MEETING THE HAGUE SOUTH WEST AT THE BORDER

HYBRID BUILDINGS A + U CUNERA SMIT - 1314300 - P5 REPORT - JANUARY 2013

RENEWAL OF THE URBAN RENEWAL

" LINKING THE CITY BY CONNECTING ACTIVITY PLACES TO AN INFRASTRUCTURAL NODE "

COLOPHON

Final thesis **"Meeting the Hague South West at the border"**
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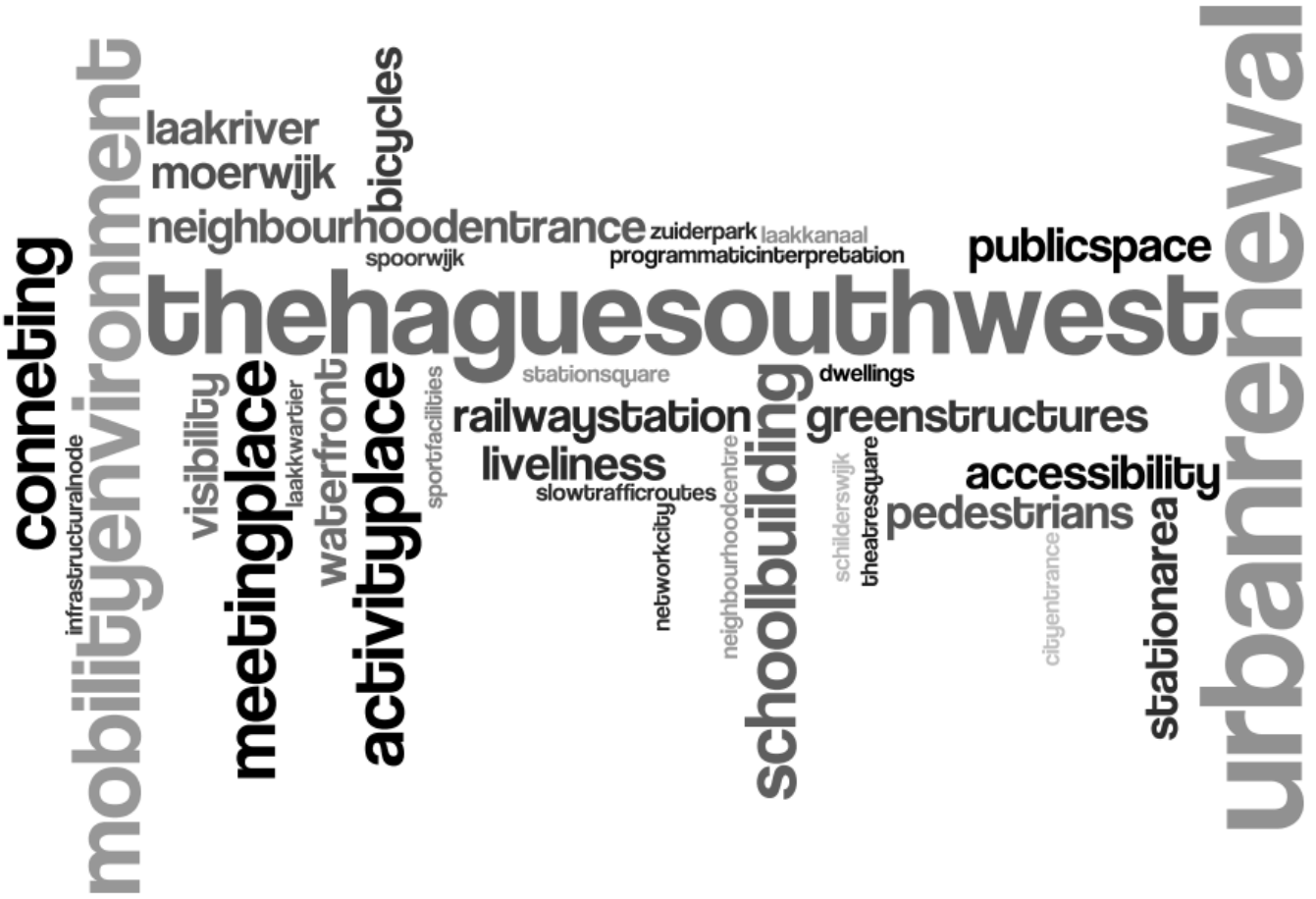

Word cloud of graduation project I author, 2012

Urban life I author, 2009

This final thesis contains the results of my graduation project '*Meeting the Hague south west at the border* '. This design project is part of the graduation studio Hybrid Buildings '*Renewal of the Urban Renewal* ', and it is the final product for the dual master track Architecture and Urbanism at the Faculty of Architecture, at the Delft University of Technology.

This graduation project focuses on improving the public space and pedestrian connections between the different neighbourhoods surrounding the station area of the Hague Moerwijk. In the present situation the station area of the Hague Moerwijk is not well accessible or visible from its surroundings and the existing qualities of the area are neglected. The area around this tertiary station of the Hague is well located within the city structure, but has insufficient connections to the network of public space and facilities surrounding the location. The project location is now a left over space between the several neighbourhoods around the station. However it could be transformed into a central space connecting the city and the neighbourhoods, as well as being an interesting living area in the Hague south west. To achieve the objectives for this graduation project, several literature has been reviewed and studies are done on the project location. Within this thesis the results of the research and the development of the design are described.

I would like to thank my mentor team for their support during this graduation project. The process of this final project was not always easy because of the combination of the different disciplines and variation in opinion of my mentors. However the meetings and discussions with them, made me gain new knowledge on my profession and created an improved vision on the fields of architecture and urbanism. I would like to thank Olindo Caso for his critical questions and remarks during this process, it really helped to improve my design. Henk Mihl for his always interesting meetings on different kind of topics and challenging me to do better and really thinking further on. I would like to thank Maurice Harteveld for his open approach, his way of motivating and cross connection between the disciplines. And I would like to thank Machiel van Dorst for our stimulating meetings and his way to review my project from different kind of perspectives.

Besides I would like to thank my boyfriend and father for stimulating and supporting me during this challenging graduation process, and having patience with me when I had stress or a lack of sleep. At last, thanks to my studio and lovely friends at the faculty who had faith in me and supported me all the time, even when I thought I would not made it.
You all made this journey worth it!

Cunera Smit
Delft, January 2013

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Sight from Willem Dreespark I Staedion, 2012

In this part of the thesis, the problem field and the objectives of the graduation project are discussed. The underlining relevance of the project is explained which let to the main research questions and sub research questions for this project. Furthermore, the methodology and disciplines of this graduation project are described in this first section of the thesis.

1.1 Aim of the project

The aim of this graduation project is to renew the urban area of the Hague south west around the station of the Hague Moerwijk. Hereby the project focuses on the improvement of the pedestrian connection between the surrounding neighbourhoods of Moerwijk, Spoorwijk, Groente- en Fruitmarkt, Schilderswijk en Laakhaven. Implementing this connection means improving the network of public space, strengthen the existing spatial qualities in the area and stimulating the facilities that are related to this network.

1.2 Motivation and fascination

The Hague is my place of residence since four years and still the city can be a mystery for me sometimes. Because I study in Delft and have friends living within different cities of the Randstad, I travel around a lot and never really explored the city of the Hague. In my studies I researched several cities for design projects, but not once developed a plan within the city of the Hague.

When I started with this graduation project, my main interest was to research and redesign a location around a railway station, preferably outside of the Randstad. This fascination for station areas came from the experiences as a user of the public transport network in the Netherlands and the impact these public places have within the city structure. For my history thesis of Msc 2 Architecture I research the development of the rail network in the Netherlands from 1839 until present and the implementation of three main train stations: Rotterdam Central, Utrecht Central and Arnhem Central. The role of these station areas as a connecting element and entrance to the city was the main input for this history thesis. From this knowledge the interest grew for redeveloping a station area and the dual graduation studio of Hybrid Buildings also had a focus on station areas. Within this studio there were three locations were we could choose from: Amsterdam Muiderpoort Station, Rotterdam South Station and the Hague Moerwijk Station. These stations are not part of the main stations in the Randstad, but are one of the so-called secondary or tertiary stations in these cities. Although my first idea was to redevelop a station area outside of the Randstad, within this dual graduation studio there was no opportunity to choose another location. Therefore I decided to focus on the location near the Hague Moerwijk station, while it was close to my own neighbourhood of the Schilderswijk and I wanted to explore the city that I was living in.

The station of the Hague Moerwijk is located near the Schilderswijk, and is even closer to my house then the Hague Hollands Spoor, however I never use the station of Moerwijk. The connections by tram towards the surroundings are very low, therefore this station is used as a tertiary station. It is located at the border of several neighbourhoods, hence it can be used far better, if the station is more integrated in the network of the city. A station area, at any scale, can be a connecting element in the city structure, when it is well accessible and visible. It is not only a connection by infrastructure, but can also be a space where people gather. As Bertolini stated (1999: 201): "... An accessible mobility environment is thus one where many different people can come, but also one where many different people can do many different things: it is an accessible node, but also an accessible place". So the question is how this tertiary station area can be regenerated to

reconnect its surrounding city structures. However, Bertolini does not talk about secondary or tertiary stations, his focus is on the central station areas. The influence of a station on its surrounding neighbourhoods and its interaction with the daily urban life in these living areas is not part of his statement. Although in these neighbourhoods in the Hague south west, and especially in the more deprived neighbourhoods of the Schilderswijk and Moerwijk, the liveability of the area is an important element. It helps to define what the role of the neighbourhood is in the structure of the city and the urban life. The proximity this tertiary station area can have a large influence on the liveability and liveliness in the surrounding neighbourhoods in a positive or a negative way. This liveability consists of social and physical elements that have an influence on the wellbeing of the inhabitants and visitors of an area (Van Dorst, 2012). Therefore it is not only important to focus on the role of the station area on the larger scale of the city, but also on its interaction with the direct surroundings and the way it can contribute to the liveability of the urban life in these neighbourhoods in the Hague south west.

1.3 Historical problem statement

The city of the Hague always has been a fragmented city due to its geological structure and the dual orientation towards the land and the sea. Comparing the urban form of the city with the geological structure, shows that the original settlements of the richer neighbourhoods are located on the sand layers near the coastline. The deprived neighbourhoods are located on the peat grounds, towards the east and the south of the city. The development of the city and the separation between the richer and more deprived

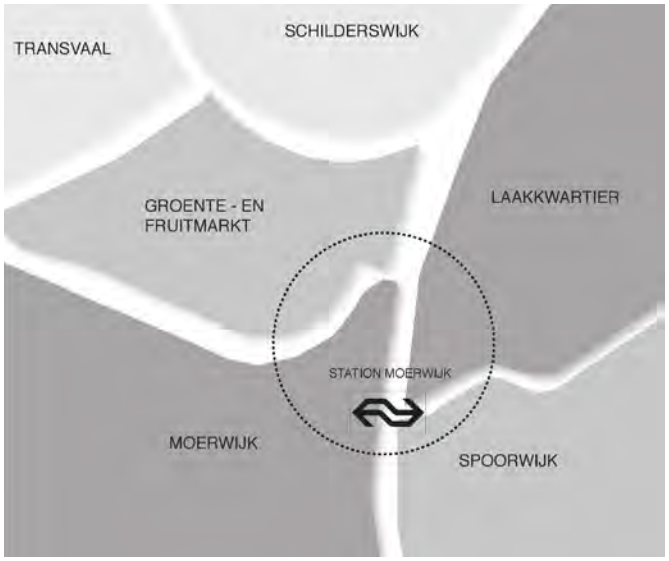


Figure 1.1 I Neighbourhoods around project location I author, 2013

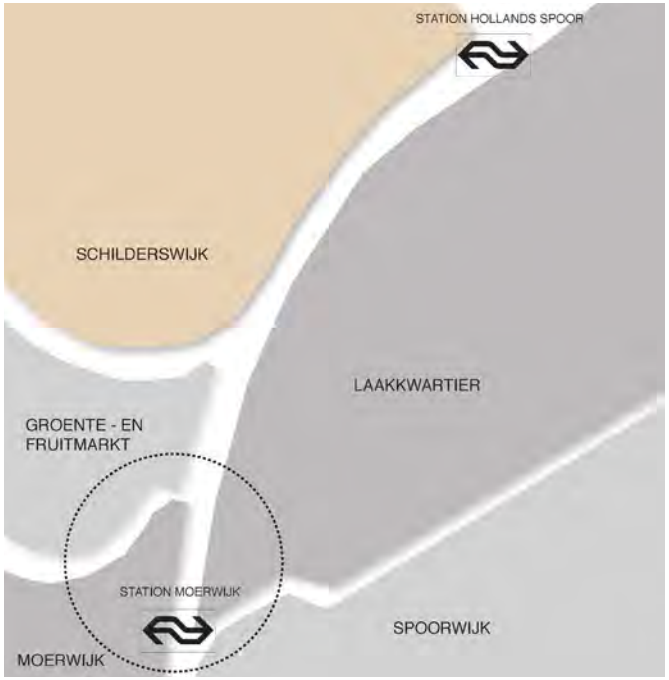


Figure 1.2 I Schilderswijk in relation to stations I author, 2013

Figure 1.3 | Plan Berlage for the Hague | pvda, 2005

Figure 1.4 | Plan Dudok for the Hague | pvda, 2005

neighbourhoods are a result of this fragmentation. The deprived neighbourhoods of the Schilderswijk en Moerwijk were for example originally meadows, which were pumped dry by the mills. The first built up location in the Schilderswijk was a village created by the municipality to banish the socially disadvantaged people from the city centre. When the train tracks were constructed through the polderlandscape in the Hague south west, the neighbourhoods further developed. These train tracks followed the original polder structure. The plan of the municipality was to create a high class living area in these extension neighbourhoods. However, due to the pursuit of profit by the developers and industrialisation of the society, it became a working class area. In the 1960's efforts were made to improve the living conditions in the neighbourhoods, by introducing the slogan 'From grey to green' (KEI, 2012). However these urban renewal projects only mixed up the linear structure of the neighbourhoods, making it fragmented and unclear.

This originally linear structure in the city structure was based on the allotment of ditches and roads. Also the areas that were developed by the city engineer Isaac Anne Lindo around 1890's had a very clear structure. His strategy was to develop a polder, linear, structure with a diagonal crossing (Geurtsen et al, 1989). These diagonals operated as structuring elements in the neighbourhoods and contributed to original linear structures of the neighbourhoods.
The extension plan 'Plan tot uitbreiding' by Berlage of 1908 also tried to create a clear structure, by introducing widened axes in the plans, such as the Gouveneurslaan in the Laakkwartier. This axis is still today an important shopping street near

the project location around the Hague Moerwijk station (see figure 1.3). While other cities grew concentric, in the Hague the areas for extension followed the dune riches structure of the city. Beside implementing housing in the plan, Berlage even pointed out places for labour and industry around the Hague Hollands Spoor station and at the Binckhorst (Norder, 2005). Also ideas for the urban infrastructure were implemented by a ring road with a wide ellipse around the city centre, the still existing Parallelweg in the Schilderswijk.

In 1949 the plan of Dudok 'Structuurplan Groot 's-Gravenhage' was presented, which also had a high ambition for the Hague. The plan appeared short after World War II, were the city was destroyed enormously. The plan of Dudok had 1975 as its horizon and included large extension plans. Dudok as well as Berlage built on the structure of the dune riches, with the richer neighbourhoods on the sand layers and the more deprived neighbourhoods on the peat. The largest extension was in the south west part of the Hague, the neighbourhood of Moerwijk (Geurtsen et al, 1989). The concept for this area was creating a living situation in a broad green settlement at a distance from the noise of the centre and industrial areas. The axes in the plan were mainly established for cars and the concept was influenced by the ideas of the garden city (see figure 1.5). The plan of Dudok was grafted on the continuation of the grid structure and the infrastructural network: roads parallel and perpendicular to the coastline. The original axis of the Gouveneurslaan by Berlage was extended in the plans for Moerwijk by Dudok. Also the ring structure around the centre was strengthened by a new axes that reached towards the surrounding

Figure 1.5 | Birdseye view on Moerwijk | Swart, 2009

Figure 1.6 | Birdseye view on project area | Oosterhout, 2007

Figure 1.7 I Map of the Hague I author, 2012

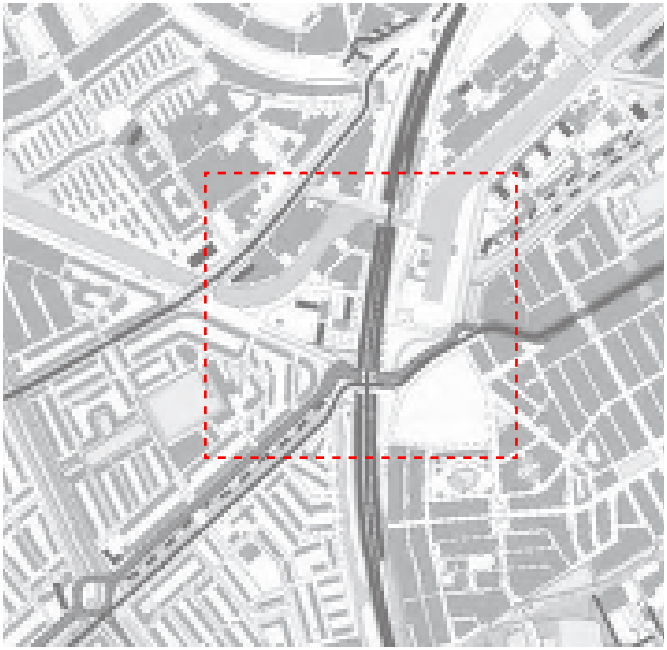


Figure 1.8 I Project location I author, 2012

polderlandscape. The axis of the Gouveneurslaan (blue horizontal line) and the south east axis of the ring structure (red horizontal line) of Dudok are still marking the project location today and have a structural role in the city fabric (see figure 1.4).

An other part of the Hague south west is the Laakhaven area, which is only developed in the last few decades, after the area lost its harbour function. An arrangement of large volumes were placed along the water of the Laak, which introduced again a new structure in this part of the Hague. These developments in the neighbourhoods of the Schilderswijk, Moerwijk and the Laakkwartier, had a large influence on the project location around station Moerwijk, since the several renewal plans for these areas were separated interventions within different time periods during the development of the Hague. The renewal plans of these separated neighbourhoods resulted in a very fragmented area around the station of Moerwijk, since it is situated at the border of these neighbourhoods (see figure 1.8). At this location, all those different fragments of the surrounding neighbourhoods gather. These neighbourhoods are mainly orientated inwards, which makes the location function as a left over space between those different structures (see figure 1.6 and 1.9). Beside the different structures of the neighbourhoods, the water structure of the Laakkanaal and the green structure around the old Laakriver also causes separation in the area. Although these elements can be improved in their spatial qualities and can create the connection between the neighbourhoods, instead of separating them. However mainly the train tracks create a barrier in the area, while the crossings for fast and slow traffic are limited. Also

the spatial relation between both sides of the tracks is lacking, because the tracks are raised on a dike and therefore the visibility to the other side is blocked. Even the road structures in the area cause a division at the crossing of several main roads at the station of Moerwijk. Hence this location is dealing with a high amount of traffic, where the pedestrians and bicycles are inferior.

To reconnect the surrounding structures and upgrade the deprived neighbourhoods in this part of the Hague, the infrastructural node of Moerwijk can play an important role. This node can function as a entrance to the neighbourhoods, when functioning as a gateway or meeting place for the surroundings. For this node to accede to these conditions, the most important element is the accessibility of this activity place. As Bertolini and Dijst (2003: 31) discuss ‘it is particularly places - and moments - where mobility flows interconnect that have this potential’. From this idea of mobility environments, this station area can be the activity places for and within the neighbourhoods, when it is well connected on the city and neighbourhood scale. Hence, it is important to also consider the influence of a station on it surrounding neighbourhoods and especially on the daily urban life in these living areas. In a positive way the station area can provide better accessibility of the neighbourhoods towards the larger scale, but the flows of visitors can also interfere with the life of the inhabitants. Since the connection between the neighbourhoods and towards the station of Moerwijk is lacking, new diagonals supporting the existing structures should be introduced, while maintaining the qualities for urban life by closely marking the separation between public and private areas (see figure 1.10).

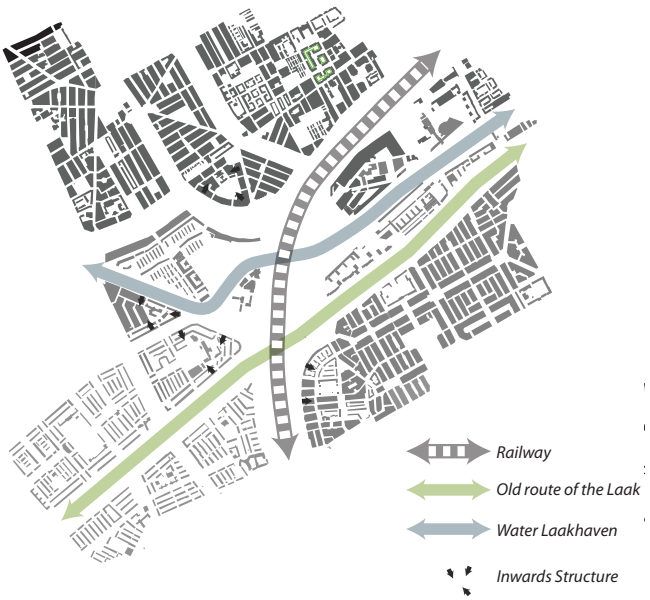


Figure 1.9 I Structuring elements I Urban analysis, 2011

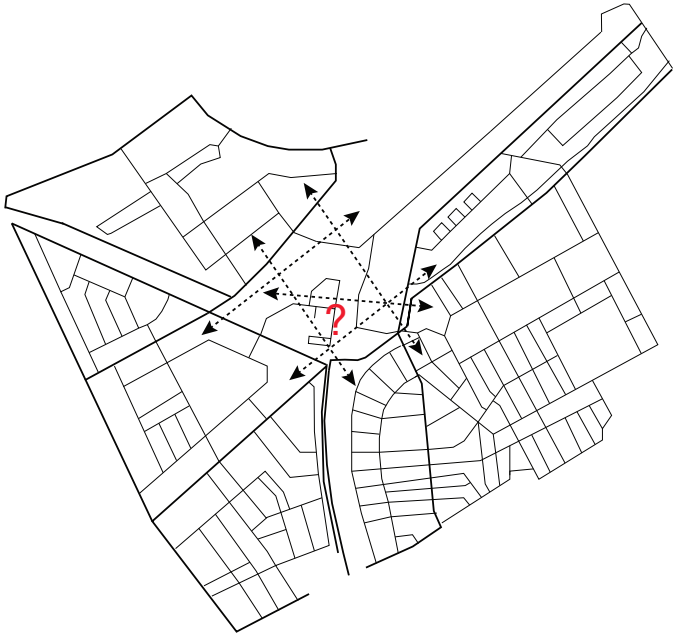
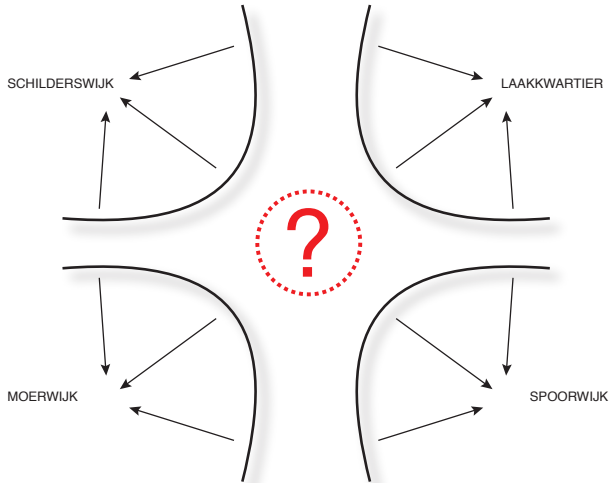


Figure 1.10 I Missing connections I author, 2012

From: Left over space in between neighbourhoods



To: Integrated centrality in the district of the Hague south west

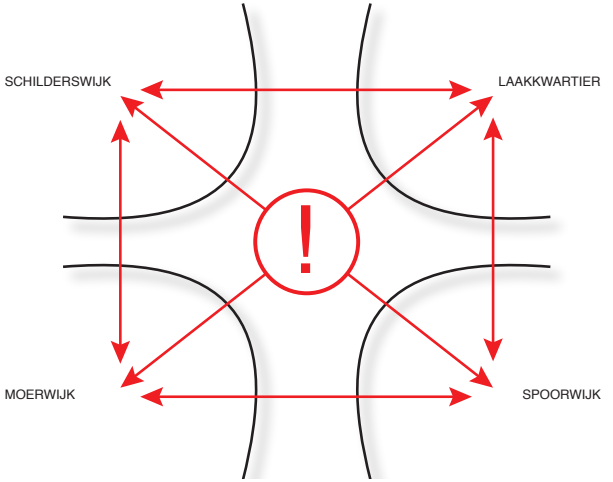


Figure 2.1 I Project objectives I author, 2012

2.1 Main objective

The main objective for this graduation project is developing a regeneration plan for the area of the Hague south west to improve the pedestrian connection between the different neighbourhood structures and integrate the Moerwijk station area into the spatial and functional network of the city. The design will exist of an urban design and an architectural intervention. The project will be developed on three scale levels; The neighbourhood scale, the scale of the ensemble, and the scale of the architectural interpretation and its small urban scale. These design scales are related to the studio framework of 'Urban Renewal'. From this framework, three planning themes are defined for the project:
(1) Routes between separated neighbourhoods
(2) Network of public spaces
(3) Programmatic interpretation
The focus of the project is on the inhabitants of the several neighbourhoods, who make the transition towards an other neighbourhood while crossing the development area. Therefore the emphasis is on the spatial qualities and programmatic interpretation of the area. This dual input for the design is needed to upgrade the area and to create a space that captures activity and which is a living place at the same time.

2.2 Sub objective

Considering the current economical situation in the Netherlands, it is important to construct this design on several scales. According to Secchi and Vigano (2009) the goal is to find focused interventions that can have a structured impact on the neighbourhoods and the city as a whole; the strategic places within the city that can be transformed for that matter. These

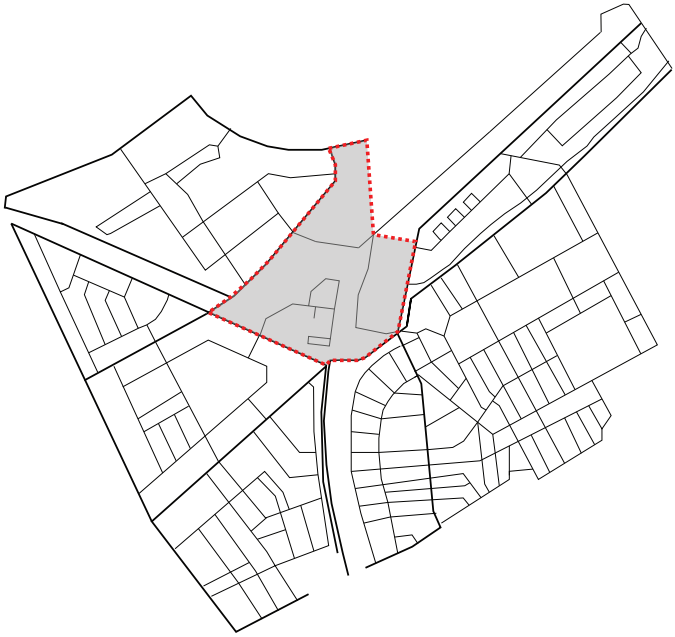


Figure 2.2 | Studio framework: the urban renewal area | author, 2012

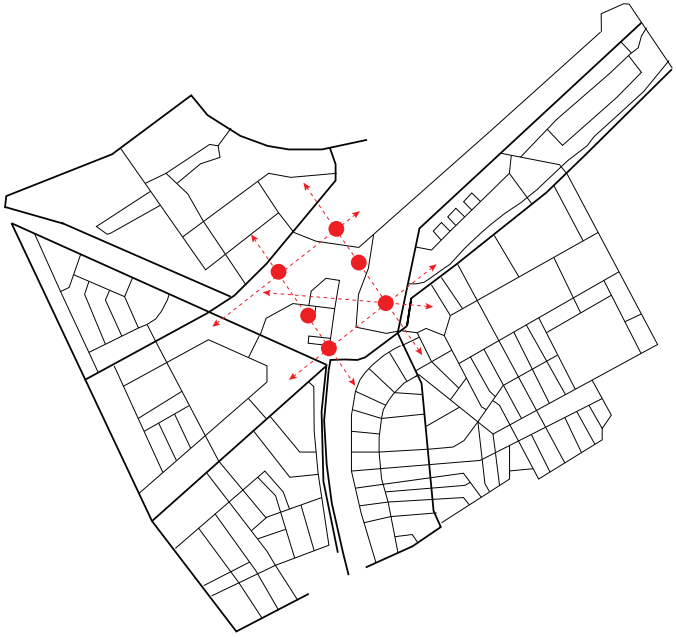


Figure 2.4 | Network of public spaces connected to routes | author, 2012

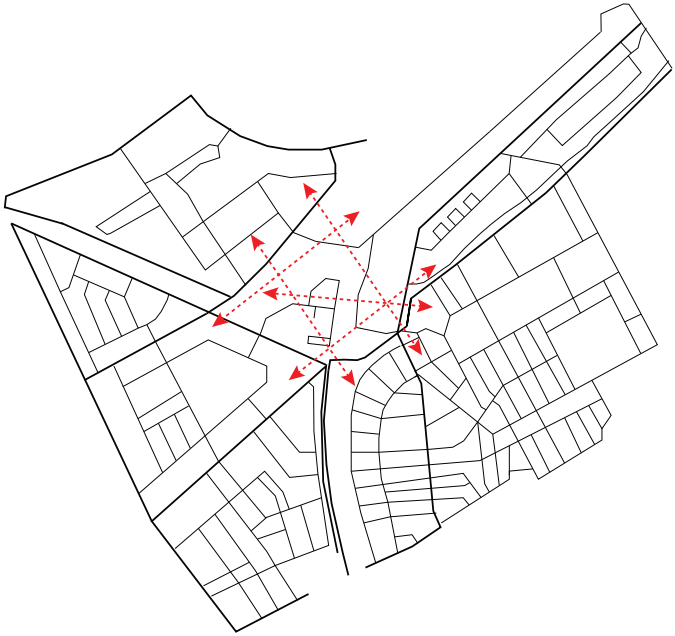


Figure 2.3 | Routes between neighbourhoods | author, 2012

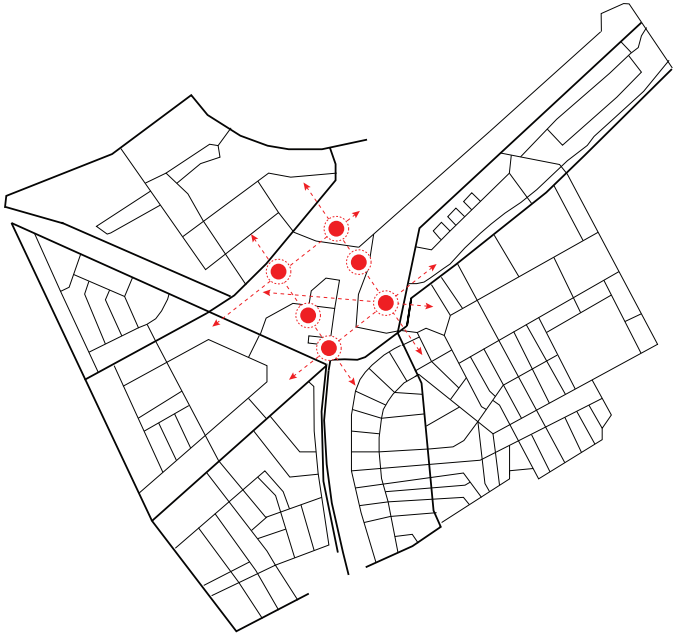


Figure 2.5 | Programmatic interpretation | author, 2012

interventions can then work as a catalyst for urban transformations in the city as well as for the direct neighbourhood(s). Therefore the emphasis of the project should be on the facilities, connections and public space in the area (Van Velzen and Engel, 2010). Hence it is helpful to start with the implementation of the architectural intervention. The architectural project can then function as a catalyst for developing the rest of the plan, so the placement of this intervention is a important feature for transformation. Therefore it should be situated near existing buildings and connected to the network around the location. After implementing the architectural intervention, the development of the surrounding structures can follow. The design interventions on the several scales will be related to each other. So after implementing the architectural project, the rest of the plan can be developed without changing the structure of the already implemented elements.

Another objective for this graduation project is creating a strategy for the renewal of the area where the existing qualities will be better represented. When entering the location from the train station in the current situation, the existence of the Laakkanaal and the proximity of the green structure of the old Laakriver are not visible. Moerwijk area as a 'green living environment' does not appear at the location of the station and therefore these existing structure do not contribute to the connection between the several neighbourhoods. The Hague south west has several qualities that have to be more accessible and presented at the location. It should be more attractive for visitors and inhabitants to go out at Moerwijk station and explore the qualities of these surrounding living areas.

2.3 Graduation products

To achieve the objectives of this graduation project a design will be developed on three scales. By integrating an urban plan with an architectural intervention in the Hague south west, this urban area can be transformed. For this area of the Hague south west a renewal plan will be created, with focus on the left over space at the Willem Dreespark and the Petrolium Haven, close to Moerwijk station. In this design new routes towards the surrounding neighbourhoods will be added. These routes will strengthen the connection between the neighbourhoods and the accessibility of the station area. Related to these routes, public spaces will be added and upgraded. The programmatic interpretation shall be connected to this network of public spaces, with the architectural intervention as a secondary centrality close to the station.
To give the design an academic relevance and underpinning, a literature review will be done on the function of a station area as an urban gateway and meeting place in its surroundings. Besides more literature studies will help to define the spatial requirements for the routes and public spaces. By reviewing recent literature, the interpretation of the tertiary station area will be researched and its connection to the network of public space.

Concluding the graduation products, a design will be developed for the area in the Hague south west, connecting an urban plan with an architectural intervention. Related to this design project, literature studies will be done. The design shall be created on three scale levels: From the neighbourhood scale to the ensemble and the scale of the architectural project.

The approach used for this graduation project to design an urban plan and an architectural intervention throughout three scale levels will be further elaborated in chapter 5 '*Methodology and disciplines*'. This approach leads to the research questions for the design, which are divided in five questions that are related to the three themes:
- Routes between separated neighbourhoods
- Network of public spaces
- Programmatic interpretation

3.1 Main research question

The main research question of this graduation project has a spatial and design orientated scope. It is related to the framework of Urban Renewal:

Which strategic spatial interventions can improve both the accessibility and liveliness of the area of an infrastructural node in the Hague south west, in such a way that it becomes an activity place catalysing urban renewal?

The answer to this research question will be given by the elaboration of the design project on the three different scales, creating an urban and architectural project. To realize this design project, research will be done on different scales in the Hague south west and literature will be linked to the situation. From here design proposals will be made for the location. The theoretical question and the three sub research questions will support this process of creating design proposals.

3.2 Theoretical question

The theoretical question is connected to the requirements that are needed for a mobility environment to function as an entrance towards the city and its surroundings. It is part of the Urban Renewal framework and will be answered by a literature review on gateways and meeting places.

Which spatial conditions are needed for urban gateways and meeting places around station areas, to let them function as an entrance to the city and their direct urban surroundings?

3.3 Sub research questions

The three sub research questions are part of the approach for this graduation project and support the main research question. Each question is linked to one of the planning themes (Routes, Network of public space and Programme):

1. Routes between separated neighbourhoods
What are the spatial and structural requirements for qualitative (slow traffic) routes to connect this area to its surrounding neighbourhoods?

2. Public spaces
How can the improvement in and the kind of the public space in the area contribute to the accessibility of the station and the liveliness of the routes from the surrounding neighbourhoods?

3. Programmatic interpretation
Which functions should be related to the public space in the area, to contribute to the liveliness of the station area and the routes towards the location?

The order of the sub research questions is defined by the level of the scales and the elaboration of the design project. The three sub research questions will be answered by using different methods (figure 3.1), as explained in chapter 5.

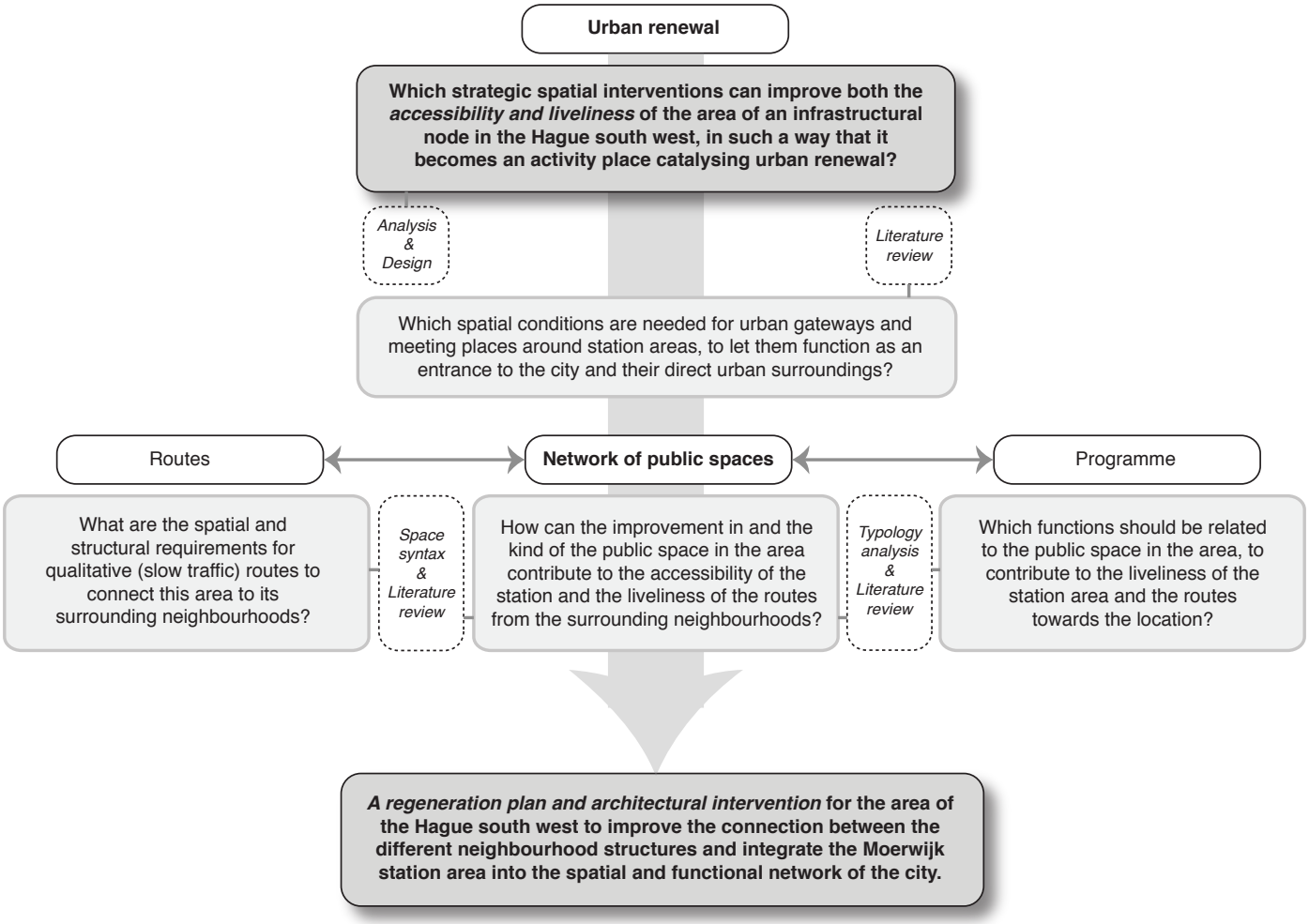


Figure 3.1 | Scheme research questions and methods | author, 2012

4.1 Societal relevance

Since the advent of the 'Stedenbaan project' in the south wing of the Randstad, the area of station Moerwijk is back on the agenda of the municipality. The station was constructed in 1996 on the already existing railway arch to support the accessibility of the district the Hague south west. Because of the new function of the station as part of the Stedenbaan netwerk in the Randstad, the surrounding neighbourhoods needed to transform as well. These neighbourhoods were part of the urban renewal of the Seventies, and they now mainly house new inhabitants and socially vulnerable groups (Van Velzen and Engel, 2010). The neighbourhoods deal with a high transfer rate of inhabitants and therefore the connection of the inhabitants to their neighbourhood is often missing. This results in the feeling of being less responsible for your own neighbourhood and putting less effort in keeping the neighbourhood well maintained. Although these neighbourhoods are well located in the city, they are often inadequate in terms of public space and sometimes disconnected to urban fabric. The large restructure plans since the Seventies did not help in a proper way to revitalize the neighbourhoods, while a top-down approach was applied and only the housing stock was upgraded (KEI, 2011). Today, these neighbourhoods are still orientated towards the bottom of the housing market. Therefore, a bottom up approach is needed to restructure these neighbourhoods.

The areas of Spoorwijk, Laakkwartier and Groente- en Fruitmarkt are already transformed over the years, but the node of station Moerwijk has not changed until now. The station area itself deals with the main problem, because of its visibility and accessibility towards the surroundings. The routes to the station of Moerwijk are unclear, unsafe, unattractive, or simply not present. The walking distances are also to long, the main busline trough the neighbourhood of Moerwijk does not have a stop at the station and there is not enough parking space for cars to stimulate transfers to the public transport network. The inhabitants of this district, especially the neighbourhoods to the north (Groente- en Fruitmarkt and the Schilderswijk), are therefore more orientated towards the station of the Hague Hollands Spoor, because this station is better accessible and integrated in the city network. However, the station of Moerwijk is closer to these neighbourhoods and can be seen as the entrance point to the city from the south, the 'Haagse Poort'. Although this station does not function like an entrance point at the moment. Beside, this station is close to important green structures of the Hague, such as the old Laak river, the garden city of Moerwijk, the parks of Overvoorde and Julianapark in the south and the Zuiderpark in the west. These green structures are unfortunately not well visible or present at this station area and therefore their proximity is unknown. With the city renewal of the surrounding neighbourhoods, this station area should be upgraded as well, to support the regeneration of this district to its full potential. There are already several plans of the municipality for this district, but these plans are related to strict neighbourhood boundaries, instead of making cross connections for better integration.

Connected to the spatial network and the focus on infrastructural nodes, is the importance of station areas near these deprived neighbourhoods. A well maintained network of public space related

Figure 4.1 I Societal relevance I local newspapers, 2005 - 2010

to a station area helps to stimulate the liveability (and to make better use of) the neighbourhood by the inhabitants, while it functions as a location of residence and as a meeting place (VROM Raad, 2009). In the present Randstad, the main focus of the municipalities is on the large station areas (Visscher, 2011). These stations have a high amount of passengers every day and they represent an image for the city. But what about the secondary or tertiary station areas, which are located outside the inner-city, closely to these areas of urban renewal? Those station areas are most of the time neglected because of the low(er) amount of trains and thus passengers every day. By investing in these nodes, the connectivity between and the image of the surrounding neighbourhoods can be upgraded.

4.2 Academic relevance

This graduation project is part of the graduation studio 'Renewal of the urban renewal', which belongs to the chair of Hybrid Buildings. This architectural track tries to show "*the attempt to escape the traditional but arid binomial form-function by addressing buildings with multiple performances*". Thereby the focus of this master programme is to combine different functions into a 'hybrid' element by using new ways of organizing the space. The aim is to create different combinations of types of space, functions and constructive systems in order to shape alternative social and urban environments. Architectural interventions can be used to revitalize an urban area, if there is a conscious understanding of urban transformation processes and knowledge of changes in building typologies. Thereby, the historical development of the place and the existing urban context are very important

elements to consider in the design process (TU Delft, 2012). It was in this studio thus possible to combine the tracks of Architecture and Urbanism, while it already had its focus on the link between architectural projects and their urban context. This studio focuses on "*how architectural interventions can activate and contribute to the process of urban transformation*." Within this studio the combination of design and research is seen as an opportunity to strategically intervene in the regeneration and redevelopment of urban areas. The urban areas that should be reconsidered in their existing urban context are especially the post-war neighbourhoods in the Netherlands. The goal is to find focused interventions that can have a structured impact on these neighbourhoods and the city as a whole; the strategic places within the city that can be transformed for that matter (Secchi and Vigano, 2009). These interventions can then work as a catalyst for urban transformations in the city as well as for the direct neighbourhood(s). Therefore the emphasis of the project should be on the facilities, connections and public space in the area (Van Velzen and Engel, 2010).

Connected to the studio theme of 'Renewal of the urban renewal' was the role of secondary or tertiary station areas, while these infrastructural nodes can play an important part in the city structure. They can be a connecting element in the network of the city and function as an activity place for the surroundings. If the spatial network and the layout of the public space are of good quality, the social position of the neighbourhood can eventually increase. The neighbourhoods of urban renewal often have arisen outside of the inner city and sometimes closely to the infrastructure of the public transport network. The train tracks in the Randstad originally developed outside the city borders. However, due to the economic development along these tracks, the cities grew towards their surroundings and the train tracks became part of the city structure. These areas along the tracks, developed from industrial to residential or business districts, and the tracks were suddenly a barrier between neighbourhoods. However what about the areas in between, the transition areas between these different neighbourhoods, that are now often leftover spaces within the city?

The urban renewal plan of this graduation project has an influence on the urban fabric as well as on the living environment of many people. By developing this project on different scale levels, the designer will be linked to the users of the space. And by processing the development of the design in several phases, the public has the time to adapt to the changes in their environment. Another aspect of this design project is the focus on pedestrian movement in the area. By creating new routes for pedestrians and bicycles towards the station area, the location becomes more accessible. At the same time the quality of the public space should be discussed. As Gehl (2010: 134) argues : "People walk, stand and sit where the quality of city space invites them to do so". And every actor or user of the space has a different behaviour while using this city space: lifestyle behaviour (being), strategic behaviour (going), tactical behaviour (travelling) and operational behaviour (walking) (PQN, 2010).Therefore it is important to consider these aspects during the design process, because the behaviour and well being of the users is closely related to the design of the public space.

The main approach for this graduation project is an approach where a close relation between design and research is present. Design proposals are used for research and the framework for the design is based on research. So there is a constant interaction between design and research during this design project.

5.1 Research methods

During this graduation project two main research methods are used for the design: literature reviews and spatial analysis methods.

Literature reviews

The literature review has provided a theoretical framework for the design project. First of all a review paper was made, discussing the capability of mobility environments to function as entrances to the city and their direct surroundings in Dutch regeneration areas. In this paper the spatial requirements, for gateways and meeting places around station areas, to let them function as an entrance to their surrounding neighbourhoods, was pointed out. By first defining the principles of mobility environments and the idea of the Network city, the role of the station area within the city structure was reviewed. Here several writers were referred to on their theories, such as Dupuy (1991), Peek and Hagen (2001), Bertolini and Dijst (2003) and Rooij (2005). Secondly, the definitions of an urban gateway and a meeting place were discussed, by reviewing theories of Alexander (1977), Orum and Chen (2003) and Gehl (2010). Their theories helped to sharpen the conditions for an entrance. Finally the criteria and the relation between the mobility environment and the role as an entrance was being explained. The outcome of this paper was used as an assessment tool for a research to identify which spatial elements are responsible for a station area to let it function as an entrance to its surroundings.
After this first review paper, more theoretical research was needed to define the theoretical framework for this design projet. Especially the requirements for the routes and public spaces had to be defined, to make the connections towards the surroundings and support the accessibility of the station area and the liveliness of the routes. By reviewing the theories of Jacobs (1960) and Lynch (1960), Kaplan (1987) and Carr (1992) and Gemzøe (2006), Ewing (2009) and Mehta (2009), within the different time periods the conditions for qualitative public space or route could be pointed out. Afterwards the principles for more specific public spaces could be researched by literature to define the type of spaces and support the design project. At the end some literature was used to define the requirements for the chosen programme for the location and the architectural intervention. By reviewing existing building typologies of the programme and researching the relation between several functions, a new coherence could be created. The analysis on the differentiation in public spaces helped to shape the environment where the architectural intervention was inserted.

Spatial analysis methods

Two spatial analysis methods will be used to support the objectives of this graduation project and help to answer the research questions:
- Spatial location analysis
- Space syntax analysis

The research methods will be used during different phases of the design project and will start with the spatial location analysis and the literature review

on mobility environments. During the project the spatial location analysis will be extended by reflecting on the project plans of the municipality and the knowledge gained by the literature reviews. The space syntax analysis will then be used as a substantiation for the design proposals. Research on the programme and typologies are more referred to the architectural intervention and helped to sharpen this part of the design project. In the next paragraphs the different methods will be handled briefly.

Spatial location analysis
The spatial analysis method starts with research on the project location. What are the strengths, weaknesses, opportunities and threats of this location? This analysis helps to prove the necessity of the project, by showing the problems that are present in the area. The morphological structure of the location will be reviewed by searching for the relationship between built an unbuilt, infrastructure, public spaces, building typology, historical development, programmatic interpretation and so on. The historical structures help to review what structures dominate the location and how new structures can improve the quality of the existing network. The functional analysis stimulates the research on whether certain programme is missing in the area and how new functional connections can be made along the routes towards the station. The project area is located at the border of several neighbourhoods and near an existing infrastructural node. Therefore it is important to research which programme should be implemented at the location to upgrade the liveliness, accessibility and quality of this station area in the Hague south west.
For the project location the municipality made over the years several project plans, which already research the strengths, weaknesses, opportunities and threats of the area. These plans mainly focus on and are concentrated between neighbourhood boundaries, instead of making cross neighbourhood plans. Reflecting on these plans help to support and review the design proposals and give new insides on which elements are essential to restructure the project location.

