

Adaptability and innovation. The Dutch experience in the public promotion of mass housing neighbourhoods: 1945-1985

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ADAPTABILITY AND INNOVATION. THE DUTCH EXPERIENCE IN THE PUBLIC PROMOTION OF MASS HOUSING NEIGHBOURHOODS: 1945-1985

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1. OBJECTIVES AND METHODOLOGY

The Netherlands should be considered a pioneer in the regulation of access to housing in Europe (Sainz Guerra, 2008, p.17). An extensive track record has characterised this country. Although the first organisations for the construction of workers' housing were founded between 1850 and 1860, the construction of social housing is not formalised until the approval of the Housing Act of 1901 (Elsinga & Wassenberg, 2014, p.26-27).

This law promoted the creation of the *woningcorporaties* (housing associations) as organisations responsible for the promotion, construction and management of housing under social rental. Together with local housing companies and other non-profit organisations, they were considered authorised institutions to build public housing based on the so-called principle of the revolving fund (Gerrichhauzen, 1990, p.24). They were not allowed to make profit, as the income received from the rental and sale of homes should be invested in the maintenance and possible increase of the social housing stock (Hoekstra, 2013, p.2). The government ensured that housing associations had access to credits to develop new housing developments, while

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1 tenants were granted based on their income, which was decisive in order to have a
2 subsidised dwelling.

3 Although highly organised, the Dutch housing policy has been characterised by a
4 lower legislative output compared to other European contexts (Navas-Carrillo, 2020,
5 p.819). This has been based mainly on the elaboration of ministerial memorandums
6 and circulars and especially the specific agreements adopted between administrations
7 and housing developers (Priemus, 1980:16). Accordingly, this paper seeks to demon-
8 strate that, in addition to be pioneer in housing regulation, this lower legislative
9 output has favoured greater adaptability.

10 To achieve this goal, the research approaches the principle features that charac-
11 terised the Dutch massive housing construction between 1945 and 1985, the period
12 of most significant growth of the social housing park (Elsinga & Wassenberg, 2007,
13 p.133). For this purpose, it has been necessary to build a general framework about
14 the housing and spatial planning legislation and the identification of the organisa-
15 tions responsible for public housing construction in those years. As will be explained
16 throughout the article, a significant legislative change took place around 1965, since
17 the Housing Law is modified, and the Spatial Planning Law and the Second Spatial
18 Planning Memorandum are approved. These legislative changes coincide with the ar-
19 rival of Minister Schut to the Ministry of Housing, Territorial Planning and Environ-
20 ment who promoted the experimental housing programme. Based on these facts, the
21 research has been divided into two periods: 1945-1964 and 1965-1985.

22 Accordingly, the research methodology has been structured on an extensive lit-
23 erature review to relate and articulate the knowledge previously generated by other
24 researchers through scientific publications, professional papers or legislative docu-
25 ments. The research has been mainly based on Dutch sources but analysed through
26 the external and foreign view of two of the authors. The references have been ob-
27 tained through a systematic search in repositories and bibliographic collections of
28 the Delft Technical University, being previously oriented by experts in the field. It
29 should also be noted that this paper is the result of a research stay of the fist author
30 at the Delft University of Technology.

31 32 33 34 **2. THE DEVELOPMENT OF SOCIAL HOUSING: A LITERATURE REVIEW**

35 The publication *Woningbouw, Inspiratie & Ambities. Kwalitatieve grondslagen van*
36 *de sociale woningbouw in Nederland* (de Vreeze,1993) can be regarded as the most
37 comprehensive and in-depth research about the construction of social housing during
38 the 20th-century in the Netherlands. At the same time, research on 20th-century
39 urban planning should be considered as Wagenaar (2013).

