Cultural historical values as an approach for urban renewal The Hague Moerwijk

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Luchtfoto Den Haag Moerwijk (Source: Beeldbank Haags Gemeente Archief)
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1. Introduction

The national policy on spatial development is characterized by the renewal of early postwar housing estates. These estates were produced in mass-production in order to fulfill the housing need after the second world war. Although the modern housing estates equipped in need in the reconstruction period the current living conditions do not live up to contemporary standards. As a result there has been a deprivation of quality of the living environment due to an accumulation of problems in the majority of the early postwar housing estates. Most of these districts are subjected to social and economic demise and there is a growing dissatisfaction of the residential environment (Argiolu e.a 2008). The national government has selected 40 of these districts that are in need of urgent intervention.

The early postwar housing estates are characterized by large scale monotonous dwellings, and a surplus of unused public space and large infrastructural barriers. The negative image of the districts has spiral effect which contributes to further expiration. Although the image is mostly negative the district often has distinctive spatial qualities. However the qualities have lost the attractiveness because they are out-dated or have been distorted by new developments. With the introduction of ‘cultural planning’ in the national policy (OCW&VROM 1999) there is growing awareness of the potential of cultural historical qualities for urban renewal. In order to make use of the qualities and to address the issues at hand there is a need for a new and specific approach of urban renewal of early postwar housing estates.

Research is needed to get a clear understanding of the problems occurring in these neighborhoods and the options to transform the characteristic qualities in order resolve these issues have to be explored. The object of research is the district Moerwijk located in the Southwest of The Hague. Moerwijk is considered to be a school example of early postwar urban design. Moerwijk is also known as one of the 40 problematic districts, that is subjected to social and economic decadence. Therefore Moerwijk is chosen as a case-study to explore the possibilities of an approach of cultural historical values of the reconstruction period for urban renewal. In the approach for the renewal of Moerwijk physical interventions are related to socio-cultural and economic issues in order to be able to formulate an integral approach for renewal. The research results are the startingpoints for the designproject and are translated into a set of design principles to tackle the spatial issues at hand. The design principles used in the approach of renewal of the district of The Hague Moerwijk can be used as starting point for the formulation of strategy for renewal of similar early postwar housing estates.

40 “Krachtwijken” in the Netherlands
2. Field of Research

The aim of this study is to explore the potential of cultural historical heritage as an approach for urban renewal. The field of research is determined by three factors. The first is the pressing task of urban renewal of early post war housing estates. Within the field of urban renewal in the Netherlands research is restricted to problematic early postwar housing estates. The task of urban renewal comprehends spatial intervention in neighborhoods in order to create the desired changes of the living environment. Politics play an important role in the process of renewal. Policy changes are required to create the needed support and guidance for an integral approach to a task of this magnitude. In addition the awareness and willingness of private institutions is required to invest in the development of the social and economic climate in these neighborhoods. However, this study is restricted to the design aspect of urban renewal. Therefore the focus of this research lies with physical intervention in the existing built environment in order to regenerate the immediate surroundings. The second factor is the geographic restriction of the task set by the boundaries of the project location. Moerwijk is chosen as a case-study to explore the possibilities of renewal for these estates. The last and most important factor is the existence and potential of cultural historical heritage within the boundaries of the study location. Cultural-historical heritage can be described as tangible or intangible traces, objects and structures that are part of the living environment and are representative for a historical situation or development (OCW&VROM 1999). However, all neighborhoods are built with their own distinctive urban fabric, are characterized by different spatial elements and all plans are conceived with a different design philosophy and design instruments. Although none of these estates are the same, they all have similar aspects and elements that are distinctive for urbanism from the reconstruction period. The “Wijkgedachte” was the leading concept for the creation of large city expansion. The concept was characterized by an hierarchical setup in separate scale levels. Motifs of public facility clusters, vast green structures and hierarchic infrastructure systems where the structuring spatial elements of the neighborhood. The research focuses on these generic aspects of these neighborhood for possibilities of intervention and transformation of spatial elements. In this way the solutions presented for the renewal of Moerwijk can pose as starting point of other early postwar housing estates.
4. Research approach

This study is based on the hypothesis that cultural historical heritage from the reconstruction period has potential to be a catalyst of urban renewal of early postwar housing estates. This statement is based on the understanding that physical spatial intervention can positively affect the socio-economical climate of a neighborhood. The hypothesis will be tested on the hand of the following research question:

*In what way can transformations of cultural historical heritage from the reconstruction period contribute to the process of urban renewal and improve the living quality of Moerwijk?*

In order to make critical review of the literature the research question is divided in to three subquestions:

1) *Which generic problems of early postwar housing estates characterize The Hague Moerwijk?*

2) *What are the place specific and generic cultural historical values of the reconstruction period that characterize Moerwijk?*

3) *In what way can cultural historical values of Moerwijk be transformed to improve the quality of the living environment?*

By relating generic problems of Moerwijk to characteristic physical aspects of the neighborhood an approach for renewal can be formulated. The exploration of the potential of a transformation of these spatial characteristics can be starting point for strategic intervention. This research report consists of two elements. The first part is a literature review that will be conducted from 3 different perspectives. Firstly, an analysis of generic problems of early postwar housing estates (Argiolo e.a. 2008), secondly an inventory of cultural historical heritage of the reconstruction period (Lörzing e.a 2008) and thirdly a current view on cultural planning (Cusveller&Gall 2004). In addition statistical analysis from research reports of “Centraal Bureau van de Statistiek” and the “Planbureau voor de leefomgeving” of the demographics and migration flows within the neighborhood, financial records and employment rates will were used to obtain an understanding of the origin and magnitude of social problems in The Hague Moerwijk.

The second part of consists of a case study of The Hague Moerwijk in which the conclusions from the literature review will be combined with results from a morphological analysis of the location to support the design. This results in set of restrictions and requirements for the development and strategy and design of the renewal of Moerwijk. The findings from the literature review and the context analyses are subjected by research by design. The results of this design exercise will be elaborated in a design proposal for the renewal of Moerwijk. This proposal contains a set of design principles for physical transformation of cultural historical values specific to the location as a solution for generic problems of early postwar housing estates.
4. Phased city development & expansion

Moerwijk is located on the Noordpolder, Escamppolder and the Wippolder in the southwest of The Hague. The district has an oblong shape parallel to the coastline. The area is divided into 5 dissimilar ensembles by the Moerweg and the Erasmusweg. Nowadays these former country roads are the main arteries for ongoing traffic. The Erasmusplein is located at the intersection of these two roads and forms the center of the district. Moerwijk is the eldest of the four postwar neighborhoods located in The Hague Southwest. The district itself can be divided into two parts according to the development process. The part north of the Erasmusweg partially originates from the prewar period (1933-1940) and was based on the plan for expansion by H.P. Berlage dating from 1930. The southern part of Moerwijk was built after the second world war and was developed in accordance to the ‘Structuurplan Groot ’s-Gravenhage’ of W.M. Dudok.