Space syntax (depth map)
One of the products of this graduation project is the design of new qualitative slow traffic routes from the station area of Moerwijk to the surrounding neighbourhoods. These routes are related to the existing network of this city district and therefore it is important to analyse the spatial street network at the location. Space syntax is a method to analyse this street network. Patterns of movement and the use of public space are influenced by the configuration of space and the location of activity generators. The levels of accessibility can be measured in existing and proposed environments, so the benefits of new urban plans can be researched (Space Syntax Limited, 2012). Only the spatial patterns of the urban structure can be analysed by this method, so factors such as quality, liveliness, attractively and safety can not be measured through Space syntax. This method will be used to analyse the current situation in the Hague south west and the influence of the design proposals on this spatial street network. Red lines in the Space syntax map shows the connectors of the network, while green or blue lines mark the collective areas of the neighbourhoods. Depthmap is the software programme which can be used to make a Space syntax analysis.

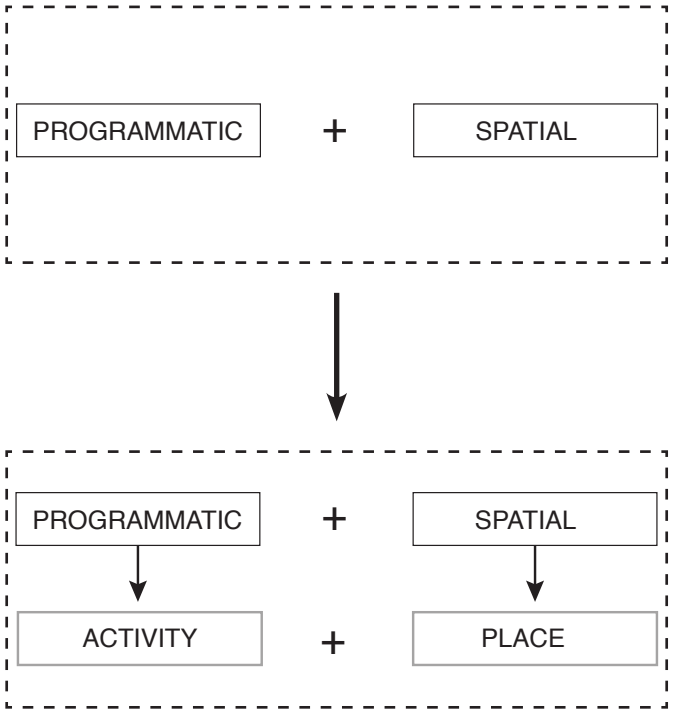


Figure 5.1 I Project approach I author, 2011

5.2 Design approach

To achieve the objectives of this graduation project, an approach on three scale levels is developed. This project discusses three themes; Routes between separated neighbourhoods, Network of public spaces and Programmatic interpretation. These three themes are researched by different methods and have resulted in separated levels of development for the design in the Hague south west. The levels of scale are also related to the phasing of the project, while the process will start with the interpretation of the architectural intervention. This architectural project can then work as a catalyst for further developments in this project area. Connected to this architectural project, the routes between the neighbourhoods will be created, because the programme of the architectural intervention can support the quality and liveliness of these routes. The public space will be upgraded related to these routes. Further programmatic interpretation and building elements can then be added, starting from the scale of the ensemble. From here on, the rest of the urban plan can be elaborated, to connect this area to its surroundings and complete the new urban structure for this part of the Hague south west.

Due to the current economical situation in the Netherlands, the renewal of this urban area as a short-term development will not be considered. Therefore the process will start with the architectural project, so this element can work as the catalyst for the rest of the design project. In this way the approach contributes to the feasibility of the project and helps to create a realistic design project even in times of an economic crises.

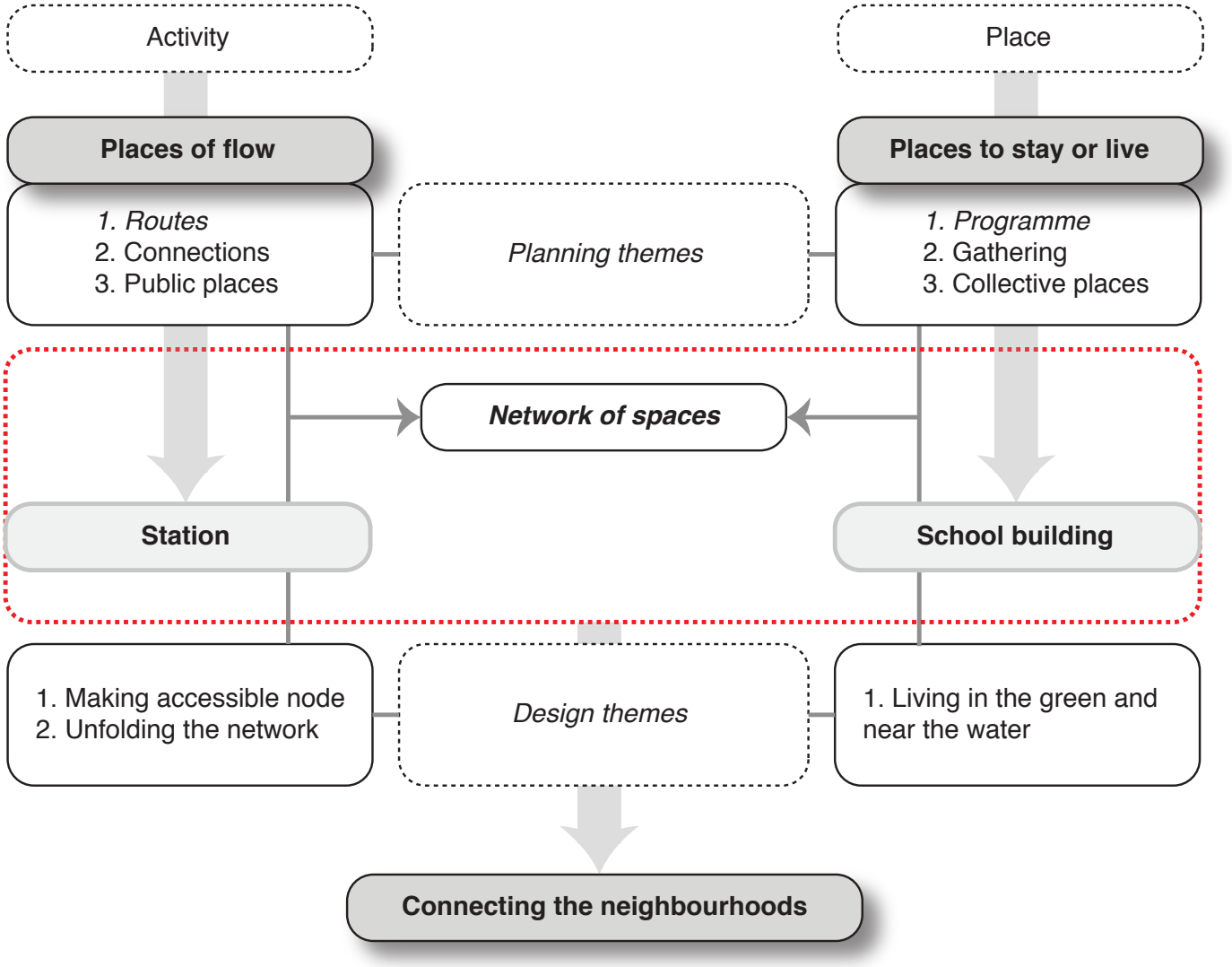


Figure 5.2 I Scheme of design approach I author, 2012

Scheme 5.1 presents the project approach, which is about a programmic and spatial input that leads to ‘Activty’ and ‘Place’. In scheme 5.2 this design approach is further on developed, by the two main topics: (1) ‘Activity’ or Places of flow and (2) ‘Place’ or Places to stay or live. Within the structure of a city, two kinds of activities take place: moving activities and stationary activities (Gehl, 2010). These activities are directly linked to the two topics in the design project. These topics are related to the planning themes mentioned in paragraph 2.1, with the routes and the public places on one site and the programme with the collective places on the other. The design themes, which will be described in chapter 6.4, can also be divided within the scheme, by the infrastructural node versus the living area near this node. Two of the planning themes and three of the design themes are connected to each other by the overlapping theme of the ‘Network of spaces’. This theme leads to the two main centralities of the project area (see chapter 6.5), the station versus the school building. The main centrality of the station refers to the ‘Places of flow’ and the larger scale of the city, while the second centrality of the school building refers to the ‘Places to stay or live’ and the smaller scale of the neighbourhood. This second centrality will be the architectural intervention of the graduation project. This total scheme of the design approach leads to the main aim of this graduation project ‘Connecting the neighbourhoods’. This theme will be further explained as the main design theme in the next chapter 6.4.

5.3 Structure of the graduation project

In the scheme (see figure 5.3) is the process of the graduation project presented. Firstly research questions are developed to structure the design process. These questions let to the theoretical framework and the analysis of the Hague south west. This theoretical framework focuses on the spatial requirements that are needed for a station area to be an entrance to its surroundings, on the conditions for qualitative slow traffic routes and public spaces and on the programmatic requirements. As a result of this analysis of the location and the theoretical framework, a vision for the Hague south west is developed. This vision shows the important changes in the spatial structure of this district and the infrastructural network in the area. Several design proposals are created on the three different scale levels (neighbourhood, ensemble, building design), from the urban project until the architectural intervention. These proposals are related to the design themes (see chapter 6.4) and the planning themes mentioned earlier : Routes, Network of public spaces and Programme. The proposals are a further elaboration of the vision for the Hague south west and they are constantly evaluated, tested and transformed during the design process. The final product of this design process shows a design project which is elaborated throughout all scale levels, from a vision for the location to the detailing of the architectural intervention.

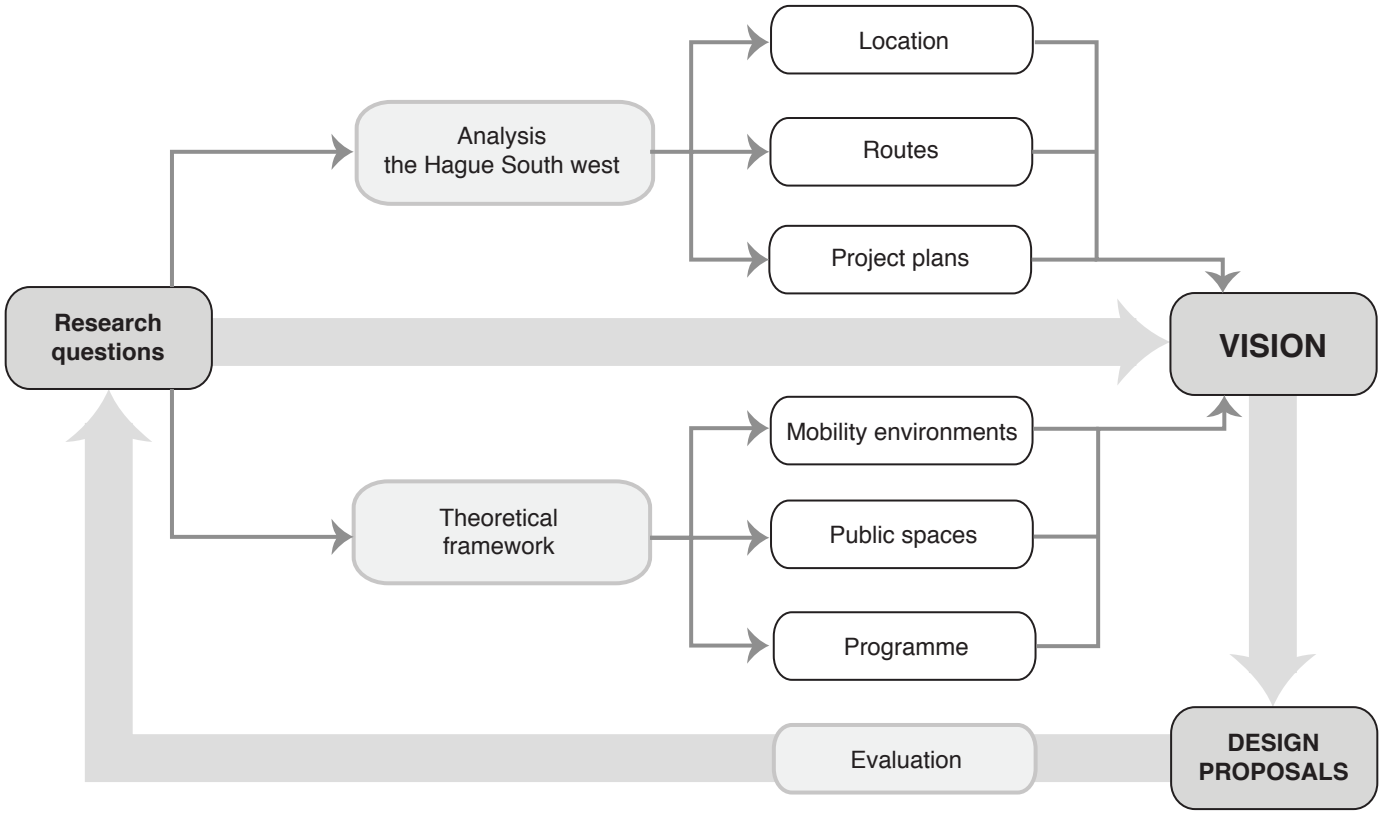


Figure 5.3 I Scheme of design process I author, 2012

Bus transportation at Willem Dreespark | Wim Vink, 1974

This part of the thesis describes firstly the general spatial analysis of the Hague south west, the themes for the design and the design concept. Afterwards the plans of the municipality for this location from 1989, 2008, 2009 and 2011 are reviewed, to gain more knowledge about the project area and the focus points that should be present in the design. At the end of every chapter, recommendations for the design are made.

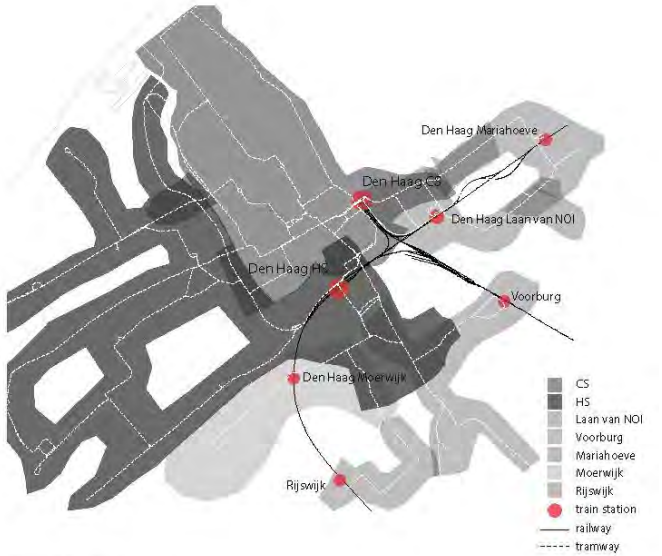


Figure 6.1 I Railway vs tramline connections I Urban analysis, 2011

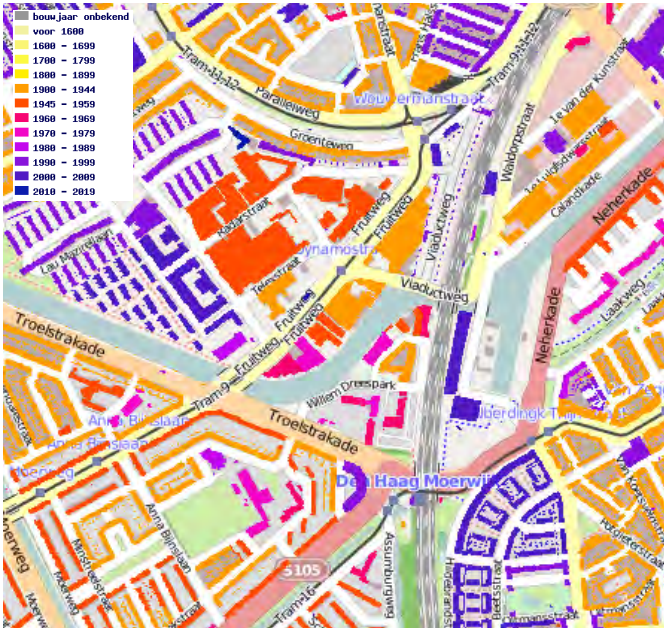


Figure 6.2 I Age of buildings at location I EduGIS, 2011

6.1 Spatial location analysis

The location that is chosen for the design project, was directly linked to the theme of the studio, *Renewal of the urban renewal* and the role of secondary station areas in the city. The project location is situated near the secondary station area of the Hague Moerwijk, at the border of several urban renewal districts. This station is located in the southwest of the Hague and is part of the Leiden – Rotterdam train network. It is one of the four secondary stations around the Hague, with the stations of Rijswijk, Mariahoeve and Voorburg (see figure 6.1). The scope of the station towards it surroundings by tram (and by bus, because there are only one bus line and one tramline) is insufficient (figure 6.9). Therefore the south western part of the Hague is not well connected to the public transport network of the city and its region. Although the city counsel is planning to upgrade some of the tram lines to be part of the Randstad rail network, the connection with the station of Moerwijk is not part of these plans.

At the project location a lot of different spatial and social problems emerge. The station is situated in an area between several (deprived) neighbourhoods, which are part of the previous urban renewal plans in the city (see figure 6.2). This area is located at the boundaries of these separated districts. Partly due to the three existing borders in the area: The railway, the old Laak river and the Laakkanaal, the present connection between the station and the surrounding neighbourhoods is insufficient (see figure 1.10). Thereby, the station itself is hidden in the area and the visibility and accessibility are therefore lacking (figure 6.7). The existing housing blocks from the seventies are the only recognizable

point of the station at the moment (figure 6.5). The accessibility of the station is also inadequate because of the amount of traffic that congregates at the node: Train, tram, bus, car, bicycle and pedestrian (see figure 6.6). Beside, the public transport stops are not directly combined at one point, but spread around the node. The routes to the station for bicycles and pedestrians are intermitted several times by other transportation, which causes unsafe situations for the slow traffic. The station of Moewijk is therefore not properly used by the residents surrounding this infrastructural node (Zuidvleugel Stedenbaanplus , 2011). At the same time there is an absence of connections over the Laakkanaal for pedestrians and bicycles, because the routes around the station are not well integrated in the city network. The surrounding neighbourhoods have an inwards structure and routes in the neighbourhoods are dealing with a low vitality for that reason (figure 6.3). Especially at the Willem Dreespark and the Petrolium haven (which are project location), the routes towards the surroundings are missing and that makes the location an island in the city.

The segregation of the project location is not only spatially, but even socially. Because of the different neighbourhoods around the location, there is a variety in ethnicity and social position in this district (KEI, 2012). This division is visible at the project area, since there live relatively a large amount of non-western immigrants in the surrounding neighbourhoods.
Besides the problems that emerge in the area, this location also has a lot of potentials when considering the existing qualities around this node. The Laakkanaal and the old Laakriver are not only borders in the area, but capture at the

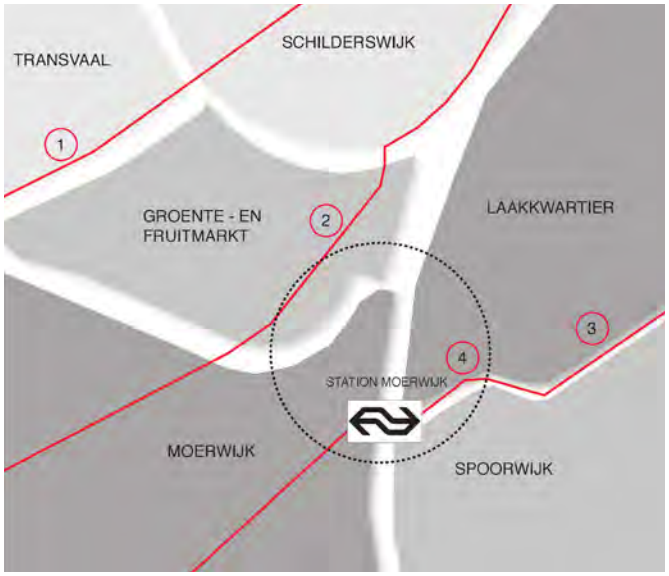


Figure 6.4 I Ethnicity and social position I Urban analysis, 2011

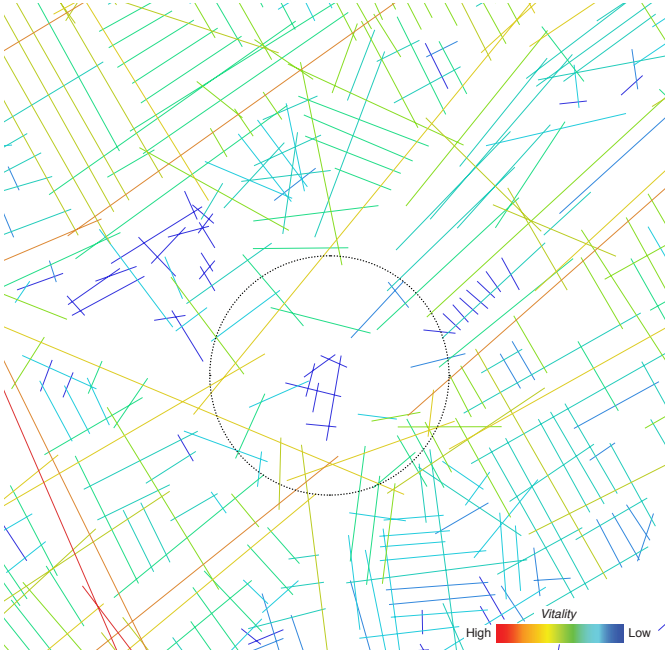


Figure 6.3 I Low vitality at location (Depthmap) I author, 2012

Figure 6.5 | Accessibility and visibility of station | Stedenbaanplus, 2011

Figure 6.7 | Accessibility of station | Knoopmoerwijk, 2011

Figure 6.6 | Traffic intensity at station | Flickr, 2007

Figure 6.8 | Neglected waterfront at Troelstrakade | Rottgering, 2000

same time the green and water structure in the neighbourhoods. The visibility of these structures is missing at the station area, because these structures are interrupted by the train tracks (see figure 6.10). Beside, the waterfront of the Laakkanaal is neglected in the present situation, because of the dominance of cars in the public space, the spread around houseboats and the still existing industry (figure 6.8). However the quality of these green and water structures is existing in the area and can be upgraded by improving the visibility and accessibility of these elements at the station area. The railway itself is a border at the location, but it makes a connection to the larger scale of the city and the region. Thereby, boundaries are needed to give identity to the different neighbourhoods and are thus not always negative (see chapter 8.4). By focussing on the potentials of the location, a neighbourhood specific approach for the urban renewal area can be made. This relates to the idea of making an effort for strategic interventions instead of a generic large scale approach, mentioned in chapter 4.2. By upgrading the area of the infrastructural node, the deprived neighbourhoods around the location can be renewed, instead of only renewing the urban fabric and housing stock inside of the demarcated neighbourhoods.

6.2 Programme for design

Part of this spatial location analysis is the analysis of the programme for the project location. Hereby is was important to consider the groups of inhabitants in this city district. Therefore, the research of Reijndorp (2004) was reviewed, where he points out that there are three main groups for a city district: the original inhabitants, the immigrants and the new inhabitants (see figure

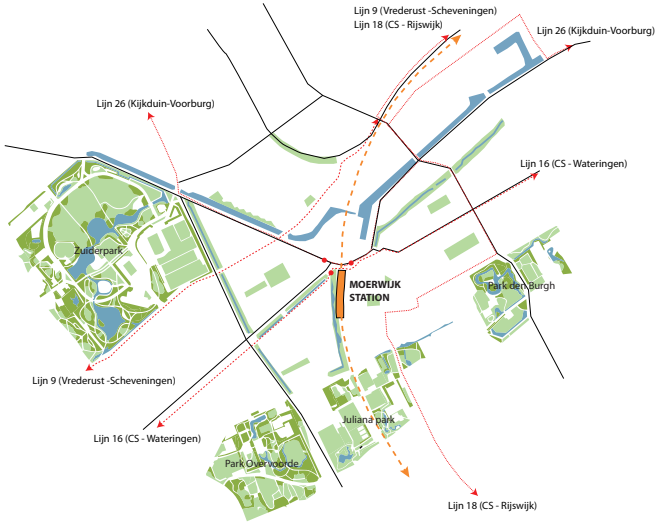


Figure 6.9 I Connections and structures around station I author, 2011

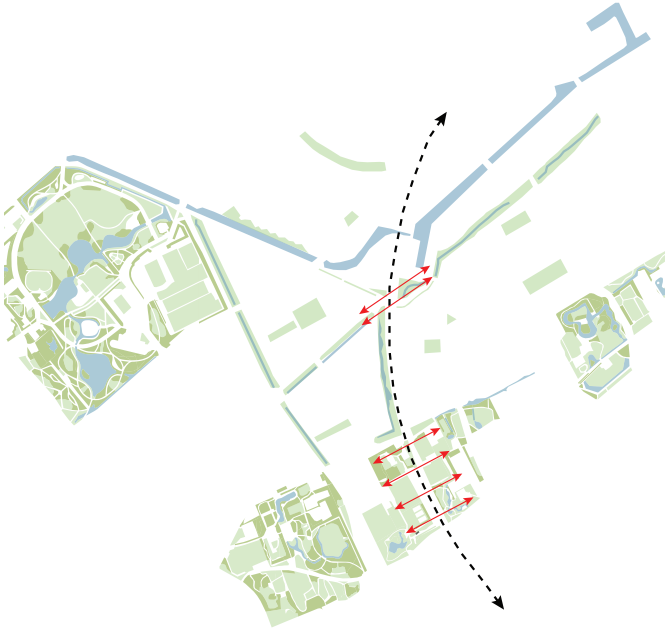


Figure 6.10 I Interrupted green structures I author, 2012

Figure 6.11 I Main groups of inhabitants Reijndorp I author, 2011

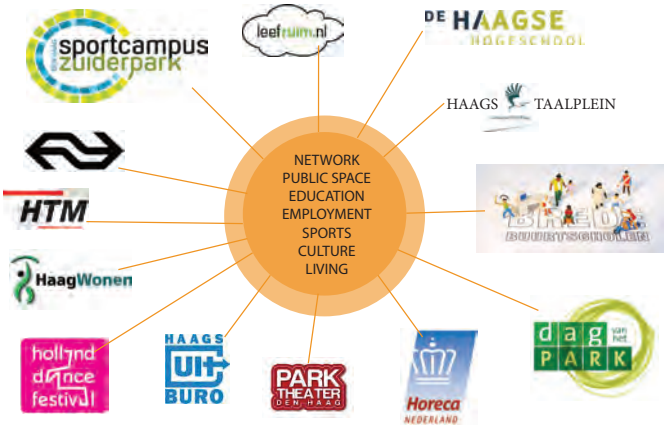


Figure 6.12 I Desired programme for location I author, 2011

6.11). These groups are related to each other by the network of this district, but are different on the levels and ways they use the network. The public space and the (desired) programme for the location will also be used in varied ways by them. This knowledge helped to determine the focus for the programme and the actors which are related to this process. From this analysis on the groups of inhabitants and their way of living, the following programmatic themes emerged: Network, public space, education, employment, sports, culture and living (see figure 6.12). These programmatic themes are also related to the existing programme at the location and of course the desired additions.

Analysing the existing programme around the location shows that the location is situated between two main shopping streets: the Hoefkade (figure 6.3, nr.1) in the north west and the Goeveneurslaan (figure 6.3, nr.3) in the east. These streets mainly have shops with housing above and do not have a lot of space for small businesses (see figure 6.13). The Gouveneurslaan has some businesses and a theatre, but this public programme stops at the Hildebrandplein (figure 6.3, nr.4) and does not has a direct connection to the project location. The Hoefkade is further away from the location and therefore this street will not directly influence the station area. Between those two streets is the Fruitweg (figure 6.3, nr.2), which has several office buildings and small businesses. The programme here is more monotonous, since there is almost no housing along the street. Therefore this street is less pedestrian friendly after office hours. The area of Groente- en Fruitmarkt is transformed in the past years, which resulted in a mixed programme of small businesses and housing. This mixed

programme should be extend over the Fruitweg, to be connected to the project location.
In the district of the Hague south west are a lot of educational facilities, from (special) primary schools to high schools, with play- and sport facilities connected to it. Close to the location are the cluster of the Kleine Wereld and the Johan de Witt school (figure 6.13, nr.1); the Scholengroep Den Haag Zuid-West (nr.2); the Galjoen (nr.3); and SBO het Age (nr.4). These educational buildings are directly linked to playgrounds or sport activities. At the location itself is the special primary and high school the Witte Vogel (nr.5), which is not directly connected to a public playground or sport facility. This educational programme is isolated from its surroundings and therefore it is not an element that gathers people at the location or serves the community. This is also related to the existing high rise housing blocks at the location, which do not have a connection to the ground floor and public life.
By reorganizing the existing programme and by adding new facilities to the location, a more lively area around the station can be realized. The programmatic themes of the 'network' and 'public space' are the most important ones on the larger scale of the district, while 'education', 'employment', 'sports', 'culture' and living' serve the smaller scale of the architectural intervention. By creating four new mixed public clusters around the station, connected to the Fruitweg (nr.1 and nr.2), the Gouveneurslaan (nr.3) and the existing housing blocks (nr.4), a more integrated area between the several neighbourhoods can be developed (figure 6.14).

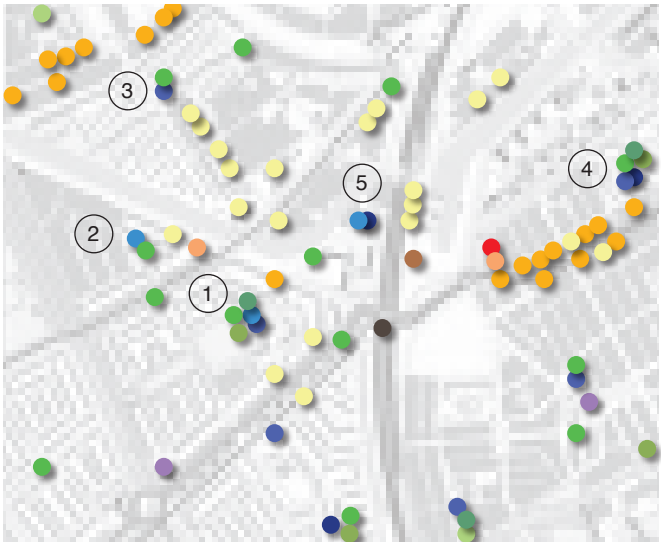


Figure 6.13 I Present public programme I author, 2012

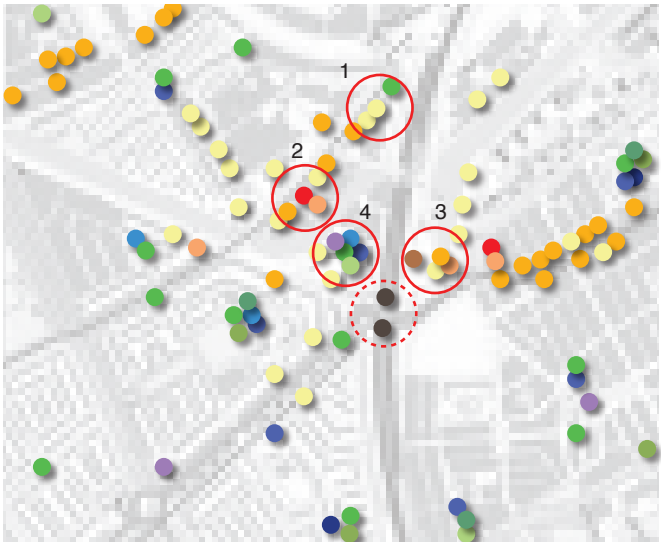


Figure 6.14 I Desired public programme I author, 2012

6.3 Urban structures

The main urban structures in the area were already pointed out by the public programme analysis in the previous chapter. The axis of the Fruitweg has a large reach in the city, from the station of Hollands Spoor in the north along the Parallelweg, until the park of the Uithof in the south west at the end of the Melis Stokelaan. This road has an almost straight route in the city and is connected to the Zuiderpark in the middle (see figure 6.15). The other main road, the Hildebrandplein, reaches from the Trekvliet near the Binckhorst in east along the Gouveneurslaan and the Erasmusweg towards the park of the Uithof in the south west. Both roads are clear structures in the city, but at the project location the structures are less clear or interrupted. Especially for slow traffic, the roads lack connection or quality around the station.

Closer to the location, other structures can be defined, such as the routes along the waterfront of the Laakkanaal (see figure 6.16). The one on the north side could connect the Zuiderpark with the Haagse Hogeschool and the one on the south side could reach from the Zuiderpark, along the Laakriver towards the Trekvliet. Beside are the new axes structures that could be present at the project location to connect the Spoorwijk with the Julianapark and Park den Burgh in the south east, to the Schilderswijk with the hospital Westeinde near the city centre in the north. These structures are again clear around the location, but at the project area itself, the structures are not present, interrupted or lack quality.
Therefore, combining the main roads of the Fruitweg en de Hildebrandplein and the structures close to the project location, shows what the importance of this area is in the city. It also points out how restructuring this location could help to integrate this district of the city better in its surroundings. To realize this objective, these six structures should be part of the design, to able to open up the location and reconnect the area to the existing urban structures and qualities (see figure 6.17). The spatial location analysis of the Moerwijk station area, the programme for the design and the analysis of the urban structures, let to the next step in the design process: Defining the design themes for the project, in relation to the planning themes mentioned in chapter 2.1.

6.4 Themes of design

After the spatial analysis of the Hague south west, the search for the desired programme and the analysis of the urban structures, several themes are defined to upgrade the project location. These three design themes are related to the earlier mentioned three planning themes. The design themes are concentrated around the traffic node of the station and give guidance to improve the quality and liveliness of the location.

Making an accessible node

The first theme is focussing on the infrastructure in the area and the network for public transport, bicycles and pedestrians. In the existing situation, the station area is only connected to the surroundings by one bus line (*26: Kijkduin - Voorburg*) and one tramline (*16: Central Station - Wateringen*). Hereby, the station consists of only two platforms and it has no other facilities. These platforms of the station are just accessible from one side of the main road, since the entrance is hidden underneath a railway arch.

Figure 6.15 | Urban structures of main roads | author, 2012

Figure 6.16 | Urban structures of routes along water and axes at project location | author, 2012

Figure 6.17 I Total urban structures around project location I author, 2012

Unfolding the network
The second theme is also related to the infrastructural network of the Hague south west, because the station is located near busy roads. There is a high intensity of traffic in the area, since four roads with different types of transport come together at the node. Two roads have to deal with the tramline, beside the cars, bicycles and pedestrians. Beside, the tram stop, bus stop and entrance of the station are spread around in the area, instead of combined at one point. Therefore, it is important to focus on these two themes, because by paying attention to the spatial network, the liveliness of the area can be improved.

Living in the green and near the water
The third theme consists of creating an interesting living place and restoring the green network towards the surroundings. The waterfront of the Laakkanaal is idem a element connected to this theme. In the present situation the near waterfront and the proximity of the parks in the surroundings (Zuiderpark en Park Overvoorde) are not visible from the station area. The existing waterfront of the Laakkanaal is neglected, and the green route of the old Laakriver is not properly used. Besides, there is a need for private and semi public space in the area, combined with well maintained housing. Therefore, by making the green visible again from the station area and adding housing programme combined with private and public spaces, the present qualities of the surrounding green- and water structures can be upgraded.

The three themes are together related to the main theme and aim of this graduation project: ***Connecting the neighbourhoods***. Because of the low rate of visitors at this station area and its uninviting appearance, the location is secluded from the different neighbourhoods. The lack of social control and the high intensity of traffic at the node, provides an insecure feeling for the inhabitants and visitors. By making new connections from the station area towards its surrounding neighbourhoods, as an addition to the existing slow traffic network, more people will use this transition area between the neighbourhoods. Hence, the neighbourhoods will be better connected to each other. These connections should be related to the existing green and water structure and provide a good quality network of public spaces in the area. These design themes form the guidelines for this design project, combined with the planning themes mentioned in chapter 2.1. Because the project has to capture an urban plan and an architectural intervention, the design project will be developed on different scale levels. To support these guidelines, more research is needed on the elements of the project location and the intentions which are related to the themes.

6.5 Concept
These design themes, in combination with planning themes, the spatial location analysis and the theory that has been studied (see part 3), resulted in the concept for this design project. Because of the existing potentials in the area (the waterfront and the proximity of the parks), this location can function as a gathering place in the district. These potentials can be the foundation for upgrading the network and connect this location to the surrounding neighbourhoods. By adding public space along new routes, related to the existing housing and other facilities, the missing links can be solved. This concept concentrates on the idea that with this project two new centralities for the

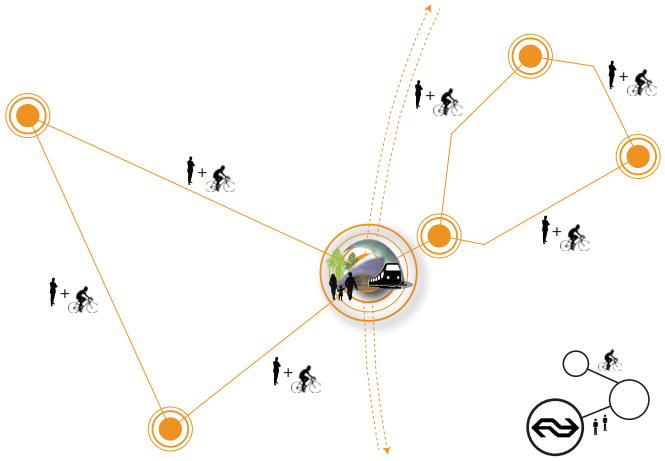


Figure 6.18 l Making an accessible node l author, 2011

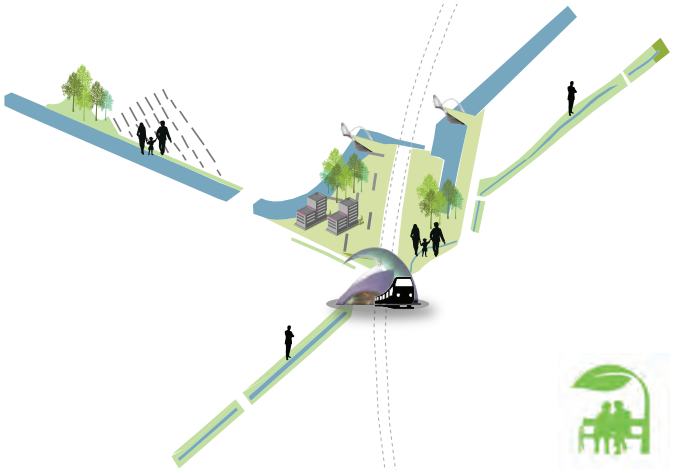


Figure 6.20 l Living in the green and near the water l author, 2011

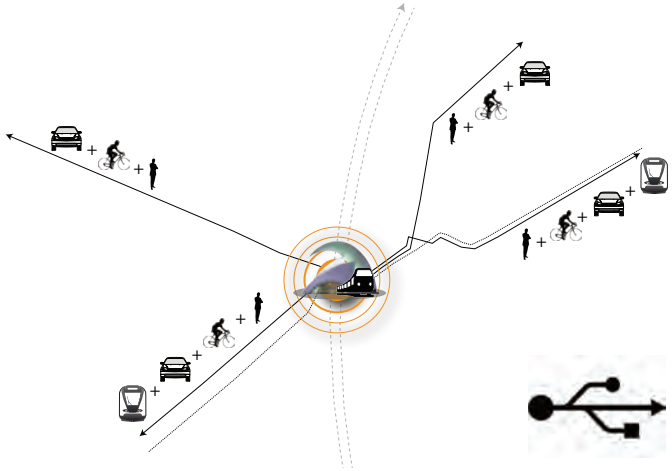


Figure 6.19 l Unfolding the network l author, 2011

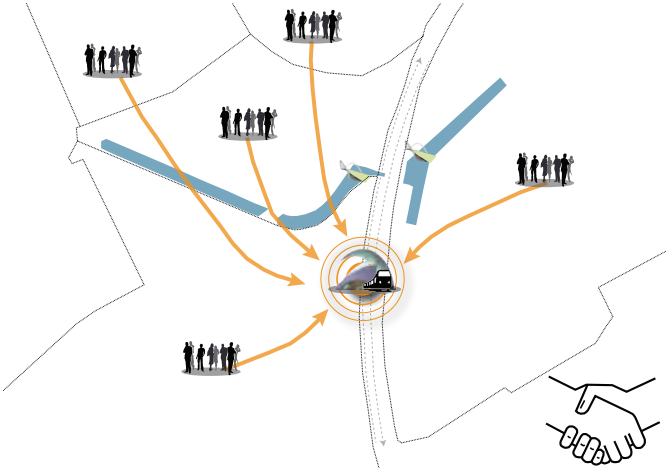


Figure 6.21 l Main theme: Connecting the neighbourhoods l author, 2011

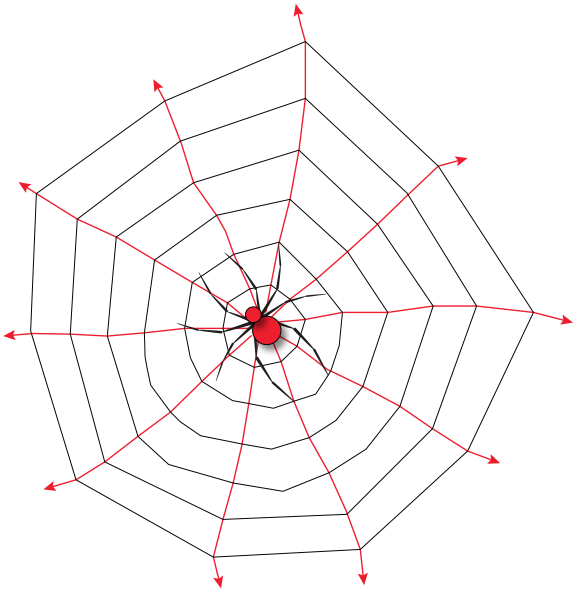


Figure 6.22 I Concept for design I author, 2012

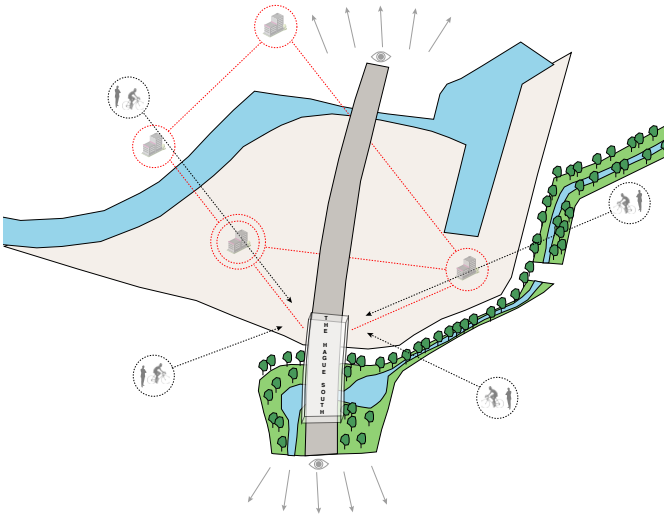


Figure 6.23 I Recommendations I author, 2012

area will be created (as mentioned in chapter 5.2). Firstly the station area will be upgraded, which will functions as the urban gateway to the city and its surrounding neighbourhoods. Secondly the architectural intervention will be developed closely to the station area, which shall be the meeting place for the neighbourhood. Within this architectural intervention several functions will be combined to serve the neighbourhood and the city district. The research on the type of programme will be discussed later on. From these two centralities several routes will lead towards the surroundings, making this now segregated area part of the urban fabric again. Along these routes different public spaces can be created, to support the quality, accessibility and liveliness of the new paths towards the surrounding neighbourhoods. This concept idea can be captured in a drawing by a spider in a web, with the two centralities as the head and the body of the spider and the new routes integrated in the existing network as his web (see figure 6.22).

6.6 Recommendations for design

- Focus on the accessibility and visibility of the station area towards its surroundings.
- Create new slow traffic routes from the station area to the surrounding neighbourhoods.
- Connected public spaces to the new routes and provide a variety of programme within the project location, related to the existing urban structures.
- Create four programmatic clusters, related to the station area and the routes with the public spaces.
- Give the district of the Hague south west a clear identity, which is visible at the station area.
- Upgrade the existing qualities of the surroundings by making the green and water structures again visible around the station area.

7.1 Plans of municipality

After the spatial location analysis of the Hague south west and defining the concept idea for the location, more research was needed on plans for this project location. Therefore several plans for the location around of station Moerwijk are reviewed, from the plan by SOGZ in the eighties until the present plans of the municipality in 2011.

Plan of SOGZ (1989)

The first renewal plan made for this location by the 'dienst Stadsontwikkeling en Grondzaken' (SOGZ) focussed on making the connection between the Erasmusweg and the Neherkade (see figure 7.12). This study was not only projected at the infrastructural node around the station, but also on the areas that were connected to the node. This plan was searching for an integral solution for a complex spatial problem, by placing the area in a wider context (Geurtsen et al., 1989). At that time, they already thought about the idea of making a tunnel for the continuous road of the Erasmusweg, which could enlarge the development solutions for this location. The programme for this plan was mainly housing near the waterfront and offices along the train track. However, the train station of Moerwijk did not exist at that time (opened in 1996) and the exact location was still unclear. The three existing housing blocks at the Willem Dreespark were placed 'outside' the plan, as free standing buildings in their surroundings. The placement of the new programme was more of a 'built-in-the-block' principle, because the blocks had a clear border with orthogonal placed buildings inside. This plan was orientated towards the waterfront and the train tracks. By the placement of the new buildings, they tried to enlarge the existing structural lines in the area.

Figure 7.1 | Petroliumhaven | Geurtsen et al., 1989

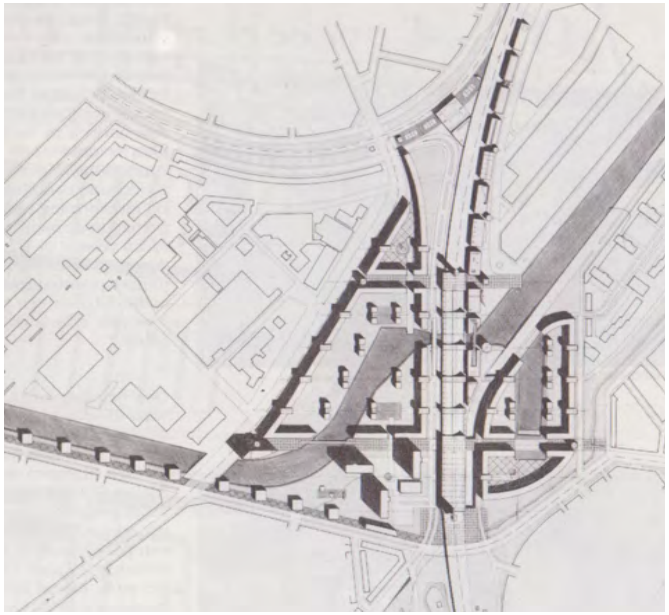


Figure 7.2 | Plan for station area by SOGZ | Geurtsen et al., 1989

Figure 7.3 I Map ‘Avenida’ I Gemeente Den Haag, 2008

Figure 7.4 I 3D image ‘Avenida’ I Gemeente Den Haag, 2008

Plan models for ‘Knoop Moerwijk’ (2008)
The municipality created a vision for the project location at Moerwijk station in 2008, related to the structural vision for the city ‘Wereldstad aan zee’ (Gemeente Den Haag, 2008). The problems that emerge at the location are mainly concentrated around the infrastructure node. Hence, the focus of this new vision was on disentangling the infrastructure; creating a positive identity; and connecting the subareas of this location. The municipality created four different models as a design study and a research on a new identity for the Hague south west.

Model ‘Avenida’
This model is concentrated around a new city boulevard, as the spine for development in the area. Along this boulevard are the station, several housing blocks and a catalyst for the urban renewal. This catalyst can upgrade the identity of the area, serve the city and the district and can take in many visitors (with facilities as education, offices, culture or sports). With this boulevard the flow of traffic on the city scale will be stimulated and the barrier in this district shall disappear (Gemeente Den Haag, 2008).
The Petroliumhaven will be transformed into an urban residential environment with other facilities. The Willem Dreespark will be a more quite residential area along the water and near the garden city of Moerwijk (see figure 7.3 and 7.4). Along the boulevard there will be the green zone of the old Laakriver, where buildings can be placed freely. The station shall maintain its present location, where the new catalyst will be integrated. There are three underpasses in this model: the one at the station, the one at the Laakkanaal and a new one in the middle. These underpasses

stimulate the accessibility of the location, especially for pedestrians and bicycles.
For this model one of the existing housing blocks and the school building at the Willem Dreespark, the fire station at Petroliumhaven and the pancake-house in moerwijk east will sacrificed.

Model 'Poort van Den Haag'
This model focuses on making a new entrance to the city centre of the Hague, between 'Knoop Moerwijk' and the 'Kop van Binckhorst'. The station area has a clear entrance by a new 'gateway' building with an educational programme over the train track (see figure 7.5 and 7.6). The car traffic will go underground by a tunnel, to have more space for the station. The local car traffic and the tram will use the new underpass between the Willem Dreespark and the Petroliumhaven. The tram will go from the Erasmusweg along the train track, through the underpass and further on to Laakkwartier.
In this plan are three important meeting points: the 'Waterplein' at the Petroliumhaven; the 'Stationsplein' with the gateway building; and the 'Bocht' at the Willem Dreespark. The image of the design for the Laakhaven will be extended until the Fruitweg, which will be the new identity for this location. The station will maintain its original location, but the raised railway will have an open connection to both sides, instead of a dike. Hereby the residential environments of Peteroliumhaven en Willem Dreespark can be directly connected to each other. This model has a clear urban grid structure, to create views to the waterfront from several sites. The green zone of the old Laakriver will restored, partly because of the tunnel for car traffic.

