Flexible Fragmentation

Transformating a neighbourhood, by segmented transformation of the Borstblok



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1.1 Content

This graduation project in Amsterdam West by the section of Restoration, Modification, Intervention and Transformation (RMIT) faces like a lot of other districts in European cities complex social issues and degeneration. The city is opportunistic and ambitious regarding the improvement of the neighbourhoods in West and New-West Amsterdam. However, due to the financial crisis, a lot of these plans and ideas are put on hold (Gemeenteraad 2011). The corporations and the municipality are looking forward to new innovative solutions. Making a design for a regeneration area demands a deeper understanding of this complexity.

There will be much time and efforts spend on analyses. Areas and sites constructed in different periods in history will be studied. Analyses will be carried out using different scales; the urban scale of the city and landscape, the architectural scale of buildings and context and the technical aspects of structure, material and detail. History, the past of interventions, the actual situation and the future possibilities will be studied in this thesis.

Results of the research, the interests of the people involved and contemporary and future themes will lead to the design of interventions in the jagged urban edges and neglected industrial and residential buildings. There will be worked on the transformation of housing stock and will be dealed with architectural, cultural, historical, programmatic, economical and spatial issues.

The communication with various professionals, stakeholders and residents, will be part of this process. Results of the research and the interests of the actors involved finally lead to the design of interventions.

1.2 Personal Motivation

Because we are dealing with financial and political crisis at this moment, architecture and urbanism are really asking for a different approach, only this could give an accurate solutions to the current spatial problems. RMIT is a studio, which offers knowledge and tools in order to tackle the most relevant, not only todays but also in the future, spatial challenges.

The challenge nowadays is to deal with our existing building stock by (RMIT) Restoring, Modifying, Intervening and transformation. Our building heritage gives us our identity and tells the story from the past. It's the task and necessity for professionals in the building environment to work with this context. The building industry is a slow market and the needs are changing fast. Characteristics of the (old) existing urban fabric need to be worked with. Besides it is impossible with the current financial situation to develop new large-scale plans/projects. The building industry has changed from being active towards a passive stance.

The combination of branches within the construction makes it extra interesting. It's the complete image. Building technics, Real estate and housing,

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Urbanism and Architecture. Building technics in this studio is essential in the sense that a lot of the current building stock don't meet the current requirements, in energy use and comfort. Real estate and Housing is critical in several ways but the tension between economic and architectural interests me a lot.

The reason I have chosen for the studio of Amsterdam transforming neighbourhoods is the large scale of this problem. I believe that this is a problem of all times and not bound to location. Our demands are changing way faster then our existing building stock. The Dutch post war expansion plans were seen as revolutionary with a specific architectural believe, now it is not really appreciated, but they are rich in their own way. fig 1. These areas changed a lot. The population became more multicultural and hereby changed the commercial range. But large families, which were mostly proud of their neighbourhood, always inhabited these houses.

I also want to research more towards solutions in different phases. Housing transformation is maybe less spectacular than transforming monumental buildings in the existing urban fabric, but it is highly needed. I want to see how it could be possible to see the use of these building through time, use, maintenance, position of the stakeholders and shareholders. I believe that there is much to win in the effective and flexible development of the existing housing stock. Maintenance could be part of architecture. Designing the whole durability-cycles of the building is something, that interests me. I would like to find out what is possible in a temporary

basis, yet could be used for long-term use. Especially with social housing, I believe that precise and social solutions are a must.

Finally, the reason why I took the Borstblok is because of its location and mixed functions of dwelling and commercial space. In this way I would be able to create a more complex project where one could benefit from the other. Dwelling and commercial transformation in a sustainable way. Whether this is a temporary intervention, or a long-term solution. What could be possible with the low budgets of a social housing area? This is a challenge for me.

1.2.1 Aims of the project

The aim of the project is to offer design solutions that will connect the isolated Kolenkitbuurt with the surrounding neighbourhoods and the city centre. The bad living conditions of the residents are mainly results of social and financial issues and passive management of the owner, resulting in neglection and degradation of the physical environment. The Borstblok is an important building for the first impression of this neighbourhood. Shops are facing structural vacancy and the building technics are out-dated.

In my opinion, the physical development of an area is a very important step towards its general revitalization. However, the physical development on its own, does not ensure the solution of the deeper social problems.

The future plans are out-dated and not sufficient considering the current problems. I want to create a master plan for the development of the Kolenkitbuurt with the current knowledge. I would like to compare this with the current plans on urban, building, material and economical matters. This will be structured in phases of time. From highly needed investments, which are needed now and more structural/expensive changes later on in the process.

The buildings lifespan with renovations during different time spans will be the main focus of this project. The time of seeing a design apart from maintenance is something out-dated, definitely with social housing blocks.

The shopping strip needs to give hierarchy to the sidewalk around it. The backside will be a combination of retail and community spaces, which will make it easier to make a connection to the Bos and Lommerweg. Where the Borstblok now is the blockage between north and south, it will turn into the combining factor.

fig 1 Borstblok in 2012



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1.3 Problem statement

Kolenkitbuurt is nominated to be one of the worst neighbourhoods in the Netherlands (West, S. (2010). To upgrade this neighbourhood the municipalities and the housing associations started a plan to demolish parts of the Kolenkitbuurt and rebuild this neighbourhood with more divers dwellings and reconnect the northern part with the southern part of the Kolenkitbuurt. The renewal of the Kolenkitbuurt is visibly started. The dwellings facing the Leeuw van Vlaanderenstraat and the Akbarstraat are extensively renovated. New buildings replaced the existing at the Leeuwendalersweg. As well did they realized an extra symbol, countering the Kolenkit church, the "new kit". A high-rise apartment building almost hanging over the Ringspoorlijn, near the Bos en Lommerweg. The plans are put on hold, because of the economical situation and the next plans are far from certain (fig 6).

There is no money at the moment and the municipality has plans to restart the demolishment in 10 years (interview municipality 2012). It's the question whether this is reasonable, the municipality is already talking about 15 years and even this is with big doubt. The inhabitants are facing an uncertain time with a very passive attitude of the parties owning and maintaining these buildings (fig 2).

Homogeneity

Especially the Kolenkitbuurt, which is the Post-war part, is very homogeneous. All the dwellings are

more or less the same and miss the nice details of the Pre-war part of Bos en Lommer.

Isolation

The Kolenkitbuurt is isolated because of the Ringspoordijk and the A10. This is a clear physical separation as well as a mental one. Till now the A10 is considered to be the boarder of Amsterdam centre.

Transformation plan

The Kolenkitbuurt is mentioned to be the worst neighbourhood of the Netherland and this gives the municipality the urge to transform this as fast as possible.

Socio-economical Role

The social role of the Borstblok has changed. The preconceived opinion that all post-war expansions suffer from terrible economical and social conditions with lots of disadvantaged groups (mostly morrocan and Turkish groups). They seem to have no direct involvement in their neighbourhood to improve it.

Economical situation

The housing corporations don't have the financial possibility to proceed with the current plans. There needs to be a creative solution.

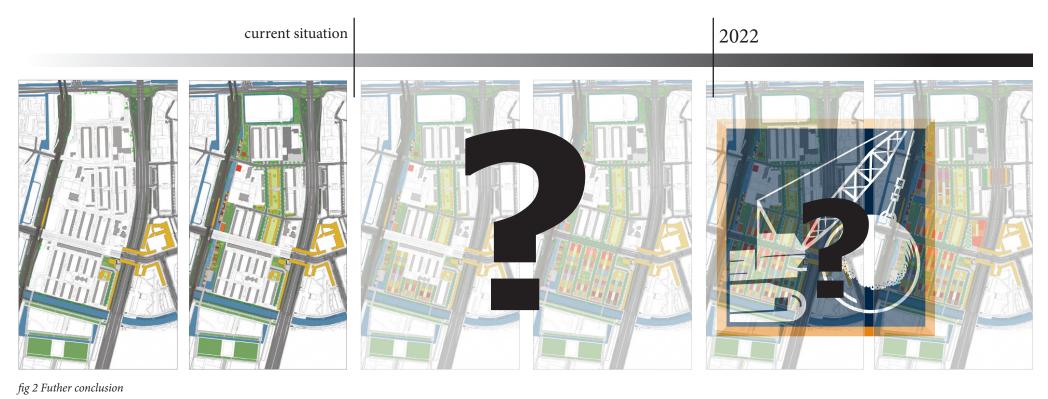
1.4 Theme

The theme of this graduation assignment is flexibility and fragmentation, tested on both time and the physical mass of the building. For example: the building construction is cut in to three phases along the TIME, but also the building is fragmented into 3 building blocks. Both these aspects add a new level of flexibility in this building. Flexibility and over dimension is what is crucial for our current building stock. By fragmenting the building process, it will be easier to react on the market and hereby taking less risks. By fragmentation the building into smaller unities you give them the possibility to form their own identity within the whole assemble of the building. By fragmenting up the building it is easier to fragment the construction process and it makes it easier to make specific investments as well.

