

## **Residential environmental conditions on housing estates in Yerevan**

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### **Abstract**

Most housing estates of Yerevan, the capital of Armenia were constructed during communism, mostly between the 1960s and 1980s. The residential environment was shaped according to the typical approaches and styles of the Soviet urban construction: houses of the same type can be found almost in all 15 capitals of the former USSR. The construction of the so-called “elite” housing stock appeared in different parts of Yerevan in the 2000s. However, due to higher prices, those houses are not widely available. Therefore, housing estates of the communist period still remain the only possible housing for the majority of the population in Yerevan. Nowadays, the residential environment on those housing estates has to face different kinds of problems and challenges: communal, infrastructural, environmental, sanitary, esthetical, etc. In the present paper the author makes an attempt to provide an overview on the residential environment of large housing estates in Yerevan based on survey data and field work.

**Keywords:** housing estates, residential environment, housing stock, communal services, Yerevan

### **Introduction**

Yerevan, the capital and the largest city of Armenia is located at the north-eastern edge of Ararat Valley, on the banks of Hrazdan River which originates from Lake Sevan. The territory of Yerevan is 227 sq km (0.8% of the territory of Armenia). It is noteworthy to mention that Yerevan is situated at the altitude of 865–1,400 meters above sea level. The population figure of the city as of January 1, 2012 is 1.127 million which equals to 34.4% of the total population and about 53.8% of the urban population of Armenia (Yerevan, RA capital in figures, 2012).

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In order to analyse the current state of residential environment in Yerevan, a field survey was carried out in the framework of IVF's small grant project ("Residential environment in the housing estates in V4 countries and Armenia"). Out of the 12 administrative districts (AD) of Yerevan, the following ones were surveyed: Qanaqer-Zeytun (the main research site), Davtashen and Nor Nork. In this paper the most centrally located Quanaqer-Zeytun is analysed in details; because its peculiarities and problems well reflect the overall state and the challenges of housing estates of Yerevan.

### **The history and current conditions of housing stock in Yerevan**

The geographical position and the relief have shaped the main directions of housing development and the urban structure of Yerevan. The geographical, architectural and functional "core" of the Armenian capital is the city centre which is located at lower altitudes (at about 1000 m above sea level). This was the place where the urban development of the city started. During the period of 1960–1980s a range of new housing estates were constructed on hillsides (1,000–1,400m) surrounding the centre (*Photo 1*).

During the communist period Armenia and particularly Yerevan had well-organised housing stock and continuous housing production; housing management and maintenance were arranged centrally. The housing sector was entirely controlled and supported by the state (JANOYAN, T. *et al.* 2002).<sup>2</sup>

In the late 1980s two events contributed to the worsening of housing situation in Armenia: a conflict over Nagorno-Karabakh Region with Azerbaijan<sup>3</sup> which triggered the influx of about 350,000 refugees from 1988 to 1992; and in 1988 a devastating earthquake in the northern regions of Armenia (including Yerevan) which rendered about 17% of Armenia's housing stock uninhabitable (ANILIAN, S. and VANIAN, I. 1997). Besides, Armenia had to cope with at least three more challenges: firstly, the regional destabilisation caused by local fighting in neighbouring countries (i.e. Georgia and Azerbaijan), secondly, the effect of Turkish and Azerbaijani economic blockade, and finally the exceptionally harsh winters of 1992–1994.

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<sup>2</sup>The housing rights of Soviet Armenian citizens were stipulated by the Constitution of 1977 and by the Housing Code adopted on 3rd December 1982.

<sup>3</sup>Nagorno-Karabakh, a historic part of the territory of Armenia settled by ethnic Armenians was joined to Azerbaijani SSR under the decision of Soviet government in the early 1920s. At the end of 1980s the inhabitants of Nagorno-Karabakh expressed their wish to join the Armenian SSR in peaceful and democratic way according to the international law. The massacre of the Armenian population in Baku, Sumgait and in other parts of Azerbaijan in 1988–1990 was the response of the Soviet Azerbaijani rulers.



