

Rehabilitation of the Architecture of the 20-40 Belt in the City of Amsterdam

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The 20-40 Belt

The Housing Act of 1901 enabled Amsterdam city authorities to draw up compulsory building regulations and to grant subsidies to house builders. The influence of local public housing authorities meant that the Housing Department and Public Works became important institutions and involved in the debate about town planning theory.

This contributed to the development of city neighbourhoods including the *Transvaalbuurt*, in which important architects such as Hendrik P. Berlage were involved. The *Transvaalbuurt* is an excellent example of the use of town squares. It is possible that some of Berlage's designs were preliminary exercises for one of the climaxes of pre-war town planning: the 1917 development plan for *Zuid* (Amsterdam South). *Plan Zuid* was commissioned by the City Council to cover a section of Amsterdam to the south of the *Ceintuurbaan* and was carried out in a somewhat revised form (Fig. 2).

It was the first time that aesthetic considerations played an important role in planning. By combining wide avenues and winding side streets, Berlage hoped to achieve the same mixture of the monumental and the picturesque that characterized the 17th century concentric canals. The



1. The renowned 17th century town plan of concentric canals

avenues led into squares in which monumental buildings were to close the perspective. Instead of artists' residences and an art academy, however, the buildings that were actually constructed were more mundane. A "sky scraper" was built in the eastern part of the neighbourhood at the intersection of Rooseveltlaan (Fig. 3), Vrijheidslaan and Churchill-laan. In the western part, dominated by a trident configuration of streets, a hotel was to appear at the end of the central axis. Owing to increased traffic, the squares have become busy traffic intersections. Seventy-five percent of all the buildings

were intended to be working-class housing, making the plan an expression of ideas, which were fundamental to the Housing Act.

In Berlage's social vision all people were equal and, although the brief demanded a division into classes (the well-to-do came to live in the western part of the neighbourhood), Berlage was able to create a single urban environment for everybody and, in doing so, brought together the different classes.

In 1922, the City Council lent its approval to *Plan West*, also called the 6,000 houses plan, which was developed by the private developer H. van der Schaar.

This plan covered the area between Jan van Galenstraat and Postjeswetering: the "Admiralen en Postjes" Quarter.

This plan differed from the *Plan Zuid* by Berlage in so far that it maintained the general pattern of the existing paths and ditches for the new street layout. Many of the architects who worked on Berlage's *Plan Zuid* also cooperated in the realization of this plan. The large residential blocks were intended to have a certain measure of uniformity, but were often developed and commissioned in different sections and designed by different architects. The desired uniformity was seen to by the Architectural Aesthetic Committee. Often one architect also designed an entire block for different owners.



2. The *Plan Zuid* was commissioned by the council to cover a section to the south of the *Ceintuurbaan* and was carried out in a somewhat revised form

Throughout the years, various forms of ownership had their repercussions on the way the buildings were maintained. Buildings in the area to the south of this part of the city were developed through the efforts of private developers. Other areas along the outskirts of the city were also developed, including the *Spaarndammerbuurt*.

The urban expansion projects carried out between 1920 and 1940 were spread over several Amsterdam boroughs, forming an irregular belt around the old city.



3. A "sky scraper" was built in the eastern part at the intersection of the Rooseveltlaan, the Vrijheidslaan and the Churchill-laan

The garden city concept was introduced to Amsterdam by socialist councillors such as Wibaut and De Miranda.

Their ideas were given shape in Amsterdam-North (Fig. 4), in Tuindorp Oostzaan, the Vogelwijk, and in the district of Watergraafsmeer in Betondorp. The southern part of the Belt is largely dominated by Berlage's famous *Plan South* while to the west more pragmatically developed projects were realized. To the east, the Belt appears more fragmented. This is partially due to the demolition of almost the entire *Indische Buurt*. The building style that stands there today is overwhelmingly Amsterdam School, in its various phases, or other forms of brick-based architecture.