1.5 Research question

The research question is:

How can the Borstblok regain a central social and economical link in this neighbourhood during the neighbourhood transformation in the current economical situation?



Research conclusion little involvement with the neighbourhood a

The Kolenkitbuurt is under pressure from different sides. There are many prejudices about it and it is appointed to be the worst neighbourhood in the Netherlands. Amsterdam is one of the few cities in the Netherlands where housing demand is not declining; the town has some big plans for this area. These plans were started around 2000 and are now more or less put on hold because of the economic crisis. The Kolenkitbuurt is now facing an identity crisis, given that they do not know whether she lives in the past, present or in future.

The district has had a good connection from origin to the historic centre of Amsterdam. Developments in the past, separated the Kolenkitbuurt physically, but also mentally from the eastern part of Bos en Lommer, but the good accessibility remained. This confinement between the A10 and the Ring Railway also gives a certain intimacy to the district in return. This brings the district more in the lee from the busy city life.

From the past until around the eighties, there has been a large social identity change. In the beginning years of the district, there were mainly Dutch and Dutch-Indonesians who came to live here. Often moved from the small houses of the city centre to the, in that time, spacious houses and public spaces of Bos en Lommer. Around the 80ies this target group mostly disappeared out of the Kolenkitbuurt and nowadays the neighbourhood mainly exists out of non-Western immigrants, low-income and high unemployment. There is

little involvement with the neighbourhood and its surroundings.

The Borstblok is a good example and plays a big part in this decline. It was from the origin the commercial connection between the city centre and the district New West. It had an important economic and social role within the neighbourhood itself. By including the advent of the Bos en Lommerplein and the plans for the future, the Borstblok couldn't fulfill this link function. The stores of primary need goods have all disappeared overtime. There are no features that neighbourhood and the surrounding can provide from their needs at the same time. All functions on the ground floor have a backside, where it was supposed to be an all sided and all serving part of the building. The plinth is filling up the needs of this neighbourhood, but is forming the missing link for the commercial rollout area to the Burgermeester de Vlugtlaan in New West Amsterdam. The retail trade in the block has a difficult time to keep his head above water and have no relationship with the neighbourhood; this is clearly reflected in the detailing of the rear and front façade of the building. The backside is seen as a problematic area, this is partly due to the closed shop space at the rear. Shortly said, the variation of functions is too monotone to function well and there is not enough initiative from the inhabitants of the area to stand up for their needs.

The housing supply in the area is limited and shows little variation. There is a high demand for bigger houses. The Borstblok contains 4 different kinds of houses and are very variable in size and

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relatively large for the Kolenkitbuurt. The Kolenkitbuurt is currently facing a negative housing trend, with cheap houses. This due to the technical arrears of the buildings. There is no natural transition of the housing stock in that area and hereby creating a monotonous society. It is also an opportunity for development in the neighbourhood. It cannot be much worse, and every development can be a big difference and is therefore welcome. Good priced no nonsense residences is what Amsterdam needs.

It is therefore important for the neighbourhood to make things happen at this time. The battle between the lack of money and the ambitious plans for the future got the Borstblok, and thus the area, in its grip. The district will be demolished within an indefinite time, with the directive of 10 to 15 years. The difficult situation of real estate property in the neighbourhood, makes the owners choose for a passive attitude toward development. There will not be invested for a short period, which will never be profitable. It will after all be demolished. With this attitude, especially with the uncertainty of the situation, does the neighbourhood decreases even more, and it shall have a harder time to come back to the level where they want to be. This is for a neighbourhood with this reputation no positive data (fig 4).

Architectural speaking, it is constructed in a very effective way. The construction is a hybrid construction of concrete, wood and steel. In the passage, the construction is only constructed of steel and timber to make it as light as is possible. The building is from itself clearly laid out and constructed with little detail. This makes the building vulnerable in his

appearance, but this is also an immediate opportunity for change. Every intervention will make a big difference. The rhythm of the façade and the manor of accessibility can be considered to be a strong point of this building. Elements in the façade lack a certain degree of hierarchy, making this building weak in its expression.

The public space around the Borstblok with the organisation of the Bos en Lommerweg got the same lack of hierarchy. It is from great importance by transiting through this neighbourhood but also by entering. The Kolenkitbuurt south is only reachable passing this public space.

So currently, this area is weak in the link towards the surrounding area and in the area itself (fig 3). Weak in technical, social, functional and in public way. The only way to prevent the neighbourhood to slide even further back is to make a start right away. Use the unique openness of this area in advance. This neighbourhood could be the perfect mix of living in the lee in a dense urban context.

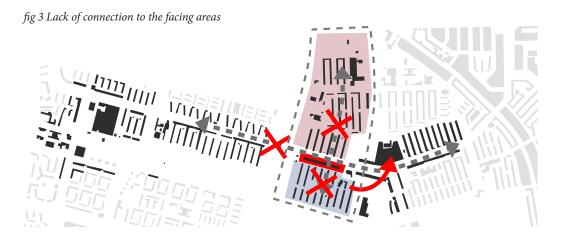
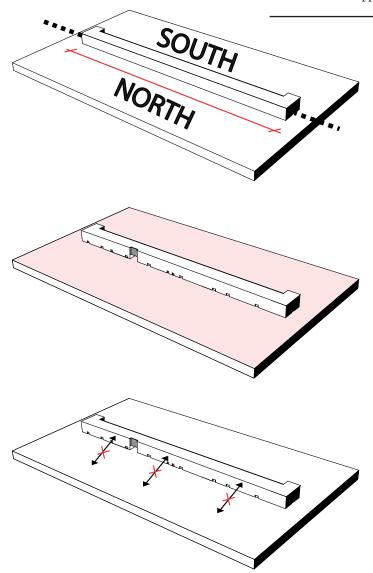


fig 4 Problemstatement



5.1 Starting Points

After analysing the different scales, I will design a new development plan for the Kolenkitbuurt in which the Borstblok can play a central role. Instead of big scale development, I will make a plan with small-scale renovation, which is focussed on the present. In contrast to the demolition plans of the municipality of Amsterdam, I propose a transformation of the Kolenkitbuurt in a gentler and less linear way.

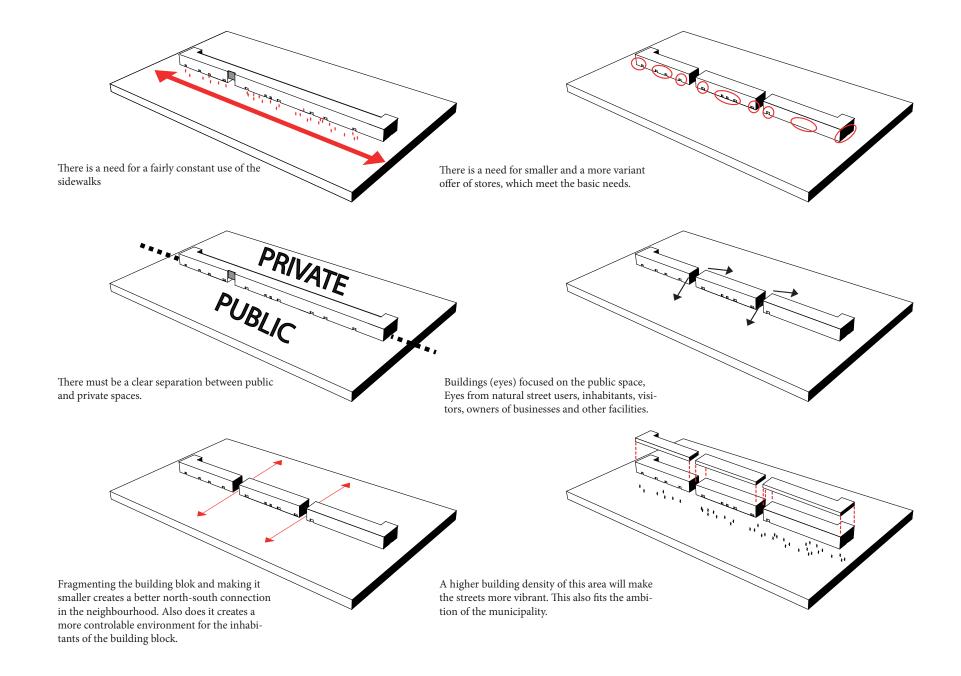
The Borstblok will be the extension of the Kolenkitbuurt to its surrounding areas. A architectural and functional link between the city centre and the Westerlijke tuinsteden, something that it was before. Furthermore, the missing connection between the north and the south part of the Kolenkitbuurt will be better articulated.

The first interventions will mainly focus on the current inhabitants itself, hereby focussing on the function on the ground level. There will be added more community space and small scale offices for the inhabitants to face the vacancy of the commercial space. Hereby restoring the main logic of the building, which from the start houses the workers. Make the school more part of the urban fabric by opening up the facades on the corners and make it an attractive block. Later on, the focus will be mainly about the variation of housing and target groups. The shape and the interior allow variation of dwellings but no variation of size.

