

Sustainable Urban Renewal

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Key words: design of housing environments, urban renewal, sustainability, social and cultural aspects of housing

Abstract

For many years the urban renewal approach of Rotterdam, executed during the period 1975-1993, served as an example on the national and international level. With this approach a process of revitalization was initiated, which meant that the urban fabric and building supply had to adapt to changing conditions and accommodate new demands. Due to large financial and social investments in Rotterdam, about 65% of the housing supply in the urban renewal districts have been replaced through newly constructed social housing or modernization of old housing, social services and facilities. By economical and social changes the question is again to what extent in those days constructed quality meet and adapt present demands. Related to these dynamics sustainability is defined as: the quality of a house or a housing situation is sustainable when it can be used over a long time and when the physical, social and economic situations improve [14].

In the Oude Noorden district this approach on sustainability is evaluated by analyzing changes of the district and the city of Rotterdam. Moreover ten projects and design concepts, constructed during the urban renewal period 1975-1993, are evaluated by the present tenants on use of the floor plan and perception of environmental qualities and also confronted with present standards. Social and cultural changes emerged particularly in case of plan development of urban renewal projects [12].

1 Introduction

Since the 1970s' urban renewal with a surplus of investments has contributed to the improvement of housing and residential environments. Urban renewal was aimed getting rid of technical and physical obsolescence but also meant to diminish social imperfections. At the same time a process on revitalization was introduced in which the urban fabric and the building supply should be accommodated to changing conditions and new social demands. Contradictions were raised between aims to preserve or turn back to the original social infrastructure and modernization that was more related on new social and economical developments. That means that not all starting-points and results of the building for the neighbourhood strategy can be classified in a perspective of sustainable development.

At least the notion on housing standards and quality extended; quality of the floor plan, residential environment, facilities etc. Sustainability related to this extended notion means that there is not only emphasis on sustainability connected to the used materials and building construction. Social obsolescence caused by changing demands on housing puts more emphasis on the user's value of housing and environment especially when an evaluation by the residents themselves is done. These evaluations will mainly be determined by the position of a household on the labour and housing market, the present housing conditions, the mentioned imperfections and possibilities to improve their housing conditions.

The concreteness of removal plans and mentioned motives will give partly an indication of the extent of those experienced imperfections and discrepancies. The conditions that have influence on the possibilities of a household, on the sustainability and possibilities to change the constructed quality are affordability, accessibility, availability, usability and possibilities to influence their housing conditions.

The Dutch housing provision and sector formation shows great dynamics. The conditions for a sustainable development and perspectives on sustainable use of the constructed quality are object of changing times because of fundamental changes of housing and urban renewal and restructuring policies. The question is how far will be the function of the social sector diminished as a result of these changing policies. This broad function of the social sector had been developed after the WOII and as part of socialization of housing provision strategies became mature at the beginning of the 1970s'. In an extreme form this was also the case in the urban renewal approach of the government of Rotterdam. Since the 1990s' this position of the social sector becomes an issue in neo-liberal politics. The re-differentiation of the housing supply, with stimulation of owner occupied housing, becomes an important issue to create a less one-sidedness of these districts according to the division on housing sectors. But this high concentration of social housing is directly connected and an effect of the former 'building for the neighbourhood' strategy. The consequences of those fundamental political changes for the present residents of those districts and the sustainability of their living conditions are matter of conflict.

In this paper we will first define sustainability related to urban renewal. The analyses of the urban context are concentrated on changing economical and social conditions and changing planning policies. In this paper the presentation of the evaluation research 'sustainable renewal' will be limited to the during the urban renewal period realized quality.

2 What is sustainability?

Cities change over time and, because this process is inevitable the operation of the political, economic and social systems, constantly generate new demands, new opportunities for improvement and progress. Related to sustainable development, the definition of quality and design methods have to connect the physical structure with the changes in the social infrastructure or in other words the static character of the building environment as a reality and the dynamics on population characteristics with different and ever changing demands. Therefore, the issue of sustainable development is difficult to isolate from the urban context and environment in which it takes place.