Figure 7.5 I Map 'Poort' I Gemeente Den Haag, 2008

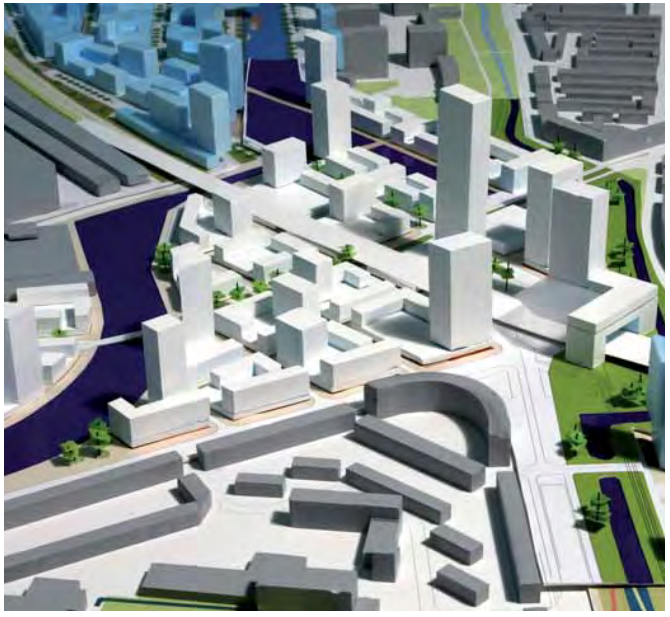


Figure 7.6 I 3D image 'Poort' I Gemeente Den Haag, 2008

Figure 7.7 I Map ‘Waterknoop’ I Gemeente Den Haag, 2008

Figure 7.8 I 3D image ‘Waterknoop’ I Gemeente Den Haag, 2008

With this model the existing housing blocks and the schoolbuilding at the Willem Dreespark and the fire station and the office buildings at Petroliumhaven will not be maintained.

Model ‘Waterknoop’

This model will present a new urban centre island, a kind of ‘mini-Manhattan’. This island will be the entrance to the city of the Hague, with a regional catalyst and mixed urban residential area. It is the central meeting point of the area, because the station is located on the island and there are several connections towards the surroundings (see figure 7.7 and 7.8). The train track is on stilts at the station, the rest of the track remains on the dike. The car traffic will stay on its present location, with a new connection on the west side to the north (over the island) and underneath the train track between the Willem Dreespark and the Petroliumhaven.

Within this model there will be three different residential environments: Urban centric at the island; the residential area in the previous harbour at Petroliumhaven; and the ‘monastery garden’ area at Willem Dreespark. With this model the existing water surface will be extended, whereby a fluent water flow is made, except for at the underpasses of the train tracks. The old Laakriver will be connected to the Erasmuszone, because the tram line will be moved to the extended Gouveneurslaan.

In this model the fire station at the Petroliumhaven will be implemented, while the office buildings and the school building at the Willem Dreespark have to be sacrificed. The three building blocks will be maintained in their open structure. The industrial area along the Fruitweg will be entirely developed in this plan, in relation to the new island.

Model 'Caleidoscoop'

In this model four different environments meet at the location: the new centre of Laakkwartier in the east; the green structures of Spoorwijk in the south; the garden city of Moerwijk in the west; and the multicultural living of Transvaal and Schilderswijk in the north. This design proposal has for that reason four different images. The station is the central point in this model. The car traffic routes at the station underpass will be transformed by making the Erasmusweg the main road and downgrading the Troelstrakade. The underpass will broadened and at the Gouveneurslaan an overpass crossing will be realized. The tram line 16 will maintain on its original track. The platforms of the station will be extended, so four different entrances to the station can be made (see figure 7.9 and 7.10).

Related to the four different images of this model, various residential environments shall be created. A harbour living at the Petroliumhaven with mixed housing and office space; a mixed residential area for neighbourhood facilities at the Willem Dreespark; the garden city in the direction of Moerwijk; and the living along the water at the Laakkanaal and the Fruitweg. At the end of the Erasmusweg, near the underpass of the train track, is an iconic building to mark the new entrance to the centre of the Hague. Connected to this building will be the new station square, at the west side of the railway. Because the underpass is broadened, more space is available for the cars and slow traffic to transfer to other transportation. In this model the fire station and the officice buildings at the Petroliumhaven will be implemented and the three building blocks will be maintained as well. The industrial area along the Fruitweg will be developed in relation to the Laak.

Figure 7.9 I Map 'Caleidoscoop' I Gemeente Den Haag, 2008

Figure 7.10 I 3D image 'Caleidoscoop' I Gemeente Den Haag, 2008

Figure 7.11 I Plan municipality I Gemeente Den Haag, 2009

Figure 7.12 I Plan municipality I Gemeente Den Haag, 2009

Plan of municipality for 'Knoop Moerwijk (2009)
From the plan models made in 2008, the Masterplan for Knoop Moerwijk was developed. The focus of this plan is on: (1) disentangling the infrastructure; (2) strengthening the opportunities for public transport and bicycles; (3) connecting the surrounding neighbourhoods; and (4) adding an urban centric programme. This resulted in a vision for the location, with four different ambitions (Gemeente Den Haag, 2009):
- A sustainable and flexible urban renewal
- An accessibly station with space for bicycles
- A lively urban area, where people can meet
- An area with a clear own character in the city and the region

The plan pays attention to sustainable development by restoring the old Laakriver. The flexibility of the project is related to the phasing, while compressing this location will be a long term and costly case. The accessibility of the location will be strengthened by improving the slow traffic routes, by extending the platforms of the station to the north and realising more storage facilities at the station. Related to the accessibility, the liveliness of the area will be improved by adding more regional and mixed urban programme at the station square and along the waterfront. The quays will be transformed as slow traffic routes with two new bridges to stimulate the connectivity towards the surroundings. The new identity for the location will be made by the intensity of the urban programme and the new relations made towards the water of the Laakkanaal (see figure 7.11 and 7.12). The main structure of the plan exists of the 'Stadsallee' and the 'Waterfront'. The 'Stadsallee' is the city boulevard, which connects the Erasmusweg with the Neherkade, by a green urban road with an overpass crossing

at the Gouveneurslaan. The waterfront connects the different previous harbour areas, with a clear interpretation and a recognizable character in the city.
This masterplan is focused on the development of the harbour area and the strengthening of the station area. The public transport stops will be combined at the station square for that reason, instead of being spread around as it is today. The existing building blocks at the Willem Dreespark, the fire station and office buildings at the Petroliumhaven and part of the industry along the Fruitweg will be maintained in this plan.

Preliminary design 'Knoop Moerwijk' (2011)
After the development of the Masterplan in 2009, the economic crisis emerged, which resulted in a very basic restructure plan for the 'Knoop Moerwijk'. Until this masterplan can be realized, the public space around the station has to be improved already on several points: spatial quality, social security, transfer possibilities, bicycle connections and storage, atmosphere and lighting (IBDH, 2011).
In this plan the tram track is not hardened, but the green zone of the Laak is extended here. There is a clear route for bicycles, with safer crossings. Therefore the route for pedestrians is better accessible and defined by the pavement and integrated lightning at the station square.
A public function will be added in the existing station building, which can cause more liveliness at the square. The bicycle parking facilities will be realized closer to the entrance of the station and the routes to the bus and tram stop can be improved with this plan. Because of the integrated lightning and the lampposts on both sides of the square, a safer environment is created.

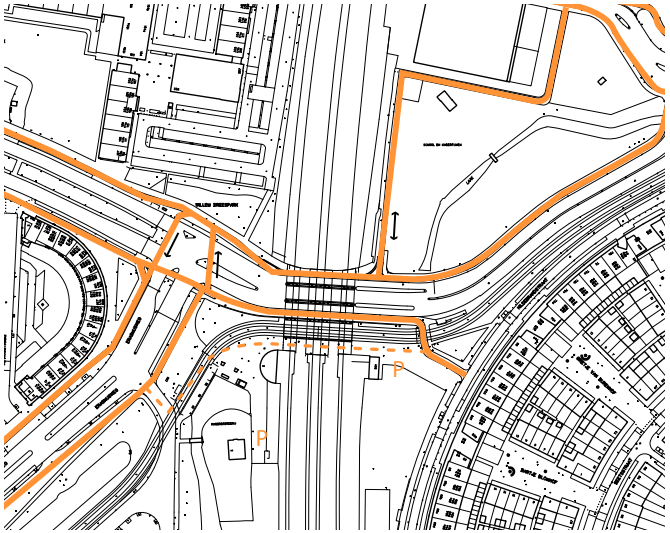


Figure 7.13 I Bicycle paths present I Ingenieursbureau Den Haag, 2011

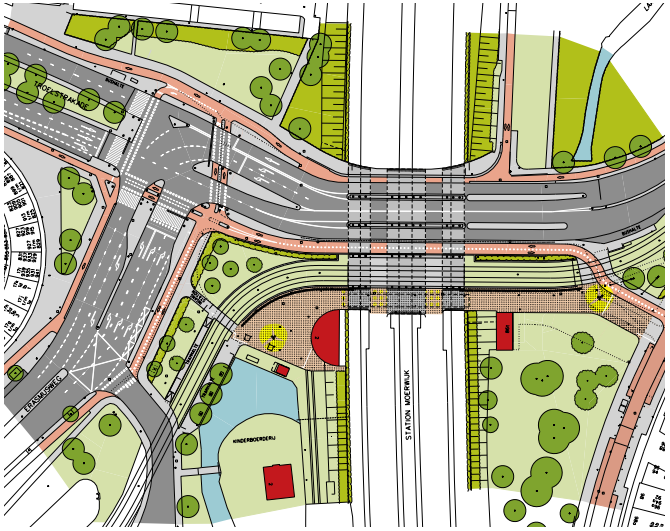


Figure 7.14 I Preliminary design I Ingenieursbureau Den Haag, 2011

7.2 Reflection on plans

Reviewing the plans from 1989 until 2011 shows that the problems that were present at the location in 1989 are still not solved 30 years later. The connection towards the waterfront, the intensity of traffic at the node and the link between the (now existing) station and the surroundings is lacking. The plan of 1989 is made as a 'built-in-the-block' idea (like the model 'Waterknoop'), while the masterplan of 2009 takes the existing free standing blocks as a starting point (like the model 'Poort van Den Haag'). Both of these plans try to exclude the idea of the area as an 'island' and go beyond the Laakriver to make the connection toward the north side. However, the south side in both plans is not actually part of the design. The masterplan of 2009 focuses on a housing programme around the node, connected to retail and office facilities at the new location of the station. Strangely in both plans the station is located at the north part of the continuous road, while the station is realized south to this road. The plan of 2009 is trying to make a lively waterfront and a city avenue by adding a lot of programme to the location, especially at the station. Reflecting on the way the buildings are organized, this plan of free standing buildings is neglecting the existing structures of the surrounding neighbourhoods. The gravity point of this plan is located at the development area of Laakkwartier. Besides, this masterplan is presented as it could only work when it is realized as a total plan. Considering the existing economic crises, it will not be realized in this way.

The models made by the municipality in 2008 are more interesting to consider and in some way better related to the location. These models show the extreme solutions for the location, but they clearly point out what the focus points should be. Unfortunately none of the plans try to preserve the existing gardens for schoolchildren at Petroliumhaven and the houseboats at Willem Dreespark, while there is a strong desire from the inhabitants to maintain these objects. Besides, the idea to make an overpass crossing at Hilderbrandplein, can provide more barrier problems in the area. Here the model 'Caleidoscoop' is the most realistic one, because it integrates existing buildings and elements into a new design proposal. However the mix of models that is chosen for the masterplan (2009), does not fulfil all the needs for this location and is still to much orientated towards the Laakkwartier. This location should get a clear image and identity, but why does is have to be an extension area of Laakkawartier? There are several identities of the surrounding neighbourhoods that meet at this location (see model 'Caleidoscoop'). An identity and connection to all these images should be the integrated solution for this location, since it is the station area of the Hague south west and not the one of Laakkwartier. Phasing of the project is also an important factor, as shown by the plan of 2011, since the masterplan can not be realized on short notice. Still this plan of 2011 does not solve all the problems, but it is a good way to start transforming the situation and the area slowly.

Relating these plans to the planning themes of the project, it is clear that all the proposals invest in more programme for the location. However they concentrate the programme at the station, instead of in the area towards the surroundings neighbourhoods. New routes towards the surroundings are part of the plans,

but they do not emphasis on slow traffic. The station is the main focus in the plans and new living areas are created, only these areas are aimed at the Laakkwartier, instead of referring to all the surrounding neighbourhoods. The quality of the public space is neglected in the plans of the municipality, therefore literature studies are needed to define the requirements for these spaces. Instead of focusing only on the infrastructural node and his places of flow, it is also important to pay attention to the living areas and their places to stay. A good interaction between the station and the urban life, can provide an accessible and lively city district.

7.3 Recommendations for design

- Maintain the existing gardens for school children, the houseboats, the existing building blocks of Willem Dreespark and the fire station at Petroliumhaven.
- Disentangling the infrastructure around the station, but do not create an overpass crossing, this can create a new barrier in the urban fabric.
- Connected the Erasmusweg directly to the Neherkade and downgrade the Troelstrakade, while the first to roads are linked to the centre ring of the Hague.
- Make a city boulevard of the Erasmusweg - Hilde brandplein - Neherkade, to support the image of the location and create the entrance point to the city.
- Focus on the waterfront of the Laakkanaal by making a variety of houses near the water and clear routes for slow traffic along the Laak.
- Integrated the public transport stops at the station square, instead of being spread around in the area.
- Create clear routes for bicycles and pedestrians and provide bicycles storage at the station.
- Restore the old Laakriver underneath the train tracks and make a connection with the Erasmuszone.
- Give the area a clear image and identity of the Hague south west, capturing the four images that meet at the location.
- Oriented the area not only to the Laakkwartier and the north, but try to connected the location also to the south side.
- Built bridges over the Laakkanaal to make the connection towards the Fruitweg.
- Create a new underpass at the extended Gouveneurslaan, to connect the Petroliumhaven and the Willem Dreespark.

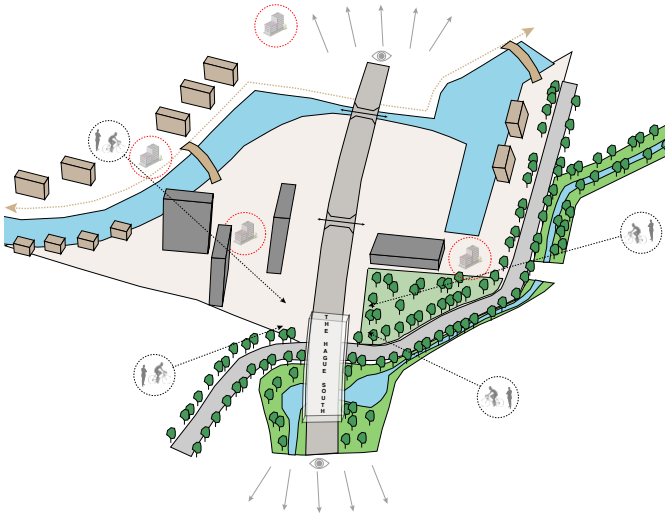


Figure 7.15 I Recommendations I author, 2012

Public space at Willem Dreespark I Staedion, 2012

In this part of the thesis, the theoretical framework is made by reviewing recent literature about the theories of the network city, mobility environments, pedestrian movement, routes to the surroundings, public spaces and programmatic typologies. The capability of mobility environments to function as entrances to the city and their direct surroundings in Dutch regeneration areas, are discussed. Beside the desired new routes for the area are tested by Space syntax analysis. Afterwards theories on pedestrian movement and public spaces are reviewed to search for spatial requirements. In the end the programmatic interpretation for the area and especially the architectural intervention is explained. At the end of every chapter, recommendations for the design are made.

8.1 The station as a central place

Within the structure of a city, two kinds of activities take place: moving activities and stationary activities (Gehl, 2010). These activities define the use of the public space and especially in the more developed countries, like the Netherlands, the stationary activities are mainly influenced by optional instead of the necessary activities. “People walk, stand and sit where the quality of city space invites them to do so” (Gehl, 2010: 134). While defining several activity places within the city structure, we see that especially the places where mobility flows interconnect have the potential to provide human interaction. These mobility environments, such as station areas, are seen as the “upcoming central places within network cities” (Bertolini and Dijst, 2003: 40). However, the question is if those station areas are only playing a central role within the city, or can they also be a central place for the neighbourhood. Are those station areas capable of functioning as an entrance, like an urban gateway or central meeting place, to its direct urban surroundings?

The aim of this review paper is to find out which spatial conditions are needed, for gateways and meeting places around station areas, to let them function as an entrance to their surrounding neighbourhoods. By first defining the principles of mobility environments and the idea of the Network city, the role of the station area within the city structure is pointed out. Secondly, the definitions of an urban gateway and a meeting place are discussed, to sharpen the conditions for an entrance. Finally the criteria and the relation between the mobility environment and the role as an entrance is being explained. The outcome of this paper will be used as an assessment tool for a case study research to identify which spatial elements are responsible for a station area to let it function as an entrance to its surroundings.

8.2 Mobility environments

The city of today is increasingly becoming independent of his physical and administrative boundaries by for example fast transport systems and new interactive communication networks. Stating this, you could say that the city as a demonstrable physical place does not exist anymore. Is the city in this sense, then ‘everywhere’, or are there still places in the urban structure that can play an essential role? According to Bertolini and Dijst (2003: 29) there are a lot of ideas about the diffusion and dematerialization of the city, but “it appears that for many types of urban activities, physical contact maintains an irreplaceable value.” They say that the essential reason for cities to exist is this ability to provide opportunities for human interaction. Therefore, it is important to define which places can fulfil this role within the urban structure of the city. As Bertolini and Dijst (2003: 31) discuss “it is particularly places - and moments - where mobility flows interconnect that have this potential.” They call these activity places mobility environments and distinguish four types, including railway stations and areas around it. They say that the quality of those places depends on the features of the location and on the characteristics of the visiting people. It depends on several factors, whether any interaction and what kind of interaction will actually occur at these places (See figure 1). However, the potential for interaction is there and therefore these locations capture an essential urban quality (Bertolini and Dijst, 2003).

Bertolini and Dijst (2003: 40) see mobility environments, like station areas, as “up-coming central places within network cities” and say that NS Vastgoed considers station areas also as the meeting places of the future. Besides that, these station areas can play an important role within the urban structure of a city: they can function as an entrance to the neighbourhoods around it, but this is not always the case. An important element is then the accessibility of the place, because accessibility is not only a feature of a transport hub. This is also the feature of an activity place and of the users of this place (Bertolini and Dijst, 2000). An accessible mobility environment is in this definition a place where a synergy between staying and moving is achieved both on the level of the location and of the network (see figure 8.2). A site that many different people can reach and where they can do many different things: it is an accessible node and an accessible place (Bertolini, 1999; Peek and Hagen, 2001).

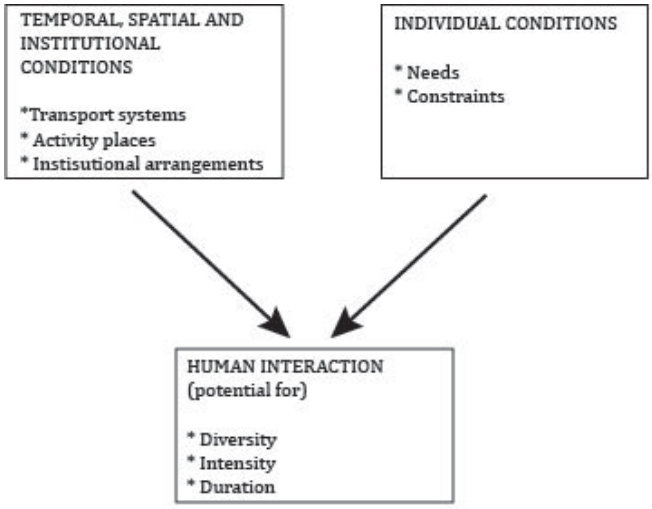


Figure 8.1 | Conditions for human interaction | Bertolini and Dijst, 2003

8.3 The station within a Network city

Connected to mobility environments, such as station areas, is the idea of the Network city, while networks have the capability to interconnect people rather then single places (Rooij, 2005). Cities are becoming network cities, within the network society that is emerging (Bertolini and Dijst, 2003). We speak of a network society, when the social, economic and cultural structures are determined by the connections of an individual actor (person, company or institution) with certain places, persons or activities (Rooij, 2005). Although, there are several perspectives on network cities, the interpretation in this paper is the ‘analytic’ approach. This perspective sees cities as “overlapping sets of physically connected (by

	Moving	*Synergy*	*Staying*
Network	Scale level	Centrality	Urban environment
Synergy	Tranfer quality	Accessibility	Environmental quality
Location	Movenment functions	Proximity	Stationary functions

Figure 8.2 | Elements of synergy at stations | Peek and Hagen, 2001

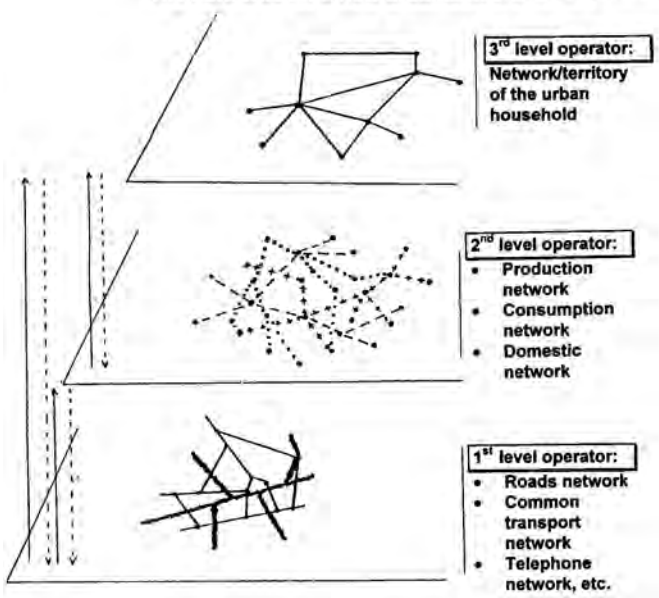


Figure 8.3 | Urbanism of networks | Dupuy, 1991

transportation systems) and virtually connected (by telecommunication systems) activity places" (Bertolini and Dijst, 2003: 30). Within this network city each individual actor may create his or her own virtual city, which is has no set physical or administrative borders, while the city is becoming increasingly independent from these boundaries. However, this virtual city can be seen as "a specific, changeable combination of activity places, connected by transport networks, within definite socio-economic and behavioural constraints" (Bertolini and Dijst, 2003: 29).
With the city seen as a network city and his mobility environments such as station areas, the accessibility of the network and the activity places is the most important factor. We call an activity place 'well connected' if little effort is needed to reach the specific activity place, because a good infrastructure and good transport services are present. The accessibility of an activity place can also increase "if more people can reach this activity place within a certain amount of time" (Rooij, 2005: 16).

Related to the idea of the network city is the theory of networks by Dupuy (1991), which describes the (re)organisation of the urban space in three levels of 'operators' of networks. "At the first level, there are the suppliers of technical networks, such as streets, highways, cables, wires, sewerage, and so on. They are in charge of providing the physical elements of the networks (infrastructure management) and the services on the networks (exploiting the infrastructure). At the second level there are the suppliers of the functional networks. They use the level immediately below to provide services –production, consumption, distribution – to the upper level. At this third level the operators

are people in their daily life. They make use of the first two levels to create their personal networks by interpreting possibilities and linking activity places, spaces, services, desires and needs in a single personal (or household) behaviour" (Rooij, 2005: 5). Linked to this theory of networks is the definition of the activities and the programme at a certain level. The relation between the functional networks (second level) and the people (third level) can be addressed to the activities. Through activities people can make use of the facilities or have human interaction. The relation between the technical networks (first level) and the functional networks (second level) can be addressed to the programme. The programme determines the requirements for the realisation of the first level (the physical environment) in relation to the possibilities for the second level (the functional or social uses) to be available. Therefore, planned spatial actions cannot be part of the third level, but they are part of the first two levels. Still the knowledge of the characteristics of the third level is needed to shape a better environment for people (Rooij, 2005). This knowledge is needed to see which conditions are required for a station area, within a network city, to function as an entrance to its direct urban surroundings.

8.4 Urban gateways and meeting places

As stated before, station areas can be seen as mobility environments, which are part of the Network city with its network society. Looking more closely to the station areas and their integration in the surroundings, the question rises if station areas can play the role of an entrance to the neighbourhood. An entrance, which can function as an urban gateway or meeting place in the surroundings. To define if a station area can fulfil this role, it is important to understand what we mean by 'urban gateways' and 'meeting places' connected to these locations. Besides that, before we can talk about making an entrance, it is relevant to realize that different neighbourhoods (around station areas) are distinguished from each other by their boundaries. Therefore, it is interesting to see what the role is of these boundaries in relation to a gateway or meeting place for the neighbourhood(s). Alexander (1977: 87) points out that "the strength of the boundary is essential to a neighbourhood." He argues that a neighbourhood can only maintain its own identifiable character if the boundary is strong enough. But on the other hand, gateways are needed at those points where the restricted access paths cross the boundary. Otherwise an interrelated system between neighbourhoods cannot be made and the boundary can then become a barrier. Besides that, the boundary zone has to be wide enough to contain meeting places for the common functions shared by several neighbourhoods. The meeting places within the boundary zone should consist of functions that invite gathering at these places.

To distinguish the spatial conditions for an entrance, it is important to consider the meaning and definition of a meeting place. A place can be seen as that special site in space where people live and work and where, therefore, they are likely to form intimate and enduring connections. It is a site where activities may occur, a location that may furnish the basis for our sense of identity and connection to other human beings. This specific location provides an anchor and a meaning to who we are (Orum and Chen, 2003). Orum and Chen (2003: 11) also point out that "our sense

of placeness" can get its meaning by natural and invariant connections. They distinguish four types of senses: (1) a sense of individual identity, of who we are; (2) a sense of community, of being a part of a larger group, whether a family or a neighbourhood; (3) a sense of a past and a future, of a place behind us and a place ahead of us; and (4) a sense of being at home, of being comfortable, of being, as it were, in place. A way to make the connection between people and places is by providing public areas where people can gather and assemble together easily. Places where the facilities not only provide recreation, but that make it possible for people to socialize and to identify with this public space. Every actor or user of a place has a different behaviour while using this city space: lifestyle behaviour (being), strategic behaviour (going), tactical behaviour (travelling) and operational behaviour (walking) (PQN, 2010). The type of behaviour depends on the role of the user as a visitor or inhabitant and the kind of activity. Those places itself do not necessarily have to be beautiful or materially abundant to play an important role in the urban structure or the lives of the users. These public spaces just need to be designed "to enhance the natural connections between people and places" (Orum and Chen, 2003: 151).
Related to the public spaces are the collective spaces, which contain a more private role in an area or neighbourhood, preferably with a clear determination of the owner of the place. The demarcation between public and private spaces is most of the time strict and clearly present, while the demarcation between semi private or collective spaces to private spaces can be more informal. This demarcation can be an intermediate space, which can be outside of a building block or be part of the inside area of the block, like a communal garden. The presence of qualitative public, collective and private spaces within an area, with a clear demarcation between them, contribute to the liveability of a neighbourhood. This liveability consists of social and physical elements that have an influence on the wellbeing of the inhabitants and visitors of an area (Van Dorst, 2012).

Gateways to a neighbourhood, on the other hand, should be solid elements, which are visible from every line of approach, while enclosing the paths and for example creating a sharp change of level (Alexander et al., 1977). The feeling of transition between neighbourhoods need to be emphasized while passing through the gateway by a change of light, view or surface, to make it feel like an entrance. But in the end, for these gateways and meeting places to function as an entrance to the neighbourhood, the most important element is the accessibility of this activity place. When looking at the activities that take place in the city, there are two main activities to distinguish: moving activities and stationary activities (Gehl, 2010). These activities can be seen as a contradiction to each other, as well as a gateway can be seen as a contradiction to a meeting place. But the fact is that at a station area, moving and stationary activities should take place, because it should be a node or a place of flow and a place to stay or live at the same time. By combining the node and the place at one location, an entrance to the city (node) and the neighbourhood (place) can be made.

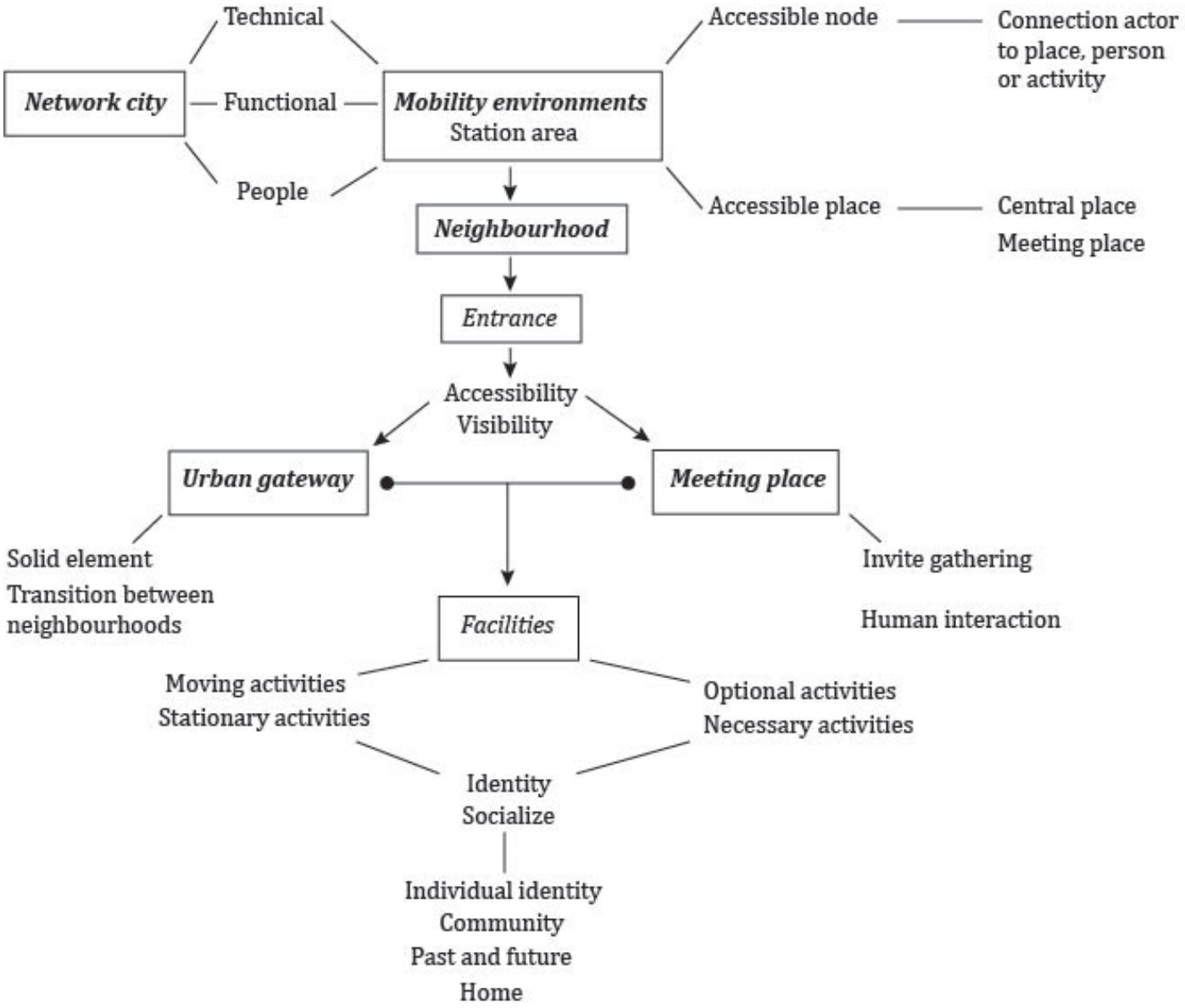


Figure 8.4 | Scheme of criteria for station areas | author, 2011

8.5 Criteria for the station area

Within this paper, several criteria are discussed for mobility environments, like station areas, to be as well part of the larger network city as to fulfil a central role within the surrounding neighbourhoods. As said before, a station area should be a site that many different people can reach and where they can do many different things: it is an accessible node and an accessible place (Bertolini, 1999; Peek and Hagen, 2001). The criteria and relations between the several elements that determine the role of the station area in the larger network and in the surroundings are pointed out in figure 4 below. It is based on the theories from among others Alexander (1977), Dupuy (1991), Bertolini and Dijst (2003), Orum and Chen (2003), Rooij (2005) and Gehl (2010). From this framework the design criteria for a station area, as an entrance to the city and the neighbourhood, can be derived.

This framework shows that a mobility environment, such as a station area, can be connected to the larger network city in three levels: The technical level (first), the functional level (second) and the people (third) that use the first two levels (Dupuy, 1991). This mobility environment functions as an accessible node by making the actor have a connection to a place, person or activity, while it can be an accessible place, when it has a central role of functions as a meeting point (Bertolini and Dijst, 2003; Rooij, 2005). These criteria make it possible for a station area to be a central and accessible place within the city structure.

For a station area to also be an entrance to the surrounding neighbourhoods, the most essential factors are the accessibility and visibility of the location (Alexander et al., 1977; Bertolini and Dijst, 2003). Hence, it is important that this station area is not only an urban gateway (enhancing the node) or a meeting place (creating a place), but it has to be both a gateway and a place. Therefore, it should be a solid element, which marks the transition between several neighbourhoods and at the same time is a space that invites gathering and stimulates human interaction. This meeting place can be public or collective, depending on its function within the neighbourhood and the demarcation towards the private spaces.
These two elements of a gateway and a meeting place have to be brought together in the facilities at the location, capturing the possibilities for moving and stationary activities, for optional and necessary activities (Gehl, 2010). While carrying out these activities the users of the station area can socialize or identify with the public space. This sense of identity and connection to other human beings can be put out in a sense for individual identity (1), a sense of community (2), a sense for a past or a future (3) or a sense of feeling at home (4) (Orum and Chen, 2003). These senses determine eventually not only the facilities at the location but the elements that make it possible for a station area to be an entrance to the city and the neighbourhood, the gateway and the meeting place. Hence, it is not only important to focus on the role of a station area on the larger scale of the city, but also on its interaction with the direct surroundings and the way it can contribute to the liveability of the urban life in the surrounding neighbourhoods.

8.6 Conclusions

“People walk, stand and sit where the quality of city space invites them to do so” (Gehl, 2010:

134). So when searching for activity places within the city structure, we see that especially the places where mobility flows interconnect have the potential to provide human interaction. Those places, like station areas, are called mobility environments and they are seen as the “upcoming central places within network cities” (Bertolini and Dijst, 2003: 40). However, those station areas can on one hand play a central role within the city, but on the other hand be a central place for the neighbourhood. For those station areas to function as an entrance to the city and to the surrounding neighbourhoods, several criteria are relevant to take in mind.

Firstly, a station area should be a site that many different people can reach and where they can do many different things: it is an accessible node and an accessible place (Bertolini, 1999; Peek and Hagen, 2001). Therefore, the connection to the network city has to be made on the technical and functional level, so the users of the activity place can be better related to the place, or a person or activity there. Secondly, a station area should be well accessible and visibly from every line of approach, considering the station as an entrance to the neighbourhood. Therefore, the station area should be as well an urban gateway as a meeting place, since it has to be a node and a place at the same time, to invite gathering and to transition between neighbourhoods. Hence, moving and stationary activities can occur, which can be optional or necessary activities related to the facilities that are present. These facilities should make it possible to socialize and give identity to the users. When talking about central station areas, these facilities and interactions can be embedded within the station itself, because

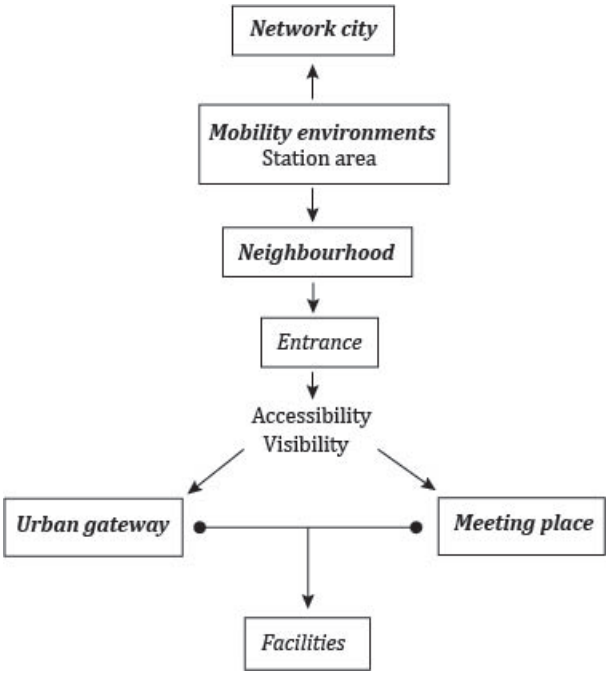


Figure 8.5 | Scheme linking the station area | author, 2011

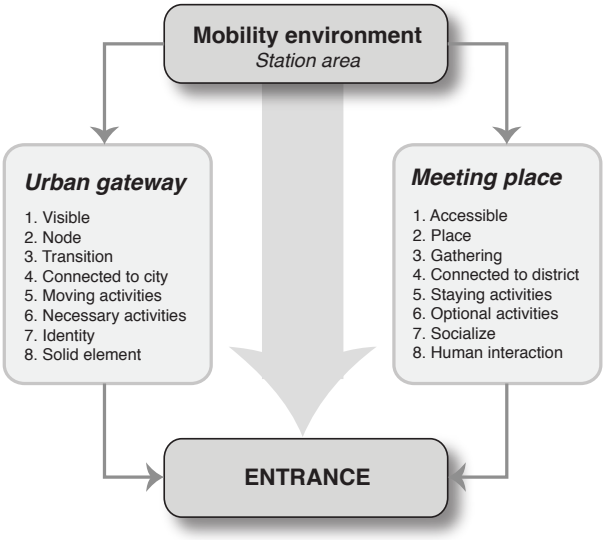


Figure 8.6 | Scheme linking the station area | author, 2012

there is a high transition of passengers every day and therefore the node stimulates the activity flow. While with secondary or tertiary stations it is not always profitable to collect those facilities at the station itself, so a wider range around the station is needed for the facilities to provide an identity and stimulate interaction. Especially in neighbourhoods or districts that are lacking a central place or heart, this station area can fulfil this role and therefore be an entrance to the neighbourhood. Here it is important to focus on the interaction of the station with the direct surroundings and the way it can contribute to the liveability of the urban life in the surrounding neighbourhoods. This liveability consists of social and physical elements that have an influence on the wellbeing of the inhabitants and visitors of an area (Van Dorst, 2012).

These criteria mentioned above, to let a station area functions as an entrance to the city and to the surrounding neighbourhoods, is used for designing a secondary station area within the Netherlands (see figure 8.6). This station area is positioned in a boundary zone between several neighbourhoods and is part of the Randstad (rail) network. Because it is a tertiary station, a wider range of facilities around the station is needed to provide an identity and stimulate human interaction. Therefore, a social and hybrid facility should be added near the station, which is part of the city structure and the neighbourhood at the same time. This hybrid facility will be the architectural intervention of the project, namely the school building (see part 4). By positioning this facility more into the neighbourhood instead of at the station itself, the station and this facility can be together the entrance to the city and the neighbourhood at the same time.

This knowledge on mobility environments and their spatial requirements to function as an entrance to the surroundings, does not carry out the spatial conditions for the routes to the surroundings and the public spaces connected to them. Also more knowledge is needed on the programmatic interpretation of the architectural intervention of the project. Therefore, more research has been done on these topics in the next chapters.

8.7 Recommendations for design

- Create an accessible node and place at the station area.
- Make the station visible and accessible from the surrounding neighbourhoods.
- Let the station be an entrance to the neighbourhood by being an urban gateway, with a hybrid facility as a meeting place connected to the station.
- Connect several facilities to the network from the station towards the surroundings, to invite gathering and support human interaction and transition between neighbourhoods.

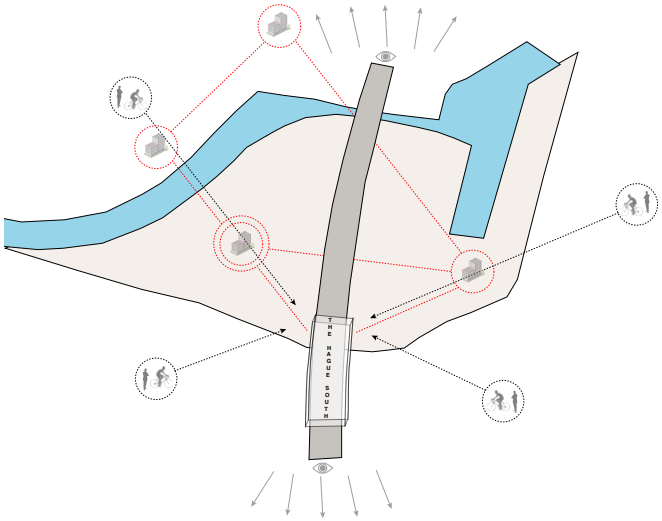


Figure 8.7 I Recommendations I author, 2012

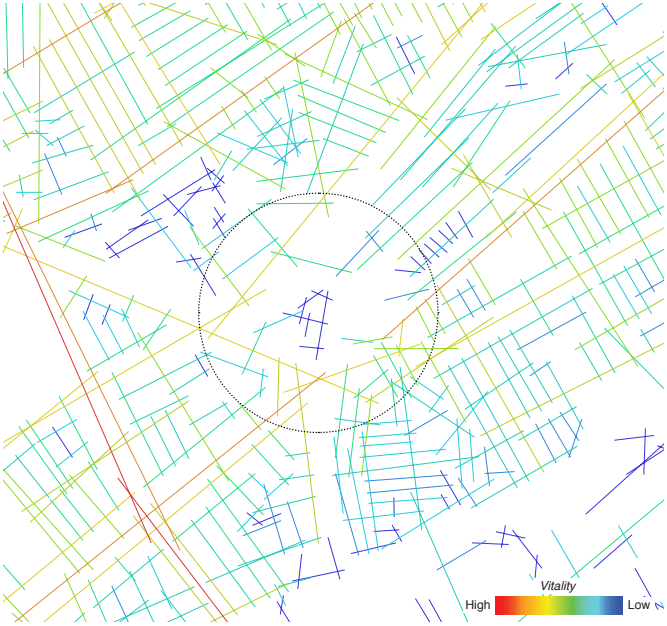


Figure 9.1 I Low vitality at location (Depthmap) I author, 2012

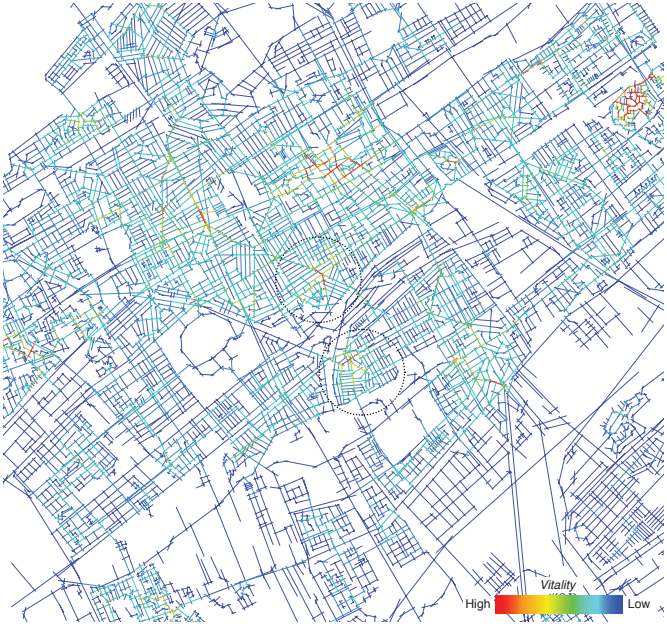


Figure 9.2 I Centralities around location (Depthmap) I author, 2012

9.1 Current situation

The spatial street network of the Hague south west is researched by using Space syntax, a method to analyse the spatial patterns in an urban environment. Depthmap is the software programme which can be used to make a Space syntax analysis. Only the patterns of movement in the urban structure can be analysed by this method, so factors such as quality, liveliness, attractiveness and safety can not be measured through Space syntax. Here, more literature studies are needed on the social and spatial aspects of the area, as presented in chapter 10.1. This research by Space syntax is not used as a strong design tool during this project, but more as a way to test the already gained knowledge on the area in reference to the routes in the surroundings.

In the current situation there is a low vitality at the Willem Dreespark and the Petroliumhaven, which are the development areas. The global integration (see figure 9.1) map points out that the inner structure of the location causes lacking connections to the surrounding urban fabric. The location is situated between two main centralities in the city, marked by red lines: the Valliantlaan - Wouwermansstraat in the north and the Gouveneurslaan - Hildebrandplein in the south (figure 9.2). This topological map (R3) shows that the area is not well accessible or integrated in the network of the city. On the district scale there are four main roads, connected to the two centralities on the city scale: the Valliantlaan and the Heemstraat (north) and the Alberdingk Thijmstraat and the Hildebrandplein (south). The project location is not part of or directly connected to these roads, which undermines the accessibility of the location (figure 9.3). On the other hand, it

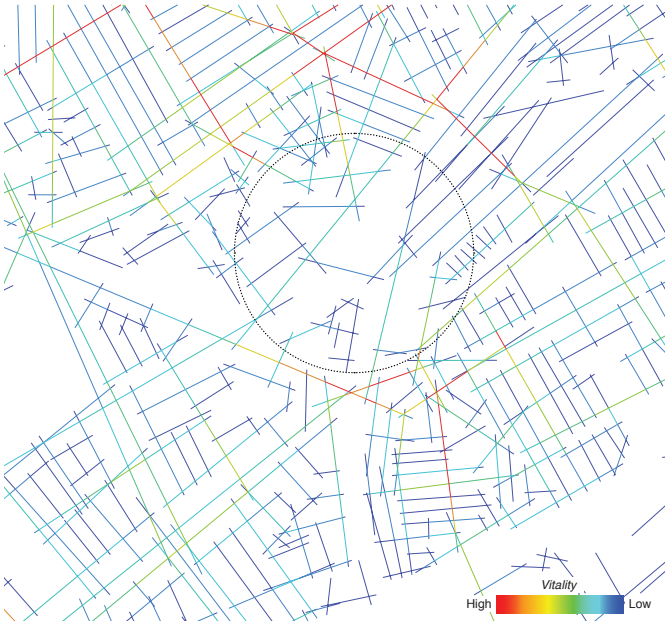


Figure 9.3 | Main streets around location (Depthmap) | author, 2012

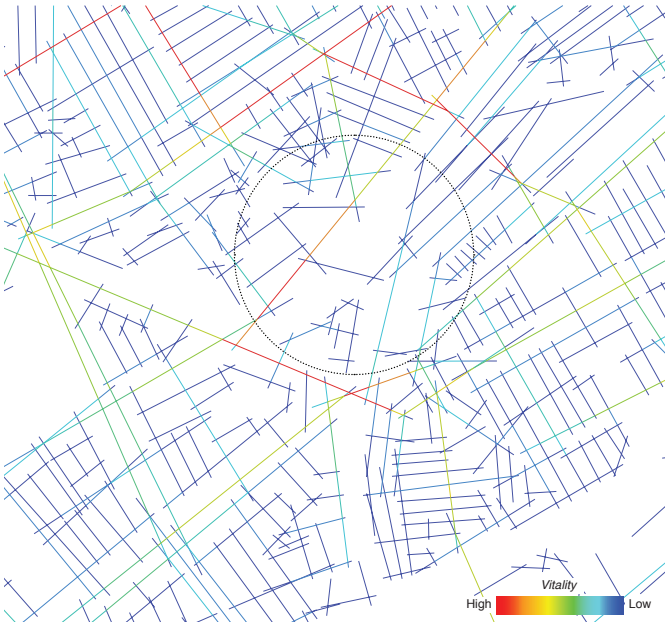


Figure 9.4 | Local streets around location (Depthmap) | author, 2012

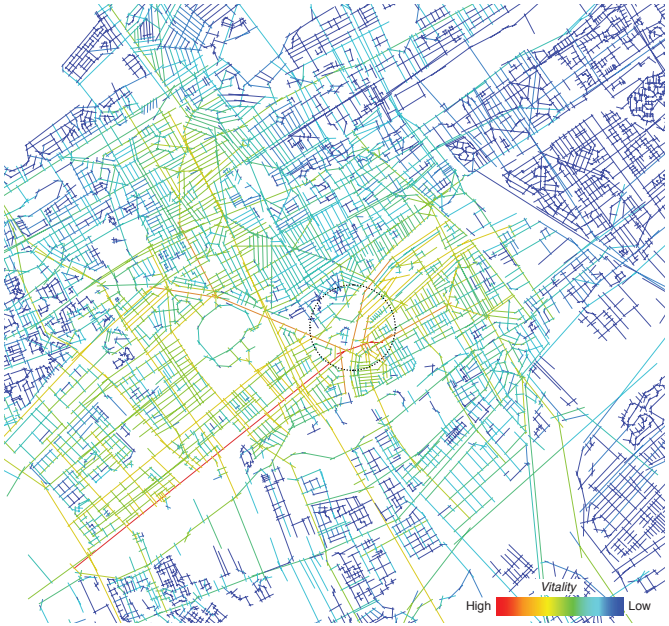


Figure 9.5 | Integration of Hildebrandplein (Depthmap) | author, 2012

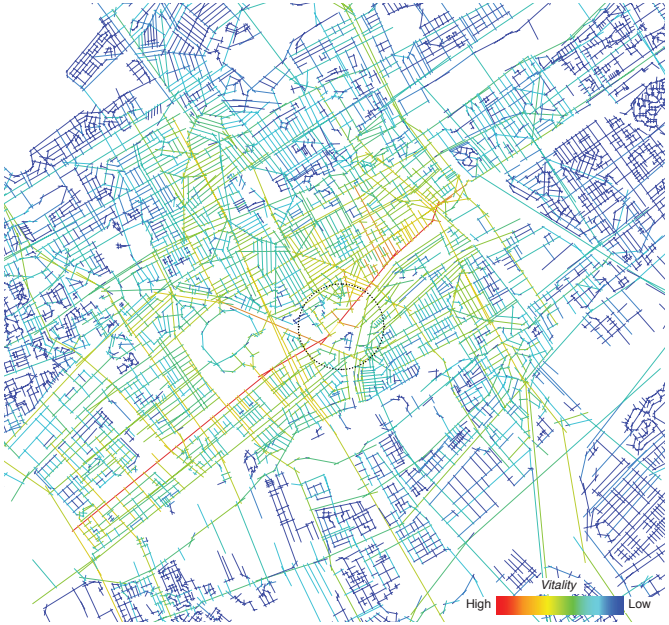


Figure 9.6 | Integration of Fruitweg (Depthmap) | author, 2012

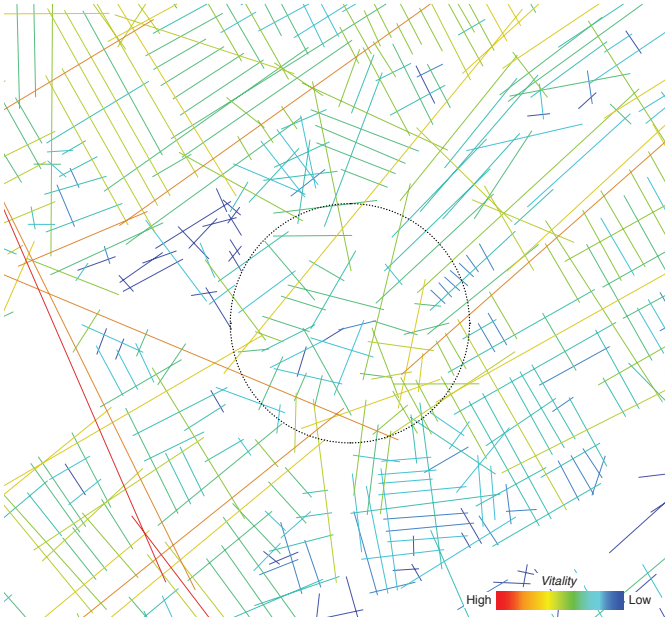


Figure 9.7 | More vitality at location (Depthmap) | author, 2012

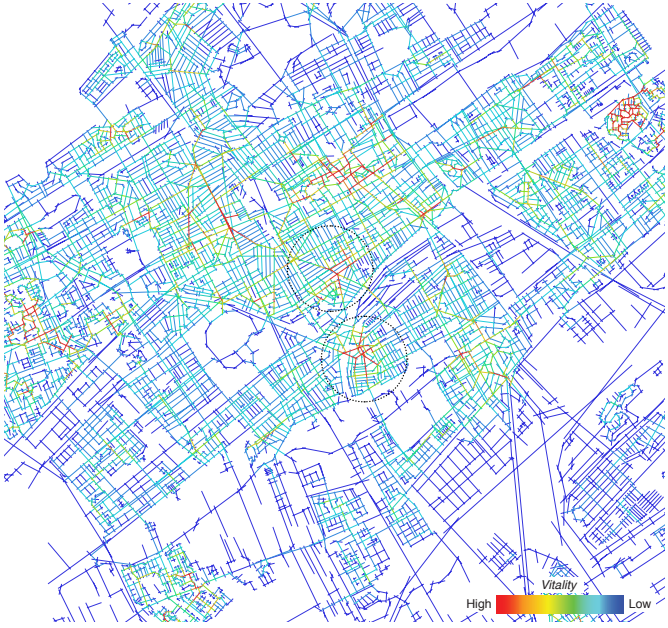


Figure 9.8 | Stronger centralities (Depthmap) | author, 2012

shows that the project location is a living area, since it is marked by blue lines. However, the area can be upgraded into green lines by making more connections towards the main roads, which will lead to a better accessible project location. On the local scale are the streets of the Troelstrakade - Hildebrandplein and Fruitweg well connected, so it is interesting consider these two main streets in the structure of the city. These main streets were already present in the plans of Berlage and Dudok in the beginning of the 20th century and are still structuring elements in the city of the Hague (see chapter 6.3). Figure 9.5 points out that the Hilderbrandplein is a street that reaches from the node of Moerwijk: to the Uithof in the south west by the Erasmusweg and; to the Trekvliet in the north east by the Gouveneurslaan and the Neherkade; and to the Zuiderpark and Laan van Meerdervoort north west by the Troelstrakade. The Fruitweg reaches from the location towards Station Hollands Spoor in the north east by the Parallelweg; to the Uithof in the south west by the Melis Stokelaan; and to the Zuiderpark in the west by the Troelstrakade. Both streets have a north east - south west orientation, with the Fruitweg more connected to Schilderwijk in the north and the Hilderbrandplein to Spoorwijk in the east. These streets are well connected in the city and should therefore be better linked to the project location around station Moerwijk.

