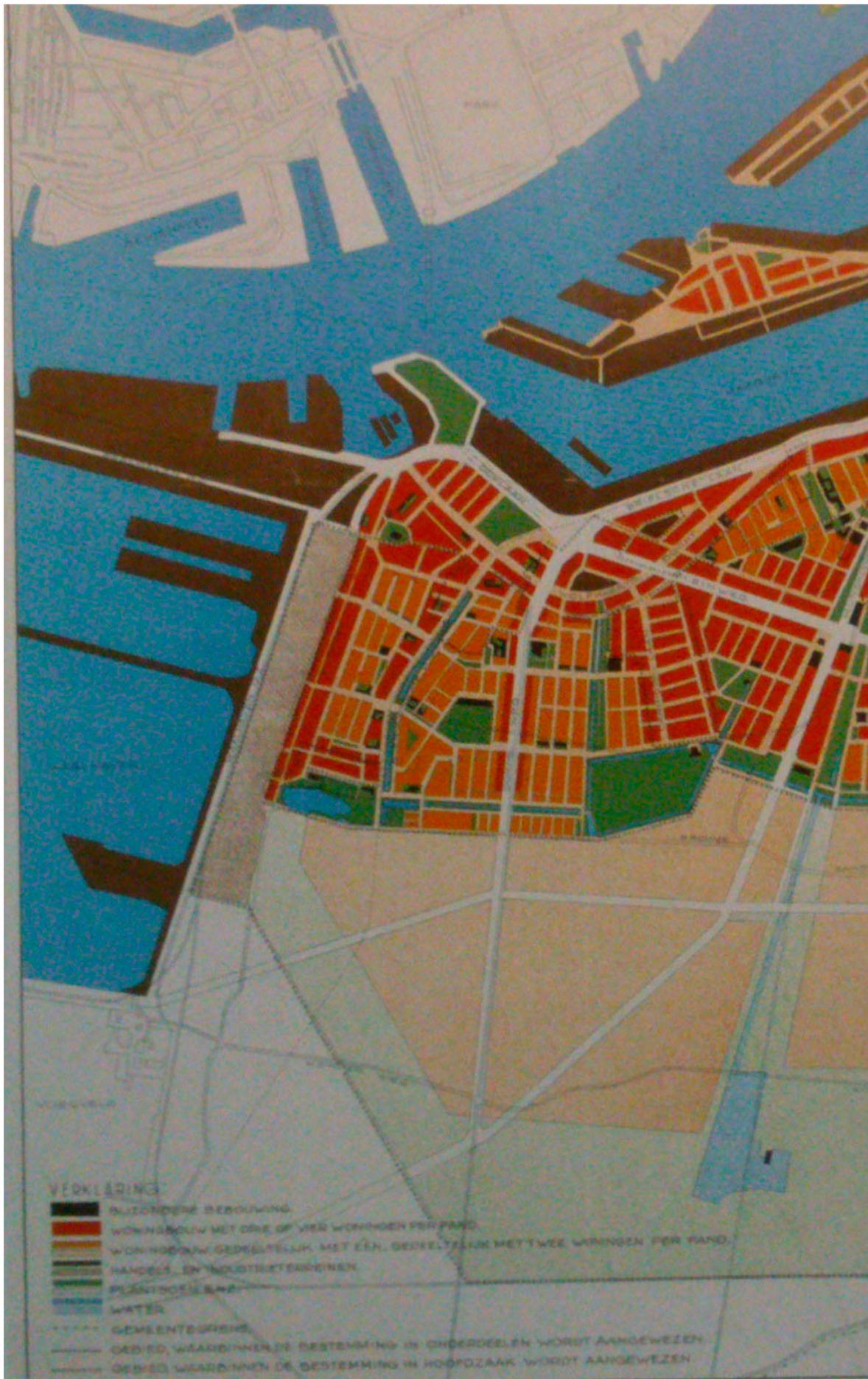


Appendix 4
Streekplan IJsselmonde.
W.G. Witteveen (1938).
Via Mens p.124. Also
noticeable in figure 2.6



Appendix 5

*Expansion plan of W.G. Witteveen (1926).
“Uitbreidingsplan Linker Maasoever”. GAR via
Mens p.174-175. Also visible in figure 2.4.*



Appendix 6

*Expansion plan of W.G. Witteveen (1937/38).
 "Uitbreidingsplan Linker Maasoever". GAR via
 Mens p.126. Also visible in figure 2.8.*



