
THE IMPLEMENTATION OF THE NEIGHBOURHOOD UNIT CONCEPT IN THE WESTERN GARDEN CITIES IN AMSTERDAM IN THE EARLY POST-WAR PERIOD

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This paper analyses the way the General Expansion Plan for Amsterdam was modified after 1945 to accommodate the principles of the neighbourhood unit concept, using the Western Garden Cities as a case study. The purpose is to evaluate continuities and discontinuities between pre-war and post-war modern urbanism. Since its presentation in 1934, the original plan was heralded as exemplary for the CIAM approach to urbanism - not surprisingly since Cornelis van Eesteren, its principal designer, was president of the CIAM. So far scholars have ignored the way the plan was partly re-designed in the 1940s and 1950s, the neighbourhood unit concept providing the reasons for most of the changes. Exploring these changes is the original contribution of this paper. The methodology combines historical research into the motives of the principal stakeholders - Van Eesteren, the municipal planning office, local politics and the housing corporations among others - with a thorough analysis of urban plans and the structure of the neighbourhoods.

Keywords

Neighbourhood Unit Concept, General Expansion Plan (AUP), Cornelis van Eesteren, Western Garden Cities, post-war neighbourhoods

How to Cite

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INTRODUCTION

In the 1950s and 1960s, new housing estates were built in the Western outskirts of Amsterdam. Conceived as green, spacious neighbourhoods, they are usually referred to as the 'Western Garden Cities'. Although they do not follow the model laid out by Ebenezer Howard, they do have certain features in common with their historical predecessor: they are separate units in green surroundings and they have their own facilities. Densities are low, and ideally the buildings are situated in a park like setting. The Western Garden Cities are part of the famous General Expansion Plan (Algemeen Uitbreidingsplan, AUP) designed by Cornelis van Eesteren and Theodoor Karel van Lohuizen between 1928 and 1934, when Louis Suzon Pedro Scheffer was head of the Section of Urbanism, a new division of the city's Public Works Department. The Western Garden Cities mark a new approach in public housing in Amsterdam. In the 1950s and 1960s, the way the buildings were distributed in a neatly designed green open space with playgrounds for children came to symbolize a new way of life.

Acclaimed as a revolutionary and characteristically modern approach to urbanism, this plan was actually based on concepts and strategies that had been developed in the 1920s and clearly expressed at the International Town Planning Congress in Amsterdam in 1924¹. Specific for the Dutch variant of these views was the conviction that in the densely populated Western provinces the creation of satellite cities should be prevented: they would drain the lifeblood from the cities, destroy the open landscape, and frustrate the realization of efficient networks of public transportation². Although the term 'compact city' had not yet been coined, this was the ultimate goal of most general expansion plans in the 1920s and 1930s. The appreciation of the beauty of the landscape and the wish to preserve it as much as possible, had a major impact on the development of town planning³. Easy access to greenery was guaranteed by a radial layout with green wedges that penetrated the urban tissue, and, vice versa, 'fingers' stretching out in the surrounding landscape.

Demographers, geographers, urban planners and most policy makers believed that the period of rapid expansion should be seen as transitory: within only a few decades, growth would come to a halt and a period of more stable development was bound to set in. The General Expansion Plan for Amsterdam calculated the population of Amsterdam at approximately one million inhabitants once the transition period was over. All plans at the smaller scale were seen as steps leading to the city's final form⁴.

In the 1940s the plans were partly redesigned, the neighbourhood unit concept providing the reasons for most changes. Developed in the United States as method to make housing estates fit for the car while at the same creating social units with all the facilities for everyday life, the neighbourhood concept was charged with new meaning in the Netherlands in the years of the German occupation. Inspired by the characteristically Dutch political philosophy of 'personalist-socialism', the model was now seen as a tool to forge a new sense of community, the lack of which having been identified as one of the underlying causes of the war. Finally and most importantly, the implications of the concept for the Western Garden Cities are described. A hierarchy of housing units of different scales was introduced: neighbourhoods made up of several sub-neighbourhoods, with facilities such as shops concentrated in neighbourhood centres, leading to a much more differentiated urban landscape.

After briefly outlining the original plan and its historical background, this paper analyses the neighbourhood unit, its introduction in the Netherlands, the role assigned to it in fostering a new sense of community, and the impact it made on Dutch urban planning after the war. The core of the paper describes how the principles of the neighbourhood unit concept impacted the Western Garden Cities, the first substantial part of the General Expansion Plan that was actually realized.