In the book 'Cities in Civilization' Hall mentions two basic conditions to solve problems on urban order and sustainability [7]. The division of sources and public space will be considered as not justified among a broad range of population groups in the city. Social safety and the quality of life are at stake. According to Beck social conflicts are less about the division of prosperity but in growing extent about the share of risks and the question who is allowed to decide on who may burden the risks [1].

In the Netherlands the meaning durable often is used. But certainly in relation to sustainable urban development such an approach is problematic because not all the situations and sometimes-allied problems have to be preserved. Therefore a more dynamic approach with more emphasis on social and economical developments is needed [5]. The complexity of a more dynamic approach is evident for the research is about the adaptation and viability of during the urban renewal constructed quality to new demands that are influenced by social and economic developments.

Since 1987 a dynamic approach gets more attention and the issue on sustainable development with reference to the Brundlandt commission has become an important item for economists and politicians. The Brundlandt commission pleaded for a sustainable development 'to ensure that development meets the needs of the present generation without compromising the ability

of future generations to meet their own needs' [15]. Though the central government of the Netherlands refers to this definition the ministry on Housing, Physical Planning and Environment estimate policies on environmental issues [8,10]. This approach too much ignores the urban fabric as the result of spatial forms and social processes based on conflicts of interests and transformations that had taken and still take place by fundamental changes on the production and employment structure and social conditions [5,4]. Because of these changes and reposition in relation to the housing market the gains and the burden of charges are not equally spread over income groups [2]. In this research sustainability related to urban renewal is defined as: the quality of a house or a housing situation is sustainable when it can be used over a long time and when the physical, social and economic situations improve [14].

The sustainability is in case of modernization of a building more determined by normative obsolescence than by technical obsolescence. Influenced by social and economic developments perspectives on sustainability can change when the usability has changed by improvement of housing and building environment. Economically seen the exchange value increases but in relation to urban renewal turns the social dimension and the normative obsolescence the scale. At his turn the normative obsolescence is dependent of changing demands and requirements as result of social and economic developments.

3 Changing policies

At the end of the 1960s' in the local politics the interests of the port were less matter-of-course and dominant than before. Not only the economy and development of port activities but also the quality of the urban environment got attention. Social urban renewal became a big issue with improvement of housing conditions for the residents of these districts. Begin 1990s' a new change occurs in urban planning and economical aspects become dominant again.

Sustainable development and sustainability of the urban fabric is put central in the strategic district approach. The strategic planning in the city of Rotterdam is concentrated on restructuring and revitalization of old port districts and city center and at the other hand the district oriented approach for some of the former urban renewal districts. Moreover urban renewal and revitalization are confronted with new challenges on urban planning because the fundamental change of conditions caused by privatization, decentralization and deregularization and changes on the system of housing provision.

Since 1979 in big cities the decline of the total population figures came to an end and more or less stabilized. The settlement surplus exists mainly out of low-income groups, little households and a great diversity of ethnic groups. During the urban renewal the rise of housing standards gets priority by building housing in the social sector but after that period in the 1990s' the aims are to build according to income and household composition for a more diverse population. More differentiation on building is seen as an instrument to fight against segregation. The two main aims on urban revitalization strategies are more economic functions versus the function of living and building for high (err) income groups versus housing for social and economic deprived groups. The item residential differentiation is put central to these policies. Combined with strategic planning residential differentiation and sustainability of the building environment and urban fabric are mentioned as important elements to create a new framework for urban revitalization. But many problems like unemployment are persistent. Horizontal and vertical integration of different fields of policies and problems still deliver conflicts on various scales and between diverse interests. Besides the planning has many uncertainties that shows for instance the finally construction of the housing programs; last years nationally only 60% of the planning figure of 100.000 dwellings per year has been constructed.

4 Rotterdam and changing conditions

In Rotterdam the fundamental change of the industrial period towards application of new technology has caused an ongoing replacement of traditional production capacities through production processes with the use of computers and new communication and information technologies. Since the containerization many traditional jobs in the port were lost already in the 1960s' and 1970s' but also many traditional industries like shipbuilding have been disappeared. New jobs also in the service sector related to new information technology did emerge but the amount is less than before and based on different requirements. The extension of the port and of the infrastructure for shipment and loading and the planning of new public transport facilities in the city center important conditions of the extension of the metropolis to which Rotterdam belongs.