Concrete ideas are so far mainly dependent on the wishes of the target groups. Mapping these desires is on of the first necessary steps and depends on the precise specification of the target group. The connection of the groundfloor towards the city and the neighbourhood is a number one priority. The functional and architectural expression is where to start the next research phase. I will study the possibility for variety of the current building and possibilities for extension. The original building and current program will be the starting point towards more variation, which is a demand of this part of the city (fig 5).

And indoor market hall with child day care could be functions to take into account for further program research. There is also a big need for indoor bicycles storage. These are all functions directly related to the neighbourhood, but as well to the city.

Fig 5 Starting points



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2.1 The relationship between Research and Design

The most important outcome of my P1 research is the fact that the Kolenkitbuurt is getting isolated from the rest of the area. This had to do with the urban setting as well as the lack of a functional link with the centre of Amsterdam. According to the future plans of Amsterdam there is ambition to upgrade the Kolenkitbuurt. Due to the economical crisis, the mainly large-scale demolition plans are put on hold. There is a big need for a different approach of upgrading the Kolenkitbuurt.

The Borstblok, the longest building along the Bos en Lommerweg and the building I put my focus on during my graduation project, appears to be one of the biggest problems in this neighbourhood. The building had to deal with poor technical conditions and a high degradation of the public space. The urban position of the block was also problematic. A 220 meter long building with only one small anonymous passage way through. It was not only the Kolenkitbuurt that was being isolated from the area, but the Borstblok was also causing a separation inside the neighbourhood. The two problems of the economical crisis and isolation got me to the setup of my research: How to relink the Borstblok with his surroundings by using phase rings.

At the beginning of the project my research and design strategy was based on the presumption that the phased building process was my design test. Improve what was already there, built in a frag-

mented way. Like there was no fundamental way to change this building. Later on in the process it became more a tool. A tool, which helped me to reflect on the actual design steps that I took. The focus on the phased building construction was limiting for the way to reflect on the building itself, which became secondarily important. It was a way to develop the Borstblok, but the method itself didn't solve the problem. Drastic and fundamental changes are necessary to relink the Borstblok in its surroundings and the method of phasing started to become a tool to do it in the most efficient way. With this new insight my research and design proposal can be used to change the way of thinking and developing of this large-scale demolition projects. It can help to offer an alternative for development.

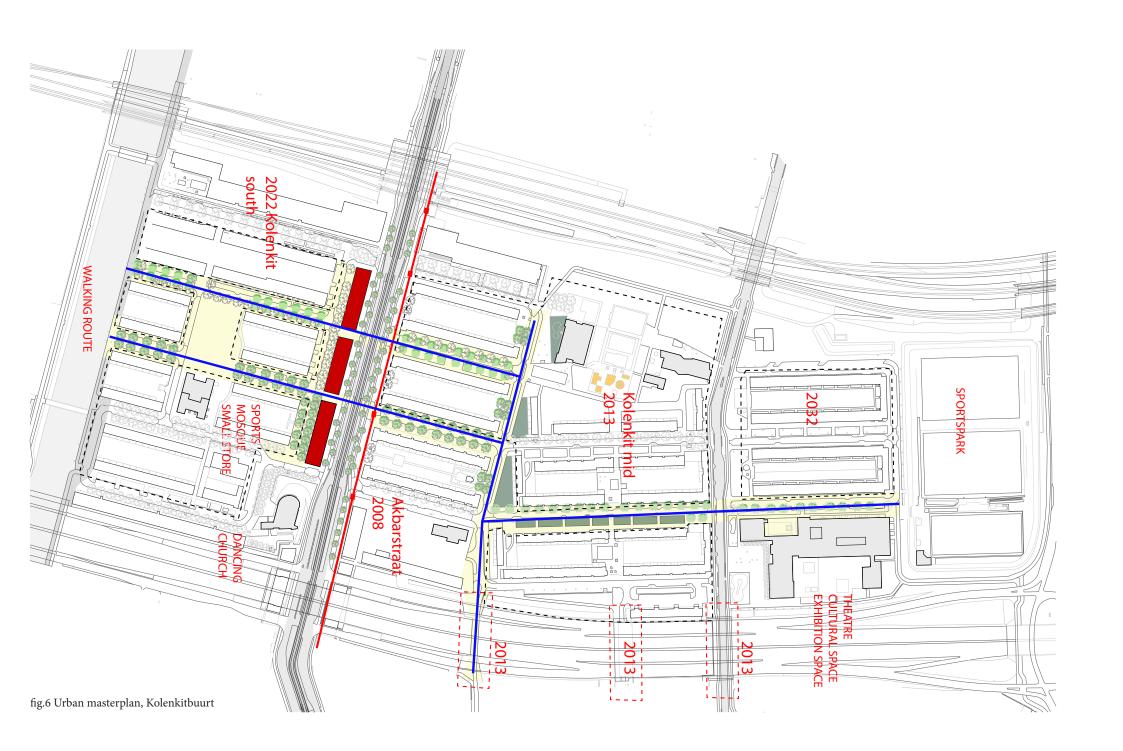
An important focus of my research was to find a functional link with the surroundings. The Borst-blok was the only building block with an entire commercial ground floor. This was degrading and was facing vacancy of this space. The functions on the ground floor where causing two big problems. The liveability on the backside was of poor condition, because there was no function. The front side didn't give the variety of shops this neighbourhood needed. Less space was needed for commercial activity and the relation between the dwellings and commercial activity needed to be improved. This helped me to create a system that should offer the possibility of different functions, without the downside of creating a backside.

2.2 Urban Fragmentation

The urban situation of the Kolenkitbuurt is facing an identity crisis. On the one hand it is like living in the past with the typical typology of the 50's and on the other hand it is already living in the future. Some parts of the neighbourhood are already demolished, rebuilt or renovated. The rest of the buildings are waiting for their turn. But eventually the whole neighbourhood will get her facelift.

The principle of "licht, lucht en ruimte" and the almost communistic architecture characterize Bos en Lommer. There are beautiful wide streets and public gardens. These streets are guiding the inhabitants to and along the exceptional spots of the neighbourhood like the small squares, sport parks and inner gardens. These streets will be pearsing through the Borstblok to make a connection between the south and the north part of the Kolenkitbuurt (fig 6).

Along these streets the neighbourhood could be able to develop, as will the Borstblok. The development of the Borstblok and the neighbourhood will be fragmented in three phases. Fragmenting is needed to keep a certain level of flexibility between renovation and demolition, but also to spread out the economical investments. Starting with the first intervention of the Borstblok on the ground floor and the area of Kolenkitmidden. In this phase the focus will be on the Bos en Lommerweg, which is the main connection to the surrounding neighbourhoods and the city centre. Then in 2022 starting with the Kolenkitsouth and the 2nd phase of the



Borstblok. The interventions will be mainly oriented to the Kolenkitsouth and the livability of this neighbourhood. Finally, the northern part will be renovated in 2032. These blocks are still in a quite good shape and that is why not a lot of priority will be given to this. These dates are estimations of the municipality (structuurvisie, 2011).

Between the first and the second phase the flexibility between renovation and demolishing will be still there. The interventions will be able to earn itself back in a timespan of 15 years. The 2nd phase will be the most intensive phase coherent with the Kolenkit south area. And the final phase will be one of intensification of the area.

2.2.1 Phasing

In this project, where there is no money and where there is a lack of vision of the municipality, which is the owner of the Borstblok, phasing could be the solution for progress in this neighbourhood. It will cost a lot of money to let the building deflate. A lot

of income will get lost because of vacancy. Fragmenting the building process into phases could be the solution (fig 7), but to use phases in your building development you have to set a couple of rules. First of all you have to make a decision where and when you want to make an investment. The building plans for the Kolenkitbuurt are put on hold for 15 years (west, 2010), without knowing what to do after (demolition or renovation). At that moment large investments are planned and hereby available for renovation. In this phase the building should be transformed in a comfortable housing block that will meet todays standard. In the preceding 15 years you can only do very small and precise interventions to upgrade the neighbourhood. This investment should be able to earn itself back. because the building could be demolished after 15 years. The final phase could be seen as a luxury and intensification phase, not directly needed but desired and profiting from the quality improvements made before. This phase includes bigger appartments on top of the existing Borstblok and the use of more advances technical installations like Active

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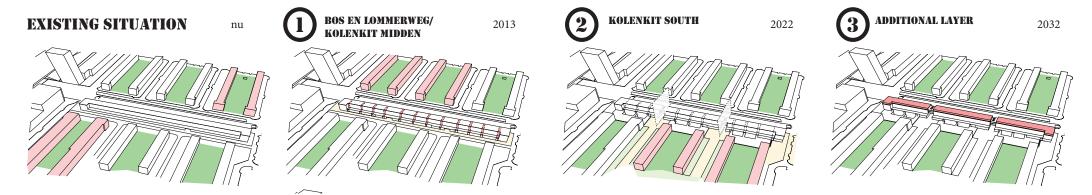
Solar Energy systems en the reuse of rainwater.