A GENERAL EXPANSION PLAN FOR AMSTERDAM

In 1921, as a result of annexation of Sloten and Watergraafsmeer, the territory of Amsterdam increased from 4.630 to 17.455 hectare. Reflecting an international trend, the Public Housing Law was adapted in the same year in order to allow municipalities to make zoning plans for the entire area they covered⁵. The International Congress of Town Planning, organised in Amsterdam in 1924, went even further and called for planning at the regional scale. Acknowledging that these now exceeded the level of single municipalities, this called for a regional approach⁶. Town planning could no longer only be concerned with aesthetics as the basic principle. Apart from regional planning, nature in urbanism was an important theme. Not only the preservation of the surrounding landscapes of the cities, but also the way nature could be brought into the city, close to the inhabitants. This led to new concepts of urban growth: instead of concentric rings, radial expansion was now favoured: 'fingers' stretched out into the surrounding landscape, and the areas between them were transformed into green belts. Ideally, these connected to parkways that penetrated deeply into the urban fabric. Equally consequential was the conviction that town planning should be based on thorough surveys. These should map recent changes and understand the preferences of urban functions, notably industries, for sites with specific qualities (proximity to either canals or railways, for instance).

Trying to benefit from the new legal means and reflecting the movement towards regional plans, the municipality of Amsterdam presented the Plan-Bos: a rather sketchy 'Schemaplan voor Groot-Amsterdam' (schematic plan for Greater Amsterdam) in 1924. Its principal aim was to designate areas for living and industry respectively. A.W. Bos, head of the department of 'Publieke Werken' (public works), presided over the committee. It proposed expansion mainly in a western direction, continuing the already built-up areas. In the centre of the expansion plan, a park with recreational facilities was planned, and the scheme incorporated the trajectory for a circle line for the railways that had been adopted by the city council. Arie Kepler, head of the municipal housing department and a stern advocate of the construction of garden cities, disagreed with the schematic plan and presented his views separately.

The Netherlands Institute for Housing and Planning (Nederlands Instituut van Volkshuisvesting en Stedenbouw, NIVS), home of all modern minded urban planners and initiator of the town planning conference in Amsterdam in 1924, was disappointed by the schematic plan, but for other reasons than Kepler's. Dirk Hudig, its chairman, Th.K. van Lohuizen, who worked on surveys for the city of Rotterdam, and M.J. Granpré Molière, pioneer of regional planning in the Netherlands, attacked the proposal for not incorporating the latest views on urban planning. The NIVS asked W.G. Witteveen, who had gathered experience as an urban planner while working for the Dutch railways, to design an alternative plan. Witteveen accepted the view of the municipality for expansion industries in a western direction; the living quarters for the working force should be built nearby. Preservation of the qualities of the landscape was an important motif in Witteveen's plan, which incorporated the recreational zones along the Schinkel, the Nieuwe Meer and the Amstel in his proposal. He saw his plan as a tool to bring together working areas, living quarters and recreational facilities in a single 'organism'⁷.

Although Witteveen's plan wasn't realized, it fostered the belief that fundamental measures were needed to address the urban problems of Amsterdam. Already in 1923, two committees had been founded: the Garden City committee, which was in 1923 appointed to examine the possibilities and desirability of the realization of garden cities near Amsterdam, and a committee that examined the possibility of a separate municipal department for urban planning. Members of the Garden City committee were Hudig, De Bazel and Berlage and the heads of the municipal services. Chairmen were the alderman of Public Housing (S.R. de Miranda) and Public Works (J. ter Haar). In 1929 it presented a bulky report⁸. It stated that the foundation of a new town, completely independent from the city, was out of the question, but one garden city nearby, separated from the city by a green belt, could be a viable alternative. The committee proposed a plan for a satellite city for approximately 50,000 inhabitants in Het Gooi.



FIGURE 1 W.G. Witteveen, Expansion plan Amsterdam-West, 1923-1926

The committee studying the pros and cons of an independent body for urban planning reported in 1928. Its work was of great importance for the General Expansion Plan⁹. According to F.M. Wibaut, chairman of the committee, the head of the new department also was supposed to be more than an architect-designer (in the sense of town-planner), but also an economist with knowledge of the economical development of the city, and a technical expert¹⁰.

The brief contained several elements. It called for a rather centralised expansion with neighbourhoods that directly connected to the existing city and it should be based on scientific research (survey before plan) and needed to be based on objective data¹¹. Both the port and the new living areas should expand in a western direction, which was also determined by the municipal borders. Further demands were the planning of a recreation area in the vicinity of the Nieuwe Meer, a lake in the centre of the new expansion area. The so-called Bospian that was being realized at the time provided additional opportunities for leisure. The circle line should be part of the plan, and the traffic infrastructure with the region should be taken into account.