The flexibility in use of the building supply and the urban fabric and to create an extra value according to the economy is an important matter. The rise of these new technology and information technology with her growth on world scale has contributed to a new geography and renewal of the spatial structure, which can be characterized with centralism and marginalization. This new geography reproduces partly existing possibilities and present forms of economic growth [11]. At the same time there is a sharpening of contradictions that reveals unequal positions according to the access to strategic resources and activities between cities and inside the urban fabric and between different households and population groups. Integration of diverse groups and identities to avoid social exclusion is an important condition for the development of a sustainable city.

In present urban developments and strategic plans is the production of space especially directed on locations that can be marked off with 'special' quality. When we compare these locations, according to a dual city concept, with old neighbourhoods then nuances are necessary especially at lower scales and also between the four main Dutch cities [13].

Changes of the income- and occupational structure between Rotterdam and Amsterdam there show important differences. The growth of post-fordist jobs is much lower than in Amsterdam [3]. The discrepancy between the present working population living in Rotterdam and the demand on higher qualified personnel is in Rotterdam more structural than in Amsterdam. The unemployment figure in Rotterdam was also in the last period of economic growth at a high level with a large share of long-term unemployment. This long-term unemployment is an important element in social divisions with differences between all kinds of ethnic groups. In some districts an informal economy based on ethnic entrepreneurs provides marginal employment based on flexible contracts. This development fits in a demand on flexible employment structures. Though the situation in Rotterdam cannot be classified according to the dual city concept one cannot deny sharp contrasts inside the social and economic structure in certain districts. Especially near the city center low and high-income groups are living at a short distance from each other. Compare to the USA the situation in most of the urban renewal districts is spatially less isolated and more integrated and with her social and ethnic heterogeneity there is more fragmentation. There are concentrations at street and block level. At the other hand it is clear that the population of Rotterdam as well as the other big cities in the Netherlands compare to the national level has an overrepresentation of unemployed and low-income groups.

Approaches to stimulate the development of a compact city will mean for diverse districts and thereby for different population groups different things. Especially in the urban renewal districts were between 1975-1993 densities decreased but despite there are still problems because of a lack of public space. And especially in those districts the housing supply and building environment has been improved with as result that inequality on the housing market has quite an other dimension than on the labour market.

5 Results of urban renewal in terms of sustainability

According to the building for the neighbourhood strategy not only was the bad condition of the housing stock seen as a problem but also the fact that certain groups, mostly low income households, had no possibilities to improve their bad housing situation. This approach was based on a coalition between local authorities, tenants' organizations and housing associations. Need criteria and not market criteria were the main issue in this strategy. In the decision making process tenants had a say. Due to this approach in Rotterdam about 65% of the housing supply in the urban renewal districts had been replaced through new built social housing (figure 01) or modernization of old housing (figure 02). These modernized housing are also belonging to the social sector. At the same time the differentiation of the housing stock related to sector divisions and the amount of rooms has changed completely; there was a shift from private rental sector to the social sector and a shift from one (bed) room to two or three bedroom dwellings.



Fig. 01: first project 'New built social housing' with large inner-courtyards

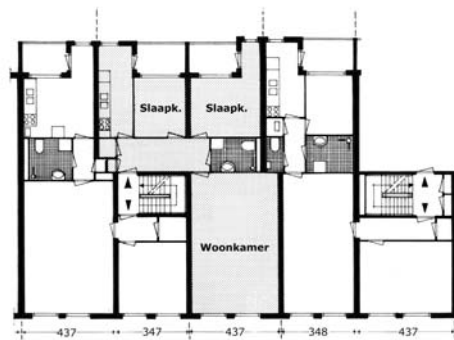
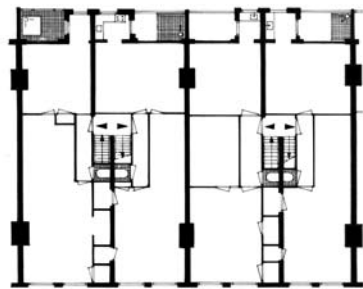