The AUP

In 1929, urban planning in Amsterdam was committed to the Department of Town Planning (Stadsontwikkeling), led by Ir. L.S.P. Scheffer, Ir. TH.K. van Lohuizen and C. Van Eesteren. This trio presented the Algemeen Uitbreidingsplan AUP – a general development plan based on the idea in those days that there should be a strict division between housing, employment, recreation and transport. As a result various neighbourhoods were created where residential and working quarters were separated by recreational areas. Most of the new neighbourhoods were developed in West, for example Bos en Lommer and Sloterveer. In 1934, a competition was held for cheap working-class housing as a part of the AUP. It was won by representatives of "Nieuwe Bouwen". On the

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basis of their design, housing was built in Bos and Lommer, an area in the western part of the city. The most important aspect of the plan is the use of open building-blocks in strips instead of the enclosed blocks. This assured the admittance of more sun and air, and green areas were more important. The designers were not satisfied with the finished product, however, as the price of land had compelled builders to place the façades too closely together. Also other building forms were parcelled out. L-shaped residential blocks were built around green courtyards. Due to the World War II, the major part of the AUP came into existence after 1945.

The Amsterdam School

The manner in which town planning, architectural policy, and public housing were integrated in Amsterdam between 1920 and 1940, the so-called *Gordel 20-40* (The 20-40 Belt), has been praised all over the world.

The architect Jan Gratama first introduced the term Amsterdamse School (Amsterdam School) for the architecture in these areas in an article with the following words: "Youth do not have the patience of Moses. They want to taste today the wine of the promised land of architectural beauty. Henceforth, the new direction in architecture is the modern Amsterdam School with its expressionism, its modern romanticism and its fantasy." The coherence between town plan, architectural design of the façades and the craftsmanship of the sculptural details would not have been possible, if it had not been for easy collaboration between politicians and designers. The consistent use of a uniform architectural style, combined with the relatively short period of 20 years within which the Belt was built, has resulted in the creation of a rare and largely intact urban area, which is much appreciated internationally.

In recent years, an enormous amount of work has been done under entirely different social and political circumstances for the rehabilitation and improvement of buildings in the Zone 20-40. The rediscovery of the importance of architectural details, in relation to the over-all structure of the initial plan, has come step by step.

"Beter verbeteren"

Plan South and the highlights of the Amsterdam School are already well known. Officials have not only identified the highlights, but also surveyed and appraised the lesser known buildings (Fig. 5) and projects as part of the greater whole.

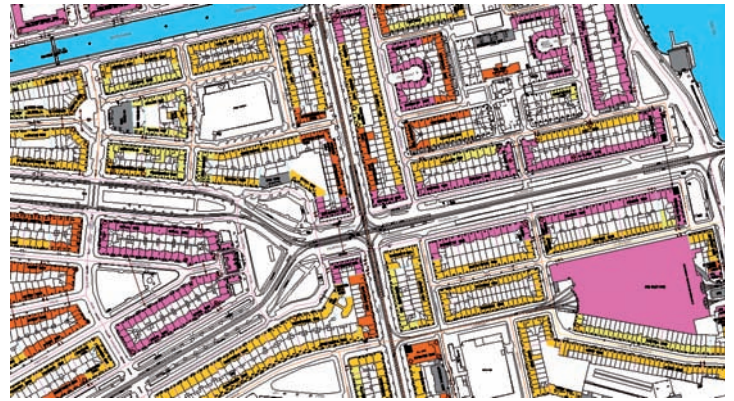
This research has significantly increased insight into the process of construction during a period that was not that long ago.

At the time of this research, the buildings in the neighbourhoods discussed here were fifty-five to seventy-five years old and in dire need of renovation. The condition of many of the buildings was bad: woodwork had rotted, steel was rusted and concrete had cracked. The foundations of many buildings was also a problem; masonry had sagged and was starting to crack. Various parts of the buildings had to be repaired or renovated to keep them intact. Moreover, it was necessary to adapt the buildings to the requirements of modern housing.