THE GENERAL EXPANSION PLAN

The new department of urban planning came into being shortly after the report was finished; 'Stadsontwikkeling' (urban development) became part of the public works, where L.S.P. Scheffer was appointed the chief. A subdivision dedicated to the research was led by Th.K. van Lohuizen. In 1929 Cornelis van Eesteren was appointed chief designer; a year later J.H. Mulder became his principal assistant. Already in 1929 the demographers concluded that the population of Amsterdam was not likely to grow beyond the numbers that could be accommodated beyond the new municipal borders. That implied the end of the idea to build new garden cities. It also led the designers to believe that they could take the final stage of the plan, the city that would emerge once the plan had been realized, as a starting point. This was expected to occur around the year 2000; at that time the city would have 960.000 inhabitants¹². 'These results lead to the surprising conclusion that it is not only possible, but actually necessary to conceive of the General Expansion Plan in such a way that it envisages our future city in its final shape, that is to say as a complete and finished whole'¹³.

The plan was conceived of as a master plan that only fixed the basic structure; afterwards, partial plans were to be made. This anticipated the planning processes envisaged in the 1931 amendments to the Public Housing law. The municipality approved the General Expansion Plan in 1935, the state in 1939. It covered the areas to the west and south of Amsterdam within the circle line (comprising the neighbourhoods of Bos en Lommer, Westlandgracht and Overtoomse Veld), an area south of the circle line (Buitenveldert), and a very large zone to the west of the circle line (Slotermeer, Geuzenveld, Slotervaart and Osdorp: the Western Garden Cities that are the object of this study.

The plan incorporated the recommendations of the brief. The port and the living quarters expanded in a western direction. Both parts were separated by a wide green belt. The living area was subdivided in neighbourhoods that were separated from each other by green belts. The circle line was embedded in a wide green zone, which was seen as a perfect site for high-rise buildings. The Slotermeer-polder was transformed into the Sloterplas, the main recreational area. The recreational areas Amsterdamse Bos and the Nieuwe Meer were integrated in the plan. The railway line leading to Harlem was to be moved to the north. The plan only contained the main traffic arteries: the connecting roads with the centre.

An explanatory note ('Nota van Toelichting') accompanied the plan. It stated that it was hard to decide the locations of the future industrial zones, though it made clear that their size was derived from the number of inhabitants. The recreational facilities were calculated on the basis of a fixed number of square meters per inhabitants; reports from abroad, for instance Martin Wagner's *Städtische Freiflächenpolitik* (1915), provided indispensable input¹⁴. Their precise location, size and design characteristics were defined in relation with the surrounding neighbourhoods¹⁵.