4.1 Plan tot uibreiding van ‘s-Gravenhage - Berlage, 1909

Berlages ‘Plan tot uibreiding van ‘s-Gravenhage’ for Moerwijk is an example of ‘monumental city design’. The layout of the district is structured by large open spaces connected by axial lines. The axes were introduced to the urban layout as sight-lines to parks and monumental buildings. The sight-lines were used as a structuring ele-
ment of the spatial composition and to clarify the internal organization from a residents’ perspective. The two main axes that subdivide Moerwijk into 5 smaller spatial units connects the district to the rest of the city. The axis within these spatial units was created to connect large public spaces of the neighborhood and to maintain a visual relation. These public spaces are located in the center of the ensembles and provide space for schools and sports facilities. The sub-layer of the plan consists of a rational street pattern with rectangular building blocks. The spatial setup of the district is characterized by a height gradient with low buildings at the center and higher building on the edges on the example. The majority of the buildings consist of portiek-etage-woningen of tree of four floors. Lower and open building blocks with single-family housing are positioned around the squares. The plan determined the growth and expansion of The Hague for almost tree decades. However the plan was never fully completed due to the interference of the second world war. In 1940 only a portion of Moerwijk 1 was completed.

4.2 “Structuurplan Groot ‘s-Gravenhage” Dudok

After the war Dudok was asked to develop a structuring plan for the expansion of The Hague which resulted in the ‘Structuurplan Groot ‘s-Gravenhage’ in 1949. In his plan for the expansion of Moerwijk from 1952 he adopted parts for the already approved plan of Berlage but made
use of the opportunity to attune Moerwijk 3 to the schematics of the entire expansion area. In contradiction to Moerwijk 3 a new design was made for Moerwijk 2 and 4/5 located south of the Erasmusweg. For this part of the district he abandoned the original plan of Berlage with its ‘monumental city design’ and created a new urban design within the parameters of the ‘structuurplan’. This part of Moerwijk was built according to the spatial concept of the ‘Wijkgedachte’. With the realization of ensembles 2 and 4/5 Moerwijk became one of the school examples of the elaboration of this concept.

4.3 Wijkgedachte

The ‘wijkgedachte’, or ‘neighborhood concept’, is an ordering principle based on community building (RDMZ 2004 p.3). Through the ideas of ‘the garden city’ by the Englishman Howard and the ‘neighborhood-unit’ of the American sociologist Clarence Perry the ‘Wijkgedachte’ was introduced into the Dutch design culture. The “wijkgedachte” really got a food-hold with the publication of the study group led by M. A. Bos (1946), called “De toekomst der stad, de stad der toekomst” (Argiolu 2008 p.50). Government official W.F. Geyl, of the department of city development of Rotterdam took this development a step further and translated the ideas of Howard and Perry into a diagram (see Illustration 1) called “de gelede stad” (Blom 2004 p.18). The diagram shows the spatial and social organization of the city, based on hierarchy: dwelling-city block-ensemble-district-city. The neighborhood concept was based on the idealistic assumption that the structure
and quality of the urban layout could influence the social development of the city dweller (Meijel 2001 p.7). Features such as public functions were linked to successive scale levels, the public functions eventually became the backbone of the neighborhood concept (RDMZ 2004 P.3).

Dudok agreed with the observation that the modern city lacked a clear structure but he was still skeptical about the Wijkgedachte. According to Dudok the district played a crucial role in city-life but it had to be designed in a way that a vibrant community is possible (Blom 2004 p.19). The district resulted in a hierarchical structure but Dudok was of the opinion that it should not be exaggerated as a urban principle. In addition Dudok stated that the wijkgedachte would deteriorate due to religious differences, religion would bind similar minded people but would divide those with other ideologies. Despite Dudok’s skeptic perspective, Moerwijk became one of the school examples of early postwar community life.
5. Causes of the decadency of Moerwijk

The majority of early post-war housing estates such as Moerwijk is subjected to spatial- social and economic problems. Problems concerning public safety, the social-economical position of residents and the overall level of satisfaction (Brouwer & Willems 2007). Although every district has specific problems and characteristic 4 generic causes of decadency can be pointed out (Argiolu e.a. 2008): The demographic dynamic in the estate; the physical characteristics of the housing stock; the quality of the public space and in conclusion the social infrastructure and social cohesion within the neighborhood. In relation to each other and in combination with external trends these factors often have a negative influence on the social-economic position of the contribute to the process of demise. In addition to generic problems of early post-war housing estates all of these estates are subjected a number of local spatial issues. In order to formulate a sustainable approach for urban renewal of Moerwijk two additional issues have to be addressed. The first local issue to be addressed is the infrastructure system. The current state of the network of roads and connection is not sufficient to accommodate internal traffic flows. The second local spatial issue is related to water-management. Moerwijk is subject to a high flood risk due to the lack of water-storage capacity in the hydrological infrastructure.

2.1 Characteristics of the Housing stock

The physical characteristics of the housing stock are the most common motivation of departure from the neighborhood (Buys 2008 p.8). The majority of the housing stock consists 3- or 4-room flats and is in ownership of large housing corporations. In the case of Moerwijk more than 82% of the housing stock is owned by 2-3 large housing corporations. Most of the housing stock in technically sound but is programmatic outdated (too small, poor acoustics, no elevator, poor flexibility (Argiolo e.a. 2008b p1), worn out in a typological sense (Meijel 2001 p2) and often poorly maintained (Buys 2008 p.8). The relative quality of the dwellings decline because of the development of new dwellings in the neighboring estates that better meet the (increasing) requirements of the housing consumer (Argiolo e.a. 2008. P.36). As a result the early postwar estates become less popular by a growing number of households and the estates decrease in the local neighborhood hierarchy (Kempen e.a. 2008).