40 The Housing Act of 1901 is the legislative basis on which Dutch social housing was
41 built during the 20th century. This fact has led to the generation of a broad scientific
42 body about the law itself and its implications (Houben, 1989), the results obtained a
43 century after its enactment (Kempen et al., 2001; Priemus, 2011) as well as its com-
44 parison with the legal framework of other geographical contexts (Lévy-Vroelant et
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al., 2008; Heynen, 2010). Among other measures, the law encouraged the formation of housing cooperatives, a non-profit organisation responsible for the promotion, construction and management of social rental housing. In this regard, Leonardus Gerardus Gerrichhauzen (1990) provides an extensive analysis of the functioning of housing associations throughout the 20th century.

The so-called *Wederopbouwperiode* (1940-1965) or period of the Reconstruction is the stage in the country's recent history that has aroused the most significant interest in the specialised literature. Although World War II had devastating consequences for the Netherlands, as for many other European countries, it also provided an opportunity for the modernisation and innovation of its cities and, in particular, for the flourishing of new residential developments. The monograph published by the Rijksdienst voor het Cultureel Erfgoed (RCE) highlights with a selection of 30 representative Dutch post-war areas (Blom et al., 2016). Previously, Bosma and Wagenaar (1995) and de Lange (1995) analysed the architecture and urbanism of that period. Likewise, Marieke Kuipers (2002) has tackled the architectural, urban and landscape prototypes of the Reconstruction.



Figure 1. Bijlmermeer in Amsterdam (1975). Source: Stadsarchief Amsterdam.

The residential 20th-century neighbourhoods of the large cities have been analysed in greater depth. In particular, we have found a significant number of recent publications about the Randstad's cities: Amsterdam (Steenhuis et al., 2017), Rotterdam (Wijngaarden et al., 2017), Den Haag (Kleinegris et al., 2016) and Utrecht (Den Boer et al., 2019).

Although equally relevant, Post-65 residential complexes and neighbourhoods are less studied as their construction is more recent than earlier ones. As a general study

1 on the architectural and urban characteristics of production in the 1970s, we can
2 cite the publication *De kritiese jaren zeventig: architectuur en stedenbouw in Neder-*
3 *land 1968-1982* (de Vletter, 2004). As with the Reconstruction period, the National
4 Agency for Cultural Heritage is working on the documentation and recognition of the
5 architectural and urban production of the so-called *Verkenning Post-65* (Blom, 2015).
6 This project is a first step for the heritage assessment and selection of samples of
7 this emerging heritage. In 2019, its conclusions were sent to the Minister for Culture
8 to be transferred into a specific protection policy, which has not yet been approved.

9 Nevertheless, this public institution has produced various informative-nature pu-
10 blications as the result of this explorative initiative. For example, they have published
11 a documentation about the experimental housing programme 1968-1980 (Barzilay et
12 al., 2019) and a report about citizen participation in the genesis and management
13 of residential areas since the 1970s (Blom & Bruns, 2019). The last published text
14 provides a general approach to the production of this period (Blom et al, 2019).

15 The development of the so-called *bloemkoolwijken* or 'cauliflower neighbourhoods'
16 should be highlighted as a significant urban typology of this period. Liebrand,
17 Pauwels and Wernsen (2012) analysed more than 150 of these neighbourhoods in
18 cities such as Groningen, Rotterdam, Zwolle, Alkmaar, Almere or Venray in order to
19 determine the main urban-architectural characteristics of this urban typology. The
20 possibilities of rehabilitation and preserve them (Ubink & van der Steeg, 2011), the
21 influence of its morphology on the increase of social cohesion, one of the objectives
22 initially intended (Steinvoort, 2011) and possible transformations to guarantee and
23 preserve its identity (Bijlsma et al., 2008), has also been analysed.