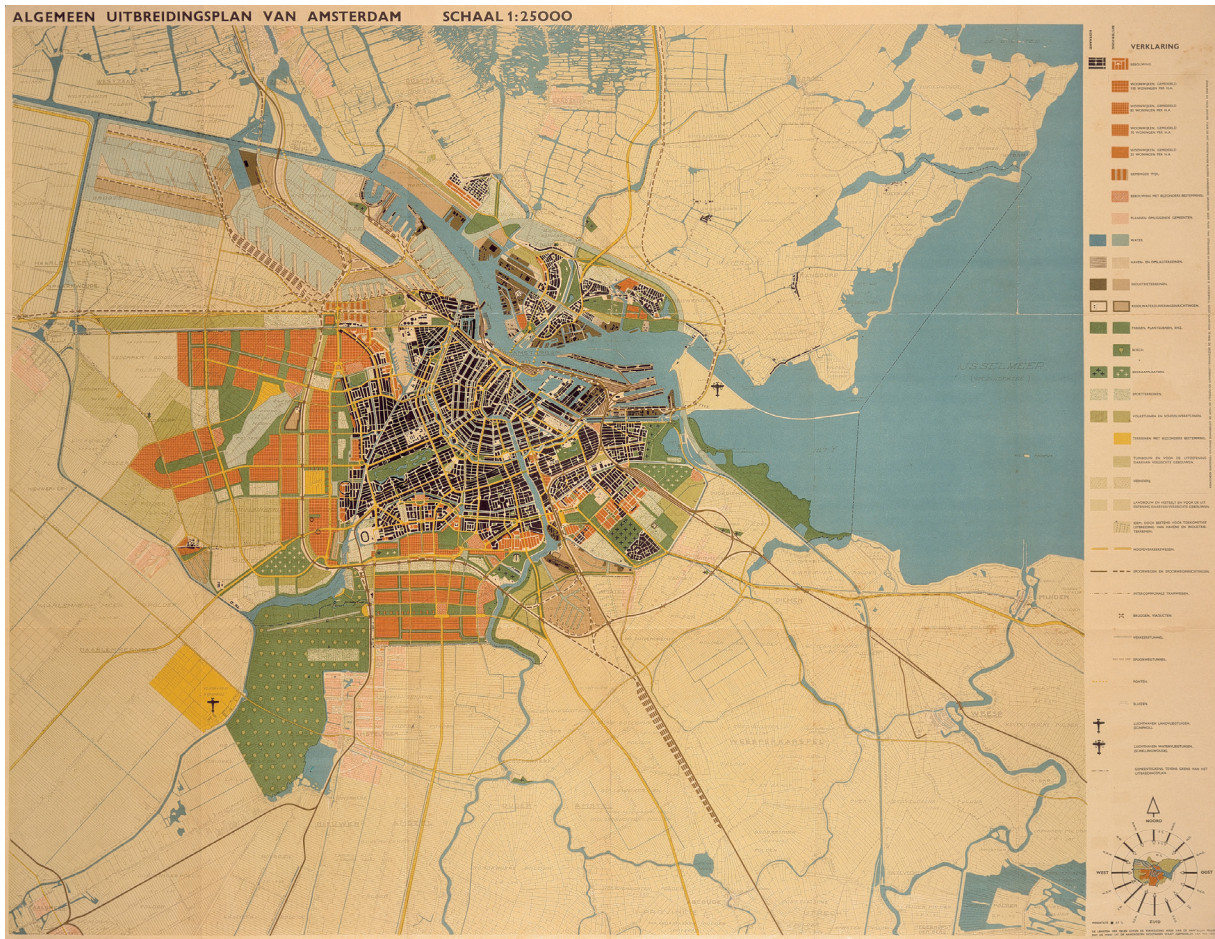


FIGURE 2 General Expansion Plan Amsterdam, 1935

The neighbourhoods were to emulate the qualities of garden cities – an ideal that reflected the fears for the ‘awful spectre of the metropolis’¹⁶. The explanatory note specifically stated that the neighbourhoods were to approach the living ideals of the garden cities¹⁷. Outside the circle line large numbers of single-family houses were to be built (50-60%) in very low densities (55 units per hectare). High-rise buildings were to act as aesthetic accents in the wide green belt alongside the circle line¹⁸. Another aspect derived from the garden city model was the level of independence of the separate neighbourhoods, which were organized in bands (fingers) that stretched out from the central city. ‘Precisely the arrangement of the expansion areas in one direction allows a relative degree of independence to be combined with a close link to the “mother city”¹⁹. The explanatory note states that this enabled the design of a centralized expansion without sacrificing the principal characteristics of garden cities: the definition of separate neighbourhoods with large numbers of single family houses, preventing the economic and practical disadvantages inherent in housing estates far away and isolated from the central city²⁰.

The plan was supposed to be gradually realized between its conception and the year 2000. That allowed the planners to incorporate the latest views on, for instance, the parcelling structure. Moreover, in all stages of its construction, the city would give the impression of being complete. A rounded-off this way of building the city prevented the risk giving the impression that the city was incomplete and more work needed to be done²¹. Strict building codes guaranteed a unified visual image of the city. They not only determined the functional zones, but also included aesthetic clauses. Obviously, the size of the neighbourhood was derived from demographic prognoses.