In the 1970s systematic urban renewal projects were started in Amsterdam. From the outset, this often meant the demolition of the old buildings and the construction of new buildings. The condition of the foundations was most often cited as the reason for demolition. At the time, if there were problems concerning the quality of the foundation, the architectural and historical quality a building was easily ignored in favour of the simple solution: demolition. In the 1980s, local politics was confronted with the fact that more and more of the original wooden windows, and window frames in the 20-40 Belt were being replaced by plastic windows. The result was a dramatic change in the appearance of streets around the city, making the architecture seem drab and superficial. As the potential impact on the city became apparent, city authorities took things in hand. Officials soon realised that the process was a threat not only to Amsterdam's



5. This project has not only identified the highlights, but also surveyed and appraised the lesser-known buildings



6. The conditions for receiving subsidy are that the projects belong to complexes classified in the architectural classification maps

cultural and historical heritage, but also to social relations within the city and its prestige as the country's capital. As a result, a more subtle approach was called for. (For example, today buildings are only demolished when no alternative can be found.) Consensus between politicians and civil servants as to the importance of the city's architectural heritage meant that there was a sound base for the creation of the regulations for the "beter verbeteren" subsidy.

Among the changes, the city of Amsterdam initiated a stricter supervision of all changes to façades and, because of the specific character of architecture and town planning of the 20-40 Belt, a special architectural supervisor was installed. The supervisor is expected to evaluate changes to buildings and public areas, and to determine if they comply with the demands necessary to acquire subsidies. He also advises various town boroughs on stipulations for new buildings.

When protected architectural monuments are concerned, advice from the Municipal Department for Preservation of Monuments is also required before building work can be carried out.

The practice of renovation has increased greatly, and this has had a significant impact on the building and construction market. In a short span of time, a large supply of building materials and parts has been developed. These can easily replace non-functional parts of buildings of architectural value quickly and efficiently.

The specific approach for the 20-40 Belt started out with a systematic analysis of the town structure. Buildings were classified on the basis of this analysis. The classification led to criteria on the basis of which interventions in the architectural appearance of the buildings may be judged. These criteria are used daily in discussions with architects, builders, homeowners and cooperation of technical services. And, last but not least, they are used with labourers at work sites. The strict attention to our architectural heritage from the period 1920 to 1940 has finally begun to bear fruit.

This subsidy is called "Beter Verbeteren"... literally "to better better" (to improve even better). First of all, this new subsidy was meant for houses bought by the corporations. Later it could also be used for private rehabilitation projects. In order to receive the subsidy, projects must belong to complexes classified in the architectural classification maps (Fig. 6) developed for the 20-40 Belt.

Architecture is divided into four categories: *Basic*, *Class 3*, *Class 2* and *Class 1*.

Architecture classified as *Basic* has no significant inherent value. *Class 1* has listed-building status, or is worthy of it, and requires total restoration of the building. *Class 2* demands a careful approach, especially the street façade. *Class 3* requires an approach of lesser importance.

The subsidy still exists, and has been modified to be put to use in older 19th century districts. It would be a disaster for the city if it was abolished.

It is imperative that knowledge and appreciation be handed down to future generations. This includes knowledge

about materials, constructions and decorative details. It is important that we understand how things were done in the past and how we can reproduce these procedures in the future. Up until World War II, the carpenter was the boss at a building site. However, industrialization has dampened enthusiasm for this handicraft. Producers of window frames, for example, have started to develop good standard details, so their work can be done quickly and efficiently. But issues such as the difference between modern glass, which reflects more than the old glass, are problem that need to be resolved. There is a constant search for the best solution.

The challenges

The challenges faced in the phase of rehabilitation have been many and have had to do with a variety of problems.

1. The appearance of whole blocks of buildings had changed drastically throughout the years by the way different owners and inhabitants have maintained their individual sections.

The unity that originally had been intended and had been achieved from the outset, has disintegrated. The simple cleaning of a section, for example, of the street façade can cause the architecture to be cut into bits. Replacing elements as windows, using different colours when repainting, and other maintenance work can have the same effect.

2. The next challenge is to adapt the old ground plans to present requirements. Homes stay more or less the same after renovation, but present needs are different. Most of the buildings were developed with uniform plans with small apartments, for which different architects designed the façades.

Presently, there is not a large variety in the choice of apartments nor is there the diversity that has been made possible in modern housing. To create this diversity, an artificial joining of houses is an option – or demolition. The integral approach to the rejuvenation of Mercatorplein (i.e.