9.2 New routes

This analysis method is used later on in the design process, to reflect on the new routes created in the design proposal, in relation to the existing situation. The development and elaboration of the design will be discussed in chapter 13.
The new routes firstly provide more paths through

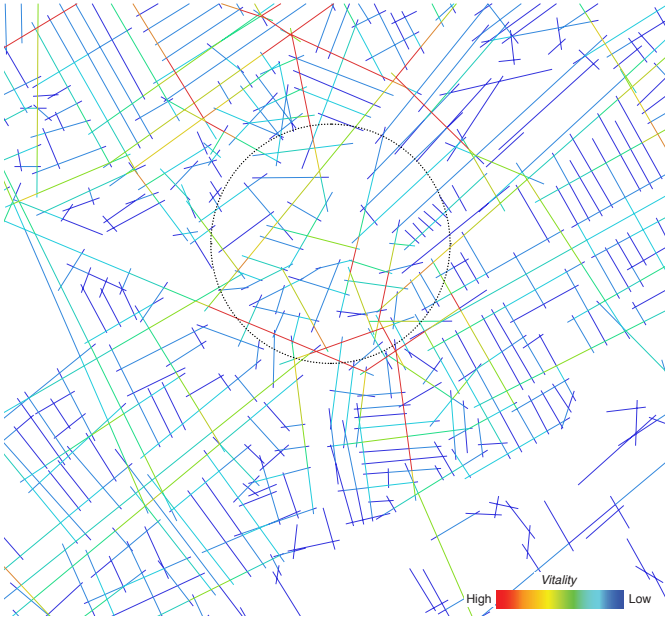


Figure 9.9 | Main streets around location (Depthmap) | author, 2012

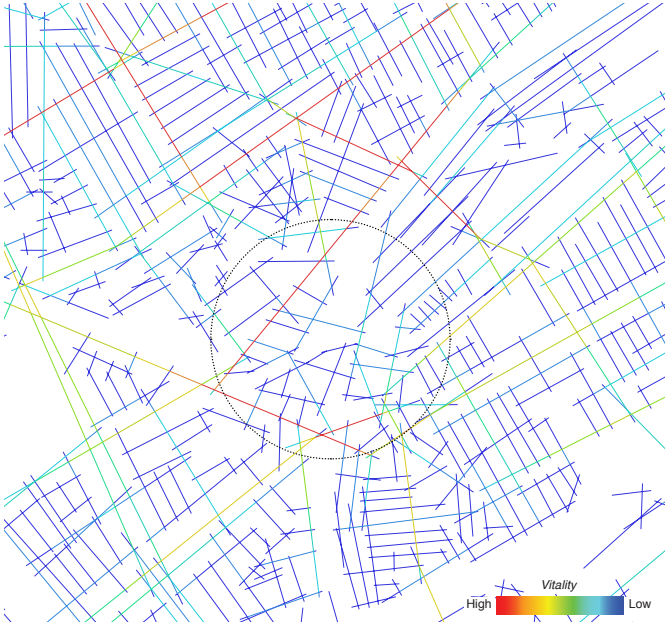


Figure 9.10 | Local streets around location (Depthmap) | author, 2012

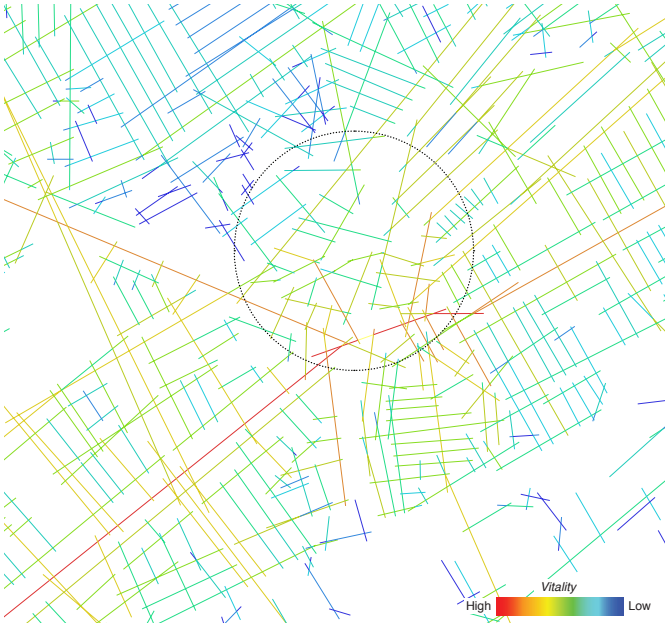


Figure 9.11 | Integration of Hildebrandplein (Depthmap) | author, 2012

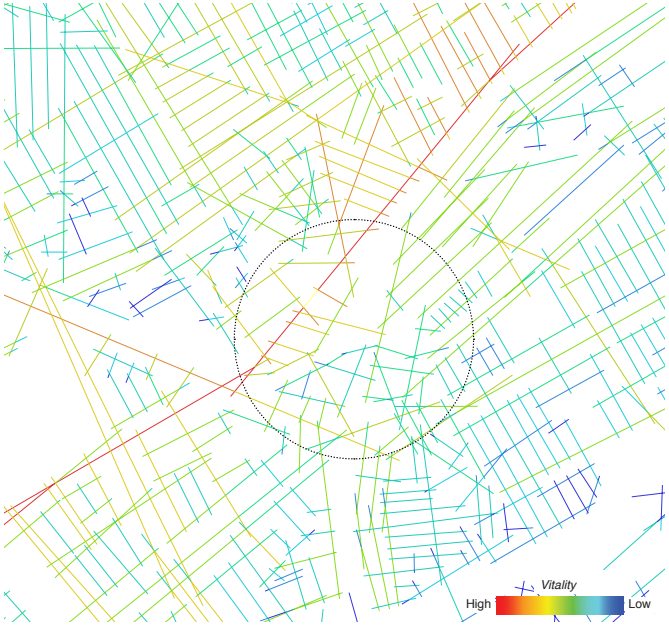


Figure 9.12 | Integration of Fruitweg (Depthmap) | author, 2012

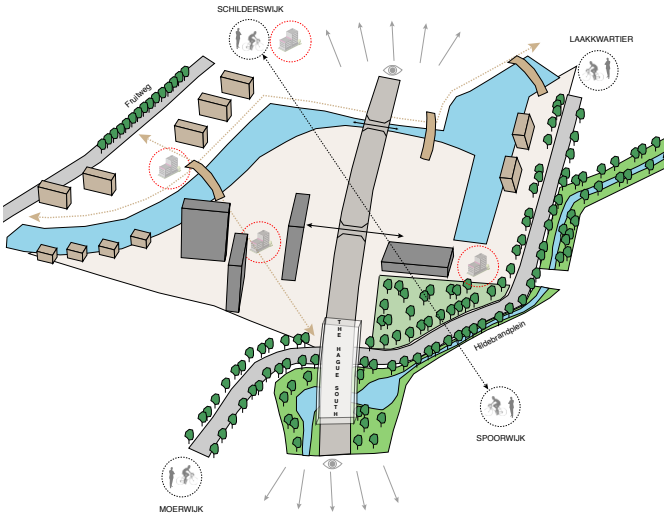


Figure 9.13 I Recommendations I author, 2012

the area and so more connections to the direct surroundings. The existing streets are better integrated in the network by these new routes, as illustrated in figure 9.7. The two centralities near the location are also supported by these new routes (see figure 9.8). The four main roads around the location are now the Valliantlaan with the Wouwermanstraat and the Hilderbrandplein with the Alberdingk Thijmstraat. Because of the new routes, a closer connection is made to the Schilderswijk in north en Spoorwijk in the south. Especially through the Fruitweg is the Schilderwijk now more connected to the station area, which can result in an increasing pedestrian and bicycle movement to the location (figure 9.10 and 9.12). Also the shopping street of the Gouveneurslaan is now integrated and related to the Erasmusweg. This research shows the effect of the new routes on the spatial network of the city, but the quality and liveliness of the routes is substantiated by this instrument.

9.3 Recommendations for design

- Create slow traffic routes connected to the main roads of the location : the Hildebrandplein and the Fruiweg.
- Make direct connections between the neighbourhoods of the Schilderswijk and Spoorwijk.
- Use the city boulevard as the connective route between Moerwijk and Laakkwartier.
- Place the bridges on strategic places over the Laak to support the slow traffic network.
- Connected the Willem Dreespark and the Petroliumhaven directly by the extension of the Gouveneurslaan.
- Create a primary and secondary network at the location, differentiate in visitors and inhabitants.

10.1 Requirements for public spaces

The spatial location analysis (chapter 6) and the space syntax analysis (chapter 8) methods clearly illustrated the advantages of the new routes at the location, from the point of spatial patterns. The Gouveneurslaan - Hildebrandplein - Erasmusweg and the Parallelweg - Fruitweg - Melis Stokelaan are important road structures in the surroundings and with the new connections, these streets will be more integrated in the urban fabric.
Still these methods does not argue on the spatial requirements for the new routes or the public spaces that are connected to them, so more studies are needed to answer the sub research question of chapter 3.3:
What are the spatial and structural requirements for qualitative (slow traffic) routes to connect this area to its surrounding neighbourhoods?

Considering the requirements for the routes, the first ideas and theories about public spaces that come to mind are the ones relate to Jane Jacobs and Kevin Lynch. When thinking about the city, the first thing that occurs are the streets, if the streets of a city have an interesting appearance, then the city appears interesting; if the streets seem dull, then the city will have the same image (Jacobs, 1961). She argues that streets within a neighbourhood should capture three main qualities:
- There must be a clear *demarcation* between public and private space
- There should be *eyes* on the street
- The sidewalk must have *users* on it fairly continuously, to support the number of effective eyes on the street

Because interaction on the street is the most important element to be able to create a public city life (Jacobs, 1961). Jacobs talks about the qualities that are needed to create an interesting public space, but the physical elements to do so can be better explained by theory of Kevin Lynch. Lynch (1960) argues that there is a public image of for every city which is the shared element of many individual images. Each individual image is unique, with some contents that are part of the public image, but which are rarely communicated. These contents are referable to physical elements, which can be classified into five types of objects:
- *Paths*: the channels along which the observer moves
- *Edge*s: the linear elements not used or considered as paths by the observer
- *Districts*: the medium-to-large sections of the city, with an identifying character
- *Nodes*: the strategic points in the city into which an observer can enter and from which he is travelling
- *Landmarks*: the external points of reference as physical objects

These elements do not exist in isolation, but are directly related and regularly overlapping each other (Lynch, 1960). Although these theories of Jacobs and Lynch are well known and adopted in the theoretical framework of our field, both theories are from one time period. Therefore, it is interesting to search for more spatial conditions by means of other theorists in later periods.

In the eighties new ideas were developed on environmental preference and requirements for public spaces. This theoretical framework did not only provide a guide to research, but also pointed out the significance of aesthetics as a factor in human behaviour and human experience (Kaplan, 1987). This framework could be divided

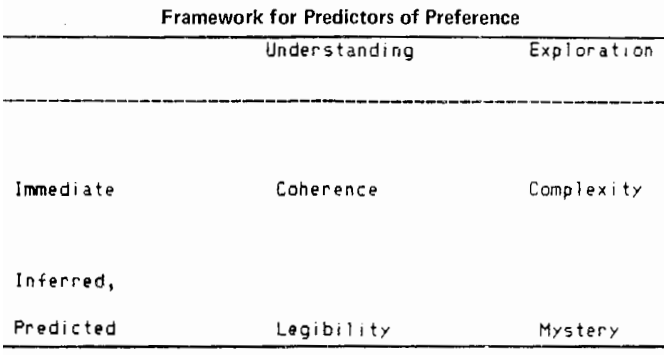


Figure 10.1 | Predictors of preference | Kaplan, 1987

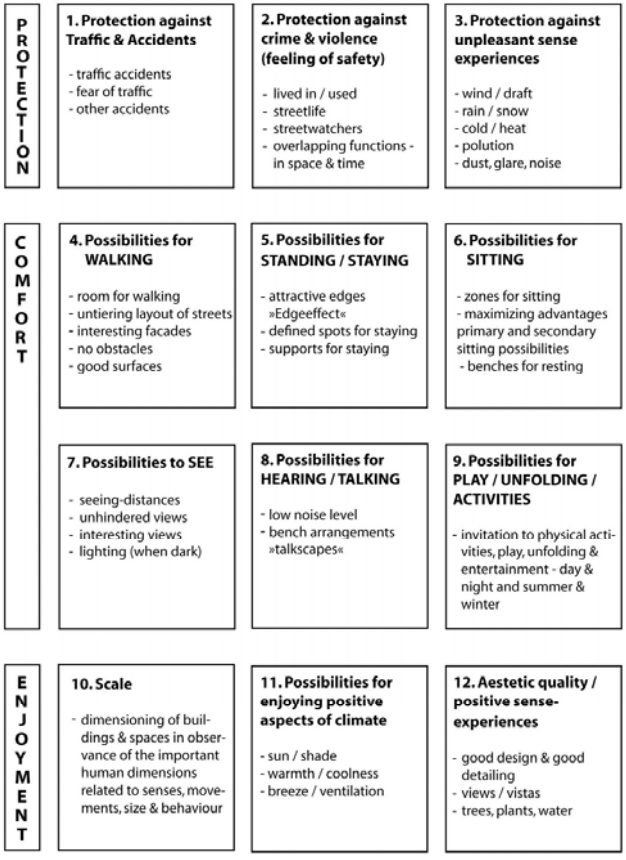


Figure 10.2 | Designing public spaces | Gemzøe, 2006

into two informational outcomes: understanding and exploration. There are four variables that are related to these outcomes, which can be immediately present or promised perspectives (figure 10.1):
- *Complexity*: immediately present elements which create a divers scene
- *Mystery*: inferred information which makes it impossible to have a complete perception on the scene
- *Coherence*: symmetries, repeating elements and unifying textures to create a harmonious scene
- *Legibility*: being able to predict and maintain orientation when going more deeply into the scene

These preferences should appear in every scene of the physical environment, to stimulate human behaviour and their experiences. Related to this theory are the ideas of Carr et al. in the beginning of the nineties about the role that public spaces play in people's lives and the needs that result from it. They divided five types of reasons which account for people's needs in public spaces:
- *Comfort*: physical, social and psychological (basic need)
- *Relaxation*: body and mind at ease through natural physical elements (resting)
- *Passive engagement*: encounter with the setting, without being actively involved (observation)
- *Active engagement*: directly experience the place and the people in it (interaction)
- *Discovery*: desire to be stimulated to have new and pleasurable experiences (exploration)

These descriptions provide clues to why some places are filled with people and others are empty. But these needs are alone not a sufficient reason for vitality (Carr et al., 1992). These preferences and needs of Kaplan and Carr should to be supported by more recent studies on this topic.

Therefore recent studies are reviewed to get a more concrete description of the spatial requirements that are needed for the routes and public spaces at the project location. In 2006 an international conference was held on this topic by Walk21, to define the quality criteria for the design of pedestrian places and networks. These criteria were related to earlier studies of Jan Gehl. They can be used to focus on the problems in existing pedestrian landscape, as well as guidelines during the design process (Gemzøe, 2006). There are twelve quality criteria defined, which can be divided into three main groups:

- *Protection:* how to minimize unpleasant experiences like accidents, insecurity and discomfort
- *Comfort:* the quality of walking and staying in a place and the opportunity to participate in a variety of activities (walking, standing, sitting, seeing, hearing, talking and playing)
- *Enjoyment:* relates to the human scale, enjoying the positive aspects of the climate, the artistic quality of the design and the materials used (see figure 10.2). These norms focus on the relations between the needs of people and the physical environment. But first we have to understand the needs of the user groups, before we can start to design a public space and the buildings surrounding the place (Gemzøe, 2006).

Related to this study at the conference of Walk 21, are the urban design qualities mentioned by Ewing and Handy (see figure 10.3). They tried to measure the subjective qualities of the urban street environment, by using ratings from an expert panel on perceptual qualities. There were five urban design qualities in terms of physical characteristics of streets and their edges, that were measurable (Ewing and Handy, 2009):

Urban design quality	Significant physical features
Imageability	people (#) proportion of historic buildings courtyards/plazas/parks (#) outdoor dining (y/n) buildings with non-rectangular silhouettes (#) noise level (rating) major landscape features (#) buildings with identifiers (#)
Enclosure	proportion street wall—same side proportion street wall—opposite side proportion sky across long sight lines (#) proportion sky ahead
Human scale	long sight lines (#) all street furniture and other street items (#) proportion first floor with windows building height—same side small planters (#) urban designer (y/n)
Transparency	proportion first floor with windows proportion active uses proportion street wall—same side
Complexity	people (#) buildings (#) dominant building colours (#) accent colours (#) outdoor dining (y/n) public art (#)

Figure 10.3 | Urban design qualities | Ewing and Handy, 2009

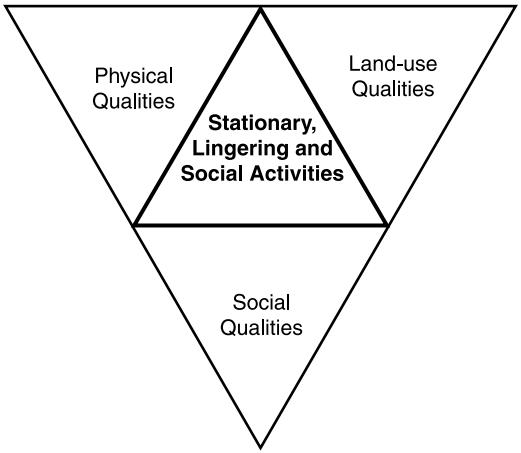


Figure 10.4 | Interrelated dimensions for spaces | Mehta, 2009

- *Imageability:* a quality of a physical environment that makes it distinct, recognizable and memorable, which is measurable by numbers, proportions and presence of elements
- *Enclosure:* a quality that appears by breaks in the continuity of the street wall, so interruptions in vertical elements, which is mainly measurable by proportions
- *Human scale:* a quality that relates to the human speed and the (building) heights and widths, which is measurable by numbers and proportions
- *Transparency:* a material condition that is pervious to light and air, to make what lies behind the street edge imaginable, which is measurable by proportions of elements
- *Complexity:* a quality that is related to the number of noticeable differences to which a viewer is exposed, which can be mainly measured by numbers of elements

Many tools for measuring the walking environment have emerged, but only focussing on physical features does not tell us the experience of walking down a street or at a public space (Ewing and Handy, 2009). Therefore a third study of this time period is researched, namely the one of Vikas Mehta. This study focuses on the neighbourhood (commercial) street which can provide our functional, social and leisure needs. The street should have the ability to stimulate social interaction and therefore he defined the characteristics that supports this human behaviour. There are several important urban design characteristics that support social behaviour (Mehta, 2009) : (1) seatings near activity; (2) sidewalk width; (3) articulation; (4) tree covering; (5) other street furniture; (6) stores; (7) permeability; and (8) community places. These elements help in understanding, designing and managing the public space. Together these elements can be classified under three dimensions that are applicable to planning and design of public spaces (see figure 10.4):
- *Physical qualities:* elements of the physical setting
- *Social qualities:* element of gathering and interaction
- *Land use qualities:* elements of the behavioural environment

These dimensions show that if there is an appropriate combination of characteristics in a place, it can be a desirable space for stationary, lingering and social activities (Mehta, 2009).

Reflecting on all these theories mentioned above, can be concluded that every time period has in some way related research studies. The studies of Jacobs and Lynch are connected to each other by the elements that are needed on the city scale to create the city image and the effect they will have on the characteristics of the neighbourhood streets. These studies are the basis for further research as done by Kaplan and Carr et al. They define the preferences for a public space and the needs of people to participate in the public life of the city. These preferences support the needs of people and therefore the reason to be in a specific place. These elements are also present in the studies at the beginning of this century by Gemzøe, Ewing and Handy and Mehta. The spatial qualities of Gemzøe are directly related to the study on needs of people by Carr et al. and the characteristics of streets by Jacobs. The design qualities of Ewing and Handy can be linked to the preferences of Kaplan and the elements for the city image by Lynch. Some of these theories overlap or complement each other, which helps to

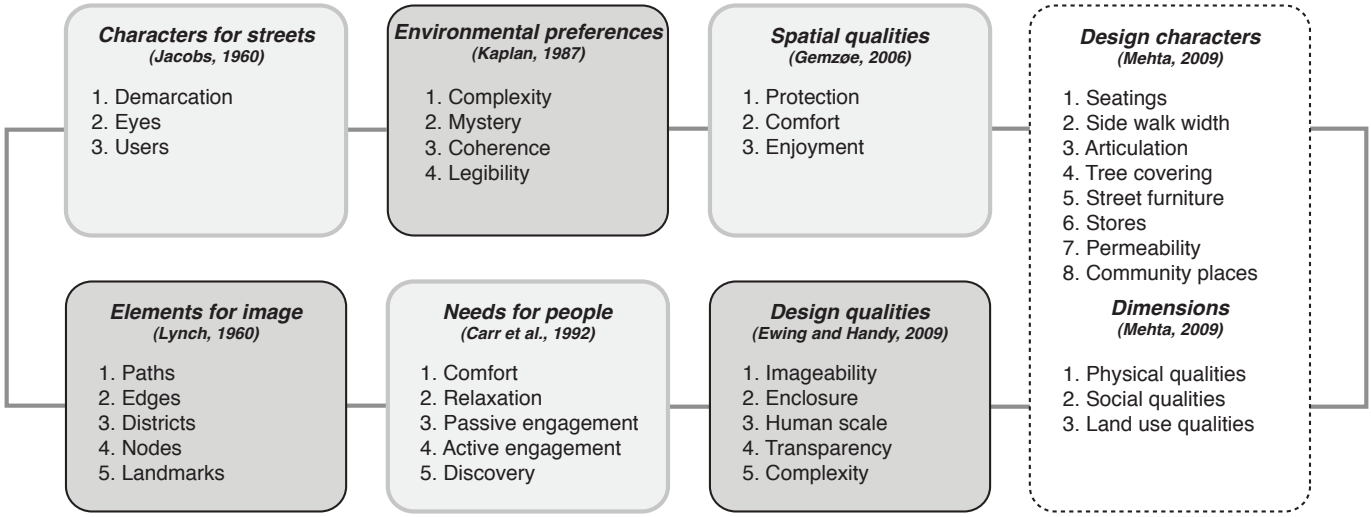


Figure 10.5 I Interrelated theories I author, 2012

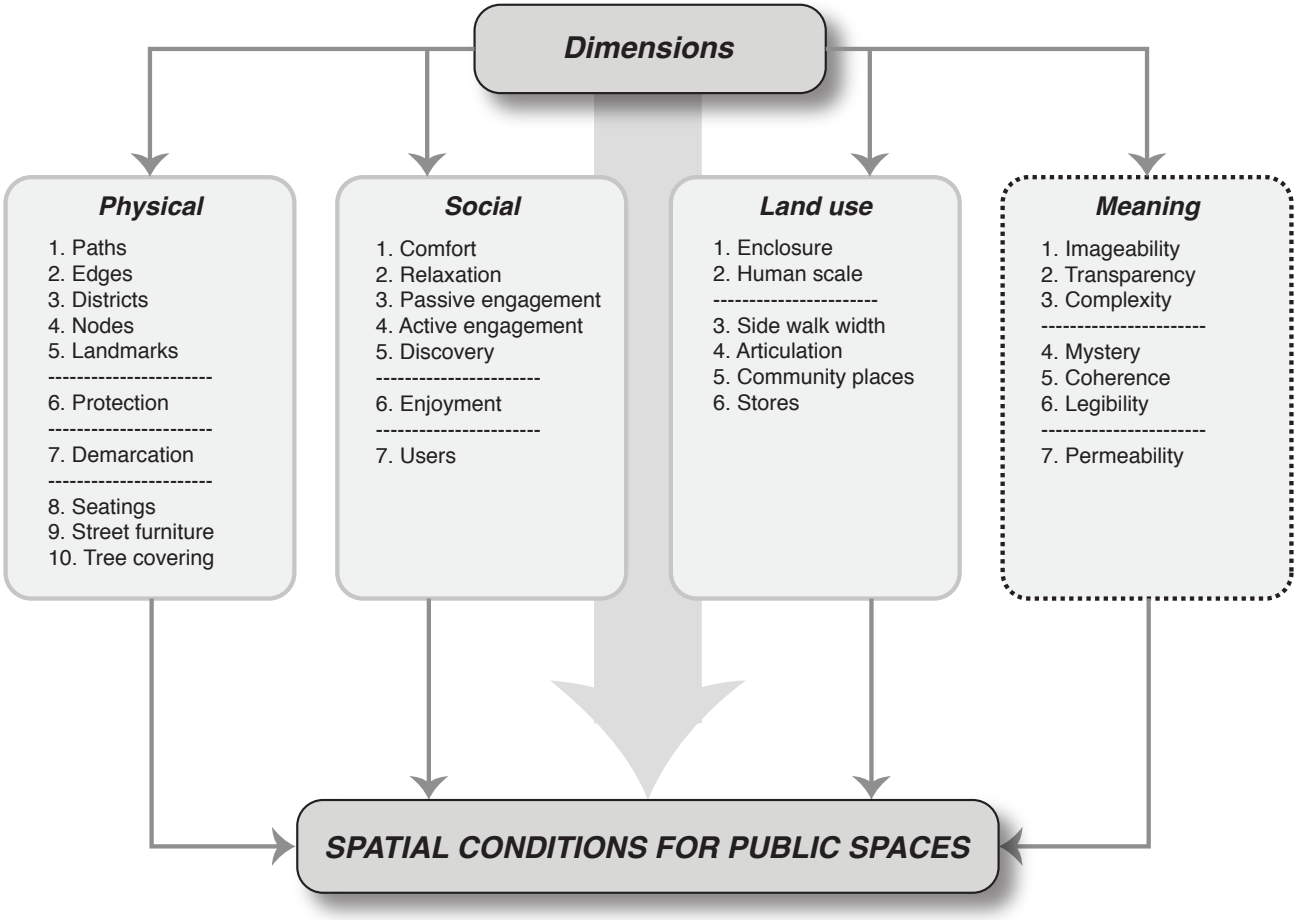


Figure 10.6 | Criteria list for public spaces | author, 2012

create a solid knowledge on spatial requirements for routes and public spaces. These theories can in some way be related to the dimensions mentioned by Mehta, but not all elements of the theories can be placed within this study.
A forth dimension should be added to describe the elements, which is the *'meaning of a place'*. The physical elements and land use of a place are useless if they do not stimulate the social conditions to have interaction and to identify with a place, the meaning of the public space. This meaning relates directly back to the image of the city by Lynch, the legibility of a place by Kaplan and the complexity of a space to make it interesting by Ewing and Handy. These four dimensions together can be the structuring elements to define the spatial requirements that are needed to create a qualitative public space and well connected slow traffic routes at the project location (see figure 10.6).

10.2 Public squares

After defining the requirements and dimensions that are needed to create qualitative slow traffic routes and public space for the project location, more knowledge should be gathered about the types of public spaces. By researching different kind of public spaces, the requirements and distinctions can be better integrated into the design, to create a variety of places at the location. This study helps to answer the sub research question of chapter 3.3:
How can the improvement in and the kind of the public space in the area contribute to the accessibility of the station and the liveliness of the routes from the surrounding neighbourhoods?

There are different kinds and types of public spaces, which can be distinguished by their physical characteristics by practical purposes. Still a public space should not focus on one function, but should capture a certain neutrality, so different perspectives can be obtained. Because of the increasing differentiation and specialisation of the use of spaces, it becomes more and more difficult to create neutral places which can cope with these variety of uses (Meyer *et al.*, 2006). Public spaces can be divided into several typologies, which can be marked by two aspects : (1) the position of the public space in the larger network of the city and (2) its own composition on the smaller scale. One of these typologies is the (public) square. This typology is characterized by several elements, such as the meaning of the place; the position of the (main) buildings; the presence of a central open space; its limitations; and the materialization of the square (Meyer *et al.*, 2006). Within this typology, Meyer et al. point out three variants:
- *The traffic square:* the place where different infrastructures come together
- *The arrival square:* the place where you arrive in the city or district, like a station square
- *The residential square:* the place where no continuous roads are located, the resting place in the city or neighbourhood.

At the project location there will be several public squares added to the new network of routes and especially the arrival square and the residential square will fulfil an important role. The station should be supported by a clear entrance and meeting place, the arrival square at the border of the district. The residential squares will be more inside the project location, since it should be a point for rest and gathering inside the neighbourhood.

(1) Image and identity

(2) Attractions and Destinations

(3) Amenities

(4) Flexible Design

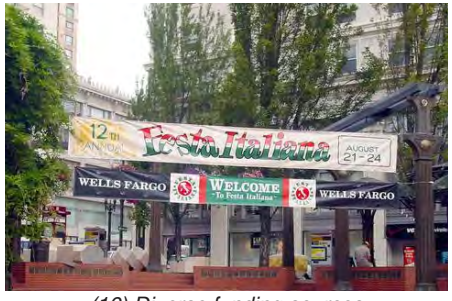
(5) Seasonal strategy

(6) Access

(7) The inner square & the outer square

(8) Reaching out like an octopus

(9) The central role of management



(10) Diverse funding sources

Figure 10.7 | Quality principles for squares | PPS, 2012

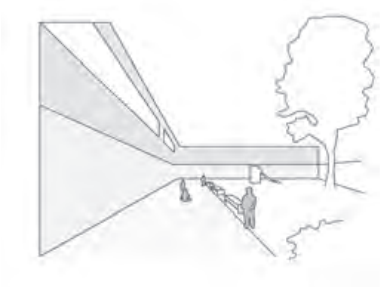
These squares should capture ten principles to be a successful and qualitative public space according to the Project for Public Spaces (2012):
(1) Image and identity: a whole community should feel connected to the place
(2) Attractions and Destinations: a variety of smaller places at the square to attract various people
(3) Amenities: facilities to support the comfort of using the place
(4) Flexible Design: a place that responds to natural fluctuations, so changes during the day, week or year
(5) Seasonal Strategy: seasonal changes over the year at a place
(6) Access: the ability to reach the square successfully on foot
(7) The Inner Square & the Outer Square: the streets and sidewalks around a square greatly affect its accessibility and use, while supporting the well-being of the inner square
(8) Reaching Out Like an Octopus: the way that streets, sidewalks and ground floors of adjacent buildings lead into the square
(9) The Central Role of Management : a management plan to keep the square safe and lively, so people will return
(10) Diverse Funding Sources: partnerships which seek to supplement what the city can provide by a variety of funding
These ten principles are closely related to the spatial conditions mentioned in chapter 10.1 and should be taking into consideration while designing a public square.

10.3 Playgrounds

A more specific square is the public or collective playground, especially in combination with an educational building. The reason to study this type of public space is related to the programmatic interpretation at the location, which is already mentioned in chapter 6.2 and will be further explained in chapter 11. Within the Netherlands there are most of the time no financial opportunities to study and develop the spatial requirements for a playground, while there are no budgets for these spaces. Several actors have an influence on the policy and design of collective spaces in a neighbourhood, but the link between them is often missing (Stimuleringsfonds voor Architectuur, 2008). Playgrounds are important elements within a neighbourhood, not only for gathering, but also because it supports the development of children in movement behaviour and interaction with others.

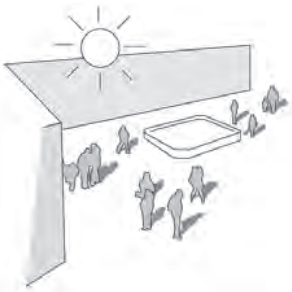
The present opinion on the use, maintenance and opening hours of schoolyards is changing, since there is a shortage of available public or collective space. By combining schoolyards and collective playgrounds, double use of space can be realized and more public space for the neighbourhood will be available. A good playground gives users the opportunity to participate in different activities and stimulates children to move, explore and experiment in relation to their age (Stimuleringsfonds voor Architectuur, 2008). Therefore the playing area of a playground should have at least 300 m2 of paved surface and have a ratio of 2:1 towards the unpaved surface. Because of the limited budgets that are present, schools are forced to cooperate with other actors and cluster facilities to be able to realize a good public playground. There are ten basic principles to create successful playgrounds (see figure 10.8):

(1) Participation



(7) Spatial differentiation

(2) Management and organisation



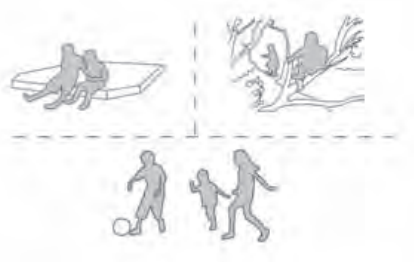
(5) Sunlight and shelter

(8) Safety and accessibility

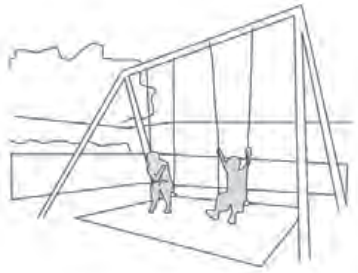
(3) Type of profile

(6) Connection to public space

(9) Surface and pavement



(4) Zoning



(10) Arrangement and play elements

Figure 10.8 | Principles for playgrounds | Stimuleringsfonds voor Architectuur, 2008

(1) Participation:
Needed to get a broad support for the plan and to find extra financial resources, since the budget determines significantly the final design proposal.
(2) Management and organisation:
A structured management plan is needed to realize a good playground, including the chose of materials, location, design and maintenance.
(3) Type of profile:
The organisation of a playground has an influence on the way of playing by the users.
(4) Zoning:
A clear zoning plan is needed, with at least the zones of competition, movement and rest.
(5) Sunlight and shelter:
Avoid too much shade and wind already during the urban design process.
(6) Connection to public space:
Stimulate social cohesion in the neighbourhood by making a good transition between the playground and the surrounding public space.
(7) Spatial differentiation:
Children of different ages have a variety in movement behaviour, security and challenges, so separation between those groups is needed.
(8) Safety and accessibility:
Design the playground with good safety measures and make it well accessible.
(9) Surface and pavement:
The chose of pavement has a great influence on the play- and movement possibilities, so create different combinations and environments.
(10) Arrangement and play elements:
Create new elements for the playground, related to its landscape or structural requirements.
The first two principles (Participation and Organisation) in relation to the process of creating and maintaining a good public playground are the most important elements in the beginning of the design process (Stimuleringsfonds voor Architectuur, 2008).
Connected to these ten principles are the different activities and the kinds of play, that should be divided into separate zones and not interfere:
(1) Competition: Sports and active movement
(2) Movement: Playing games and learning
(3) Rest: Interaction and communication
(4) Construct: Building own elements
(5) Imitate: Acting and triggering fantasy
These five activity zones (see figure 10.9) should be present and related to the arrangement of the playground and the ages groups of the users (Stimuleringsfonds voor Architectuur, 2008).
Combining all these elements should result in a public playground, that supports movement, interaction and gathering of people from the school and other inhabitants of the neighbourhood.

10.4 Public to private spaces

To make a public space and especially a public square or playground successfully, a clear demarcation is needed between the public and private domain. Not only the edges of the square or playground itself, but also their connection to the surrounding public and private space is very important. Different user groups makes a space public, but these users should all feel welcome at the place and should in some way identify with it. While main public places, like squares or streets have a clear mark of being ‘public’, (because of the open structure, the surrounding public buildings or the present elements) at the transition to the surroundings, this marking can get more vague. We can see this transitions zone as an intermediary space, which can have different physical outcomes (Meyer et al., 2006). It can be

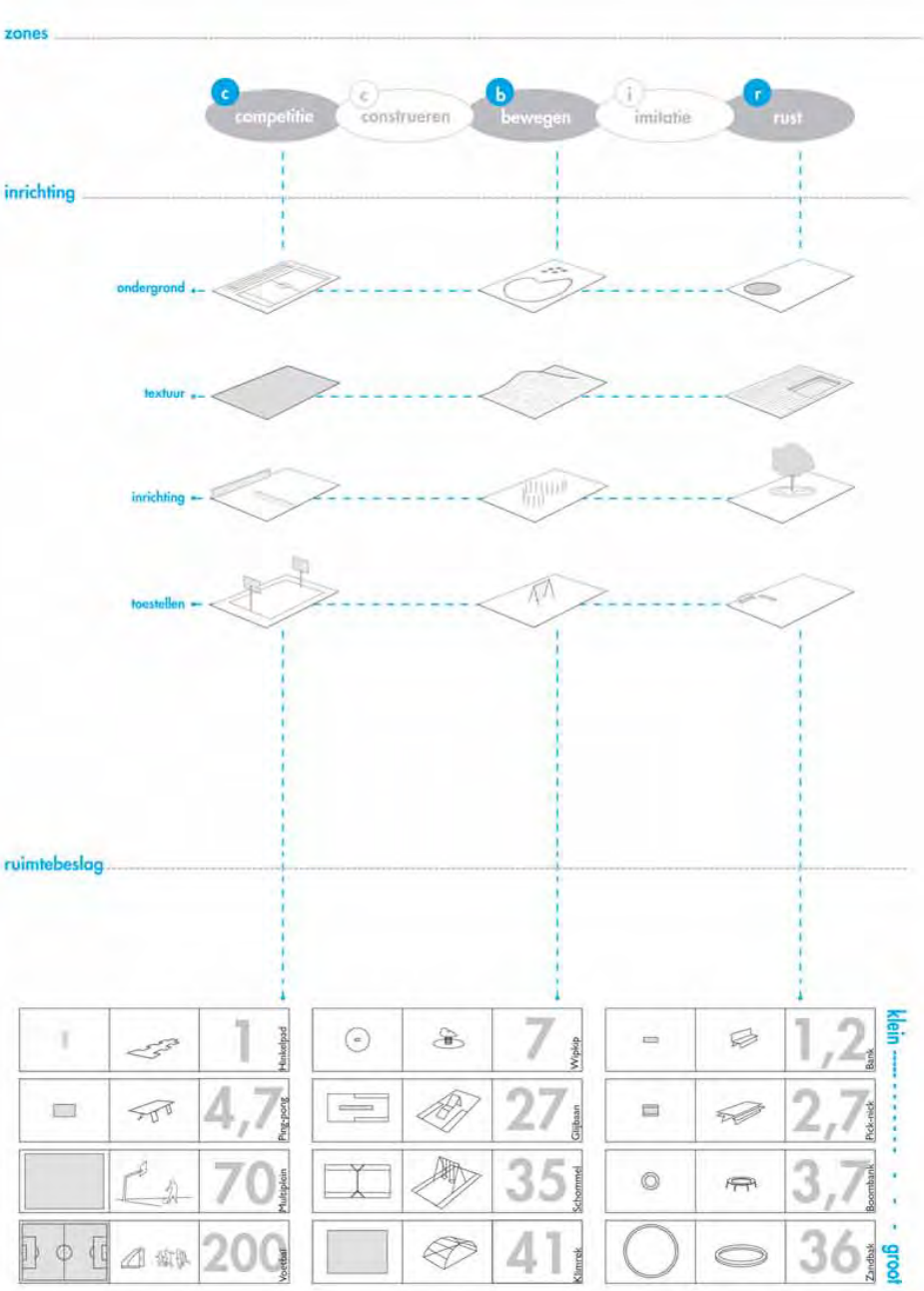


Figure 10.9 | Activity zones of playgrounds | Stimuleringsfonds voor Architectuur, 2008

a doorstep, a plateau, a small differentiation in pavement, a fence, a garden, an arcade, a bay window, a foyer or just a simple pot of flowers. Because of the freedom within this intermediary space, it is difficult to design this transition area properly. To create good public spaces, well defined edges and a smooth transition towards surrounding semi-private and private spaces are needed. For these private spaces it is most important to realize who the owner or manager of the place is, for people to feel welcome or to be able to identify with the space. It is the same as with public spaces, if there is no clear management plan, no one will feel responsible and the place will be neglected. This demarcation from public to private spaces is necessary within the structure of a city to give people different possibilities and stimulate activities or associate a variety of identities to their (public) city life.

10.5 Collective to private spaces

The demarcation between public and private spaces is most of the time strict and clearly present, while the demarcation between semi private or collective space to private space can be more informal. When a private space is adjacent to a public space, people will choose to have a clear distinction and therefore a hard edges of the public or private space. For example when a private garden is near a public route for pedestrians of bicycles, high fences will be placed by the house owners to create their own private and intimate space. When there is an intermediate space between the private and public place, the demarcation can be more ‘soft’, like a green boundary or bushes, since the inhabitants do not feel the proximity of people passing by their home. This intermediate space can be outside a building block or be part of the inside area of the block, like a communal garden. These communal gardens can also have a gradation in being private or public, which will determine the demarcation towards the private spaces. When there is a collective space inside a building block which is closed off and only usable for the residents, the distinction between collective and private can be less ‘hard’. Of course the usage of this collective garden is closely related to the amount of private space the residents have and thus the need to use the collective garden. When there is a continuous slow traffic route through the collective space inside the block, it depends on the openness of this space to the public, how strong the demarcation to the private spaces will be. When this route is only accessible between several hours a day and is closed at night, the residents will feel like it is their garden and the people that pass by will feel like visitors. The demarcation between the collective and private space is then less strong, since it is clear who is responsible for this collective space. When a continuous slow traffic route opens a building block and is accessible all the time, the residents will ‘protect’ their private space more and will choose for a stronger distinction. The collective garden becomes then public and should be maintained by the municipality or a private company, since residents and visitors can use this space on the same level.

This knowledge about collective spaces and the demarcation towards public or private spaces will be used in the development of building blocks in the urban plan for the project location in the Hague south west.

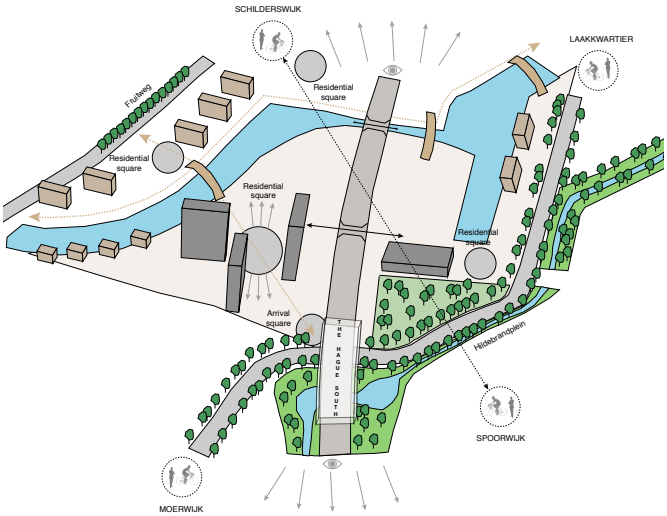


Figure 10.10 I Recommendations I author, 2012

10.6 Recommendations for design

- Focus on four dimensions to create qualitative slow traffic routes and public spaces at the location: physical, social, land use and meaning.
- Stimulate the ability for the activities of walking, standing, sitting, seeing, hearing, talking and playing at a public space.
- Consider the position of the public space in the network and its composition to define its typology.
- Focus on the two main square types at the project location: the arrival square and the residential square.
- Consider the ten principles to create a successful and qualitative public square.
- Create collective playgrounds instead of schoolyards, to relate the place not only to the users of the school, but make it available for the neighbourhood.
- Consider the ten basic principles to create a successful playground, with the participation and organisation of the playground as the most important elements.
- Focus on the three main activity zones that are needed to create a good playground : competition, movement and rest.
- Pay attention to the design of the intermediary zone between public and private spaces.
- Realize that the public and private spaces should have an owner or manager to make the space readable and keep it safe and lively.
- Realize the gradation in collective spaces and the way residents will demarcate their private spaces (strong or soft edges).

After analysing the programme for the design in chapter 6.2, four clusters of desired programme were defined which should be related to each other, to the main roads in the surroundings and to the station area. One of these clusters is located near the existing housing blocks of the Willem Dreespark, in the centre of the project location. This cluster will be the architectural intervention area, since the architectural building should be the catalyst for urban renewal at the location. By situating this architectural intervention near the existing housing blocks, the programme can be developed before the rest of the urban project will be realized.

11.1 'Brede school'

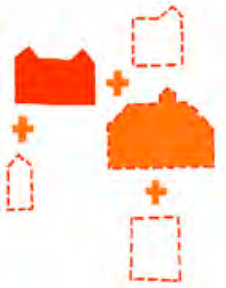
This cluster near the existing buildings is dominated by an educational programme, which could be related to sport facilities, a collective playground and neighbourhood facilities, like a library or auditory. Also housing programme could be connected to these public facilities, to create a hybrid environment and support the financial realisation of the project. This concept of clustering facilities within a school building is called a 'brede school', a mixed use building with a larger purpose then only education. This idea for cross funding school building arose from the problems that emerged with the present conditions of the existing school buildings in the Netherlands. A lot of school buildings cope with deferred maintenance and have too little budgets to renewal the building and the playground connected to it (Stimuleringfonds voor Architectuur, 2011). Therefore, clustering of facilities and involving private partners in the renewal process and development of school buildings, can help to solve these problems. Related to this process is the phenomenon of libraries and neighbourhood centres disappearing from the neighbourhoods and the development of their new clusters that serve larger districts. Since in 2005 a motion is approved which makes primary schools mandatory to provide preschool and after school care, more and more multifunctional school buildings were realized. Several facilities can be part of these school buildings, like a child care, welfare, sport facilities, cultural facilities or a library. By involving private partners in this development process, and by not leaving the ownership of the ground and school building by the municipality, extra financial benefits can be realized. These financial resources can then be invested in qualitative elements for the school building, like extra space or better management (Stimuleringfonds voor Architectuur, 2011). Therefore it is important to realize the elements that influence this process of developing a mixed use school building. There are ten guidelines defined after analysing several examples in England and the Netherlands (Stimuleringfonds voor Architectuur, 2011) :

(1) Programme:
Connecting neighbourhood facilities to the educational programme, whereby the school anchors in the neighbourhood.