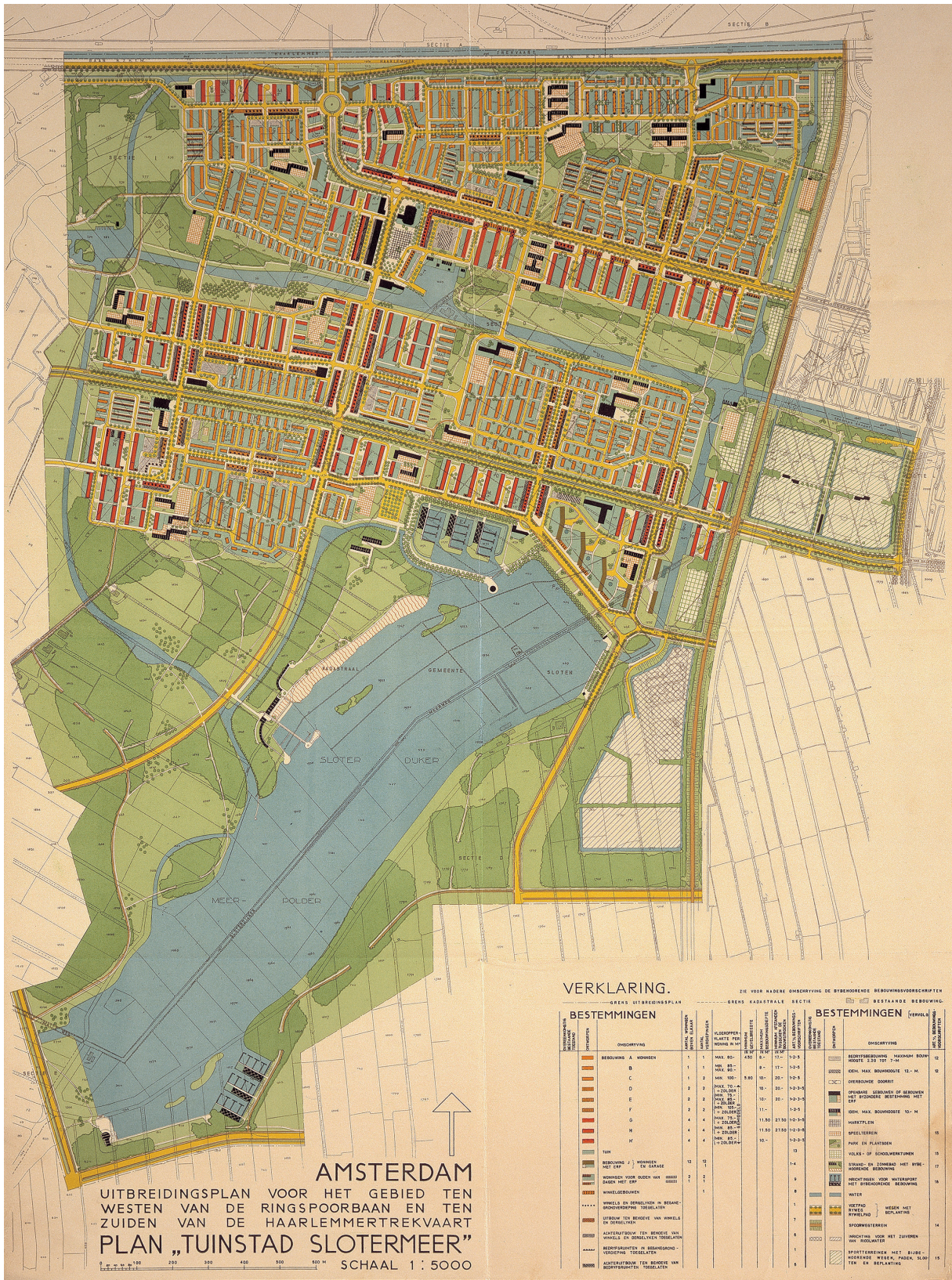


FIGURE 3 Expansion plan for garden city Sloterveer, 1939

PARTIAL PLANS AND THE INTRODUCTION OF “OPEN PARCELLING STRUCTURES”

In the 1930s, partial plans for a number of neighbourhoods were made. The plan for Bosch en Lommer was designed between 1930 and 1933, prior to the completion of the General Expansion Plan it was part of. In 1936 Landlust began to be planned. In both partial schemes, experiments with ‘open parcelling structures’ (‘open bebouwing’) were tried. These experiments were initiated by members of ‘De 8’, the organization of modern architects in Amsterdam.

In the former city expansions, back facades faced the inside of the building blocks. Now, they became visible from the street. This meant that their aesthetic qualities became much more important than they had been in the system of closed building blocks. It was difficult to meet these requirements and the first results were not very convincing. The ‘open parcelling structure’ made it particularly difficult to shape pleasant urban spaces²². In the design for Sloterveer attempts were made to improve the results of the open parcelling structure. It is characterized by the quest for more variety in the parcelling structure with linear rows of buildings²³.

The fact that the ‘rue corridor’, the traditional street with closed walls at both sides, was abolished, didn’t mean that street profiles no longer played an important role in urban planning. On the contrary, street profiles and greenery are essential for the appearance of a neighbourhood with open parcelling structures²⁴.

Shortly before the Second World War, the plan for Sloterveer was approved; by then, half of Bosch en Lommer had been built at the time.