24 In the second half of the century, the development of the *groeikernen* (growth
25 centres) also takes on special significance. These new developments arise to limit the
26 growth of large cities in the Randstad (Spoormans, et al. 2019, p.103-104). It should
27 be noted that other public initiatives were also developed in this period, such as
28 the *Stadsverniewing* programme for urban renewal, which is closely linked to growth
29 centres, since these would serve as accommodation for the population moved from
30 urban areas to be renewed in large cities. Nor does it mean that expansion projects
31 were not developed in the big cities. However, the *groeikernen* represent a significant
32 change from previous policies, turning the housing problem into a territorial issue.

33 In particular, A. W. Faber's doctoral thesis (1997) provides a comprehensive analy-
34 sis of the role of the Directoraat-Generaal van de Volkshuisvesting (DGVH) in the
35 policy and the development of the Dutch growth centres. Previously, Faludi and van
36 der Valk (1990) had addressed the *groeikernen* as pillars of Dutch spatial planning.
37 One of the publications of greater scope is the *Atlas nieuwe steden. De verstedelijking*
38 *van de groeikernen* (Reijndorp et al., 2012). It is a complete overview of the origin,
39 current situation and prospects of each of these growth centres. The publication
40 *Groeikernen in Nederland. Een studie naar stedenbouw en architectuur* developed by
41 Willem Jan Pantus (2012), with similarities in terms of content, seeks to contribute
42 to the assessment and dissemination of knowledge about the development of these
43 cities from a holistic approach.
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Figure 2. The construction of De Werven in 1976. A *bloemkoolwijk* in the *groei kern* of Almere. Source: Stadsarchief Almere

3. RESULTS

3.1. Rebuilding: urgent measures for the reconstruction (1945-1964)

In the Netherlands, like many other European countries, World War II had devastating consequences on the housing stock, which had grown significantly during the 1930s. A high number of inhabitants lost their homes. Thus, alleviating the high housing shortage was urgent, as a direct consequence of the war damage and the non-existent dwelling construction during the war, but also, the significant growth of the urban population given the significant migratory flows from the country to the city. This situation led the government to assume the leadership in the planning and construction of massive housing, through the *Centrale Directie voor de Volkshuisvesting* (CDV) of the *Ministerie van Wederopbouw en Volkshuisvesting* (MWV) (Central Housing Directorate of the Ministry of Reconstruction and Housing). It should be noted that the 1901 Housing Law had placed the housing policy as a state competence but had delegated the management to the municipalities and the housing execution to housing corporations (Canon sociaal werk, 2016, p.17). Private builders also had an important influence, although, their activity was limited immediately after the war, given the difficulties of making profits. The rents remained frozen for a long time, being the state intervention a way of providing social security (ibid, p.51-52).

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Figure 3. Centre of Rotterdam after the bombing in 1940. Source: Museum Rotterdam.

The annual housing construction programs were accompanied by additional financial aid to promote residential production, as well as measures to streamline the design and construction processes of housing. According to de Vreeze (1993, p.3439), the principal goal of all these measures was quantitative rather than qualitative, i.e., the number of homes built should prevail over their quality. Construction, functional and technical standards were periodically regulated by the CDV. Though a wide network of Provincial Directorates, its technicians were responsible for evaluating housing plans and the quality standards required of public housing projects.

In 1946 the *Voorlopige Wenken* were published, and the first *Voorschriften en Wenken* in 1951, followed by those of 1965. The first document included recommendations for the design of dwellings concerning orientation, the size of the dwellings and their adaptation to the different types of family, the functional design of the living spaces and their aggregation. About construction, it sought to guarantee the habitability of the dwellings and reduce the maintenance and rehabilitation. The latter ones developed compulsory regulations and were considered as the regulatory framework for the granting of aid and tax benefits for developing public housing.



Figure 4. Nemavo-Airey system. Construction of the residential neighbourhood of Jeruzalem in Amsterdam (1950). Source: Stadsarchief Amsterdam.