SCHAAL 1:10000

HERZIENING VAN HET UITBREIDINGSPLAN LINKER MAASOEVER

	Wielewaalstraat 2	Wielewaalstraat 6	Wielewaalstraat 8	Wielewaalstraat 12	Wielewaalstraat 14
Zakelijk gem.	VVE CLS00I 00647	C Erbek	VVE Gebouw Korhaanstraat 107 En 109 En Wielewaalstraat 8 Te Rotterdam	VVE CLS00I 00686	xxx
Gebruiker	J van Aalst	J Simons	xxx	Snackbar Nieuw Rembrandt V.O.F.	xxx
feitelijk gebruik		"detailhandel"	"bedrijfs-, dienstwoning"	"horeca"	"detailhandel"
	Lepelaarsingel 123A	Korhaanstraat 108A	Korhaanstraat 107A	Fazantstraat 124A	Fazantstraat 111A
Zakelijk gem.	VVE CLS00I 00647	xxx	VVE Gebouw Korhaanstraat 107 En 109 En Wielewaalstraat 8 Te Rotterdam	VVE CLS00I 00686	xxx
Gebruiker	xxx	xxx	xxx	xxx	xxx
feitelijk gebruik	"bedrijfs-, dienstwoning"	xxx	"bedrijfs-, dienstwoning"	"wonen, gestapeld"	"wonen, gestapeld"

	Wielewaalstraat 18	Wielewaalstraat 20	Wielewaalstraat 22	Wielewaalstraat 24
Zakelijk gem.	VVE CLS00I 00638	R de Jong	L C Klaare / R de Jong	L C Klaare
Gebruiker	K van Donk	R de Jong	xxx	A G Qayyum
feitelijk gebruik	"detailhandel"	"detailhandel"	"kantoorfunctie"	"detailhandel"
	Tapuitstraat 66A	Tapuitstraat 73A		Dorpsweg 164A
Zakelijk gem.	VVE CLS00I 00638	VVE CLS00I 00731		VVE CLS00I 00704
Gebruiker	BELZER-PAPAVOINE J C C	xxx		xxx
feitelijk gebruik	"transport en opslag"	"bedrijfs-, dienstwoning"		"bedrijfs-, dienstwoning"

Appendix 7

Overview of 'Kadastrale' information about the endfaces (shops and offices) at the southside of the Wielewaal and the linked groundfloor dwellings behind it. 'xxx' means no available information in GISWeb 2.0.

Sociological assumptions and argumentation

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Preface

This appendix is written with the aim to underpin some of the assumptions that are used in the design. As much assumptions as possible can be traced back to the main graduation research (The Great Strip-Block Paradoxiality), but when one concerns about the public and private domain it is inevitable that some assumptions come from a sociologic point of view.

In this short essay, five subjects are mentioned. Every subject concerns a different scale of aspect of the neighbourhood and besides a description, my point of view as an architect will be set out, all of which is underpinned by literature and research. The five subjects are;

- *Coming home*, which concerns the notion of publicness, place-attachment and the gradual transition between public and private.
- *Streets in the neighbourhood*, which concerns the hierarchy and different types of street that are or should be there.
- *Identity*, is it needed to create identity? And if so, how could this be designed or stimulated?
- *Public space as motivator*, which describes the influence of a well-maintained public space on the neighbourhood and why this domain could or should be the first step in a long-lasting transformation process.
- *Filling vacant volumes*. This last notion stresses the importance of transparency and occupation for the Wielewaalstraat.

Coming home – Degrees of publicness

Christopher Alexander describes in *A Pattern Language* (1977, p.192-196) the degrees of publicness as one of his patterns. This pattern mostly describes different types of houses, around different type of paths and roads in order to provide houses for different kinds of inhabitants. More specifically, it is described that around busy streets, the houses should be more public and ‘relatively exposed to the passers-by’ (p.195). Further backwards, where more introvert inhabitants find their place, the dwelling can be physically more closed off.

Even more, besides this distinction Christopher Alexander also pleads for transition zones and gradually changing levels of intimacy or openness (p.548-552, 610-613). This physical place or zone offers the possibility for a psychological transition between inside and outside or between public and private and it is emphasised by the fact that “the view, and sounds, and light, and surface which you walk on change as you pass through this place” (p.552).