2.2 Demographic dynamics

The demographics of the early postwar housing estates changed significantly in the last decade. Households became smaller, aging set in and there was a large increase of immigrants. There was a large outflow of residents because the dwellings were to small to support large families. The number of inhabitants of Moerwijk decreased from 30.000 in the early 1960's to a mere 19.300.
residents. Due to the cheap housing there was also a large increase of low-income households, while mid-incomes and high-income households migrate to more attractive estates in vicinity or surrounding suburbs (VROM 2007 p.5). As a result many districts have an over-representation of households in a socially disadvantaged position. Especially young people only stay in the estates for a few years (because there are limited possibilities for residential career Buys. 2008 p.9). The increasing concentration of the immigrant population and the decrease of average income have negative effects on social cohesion and satisfaction within district (Argiolo e.a. 2008 p.37). A little over 43% is a indigenous inhabitant of Moerwijk. Housing corporations, that own the majority of the housing stock, try to sub verse this negative trend by systematically renewing the housing stock.

5.3 Quality of public space

District Squares and many green spaces are still regarded as one of the greatest qualities of the neighborhoods (Bayer 2004 P.6). However the design of public space is outdated, and parks and squares have often fallen into disuse. The cause of this problem is threefold. Firstly, many public spaces are often poorly maintained and the facilities are outdated. As result they are neglected, and have fallen into disuse or have become unsafe (Argiolo e.a. 2008b). Secondly Living and working functions are often poorly related to the public space (KEI 2012). The closed lower floors of residential buildings often pose a problem (Lörzing 2008 p.5). Thirdly, much of the public is not used and it is not clear for whom this space is intended, the boundaries of the area are poorly defined and the organization of space is not focused to specified activities (Cusveller&Gall 2004). In addition the functional separation of traffic and living leads to decrease of activity in the neighborhoods and the lack of social safety (Adriaanse 2004).

5.4 Social Infrastructure and Social Cohesion

The dynamic character of the demographic influences the social cohesion of the neighborhood in two ways. Firstly the large influx of immigrants led to major socio-cultural diversity. The lack of shared values leads to confusion, inappropriate behavior, and eventually results into dissatisfaction and insecurity (Argiolo et al 2008 p.145). As an effect the social interaction decreases and the attachment to the neighborhood declines. Secondly leisure patterns have shifted and use of public space changed. The reduced average income en decrease of inhabitants in Moerwijk lead to departure of most corner-shops and a decrease of use of the local shopping malls. The fragmented and outdated social infrastructure (childcare, schools, centers for work and income, hospitals or sports) is insufficient to support the needs of the residents (Duijvestijn et al 2007 p.53). Due to reduced support of shops and public facilities ultimately leads to a decrease of vibrancy and livability. For instance, shopping streets and squares with public facilities, which served as
a meeting place within the district (Adriaanse, 2008) and offered residents the possibility of social interaction (Van Bergeijk et al, 2008) become deserted due to increased vacancy. Therefore basic conditions for personal growth and structural behavior are missing, the involvement of local residents in their immediate environment becoming less obvious (VROM 2007 p.3).

5.5 reduced Mobility

The increase of motorized traffic is the cause of numerous spatial problems. The Erasmusweg and Moerweg are main traffic arteries on the scale of the city. Due to the increase of car traffic there on these roads there has been a disruption of the carefully designed hierarchal infrastructure system. The main access roads are dominated by ongoing traffic on a city level and poses as a barrier for internal traffic and hinder slow traffic routes. The reachability of the district for slow traffic flow is negatively effected and common areas become less accessible. This results in the desertion of common areas and eventually leads to a decline in social involvement (KEI 2012). In order to restore the hierarchy of the infrastructure system the distinction between city traffic and district access roads must be clarified. The focus of the task lies on the refurbishment of these roads in accordance to its function (Gemeente Den Haag 2011 p.117). Special attention is needed to reconnect the main traffic arteries to the local road system. Cycling paths and walkways must integrated in the redesign of these arteries to accommodate slow traffic flows. In the vicinity of
schools and other public functions extra care must be taken in the design of pedestrian crossings. On local routes slow traffic must be the normative standard for refurbishment. In this process the priority lies with pedestrians and cyclists with a less dominant role for car traffic.

Water management issues

Moerwijk is located on 3 different polders. A constantly rising groundwater level is one of the characteristics of a polder landscape. A system of drain canals and pumps prevents the district from flooding. To prevent uncontrolled flooding a policy was made on a national level concerning water management (Nationaal Bestuursakkoord Water). In this document several protection levels are defined based on the function of the area. For urban areas there is restriction of flooding once every 100 years. To achieve this, water storage possibilities are needed with a capacity of 325 m3 per hectare. Based on these protection levels and the maximum increase of the water level the water management authority Delfland has determined that there is shortage of 50,350 m3 in the Noordpolder and 97,000 m3 in the Eshofpolder (Hoogheemraadschap van Delfland 2007;2008). To prevent flooding in Moerwijk the public space has to adapted and refurbished to accommodate large quantities of water. The amount of hard materials has to be decreased to improve natural drainage. Large public spaces will have to be redesigned as temporary storage basins in order to take the pressure of the drainage system. The problems occurring in Moerwijk are caused by a combination of factors. Therefore, an
An integrated and comprehensive approach is needed to achieve the desired differentiation of housing, mix of functions, upgrading of the social infrastructure, the improvement of the infrastructure, and refurbishment of public space (Meijel 2001 p.2). In order to formulate a strategy for the renewal of Moerwijk further study must be conducted on the physical characteristics of the early postwar estates and the distinctive qualities of The Hague Moerwijk.

Water management system of Moerwijk
6. Conditions of transformation

5.3 A layered design

One of the main features of the early post-war neighborhoods, such as Moerwijk, is the layering of design of the successive scale and the strong correlation between the scales, as a result of the neighborhood concept. The significance of this approach lies in the care of the spatial design, in which the different levels are mutually involved, the great attention to the way that the outside space is designed in relation the dwellings, the accuracy of the subdivision and the accuracy of the composition (Cusveller & Gall 2004). As a result an alteration of the physical characteristics on one of the scale-levels it inevitably effects the functioning of the adjacent scale levels. Therefore a good design is positioned deliberately in the range of scales between home and city, and park tree, and shows awareness of the effects that the transformation to higher and lower levels (Cusveller & Gall 2004). It addition it is essential to distinguish the scale of the transformation, the scale of the design and the scale of the plan area (Cusveller & Gall 2004). The accuracy of the transformation depends on the definition of the smallest repetitive spatial unit, the smallest spatial unit in which the transformation take place and the definition of the biggest on which it has effect (Cusveller & Gall 2004).