Given its massive impact on numbers, the economic incentives granted for the rationalisation of construction processes and the development of industrialised construction techniques that would speed up construction times and reduce costs are noteworthy. More than 360 prefabricated construction systems were studied, of which 60 were approved (Messchaert, 2004, p.27). Of all of them, the Nemavo-Airey system stands out as one of the first prefabricated systems to be used in the Netherlands as it was imported from the United Kingdom. Once adapted to the Dutch construction industry, more than 8000 homes were built with this system. (Spoormans et al., 2018, p.158).

These objectives also have their correspondence in the typologies preferably used by developers. Since the aim was quantitative, to build as many houses as possible, this period was characterised by repetition and serialisation of housing units, building typologies and the so-called stemple, i.e. modular urban layouts (Blom et al., 2004, p. 37). It should be noted that while terraced houses and mid-rise buildings dominated the 1950s, the high-rise became the dominant typology at the end of the 1960s once it was technically possible.

The Marshall Plan aids supported a large part of these measures. As a result, there was a significant take-off in housing construction from 1948 onwards, successively exceeding the annual governmental forecasts, particularly under the 1950 Reconstruction Act (de Vreeze, 1993, p. 251). Therefore, it can be said that this first period was characterised by the search for a significant increase in housing construction.

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Housing Policy	Housing Act (1901)
	Reconstruction Law (1950)
Construction Standards	Voorlopige Wenken (1946)
	Voorschriften en Wenken I (1951)
Spatial Planning Policy	First Spatial Planning Memorandum (1960)

Table 1. Housing and spatial planning legislation 1945-1965. Source: Own elaboration.

3.2. Innovation in the design, construction and geographical distribution of public housing (1965-1985)

As previously mentioned, the Housing Act was reformulated in 1965. The date coincided with other two notable milestones for the production of social housing: the Spatial Planning Act (1965) and the Second Special Planning Memorandum (1966), which is considered the origin of the *groeikernen* policy. Following to de Vreeze (1993, p.342), the arrival of Wim Schut to the Ministry of Housing, Territorial Planning and Environment in 1968 and his impulse to the *Experimentele Woningbouw* programme (experimental housing) shows a turning point concerning the planning and development of public housing but also in the urban and architectural characteristics of the built complexes.

This programme arises to promote, through public aid, an alternative to the residential projects of monotony and uniformity of housing during the reconstruction period (Barzilay et al., 2019, p.19). The priority was no longer the rapid, efficient and high production of housing, but to respond to the housing needs of a broad spectrum of specific groups, such as students or young workers, together with the particularities of diverse geographical contexts. In contrast to the first phase, high quality was expected. Consequently, multiple residential programs arise as well as an enormous variability of residential types and urban designs, among which single-family developments prevailed.



Figure 5. Wandelmeent in Hilversum. Experimental housing design by Leo de Jonge and Piet Weeda. Source: BV Intersel.

This trend was strongly influenced by the group of architects linked to the *Forum* magazine. Directed by Aldo van Eyck, they advocated developing new architectural and urban forms adapted to the user and, consequently, increasing the quality of life in cities. The groups would integrate various urban functions, surpassing the division of the modern city and would be connected by an extensive infrastructure network. All this coincides with the increase in environmental awareness, after the 1973 oil crisis. The *bloemkoolwijken* mentioned above emerge as the characteristic urban typology of this period. Through the generation of the so-called *woonerf* or socialization spaces, its characteristic irregular structure free of vehicles sought to generate a more pleasant environment, of domestic or human scale, while fostering community relations between neighbours (Smits, 2017, p.1).



Figure 6. *Woonerf* in Kempenaar, Lelystad. Source: photograph of the authors.

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1 There is also a significant change in the geographical distribution of public housing.
 2 The first three Spatial Planning Memoranda (1960, 1966 and 1973) and the
 3 Housing Memorandum of 1972 outlined a new land policy based on the development
 4 of *groeikernen*. This policy places the focus of social housing construction on cities
 5 of intermediate scale, to curb the excessive growth of the large Dutch cities of the
 6 Randstad. However, this second period is going to be characterised by a lower promi-
 7 nence of the state administration, public aid is limited, and rent regulation is elimi-
 8 nated, which favours the construction of private housing (de Vreeze, 1993, p.450).