In *The Fall of Public Man* (1992-2), Richard Sennet says that individuals have –in general- a more narcissistic mindset than before, which causes interaction with strangers to be seen as formality or obligation. The assumption that ‘getting to know yourself’, your own soul or psyche, is a liberation and will eventually make you contribute more to society is false. It leads to the belief that society is a case of “mutual self-disclosure and to undervalue the community relations of strangers, particularly those which occur in cities” (Sennet, 1992-2 p.4). The importance of interaction with strangers is greatly undervalued, which causes the little interaction taking place to be less meaningful or superficial. From this, two things can be concluded regarding ‘impersonal’ acting, in which impersonal is described as ‘without direct profit or benefits for the person or his closest relatives.

Firstly, the impersonal acts or issues don’t evoke passion anymore and secondly, these acts or issues will only evoke passion if they are considered from a personal point of view. A colder approach of the public life (“erosion of a strong public life” Sennet 1992-2 p.6) deforms intimate interaction, which also entails sincere concerns and interests. Impersonal acts of people towards strangers strengthen and promote their empathy, according to Sennet. For example the importance and respect for others’ privacy. This pleads for a stimulation of encounters (even confrontation or collisions) by getting inhabitants outside into the anonymous streets. Eventually this should become a public domain that gradually flows into the private domain in steps.

Furthermore, researchers such as Leeke Reinders, Arnold Reijndorp, Machiel van Dorst and

Manuel de Sola Morales plea for a more diverse set of zones and spaces instead of just public and private. For example, Manuel de Sola Morales (1992) states that collective and undefined spaced in the urban fabric are the carriers of meaning in the historical and the future city.

Streets in the neighbourhood – Hierarchy and types

In his *Pattern Language*, Alexander also describes a lot of types of streets and pathways and their influence on the neighbourhood. These types (shopping streets, green streets, residential streets, pathways etc.) won't be explained here. The notion that there is a large collection of types is the most important one. Also, this correlates strongly with the previous chapter; besides degrees in privacy or publicness, there is also a demand for a large gradation of different types.

In *Straten Maken*, written by the landscape architects Veenenbos & Bosch (2011) they offer nine most important aspects of the street to take in account while designing. The one aspect that needs to be highlighted here is the notion of hierarchy between streets. This distinction between types of streets, their differences in function and the consequences in their layout is a highly important aspect for the redesign. This hierarchy offers the passers-by and the inhabitants a clear, durable and comprehensive urban structure and a natural division of 'territories' or domains.

In the Vogelbuurt this leads to the assumption that both from a historical point of view and from an analysis of the present Dorpsweg, Wielewaaistraat and the residential streets all belong to different kinds of streets.

Identity

One could write a complete graduation research towards the notion of identity and the possible importance of it. I only want to explain where I got my inspiration for the assumption that the identity or recognisability of the individual streets is/should become an important aspect of my design.

First of all, Christopher Alexander states (p.80-85) that "people need an identifiable spatial unit to belong to" (p.81). This spatial unit must consist of no more than 400 inhabitants and can't be larger than 300 yards (p.84) also must this spatial unit be confined within major roads, so these main roads can't walk through the unit. This all corresponds with one residential street in the Vogelbuurt as spatial unit; 120 dwellings with around and around and about 220 inhabitants and 200 m length. What is even more appealing is the simple and clear form of a single street as a spatial unit.

Leeke Reinders states in his book *De Alledaagse en de Geplande stad* (p.87) that the term identity is used in two ways; firstly as a solid term or an image of the intrinsic values of the neighbourhood through time. Secondly it is used as a flexible term, which can provide a direction or is adaptable to goals and policy. In any way, identity enhances the parochial domain of a neighbourhood (p.13). This is the living environment of a particular group, consisting of places where one encounters acquaintances or 'trusted strangers' (strangers which are recognized and trusted because one more or less knows where the stranger lives or why he/she is in a particular place on a particular time (Lyn Lofland via Reijndorp & Reinders 2010 p.23) that recognize each other as 'our kind of people'.

This parochial domain can be placed in between a clearly private and public domain and can easily be linked to Alexander's notion of an identifiable spatial unit and the degrees of publicness, described earlier in this appendix.

Public space as motivator

What lacks in the neighbourhood's public space is a feeling of responsibility and interest from the inhabitants and as a consequence of that a neglect and erosion of social and public interaction on the streets.