POST-WAR MODIFICATIONS OF THE GENERAL EXPANSION PLAN OF AMSTERDAM

The Second World War created new realities and necessitated changes of the original plan. These changes were pursued at the level of the partial plans. The explanatory note that justified the revision of the project for Sloterveer enumerated some of the reasons: the decision to raise the level of the polder land to a lesser degree than originally envisaged (which made its realization much cheaper), the increased need for special and public buildings, new state regulations concerning the size and layout of the houses as well as the densities (which changed the balance between high- and low-rise buildings), new parcelling structures, and new norms for the provision of schools²⁵. According to P. Zanstra, one of the architectural masterminds working in the Western Garden Cities at the time, the result was a new urban concept that was primarily based on scientific surveys of the social make-up of the neighbourhood, the development of the industry, the traffic structure and the nature of the soil.²⁶ Striking spatial and visual qualities were, according to Zanstra:

- The attempt to create separate neighbourhoods with a high level of functional autonomy, their own characteristic structure – in other words: they showed the impact of the neighbourhood unit concept. The urban tools used to achieve this were: clear borders, a distinct neighbourhood centre, and a specific urban and architectural idiom.
- A mix of different typologies: single family housing, portico flats of mostly three or four floors, and high-rise buildings.
- Openness, at first a consequence of construction linear rows of houses, later modified by introducing L-shaped courtyards.
- Repetition: the construction of large series of identical and similar units in one block, as well as the repetition of entire urban elements (rows, courtyards).
- The use of high-rise buildings.

Both the introduction of more public buildings and the ambition to give the separate neighbourhoods more autonomous character can be attributed to the impact of the neighbourhood unit concept²⁷.

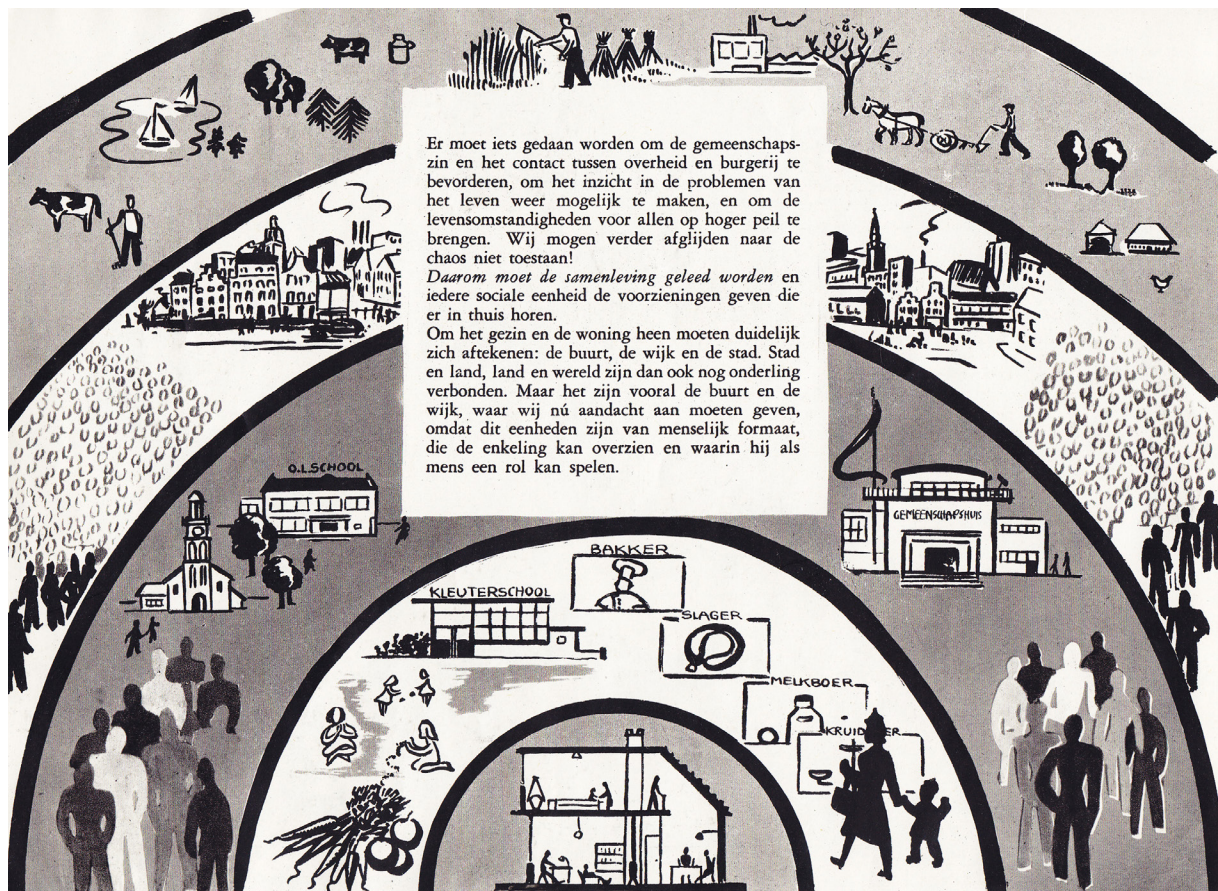


FIGURE 4 Scheme of the concept of the neighbourhood unit (from the Brochure *Wij en de wijkgedachte*)