5.4 Identity & recognizability

In order to be able distinguish the scale levels, the spatial units have to recognizable and identifiable. The identity of spatial unit not only decisive factor in the choice of a transformation but can also play an important role in the design a development process. The identity can be used to increase the amenity of the district, to legitimate the motives for conservation or renewal and can be a steering element in the process of renewal (Reinders 2008). Most of the designs of early post-war neighborhoods have spatial design features of cultural and historical value such as characteristic buildings and structuring urban elements. The recognizability and identity of the district will benefit from new architectural and urban impulses associated with these values (OCW & VROM 2004 p.8). Cultural-historical values can be used as structuring element for transformation and provide a spatial unit with identity. For instance, characteristic complexes can act as historical landmarks and make environment attractive again for contemporary residential consumers (Argiolu e.a. 2008 P.74). However, it is important to place these elements in historical perspective in order to determine if these elements can provide a cultural dimension in the future (OCW & VROM 2004 P45). Whether and to what extent the identity can be preserved depends on the nature and extent of the transformation challenge (Bijlsma 2008 p.8).

5.5 Value & flexibility

When the scale levels and identity of the district haven been established the value of the cultural-historical elements has to be determined. The value of district strongly depends on the degree of adaptability (Cusveller & Gall 2004). More specifically the potential of the ability to merge old and new (Bosma 2008 p.15), the options of transformation of existing structures to a contemporary vision and the ability of the adopted elements to provide structure for future development (Vos 2006 P.12). The choice of a particular type of approach depends on the desired degree of transformation of buildings, the scale of the operation, the properties and appreciation of the existing situation (Cusveller & Gall 2004).
6 The scale of transformation

6.1 Scale of the District

The district was considered to be the biggest achievable unit within the city. On this scale substance was given on the larger frameworks of the city (Blom 2004 p.38). When a district can be identified it is possible to transform it entirely into a new, contemporary neighborhood. Partial renewal will only harm the recognition of the district and the identity of the living environment (Cusveller & Gall 2004). Nonetheless, as long as the district can harbor changes in use radical physical transformation is unnecessary (Cusveller & Gall 2004). The spatial identity of the neighborhood is determined by the public space. Large urban areas like parks and squares, the infrastructure, green structures, historical building ribbons and monumental buildings define the character of the neighborhood (Bijlsma 2008 p.8). These cultural-historical values of these spaces offer opportunities to improve the identity of the neighborhood and strengthen the relation between dwellings and public space. For instance much desired residential environments can be created where suburban qualities and urban dynamics meet, by relating the dwellings to the green areas (Argiolo e.a. 2008 p.74).

Public facilities are often an integral part of the task of renewal (Bijlsma 2008 p.8). The rearrangement of public facilities and the refurbishment of public spaces can contribute to a transparent and effective social infrastructure (Argiolo e.a. 2008 p.74). In order to do so it is important to provide a wide range of public services and activities, which are available at different times of the day and are accessible to different residential groups (Bayer 2004 P.6). Providing that there is sufficient public support and little competition in the direct surroundings public functions superseding the district scale have to encouraged (Wassenberg & Blokland 2008). When refurbishing the public space the boundaries of the public spaces have to be defined, a specific usage has to be assigned to the area, and it has to be clear for whom it is intended and who is responsible.

6.2 Transformation on the scale of the ensemble

The district consists of a number of spatial units called ensembles. The ensemble is recognizable as a cluster of buildings of the same building typology or as a composition of buildings and outdoor spaces, within a building plot which is enclosed by roads (Hereijgers & Van Velzen 2001 p111). In the first case the identity of the ensemble is defined by the arrangement of buildings and open space that repeats itself within the urban fabric (Bijlsma 2008 p.8). A high-rise motif or courts structure within the ensemble can used to strengthen the recognizability of ensemble and can act as an inspiration for transformation. For instance the open space between the blocks can be refurbished or re-used, densified, or entire blocks can be demolished and replaced by newly designed blocks (Bijlsma 2008 p.26). In the second case, the identity of the ensemble is determined by distinguishable public spaces such parks or squares with characteristic buildings. The blocks are positioned around the public space have an inward orientation. The spatial composition is often characterized by a range of different types and sizes of condominiums, townhouses, private gardens and public spaces (Bijlsma 2008.27). The heterogeneous character of the urban layout has a great degree of complexity which results in the limited number of possible spatial interventions. However, new programs can be introduced through demolition and new construction. For instance: the development of high-rise can fulfill the demand of high-end apartments; Underground parking garages can be created to realize car-free streets; and the allotments can be rearranged to fulfill the need of private gardens (Bijlsma 2008 p.68). Nonetheless, the redesign of public spaces and the reuse of characteristic buildings have the most potential for transformation. Churches and historical school building are ideally suited for reuse (Reeken 2011 p.204). The buildings are characterized by their non-traditional architecture and often have a prominent position in the urban layout. In order to realize the desired changes in the social infrastructure these buildings can be transformed into a community center, leisure center, health center or workshops, daycare, homes, offices or space for small businesses and creative industry (Reeken 2011 p.204). The possibilities for the reuse of a church or school depends on the location of the building, the type of building and the flexibility of the spatial layout, the historical meaning and value and the appreciation of the architectural features (Rijksdienst Cultureel Erfgoed. 2011 p.45; 2002 p.30).
6.3 Transformation on the scale of the Stamp

The stamp is most well known repeatable unit: a fixed composition of building blocks and green space, which through repetition (identical or mirrored) formed the basis of the urban fabric. The buildings within the stamp often have different heights and contain different dwelling types. The physical identity is based on the repetition and continuity of building volumes (Bijlsma 2008 p.68). The basically unlimited repetition had two sides. On the one hand it was the basis of an interesting spatial rhythm, on the other it was the foundation of monotony (Blom 2004 p.37).

Nonetheless, the monotony can be decreased by the transformation of the stamp to a more contemporary city block. The main factors of a successful transformation are the spatial layout of the exterior and the nuanced relationship between the dwellings and exterior space (Cusveller & Gall; Vos 2006 p.9). The scale of the transformation for instance is affected by the structure of ownership within the stamp (Bijlsma et al 2008 p.51). Therefore it is important to take notice of the regularity and specificity of the allotments and the nuanced boundaries between public and private. Stamps characterized by slabs with a large amount of collective or public space in between the buildings offer possibilities for densification within their boundaries (Lörzing 2008). Densification of a stamp provides the opportunity to introduce dwelling types in the neighborhood that are needed to attract underrepresented residential groups. However, the characteristics of the residential will shift and the identity of the spatial unit will change. Smaller programmatic changes can be absorbed within the existing spatial-unit by the refurbishment of buildings and open space (Bijlsma 2008 p.8). Whereas the spatial composition remains the same the identity of the stamp can be maintained.