7. The integral approach to the rejuvenation of the Mercatorplein (i.e. Mercator Square, has been a pilot project for the improvement of the neighbourhood. The north wall of the square had to be demolished because of the bad shape the foundations were in, and was reconstructed





8. A great amount of creativity is needed to find a solution for the replacement of windows. Aesthetic elements as applied in the architecture can have an effect on the total rhythm of the street. Eventually, simple solutions can often be found to reach the correct effect

Mercator Square, Fig. 7) has been a pilot project for the improvement of the neighbourhood. Not only with respect to the housing, but also the redevelopment of the economic structure, public spaces, as well as safety and comfort. The north wall of the square had to be demolished because of the poor state of its foundation. After much discussion, larger apartments were constructed to be sold commercially. Also 16 larger apartments for sale were developed in the renovation project for the west wall. Around the corner, a block away, large dwellings were built in a new project on Vespuccistraat.

3. Changes to the interior use of a building have their repercussions on the exterior. Rotten window frames must be replaced, and requirements for sound and ventilation, make demands on the window type. The use of modern products as plastic or aluminium windows have touched the architectural integrity of total blocks. A great amount of creativity is needed to find a solution for the replacement of windows. Aesthetic elements, as applied in the architecture, can have an effect on the total rhythm of the street. Eventually, simple solutions can often be found to reach the correct effect (Fig. 8).

4. Functional elements such as doors, billboards, awnings, balconies, roof-ends, gutters, hoisting hooks and beams have often been removed or stripped of all decorative aspects, creating drab and superficial architecture. Often these elements have had to be removed due to poor construction of the original building or the poor state of maintenance. Improvement by modern means is frequently possible.

5. Non-functional, architectural elements are a great characteristic of the period. The coherence between town plan, the architectural design of façades, and the craftsmanship of the sculptural details is the distinguishing feature of the 20-40 Belt. Examples of these include towers to end blocks, chimney stacks in symmetrical rhythm, risaliths and accents in other decorative non-constructive elements, often marking the symmetry in building blocks or the presence of a special location or a side street. The urgent need for additional housing in a period of crisis was not beneficial to the quality of construction. As a result, many of the details were the result of dubious construction. Moisture also has caused many problems, as has the lack of maintenance by private owners. In the beginning, many houses for the working class stood empty because rents were too high. Various elements have been removed from buildings as their upkeep had caused

problems. The architectural coherence and experience dramatically went downhill. Now enormous efforts are being made to reconstruct original architecture where it has disappeared.

Even though many inhabitants have little interest in the changes, it is believed that improvement to the quality of the surroundings will have a positive effect on their wellbeing.

6. The sculptural details and great craftsmanship of the architecture of Michel de Klerk in Spaarndammerbuurt, for example, are almost the extreme in the architecture of the Amsterdam School (Fig. 9). This neighbourhood is a monument to a new way of building. Accents have been laid where blocks begin and end, and where side streets are located. The smallest details have been exquisitely designed and are well-known to many connoisseurs of architecture. However, many of these details have caused headaches when it comes to maintenance.

The Atlas of the 20–40 Belt

The results of twelve years of intensive architectural research and assessment have been compiled into the Atlas of the 20–40 Belt (and an accompanying CD-ROM). The subject of this work was the qualitative architectural and planning improvements incorporated into the urban expansion projects built in Amsterdam between roughly 1920 and 1940. During these years of unprecedented productivity and creativity, Amsterdam was enriched with both high-density housing blocks and extensive, semi-rural garden suburbs. Both were designed as a coherent whole, in complete harmony with one another and closely related to the existing development. When the 20-40 Belt was created, planners, architects, civil servants and members of various beautification committees were unanimous in their pursuance of urban beauty. Now, after many years of degeneration, a certain unity has returned. As a result, the Belt has regained something of its former lustre. The Atlas is divided into three sections.

The first is based upon an interview conducted with the (second) supervisor of the 20-40 Belt, Gijs Bolhuis. The task of the supervisor was - where a government subsidy had been awarded - to closely monitor renovation work and advise on the retention of the most important architectural and planning aspects, this while taking into account modern construction standards. The second section examines a number of specific renovation projects monitored by Gijs Bolhuis. The third section addresses aspects of the Belt thematically, including such topics as colour, neglect and decay, detail, and the relationship between architecture and urban planning.