*Photo 1. View of the densely built-up area of Arabkir district (Photo by SARGSYAN, T.)*

Although the sale of state owned dwellings to citizens (i.e. privatization) started as early as 1989, during the period of 1989–1993 only 40,000 out of 500,000 state apartments (8%) were transferred to the private sector (JANOYAN, T. *et al.* 2002). To increase the pace of privatisation, in September 1993 the “Law of the Republic of Armenia about Privatization of State and Public Housing” was accepted. According to the statistics of the Ministry of Urban Development, 381,000 households claimed that their dwellings should be privatized (TATIAN, P. 2002). The privatisation of the housing stock lasted until the end of 1998. As a result, about 96% of the housing stock became privately owned by 2000 (United Nations, 2004).

The current conditions of the housing stock of Armenia and Yerevan is rapidly deteriorating due to three main reasons:

- Armenia is located on an unstable tectonic plateau which requires (and would had required) special architectural and engineering measures and solutions;
- No major repair and maintenance projects to prevent the gradual deterioration of existing multi-apartment buildings have been financed and carried out since the early 1990s;
- Even basic maintenance was extremely limited in the last two decades, as neither the private apartment owners nor the municipalities in charge of the buildings have had the necessary financial resources (GEVORGYAN, K. and HIRCHE, S. 2006) (*Photo 2*).



*Photo 2. Home-made house repair in Qanaqer-Zeytun district (Photo by ERŐSS, Á.)*



*Photo 3. Newly built housing blocks in the heart of Yerevan (Photo by ERŐSS, Á.)*

The intensive reconstruction of Yerevan, particularly of the downtown, was launched in 1998. That resulted in the increase of density of construction and at the same time in the reduction of green areas. The new Master Plan of Yerevan was adopted in 2005. It envisaged 1.2 million inhabitants within the existing administrative borders of the city (DANIELYAN, K. *et al.* 2007).

During 2004–2008 Armenia also faced a housing market boom when real estate prices rose by 2.5 times over the 4-year period. This was very high even compared to the considerable increase in other post-Soviet countries (STEPANYAN, V. *et al.* 2010). It should be noted that new housing construction is primarily a private activity nowadays (*Photo 3*). In 2003 the state budget accounted for only 0.4% of completed housing. The international donors and private Armenian households together accounted for 47% (STRUYK, R. *et al.* 2004).

The total area of housing stock of Yerevan (as of January 1, 2012) is about 23 million m<sup>2</sup> (25.9% of the total housing stock of Armenia) The number of multiple dwellings is 4,781 (about 23% of all multiple dwellings of Armenia).

### **Brief overview of the field survey and data analysis**

The survey was designed to shed light on the most important and urgent problems and peculiarities regarding the environmental conditions and life circumstances on large housing estates in Yerevan. The questionnaire used in the survey consisted of 5 blocks: A, B, C, D and E.

Blocks A (“General information”, e.g. total surface of the apartment and the number of floors of the house) and E (“Demographic and family data”) have descriptive and informative character. Block D (“Communal services”) focuses on the problems of waste management, the frequency of electricity cuttings, gas and water supply, the existence of sewage. Blocks B (“House and location”) and C (“The apartment”) inquire about specificities in relation with the environment of the blocks of flats.

After the first data evaluation, five neuralgic points can be determined at large housing estates in Yerevan:

- the lack and/or the insecurity of entrances and entrance doors,
- problems with elevators (security and aesthetics),
- very limited distance/narrow spaces between houses, the limited number and the highly changeable quality of playgrounds and greenery problems,
- (in some cases) low access to transport, public/social services (e.g. hospital, schools).

### **Living conditions in Qanaqer-Zeytun district based on the survey results**

Qanaqer-Zeytun is located in the north-eastern part of Yerevan, on a hillside, connecting the city to Yeghvard and Kotayk volcanic plateaus in the north. It is surrounded entirely by the territories of Arabkir, Avan, Kentron (Central) and Nor Nork districts of Yerevan with no external borders (*Figure 1*). Its ter-