In order to bring back this feeling of interest and a commitment for the public and collective spaces, inhabitants must get the feeling they are not alone in their efforts to improve what is not theirs, says Leeke Reinders in *De Alledaagse en de geplande stad* (2010). He states that it is the task of the municipality to make the first efforts and investments in the public space before one can expect the same from inhabitants. Not exactly in those words though, he states that, for trust from inhabitants, 'routines' in the city must be in order. Routines could be the care for the garbage collection or the accuracy of public transport but also the care for the public domain. Inhabitants must feel like their neighbourhood is also valuable for other actors besides themselves. It is therefore that the improvement and investment in the transformation of the public space is an intrinsic part of the graduation project concerning the Vogelbuurt.

Filling vacant volumes

The last subject in this appendix concerns the filling of the vacant volumes in the current state. The activation and improvement of the liveability succeeds or fails with a working end-façade of the strips. In the current situation, three of the nine volumes are vacant on the south side of the Wielewaaistraat. From the other six volumes, there are three shops that have a direct function towards the neighbourhood; a cafeteria, a nail salon and a sort-of supermarket. A fourth shop-function can be found in the form of a driving school.

This leaves us with two volumes that are not vacant but could (and should) be considered as one. This is because these volumes are still connected to the dwellings behind it (as in the original plans), but don't open up to the public. The guess is that these volumes are used as a storage space, but you can't be sure because all windows are taped off. After talking to other inhabitants, this configuration of the volumes seems to create a lot of suspicion. One of the inhabitants even said; "I'm sure something is being traded behind closed doors, but I don't know what."

It is important that this suspicion will be taken away. This is also in accordance with the earlier statement of Alexander in the 'coming home' chapter in which is stated that around more public spaces, the dwelling also should be more exposed. If the volume is inevitably connected to the dwelling, this should also be made more clear in its exposure towards the street.

Alexander, C. (1977) *A Pattern Language*. Oxford University Press, New York

Reijndorp, A. & Reinders, L. (2010) *De Alledaagse en de geplande stad*. Boom, Amsterdam

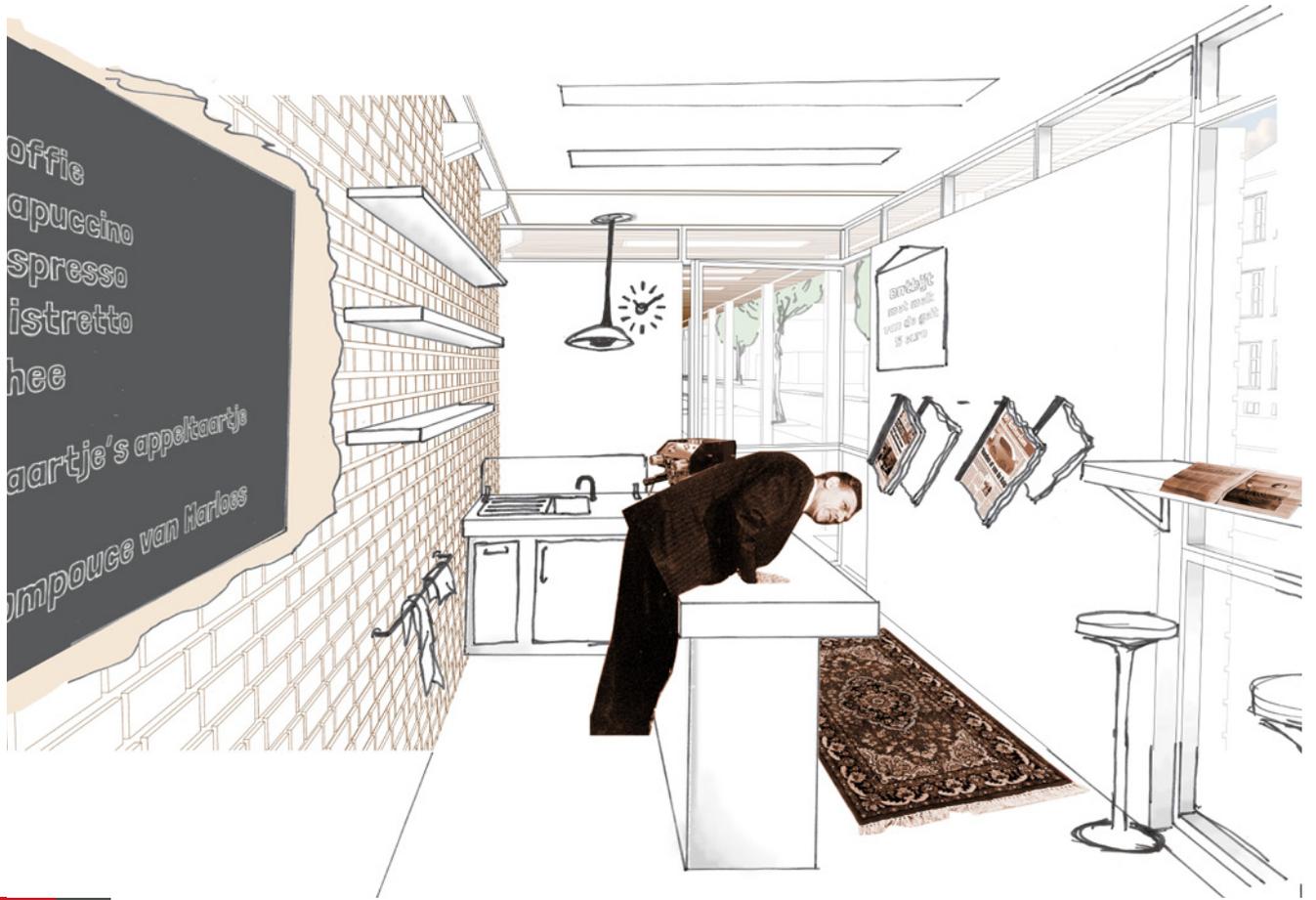
Sennet, R. (1992-2). *The Fall of Public Man*. W.W. Norton & Company, New York and London. p. 1-27 & 89-106.