(2) Urban context and location:
Pay attention to the orientation, view and transition between private and public spaces to stimulate opportunities for double usage of the land.

(3) Identity:
Try to prevent anonymity in the design by creating a strong identity for the building, so the different users of the place will not feel lost.

(4) Clear appearance:
Create a neutral and accessible public playground which provides the spatial connection between the



(1) Programme

(7) Flexibility

(2) Urban context and location

(5) Management

(8) Playground and outdoor space

(3) Identity

(6) Connections

(9) Quality and sustainability

(4) Clear appearance

(10)Finance

Figure 11.1 I Guidelines for ‘Brede school’ I Stimuleringsfonds voor Architectuur, 2011

users and the public space around it.
(5) Management:
Provide a collective management plan.
(6) Connections:
Make sure that the division of the building stimulates the opportunity for the different facilities to work together, by visual and physical connections.
(7) Flexibility:
Anticipate on changes in the exploitation of the building, so functions can transform over time.
(8) Playground and outdoor space:
Through double usage of the land, more differentiation in the playing areas and outdoor spaces can be realized.
(9) Quality and sustainability:
Investments in low maintenance and high qualitative materials can be recovered by the low maintenance costs.
(10) Finance:
By sharing the infrastructure, services and facilities, a better investment can be made and so on a more qualitative building can be realized.
Combining these ten guidelines should result in a mixed use school building, that support the educational and neighbourhood facilities, such as sports or a cultural programme, and invite gathering of inhabitants of the surrounding neighbourhoods.

11.2 Building typologies

After defining the programmatic interpretation for the location and especially the architectural intervention, and researching the guidelines for a mixed use school building, it is important to think about the building typologies that can be related to this programme. As explained in chapter 11.1 are the role and models for a school building constantly changing, while the notion of a school remains the same. Therefore it is important to maintain flexibility within the school building, to anticipate on new demands and desires for school buildings in our society. To do so, more knowledge should be gained on the existing building typologies for schools and there capability to transform them for future developments. Van Dam et al. (2011) define four ways of transforming an existing school building in design and structure (see figure 11.2):
(1) Addition: building elements are added to the main volume, therefore these building parts appear to be as well extensions of the main volume as elements of the whole composition.
(2) Absorption: open spaces that are outdoor places between different building parts, can be added to the school building, which stimulate flexibility in the design.
(3) Repetition: a concatenation of uniform building parts or clusters.
(4) Diversity: a differentiation in character of the separate building parts, by for example connecting different independent building volumes, which gives the opportunity to divide the facilities and support flexibility in the future.
These opportunities for transformation are related to the usage of the space, the functional aspects of the school building. These aspects can be divided into two categories:
- *Architectural aspects:* the elements that express the spatial qualities and influence the position and differentiation of spaces: (1) Building type; (2) Programme interior; (3) Division; and (4) Identity.
- *Urban aspects:* the elements that are related to the value of the surroundings and influence the image, social cohesion and employment: (1) Location; (2) Programme exterior; (3) Accessibility;

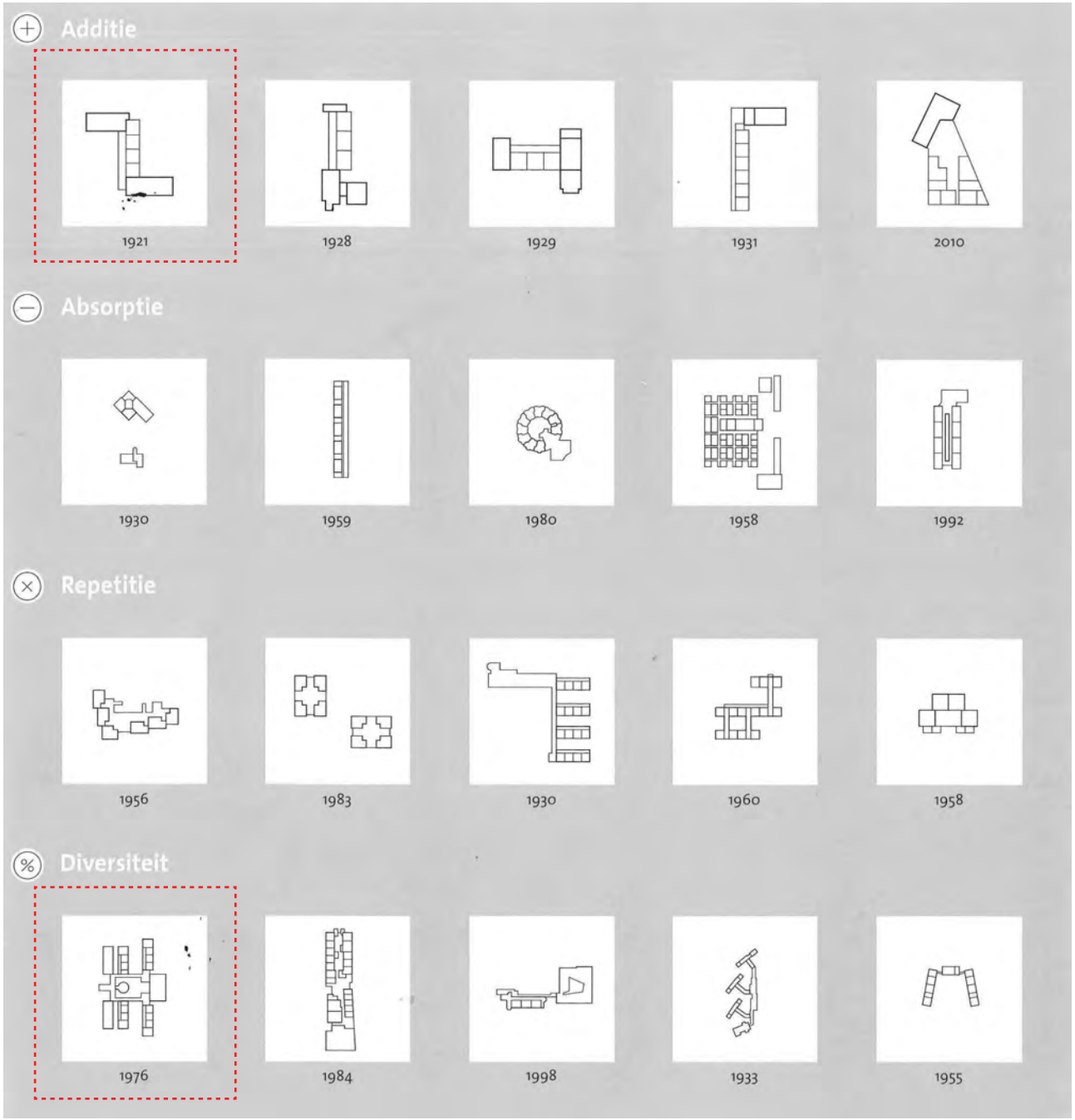


Figure 11.2 | School typologies for transformation | Van Dam et al., 2011

and (4) Identity of surroundings.
By taking this knowledge of transformation typologies and their functional aspects into consideration while designing a new school building, a better project can be realized, because it is adaptable to future developments. Therefore, for this design project there are two typologies for transformation applied: Addition and Diversity. The reason to choose these building typologies is because the project is related to the existing high rise housing blocks in the area, and the new programme of the mixed school will be added to one of these existing building volumes (see chapter 13). By adding the programme to the housing block, a new composition of building elements will be created, but the appearance of the existing volume will still be recognisable. This results in a diverse design project, which captures existing and new volumes that are separately recognizable and at the same time create one building structure.

11.3 Recommendations for design

- Create an architectural project that is a cluster of functions related to an educational programme: a ‘Brede school’.
- Connect different neighbourhood facilities to the school building: a sports hall, a library and an auditory.
- Integrate one of the existing housing blocks of Willem Dreespark in the architectural design, to support the existing living environment instead of demolishing it and developing a totally new one.
- Add more housing programme to the architectural project, to stimulate the social safety and control in the area and support the financial realisation.
- Use the guidelines for the ‘Brede school’ to create a mixed use programme at the location.

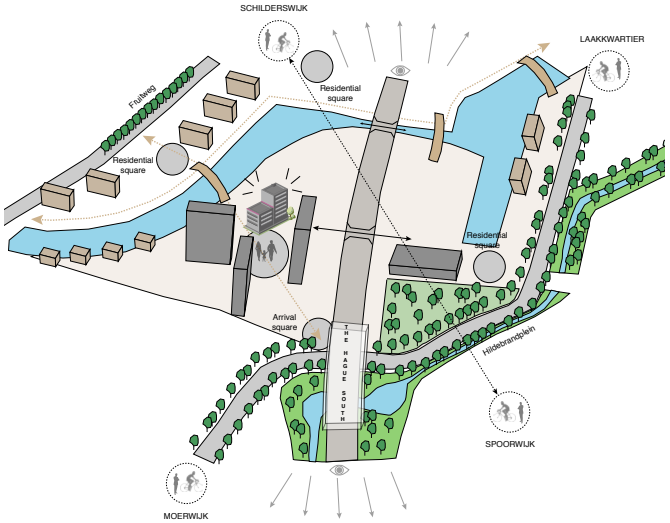


Figure 11.3 | Recommendations | author, 2012

12.1 Main conclusions

By means of the literature research on several topics related to the design project, the theoretical framework for the graduation project could be defined. By first studying the theory of the network city and principles for mobility environments, the spatial requirements for the station area were pointed out, to let it function as an entrance to the city and its surrounding neighbourhoods. Here could be concluded that a station area should be an accessible node and an accessible place, so it must be an urban gateway and a meeting place for its surroundings. With central stations these two requirements can be situated within the station itself, since there is enough support for it because of the amount of passengers. However, for secondary or tertiary stations, this is not the case. Therefore, the station area itself can be the urban gateway, by making it accessible and visible from every line of approach. The meeting place for the area can then be a (hybrid) facility close to the station, but more inside the neighbourhood, to be better related and integrated with the network of this district.

To make the station area accessible, new slow traffic routes should be added to the existing network of the district of the Hague south west, which are connected to the main roads in the area: the Fruitweg and the Hildebrandplein (see chapter 9). Connected to this routes can be new public spaces, to create more lively and attractive routes. However, the theory on the mobility environments did not cover the spatial requirements for creating qualitative slow traffic routes and public spaces. Therefore several theories from the 1960's, 1990's and the present are consulted and related to each other. These theories could be categorized into four dimensions, which help to structure all the different ideas, related to the physical elements, the social desires, the kind of activities and the image of a public space to make it attractive. From these studies arose the question on requirements for more specific public or collective spaces, like public squares and playgrounds. The choice for these places is related to the programme for the urban project and architectural intervention, which resulted from the spatial location analysis (see chapter 6). The requirements for the places are closely linked to the earlier mentioned theories, but they pointed out that the management and participation of different actors in the development process are also important elements. Beside, there is the need to have different activity zones at the public square or playground to enhance different behaviours and kinds of play at the place. From these knowledge on types of public space, started the study on building typologies for the specific architectural programme of a school building. By reviewing typologies for transforming existing school buildings, the type and structure for the new building could be defined. Beside the concept of the 'brede school' needed to be researched and explained more closely. Hereby a better cognition on this new way of organising a school building could be gained, and placed into the network of the neighbourhood and district.

All these studies helped to create the theoretical framework for this graduation project and in combination with the analyse methods mentioned before, the design project could be elaborated.

12.2 Answers to questions

With this theoretical framework and the knowledged gained by the analysis of the project

location, the theoretical question and the three sub research questions mentioned in chapter 3 could be answered.

Theoretical question
Which spatial conditions are needed for urban gateways and meeting places around station areas, to let them function as an entrance to the city and their direct urban surroundings?

The spatial requirements for an urban gateway or meeting place to be an entrance to the neighbourhood, can be divided into eight main criteria for both of the elements (see figure 8.6). Together these sixteen criteria are needed for an mobility environment to be an entrance, because it should be an urban gateway, as well as a meeting place. The most important elements are the visibility and the accessibility of this mobility environment. It has to be a node and a place at the same time. There should be connectivity towards the city and the neighbourhoods. Transition and gathering should be possible activities at the location and therefore it has to capture identity and give the opportunity to socialize. These formulated requirements will be used as guidelines in the beginning of the design project.

Routes between separated neighbourhoods
What are the spatial and structural requirements for qualitative (slow traffic) routes to connect this area to its surrounding neighbourhoods?

The structural requirements for the routes are tested by the space syntax analysis method, which shows that good connections are needed towards the main roads in the area the Fruitweg and the Hildebrandplein (see chapter 9). Beside, a direct link between the Willem Dreespark and the Petrolium is needed to connect the areas to each other and their surroundings (see chapter 7). Routes from the Groente- and Fruitmarkt and the Schilderswijk towards the Spoorwijk and Moerwijk, help to integrate the station better in the network. The spatial requirements for these routes are linked to several theories on public spaces and they can be categorized by four dimensions: (1) physical elements, (2) social elements, (3) land use and (4) meaning of a place (see figure 10.6). These spatial conditions that arise from these four dimensions will be taking into consideration when designing the routes and public spaces of this graduation project in the Hague south west.

Public spaces
How can the improvement in and the kind of the public space in the area contribute to the accessibility of the station and the liveliness of the routes from the surrounding neighbourhoods?

The kind of public or collective spaces for the location are related to the spatial location analysis and the programmatic interpretation of the architectural intervention. By considering the earlier mentioned four dimensions with their spatial conditions, the existing public space of the area can be upgraded and new qualitative public spaces can be added. These new public spaces are firstly public squares, in particular an arrival square at the station and residential squares inside the project location. These squares should contain ten principles to make them attractive and invite gathering (see figure 10.7). Here the management of the square is the most important one, since it should support people to come back

to the place. This is off course no direct feature of urban or architectural design, but should be taking in consideration during the design process. A more specific public or collective space is the playground, when it is not only connected to a school building, but when is available for the entire neighbourhood. To design a good playground, also ten principles are pointed out (see figure 10.8). Related to these principles are the five activity zones, that should be present at a playground and not interfere with each other, to enhance different behaviours and kinds of play. Three of them are the most important ones: Competition, movement and rest. These elements for improving and defining the kind of public spaces for the area, will help to organize and design the new collective spaces for this district and the architectural project.

Programmatic interpretation
Which functions should be related to the public space in the area, to contribute to the liveliness of the station area and the routes towards the location?

The functions that should be added and the location where they can be situated arose from the spatial location analysis (see chapter 6.2). Here it is pointed out that there should be four new programmatic clusters added to the location, in relation to the existing public programme. Two of the clusters are located along the Fruitweg, one of the main roads of the location. The third clusters is an extension of the Gouveneurslaan, the main shopping street in the area, and is situated along the Hildebrandplein. The fourth cluster is located between the existing high rise housing blocks of Willem Dreespark, since these existing buildings now dominate the location and are the recognizable points of the station area. Beside, it is better to added more programme to an existing situation then demolish the buildings and thus houses of almost 300 families that live there. The main function for this cluster will be a school building, with a mixed use programme for the neighbourhood. This concept of a ‘brede school’ can be better explained by ten guidelines (see figure 11.1) and the different transformation typologies for school buildings (figure 11.2). Using these guidelines and integrating the typology of ‘addition’ and ‘diversity’ to the architectural project will help to create a new hybrid building at the location, which serves the surrounding neighbourhoods. This architectural building can contain educational facilities, sports, a library and an auditory, which can be used by the school as well as by the residents of the neighbourhood. Beside, the existing housing blocks and more housing programme can be added to the building project, to support the social safety and control in the area. Hereby a new neighbourhood can be created with more connection to the surrounding public space and a mixed (public) programme, then in the present situation with the existing housing blocks.

12.3. Recommendations for design

After each chapter of part 2 and part 3 of this thesis, recommendation for the design are made. This shows how the ideas for the project grew during the design process and helped to sharpen the vision for the project location. From here on, the design project will be described, as a result of the spatial and literature research described in the last chapters.

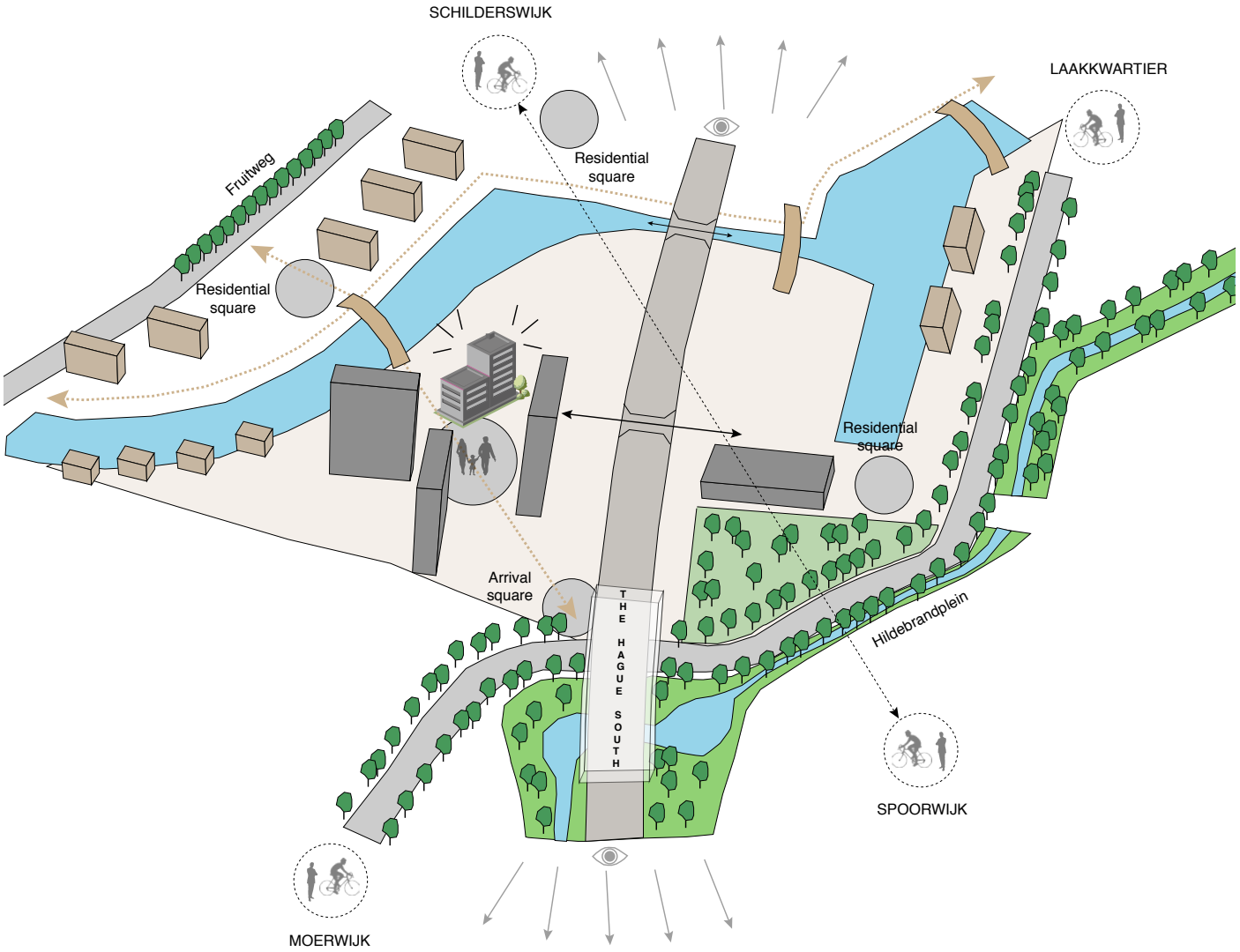


Figure 12.1 IConcluding drawing of recommendation for design I author, 2012

School class | Fotoarchief Sliedecht, 1970

In this part of the thesis, the design proposals and the final urban plan and architectural intervention are described. Firstly the vision for the Hague south west is presented, which derived from the research and analysis studies done in de previous chapters. This resulted in several design proposals for the location and eventually in the urban plan, which determines the environment of the architectural intervention. This architectural intervention developed from several design proposals as well and resulted in the final architectural design. At the end of this chapter the strategy for the design project is pointed out.

13.1 Vision for the Hague south west

There are several interventions needed to reconnect this location to its surroundings and upgrade the accessibility and liveliness of the station area. As concluded in chapter 12, the most important elements are the station and the hybrid function next to it, the mixed use school building. Those two elements are the centralities in the location, where from the routes reach out towards the surroundings (see figure 6.22). The hybrid school building will be located between the three existing high rise building blocks and integrated with one of the blocks. The playground that will be linked to the hybrid building, will not only serve the users of the school, but also the rest of the neighbourhood. This public space is part of an axis between the station and the Fruitweg and is situated in the middle of two other public spaces. The Fruitweg will maintain its existing character with rows of trees and the tramway through it, but should change in building typology and programme (see figure 6.14). The new buildings along this road should have more relation with the waterfront of the Laakkanaal and by changing this area, a slow traffic route along the water can be made. This route will reach from the Zuiderpark to the Laakkwartier, with the water as the guiding element. In the existing situation this is not possible, because the industrial buildings and businesses along the Fruitweg have their private parking and storage facilities here. By opening the waterfront, new housing can be added in different typologies connected to the water. The existing house boats can be part of this plan as well. To make the connection to the Fruitweg, a new bridge should be added to complete the axis.

The other new axis at the location will connect Spoorwijk with the Schilderswijk, by linking several public spaces and a mixed programme along the axis. Beside, the existing bridge at the Petroliumhaven will be renewed and the trailer park along the train track shall be removed. Both axes in the plan will serve slow traffic, since the main routes around the location are focussed on motorised traffic and public transport. Cars will be able to enter the location on both sides of the railway and a new railway arch in the middle of the location should connected those two sides, the Willem Dreespark and the Petroliumhaven. At Petroliumhaven the fire station shall be maintained, as well as the gardens for school children. A stronger relation will be made from the station towards the existing green structures in the area, by reconstructing the old Laakriver near the station and enlarging the green route along the Hildebrandplein. In the present situation the tramway runs along the south side of the Hildebrandplein, whereby the green structure is interrupted here. By moving the tramway to the north side, a better integrated transition point can be made for tram, bus and train and the south side will be free for enlarging the green structure. The tramway will also change position at the Erasmusweg near Moerwijk, so the green structure here can be restored as well, by locating the tram between the cars instead of in the green.

These elements together create the vision for this location in the Hague south west (see figure 13.1). Here, the most important objectives are the connections to the surroundings by creating two centralities and several slow traffic routes in this area towards the surrounding neighbourhoods.

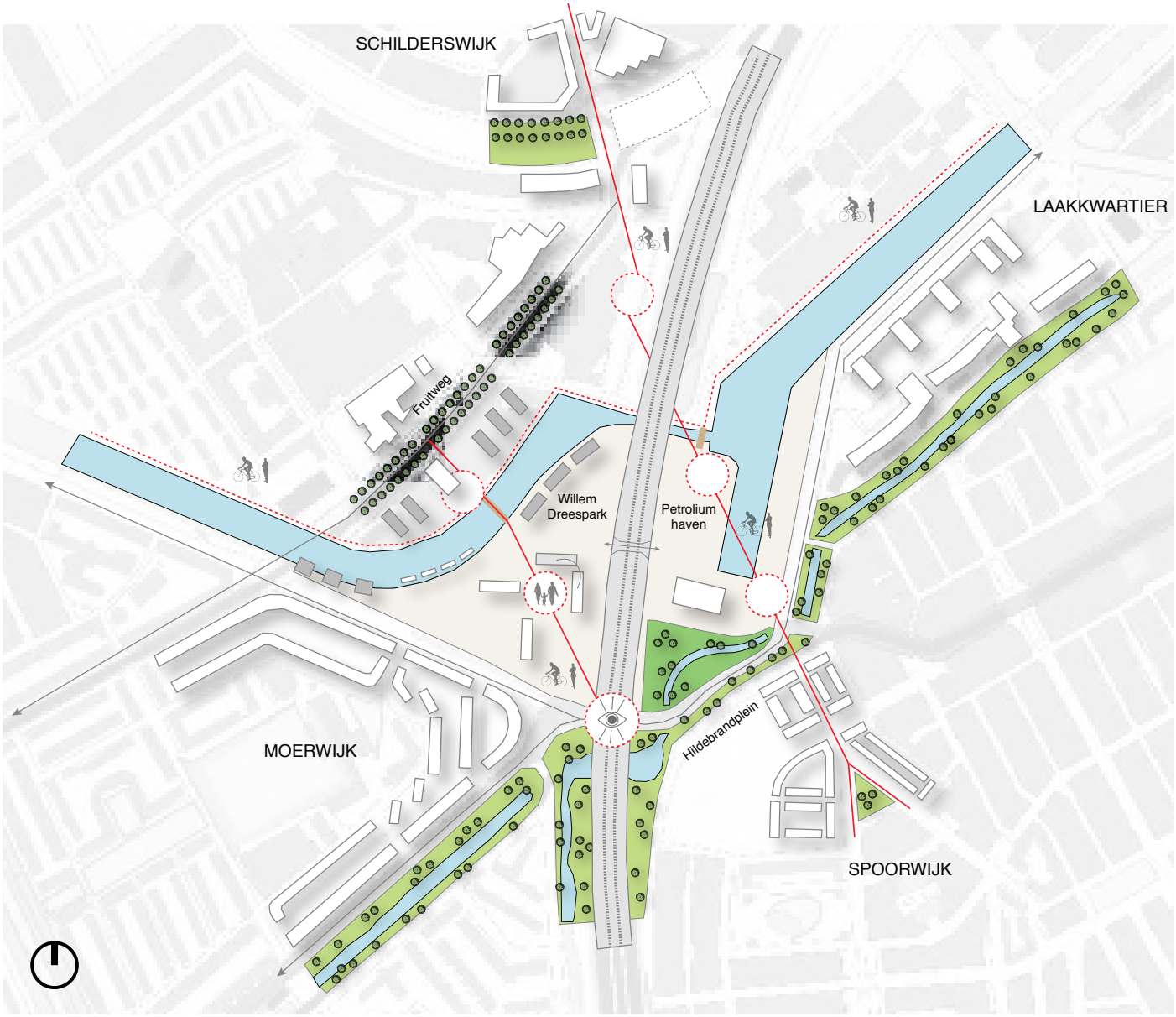


Figure 13.1 | Vision for the Hague south west | author, 2012

Figure 13.2 | Present situation | TOP 10NL, 2010

Figure 13.3 | Present situation 3D | Bingmaps, 2010

Figure 13.4 | Situation P1 (November 2011) | author, 2011

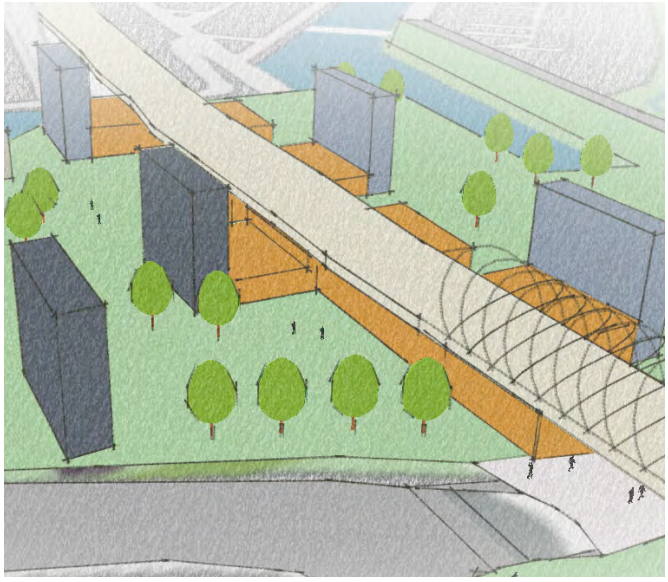


Figure 13.5 | Situation P1 3D (November 2011) | author, 2011

13.2 Urban design proposals

During the design process, several models for the location were developed, to search for the existing strengths and weaknesses in the area. In the present situation the three high rise building blocks at Willem Dreespark are the dominant elements and the only recognizable points to locate the station of Moerwijk. Beside, these buildings house more then 300 families, so maintaining the buildings in the plan was a starting point in the beginning of the project.

At the P1 presentation (see figure 13.4), after the first analysis of the location and the qualities of the area, the design was mostly orientated towards the train track, since this is the main structuring element and border in the area. The idea was to open the dike structure were the railway was located on and add a row of facilities under the tracks like the Hofbogen in Rotterdam or the 'Tussen de bogen' in Amsterdam. This was related to the idea of creating a new entrance for the city and giving the existing station more meaning in the area. The rest of the project area would be a park landscape, with free standing buildings as the existing high rise blocks. Slow traffic routes would run organically through the park to connected the two sides of the train track. The crossing at the station would be solved by creating a tunnel for the cars, with a public station square on it, to make a safety crossing for slow traffic. This first design proposal was based on making the green idea of the garden city of Moerwijk visible at the station and give an identity by adding programme to the transport node. But after more research in the area, it was clear that there were already enough existing green structures near the location, like the Laakriver, the Erasmusweg, the Zuiderpark and the Park Overvoorde, so a new park was not needed. It was better to restore the old structures and made them visible and accessible from the station. Beside, by adding only facilities under the train track in relation to the station, the rest of the area would not be connected to the place. One centrality would not solve the problem at this location and the free standing buildings would not create safe and lively slow traffic routes. Therefore a new proposal had to be made, with a clear structure for the location to connect it to the surroundings.

At the P2 presentation (see figure 13.6), this new structure for the location is created, by adding two axes on both sides of the railway, and adding programme to and around these axes, instead of focussing on the railway. During the process between P1 and P2 a theory paper was written, which provided the new idea of creating a hybrid function close to the station, but into the area, to serve the direct surroundings better, instead of only focussing on the station. Here the area along the Fruitweg is also part of the redevelopment area, since the axis leads to a new square on this side of the Laakkanaal. Around the existing high rise blocks are new enclosed building blocks created, with private and semi private spaces for the inhabitants. The hybrid function is located near the existing buildings, since this project will be realized at the beginning of the development process, and can work as a catalyst in the area. To realize this, several public facilities will be combined in this building, with a school and housing as the main facilities. The supporting facilities in the building will focus on serving the school and the neighbourhood at the same time, so this element can work as a second centrality in

Figure 13.6 | Situation P2 (January 2012) | author, 2012

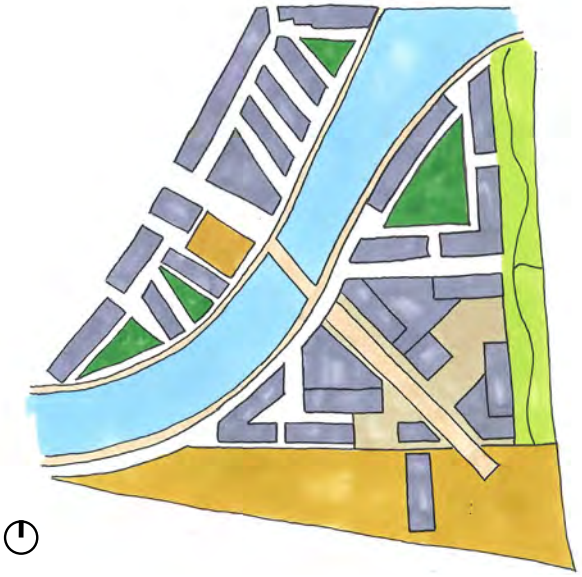


Figure 13.8 | Situation P3 Architectuur (April 2012) | author, 2012

Figure 13.7 | Situation P2 3D (January 2012) | author, 2012

Figure 13.9 | Situation P3 Architectuur 3D (April 2012) | author, 2012

the area, near the main centrality of the station. At the P3 presentation of architecture (see figure 13.8), the design proposal of P2 was further developed, by for example reflecting on the existing buildings along the Fruitweg that could be maintained. Beside, the architectural intervention of the school building changed in structure as well, to strengthen the axis and create a more clear public playground around it. The station square was enlarged towards the water, to have a more open en clear route to the station and situate the existing housing block on it. The buildings along the Fruitweg maintained their row structures towards the water from the last proposal, but the axis was extented to the Fruitweg. The green zone along the train track remained, to make a connection to the north and have a boundary zone between the tracks and the housing blocks. Howevere, in this proposal the connection from the axis to the station is unclear and the station square is far to open to create a pleasant public space for the neighbourhood. It was important to zoom out again from the project location to the surrounding, to get a better grip on the area and embed it better in the surrounding structures. Therefore, more research was done on the structures around the project area, to come to the new design proposal for the P4 presentation and the final product at P5.

13.3 Urban design

The urban plan for the location is a result of the research done by analysis of the location; literature studies on the topics of mobility environments, public spaces and school typologies; and the design proposals that are made during the design process. The plan is a translation of the vision for the area of the Hague south west, with the two main axes and their public spaces connected to it as the carriers of the plan (see figure 13.13). The two centralities of the station and the school are situated in the middle of the location, to achieve accessibility and connectivity on the scale of the city by the station and on the level of the neighbourhood by the mixed use school building. The axes of the plan are integrated with the routes along the waterfront of the Laakkanaal (see figure 13.22). Hereby with these four routes the four neighbourhoods in the surroundings can be connected: Moerwijk, Spoorwijk, Laakkwartier and Schilderswijk. Beside, the two axes create both a direct route between the Hildebrandplein and the Fruitweg, the main roads that have a wide reach in the city, as explained in de previous chapters.

Within this plan there are several different housing typologies, which shapes a mixed environment of building blocks to serve a wide scope of inhabitants. The existing high rise housing blocks can be transformed on the first two levels by adding public functions that serve the neighbourhoods and integrate the building blocks with the ground level. One of these public functions is the school building, which will be further explained by the architectural design in chapter 13.6. The school building will exist of a combination of a primary and high school, with neighbourhood facilities integrated in one building.

These neighbourhood facilities will be a library, sports hall and an auditory, which are situated along the axis and can be reached from inside the school or by an separated entrance at the axis. The functions in the other existing buildings can be a health care or dental care centre and for example sport facilities like a fitness centre (see figure 13.14 and 13.16). Along the Fruitweg a mixture of function will be created, instead of only business as it is in the present situation (see chapter 6). By creating a combination of retail, small businesses and housing, a more lively street will be realized. Cultural facilities, like a theatre, can be added as well and connected to the two squares near this road. The theatre square at the waterfront will be the entrance point from the west side to the location and can be supported by a restaurant or cafe connected to the cultural programme and the water. At this square the axis from the station meets the route along the waterfront, between the Zuiderpark and the Haagse Hoge school and the Schilderwijk. Within the urban plan, several new housing blocks are developed, which have differences in their public, collective or private use of the inner spaces, as explained more in to detail further on in this chapter. Along the waterfront are two routes created, that are part of the existing urban structures along the Laakkanaal. Here, four of the existing house boats are remained in the plan and the new created blocks are related to the water to develop a pleasant living environment.

On the east side of the track at the Petroliumhaven are the maintained fire station and garden for school children, with new public facilities as an extension of the retail of the Gouveneurslaan. Shops can be added to the new square and around the harbour, small businesses and restaurant facilities can be situated. The public functions will be combined with a housing programme, to created a lively residential area at the project location near the station. Two new bridges are added, one along the axis towards the station and the other one at the harbour. These elements and the new railway arches help to connect the area better to the surroundings. The two existing railway arches will be enlarged and in the middle will be a new one added, to connected the Willem Dreespark and the Petroliumhaven directly to each other.

Cars can enter the location from the Troelstrakade in the west and from the Goeveneurslaan or Neherkade in the east. By the railway arch in the middle these routes for cars are connected, which creates one integrated location instead of two separated sides of the train track. On both side of the track are two story parking facilities for cars, situated along the slope of the raised railway. The other new routes are for slow traffic, since in the present situation this location is dominated by car traffic and lacks accessibility for pedestrians and bicycles. In the new situation pedestrians and bicycles will have priority.

The tramway will be moved to the north side of the Hildebrandplein to make an integrated transition point for tram, bus and train at the station square. The bus will have its separated lane on the Troelstrakade, since this road will be down grated into a two lane street, with an extra bus lane. By reorganising this road, a better and clear crossing can be made at the station between the Erasmusweg, Hildebrandplein and Troelstrakade. Also more space will be available then along

the Troelstrakade, so the new buildings at the waterfront can be realized. By moving the tram to the other side of the Hildebrandplein, the existing green structure can be enlarged towards the old Laakriver and the water of the river can be made visible again at the station area. The ecological structures will be restored and a direct connection can be made towards the green structure of the Erasmusweg. Here the position of the tramway will also change, by placing the tram between the car lanes, instead of in the green structure. Hereby the green structure will get more space and a better ecological environment can be realized.

This urban plan can be seen as a ‘masterplan’ or ‘zoning plan’, however the important elements are made clear in the vision for the area and this plan should of course be developed in several phases. Therefore it is important to start this process by developing the architectural intervention near the station, combined with the axis towards the Fruitweg. From here on the routes along the water, the public spaces along the axis and the surrounding housing blocks can be developed. These elements will be described in the next part of this chapter. Afterwards, the rest of the plan can ne realized, while taking in consideration the transformation and changes in desires for the location that can arise in the future.

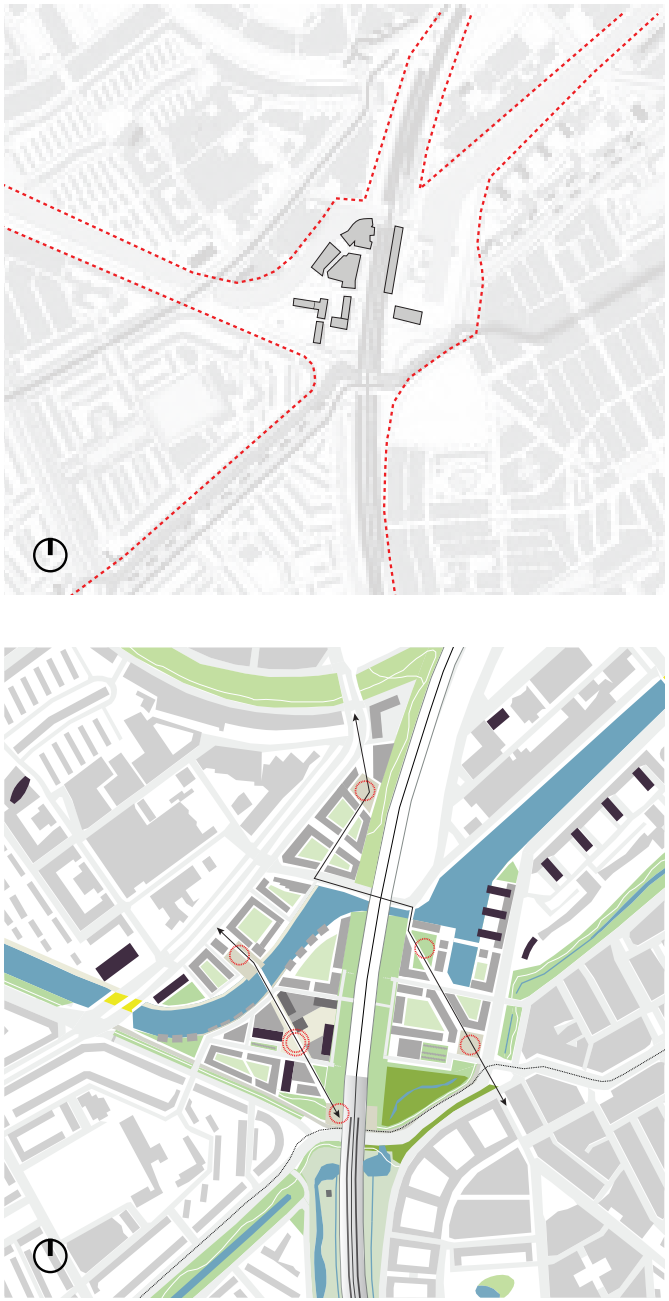


Figure 13.13 I Current situation and urban plan I author, 2012

Figure 13.15 | Urban plan large scale | author, 2012

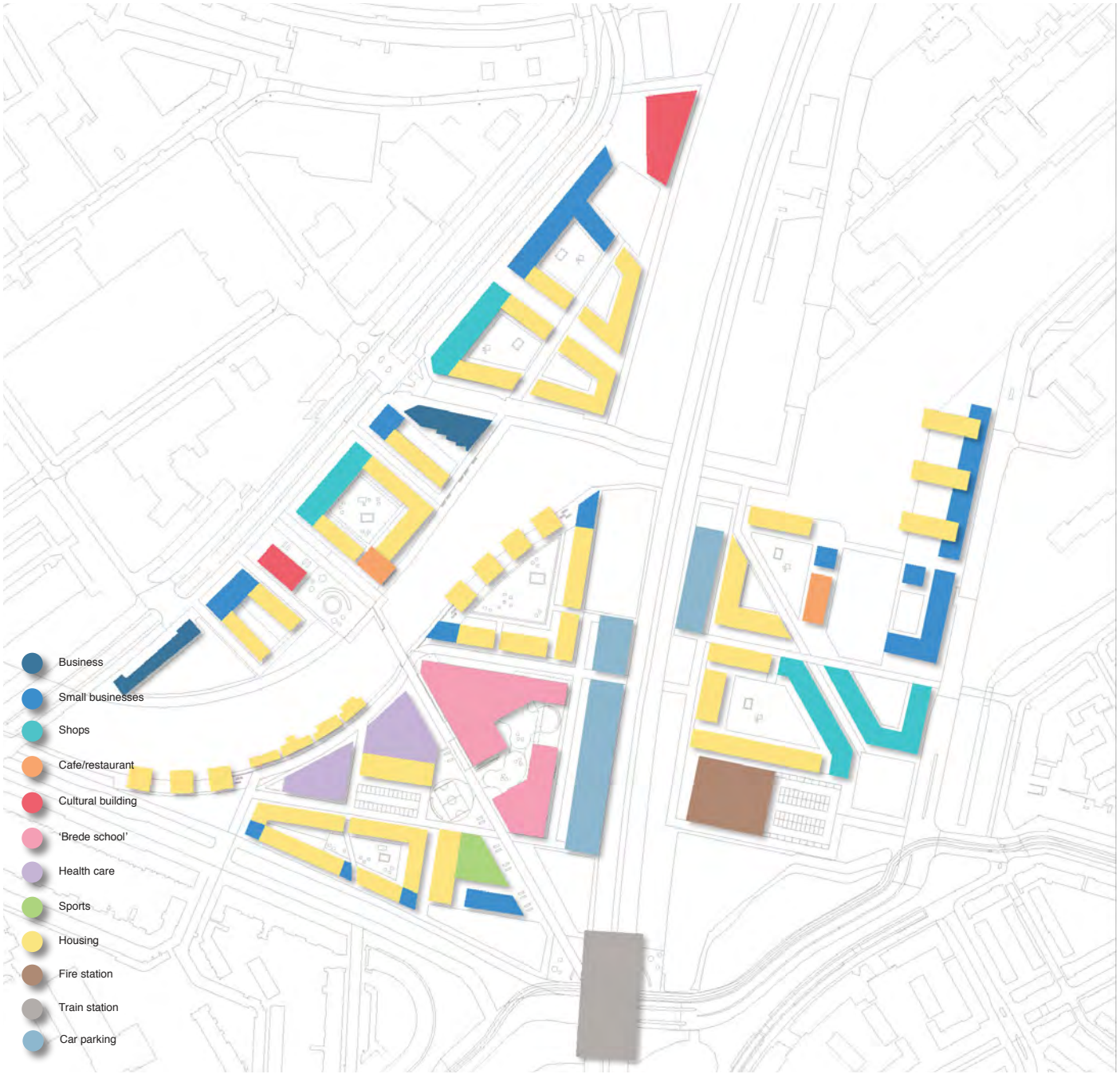


Figure 13.14 I Urban programme large scale I author, 2012

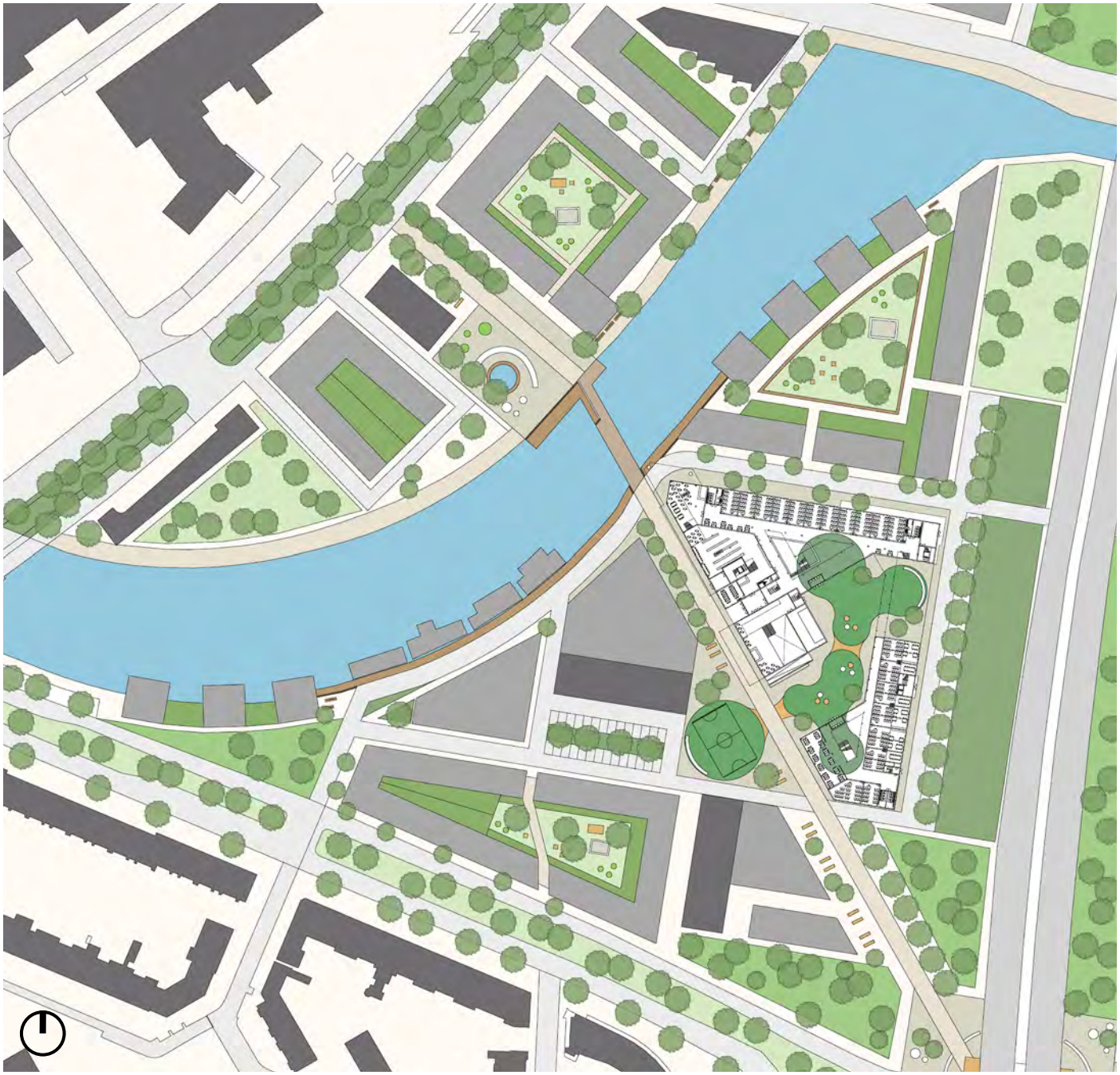


Figure 13.17 | Urban plan scale ensemble | author, 2012

Figure 13.16 | Urban programme scale ensemble | author, 2012

Figure 13.18 l 3D image of urban plan l author, 2012

Figure 13.20 l 3D image of urban plan l author, 2012

Figure 13.19 l 3D image of urban plan l author, 2012

Figure 13.21 l 3D image of urban plan l author, 2012

Routes along waterfront of the Laakkanaal

In the urban plan there are two routes along the waterfront of the Laakkanaal; one on the west side of the water, which is connected to the theatre square and the axis towards the station; and the other one on the east side of the water, which is connected to the same axis (see figure13.22). The first route is for pedestrians and bicycles and runs from the Zuiderpark towards the Schilderwijk in de north and the Haagse Hogeschool in the east. This route is the main direct route along the water and is part of the already existing route between the Zuiderpark and the Fruitweg, a new developed project by Mecanoo. The route will be extended by the transformations at the project location and adjustment that have to made in the street profile towards the Laakkwartier. Part of this road in the Laakkwartier is already pedestrian friendly, with a separated path and benches along the water, but the rest is still organized for industrial purposes.

The second route is a more informal way for pedestrians to use and explore the waterfront, which runs from the Zuiderpark to the old Laakriver and the Trekvliet near the Binckhorst in the east. This route is part of the already existing route along the old Laakriver, which has already ecological value and is a qualitative pedestrian route. This route will be extend by the new bridge at the Petroliumhaven and runs through the project location, inside one of the new buildings blocks and along the wooden deck near the houseboats, towards the Troelstrakade. This last part of the route should have some adjustments to make it an attractive space for pedestrians, since it has no clear footpath along the water and is only orientated on cars and bicycles. Part of this secondary route is lowered towards the houseboats and the water, which exists of a wooden deck, to have a more direct relation with the water of the Laakkanaal. Both routes are connected with each other by the new bridge of the axis towards the station. This bridge will be developed already in the beginning of the process, in relation to the architectural project. The bridge will be connected to the axis on the same level, so a direct route for pedestrians and bicycles can be realized along the axis. The water of the Laakkanaal is only 1-1,5m lower then the quay and therefore part of the secondary route along the water will be 0,5 m lower and connected to the bridge by steps. The main route on the west side will be directly connected to the theatre square and this square will have a wooden deck that is connected to the bridge. Along this route one of the housing blocks has the front gardens towards the water, to create more social control and liveliness along the route. These two routes together provide a differentiated way to explore the waterfront of the Laakkanaal and the green structure of the old Laakriver and integrate the project location with the network of this city district.