6.4 Transformation on the scale of the dwelling

At the lowest scale level the identity is determined by the characteristics of the housing stock. A large portion of the housing stock in early postwar housing estates consists of ‘portiek-etage-woningen’, flats accessible by a collective staircase with an entrance on street level. The most common type has is built up around the staircase in a symmetrical layout of five naves with three- and four-room apartments on each floor and storage units at ground level. If the situation requires an intervention on the scale of the dwelling the transformation of the ‘portiek-etage-woningen’ will be the most evident.

There are two common options for an intervention on this level. The first is option to adjust the existing dwelling to current demands. Completely new programs or housing types can be inserted in the shell. Existing apartments can be merged either vertically or horizontally in order to created the desired housing type (Bijlsma 2008 p.69). In addition the storage-units at ground level can be replaced by other functions, such as housing, commercial enterprises, or public facilities. As a result the blocks are better related to the public space, the livability on the streets will increase and social safety will improve (Lörzing 2008 p.5). The adaptability of the housing block are restricted by the technical aspects of the building, such as the supporting structure, the form of the building and the entrance-typology (Bijlsma 2008 p.70).

The second option is to replace one housing type systematically by another more contemporary typology. By introducing a new housing type the monotony of the built-up environment can be broken and the living quality can be improved (Lörzing 2008 p.5). For instance the development of affordable single-family houses in the owner-occupied sector and seniors apartments can attract other residential groups. By adding new dwelling types to the housing stock the opportunities for a residential career within the neighborhood can be improved (Kleinhans & Marissing 2008). However, the introduction of a large number of different dwelling types and residential environments will lead to an unclear spatial pattern with a high degree of complexity (Cusveller & Gall 2004). Limitation of variation on the other hand can lead to a harmonic composition with a strong identity.
Identity and Recognizability of Moerwijk

In the design of Moerwijk Dudok adopts themes from the original plan of Berlage. Dudok used two motifs as structuring elements and connecting elements in his elaboration of the Wijkgedachte. These elements can be derived from the plan as two different layers in close relation to each other. Together these elements form the backbone of the district and pose as the structuring elements of the Wijkgedachte in Moerwijk. The first aspect is the hierarchal composition. This hierarchal composition ensures the recognizability of the district and the subdivision separate spatial units. The second structuring element is the system the ‘groene dooradering’ or green veins of the design. The green veins are a combination of girths lanes and parks of which the district derives its identity recognizability. A third aspect that is representative for Moerwijk as well as it is a significant part of historical value of all of the early postwar housing estates is the Portiek-etage-woning.

Hierarchal composition

The road system, was originally designed, by Dudok in the ‘Structuurplan Groot ‘s-Gravenhave’, to provide a framework for the development for city expansion. The road system had a grid-like layout and was divided into 4 scale levels. These separate levels were related to one of the scales in the iteration of City-District-Ensemble-Block-Dwelling as defined in the diagram of the...
“Gelede Stad”. The infrastructure system was super-positioned over the existing city layout and gave hierarchy to infrastructure connections. The hierarchy of the road system also resulted in clear definition of spatial units. For instance, the access roads of the city district defined the edges of the separate districts, subsequently the access roads of the district defined the edges of the ensembles. Although the distinction can be made between the separate scale levels, they cannot be regarded as autonomous systems, the connection between the scale levels is vital for the efficiency of this hierarchal road network.

The composition of the building blocks was used to strengthen the hierarchy of the spatial units in Moerwijk. The composition is characterized by an iteration of descending building heights in relation to the desired level of intimacy. Alongside the broad traffic arteries are long building blocks of four storeys high, in the ensembles the apartment blocks are 3 floors high and in the center there are single-family houses of 2 floors high. The higher buildings on the edges, alongside the traffic arteries Erasmusweg and Melis Stokelaan, give a continuous and recognizable image on scale of the city (beek & Heijden 1987 p.39). The continuity of these broad roads is strengthened by the accompanying girths and service roads and the long street walls with an architectural expression predominated by rhythm and repetition (beek & Heijden 1987 p.39). The intersections of several important traffic routes are accentuated by a high-rise motif. The Erasmusplein was emphasized by a 3 towers of 14 floors high. However the buildings have little to no relation to the area laying behind it and are only visible from throughout the neighborhoods from certain points. Within the ensemble churches an schools are the most important elements of recognition.

**Green Structure**

The composition of Moerwijk is characterized by a strong axial layout and an organization of spatial units divided by oblong green spaces, such as girths and plantations often accompanied by parks and sports facilities (beek & Heijden 1987 p.39). The majority of the system of waterways and green space converges with important traffic arteries, secondary roads and large public spaces. Although the road infrastructure has rigid and monotonous character the addition of a variation of green elements results in a differentiated image of the district. The Middachtenweg, Erasmusweg and Moerweg have wide profiles with girths and broad banks. Along the girts are long strips with trees and cross pedestrian roads. The favorable positioning of Moerwijk in between the Zuiderpark and “De Voorden” results in a sufficient amount of parks and green facilities at walking distance. The Zuiderpark, de Voorden and the allotments in the west are integrated in the green system of the district by the Aagje Dekenlaan which was originally designed as a connecting parkway. Apart from these large green arteries the district has a number of green strips which often coincides with the girth structure. Although the sports fields in Moerwijk 2 and 3 quite spacious and at first glance seem to be integrated in the system of green spaces, they are not accessible.
due to a ring-girth, fences and dense vegetation.