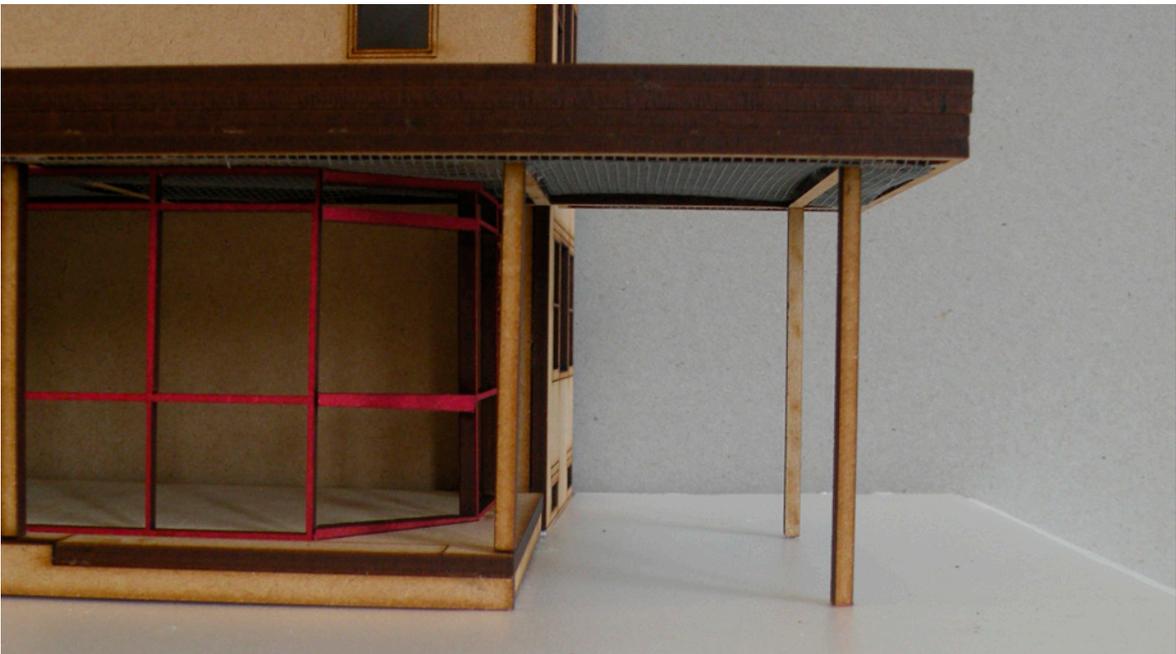
Sola-Morales, M. de (1992). *Openbare en Collectieve Ruimten*. *Oase*, jrg. 1992, nr. 33 p.3-8. Oorspronkelijk gepubliceerd in *La Vanguardia* (1992). Vertaald door Els Bet.

Veenenbos, H. & Bosch, J. (2011) *Straten Maken*. SUN, Amsterdam



Appendix 9
Impressions of the design





Appendix 10
Pictures of the 1:50 model