Figure 13.22 | Routes along waterfront of Laakkanaal | author, 2012

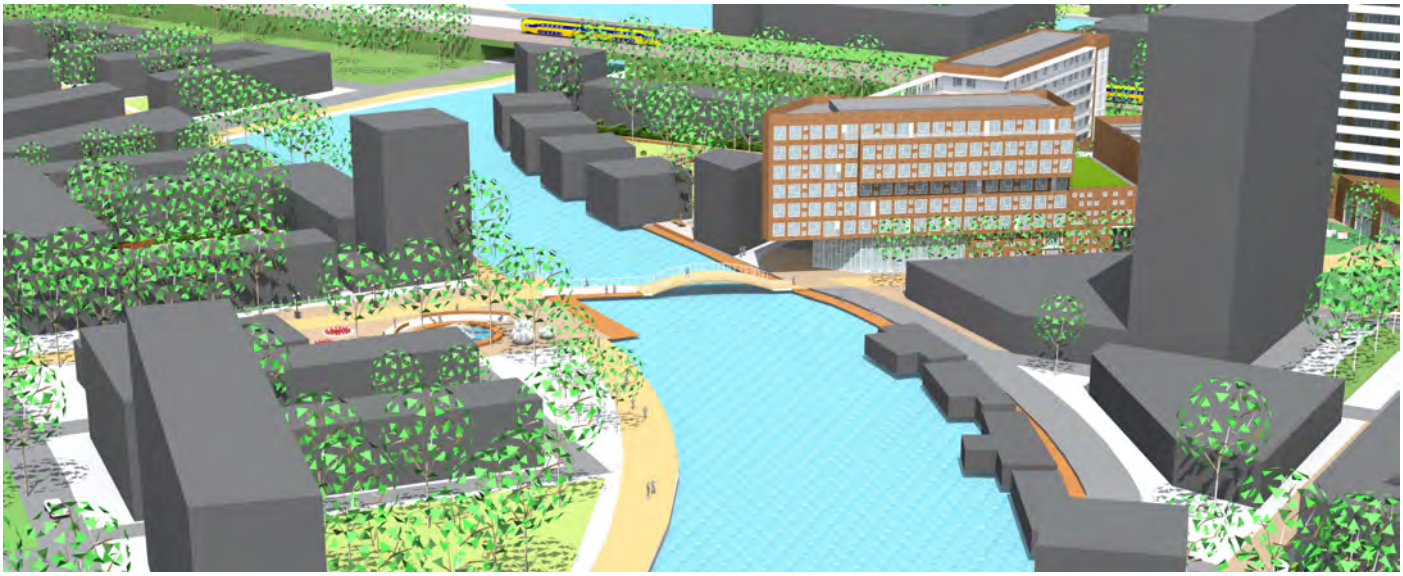


Figure 13.23 | 3D image of routes | author, 2012

Figure 13.24 | 3D image of main route along water | author, 2012

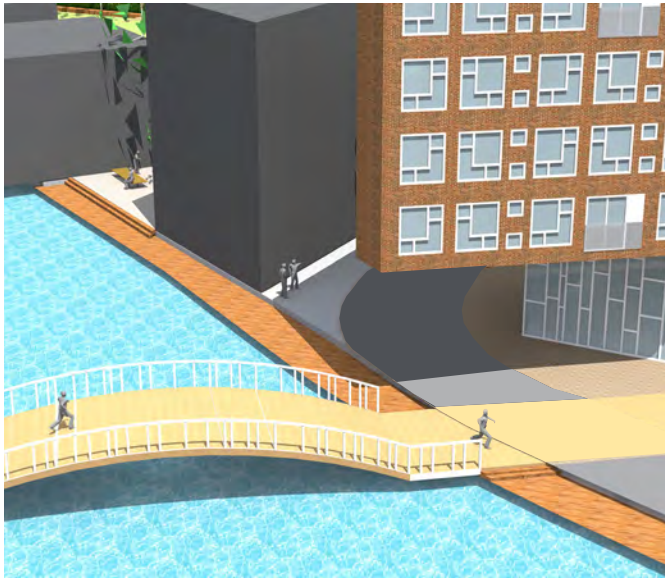


Figure 13.25 | 3D image of secondary route | author, 2012

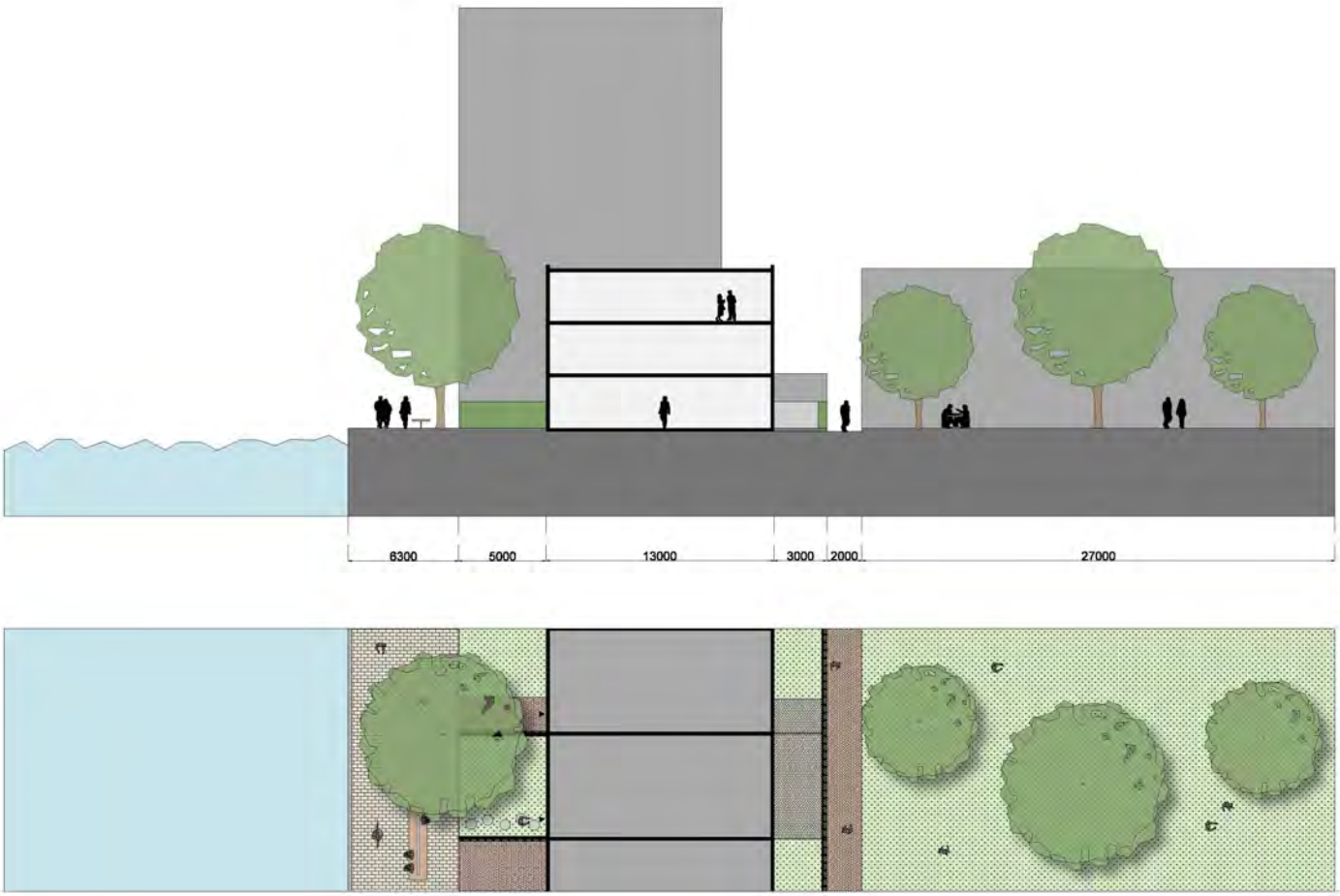


Figure 13.26 | Fragment of main route along water | author, 2012

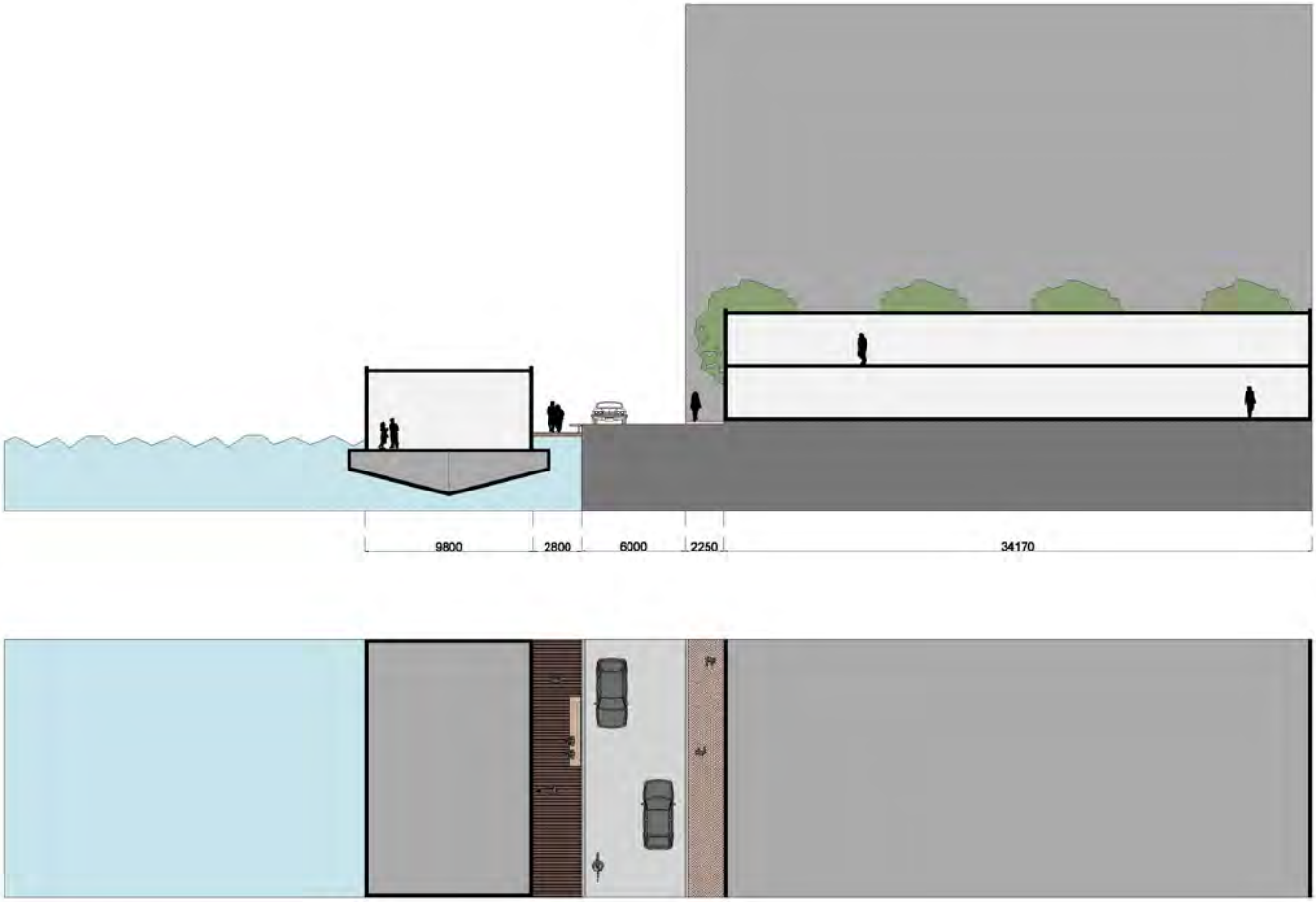


Figure 13.27 I Fragment of secondary route along water I author, 2012

Public spaces along axis

Along the main axis at the project location, between the Fruitweg and the station are three squares situated: the theatre square near the Fruitweg, the station square and the public playground of the school building in the middle (see 13.28). These three squares all have their own identity and functions for the project location. The theatre square is dominated by a cultural programme and a restaurant or cafe to support the theatre. This square is the entrance point of the location on the west side and has a direct relation with the water of the Laakkanaal. Part of the square consists of a lower wooden deck, which is connected to the new bridge of the axis. Over the square runs the main routes along the water, as explained in the previous paragraph. On the square is a fountain to support the relation with the water and give identity to this public space. A large concrete bench with wooden seats is designed in relation to this fountain and has the same structure as the seatings on the other two squares.

The public playground of the school is situated in the middle of the axis and is partly separated by this route. The playground exists of three main play fields, that are related to the activities mentioned in the literature study: 'Competition' with the sport field on the left side, 'Movement' with play elements in the middle and 'Rest' with the concrete bench and its wooden seats on the right side. The active engagement of the children will be more orientated towards the axis, since here more other activities will take place because of the movement of visitors on the axis. The public activities for the neighbourhood, that can be used separatly form the school, are also situated along this axis. On the right side, more away from the axis is the resting area, with sight on the main entrance of the school and the train track on the other side. Along the axis are of course also seatings for visitors, but this is more separated from the activities of the school. The other two activity zones that should be present at a public playground, 'Construct' and 'Imitate', will be situated inside the school building, with imitation in the main entrance hall near the auditory and construction near the technical classrooms in the second entrance hall in the south. The pavement of the playground marks these five activity zones by green rubber tiles, that provide a child friendly play area. This pavement will be extend within the school building by shape and colour, but will be made of an other material, a cast floor. By this organic shape of the play areas, the public space will be related to the inner space of the building and will guide people from the axis to the playground and into the school building.

The station square is the entrance point on the south side of the project location by the public transport network, which is the entrance from the higher scale of the city and the region. The axis from this square guides people into the location and gives direction to the tram- and bus stop, as well as the entrance of the train station. This square is less designed to support staying activities, since the user of the square will mainly use the space to transit from one public transport to an other. On the south side of the road under the tracks, is the second entrance point to the station, with the bicycle storage in the slope of the dike structure. Here, the routes for pedestrians and bicycles are made more safe and lively to have better accessibility to the square, the station and the project area.

Figure 13.28 | Public spaces along the axis | author, 2012

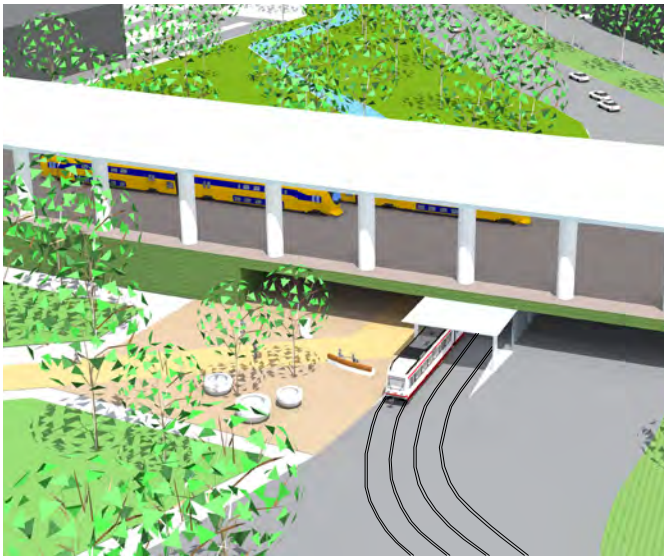


Figure 13.29 | 3D image of the station square | author, 2012

Figure 13.30 | 3D image of the station square | author, 2012

Figure 13.31 | 3D image of the axis along the school building | author, 2012

Figure 13.32 | 3D image of the playground | author, 2012

Figure 13.33 | 3D image of the playground | author, 2012

Figure 13.34 | 3D image of the theatre square | author, 2012

Figure 13.35 | 3D image of the theatre square | author, 2012

Building blocks and collective gardens

Within in the project location, in the design of the ensemble are three building blocks that are further developed into detail. These three housing blocks differ from each other by their facilities and the use of the inner spaces, from private to collective and public. The first block (A) is situated between the Fruitweg and the Laakkanaal, and next to the theatre square. Because of the different environments around the building, the block has different facilities and characters to its surroundings. Along the Fruitweg small business facilities can be part of the block, with apartments above. This part of the block is therefore five levels, instead of three levels, like the average of the block. Along the theatre square are houses in a row with a small private 'strip' in front and a garden at the back. Next to these houses is an apartment block of eight levels, with a restaurant or cafe facility on the ground level. Along the waterfront are houses with a front garden to support social control along the route and provide a sunny outdoor space. The back gardens of these houses will be most of the time in the shade. On the north side this block will have the most 'quite' space, since this road will mainly be used by residents and therefore, less intermediate space between the public and the private area is needed.

The second block (E) is located on the other side of the Laakkanaal, along the road between the Willem Dreespark and the Petroliumhaven. This block also has different characters towards its surroundings, with free standing blocks of three levels along the waterfront, small office spaces at the end of the triangular block of five levels and apartments in between of three levels. This housing block will have less movement of pedestrians along the front side of the block, but will have more movement inside the block, since this is part of the secondary route along the waterfront of the Laakkanaal. This block is situated next to the architectural project and is therefore adjusted to the design of this building.

The third building block (I) is located along the Troelstrakade, next to the separated bus lane and between two of the existing high rise housing blocks. The height of the south side of the block is adapted to the existing blocks along this road of four levels. The other sides are three levels, to create a more pleasant inner space with more possibility for insolation. Within this block it is possible to realize small office spaces at the corners or along the route through the block. The houses on the east and west side have a private front garden, to create a wider intermediate space between the public and the private space, especially next to the high rise block of 17 levels. On the north and south side are also private spaces created in front of the houses, but they have a smaller dimension.

In the next paragraphs the building blocks will be described more into detail, with focus on the use of the public, collective and private spaces, in relation to the surrounding structures and the urban plan as a whole.

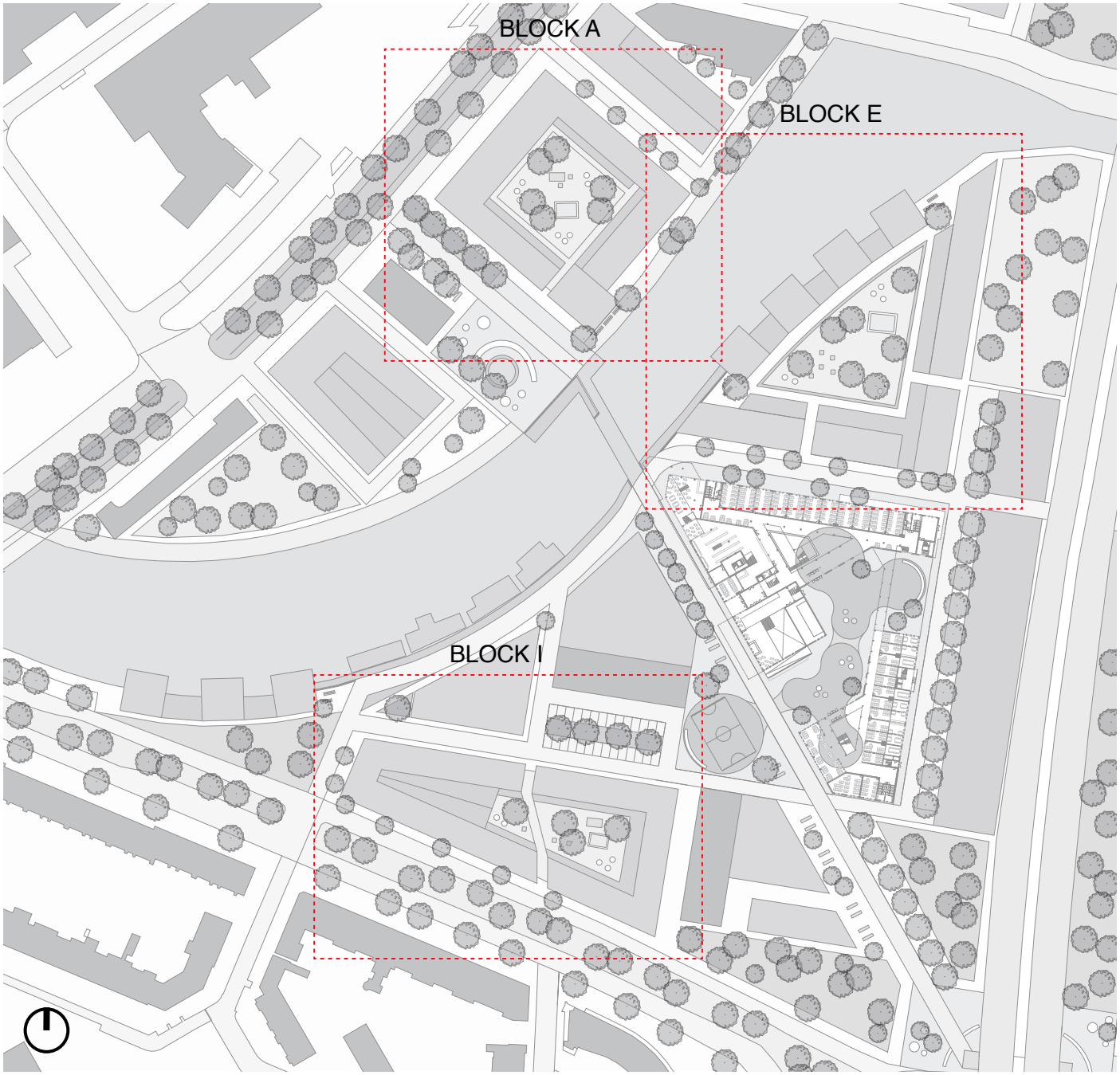


Figure 13.36 | Building blocks in plan | author, 2012

Figure 13.37 I Reference GWL project Amsterdam I KCAP, 2010

Figure 13.38 I Vrijburcht Amsterdam I Comfort Partners, 2012

Block A : private collective garden

This building block is characterized by several different surrounding elements, because of the near Fruitweg, the waterfront of the Laak ad the theatre square (figure 13.42). Because of its position in the plan and its orientation towards the sun, the inner space of this block is a private collective garden for the residents. The residents will have a small private space of 3m connected to this collective garden and a strip or garden in front of the house. This block can be developed as private houses or apartments, depending on the architectural design for this building block. The back gardens will be separated with the collective garden by a hedge and with each other by a small fence. Hereby the private gardens will be part of the collective garden.

For this inner space several references are reviewed, such as the gardens at the GWL project in Amsterdam west (see figure 13.37) and the project Vrijburcht at the Steigereiland in Amsterdam (see 13.38). In this last project the residents have small private gardens whereby the collective garden will be used more often. This project is developed in CPO (Collectief Particulier Opdrachtgeverschap), so there was already a clear group of residents before the realisation of the project. By involving the users of the space in the beginning of the design and development process, a more suitable result can be established. This approach can also be applied in the design and development of building block A. The pavement of the path in the collective garden will be bricks, in relation to the theatre square and the main axis towards the station. The pattern and the colour of this pavement differs from the square and the axis, to give the inner space its own identity.

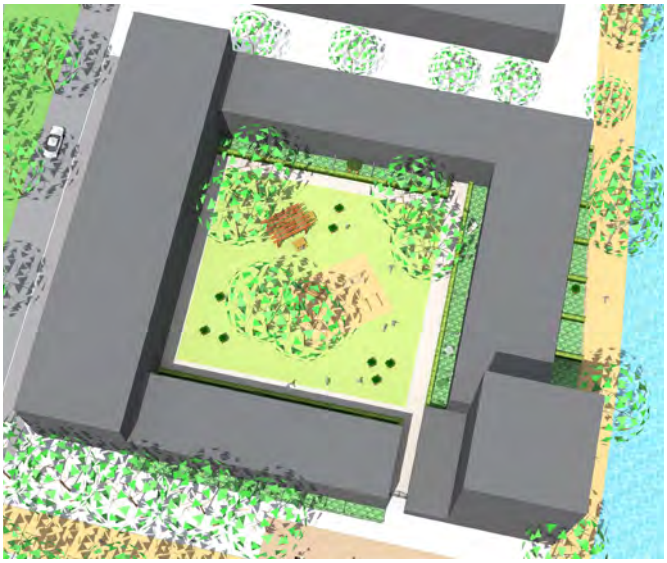


Figure 13.39 l 3D image of block A l author, 2012

Figure 13.40 l 3D image inside block A l author, 2012

Figure 13.41 l 3D image inside block A l author, 2012

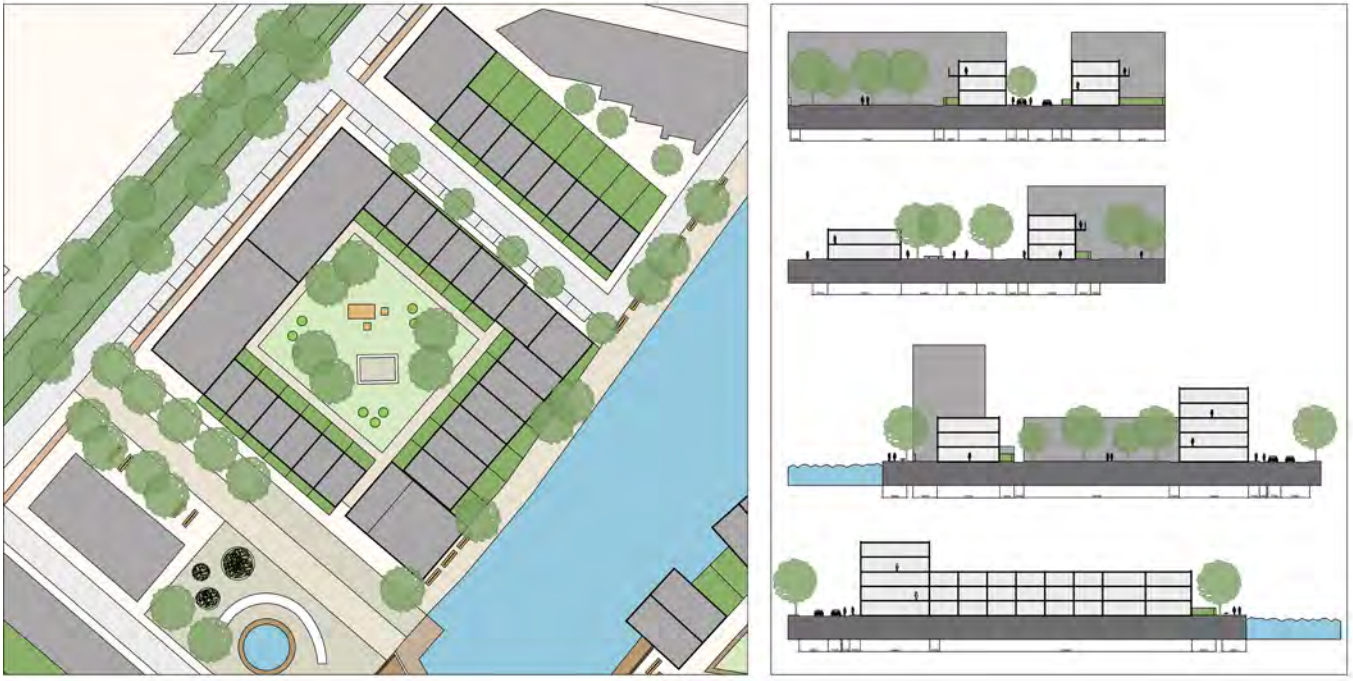


Figure 13.42 | Plan and sections of block A | author, 2012

Figure 13.43 | Fragment of block A and axis | author, 2012

Figure 13.44 I Reference Zuilen 808 I Portaal, 2010

Figure 13.45 I Reference Huis van Hendrik I Ymere, 2012

Block E : public collective garden

This building block is situated at the edge of the urban plan, with a close relation towards the waterfront, the green zone along the train track and the architectural intervention. Because of its positions in the urban plan, this block is part of the secondary route along the water and therefore it has a public inner space, since the route runs through the building block. The houses or apartments in this block will have larger private garden of 6m then in block A. Hereby a wider intermediate space between the public and private places van be created. The public garden is accessible from four sides and is related to the water at the corners. The free standing blocks along the water also have there private gardens in between the building elements. The public garden will be raised 1m, to make a clear distinction between the moving area at the route and the playing or staying area of the garden (see figure 13.49).

For this garden projects in Zuilen and Haarlem (figure 13.44 and 13.45) are reviewed, but more in a way of how these private gardens can be related to this public garden, without creating a barrier between them. It is not the intention to have high fences around the private gardens, since ‘eyes on the street’ will enhance the feeling of a safety and pleasant route and public garden. The pavement of this route in the inner space will be related to the other building blocks, so bricks in the same pattern as in block A will be used.

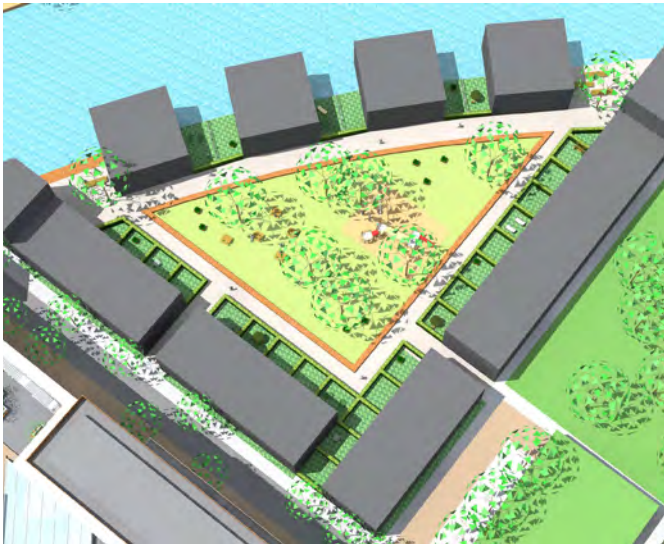


Figure 13.46 | 3D image of block E | author, 2012

Figure 13.47 | 3D image inside block E | author, 2012

Figure 13.48 | 3D image inside block I | author, 2012

Figure 13.49 | Plan and sections of block E | author, 2012

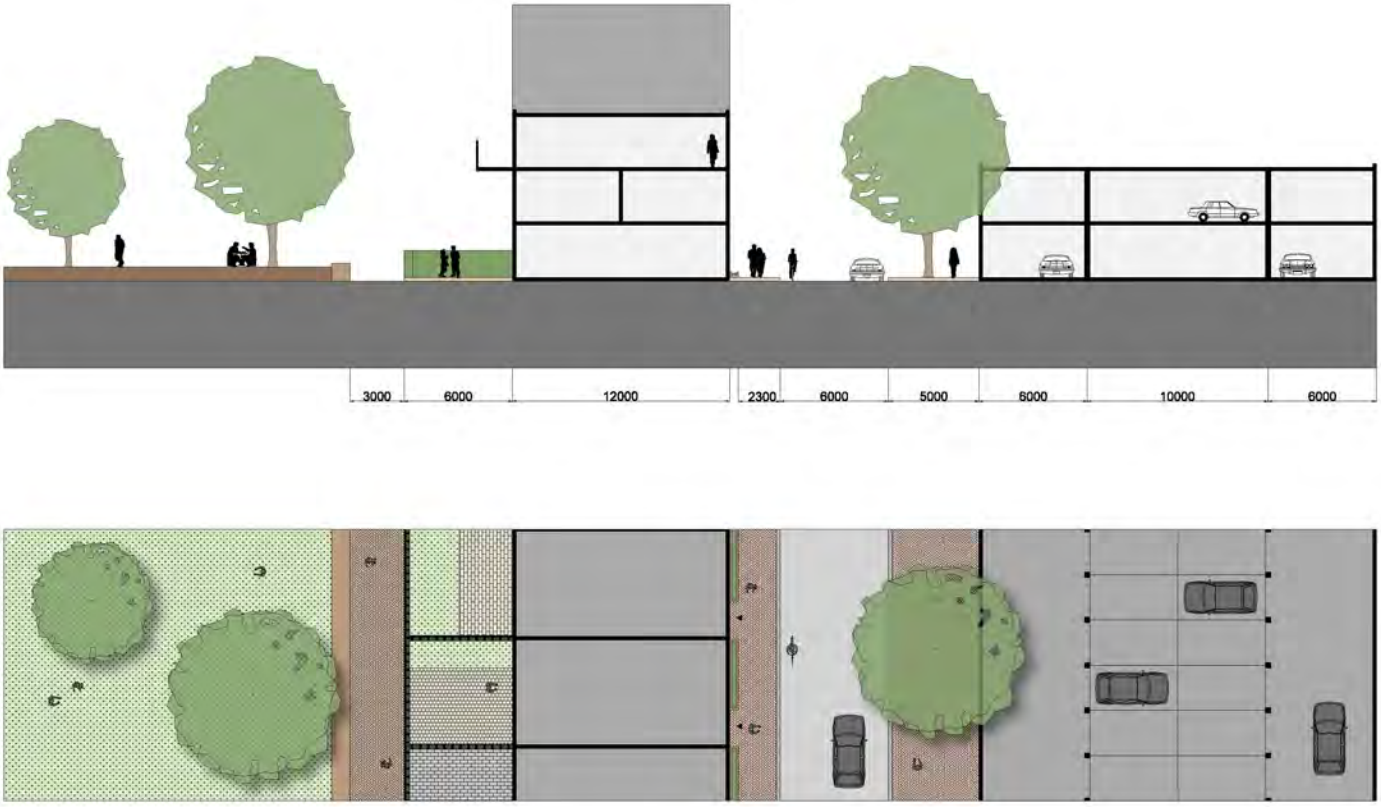


Figure 13.50 | Fragment of block E | author, 2012

Figure 13.51 I Reference Tricotage I Brouwerspoort, 2011

Figure 13.52 I Reference de Minnehof I Minnehof, 2012

Block I: semi public collective garden

The third block is situated along the (down graded) Troelstrakade, between two of the existing high rise building blocks of the Willem Dreespark (see figure 13.56). Because of its position in the urban plan, this block is a combination of the other two block with their inner spaces : it is a semi public collective garden, which can be closed in the evening or night. During the day this inner space can be used by other inhabitants or as a route for visitors, but the residents are responsible for the maintenance of the garden. Part of these houses have a larger private garden of around 6m deep, while the others have a small garden of 3m connected to the public collective space. The separation between the collective space and the private spaces will be again made by hedges and small fences, to avoid high fences that do not have a relation with the collective garden.

For this building block the projects of Tricotage in Veenendaal and the Minnehof in Eemnes (see figure 13.51 and 13.52) are reviewed, to study how the small private spaces could be designed and how this route through the block could be integrated. Because of its location near the Troelstrakade, a more private character was needed then with block E, but the route through the building provides a better relation with the surrounding structures then the private collective garden of block A. The pavement of the route in the block is related to the pavement and pattern of the other blocks.
With these three blocks different ways to organize an inner space of a building block are researched and these buildings can be seen as examples for the rest of the blocks in the urban project.

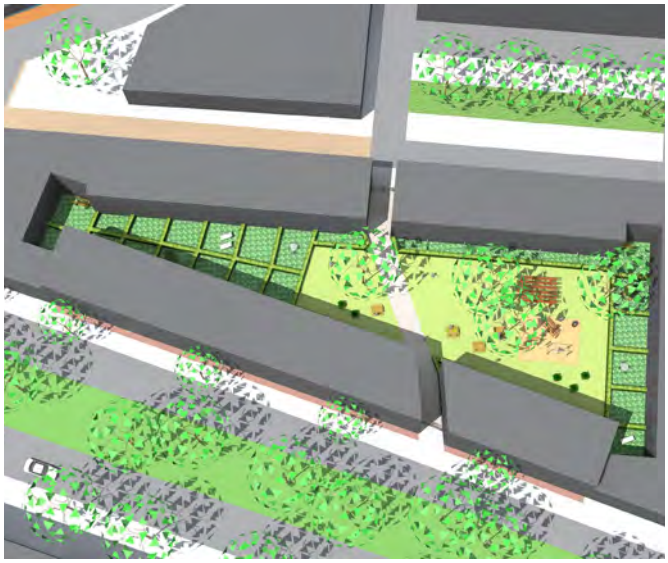


Figure 13.53 l 3D image of block I l author, 2012

Figure 13.54 l 3D image inside block I l author, 2012

Figure 13.55 l 3D image inside block I l author, 2012

Figure 13.56 | Plan and sections of block I | author, 2012

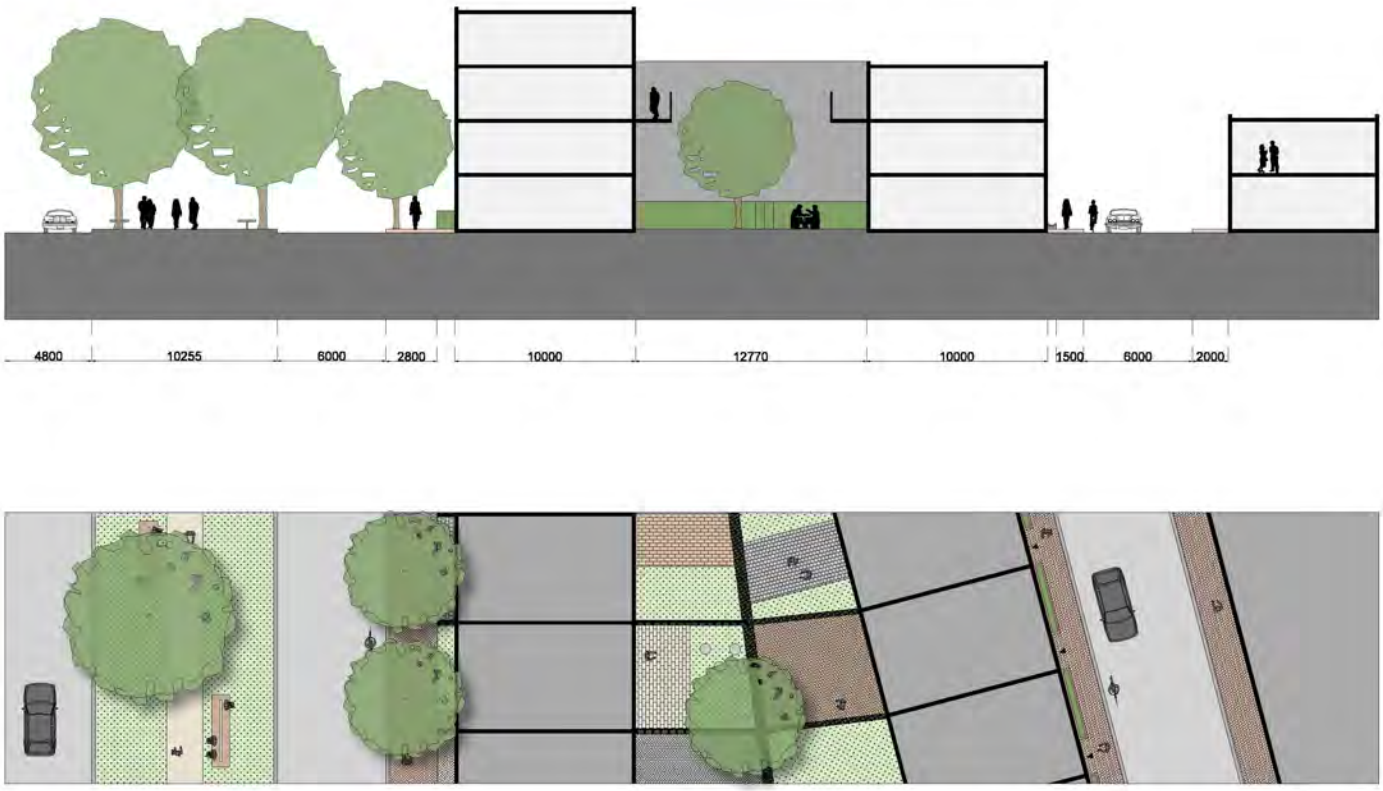


Figure 13.57 | Fragment of block I | author, 2012

Figure 13.58 | Appearance and materialization in urban plan | collected by author, 2013

13.4 Requirements for urban design

- The axes should be directly linked with the existing network and connect the surrounding neighbourhoods to each other.
- The building blocks should contain different housing typologies, depending on the dimensions of the blocks (see figure 13.59).
- A percentage of the houses should have the possibility to have an office space or studio within the house.
- The architectural design should be the starting point of the transformation process, combined with the axis between the Fruitweg and the station.
- The rest of the industrial area along the Fruitweg, could be transformed in a next phase of the development process (see chapter 14).
- Each house within the building blocks should have a private space, like a balcony or a (small) garden of at least 3m deep.
- There should be a intermediate space between the public street and the front door of the houses, like a front garden, a small plateau or pot of flowers.
- There should be a clear determination on who is responsible for the collective space inside the building blocks, depending on its degree of being public or private.
- Between the private spaces and the collective spaces is only a natural demarcation allowed, like a green fence or a hedge. This demarcation should have a maximum height of 1m to a semi public or private collective garden and a height of 1,5m to a public collective space.
- Both axes in the plan should have a clear and continues type of pavement of bricks.
- The routes along the waterfront should differ from each other by the type of slow traffic and be connected by the bridge of the main axis.
- There should be clear street lighting in the evening and at night in the project area
- The curved benches at the squares have to be from the same material and have the same appearance, while the benches a;long the axis and the routes along the water can differ from each other (see figure 13.58).
- The playground of the school should be adapted to its function with bright colours and elements for children to play.

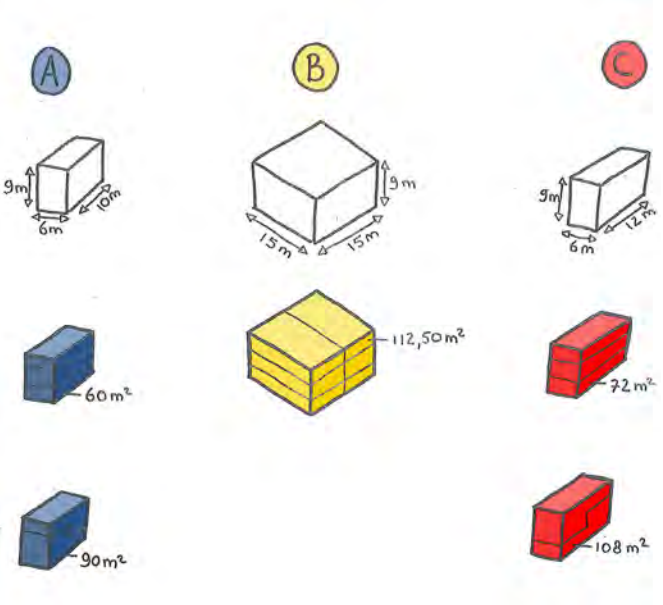


Figure 13.59 I Housing typologies I author, 2012

13.5 Architectural design proposals

During the design process, several models for the architectural intervention were developed, to search for the integration with the urban surroundings and the placement of the different programme components.
The first idea was to relate the intervention with the existing high rise buildings, by adding an other high rise element on a lower two story building. Here the relation with the axis and the existing buildings was already a focus point, however the new high rise element did not support the insolation in the project area and failed to structure the public space in between the building blocks (see figure 13.60 and 13.61). Beside the space inside the new building, was too small in relation to the built element to fur fill its purpose of a courtyard for the school. The existing high rise buildings were only related in height with the new building in this design proposal, and their connection to the ground level is still missing.

Therefore, at the P2 presentation a lower building element was created, to support the axis and to not interfere with the insolation at the location (see figure 13.62). To the existing high rise blocks new building elements were added, but these new elements did not structure the public space in the area. Although this proposal tried to support the elements of the urban surroundings and the insolation of the area, it did not relate to the existing high rise buildings and could be seen as an autonomous building. Beside the spaces that were defined by the shape of this building element, were still unclear and needed a stronger demarcation between public space and collective space for the school building. Again, more research was needed on the shape and height of the new building and its relation to the surrounding building structure and public space.

Therefore, studies were done on the elements of the new building and their dimensions in relation to the surroundings. At the P3 presentation, a new proposal was made with a differentiation in the height of the new building elements in relation to the existing high rise buildings (see figure 13.63). One of these existing buildings is now integrated in the architectural plan, to support the idea of making an integrated project, with the high rise buildings as the recognizable elements in the area. By placing several building elements along the axis and creating a new complex with a transition in height of the elements, a stronger building structure could be realized. The shape of this design proposal supports the direction of the axis and helps to define the public space in the area and the collective space for the school. The placement of the programme components strengthened the arrangement of the building elements and the degree of being ‘public’ along the axis. Therefore the public programme is orientated towards the axis and the programme of the school is located around the courtyard of the new building structure. This design proposal was further developed towards the P4 presentation by relating the building again to the urban structures in the area and researching the integration of the different programme components.

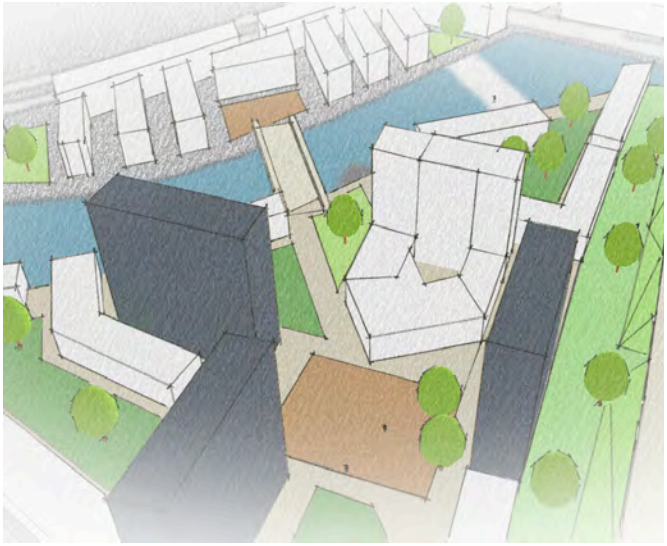


Figure 13.60 | Model before P2 presentation | author, 2011

Figure 13.62 | Model at P2 presentation (January 2012) | author, 2012

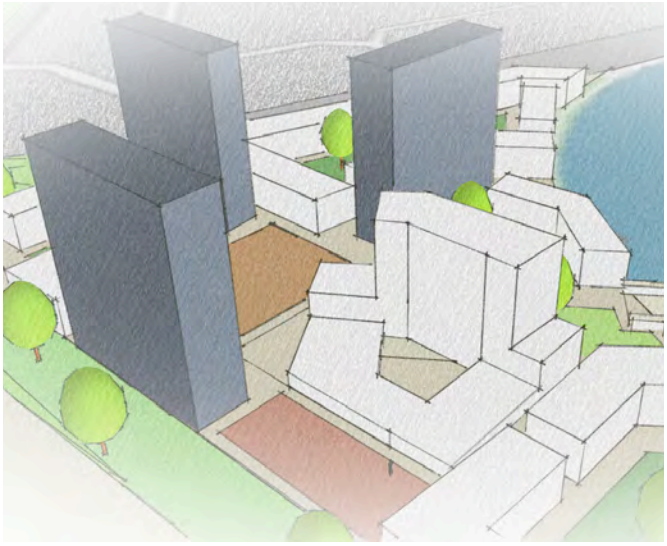


Figure 13.61 | Model before P2 presentation | author, 2011

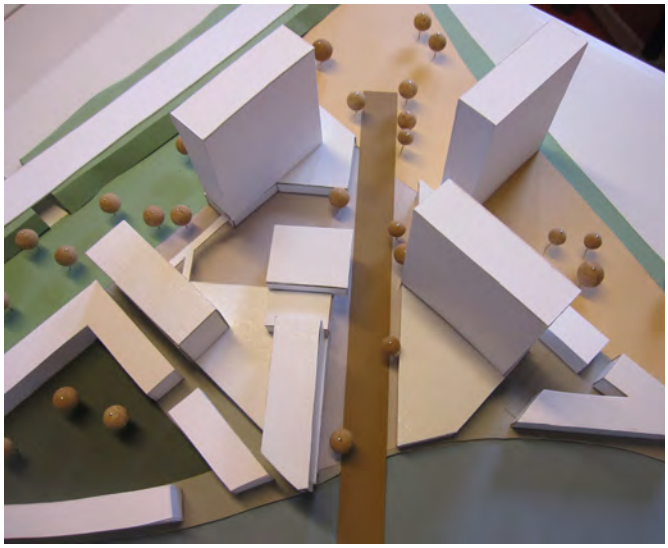


Figure 13.63 | Model at P3 presentation (April 2012) | author, 2012

Facade design proposals

After defining the building structure for the architectural intervention, several studies were done on the design of the facade. The appearance of the different building elements, in material, arrangement, openness and organisation of the facade were researched during this design process. Several facade proposals were made, to structure the new building complex and search for the relation towards the existing high rise building block. Especially the building element of the auditory and sports hall in the middle of the complex (see next chapter on 'Programme of the building) had a structuring role, since it had a public function along the axis and at the same time was a element of the school. Beside because of its central position, it was directly related to the existing high rise buildings in the area and the higher elements of the new complex.

The four facade design proposals made during this design process researched the relation between the different building elements and especially the extent to which the different elements needed to be recognizable separately or if the complex had be one building element. The appearance of the school building (first two stories) as an open or massive/closed structure and the transformation of the existing building block, were important focus points (see figure 13.66 and 13.67). The material of the building was chosen as bricks, wood and concrete, depending on the relation between the different building elements. Firstly, the facade of the housing blocks was designed directly related to the floor plans of the building, organizing the windows on the ideal places for the programme behind the facade (see figure 13.67). However the influence of the facade of the project 'Fusion' from Marlies Rohmer is also visible in the other proposals (see figure 13.64). The facade of the public programme along the axis, as a closed facade which does not predict the programme behind it, was further developed in the fourth facade proposal (see figure 13.68). This closed facade was a reaction on the third proposal, which showed a open structure as the carrier for the housing blocks above (see figure 13.67).