9 In parallel, citizen participation in the genesis and management of residential
 10 areas is also encouraged (Blom & Bruns, 2019, p.44). Housing associations begin to
 11 operate more autonomously, being favoured by the new public aid policy, which gives
 12 priority to their actions compared to other developers. During the 1980s, the policy
 13 of decentralisation favoured their heyday. With an average of 1,600 homes per hou-
 14 sing corporation, in 1981 they would manage about 40% of the residential stock and
 15 more than 60% of the rental housing (Van der Schaar, 1987: 7).

Housing Policy	Revision of the Housing Act (1965)
	Experimental Housing Programme (1968)
	Housing Memorandum (1972)
	HAT Housing Memorandum (1975)
Construction Standards	Modelbouwverordening (1965)
	Voorschriften en Wenken II (1965)
Spatial Planning Policy	Spatial Planning Law
	Second Spatial Planning Memorandum (1966)
	Third Spatial Planning Memorandum (1973)

Table 2. Housing and spatial planning legislation 1965-1985. Source: Own elaboration.

4. CONCLUSIONS

41 The Netherlands is characterised by a long history and extent production of public
 42 rental housing developed by housing associations. Therefore, research has shown that
 43 the reasons for understanding the spectacular growth of the public housing sector
 44 between 1945 and 1985 should not be sought in a strict regulatory framework, but
 45 in the numerous public aids, and especially the specific agreements adopted between

the municipalities and the housing associations, on the one hand, and with the government, on the other. According to research results, this lower legislative output favoured greater flexibility during the two periods that have been analysed.

Both periods shared the same purpose: innovation and experimentation for the housing shortage reduction. However, they differed in their priority objectives as the analysis of the housing and spatial planning legislation has shown. While in the first phase, the innovation was focussed on technical fields as prefabricated building systems or materials to respond to the urgent quantitative needs of homes after the World War II, in the second one it was directed towards increasing the quality of housing and the variability of residential types. Consequently, the prefabrication and standardisation of typologies and construction processes gained prominence between 1945 and 1965 intending to minimise costs and execution times. In contrast, the typological normalisation to respond to similar family prototypes turned to a period in which a more comprehensive range of new approaches was introduced, such as the functional flexibility, the typological adaptability, the interest in collective spaces or the citizen participation.

Differences in the geographical distribution of housing have also been identified. In the first stage, housing policy was mainly aimed at the reconstruction of war-devastated regions and to combat the overcrowding of large cities. Instead, in the second one, the problem of housing was tackled at a territorial level, insofar as the spatial planning policy sought to achieve balanced territorial development of the country.

Finally, the research has also identified different trends concerning the institutions responsible for housing development. During the *wederopbouwperiode* the government assumed a leading role to the detriment of the housing associations. Nevertheless, the public administration was gradually reducing its control over dwellings production, limiting public support and liberalising the rental prices. As a result, housing associations became the leading developers of social housing in the whole country since the late 1960s.

In short, the paper shows the changes experienced by the Dutch residential policy over the 40 years analysed. This progressive evolution has placed the Netherlands at the forefront of social housing initiative thanks to a fundamental maxim: an ongoing capacity for adaptability based on multilevel governance integrating top-down and bottom-up decisions. As the paper analysed, control and responsibility for public housing would be repeatedly balanced and redistributed among Ministry, municipalities and housing corporations, as well as citizens during 1970s. Public policies and organisational structure were adapted to face the requirements of different crises: from World War II, through the oil crisis of 1973-1976, to the social demands of the 1980s. Consequently, the Dutch management model for social housing is seen as an opportunity also for the current challenges. Its flexibility would help to overcome the still consequences of the 2008 financial crisis or to successfully address the energy transition from fossil-based to zero-carbon in the coming decades.

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