A negative aspect of the method is that there would be sereval construction periods. This is never a good selling point. It won't add to the quality of living if you have to deal with a construction side every 10 years. But by centralizing interventions and coincide it with maintainance, nuisance could be limited. During the construction of the Borstblok only the second phase will bother the inhabitants of the building block. The have to be temporary be moved to a exchange dwelling and the Woutertje Pietersestraat will deal with hindrance.

2.2.2 Financing

Financing of the phased developments of projects is most of the time done in a very inefficient manner. I believe that the Borstblok, but also other commercial building on the edge of city centres, could be an exception. There is a need for flexibility of this building process and small investments could be profitable because of vacancy and the low rents in these neighbourhoods. Especially the commercial spaces,

fig 7 Building and urban fragmentation.



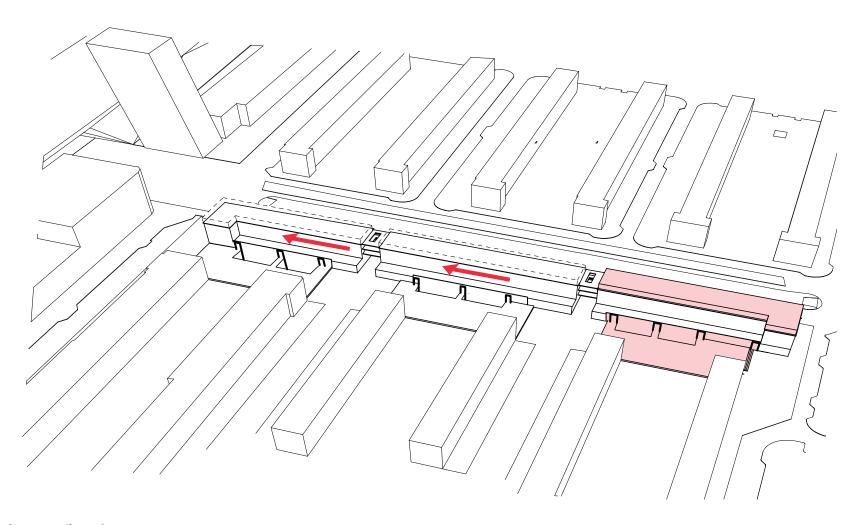


fig 8 More efficient fragmentation

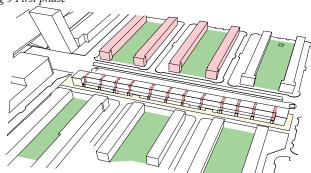
they are 5 times lower then normal standards of Amsterdam West, hereby a lot of investments could be recouped by investing in public space.

But investing of the 3 phases over a longer period of time, discussed above is financially spoken not the most efficient way. It would be better to invest everything at once to profit from the higher incomes of the commercial rents. A better way of phasing would be according the made fragmentation of the building. The tripartite division of the building could also be the way to phase building construction, but all sequentially (fig 8). The new upper floor could hereby also function as exchange houses during construction of the existing building stock. Thereby saving costs.

3.3 Design steps

Phasing is a method to fragmentize the building process but is not the solution of the Borstblok itself. In order to realize the recommendations they have been directly translated into 3 design steps that can serve as a strategic approach of how to deal with relinking the Borstblok to the Kolenkit-

fig 9 First phase



buurt and the surrounding area. Hereby the answer is given to the asked research question.

2.3.1 The first Phase

This phase is the first phase in the transformation of the Borstblok and the Kolenkitbuurt (fig 9). More than the other phases is this phase orientated on the most progress with less financial means. The main focus will be on the greater area of the neighbourhood. The image of this neighbourhood is not the best, but this is mainly the argumentation of external. The inhabitants of the Kolenkitbuurt are less negative about this neighbourhood. The focus is hereby the Bos en Lommerweg the main axe through the neighbourhood. This is also coherent with the futher plans of the housing association Eigen Haard, they plan to develop the Kolenkitbuurt Midden around 2013 (par 3.4). A phase which can return the neighbourhood to its old glory.

Connection to the ground floor

Already stated is the problematic connection of the buildings with the public space. There is no function given to the adjacent public space. The Borstblok was from the beginning already isolated from the rest of the neighbourhood. The entrances of the dwellings were reached through porches on the first floor. Hereby there was no direct connection to the ground floor. The storage rooms, which were in the basements, were reached from the unpleasant backside of the building. The new introduced entrances on the ground floor gives direct relation with the public space but also links

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the existing porches with their own storage rooms.

By landing these porches to the ground floor a higher rate of flexibility is possible. According to research, vacancy of the commercial function on the ground floor is starting to take place. Housing could be linked to the introduced entrances and this could create new types of living (fig 13).

- On short term and on temporary basis student houses could be introduced. A function, which could solve the large deficits in Amsterdam. In Amsterdam West rents are low and the centre is only a small bike ride away.
- "Kangaroewoningen" hereby give space to elderly or disabled, which is desired by non-western families and is rising among western people.
- Starter homes for beginning families and young couples, varying between a studio space and separate bedroom apartments.
- Enlargements of the existing housing stock above, hereby creating a two floor 150 square meter apartment with the living room on the ground floor and a terrace on



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the 1st.

The starters and inhabitants of the enlarged houses also have the option to rent commercial spaces. This reaches back to the original principal of the building, where the inhabitants of the Borstblok were directly involved with the commercial activity in the building. By introducing housing on the ground floor it creates an interaction between the commercial function and living function. Reacting on the current demands.

Restauration of the street façade

The main problem of the street façade is the lack of architectural elements. To restore or rather reinterpret the origingal façade from 1954 and its level of detail, I chose to reintroduce the white lintel above the glass façade (fig 10). This lintel combined with a second horizontal line, a horizontal window frame. These two horizontal leaders are important for the organisation of the commercialisation on the façade. To regulate a organised commercial façade, the owner should give the shop owner options. I chose for three option:

- 1. This is the most preferable option, referring to the past of the Borstblock. The companies name is placed with outstanding letters on top of the, white horizontal lintel.
- 2. The second option, a cheaper option, is a sticker/board between the horizontal win

- dow frame and the lintel.
- 3. The final option, is a combination option, with a board hanging out of the façade. Placed on the brickwork which is separa tion the stores, also between the two hori zontal elements.

Rubix dwelling

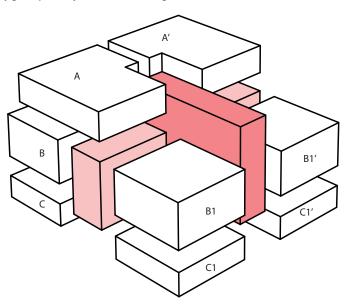
The rubix dwelling is a cluster of spaces aligned along two new introduced axes in the building (fig 11). One horizontal axe in the middle of the building on the groundfloor and one vertical axes which connects the porch to the ground floor and the basement. Hereby is the street on the deck on the first floor deleted and introduced to the street. giving it meaning again. The two axes can separate as wel as connect giving numerous of options in the use of spaces. The horizontal axe on the ground floor maintains the spaces which doesn't need direct sunlight, these where in the past located against the south facade (backside) making it unable to open this up. While the commercial function on the ground floor is facing vacancy does this system give the option to introduce a new function like living, but as easy could this be turned back into commercial activity.

The flexibility of the rubix dwelling does only reach 3 floors: the basement ground floor and the first floor. Reintroducing the link between living and working and the link between the separating basement and the ground floor with the upper living

floors above.

Even if this system turns out to be an failed experience do I think that the introduction of these two axes is a improvement. Giving the ground floor the entrances of the apartment already gives a certain meaning to the Woutertje Pietersestraat (on the backside of the Borstblok).). The vertical link can only take place after the 2nd phase because of the renovation of the existing dwellings (fig 12). During the first phase will it only be possible to rent studios and starter dwellings without any direct vertical connection. It will not be economically feasible to renovate the existing housing stock of the building.

fig 11 System of the Rubix dwelling





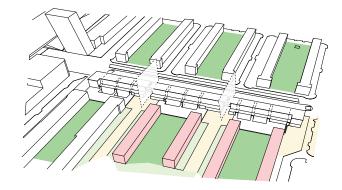
2.3.2 The Second Phase

The second phase is a phase of addition. Enrichment of what is already there (fig 14). Introducing new elements on the backside of the building, which gives hierarchy to the public space of the Woutertje Pietersestraat. By fragmenting the building into three blocks connected by passages a new level of flexibility is introduced. Each block can function in a different way and could maintain a theme. The focus of this phase is on the dwellings, public space and the relation between these both. And taking the orientation of the building into its advantage.

Passages

The Borstblok was in origin a block from 220 meters long, with only one very anonymous passageway through. The length is blocking the movement from north to the south part of the Kolenkitbuurt, which is the natural movement of

fig 14 2nd Phase



the neighbourhood. This is making the Woutertje Pietersestraat vulnerable (which is going from east to west parallel to the Bos en Lommerweg). By creating two vertical cuts through the building, it is getting fragmented into three building blocks. The openings are filled by two passages filled by vertical placed decks.