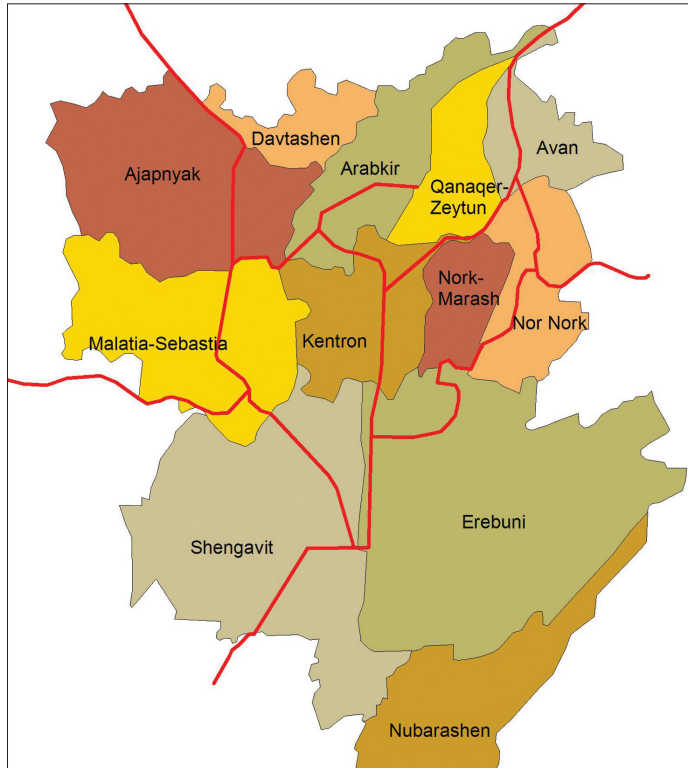


Fig. 1. Qanaqer-Zeytun in the system of administrative districts of Yerevan.  
 Source: [www.yerevan.am](http://www.yerevan.am)

territory is 7.75 sq km (3.4% of the total area of Yerevan, 10<sup>th</sup> place among the 12 ADs) with a population of 79,600 (7.1% of the total population of Yerevan, 8<sup>th</sup> place). It means that Qanaqer-Zeytun ranks second in the population density of Yerevan (10,271 people per sq km) (Yerevan RA capital in figures, 2012).

There are 353 multi-storey buildings in Qanaqer-Zeytun with 16,081 apartments and 41,180 inhabitants altogether (51.7% of the total population of the district). The average market price is about 266,000 AMD per sq km (about 532 EUR) which is the third highest in Yerevan following Kentron (882 EUR) and Arabkir (688 EUR) (Yerevan RA capital in figures, 2012).

Qanaqer-Zeytun has no administrative subdivisions of lower levels (like all ADs of Yerevan). In spite of the lack of administrative legal status, two main historical neighbourhoods can be clearly distinguished. One of them is Quanaqer – a former village of historical significance and importance – which joined Yerevan after 1950s. It occupies the northern and the north-eastern parts of Qanaqer-Zeytun district where people live mostly in private houses.

Nevertheless, there are also some multi-storey buildings and blocks of flats in the central part of Qanaqer and on Tbilisi highway (“north-eastern gate”). The other neighbourhood is called Nor Zeytun (“New Zeytun” in Armenian) which occupies the southern part of Qanaqer-Zeytun. It was founded during the period of 1940–50s after the repatriation of the Armenians from Lebanon, Egypt, Syria, Iran and other states that was organised by the governments of the USSR and the Armenian SSR. The further development of Nor Zeytun as a housing estate continued in the 1960–1980s.

During the Soviet years the blocks of student dormitories were constructed here. After the Nagorno-Karabakh military conflict and the collapse of the USSR, many of them were settled by refugees. A number of important and busy transport routes of Yerevan run across the area, therefore numerous industrial enterprises, universities, medical and trade centres of citywide importance are situated in Qanaqer-Zeytun.

All in all, 811 respondents participated in the survey from this district, the majority of whom was living either in multi-generational families (parents, children, grandparents) or in families with 2 or more children, which reflects the dominant Armenian family model and traditions.

One of the most important and urgent problems in Qanaqer-Zeytun is the state and the safety of the entrance doors. As it is displayed in *Table 1*, only 13% of the entrance doors have security systems and close safely, more than 60% of them close just slightly.