**Portiek-etage-woningen**

The blocks in Moerwijk predominantly have classic setup with a plinth of sou-terrains with 2-3-4 floors which form the actual facade of the block topped of by a cantilevering roof edge. The edges are lifted above the wall which has a strong horizontal effect. Rhythm in the facades is realized by accentuating the staircases balconies and bay windows. The majority of dwellings in Moerwijk are social housing for low income households. A smaller number of dwellings are built for singles and small families. The majority of these dwellings is realized in Moerwijk 1 and 2. The biggest point of criticism is the monotony of the district. Most blocks have the same allotment: a half open block with parallel slabs with a short slab at the head. The inner gardens are semi-public and show little differentiation. However due the uneven shape of the ensembles there is certain amount of variation in the layout of the ensembles.
9 Urban design

9.1 Vision

The redesign is set up with the same design principles as the original plan of Moerwijk. The layered approach and use of the specific design instruments of the district are the starting point for the urban approach. The approach aims to strengthen original motives Wijkgedachte by upgrading it to contemporary standards and transforming them to local requirements. The urban interventions are legitimized by making use of cultural historical values as structuring elements of transformation. The main objectives are:

1. Improve and strengthen the identity and recognizability of the spatial units.
2. Strengthen the relation between separate scale-levels
3. Improve the quality of public space by appointing clear functions with a clear spatial definition with a clear group of users.
4. Improve the social cohesion by attracting new residential groups

Strengthen Identity spatial units

The spatial characteristics of the district are used to strengthen the hierarchy. The continuing line of higher buildings on the higher edges on the north side of the Erasmusweg is mirrored to the adjacent ensembles on its south side. By doing so the relation between the 5 ensembles is...
strengthened and the Erasmusweg is emphasized as connecting route on the scale of The Hague Southwest. To strengthen the recognizability within the ensembles a similar approach is used. The gaps in the street edges have been filled by new buildings. By doing so the stamps are more clearly defined and a clear outward orientation is created. As a result the slow traffic routes are guided by the continuous street wall and the relation to the outside public space and the stamp is realized.

The emphasis of the hierarchy of the spatial units was used to clarify the social infrastructure of the neighborhood. The route on city level, spatially defined by the higher buildings at the edges of the ensemble, forms a connection between public functions on the scale of the city. This main-route between the Moerwijk Station and shopping-center Leyweg is used to cluster public district functions. In the current situation the functioning public facilities is hindered by their location whiting the ensemble. By clustering these functions to the main route they become reachable as well as accessible to residents living elsewhere in the district.

**Strengthen the relation between separate scale-levels**

In order to strengthen the relation between the scale levels a structuring framework based on the original concept motives has been added to the urban fabric. In comparison with the original design the framework also has the layered setup. The first layer consist of a hierarchal road...
system with distinction between traffic flows with reference to the scale level they serve. The second layer is a green-blue network of lanes and girths and wadi’s. This green-blue-network provides the neighborhood with a much needed identity, it produces a recognizable image for traffic routes on the separate scale levels and it gives a higher quality of public space.

The green structure is divided into 3 separate layers. The first layer consist of a connection between the Zuiderpark at the north side of Moerwijk and the Voorden at south which has a tree-folded effect on its surroundings. Firstly this new connection the parks are integrated into the recreational network at the scale of the city. Secondly the District of Moerwijk is related to qualities of its location and it is related to a higher scale level. The third aspect is that with this new ‘parkway’ has specific spatial qualities which can be used to attract new residential groups.

Alongside the parkway an ecological zone is part of the plan to integrate the green structure of The Hague Moerwijk into ecological network on a higher scale. This ecological zone strengthens the biodiversity and it provides opportunity to incorporate the task of water-management into the plan. The squares, located in the center of the 4 ensembles of Moerwijk connect the task of water-management at the scale of the ensemble to the bigger scale. The squares are designed as temporary rainwater-storage, these are connected to the outlet-waterway located in the ecological zone. The fluctuating water level creates a dynamic landscape which provides a characteristic identity to the public space.

The green blue network is strengthened by a finer
mesh of wadi’s and lanes within the ensembles. These green elements connect the blocks to large scale green elements.

The third layer of the approach to strengthen the relation between the separate ensembles is the use of set of landmarks. High rise buildings are used to create sightliness to enforce the orientation on city level. Within the ensembles churches en school buildings an height accents are inserted to mark slow-traffic routes. In addition new bridges are built to demarcate the intersection with a route on a higher scale and the connection to the adjacent ensembles. Existing characteristic buildings are utilized to integrate the layer in the current situation.

**Improve the quality of public space**

The quality of the public space is improved by giving a clear spatial definition and a recognizability. The green-blue network is used give a characteristic quality to its surroundings and a specific appeal to the adjacent buildings. In order to boost the use and value of the refurbished public space the semi-public open space within the building blocks are closed of and are rearranged into private lots and collective gardens. In addition to the reallocation of property and the renovation of the system of girths lanes and squares the relation of public space to the surrounding buildings is restored. Firstly by creating an outward orientation of the building blocks towards the outside public elements and thus restoring the visual connection. Secondly
by renovation of the facade of the surrounding buildings and connecting the dwellings to ground level by stairs, porches and terraces.

4. Attract new residential groups.

The differentiation in public space of the squares the ecological zone the parkway and the girths provides an opportunity for the inhabitants to derive a specific identity from its surroundings. Each of the different spaces has different characteristics which address specific residential requirements. These characteristics are used to attract different residential groups in order to create a more diverse demographic composition in Moerwijk. Alongside the ecological zone a new living environment will be created which can be described as city avenue. It is very well connected to the rest of the city by car and public transport. The ecological zone will provide public space of high quality. In addition new high-end apartments will added to attract two income households. The parkway and girths have a similar character. However, due to a restricted amount of car traffic this environment will appeal more households with children with the requirement of a land-related dwelling and a garden. At the location of the squares new apartment blocks will be added according to contemporary standards. The characteristics of these dwellings will focused on the needs of elderly people and starters.
Cultural historical values as an approach for urban renewal The Hague Moerwijk

Water
Overstromingsgebied
Groenstructuur
Parklandschap
Bebouwing
Nieuwe bebouwing
Netwerk openbare ruimten
Brug

Huntingdon Iep
Hollands Linde
Gewone Podoom
Paardenkastanje
Zilverlinde
Winterlinde
Sierappel
Overige

Sorbus aucuparia
Treurwilg
Salix sepulcralis 'Chrysocoma'
Salix alba
Wilde Lijsterbes
Geknotte schietwilg
Sierkers

William van Bart B1210343

Masterplan

Cultural historical values as an approach for urban renewal The Hague Moerwijk
9.2 Masterplan

As shown in the previous paragraph the masterplan is set of interventions on the scale of the district. The spatial alterations can be categorized into separate layers the parts of the intervention itself cannot regarded as interchangeable for alteration have a correlation to each other. The Masterplan can be elorated in three different compositional aspects, the green structure, the waterstructure and the system of public space.