This fourth proposal, which did not have the floor plans as its starting point for designing the facade, was further developed after the P3 presentation (see figure 13.64). Here the materials for the different building elements were more closely researched and the arrangement of the windows and open or closed facades were studied. The existing high rise block was maintained to its original organization of the facade in the levels three until seventeen. Hereby this building was still recognizable as a separate element and could be related to the other two existing high rise blocks. The arrangement of the window fragments as a important facade element was studied as well, which will be further handled in the next chapter.

Figure 13.64 | Facade study after P3 presentation | author, 2012

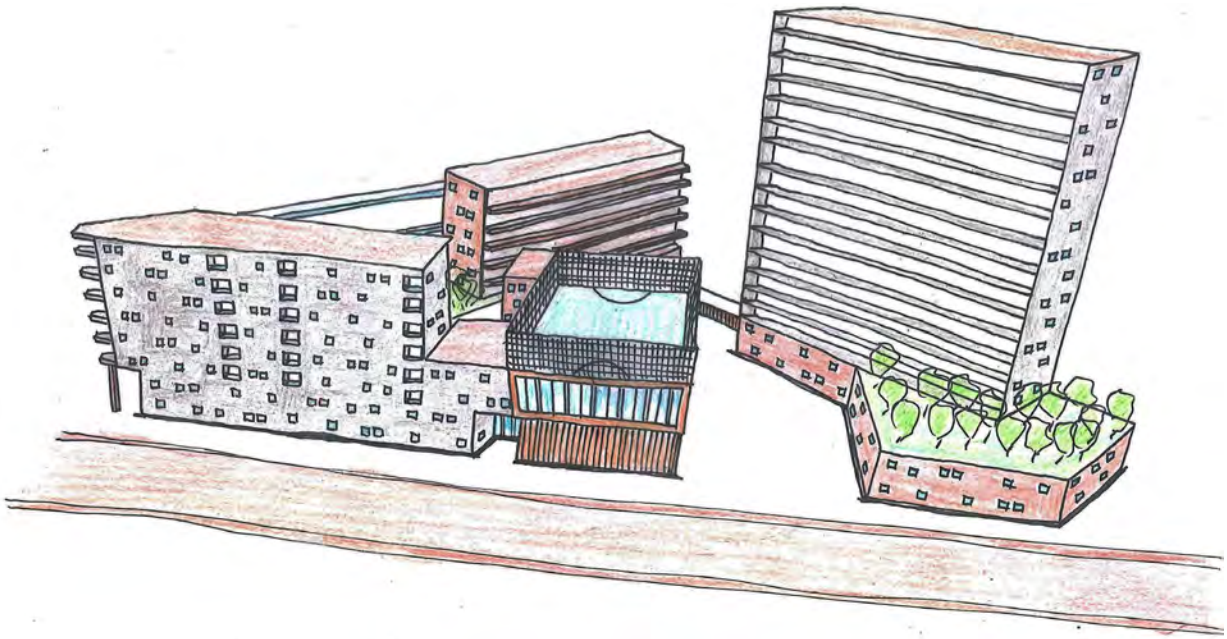


Figure 13.65 | Facade study at P3 presentation | author, 2012

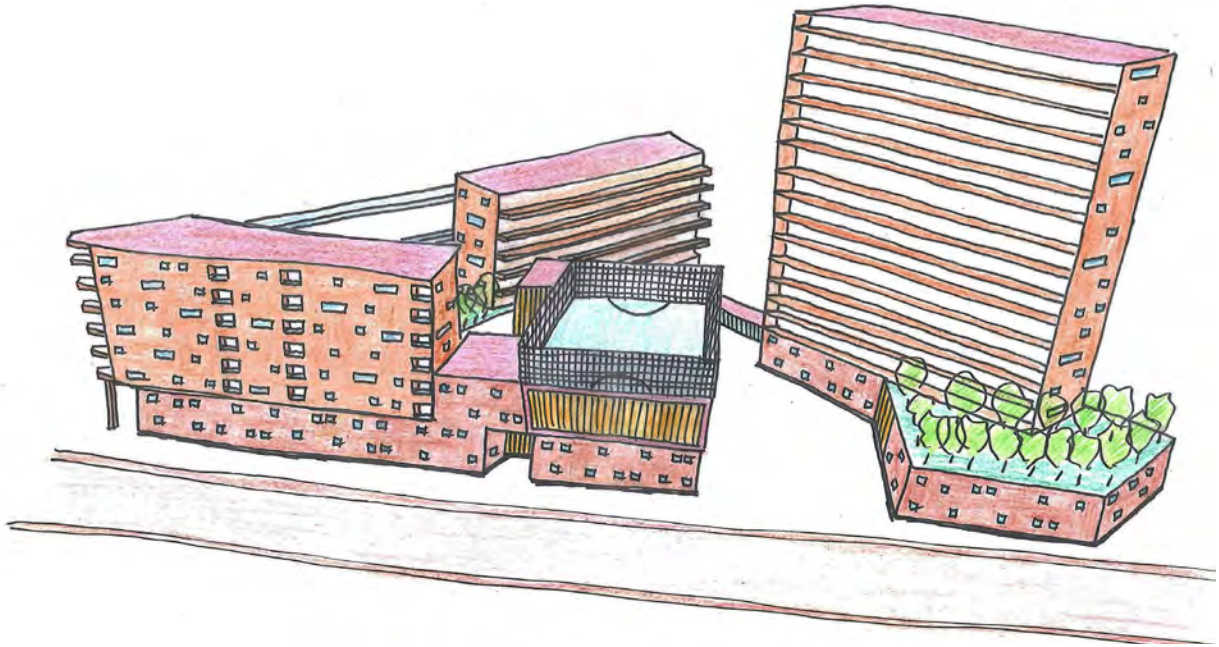


Figure 13.66| Facade study at P3 presentation | author, 2012

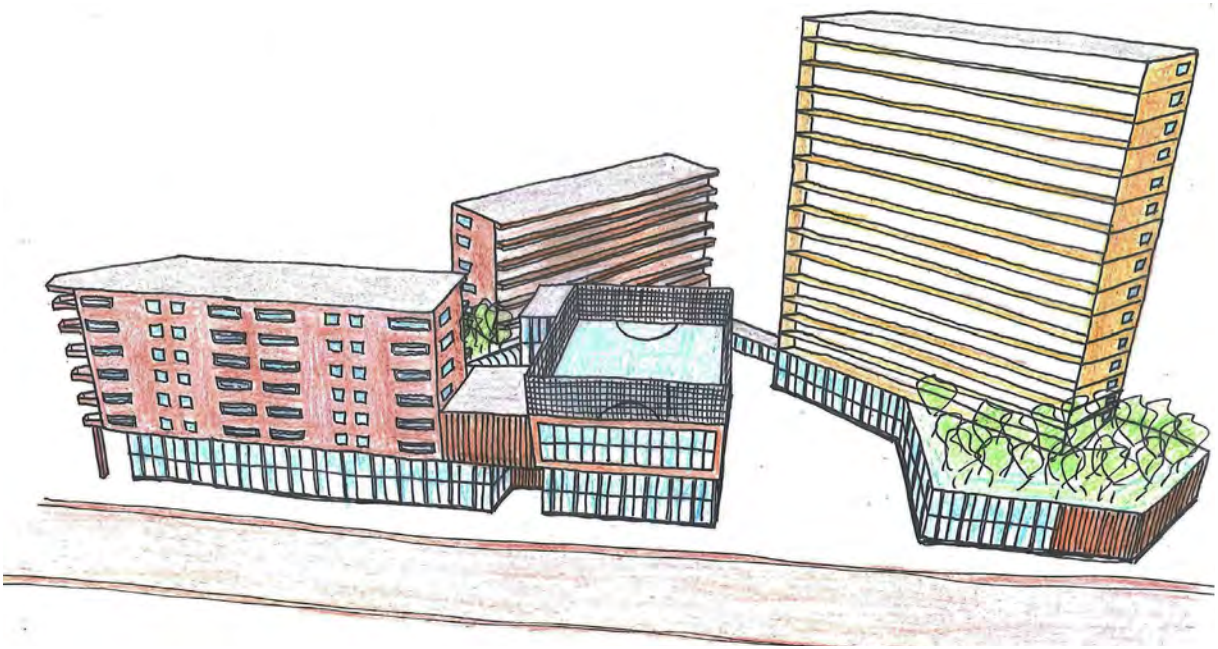


Figure 13.67 | Facade study at P3 presentation | author, 2012

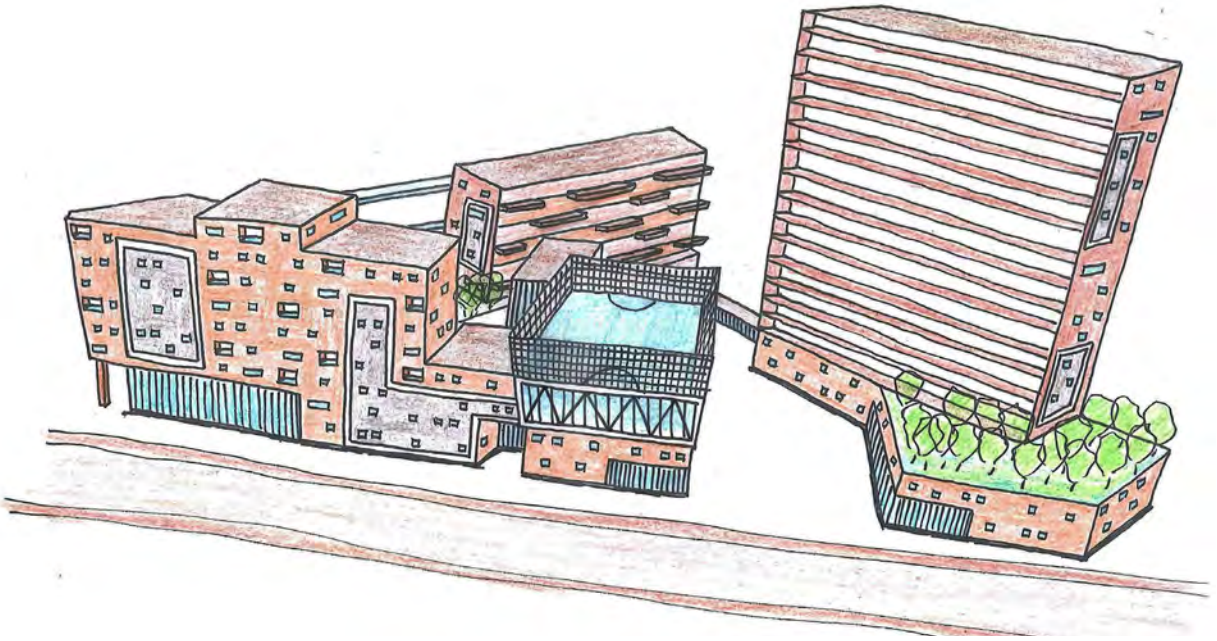


Figure 13.68 | Facade study at P3 presentation | author, 2012

HOUSING	**19300m2**
- Existing :	*11500m2*
- New :	*7800m2*
SCHOOL	**8400m2**
- Library :	*1000m2*
- Auditory:	*600m2*
- Sports :	*700m2*
- Restaurant :	*300m2*
- Bicycle parking :	*900m2*
- School facilities :	*4900m2*
TOTAL	**27700M2**

Figure 13.69 I Programme requirements I author, 2012

13.6 Architectural design

The architectural design consists of several functions, which can be divided into two main programme components: Housing and School. The housing programme is mainly the existing housing of the high rise block (11500m2) and also the two new housing elements in the new building (7800m2). The school programme consists of several public functions, such as the library (1000m2), the sports hall (700m2) and the auditory (600m2). The restaurant (300m2) and the bicycle parking (900m2) are related to the school facilities, which are the classrooms and study areas.

This new building complex contains several public functions, which can be used separately from the school facilities. These facilities help to support the public axis in the area and relate the existing high rise buildings better to its surroundings. These public facilities also support the nearby station, but the facilities are placed more into the area to strengthen the connections in the neighbourhoods (see chapter 8).The arrangement of the architectural intervention and the placement of the new building in relation to the existing buildings is chosen also because of the development of the project. By first developing the architectural intervention and the axis to the Fruitweg, the rest of the urban plan can follow. Because the intervention is located near the existing buildings, the architectural intervention and the axis can already transform and upgrade the area, without the rest of urban plan being realized. This idea of starting an urban transformation process by implementing an architectural intervention, is related to the theme of the design studio. In the next paragraphs the architectural project will be further explained.

Programme in relation to surroundings

The shape of the architectural intervention is created in relation its surrounding building elements and urban structures. The new axis from the station of Moerwijk towards the waterfront and the Fruitweg is the most dominant side of the building complex. The other edge of the complex is defined by the existing high rise building along the train tracks. The last side of the complex is marked by the route from the train track (and the new underpass towards the Petroliumhaven) towards the Laakkanaal, so the building is orientated in relation to the main qualities in the area (see figure 13.70). Within the building complex is the playground of the school, which opens towards the main axis.

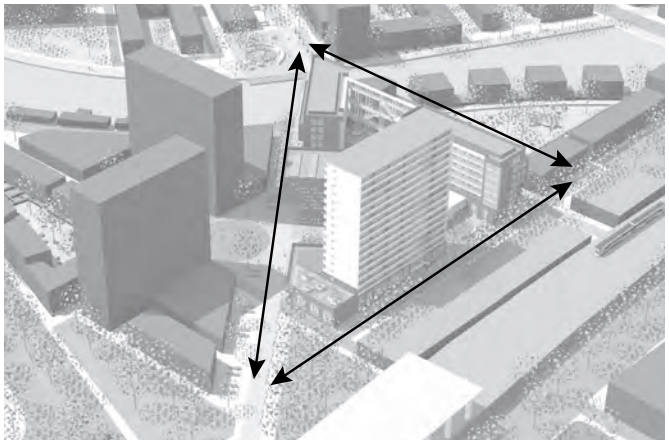


Figure 13.70 I Relation to surroundings I author, 2013

The programme of the building is organized by a corridor principle, in the school section and the dwellings (see figure 13.72 and 13.73). The school has two entrances from the playground which lead to the entrance halls. These halls have a study landscape and combine the different functions and routes inside the building. There is a third entrance from the axis into the school, however this entrance is created for the public functions to be separately accessible and can be closed of from the school. The classrooms are located on the north and east side of the complex, along two corridors that are part of the two entrance halls. These classrooms and the restaurant at the corner near the waterfront, have one side orientation. The library and the auditory along the axis are more orientated inwards (see figure 13.72).
The dwelling above the school, including the existing housing block, are also organized by a corridor, however these dwellings have a two sided orientation (see figure 13.73).

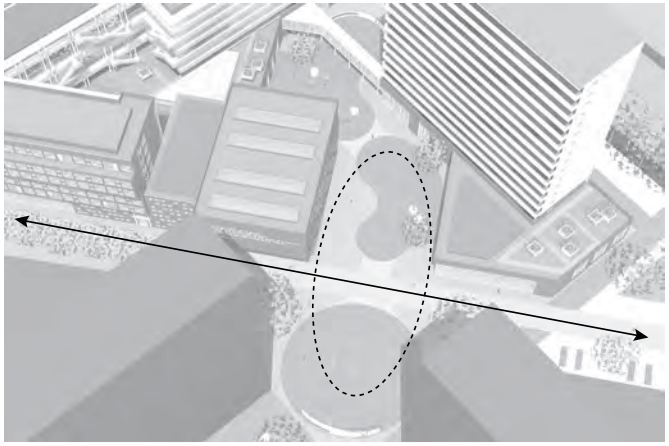


Figure 13.71 I Relation to axis I author, 2013

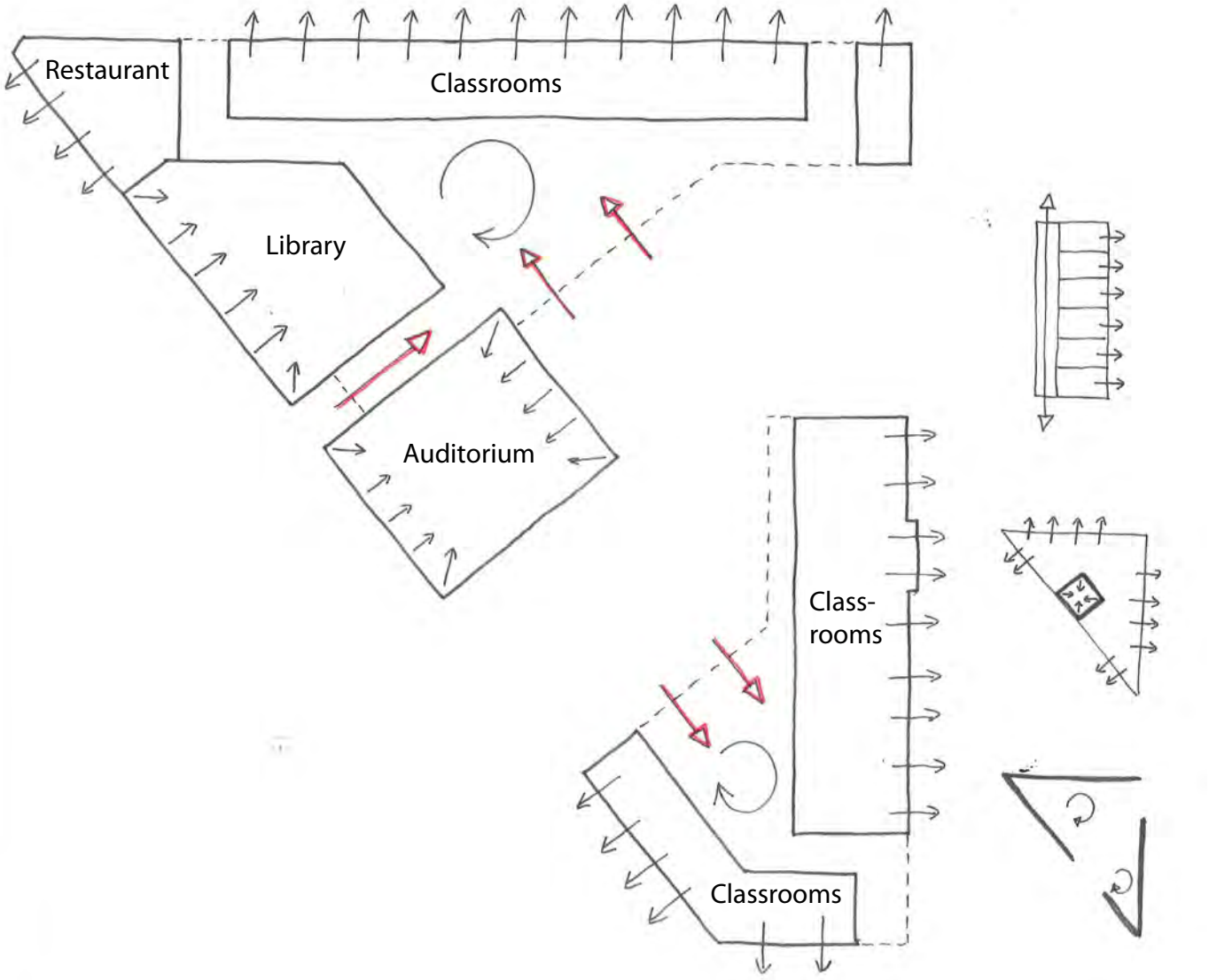


Figure 13.72 | Principle of floor plan: corridor with one side orientation | author, 2012

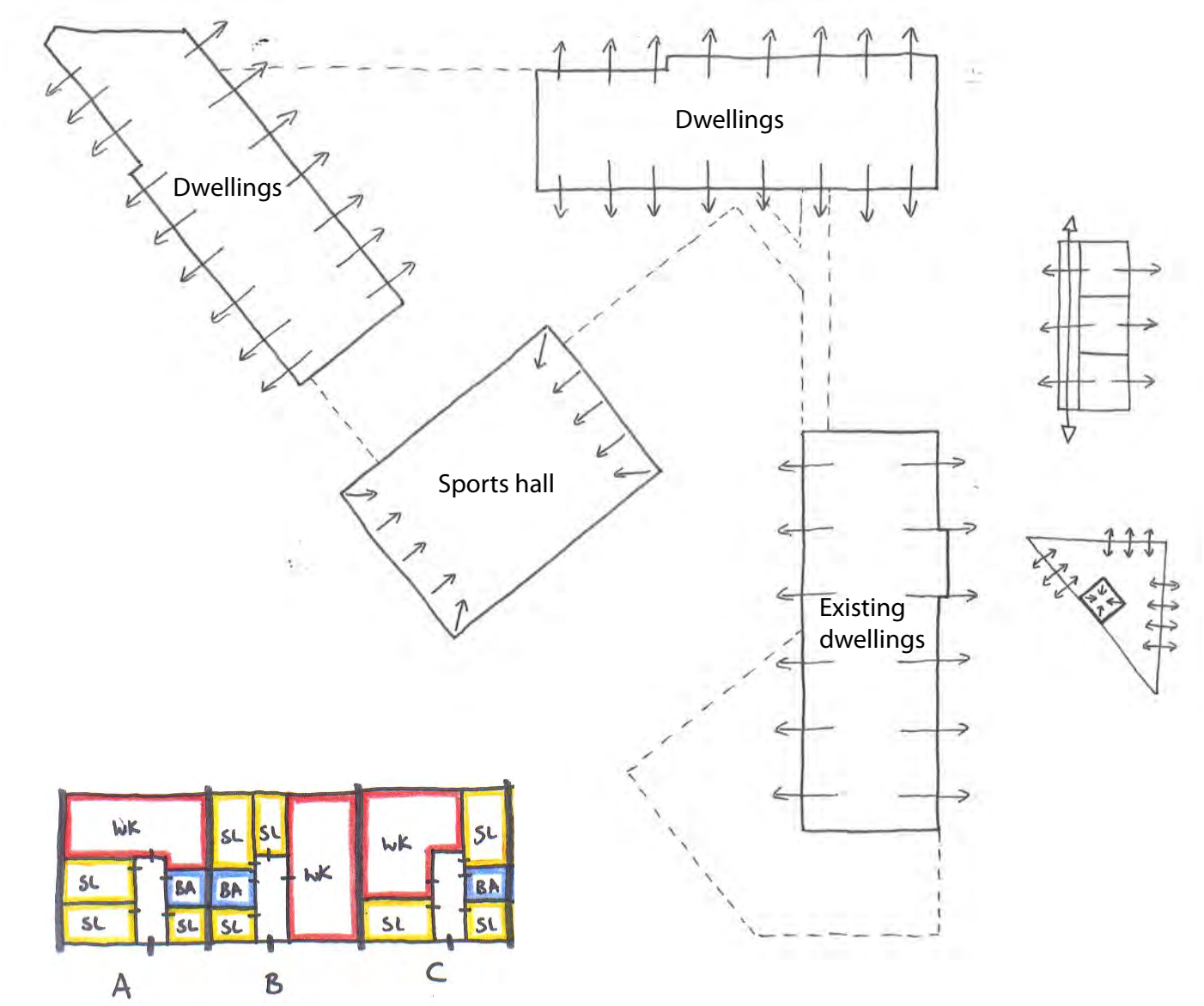


Figure 13.73 | Principle of floor plan: corridor with two side orientation | author, 2012

The sports hall in the middle of the building complex is more orientated inwards, because of its function and placement of the element within the larger complex.
The kind of dwellings in this project can be defined into three types : (A) Three bedrooms, a bathroom and a living room with one side orientation; (B) Three bedrooms, a bathroom and a living room with two sided orientation and (C) Three bedrooms, a bathroom and a living room in a L-shape. All these types of dwelling can be realized within the two building elements of housing. Even after the realization of the building, the housing types can be changed.

Floor plans of building

The floor plans are organized according to the corridor principle, as explained in the previous paragraph. In the basement of the building is the bicycles storage for the school, which is accessible from the playground of the school (see figure 13.74). The basement of the building is accessible from both sides of the school and connects the two entrance halls with each other. Part of the basement is the foyer of the auditory, were the cloakroom and the toilets are located. The rest of the basement is for storage and installations.

The first two floors of the building are the school, with the study landscape, classrooms, restaurant and library (see figure 13.75 and 13.76). On the second floor, the two sides of the school are directly connected by a bridge, linking the corridors of both sides to each other. The auditory and the changing rooms for the sports hall of the school are on the third floor of the building complex (see figure 13.77). The sports hall itself is located on the fourth floor above the auditory and marks the axis, because of its cantilever (see figure 13.78). From the third floor on starts the housing programme of the complex, with the existing block and the new building elements. The existing block contains six dwellings per level, with three smaller dwellings because of the access points to the building (see figure 13.77). The new blocks contain four dwellings each per level and have comparable dwellings in the three main types (A,B,C), as explained in the previous paragraph. The new blocks have a collective garden on the roof of the school, which is accessible from both blocks by the exterior corridor. This corridor is not only the access point to the dwellings or the escape route in case of fire, but it also is a spatial element to define the collective garden. The corridor connects the two new housing blocks with each other and its constructive columns are placed on top of the constructive walls and the facade of the school. The existing building block idem has a roof terrace above the school, which is accessible from the third floor (first housing level) of the building. The existing housing block has fifteen levels of housing, while the new blocks have only six levels.
These components of the programme provide together a hybrid building complex with a school combined with housing and public facilities, as well as an existing high rise building of the seventies combined with a new built element.

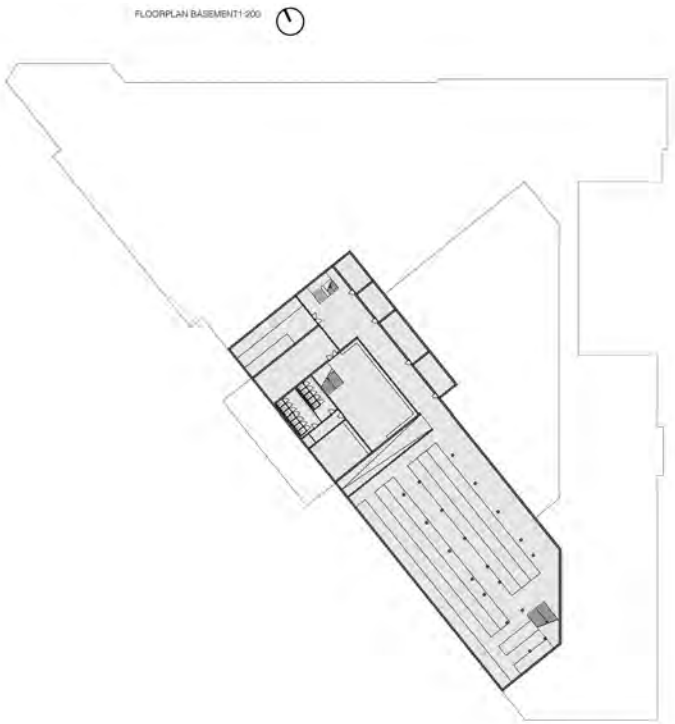


Figure 13.74 I Basement of building I author, 2013

Figure 13.75 I Ground floor I author, 2013

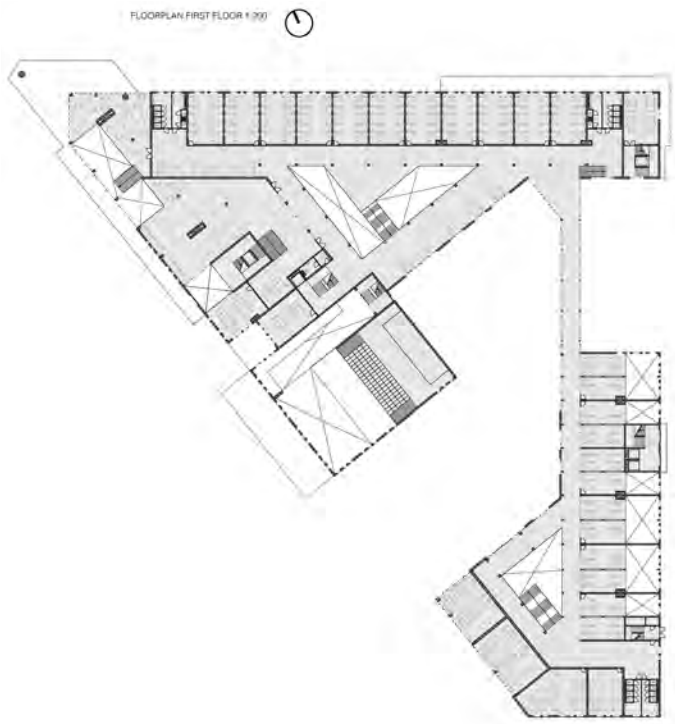


Figure 13.76 | First floor | author, 2013

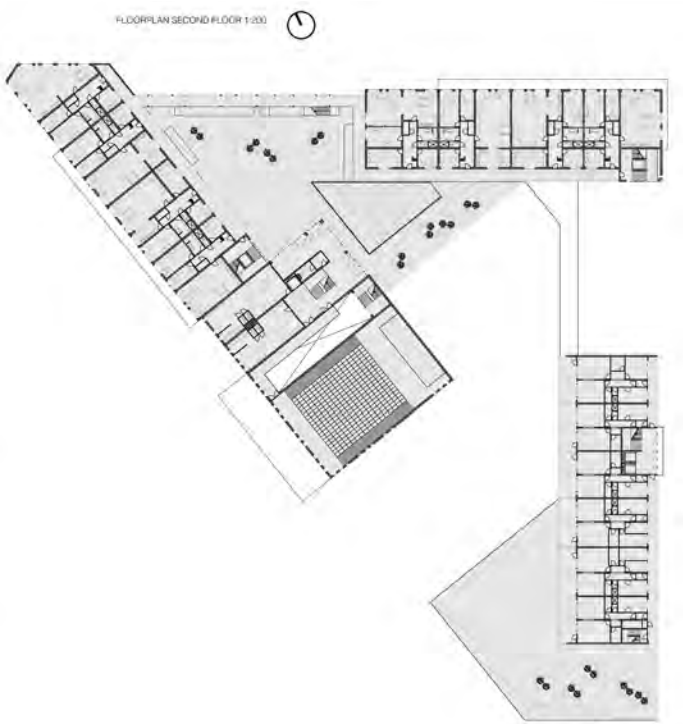


Figure 13.77 | Second floor | author, 2013

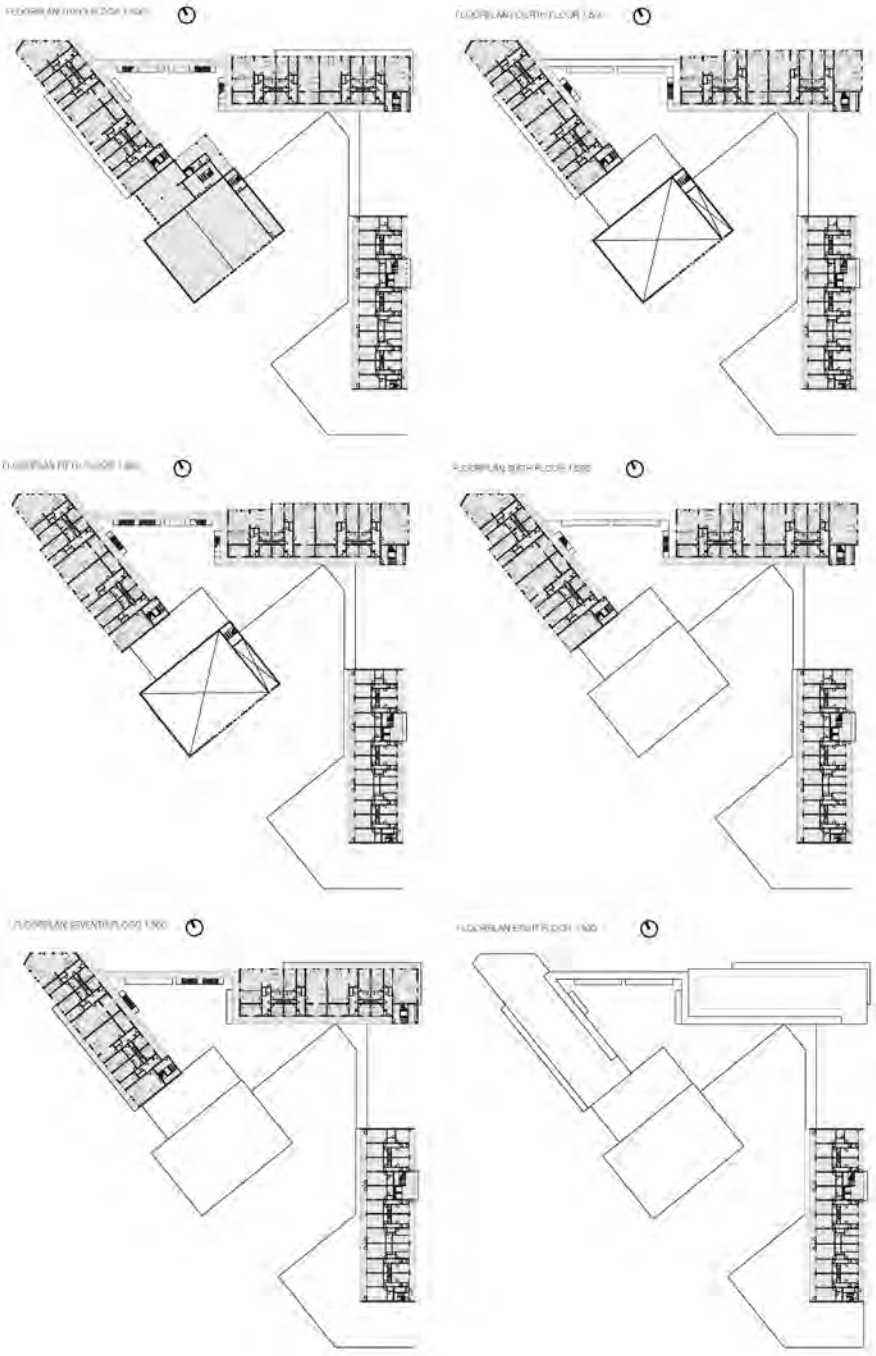


Figure 13.78 | Third until eight floor | author, 2013

Figure 13.79 | Utrechts Stedelijk Gymnasium | Utrechts archief , 1940

Figure 13.80 | Utrecht Stedelijk Gymnasium | Straatkaart, 2009

Facade design

The design of the facade has been a separate phase in the design process and was closely related to the arrangement of the building volumes of the complex. For the design of the facade, several proposals were made, as explained in a previous paragraph.
For the facade of this building project it was important that the elements were on one hand separately recognizable in the building complex and that on the other hand the complex would appear to be one building structure (see figure 13.81). Therefore several relevant reference projects were researched on facade material and structure of the school building. The choice for bricks as the main material for the building, was related to the personal appreciation of school buildings from the 1930's, such as the Utrecht Stedelijk Gymnasium by Johannes Izak Planjer (see figure 13.79 and 13.80). Beside, most of the school buildings from that period are still containing the same function, while other school buildings from later periods are already transformed or demolished. Therefore, bricks are personally associated with school buildings and also the traditional housing of the Netherlands. The school building of the Utrecht Stedelijk Gymnasium in particular exists of several building volumes, that create together a building complex, with a differentiation in open and more closed facades. Therefore this reference project can be seen as a starting point in the development of the facade design.

Beside the building volumes and type of material, research has been done on fragments of the facade, namely the window structure. Here it was important that the different types of programme

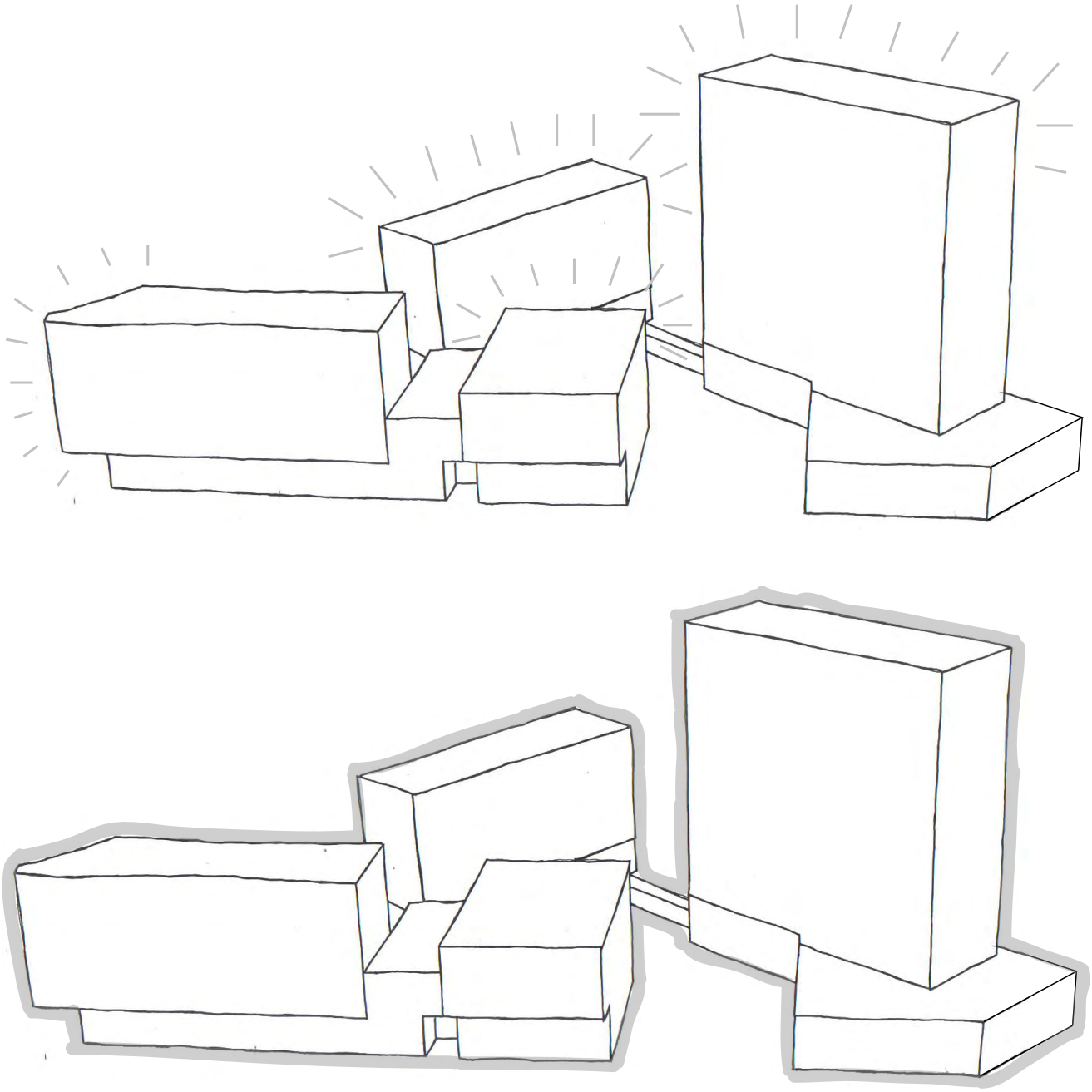


Figure 13.81 | Separately recognizable elements and one building structure | author, 2012

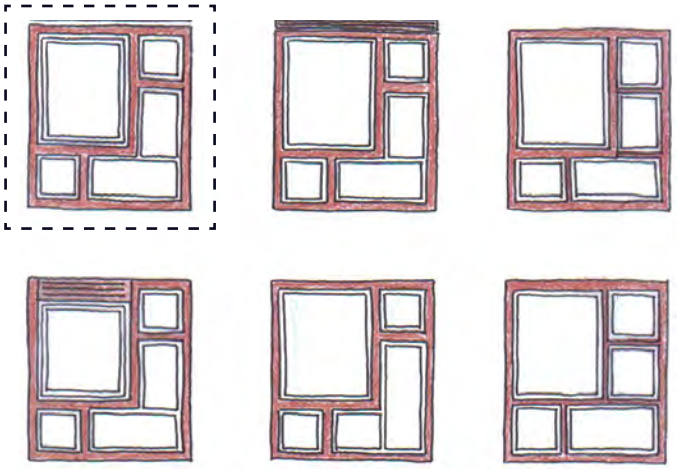


Figure 13.82 | Facade study | author, 2012

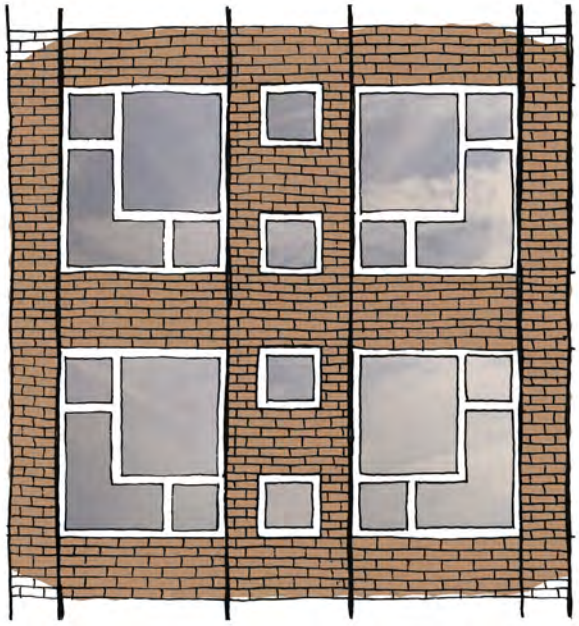


Figure 13.83 | Facade structure | author, 2012

could get the lightning that was required, but at the same time the facade would not give away the type of programme. After the several design proposals that were made, studies on the shape and orientation of the windows were done (see figure 13.82). It was important to realize if a person could see through the window in a stand up or sitting position. A differentiation was made between the dwellings and the public functions of the school, such as the auditory and the library (see figure 84). In the dwellings the main windows show a wide view outside, in a sitting and stand up position. The smaller windows in this facade fragment are for extra lightning in the apartments. While at the foyer of the auditory, there is no direct view outside in a stand up position, since this view is not needed for his function and lightning can still enter the space from several points. This creates a more mysterious appearance from the axis towards the public functions of the building, since they are alternately open or more closed facades with freely placed windows (see figure 13.87). The facade structure of the windows are strengthened by concrete frameworks, which are contrasting with the bricks of the facade. The window fragments are placed in a clear structure, which determine the building elements of this facade (see figure 13.83).

The exterior of the facade of the school building is closely related to the playground of the school and the connection between the entrance halls inside and this public space outside (see figure 13.85 and 13.86). The border between inside and outside is softer at the entrance points, were the public space becomes part of the entrance halls. At these points, the same type of floor is used inside and outside, namely cast flooring.

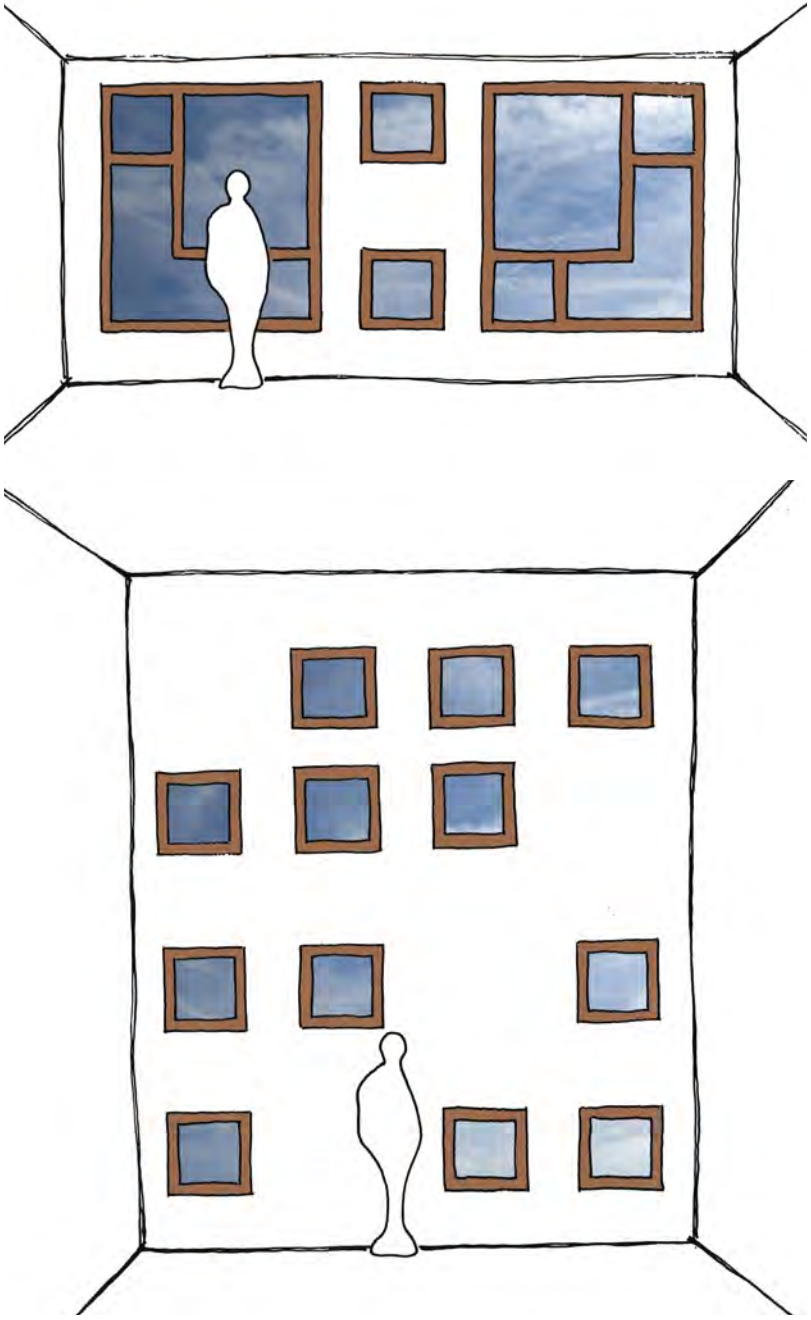


Figure 13.84 | View from the dwellings and from the foyer of the auditory | author, 2012

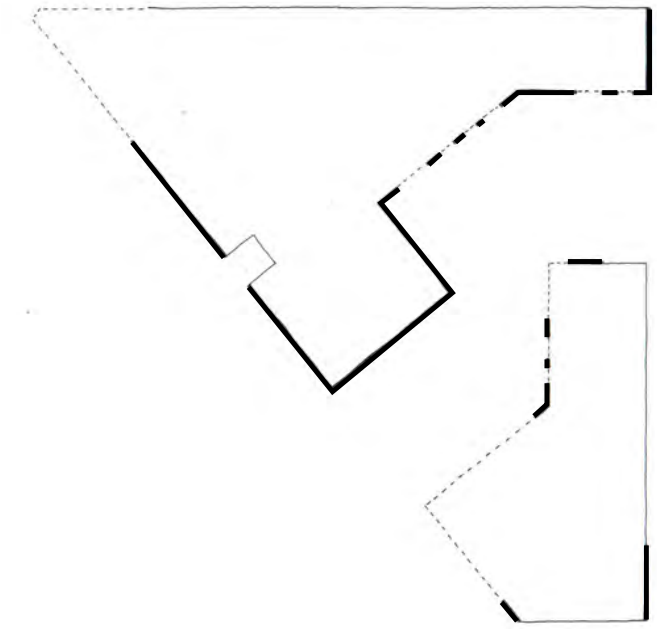


Figure 13.85 | Exterior facade | author, 2012

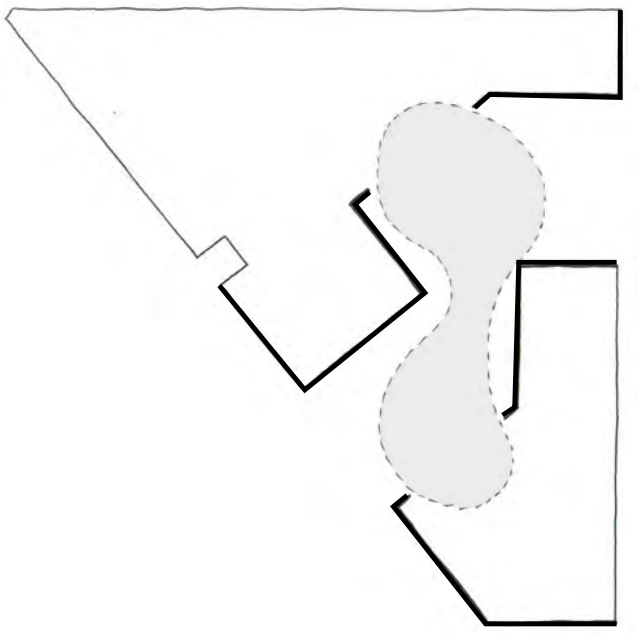


Figure 13.86 | Defined border between inside and outside | author, 2012

South facade

North facade

West facade

East facade

Figure 13.87 | Facades of the building | author, 2012

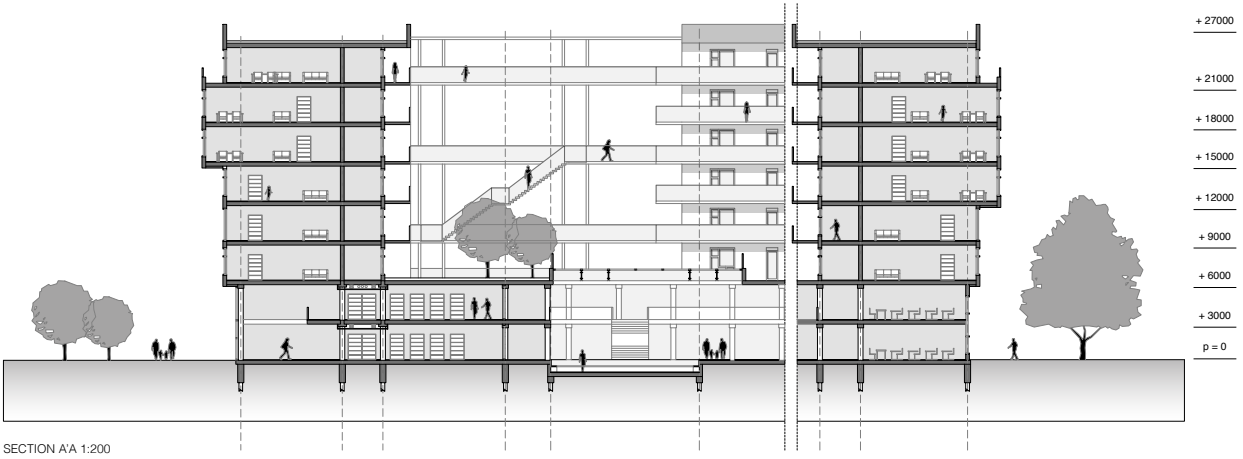
Construction and climate

The main construction of the building is determined by walls as constructive elements. In the existing building block this was already the case, with a span of 4m and apartments of 8m width. The first two levels of the school building underneath this high rise housing block, will be transformed by more openings in the structuring elements, to adapt the space for classrooms. The orientation of the construction will remain the same, however because of the new functions in these first two levels, the original foundation of this building should be reinforced. The new building element of the school will be larger then the existing building plot, so this will have ist influence on the construction as well.