The text reads: "Something has to be done to enhance the community spirit and the relations between government and citizens, to regain insight into everyday social problems, and to raise our living standards. We should not allow ourselves to drift away into chaos! That's why society has to be cut down into separate segments, every neighbourhood having its own facilities. Clearly outlined sub-neighbourhoods, neighbourhoods and the city should be organised around family and home. City and country, country and world will be still interconnected. But first we should pay attention to the sub-neighbourhood and the neighbourhood because these are the units of a human scale that the individual can overlook and in which he can participate."

THE NEIGHBOURHOOD UNIT CONCEPT

The origin of this approach can be traced back to Clarence Perry, who introduced in the United States in 1929 and to the garden city philosophy of Ebenezer Howard. In the years of the occupation, however, a characteristically Dutch variant of the neighbourhood ideal developed. It was based on a specific philosophy that outlined in 1946 in the study *De stad der toekomst. De toekomst der stad.* (The city of the future, the future of the city)²⁸. It was a study in urban-planning and the social and cultural aspects of the growing city community. It was a response to the dislocation of the past war and the fear of the unstructured urban growth from previous years. The neighbourhood unit was seen as the panacea against the negative social effects associated with larger cities. The concept of the neighbourhood unit gained popularity by the publications of leaflets and booklets such as *Wij en de Wijkgedachte* (Us and the neighbourhood unit)²⁹. These explained the ambitions: the living circumstances of the citizens should be brought to a higher level, and – especially important – the chaos that allegedly had characterized the pre-war years should be avoided. 'As a result of the war', the booklet stated, 'it has become necessary to begin a major attempt to fundamentally reconstruct and renew our country and our society'