Waterplan

The main waterway that of Moerwijk is the channel the Laak, alongside the Erasmusweg. The Laak is part of the boezemwater system and therefore on of the most important organs of the district’s hydrological system. The Boezemwater is connected tot the sewage system by girths and newly introduced wadis. The district has a combined sewage system for precipitation and waste water. In the design the sewage system is converted to two separate systems for precipitation and wastewater. In the separated precipitation system the newly introduced water-squares play a vital role. The water squares are the center of the ensemble and are a platform of community life. In case of a rain shower the function of the square shift from a public function to a hydrological function. The square act as an temporary rain water buffer. The squares or divided into several basins to store the rainwater of the immediate surroundings to take the pressure of boezemwater. When the water-level
has returned to an acceptable level the water on the square is drained to the girth system.

**Treeplan**

The green structure in combination with the system of public space in the design can be divided into categories. Ecological zone, the parkway, water-squares, girths&wadis, and residential streets. Each of these public environments has a different function. These places have specific place in the hierarchal network of public space. The identity and recognizability of these public spaces is strengthened by the treeplan. Based on a scan of all existing trees in the district and the municipalitie’s policy note on trees(2009) tree species were selected to strengthen the identity of the separate space categories.

**Design-principle - Ecological zone**

Ecological zone is located along the Erasmusweg. This zone forms an integrated part of the provincial main ecological structure. This network is of great importance tot ensure the survival of fragile plant and animal species. The profile is designed according to the goals set by the provincial government and the municipality. To meet achieve these goals the width of the zone should be no less than 20 meters. This zone can roughly be subdivided into a continuous strip of forestation edged by a grass fringe of 2m with a transition to a plas-breed one side and bush-grass fringe on the other.
Desing principle ecologic zone
**Design-principle - Girths & wadis**

The girths and wadis are not part of the main ecological structure but are also of great importance for biodiversity within the neighborhood. To strengthen the identity of the ensembles acces roads and to improve the quality of the public space the girths and lanes have been refurbished. In some parts wadis have been introduced to strenghten the green and blue image of these routes. The girths and wadis do not only contribute to the biodiversity and image of the neighborhood but also have a purely practical use. The addition of wadis to the hydrology network expands the water-storage capacity.

**Design-principle - Residential street**

The transformation of the blocks at the Cannenburglaan in combination with the design principle of the residential street integrate a large portion of the spatial alterations in the design. The buildings alongside the Erasmusweg are demolished and replaced by higher slabs to contribute to the hierarchal composition and to create a visual connection with the other side of the street. The building will have maisoneettes at street level with room for home-related business and shops. The higher floors will consist of high end apartments in order to create the desired diversity of housing types. The relation of the dwelling to street is restored by creating land related dwellings. Porches and balconies have been added to the existing buildings in order
Design principle residential street

Design principle wadi
to maintain the representative portiek-etage-woningen. The small portiek-etage-woningen are renovated and vertically merged to create large apartments. Alongside the Cannenburglaan the block is closed off by new apartments to restore the orientation of the block towards the systems girths and wadis. Inside the block the dwellings on the bottom floors are connected to a private garden by a new porch. The remaining internal space is converted to a collective garden for the upper-floors and is accessible through the internal stairwell. By subdividing the space and redefining the ownership the surplus of public space is reduced. By doing so the refurbishment of the remaining public space to high quality leisure areas is justified. The street itself has also been refurbished. Different materials are used to demarcate separate levels of intimacy and ownership. The street is divided by a band of stone-like material with an deviant color and larger integrated gutter to create a buffer zone between private and public space.

On street level the parking pressure has been reduced. Car ownership is related to the size of the dwelling. As result a result of the larger dwellings car ownership increases with a factor of 1,6. However by merging two existing dwellings were merged to achieve this the number of cars decreases with a factor of 2 and thus reducing the parking pressure with 20 percent. The new appartment blocks a the Erasmusweg will improve this number even further as a result of the underground parking garages.
BB Erasmusweg

**Current situation**

**New situation**
CC Aagje Dekenlaan

Current situation

New situation
Current situation

New situation

Cultural historical values as an approach for urban renewal The Hague Moerwijk
EE Uilenpasstraat

Current situation

New situation

Uilenpasstraat
Water-square Heewijkplein
Design principle - Water Square

The existing squares have been given a new identity by the integration of the hydrology system in the design of the exterior space. Height differences were implemented into the design to create several basins to store precipitation water temporarily. The height differences were also used to define the edges of the separate functions and activities that can occur on the square. By defining the edges of room, or space, on the square the use and responsibility can easily be determinant. The dominant principle of water storage on the Heeswijkplein is that of the 'water-steps'. The principle was derived from the oriental rice paddies that uses the height to contribute to the irrigation system. Different kinds of aquatic plants were inserted to create a distinctive atmosphere on the watersquare.
Water-square Heewijkplein AA

Current Situation

New Situation

New Situation
Water-square Heewijkplein BB

Current Situation

New Situation
Water-square Heewijkplein - functions

A large part of the shopping space on the Heewijkplein was vacant. The vacant shops at the westside of the square were converted to dwellings. By relating the dwellings to the square the activity increases and public safety is improved.
Water-square Heewijkplein - Watermanagement

In case of a rain shower the shape of the square transforms.

<table>
<thead>
<tr>
<th>Precipitation (mm)</th>
<th>Required water storage (m³)</th>
</tr>
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<tbody>
<tr>
<td>10</td>
<td>218</td>
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<tr>
<td>20</td>
<td>436</td>
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<td>524</td>
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<td>1092</td>
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<tr>
<td>62</td>
<td>1354</td>
</tr>
</tbody>
</table>
10 Conclusion

Early postwar housing estates are subjected to a range of problems. In combination to each other and under the influence of endogenous factors this leads to decadency of these neighborhoods. The cause of the problems is not always due to design flaws or deterioration of the physical environment but do often have a relation the physical spatial characteristics of the estate. The technical quality of the housing and the living environment is not necessarily bad, but it often has a poor relative quality. With the development of living environments with housing and facilities, that better meet the demands of the contemporary residential consumer, in neighboring estates the early postwar housing estate decreases in the local district hierarchy. The homogeneous housing stock and outdated social infrastructure no longer supports the needs of for instance mid- and high income households. This leads to an over-representation of disadvantaged families and underprivileged immigrants in the neighborhood. The resulting lack of social cohesion and the decreasing attachment leads to negative image of the neighborhood. The negative image creates a downward spiral effect, becoming a self-fulfilling prophecy.