Fig. 02: before and after the modernisation: social housing

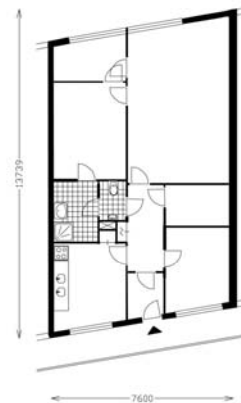


Fig. 03: special 'new built social housing' for elderly



Fig. 04: neutral floorplan in 'new built social housing'

The floor plans were as much as possible corresponding with the household composition of the residents. Therefore many different housing types were constructed. At the end new housing typologies were developed as a result of building processes and also residents with Turkish or Moroccan backgrounds had access to the new built or modernized housing. For the more traditional households of for instance belonging to the Turkish or Moroccan community it was an important issue that floor plans had two-separated scenes. So women could walk to the kitchen without eventually being confronted with visitors in the living room. Moreover owing to this a certain flexibility of functions and use was attained. These floor plans were also interesting for other less traditional households. Because of the growing variety of households and types of house sharing there was an increase of experiments with flexible dwelling types. The (re) inventing of housing typology was a continuous process.

Special housing and floor plans are constructed for elderly (figure 03).

The demand driven approach meant an enlargement of housing types. In the period 1945-1975, before the urban renewal, the social policies and housing programmes had been consolidated on pillars like the diffusion (going somewhat towards full employment) of stable family wage occupations for adults and males and the centrality of the 'nuclear family households' with married parents and dependent children. During the process of urban renewal planners and politics were confronted with changes of population structures. The 'nuclear family household' no longer is dominant because there was an increase of singles, two person households and single-parent households.

During the urban renewal process was forced removal to other neighbourhood mainly prevented. In considering the average lifetime of a household per address, the (less) amount of mutations and decrease of removals inside the district the situation in urban renewal districts has been stabilized. Yet most districts can be characterized as heterogeneous stable neighbourhoods with one-parent families, new settlers, two earner households, singles (some also belonging to Turkish or Moroccan community) and other ways of living together behind one front door. So different ethnic groups are living next to and not with each other. When we consider the composition of the population of those districts and compare that with the composition of the whole city of Rotterdam than differences between these scales is for certain characteristics diminished; nearly the same share of one-parent families, youth and (less) elderly. There is a large concentration of ethnic minority groups, unemployed people and households with minimum wages. But also an amount of Turkish and Moroccan households belong to the middle class and have a middle income and education level. Despite the preference for living in some of the districts this is mainly caused by a reasonable rent-quality ratio of the new and modernized housing mostly near the city center.

A heterogeneous population can also cause negative experiences, feelings of fear and social insecurity, violence, concerns about the future of children. There is no situation to be identified with a ghetto but concentrations on street or block level exist with more households that belonging to low income groups, unemployed, one-parent family etc. Those concentrations are more developed in the districts where the building environment has lower quality because there is relatively a lack of public space and a high building density while the housing quality like floor plan has reached also in those parts high standards. The concentration of ethnic groups in those parts is mainly caused by over occupation because most of the households are having large families and living in to small houses related to the amount of children; the rents of four or five bedroom dwellings is to high and not enough compensated in housing subsidies.

For different groups urban renewal had a different result and meaning. One-parent families, unemployed but sometimes also (two) earners live in those projects. Some households have stayed after completing their studies still living in districts near or close to the city center. For immigrants urban renewal offered the access to housing the possibility of family reunion but it meant also an increase of housing expenditures by moving to the new dwelling and a definitive choice for settlement in the Netherlands.

Tenants of new built social housing are more satisfied about the quality than tenants of modernized housing. And among tenants of new built social housing floor plans with a more neutral concept (figure 04) in the relation between rooms (one has a access from one hall or corridor to all rooms) are more preferred than open floor plans, existing mostly of an open relation between kitchen and living room and access to the bedroom section via the living room.