The passages function as a transition zone to the upper floor and the adjacent apartments. Also the passages offer a link between the Bos en Lommer weg and the Kolenkitbuurt south. Enlarging the social control and creating light points during the night at the Bos en Lommerweg. On the south side of the building the passages form an interaction with the neighbourhood squares formed in the public space, discussed in the next paragraph.

Decks

The existing deck was designed to make a distinction between the lower and middle-income classes. Nowadays this deck is still very characteristic for the Borstblok, but it makes a disconnection with the rest of the neighbourhood. In the new design the existing deck is transformed in to luxurious private roof gardens. The principal of the deck is reintroduced on the ground floor. The three decks are an extension of the adjacent public gardens. Because of the height of these decks, these spaces give the opportunity to park underneath them, creating a suburban street without any cars. This new arrangement of the decks and the Woutertje Pietersestraat reintroduces the experience of the theme "lucht, licht en ruimte", with more natural

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transitions between the public space towards the private inner gardens and the apartment blocks. The introduction of an encroachment zone is in line with this idea (fig 15).

By heighten up de decks you also create squares near the passages, which could function with the commercial activity facing the south side of the ground floor. This is also something, which is referring to the original design that was never realized. The Borstblock was meant to function in the neighbourhood as well as in a larger area and was designed with a totally transparent ground floor serving the Bos en Lommerweg and the Kolenkitbuurt south. By reintroducing this idea facing designed squared I do believe that it could function. The squares are south oriented, perfectly for hospitality venues, giving the neighbourhood a better functioning vibrant urban street life.

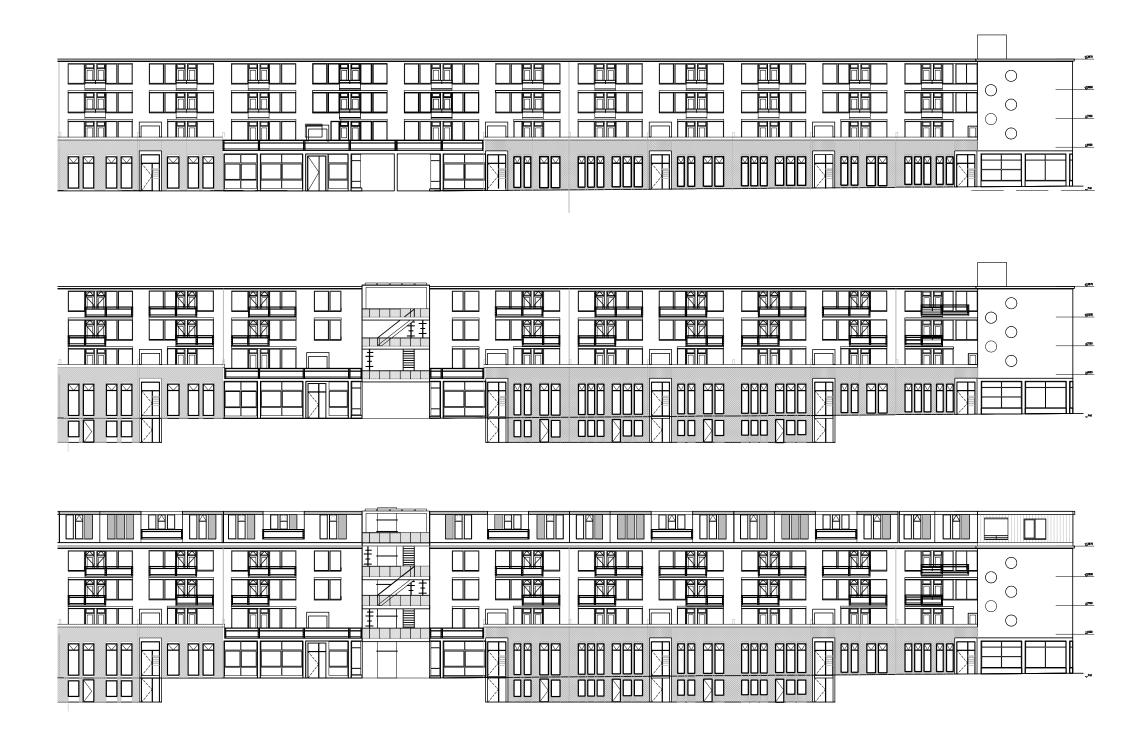
Orientation towards the sun

Sun has always played a major role in the design of Bos en Lommer. Where almost all buildings are orientated north south the Borstblok is one of the few buildings that are orientated east to west. An orientation that is perfect for the use of passive solar energy. Reorganisation of the current dwellings is for this strategy a must. All living rooms are placed along the southern façade where all the sleeping rooms are place north. The use of new balconies and trees provides shadow during the summer months





fig 16 Transformation of the backfacade



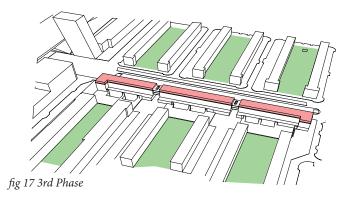
where in the winter the sun is able to entre into the apartments.

Materialisation

The materialisation concept of my design is based on minimal interventions with maximum effect. The interventions are rather subtle and mainly focussed on the backside of the building, where most of the actual problems are bundled. Transforming the character of the backside and restoring the front side.

This is a commercial ground floor with clear rules and new materials. Maintaining the transparent character, which it is starting to lose. The horizontality is an important theme in this reconstruction. The white lintel above the glass facade is the leading element.

The backside will be a combination of brick, wood, concrete and zinc. Brick and concrete on the ground floor and the floors above. Wood and zinc on the top floor. The additions on the backside are both constructed with vertical openings to contri-



bute with the flexible character. New brickwork on the ground floor differs from brickwork structure, not by colour.

Colour was a difficult point of the materialisation. This had to do with the Borstblok itself but also with the current situation of the neighbourhood. A mix of different materials and colours deriving from a different period of time. This is the reason to choose for inconspicuous colours that are mainly already there. Focus would be mainly on execution of these materials. The danger of introducing new colours is that the Kolenkitbuurt will become a group of individual projects.

2.3.3 The final Phase

The final phase is a phase of luxury and hereby only possible when the biggest steps are made for improvements (fig 17). The municipality has the ambition to identifying the area by 10%. An added layer on top of the existing building stock. Architectural spoken did I also see this like this. A prefab construction blocked ontop of the Borstblok. It is preferable that this phase doesn't only consider the borstblok, but the at least also the "Kolenkitbuurt zuid".

Build-up

The borstblok is build in the 1950s, post-war, where materials were scarce. Oversizing of the construction was out of order, hereby you could either

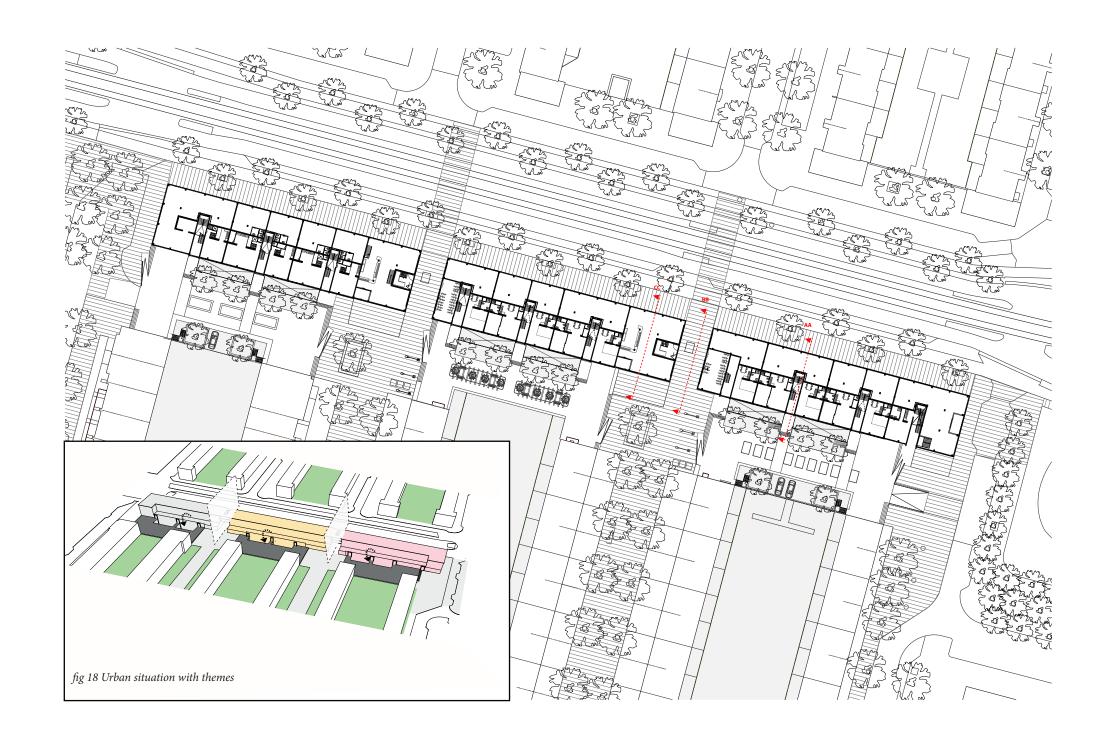
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substitute the current roof or add an extra construction on top. Part of this construction was already constructed in the second phase for the enlargements of the balconies. Prefabricated boxes could be placed on top of the building without moving out the current inhabitants of the Borstblok. Every dwelling exist out of 4 prefab boxes linked to each other, making the dwellings slightly bigger then the existing stock of the borstblock, with +/- 120m2.