Each section looks at the particular characteristics of the Belt, and its decline and its restoration. Inappropriate plastic window frames and eaves, lost carpentry and other mutilations come under review.

Entire towers and other cosmetic architectural features disappeared over the years, but as far as possible have been recreated.

The three sections are preceded by a forward about the importance of the project and the covenant drawn up by the city boroughs involved. In this, they undertake to follow a common planning policy in respect of the Belt. Finally, the book reproduces the Planning Guidelines Memorandum for the 20-40 Belt. This explains the evaluation system, which forms the basis for the classification maps and the common planning criteria. In 1999, the third supervisor Marloes van Haaren was appointed. Her task is to move politicians, project managers, housing corporations or contractors to work together to build a more beautiful city.

The classification

Inserted separately into the book are the so-called classification maps. These depict all the buildings in the 20-40 Belt, with an evaluation of each one.

The architecture is divided into four categories: Basic,



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Class 3, Class 2 and Class 1. The maps¹ on the other hand lead to the dilemma of having to make choices.

We want to preserve buildings and the quality of their architecture in their total context, but cannot register them all as protected monuments. Similarly, the Belt area is divided into planning zones, from Basic to Zone 1. The latter

1. The classification maps can also be viewed by using the CD-ROM, zooming in on the smallest detail. Approximately 450 archive photographs can be displayed, showing the Belt in its glory after completion. The same photographs are also used to illustrate the same thematic texts as contained in the book, the list of addresses with works by all the architects who worked on the Belt. Together with the book and printed maps, the CD-ROM provides the most complete picture ever published of the 20-40 Belt or indeed of any Dutch urban expansion programme.

is comparable in quality to a protected townscape.

The classification maps depict the architectural units as designed by an architect in a particular year. If different architects were involved, the units are separated by a thick line. If the same architect was involved, but the year of construction was different or the units were subject to separate planning application, then the thick line is broken. If two adjacent units were designed by different architects but merge smoothly into one another because they co-ordinated their details, a zigzag line is used. Urban planning features are illustrated, as is the use of flat and pitched roofs. Symmetries, reflections and front gardens are also shown.

10. The Vrijheidslaan is one of the principle arteries of Plan South with a classification A for the urban plan





11. An almost dramatic contrast has been developed between the long and rather flat façades opposed to the imaginative plasticity of the corner solutions, where brick and roof tiles are brought into motion in a refined manner

Case: "Vrijheidslaan"

The construction of the Berlagebridge in 1931 made what was then called the Amstellaan an important entrance into the city. Vrijheidslaan is one of the principle arteries of *Plan South* with a classification A for the urban plan (Fig. 10). The impressive and magnificent buildings on both sides are purposely adapted to the spatial and traffic-significance. An almost dramatic contrast has been developed between the long and rather flat façades opposed to the imaginative plasticity of the corner solutions, where brick and roof tiles are brought into motion in a refined manner. This is especially evident on the four corners of Kromme Mijdrechtstraat, designed in 1923 by Piet Kramer and Michel de Klerk. There are subtle differences in the details, by which one can see the relativity of literal symmetry. This is especially so with the slanting or round balconies, the rising brickwork and the incorporation of the window frames (Fig. 11). The harmonious street façades are the happy result

of the original development strategy, in which the choice of architects preceded the allotment of the parcels to the participating builders in the NV Amstels Bouwvereniging. The corner buildings are classified in the highest class 1, but have been seriously neglected and damaged throughout the years. This has ruined essential, yet high-maintenance details, as the use of vertical roof tiles on the roofs, the decorative brickwork above the roofs end, the stone plinths. The windows, window frames and façade ends have been made over in accordance with original details. A lot of attention has been paid to natural-stone façade elements. Very often these were painted over, but the result was not always satisfying. The stone has been cleaned and treated with a special anti-graffiti layer. Now it is once again one whole with the brickwork. In this fashion, work on the four corners, a relatively small project, has repaired an important feature of Vrijheidslaan. This axis of the *Plan South* can now be admired to the fullest in its original beauty.