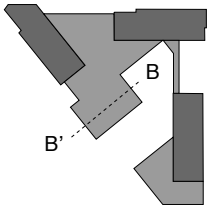
The dwellings of the new building will also be constructed by concrete walls, however the span will be 6m instead of 4m. The apartments in these housing blocks will be of 12m width, so larger dwellings with more daylight can be realized. Because the new dwellings have two small cantilevers on the outside of the building block, the floor spans into the contrary direction. However, the floor plan of this design is organized in such a way that it is possible to span also in the other direction by make some small adjustments. At the corner of the building near the waterfront of the Laakkanaal the dwelling cantilever with a span of more then 6m and therefore here a concrete column structure is chosen for the constructive scheme. This column supports the strong shape of the corner in its urban surroundings and connects the volume of the dwellings with the ground floor. The structure of the school is dominated by walls as constructive elements at the classrooms and concrete columns in the more open spaces of the entrance halls, restaurant and the library. Here the shafts of the dwellings also support the constructive system.
The columns are arranged in relation to the walls of the dwellings above and can also provide two directions of span, however the smallest span of 6m is also chosen here.

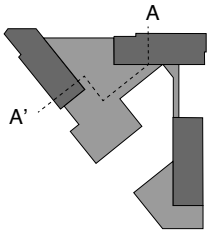
The building volume of the auditory and the sports hall have a different constructive scheme, since here the sports hall have a cantilever of 6m above the axis and both functions do not prefer columns within the space. Therefore a steel construction is made for the floor and roof of the sports hall, which can span the 22m of both functions (see figure 13.88 and 13.89 for the constructive system).

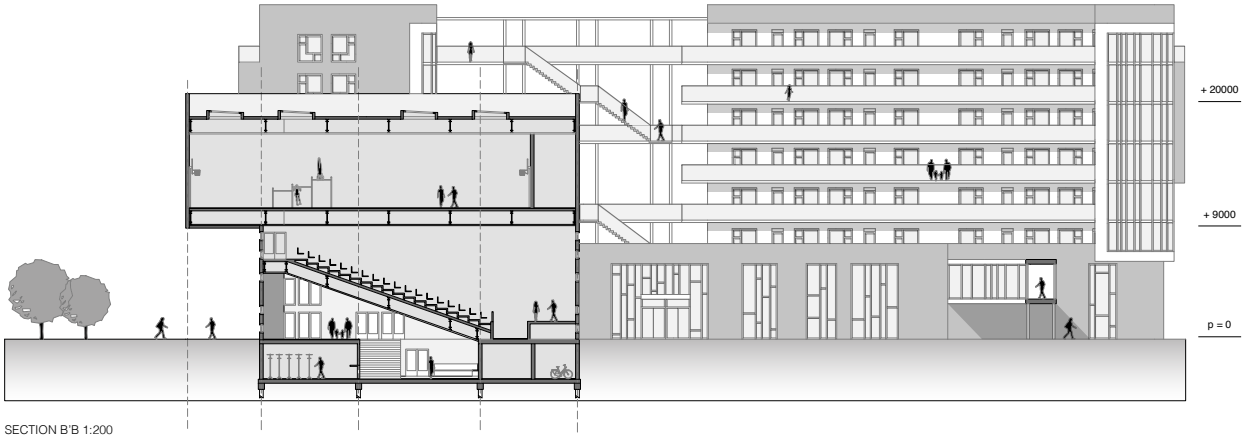
The ventilation of the building is organized in such a way that the smaller spaces of the dwellings and classrooms have the opportunity to open a window, while the larger spaces of the library, restaurant, auditory, sports hall and entrance halls only have mechanical ventilation.
The climate of the building is further on supported by a heat pump system, which provides floor heating in the winter in both the dwellings as the facilities of the school. The pipes of the system will be integrated within the monolithic floors of the building. In summer the heat pump system provides mechanical ventilation within the building, so air conditioning and active cooling is realized by this system. These cooling facilities can be organized within a suspended ceiling and on the rooftop of the building.



SECTION A'A 1:200

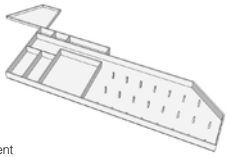




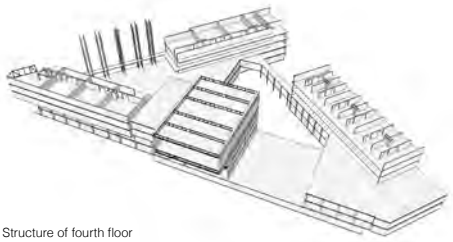


SECTION B'B 1:200

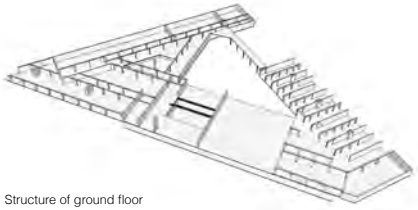
Figure 13.88 | Sections of building | author, 2012



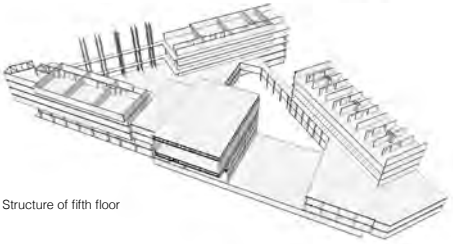
Structure of basement



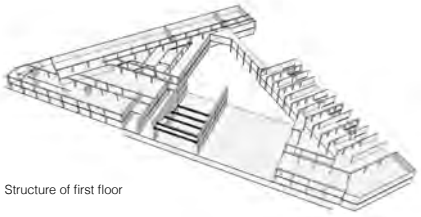
Structure of fourth floor



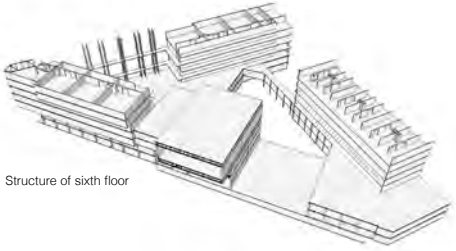
Structure of ground floor



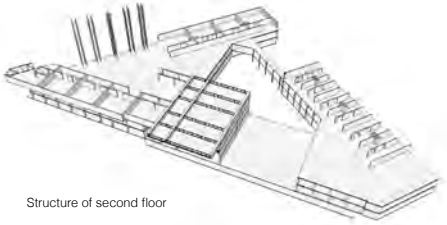
Structure of fifth floor



Structure of first floor

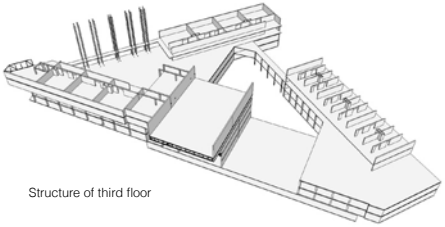


Structure of sixth floor

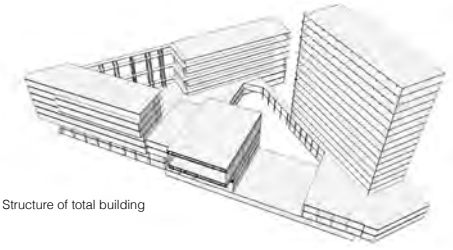


Structure of second floor

Structure of seventh floor

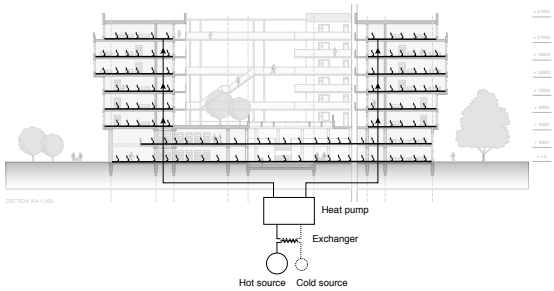


Structure of third floor

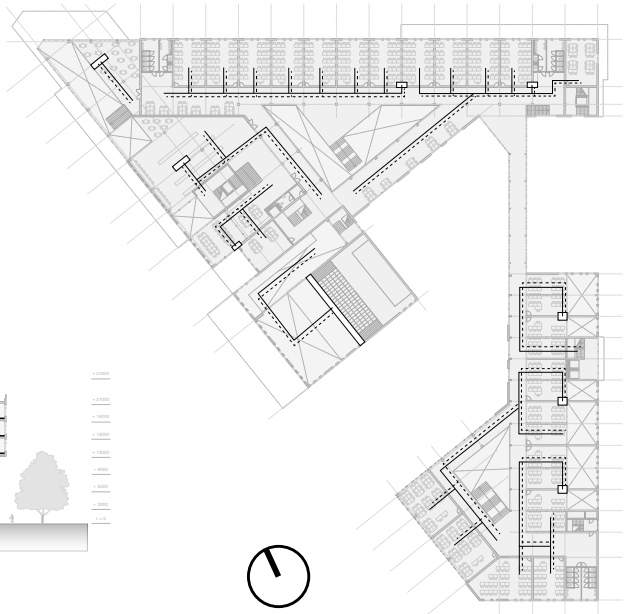


Structure of total building

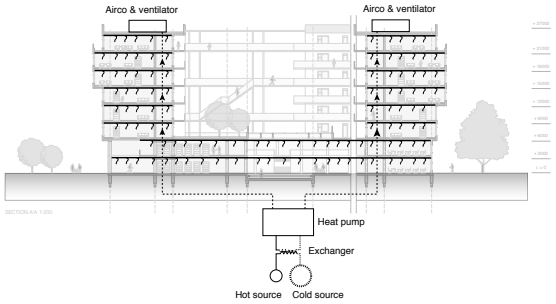
Figure 13.89 | Construction | author, 2012



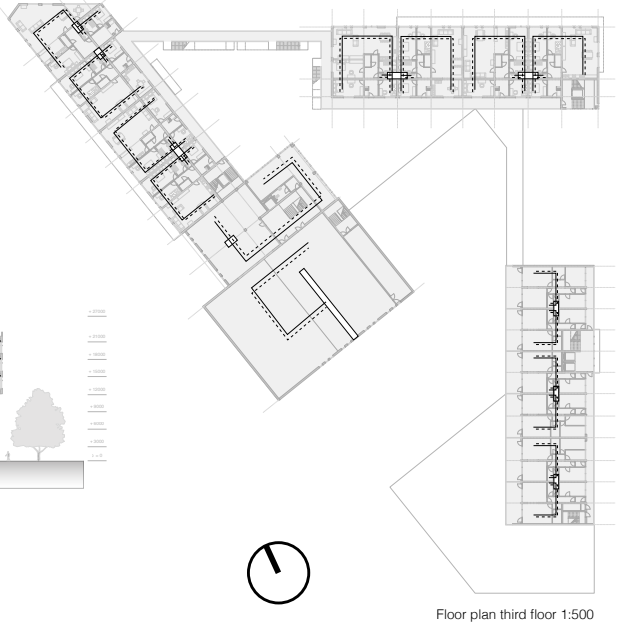
Winter situation - section A'A 1:500



Floor plan first floor 1:500



Summer situation - section A'A 1:500



Floor plan third floor 1:500

Figure 13.90 | Climate system of building | author, 2012

Facade detailing

The design of the facade was already explained in the previous paragraphs, however to realize this idea for the facade, the detailing should be consistent as well. Therefore two fragments of the facade are further researched. One on the outside of the building block with the brick facade and the other on the corridor side of the building block with the concrete facade, both at the level of the dwellings with the library and the restaurant underneath. The differentiation between the brick facade and the concrete facade in this design is made because of the corridor element, which is an exception on the main facade structure. Within the total building design the main facade material is brick and the exceptions are marked by concrete elements. This is visible at the corridors, but also were the aluminium open facade is pushed back from the building alignment and underneath the cantilevers.

The first facade fragment shows the cantilevers of the dwellings in relation to the first two levels of the school in the vertical section A (see figure 13.91). The column structure at the restaurant is visible in the horizontal section B by the 400mm columns that carry the aluminium open facade. The constructive system of the dwellings is visible in the horizontal section C, with the junction between the facade and the constructive walls. This fragment shows thereby the differentiation of the window elements on the outside and inside the dwellings. While on the outside the framework of the window strongly contrasts with the bricks of the facade, inside the apartments this framework is less dominant, so the view to the outside will not be disturbed. The concrete framework will already be connected to the inner wall of the cavity wall in the factory and the bricks will be placed on the building site. The largest window in the frame can be opened to the inside and the rest of the windows will be of fixed glass. At the french balconies, the doors can open to the inside as well.

The second facade fragment shows the relation and junction between the concrete facade and the concrete corridors of the apartments (see figure 13.92). The framework is the window is comparable with the other facade fragment, however they are less dominantly visible then at the brick facade. The railing of the corridor is made out of glass, so the corridor element will spatially be a separately recognizable element, instead of an extension of the facade of the building. In the vertical section D, the inside of the library is made visible, with the column structure and the bookcases. Horizontal section E shows the structure of the dwellings and the connection of the corridor to the facade. The water drainage of the corridor is integrated in the facade, which is visible as a linear element in the front view of this facade fragment.

From these two facade fragments several details are researched further on, especially on the junction between the different facade elements and varied materials (see figure 13.93). These facade fragments represent the main elements of the facade of this building and show that the idea of the facade is developed into the smallest detail.

Figure 13.91 | Facade fragment on outside | author, 2013

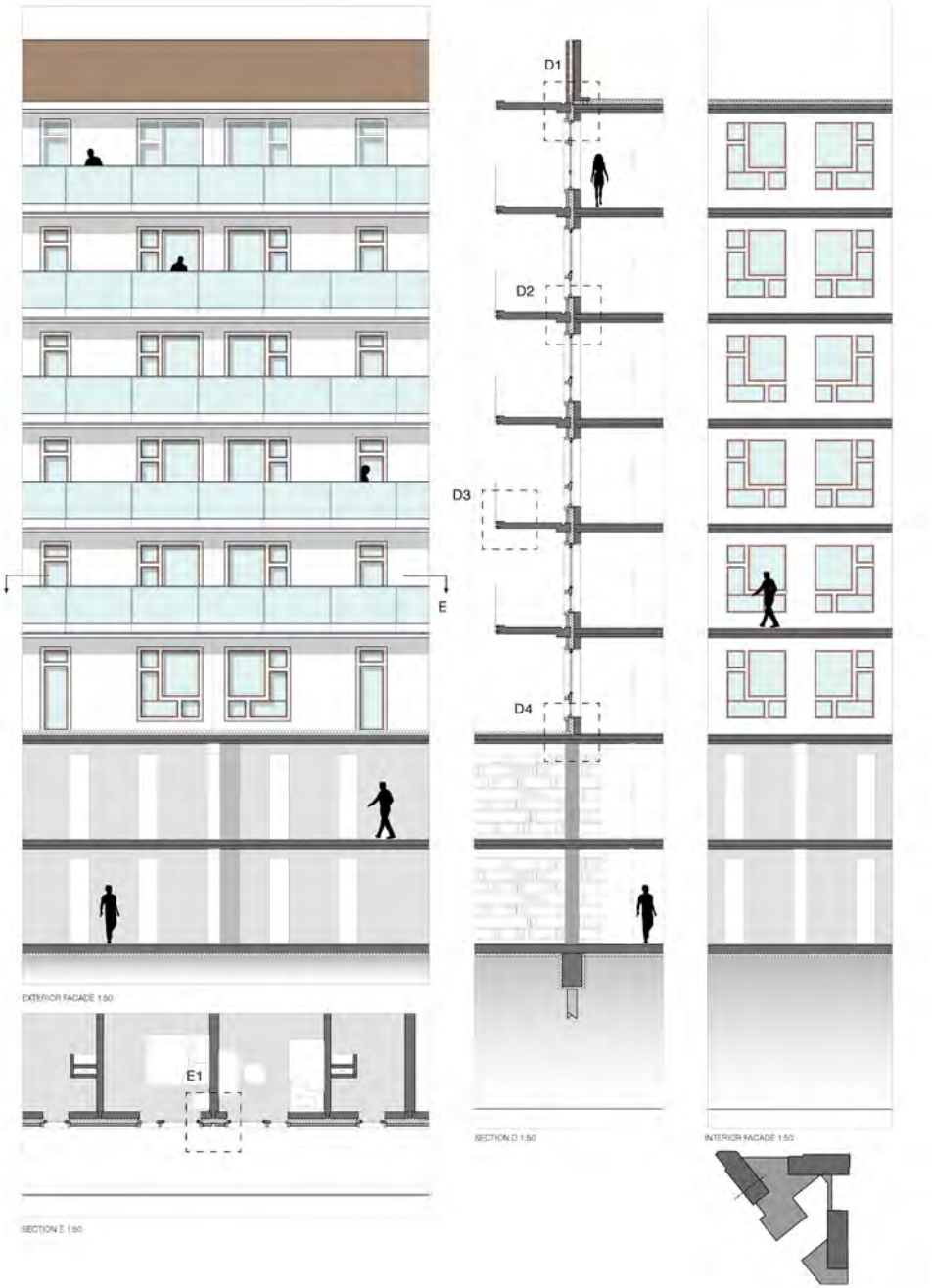
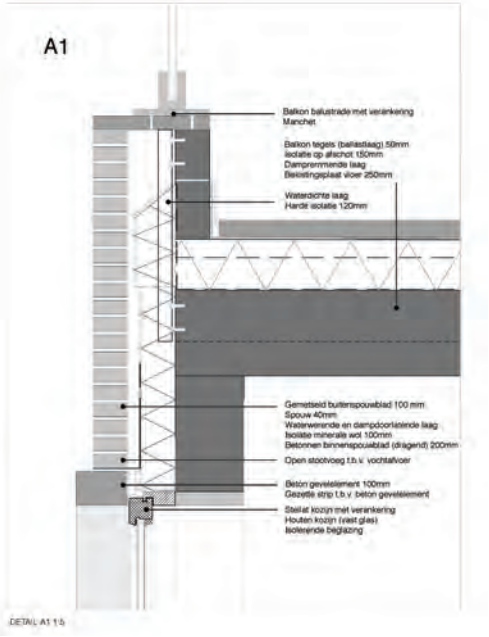
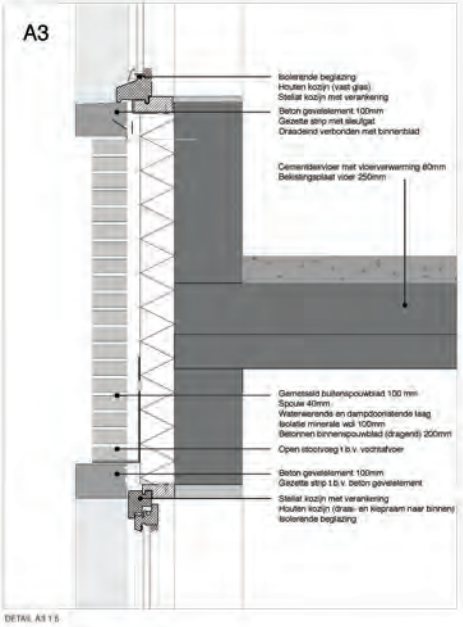
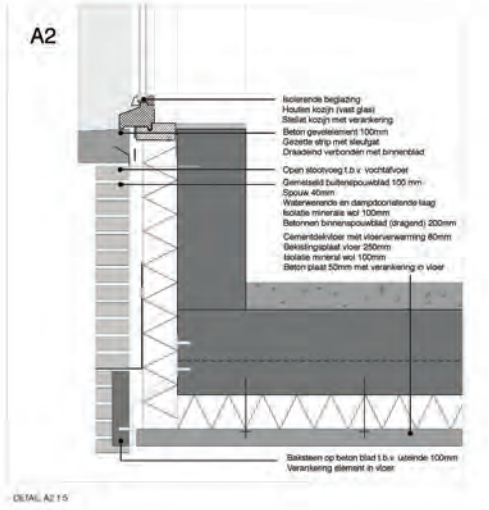


Figure 13.92 | Facade fragment on corridor side | author, 2013







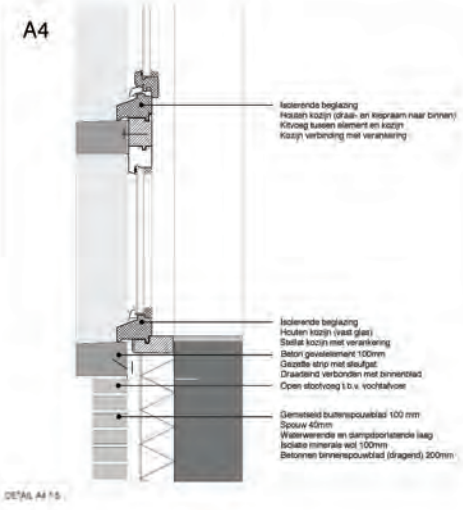


Figure 13.93 I Detailing I author, 2013

The urban design with its architectural intervention in the Hague south west will have a phased development process, which starts at the scale of the building complex and the urban ensemble. After the development of the ensemble, the rest of the urban area can be transformed at the Petroliumhaven in the east and along the Fruitweg in the north.
The development strategy for the architectural intervention and its surrounding urban ensemble can be divided into four main phases. The first phase will be the development of the architectural design and the transformation of one of the existing high rise buildings. Related to this new building complex, the axis from the Fruitweg to the station of Moerwijk will be constructed. Along this axis the three squares (the station square, the public playground and the theatre square) can be created. In this phase the second entrance to the station will already be constructed at the new square, to support the accessibility of the station. To realize this first phase of the project, some buildings will have to be demolished around the existing building blocks and the road structure at the location should be transformed as well. However a large part of the existing road structure can be maintained and to realize the connection of the axis at the Fruitweg, only one building have to be removed. The rest of this industrial area along the Fruitweg can be transformed in a later phase.

In the second phase of the project, the axis to the station will be embedded more into the location, by the new building elements that will be added to the other two existing high rise blocks. Therefore the road structure need to be diverted and the parking space in front of the blocks have to be removed. New parking garages will be realized in this phase along the train track, as an alternative for the demolished parking areas. Beside, in this phase the routes along the waterfront of the Laakkanaal will be added. By opening up the backside of the industrial area for the main route and creating the secondary route in relation to the new building block along the water. Creating the new building block in this phase of the project supports the social control and feeling of being safe in the area.

In the third phase of the project the rest of the area at the Willem Dreespark will be developed, with the houses along the water in the south west and the new building block along the Troelstrakade in the south. At the beginning of this phase the Troelstrakade will be transformed, with the new bus lane to create more space for the new building blocks. The transformation of the station area can be completed as well, with the moved tramline and the integrated transition point for public transport at the station.

In the fourth phase of the development of the ensemble, the industrial area along the Fruitweg can be transformed into a living area with direct connection to the waterfront. This transformation will be in the ‘last’ phase of the development process, because this area will be the hardest to transform. Since the industries at this place will have to be replaced to a new location in or outside the city. Some industries can be housed inside the new blocks, but some will have to be removed.
In this phase the road structure will be extended underneath the train tracks to the Petroliumhaven, to support the transformation of this part of the urban plan. After these first four phase of the development process, the rest of the urban area in the north and the east can be realized.

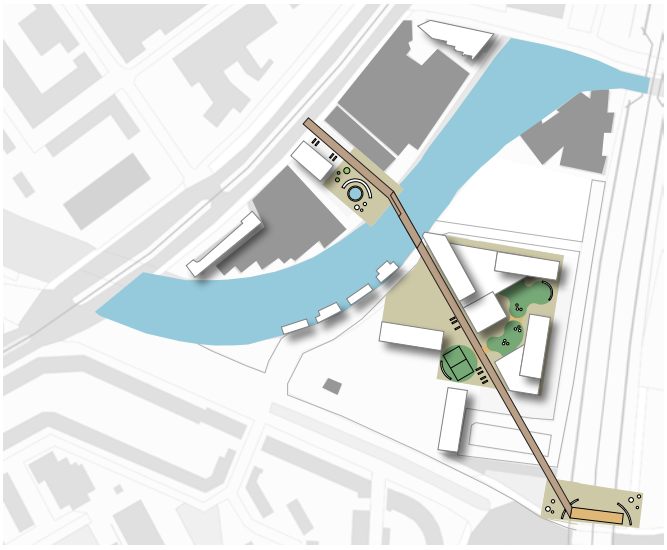


Figure 14.1 | Phase 1 of project | author, 2013

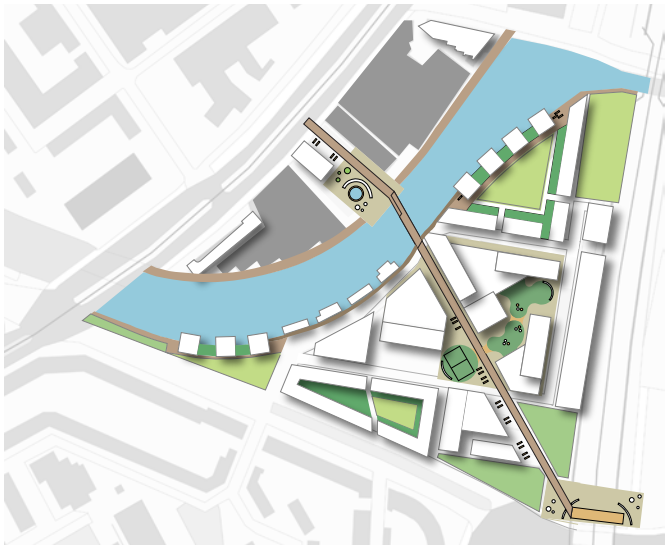


Figure 14.3 | Phase 3 of project | author, 2013

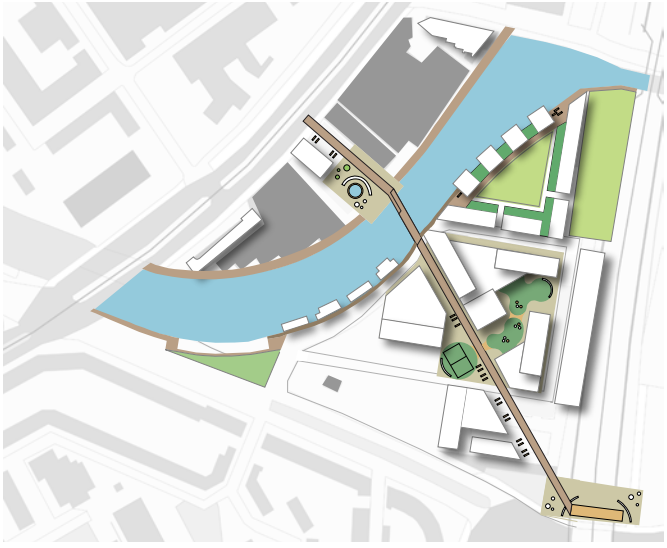


Figure 14.2 | Phase 2 of project | author, 2013

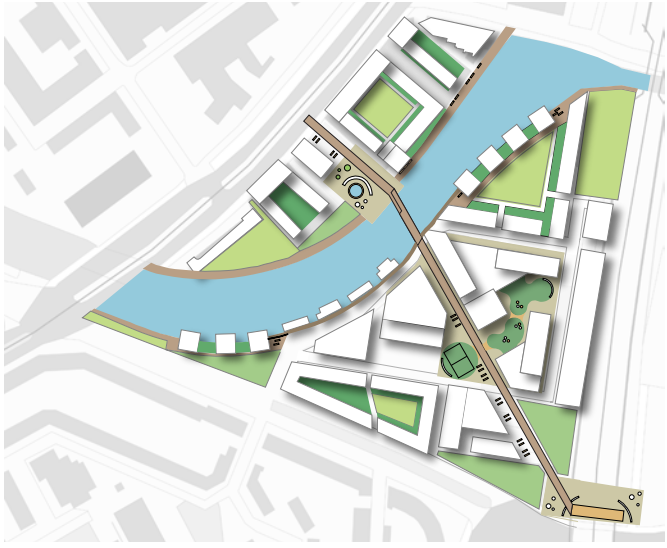


Figure 14.4 | Phase 4 of project | author, 2013

Pedestrian mobility I author, 2010

In this part of the thesis the main research question of the project is answered and the achievements of the objectives are reviewed. Secondly there is a reflection made on the graduation project, with argumentation for the way this design serves the urban renewal of the city. At the end of this part the summary of the thesis is written down and the bibliography of this report.

15.1 Achievement of objectives

The main objective for this graduation project was to develop a regeneration plan for the area of the Hague south west, to improve the pedestrian connection between the different neighbourhood structures and integrate the Moerwijk station area into the spatial and functional network of the city. The design project exists of an urban design and an architectural intervention. The project is developed on three scale levels; The neighbourhood scale, the scale of the ensemble, and the scale of the architectural interpretation. These design scales are related to the studio framework of 'Urban Renewal'. From this framework, three planning themes were defined in the beginning of the project:
(1) Routes between separated neighbourhoods
(2) Network of public spaces
(3) Programmatic interpretation
Related to the planning themes, three design themes were described, who were linked to the main design theme of 'Connecting the neighbourhoods':
(1) Making an accessible node
(2) Unfolding the network
(3) Living in the green and near the water
These themes together structured the main objective of the graduation project and helped to define the design approach and dual focus of this project: (1) 'Activity' or Places of flow and (2) 'Place' or Places to stay or live. These two topics are related to the two main centralities of the project area, the station versus the hybrid building or in this case the school.

In the design project both topics are present. The axes in the plan, the routes along the water and the station with its square represent the 'places of flow' and the larger scale of the city. The theatre square, school building with its playground and the housing blocks with their inner collective spaces on the other hand refer to the 'places to stay' and the smaller scale of the neighbourhood.
Exactly this differentiation is the duality of the graduation project, since station areas are normally focused on the higher scale of the city and the flow of people that can use this public transport node, as a transfer point or meeting place. As Bertolini stated (1999 : 201): "An accessible mobility environment is thus one where many different people can come, but also one where many different people can do many different things: it is an accessible node, but also an accessible place". However, the influence of a station on its surrounding neighbourhoods and its interaction with the daily urban life in these living areas is not part of his statement.

An intervention such as a station has an impact on its direct urban surroundings, and the flow of people using this node can interfere with the inhabitants of the surrounding neighbourhoods. By marking the area by one centrality of the station, the connection to and qualities of the surroundings can be neglected, therefore an other centrality within the project area is needed. With central stations, one centrality can be enough to structure the area and fulfill the role of being a node and a place. However with secondary of tertiary stations there is not enough support because of the lower amount of passengers. Besides the smaller stations are often located closer to living areas and therefore have a more direct influence on the surrounding neighbourhoods. This second centrality at the project area focuses on the neighbourhood and helps to support the routes,

public space and facilities in the surroundings. By locating this second centrality or hybrid building along the axis towards the station, this intervention becomes part of the network of the city and the neighbourhood. Integrating the hybrid building with one of the exiting housing blocks in the area supports the transformation process of the project location, since the architectural intervention will be realized in the first phase of the development process.

From this knowledge could be stated that the main objectives of the graduation project are achieved by the design on the three scale levels. The pedestrian connection between the neighbourhoods is improved by the new routes and their public spaces. The station area is better integrated in the spatial and functional network of the city by these routes and the added programme. Subsequently the main research question of the project can be answered.

15.2 Answer to main research question

The answer to the main research question can be seen as a summary of the design project. The answer is connected to the three scale levels of the project and the themes mentioned in the last paragraph.

Which strategic spatial interventions can improve both the accessibility and liveliness of the area of an infrastructural node in the Hague south west, in such a way that it becomes an activity place catalysing urban renewal?

The strategic spatial interventions that were designed to improve the accessibility and liveliness of the area of the Hague south west are represented in figure 15.1. These interventions could be divided into two fields of our profession: Urbanism and Architecture. The urban interventions are directly related to the planning and design themes of the project. The axis to the station and the routes along the water are linked to the themes ‘Routes between neighbourhoods’ and ‘Making an accessible node’. These interventions are part of the neighbourhood scale of the project. The squares along the axis are connected to the theme of ‘Network of public spaces’ and these urban interventions together support the theme of ‘Unfolding the network’. The design of the public and collective spaces within the building blocks are connected to the themes of ‘Programmatic interpretation’ and of course ‘Living in the green and near the water’. These interventions of the squares and the building blocks are part of the scale of the ensemble and define the urban area around the architectural intervention.

The architectural intervention itself is the second centrality in the project area, namely the school building with its mixed public and housing programme. Within this project several facilities are integrated to support the functional network in the area and contribute to the educational programme of the school. The housing programme of the building, relates to the existing housing in the surroundings and stimulates the social control in the area. This intervention covers the last scale of the design project.
All these interventions relate back to the dual approach of this graduation project: Places of flow and places to stay or live. Because a station area should be a connecting element to support the city structure and at the same time be a place were people can enjoy the daily urban life.

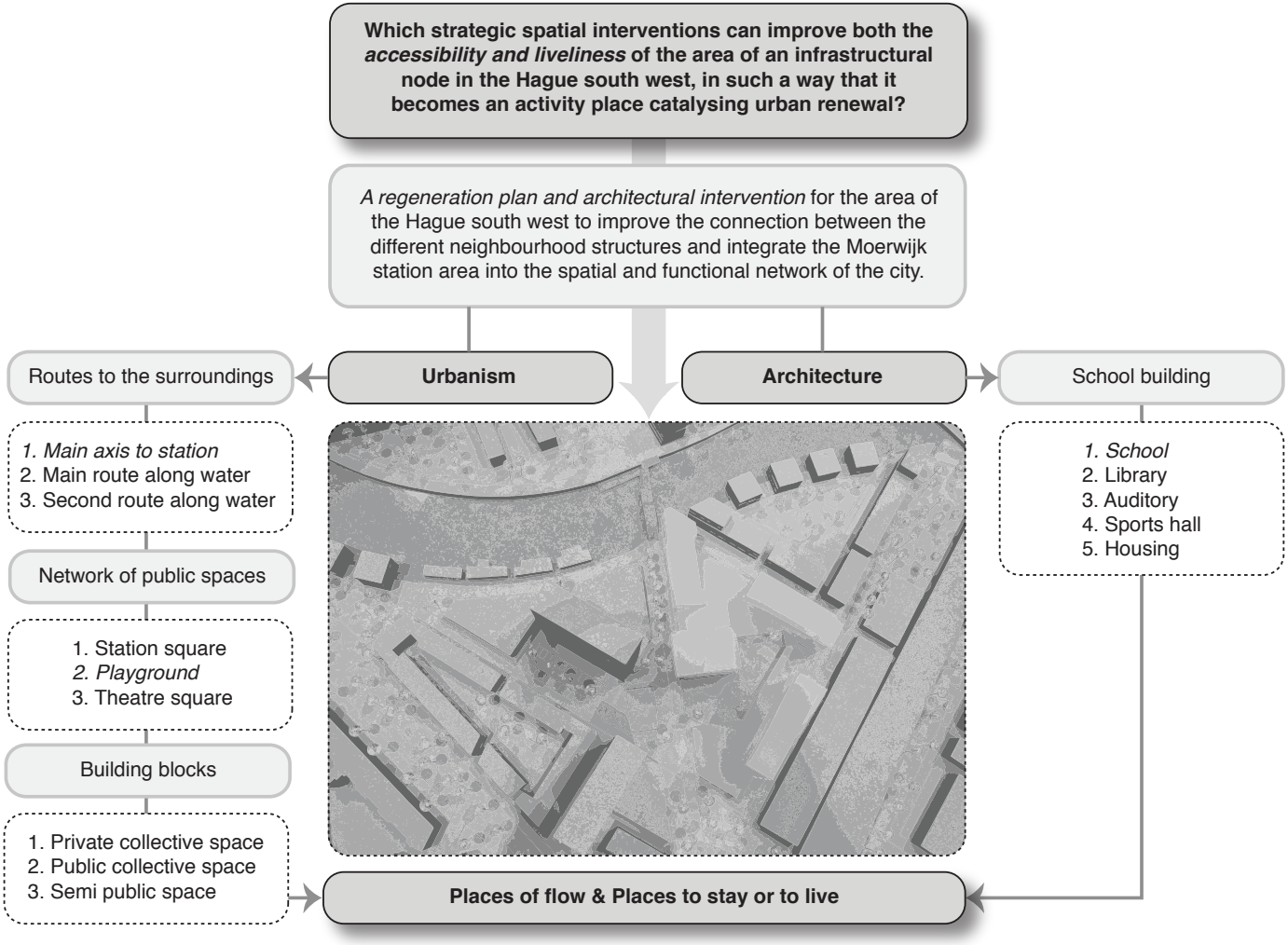


Figure 15.1 I Scheme of conclusion I author, 2013

16.1 Reflection on graduation project

The graduation studio 'Renewal of the urban renewal' is part of the chair of Hybrid Buildings. This architectural track tries to show "the attempt to escape the traditional but arid binomial form-function by addressing buildings with multiple performances". Thereby the focus of this master programme is to combine different functions into a 'hybrid' element by using new ways of organizing the space. The aim is to create different combinations of types of space, functions and constructive systems in order to shape alternative social and urban environments. Architectural interventions can be used to revitalize an urban area, if there is a conscious understanding of urban transformation processes and knowledge of changes in building typologies. Thereby, the historical development of the place and the existing urban context are very important elements to consider in the design process (TU Delft, 2012).

This studio focuses on "how architectural interventions can activate and contribute to the process of urban transformation." Within this studio the combination of design and research is seen as an opportunity to strategically intervene in the regeneration and redevelopment of urban areas. The urban areas that should be reconsidered in their existing urban context are especially the post-war neighbourhoods in the Netherlands. These neighbourhoods were part of the urban renewal of the Seventies, and they now mainly house new inhabitants and socially vulnerable groups (Van Velzen and Engel, 2010). The neighbourhoods deal with a high transfer rate of inhabitants and therefore the connection of the inhabitants to their neighbourhood is often missing. This results in the feeling of being less responsible for your own neighbourhood and putting less effort in keeping the neighbourhood well maintained. Although these neighbourhoods are mainly well located in the city, they are often inadequate in terms of public space and sometimes disconnected to urban fabric. The large restructure plans since the Seventies did not help in a proper way to revitalize the neighbourhoods, while a top-down approach was applied and only the housing stock was upgraded (KEI, 2011). Today, these neighbourhoods are still orientated towards the bottom of the housing market. Therefore, a bottom up approach is needed to restructure these neighbourhoods. The goal is to find focused interventions that can have a structured impact on these neighbourhoods and the city as a whole; the strategic places within the city that can be transformed for that matter (Secchi and Vigano, 2009). These interventions can then work as a catalyst for urban transformations in the city as well as for the direct neighbourhood(s). Therefore the emphasis of the project should be on the facilities, connections and public space in the areas (Van Velzen and Engel, 2010).

Connected to the studio theme of 'Renewal of the urban renewal' was the role of secondary or tertiary station areas, while these infrastructural nodes can play an important part in the city structure. These nodes can be a connecting element in the network of the city and function as an activity place for the surrounding neighbourhoods. In the present Randstad, the main focus of the municipalities is on the large station areas (Visscher, 2011). These stations have a high amount of passengers every day and they represent an image for the city. But what about the secondary or tertiary station areas,

which are located outside the inner-city, closely to these areas of urban renewal? Those station areas are most of the time neglected because of the low(er) amount of trains and thus passengers every day. By investing in these nodes, the connectivity between and the image of the surrounding neighbourhoods can be upgraded.

The location that is chosen for the design project, was directly linked to these themes of the studio, because it is situated near the secondary station area of the Hague Moerwijk. This station is located in the south west of the Hague and is part of the Leiden – Rotterdam train network. It is one of the three secondary stations of the Hague. At this location a lot of different spatial and social problems emerge. The station is situated in an area between several (deprived) neighbourhoods, which are part of the previous urban renewal plans in the city. This area is located at the boundaries of these separated districts. Partly due to the three existing borders in the area: the railway, the old Laakriver and the Laakkanaal, the present connection between the station and the surrounding neighbourhoods is insufficient. Thereby, the station itself is hidden in the area and therefore not properly used by the residents surrounding this infrastructural node.

Besides the problems that emerge in the area, this location also has a lot of potentials when considering the existing qualities around this node. The Laakkanaal and the old Laakriver are not only borders in the area, but capture at the same time the green and water structure in the neighbourhoods. The visibility at the station area is missing, however the quality of these structures is existing in the area. Thereby, the railway is a border at the location, but it makes a connection to the larger scale of the city and the region. By focussing on the potentials of the location, a neighbourhood specific approach of the urban renewal area can be made. This relates to the idea of making an effort for strategic interventions instead of a generic large scale approach.

As a result of the urban analysis and literature studies that were done during the design process, several themes for the design were made. These themes capture the main focus points of the project and are related to the elements mentioned by Van Velzen and Engel: facilities, connections and public space. The design intervention will consist of three main themes : Making an accessible node, Unfolding the network and Living in the green and near the water, which lead to the fourth theme; Connecting the neighbourhoods. Because of the low rate of visitors at this station area and its uninviting appearance, the location is secluded from the different neighbourhoods. The lack of social control and the high intensity of traffic at the node, provides an insecure feeling for the inhabitants and users of the station. By making new connections from the station area towards its surrounding neighbourhoods, as an addition to the existing slow traffic network, more people will use this transition area between the neighbourhoods. These connections should be related to the existing green and water structure and provide a good quality network of public spaces in the area.

With earlier urban regeneration plans, the focus was on upgrading the housing stock instead of connecting more public facilities to these neighbourhoods. There is a lack of programmatic diversity in most urban renewal areas and the

functions that are present, mostly focus on the neighbourhood itself and do not have a wider range of impact. Because this location can be connected to a larger network and deals with several neighbourhoods, the choice of programme should be considered in a wider context. Within these neighbourhoods, a mixed population is present and the social connection between these groups is often missing. Neighbourhood activities, sport facilities and educational programme can help to bring these social groups together and create the feeling of being connected to your own neighbourhood. But, due to the present economical situation, a lot of these neighbourhood facilities (such as libraries, neighbourhood centres and sport facilities) disappear from the everyday life in these areas. More facilities will be combined into one large scale object, serving a wider region. Therefore it is important to find a way to give these functions back to the neighbourhoods and still make it financially possible. By clustering these public facilities into one building at a central place in the area, more people can benefit from these facilities and the financial costs can be spread over several actors. This approach of clustering public facilities within these neighbourhoods and connecting this cluster to a wider network, can be seen as a strategy for the renewal of the urban renewal.

This strategy is reflected in the programme of the architectural intervention, by combining a school with a library, theatre/auditory, sports hall and housing. Besides that, the existing urban renewal at the location (three high rise apartment buildings) are integrated in the project by giving them a new connection with the ground level. These buildings will not be demolished because they house several families, but they will be part of the new cluster by providing the first two floors with public facilities. Furthermore, this cluster can function as a catalyst for the further development of this area in the Hague south west, since it shall be connected to the network in de surroundings. Although this strategy can not be seen as a ‘small’ architectural intervention in the area, in this specific situation, a larger intervention is needed. Hereby this urban renewal area can be regenerated and connected to the different neighbourhoods nearby the station area of Moerwijk.

16.2 Conclusion

The elaboration of this design project was based on the knowledge that resulted from the urban analysis and the literature studies. Also the experience from the building typology study and the review on the plans of the municipality made it possible to define the location and the themes for the design project. During the design process it was important to consider the connections from the architectural intervention to the larger scale and the impact it could have as a catalyst for further development. Therefore, the phasing of the project in relation to the urban interventions, that have to be made to connect the architectural project to its surroundings, was considered in the last phase of this design process. Not only the influence on the direct neighbourhoods, but also its position within the Hague south west and the rest of the city is defined by the analysis on the urban structures in the area.

This design approach in relation to the theme of the studio shows in some way a different strategy to the renewal of the urban renewal. The strategic intervention that is made with this project, deals with the urban renewal by combining several public functions for the neighbourhood in one building and integrating existing high rise buildings in the design structure. Related to this strategy is the approach of connecting the different neighbourhoods by the programmatic interpretation and the new slow traffic routes that will be added to the existing network. Therefore this project requires a larger input, while this area is very fragmented and connections have to be made on different scale levels. This can be seen as my interpretation of the renewal of the urban renewal, for this specific situation in the Hague south west. In other urban areas or at other building plots, which are more situated in an existing urban structure, smaller interventions can be made to regenerate urban renewal neighbourhoods. But at this location, between several existing boundaries and borders of surrounding neighbourhoods, only one architectural intervention is maybe not enough to restructure and connect the area to the city structure.

This design specific approach consists of some generic elements, such as the importance of making connections between areas and enlarging the existing slow traffic network; the role of the public space and the link that can be made between several public spaces; and the combination of different facilities within one building by reconsidering well known building typologies. This can be a new way of urban renewal, by making a neighbourhood specific approach and looking for the cross connections that can be made at the boundaries of several neighbourhoods. These areas should not be the residues of the surroundings, but a gateway to the neighbourhoods and a meeting place for the area and the city as a whole.

Figure 16.1 | Overview of the project | author, 2012

17. SUMMARY OF THESIS

This graduation project focuses on improving the public space and pedestrian connections between the different neighbourhoods surrounding the station area of the Hague Moerwijk. In the present situation the station area of the Hague Moerwijk is not well accessible or visible from its surroundings and the existing qualities of the area are neglected. The area around this tertiary station of the Hague is well located within the city structure, but has insufficient connections to the network of public space and facilities surrounding the location. The project location is now a leftover space between the several neighbourhoods around the station. However it could be transformed into a central space connecting the city and the neighbourhoods, as well as being an interesting living area in the Hague south west. Therefore the main research question for this graduation project was:

Which strategic spatial interventions can improve both the accessibility and liveliness of the area of an infrastructural node in the Hague south west, in such a way that it becomes an activity place catalysing urban renewal?

To answer this research question, three planning themes were defined, which categorized the sub research questions of this design project: (1) Routes between separated neighbourhoods; (2) Network of public spaces; and (3) Programmatic interpretation. These themes were connected to literature studies done on mobility environments, requirements for public spaces and building typologies. The design project exists of an urban design and an architectural intervention. The project is developed on three scale levels; The neighbourhood scale, the scale of the ensemble, and the scale of the architectural interpretation. These design scales are related to the studio framework of 'Urban Renewal'. The relevance of this graduation project within the studio framework can be described by Secci and Vigano (2009), who stated that "the goal is to find focused interventions that can have a structured impact on the surrounding neighbourhoods and the city as a whole; these elements are the strategic places within the city that can be transformed for that matter." The interventions can then work as a catalyst for urban transformations in the city as well as for the direct neighbourhood(s). Therefore the emphasis of the project should be on the facilities, connections and public space in the area (Van Velzen and Engel, 2010).
Analysing the project area and the urban structures in the surroundings pointed out that the station area around Moerwijk is well located in the city structure, but at the project location the surrounding urban structures are less clear or interrupted. Especially for slow traffic, the routes through the area lack connection or quality towards the station. Therefore new slow traffic routes into the surroundings were needed to improve the pedestrian connection between the different neighbourhood structures and integrate the Moerwijk station area into the spatial and functional network of the city.

By analysing several plans of the municipality for the project location, the different design proposals made during the design process were reflected. At the same time Space syntax maps were made to test the new routes into the surroundings and support the knowledge gained by the analysis of the location. Several literature studies helped to collect more information on the project themes

and to define the theoretical framework. This framework helped to structure the design project and create the vision for the project area in the Hague south west. During this process a continuous evaluation has been done on new design proposals in relation to the theoretical framework, so research and design were in closely related to each other.

In the end can be stated that this design project contains a dual focus because of the station versus the living areas in the surrounding neighbourhoods: (1) 'Activity' or Places of flow and (2) 'Place' or Places to stay or live. In the design project both topics are present. The axes in the plan, the routes along the water and the station with its square represent the 'places of flow' and the larger scale of the city. The theatre square, school building with its playground and the housing blocks with their inner collective spaces on the other hand refer to the 'places to stay' and the smaller scale of the neighbourhood.
This differentiation is the duality of the graduation project, since station areas are normally focused on the higher scale of the city and the flow of people that can use this public transport node, as a transfer point or meeting place. As Bertolini stated (1999 : 201): "An accessible mobility environment is thus one where many different people can come, but also one where many different people can do many different things: it is an accessible node, but also an accessible place". However, the influence of a station on its surrounding neighbourhoods and its interaction with the daily urban life in these living areas is not part of his statement.
An intervention such as a station has an impact on its direct urban surroundings, and the flow of people using this node can interfere with the inhabitants of the surrounding neighbourhoods. By marking the area by only one centrality of the station, the connection to and qualities of the surroundings can be neglected, therefore an other centrality within the project area is needed. This second centrality at the project area focuses on the neighbourhood and helps to support the routes, public space and facilities in the surroundings. By locating this second centrality or hybrid building along the axis towards the station, this intervention becomes part of the network of the city and the neighbourhood. Integrating the hybrid building with one of the exiting housing blocks in the area supports the transformation process of the project location, since the architectural intervention will be realized in the first phase of the development process.
The urban interventions and the architectural building of this design project are directly related to the themes and the development scale of the project.

All these interventions relate back to the dual approach of this graduation project: Places of flow and places to stay or live. Because a station area should be a connecting element to support the city structure and at the same time be a place were people can enjoy the daily urban life.

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