*Table 1. Composition of building stock according to construction years, materials and the state of entrance doors*

Period of construction	Nr.	%	Building material	Nr.	%	State of entrance doors	Nr.	%
Before 1960	10	7.2	Panel	59	44.1	No entrance door	14	10.7
1960–1980	102	76.6	Stone	74	55.3	Does not close	21	16.0
After 1980	22	16.2	Monolith	1	0.6	Closes slightly	81	60.3
<i>Total</i>	134	100.0	<i>Total</i>	134	100.0	Security system	18	13.0
						<i>Total</i>	134	100.0

### *Environment of housing estates*

Dense construction is a very common problem in Yerevan and especially in Qanaqer-Zeytun district. It has different aspects: aesthetic, seismic and even psychological. In some cases houses are very close to each other (a couple of meters) (*Photo 4*). About 64% of the surveyed households considered the distance between the houses “satisfactory”, however, roughly 25% of them were not satis-



*Photo 4.* Reduced distance between housing blocks means not only aesthetic but psychological problems as well. (Photo by Erőss, Á.)

fied in this respect. As the seismic situation in Armenia is not stable, the dense construction of big blocks of flats is undesirable because of safety reasons.

Special attention was paid to the quality of playgrounds and green zones as important factors of comfortable and healthy residential environment. In this context the dry and hot climatic conditions of Yerevan should be taken into account as well. Although 76% of the respondents reported about an existing playground in the vicinity, it should be clearly defined what they mean under “playground” and “green zones”. Generally speaking, a playground is a garage-free little corner with minimum facilities (or without them) while green zones include only a couple of trees.

Security is a crucial problem here as well: it is common that children play among cars, because courts and playgrounds usually lack fences or gates. It should be noted that Yerevan municipality has done a lot for the improvement of courts during the last years. There are particularly nice examples for green, safe and comfortable courts belonging to houses in Qanaqer-Zeytun (*Photo 5*). However, the lack of safe courts and playgrounds is still a common problem in Yerevan and there is much to be done regarding the environmental, esthetical and safety aspects.

Regarding the access to transport and social services, Qanaqer-Zeytun is well-equipped especially that main streets and highways as well as the bus stops are within a short distance – it takes less than 5 minutes for 80–86% of inhabitants





*Photo 5.* One of the few positive examples: newly renovated playground in Nor Nork.  
(Photo by Erőss, Á.)

to reach them. As there is no subway station here, it takes more than 20 minutes for 87% of families to reach the closest station. The schools and the kindergartens are located in a distance of 0–15 minutes walk for 81% of households. As more than 25% of the 811 inhabitants belong to the age group of 0–19 years, this factor has a special importance. Due to its central location there is also relatively good access to pharmacies, markets, shops and supermarkets: more than 90% of the respondents can reach those facilities in less than five minutes.

Finally, the survey also focused on the satisfaction of people with their districts, especially with the blocks of flats they live in. 59% of respondents claimed that they did not want to change their apartments. About 40% of families intend to change their apartments and have the preference “Same house, other apartment” and “Same district, other house”. It shows that Qanaqer-Zeytun with its 30–40 year old buildings will probably remain a comfortable and suitable place for the majority of local population. The main motivation of those who intended to move is to have a larger flat or to live separately from their parents/grandparents.

## Conclusions

The survey of housing estates that were constructed during the 1970s–1980s showed that the typical architectural style of the Soviet housing construction prevail everywhere. Thus, households living on these estates are facing almost the same problems and difficulties in every district. The revealed problems can be

merged into two groups: internal problems (at the level of households or apartments), and external problems (at the level of buildings, courts, streets or ADs).

One of the main internal problems is the low per capita housing surface. Not taking into account the single households (up to 68–70 sq m per person), the average size per inhabitant varies from 16 sq m to 21 sq m. The family traditions of Armenians (“living all together”) play a significant role in many cases. The majority of apartments have been repaired only symbolically. In some cases structural changes have been done (merged rooms and corridors, closed or added balconies, removed walls). The problem of seismic security was mostly not taken into consideration in most cases.

External problems refer to communal services, the state of courts, elevators and entrances, the access to transport and public services. The research results are much more optimistic than our expectations were prior to the survey. The households are particularly satisfied with the communal services and with the access to transport and public services. However, the lack of green areas and playgrounds and the problems of density, the quality of entrance doors and elevators’ safety indicate an urgent need of intervention.

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