Inspired by the existing 50's dwellings do the new dwellings on top have a central hallway in the centre and the remaining spaces on the sides enjoying a lot of sun. The gallery of the upper floor is along the Bos en Lommerweg giving additional social control to this street.

Materialisation

In order to realize the fast construction of the extension, the platform system, assembled with prefabricated timber panels was chosen. It facilitates quick mounting of the floor on to thus minimizing the time of construction and nuisance for the inhabitants. The materials chosen are recyclable and easily demountable. Therefore a change is easily made or even able to place it somewhere else. It is the nature of the chosen system that all wall and floor elements are load bearing and therefore fulfil high fire safety requirements. Especially the separating walls and ceilings between two apartments have to be absolutely sound proof and therefore need disconnected structural elements. The connection with the added construction underneath should made with a



bearing to disconnect sound waves and to let the boxes settle separate.

To summarize, we have five different construction layers complementing each other, but also respect the existing architecture.

- 1. The existing brickwork,
- 2. The insulation,
- 3. The transformation of the ground floor brick work with addition of the basement.
- 4. The enlargement of the balconies,
- 5. The addition on the top floor.

2.4 The building fragmentation.

By dividing the 220 long building block into three smaller parts will, like mention before, the accessibility of the Woutertje Pietersestraat improve as well as the link between the north and south part of the Kolenkitbuurt. Besides the change of use of the urban situation does also the logic of the building block itself. By the tripartite division do you give the opportunity for each block to create there own identity. Different themes in connection with the outside decks could function next to each other and could reinforce each other. One could be given an elderly theme where de ground floor could only exist out of "Kangoeroe woningen", while two

blocks away students will occupy the ground floor. Creating a dynamic living environment (fig 18).

Why, no, fragmentation

Fragmenting done in a dimension of time as well as cutting up the building brought some difficulties. Why fragment in a neighbourhood, which does already looks like a group of individual projects? During my process I noticed that the Borstblok has an high potential to become on of these projects. Change is desired and should be noticeable, but in a neighbourhood where only the entrances where different project tent to become isolated. To connect the building construction of the Borstblok with the rest of the Kolenkitneighbourhood it would be more manageable to create unity. Considering the Borstblok as an individual project could be a risk (fig 19).

The different building phases forced my to look at every part independently, while the final renovation had to be unity. A constant point of attention, but I believe a learn full experience. Where I now started with the idea of phasing followed by designing do I wonder what the differences would be if I did it the other way around. Starting off with a design and dividing this in building steps.

2.5 Appreciation for the existing

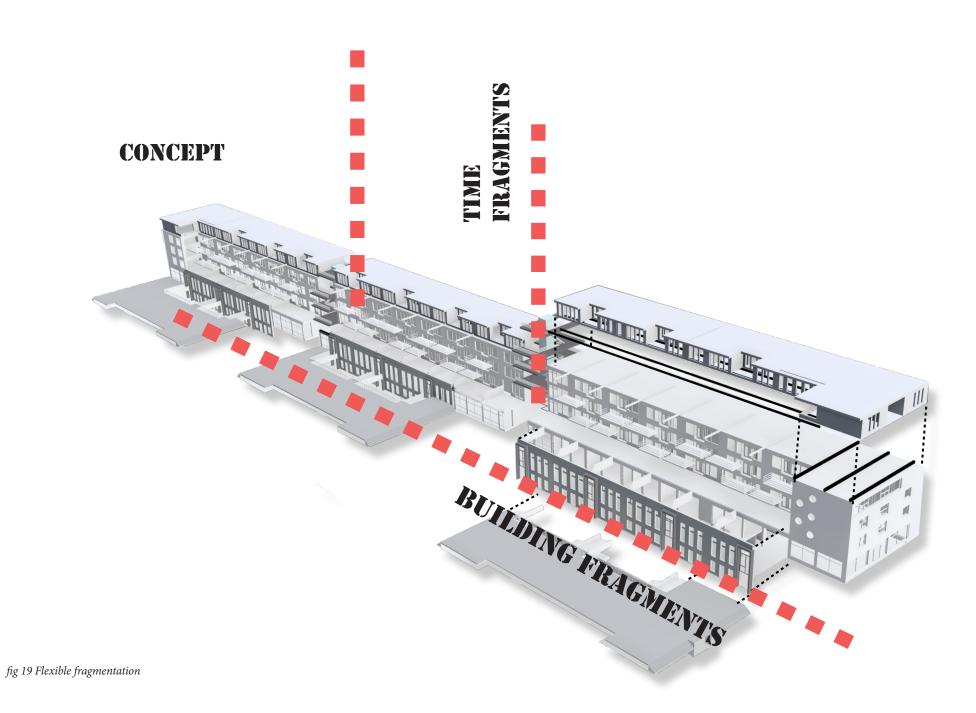
Looking to the kolenkitbuurt asks for a critical approach toward the existing situation. The current housing stock is facing poor technical conditions. And it is also a fact that there aren't a lot of archi-

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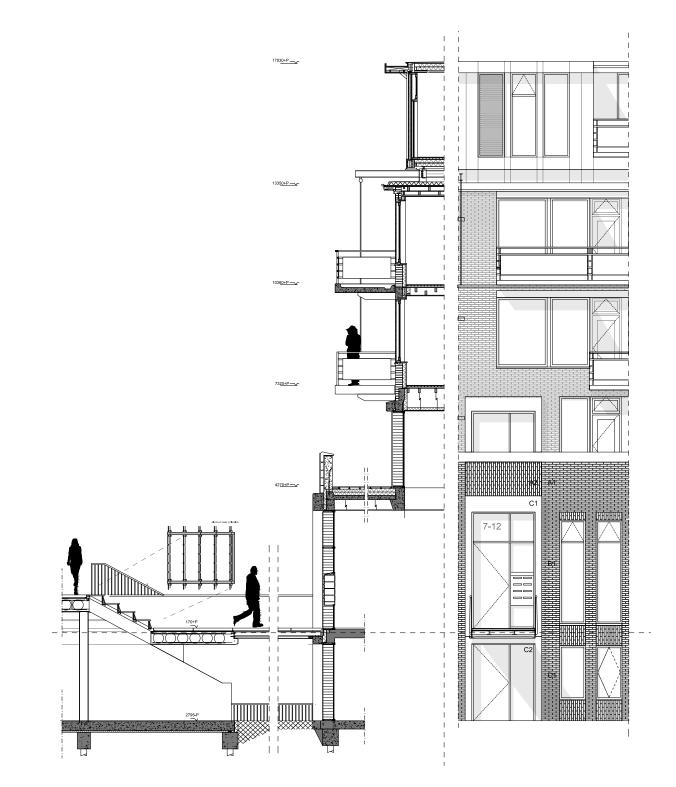
tectural highlights. But the neighbourhood itself tell us a story. The typical style of the 1950s is something, which deserves a bit more appreciation. The urban planning of that time was something very revolutionary and experimental. A very regular and efficient way of building is typical for these neighbourhoods. All orientated towards the sun. The exception of this neighbourhood is the Borstblok, the only building orientated along the main axe through the neighbourhood (the Bos en Lommerweg). This is something, which makes the Borstblok important. A lot of the image of the kolenkitbuurt is extracted from this building. Besides its historical story and maintenance of the existing urban structure, there is another reason to no demolish this building. Currently the kolenkitbuurt is still looking forward to big transformation. Demolishing the Borstblok will break down the minor link between Bos en Lommerplein and Plein 40-45. The bos en Lommerweg will face a construction site of around 10 years together with the plans of Kolenkit-Midden. By maintaining and slowly upgrading the Borstblok, people in the area are able to see the improvement made. It also gives shelter to the situation of the part behind it, the Kolenkit-South. The Kolenkit-South could be under construction, weather this is demolition or renovation without people for the surrounding area noticing this.

2.6 The Studio method

The emphasis of the studio lay on understanding complexity and on how to juggle with its parameters, not on innovation in form or building method. I was encouraged to explore complexity on different







scales: history sociology, demography, economy and politics. I have reflected this complexity in the research of my case study, the Borstblok, and its design as representative for common problems with vacancy of commercial activity and Dutch post-war neighbourhoods. Meeting reality is one of the slogans, which motivated me to join this studio and I have strived to fulfil this ambition as much as possible. I believe that research is useless unless it meets reality and its results can be implemented or further developed towards implementation. The involvement of the Dutch housing corporations Stadsgenoot and the Aliantie and representatives of the municipality have certainly boosted my ambition to meet realistic standards and offer a feasible useful solution for actual problems. The Method of the studio was of analytical nature, which suited my own line of thought and working method very well. Especially the scoop towards the working field was something I prefer as well. Gathering your information at the Amsterdam Archives and speaking various specialists, stakeholders as well as shareholders.