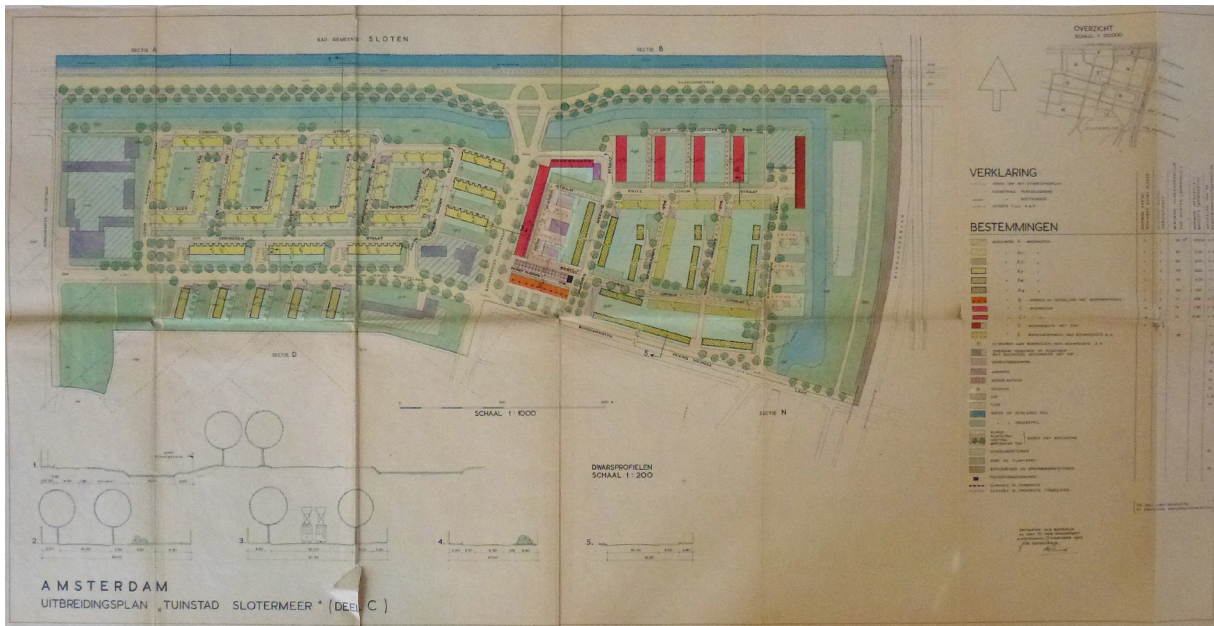


FIGURE 5 Partial plan C, Sloterveer, 1954

That required the segmentation of society in separate modules that should contain all the functions needed for everyday life³⁰. 'In very large agglomerations such as cities, the necessity manifests itself to architects and urbanists alike for defining smaller units for these large concentrations of people: the neighbourhoods, the size of which should facilitate the interaction between individuals and the community, something that got lost in our large cities.' The scale of the neighbourhoods should enable their inhabitants to feel at home in them, and – again a claim echoing the philosophy that inspired this model – allow them to do take care of their own affairs (called 'zelfwerkzaamheid', a term for which there is no proper English equivalent, though 'self-motivation' comes close). Although researchers began to question the concept already in the 1950s, it defined the framework for the design of housing estates until well in the 1960s³¹.

THE IMPACT OF THE NEIGHBOURHOOD UNIT CONCEPT IN THE WESTERN GARDEN CITIES

Zanstra's assessment of the influence of the neighbourhood unit in the Western Garden Cities is corroborated by their principal designer, Cornelis van Eesteren: the return to more enclosed forms of parceling structures, for instance the court systems that were first applied in Frankendael, can be attributed to the neighbourhood unit concept. Another characteristic feature of this concept is the principle of multiple scales for specific functions. Primary schools, for instance, are at walking distance of the houses, whereas high schools are within cycling distance. Greenery was designed as a series of increased scales. Leaving one's home, people entered the community garden; then they walked through a public garden ('plantsoen') towards a green lane lining the neighbourhood road, which gave access to the a green wedge that led to the park and the landscape outside³². The greenery partly coincided with the traffic structure, which also distinguished various types at various scale levels: pedestrian street, the street disclosing the houses, the neighbourhood street connecting these with the larger area, the neighbourhood street that led to the other neighbourhoods, and the urban thoroughfare³³. The most characteristic element was the intermediary level: the green lane, the park-lane, the sub-neighbourhood street, the neighbourhood street. This prevented the expansion plan from becoming a traditional city where greenery is provided only in parks, and the traffic system only has living streets and main traffic streets.



FIGURE 6 Expansion plan Geuzenveld, 1952

Churches were attributed a social and cultural role: they should foster a sense of community. The St. Catharinakerk in Slotermeer) and De Hoeksteen in Slotervaart had rooms for neighbourhood meetings³⁴. These modifications strengthen qualities already inherent in the original plan, which already envisaged four relatively independent parts³⁵. In his plan for Geuzenveld, W. van Tijen, one of the most fervent idealist of the neighbourhood unit, was adamant in realizing his ideals. Part of these ideals was the ambition to encourage the self-efficacy of the inhabitants, as this was believed to enhance their community spirit. To achieve this, the open spaces between the buildings were to be used as vegetable gardens. Also, Van Tijen wished to include sub-neighbourhood centres: a street with shops, workshops and small industries. Family, sub-neighbourhood, neighbourhood and city were to determine the identity of the modern citizen³⁶.

These examples illustrate how Van Eesteren's original plan was modified to meet new requirements and accept the new role as a catalyst of a revitalized community spirit – an ideal that after the devastating experiences of the Second World War was seen as of the utmost importance

Statement

No potential conflict of interest was reported by the author.

Notes on contributor

Drs. Noor Mens studied History of Architecture at the Vrije Universiteit (VU) in Amsterdam. In 1993 she started to work as a freelance architectural historian based in Rotterdam. She published widely on architecture and urban planning in the twentieth century. Since 2014 she works as a PhD Candidate on a research about the assessment of Post-war neighbourhoods, taking the Western Garden Cities in Amsterdam as a case study.

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Image sources

- Figure 1: *Amsterdam's Toekomstige Ontwikkeling*, edited by Nederlandsch Instituut voor Volkshuisvesting en Stedebouw en Groot-Amsterdam. Haarlem, 1926.
- Figure 2: New Institute, Rotterdam.
- Figure 3: New Institute, Rotterdam.
- Figure 4: Geyl, W.F. *Wij En de Wijkgedachte.* Utrecht, 1948.
- Figure 5: Stadsarchief Amsterdam [SO 5344 APC 2000100058 - 1.777.811.221 - no. 281].
- Figure 6: Stadsarchief Amsterdam [PW 5213-38275 - Pak 1. Algemeen Portef. 1C Pakket 1R-1Z en 1A1-1C2].