Most tenants use the floor plan as was according to the design teams, in which tenants had a say, intended to do. Generally they are (very) satisfied about the surface of the living room, kitchen and master bedroom. Fewer households are satisfied about the size of the other bedrooms. This is caused by the lower judgment of more traditional floor plans with a hierarchy in size of the bedroom, assumed separation between living and sleeping and probably too much corresponding with old-fashioned traditional family life styles.

Mostly the kitchen is linked with the living room. This direct connection is mostly preferred while a kitchen as direct part of the living room and in the middle of the dwelling without daylight mostly badly is appreciated. For most of the ethnic groups the possibility of a closed kitchen, closed from the living room, is an important requirement. But residents from Cape Verde Islands are thinking different. They prefer an open kitchen because for them preparing meals is a social activity which eventually you share with visitors.

In general the size of the living rooms is large enough for common activities and a lot of the houses also the modernized ones have a dining-kitchen. This contributes to a certain, today more preferred, decentralization and spread of activities and choices inside the dwelling itself. Decentralization of activities will be also supported when the bedroom originally meant for the parents is used for other activities but therefore other bedrooms not at a minimum surface are to be available. After children moving out their former bedrooms mostly get specific functions like work or study room with space for installation of a personal computer.

Moreover related to trends of individualization also within families there is a development on creating own domains and claims on space of the separate members of a household. Children and each parent are demanding more room for their own activities. Most of the constructed floor plans have little possibilities for flexibility and if it exists than it is caused by under-occupation or for instance when a (planned) bedroom is directly connected with the living room. In that situation the bedroom is used for special activities for instance creating a special Moroccan corner and/or room for visitors. Floor plans with little hierarchy according to the sizes of the bedrooms and for instance a circuit with alternative connections between kitchen and living room (see fig. 04) give lot more possibilities on flexibility and create more appreciation of all kind of residential groups.

There is a decrease in appreciation from private to more collective space: from dwelling, building and neighbourhood. The public space and porticos are because of intensity in use and sometimes over- occupation of the dwellings deteriorated a lot. Public space has not always enough quality and does not always fulfill the demands of ethnic minority groups because there is a lack of meeting places. Especially in parts of the urban fabric where the density is high and the streets are narrow, the appreciation of the neighbourhood is lower. At the other hand in general the facilities are in all parts highly appreciated because the urban renewal district is near and not isolated from the city center, the public transport is sufficient and in the neighbourhood itself there are many shops including businesses owned by all kind of ethnic groups.

6 Conclusions

In the Netherlands the sustainability of housing provision especially for low-income groups is threatened by the estimation on the market processes and the withdrawal of the government. There still are imperfections on the housing market. Related to economic developments also in periods of economic growth like in the 1990s' the amount of people dependent of social benefits is large, which means that the purchasing power of these groups decline and the governmental expenditures on subsidies increase. According to social developments

reinforcement of the market processes will stimulate the development of homogeneous income districts. For instance also in the Netherlands it seems that 'red lining' by banks, in case of refusing to provide a mortgage for certain districts, occurs. At the other hand the housing supply in the social sector still is to be characterized according to a stable heterogeneous situation especially in the former urban renewal districts. Due to the urban renewal approach in the period 1975-1993 there is contributed to large improvement and modernization of housing conditions also for low income and ethnic minority groups. Policies on metropolitan problems that were executed in the 1990s' have led to little progress but there still is an unstable equilibrium that will be sharpened during the present economic recession.

When we consider the total surface of the dwellings and the separate rooms than the results show that a high standard had been constructed during the urban renewal period and some ten to twenty years later most of the surfaces meet the present needs. In terms of perspectives on sustainability we can conclude that the quality of the floor plans can in general compete with present requirements especially these with flexible use. Those plans were constructed in a period of socialization of housing provision. Important problems are still with the quality of the building environment and public space. A strategy based on the integration of social, economic and physical aspects is needed. But important questions stay like how we bring some of the more socially and more or less spatially excluded groups into the urban policymaking process. An important challenge when we consider the large amount of different ethnic groups, sometimes sixty or even more than that, in one district.

Less appreciated is the public space and environment. This situation is caused by a lack of planning initiatives and design at higher level of scale and spatially the ignorance of the urban structure of the district and the several (fragmented) projects according to his urban context during the urban renewal proces.

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