2.7 Generic VS. Specific.

Considering this design approach, it is a very specific approach. This is because of the private involvement of Leo Borst as well. He designed his building for a specific target group, other then the rest of the neighbourhood. This made the relationship to the rest of the neighbourhood unique. The borstblok is one of the view commercial buildings, which made a separation of entrances. The Stores are reached from the Bos en Lommerweg and the

dwellings from the otherside, the Woutertje Pietersestraat. It will be hard to copy and paste the design steps to other parts of the "westelijke tuinsteden" of Amsterdam. But view things are.

The generic process of construction in phases is something I believe could be generically implemented. The current passive stance toward the existing housing stock is unnecessary. Minor chances could make a big difference in neighbourhoods. We have to get rid of the mind-set of doing it all in once. Large-scale developments, especially during this economical crisis, are something of the past. In this studio you notice the need, the desire but also the lack of improvements. There is always a hierarchy of needs in this neighbourhood. With this system do you give the architect a more involved role in the way the building is getting used, and hereby gives him the possibility to reflect on its own work. Nowadays architect make a design, which didn't proved itself yet. It can turn out to be working out fine, or it can turn out to be failure, waiting to be demolished after 20 years. With the concept of building in phases smaller investments are made with smaller changes of use. Architects hereby are able to react on the way their own design is used in the next phase.

Then another aspect of the design, the Rubix Dwelling. Is extracted from another fascination, vacancy of large-scale industrial areas. The industrial area along the transformatorweg in Amsterdam is one of those areas. All these area's face high raids of vacancy and both are in high need of change. The municipality in Amsterdam has the

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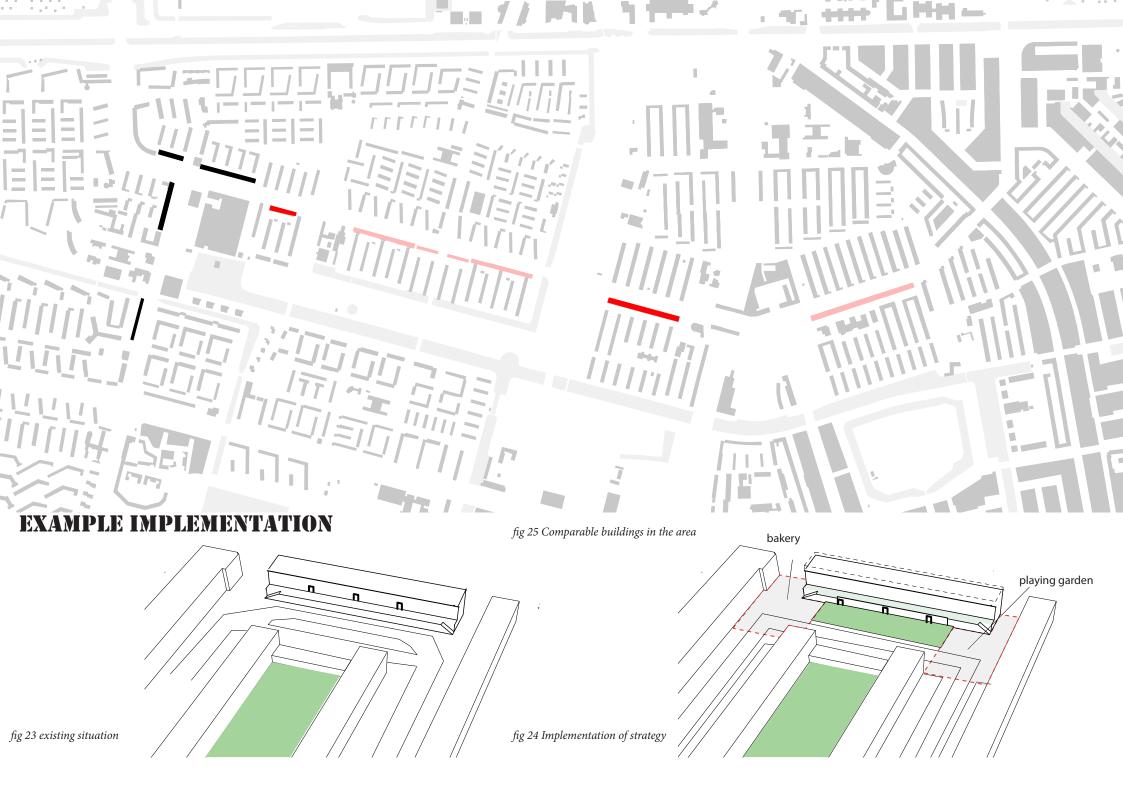
ambition to implement housing into this industrial area(Gemeenteraad 2011). Most of these areas are also close to the city centre and are geographical attractive places to live. An interaction between work en houses could work as a solution. This idea did I tried to implement in the Borstblok, but could also be used along the on other locations. The requirements for this implementation are:

- Typology: linear porch building with com mercial activity on the ground floor
- Orientation: Backside (preferable southly orientated) maintain the entrances for the houses
- Access system: via stairwells on the street side of the backside facing a living area.
- Building is dealing with vacancy of com mercial spaces.

In the area there are a view buildings, which show the same symptoms but needs another approach or are not suitable for this approach because of a bad orientation (fig 23,24,25). There is one small building near Plein 40-45, which fits all the requirement of this implementation.



fig 22 Burgermeester Vlugtlaan example



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2.8 Social and Scientific relevance

There are three things from great relevance in this assignment. The first one is the scale of intervention, the large scale from the past compared to smaller scale of today and the future. Secondly the technical neglect of post-war dwellings and finally the vacancy of border city commercial spaces.

The social relevance of this research is quite two sided and quit complex. It is mainly for the inhabitants of this area and the people around it. But then it's the question of social relevance. For who are you designing and what is eventually the outcome? If the outcome of a research is pointing out that new impulses are needed in the form of new inhabitants, the social relevance for the current inhabitants is none or high because they have to move out of their neighbourhood. In an area where there is no certainty and everything is put on hold, it is from social relevance to show what the possibilities are. Where are the Strengths, Weaknesses, Opportunities and Threats of this area? Phase rings show the inhabitants short-term results and the segmented solutions make it easier to react on the need of that time. Especially in a time of economical crisis it is very attractive for commercial developers to wait for better times to earn your money. You have to work for the people who live there, where constant attention is needed.

The scientific relevance that we are dealing with is that more than 50% of built environment doesn't meet the needs of today's comfort (Hal, Silvester et al. 1998). It is not only relevant to upgrade the post-

war buildings to today's standard(s). These upgrades are either Sociological (social structure), economical (the value but also the cost of phase during renovation) and technical (what is the current state, what is possible and what to add). It is a synthesis between these different aspects of research. Mostly these are all pointing into another direction, the balance between these aspects is important. Sustainable housing transformation is hereby you end goal. Research will give you direction in how to achieve this goal.

We also face a big vacancy of commercial spaces , on secondary spots just outside the city centre. Finding a solution on how to express commercial space and give a new program to unnecessary space of this street to enable the neighbourhoods to express themselves to the city. Especially in Amsterdam West, but almost everywhere in the Netherlands, there are a lot of empty commercial spaces on the ground floor, which gives a contaminated impression of our urban fabric. The market is changing and due to this the demand of these spaces. The transformation proposal of this study is therefore of great social relevance.

verval van vroeg-naoorlogse wijken

Den Haag, 23 juni 2008 (Nicis, institute)

'Corporaties schrappen komende jaren 3 miljard aan nieuwbouwprojecten'

(NOS, 3 januari 2013)

NVM ziet leegstand winkelruimte stijgen

Datum: 26-09-2012

(Vereniging detailhandel, Nederland)

Leegstand winkels neemt opnieuw sterk toe

De leegstand van winkelpanden is het afgelopen jaar nog verder toegenomen. Steeg het aantal leegstaande winkelpanden tussen 2009 en 2010 nog met 9%, afgelopen jaar steeg dit zelfs met 10%. Steeds meer panden staan structureel leeg.

(Volkskrant, 19 jan 2010)

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Back to the principles

The word 'building' makes many of us still think of new estate, while existing buildings, from that aspect, stay behind. The drop of the new estate sector therefore raises a lot of social dust, while existing buildings only play a secondary role in this. Only the social problems of the cities put the existing buildings and the necessary substitutional new estate in front. This is done through restructuring, of which the Kolenkitbuurt is a good example, or by building dwellings for a specific target group, for instance the 'halalwoningen' in Amsterdam Bos en Lommer. However, demolition and substitutional new estate will not be able to give an answer to the question what we need to do about the existing supply of dwellings. The only way to let the existing buildings keep their value, is to improve the quality of the existing buildings. More than half of the turnover of the building market is made by renovation of existing dwellings and commercial and industrial building.