Therefore the task of renewal is threefold. Firstly, the identity of the estate must be improved in order to stop further degeneration. Secondly, new living environments have to be created and contemporary housing has to be developed in order to attract underrepresented residential groups. Thirdly physical barriers of the public space have to be broken down and the relation between the dwelling and public space has to restored. This cannot be realized by a single physical intervention in the urban fabric. Due to the complexity of the problem and the spatial characteristics of early postwar urban design this requires an integral approach with a range of spatial and political intervention on different scale levels. Cultural historical values can be used as structuring element in renewal process. In addition the values can improve the amenity of the district and legitimate the motives for transformation. The design has shown that the qualities of the original urban design have the potential to give a neighborhood a new identity, the spatial layout has the flexibility to adopt changes in function and the majority of existing buildings can be transformed housing up to the standards of the contemporary housing consumer. However due to scale of the task the renewal is dependent on national policy to regulate the development of these neighborhoods, the involvement of municipalities is needed to provide the base for a cultural historical approach and to guard of the process of development and the willingness of corporations to invest disadvantaged neighborhoods. The shaping of the identity and preserving the qualities and heritage of the reconstruction period is up to the urban designer.
11. Reflection

The relation between research and design

The graduation project consists of two parts: research and design. The research is focused on the task of urban renewal of early postwar housing estates with the wijkgedachte as structuring principle. The emphasis lies on search for an urban strategy to increase the quality of the living environment. The research subject was framed by the following problem statement:

The increasing car-traffic on city and district entrance roads causes a barrier effect that disrupts the slow traffic-routes within the neighborhood. This has hindering effect on the accessibility and reachability public facilities. Which strategy can be used to improve the hierarchical spatial structure of the neighborhood and to clarify the slow – and destination traffic?

From the results of further morphological analysis of the plan area and a thorough study of the theory of the generic foundation of the urban situation however could be concluded that urban task could not be described by this one-sided problem statement. Thorough study of the problems appearing early postwar housing estate gave more insight in the complexity of task at hand. The initial problem statement was not incorrect but appeared merely a part of the problem. Further investigation lead to the following problem statement.

Outdated and unilateral housing stock, deficient social infrastructure, insufficient social diversity and the poor relation between public space and the surrounding buildings leads to spatial cluttering an the social-economic demise of early postwar housing estates.

Part of the problems can be traced to the original design and the concept according to which the design was conceived. Extensive study of the philosophy of the Wijkgedachte resulted into plausible leads for the re-design of Moerwijk. The layered setup and the use of several spatial motifs of the original design provide possibilities of a spatial renewal strategy. This conclusion leads to the following research question:

In which way can cultural historical values from the reconstruction be utilized to revitalize Den Haag Moerwijk?

In order find an answer to this question research has been conducted on the generic spatial aspects of early postwar housing estates. The focus lied on the search of a method to value these spatial elements. The results of theoretical survey were used as a starting point for the redesign of The Hague Moerwijk.

Relation between theme of the studio and the chosen research subject

The work in the studio Hybrid Buildings is based on research by design. The research concentrates on the interrelationship between the transformation of urban morphology and changes in building typology. The focus is on urban transformations whereby large structures must be constructed with the capacity of accommodating complex uses. Architectural design acts as a means of exploring the possibilities for the transformation of urban areas. With this approach the disciplines of urbanism and architecture are intertwined. Although architectural measures implied in the design proposal for The Hague Moerwijk it does not include and urban intervention by means of a singular architectural object. The cause of this discrepancy between the theme of the studio and the subject of the graduation project is two-fold. The first reason is of an organizational nature. Due to administrative reasons a bifurcation has taken place between the track urbanism and architecture. The second reason is founded by results of literature research. From thorough study of the renewal task of early postwar housing estates the problems of these neighborhoods appeared to be complex combination of exogenous and endogenous factors of social-economic or spatial nature. This development supported the conviction that the task of urban renewal could not be tackled by an intervention with a single architectural object. Therefore another approach was chosen which deviates from the original goal of the studio. The project is elaborated into an integral urban plan with a set of spatial interventions instead of the elaboration of an approach of renewal into the design of a hybrid building.

Relation between the method of the studio and the chosen research method
Prior to the design phase a architectural task had to be determined. By means of analyses a problem-statement was formulated. The analyses involves a typo-morphological study of the planning zone, in which the relationship between the morphological structure of the town plan and the typology of the built development is identified, with particular concentration on processes of change and transformation of the urban area in response to architectural interventions.

In the research phase prior to the accrual design a theoretical framework had to be presented in the form of review paper. On the hand of previously stated problem description the research was conducted. As mentioned in the previous paragraph the problems statement has been changed in the course of the project. This is due to the fact that new insights were acquired from a study of morphological analyses and supporting literature. Because the problem statement was finalized the theoretical research was not concluded before the advancement to the design phase, in contradiction to the setup of the of the graduation studio.

The chosen method can be characterized by an interaction of theoretical input and spatial analyses of the plan area. Knowledge of design philosophies in the reconstruction period, the concept of the Wijkgedachte and the elaboration of this concept into different scale levels with specific design motives are mirrored to the original design of Moerwijk to gain a better understanding of the urban situation and the problematic social issues. The research was not limited to the specifics of the task of the renewal of Moerwijk but comprehended the generic aspects of the task. Subsequently the experience derived from this project can be used in an approach of similar design tasks.

Social relevance of the research subject

The national policy on spatial development is characterized by the renewal of early postwar housing estates. Most of these districts are subjected to social and economic demise and there is a growing dissatisfaction of the residential environment (Argiolo e.a 2008). The national government has selected 40 of these districts that are in need of urgent intervention. Moerwijk is considered to be a school example of early postwar urban design. Moerwijk is also known as one of the 40 problematic districts.

With the introduction of ‘cultural planning’ in the nation policy (OCW&VROM 1999) there is growing awareness of the potential of cultural historical qualities for urban renewal. In order to make use of the qualities and to address the issues at hand there is a need for a new and specific approach of urban renewal of these early postwar housing estates. In the approach for the renewal of Moerwijk physical interventions are related to socio-cultural and economic issues in order to formulate an integral approach for renewal. The design principles used in the approach of renewal of the district of The Hague Moerwijk can be used as starting point for the formulation of strategy for renewal of similar early postwar housing estates.
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