Renovation of the supply of existing buildings is a subject of all time. At this moment we are looking at an enormous backlog of maintenance. This backlog is mainly in the maintenance of dwellings that were build from the end of the 19th century. With the introduction of the Woningwet in 1901 the government took the responsibility to make large expansion areas/development for the working class, which had to be affordable and spacious (during that time) with a lot of public space. There were almost build a million dwellings between 1900 and 2000. Most of the dwellings that

were build before the 90's don't meet our current standards anymore. With this is not only meant the technological use of the dwellings, like the energy consumption, but also the social basic structure of these neighbourhoods (Back, Brinkgreve et al. 2004). Especially the experimental line of thought/mindset between the 20's and the 70's is the current source of concern. At this moment particularly the public housing of the postwar expansion areas/development, the so-called 'tuindorpen', is a subject for discussion.

De history of a garden suburb is one of love and hate. The social appreciation of this phenomenon constantly changed. The rise of the garden suburb as a factory village, a colony/community of mineworkers, or residential area was the answer to the miserable living conditions in the cities. The idea of a garden city was that the new, happy human being, who would be able to develop himself... Subsequently these areas and neighbourhoods were established as old-fashioned by the modern urban development.

In the seventies these districts were all confronted with demolition. Almost nobody saw the quality of these areas, except for the suburbanites themselves. Around 1980 the neighbourhoods were massively renovated without any feeling or love. Looking back on these renovations we can say that these neighbourhoods were mutilated. The renovations were executed without any sympathy for detail and beauty. Now, 25 to 30 years later, we are faced with the scars and we are back to the question what we are going to do about it (Korthals Altes 2004). If we

look through our eyelashes, we can see the beauty of the original craftsmanship.

The 'Kolenkitbuurt' in Amsterdam West, a part of the district Bos en Lommer and therefore also part of the 'Algemeen Uitbreidingsplan Amsterdam', is a good example of this. The district is now seen as a district with a lack of variation and the good intentions from the past are no longer understood. The large amount of public space is not implicated in daily life. The repetition of the dwellings is seen as boring and monotonous. Society would be homogenous and equivalent, but it ran completely different. Society was very diverse with different cultures and lifestyles. Ethnicity and religion were important factors in this. Social inequality has always been there and has just shifted to another target group. In the 'Kolenkitbuurt' there were several housing associations active, the one with a Christian religion and other with a Catholic religion. This created different social groups, who were willing to do things for each other. The compartmentalization was still important at the beginning of the fifties. Groups were centred in adjoining blocks, through which the outdoor space played an important role in society. Nowadays the ideology of the housing associations has more or less disappeared which has as an effect that there is also less structure in the social groups.

The 'Borstblok' is a focal point of this change, which expresses itself in physical characteristics. The building is situated on the 'Bos en Lommerweg' and it is the only building with a commercial function on the ground floor. The 'Borstblok' was build by Leo Borst who was a strict catholic. With this building

Borst offered the people a place where people could live and work in the place. Thus, the people who worked in the 'Borstblok' had their homes in the same building. The interests to maintain the entire block in a particular state were big. Nowadays these two functions are separated from each other and working and living hinder each other. An example of this is the closed backside of the commercial function, which makes the entrance of the dwellings disagreeable. The simplicity of the building has proven to be very vulnerable to changes caused by time, but it is also an opportunity. Small changes can lead to a total change of these kind of buildings.

At this moment the 'Kolenkitbuurt' is seen as one of the worst neighbourhoods in the Netherlands (West, 2010). There has been released a big political load on this district. Therefore there has been made a large-scale demolition plan and new estate plan in 2006. In this plan there is held on to the existing footprint of the neighbourhood, except for the 'Borstblok'. The 'Borstblok' must yield because the 'Borstblok' strengthens the bad image of the neighbourhood. Moreover it generates a blockade between north and south 'Kolenkit'. This plan is a good example of the way of thinking in the beginning of the 21st century. The new housing estate takes away the identity of the neighbourhood and also a part of the legibility of the city. The elongated, four layered houses with a porch are replaced by single-family dwellings and gallery apartments. The fact that there is being held on to the footprint and the street names is, in my opinion, no reason to say that the neighbourhood is being preserved.

Especially if you assume that there will be a new group who is going to live in the neighbourhood and make a new start without knowledge of the history of the neighbourhood. The economical crisis has even made this worse. It didn't change the mind-set, but it did change the approach. Demolition of the new estate is still important nowadays, although this is slowly changing. The crisis has split up the approach, which has as result that there is an ensemble of isolated projects that don't refer to the individuality of the neighbourhood. The neighbourhood also looses his big physical distinguishability, "the homogeneity". It is a clear characteristic of that time, where, in times of crisis, is made the best of what you get. It's something we can learn from nowadays. Demolishing new estate in the 'Kolenkitbuurt' does not solve problems, but it only moves the problem. Especially at this time where the neighbourhood lives with the uncertainty because of de plans that are made.

This has not to say that new estate can't be (a part of) the solution, but only that we must start from the idea of existing quality. There are nowhere neighbourhoods with so much public space as in the 'Kolenkitbuurt' and the buildings mainly have a technical inferiority. A small and effective approach can make a huge difference in the neighbourhood. There is too much focus on what it has to become instead of what it should be and what is already there. The characteristics of this neighbourhood, like light, space and affordable dwellings, gave this neighbourhood a certain position in the city. These qualities have now been turned into disadvantages of the neighbourhood. It is

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exactly this what the neighbourhood should regain, a specific quality that is already partly there but has not jet been recognised. The dwellings and other spaces in the 'Kolenkitbuurt' are, most of the time, cheap and can give the space that cannot be obtained in the centre or in other suburbs. This allows them to occupy a certain market within the city, something they are known for instead of being known as a neighbourhood with a large amount of non-Western immigrants. The 'Borstblok' (for example) could be used as a focal point to reflect the positive aspect of the neighbourhood and to transform the negative image of the neighbourhood in a positive image. Back to simplicity and effective building for the inhabitants.

My position as a future architect in relation to cultural values en the redevelopment issue is different in various matters. There is a disagreement between the public buildings and the dwellings, with public housing in particular. Dwellings are, in my opinion, the annual rings of the urban development, where the public buildings form the centre points in an area. These buildings are mostly unique because of their extraordinary sizes and the vision of that time period. But it is the dwellings where the greatest opportunities lie in the future. With dwellings you cannot chose for a different function because it needs to fit in with the contemporary use and this is also the way we need to look at it. Sometimes big changes are needed to make neighbourhoods suitable for living again and the development of a city is hard to predict. It is how Rem Koolhaas it described in 'Delirious Rotterdam': "urban life is no fixed significance, it is a repetition of forms and

activities waiting for certain meaning" (Delirious Rotterdam, 1982). The character of a neighbourhood should be carrying; this refers to the events that took place during the course of time. Learning and taking advantage of the past and your surrounding is a chance of a lifetime. After all, 'De Jordaan' and 'de Pijp' have also become desirable living areas.

The cultural-historical value of the 'Kolenkitbuurt' and of the 'Borstblok' lies in the history. It lies not so much in the materialistic things but rather in the choice to let the building work in that specific context. That is not romance nor nostalgia, but the individuality of this neighbourhood. It tells the story of the provision of housing for the people and of the recent history of living. The current inhabitants also deserve this. An extra chapter about living can be made by adapting it to the current inhabitants.

But at the same time the methaphors also gets its own specific interpretation. Not the general characteristics determine the experience, but the actual interpretation. The 'Kolenkitkerk' with its almost communistic building blocks is the architectonic handshake between modernism and the 'Amsterdamse stijl'. The security of the neighbourhood is caused by the arrival of the A10 and the railway ring. The green or stone fences with the big gardens behind it, makes us curious. So it are not the fixed lines that determine the quality, but the history. This is not to fabricate, but this happens. This is contrary to the current approach, which is more focused on manufacturing, controllability and technology. It ignores the exceptionality and

the uniqueness that ultimately will determine the quality of the spot. Measuring has been replaced by knowing.

Future thinking

The daily routine is dominated too much by the issues of the day or the current affairs. Most of the time this is a dimensional approach. This approach has already endangered the garden suburbs twice, namely in the seventies and at the beginning of this century. The garden suburbs have therefore been confronted multiple times with demolition. Each time, the social turmoil caused a turn. This course of events is illustrative for the way that we, as society, deal with the existing (house) stocking. If you don't know the values, you can't deal with them carefully.

We need to move away from the static attitude that prevails in the construction industry nowadays and need to improve. We have to try to avoid large-scale environmental interferences. Neighbourhoods need to go back to the basics, the principles, with which they occupied a certain characteristic in the city. A reinforcing factor for the legibility of the city. Often this is very close, but it is not yet visible. Legibility and stratification of the urban and architectural structure tells the story of the neighbourhood and the building and is therefore determinative for the character.

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