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Evaluation of subsidized housing, case study in Deçan

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ABSTRACT

Flexibility represents one of the main elements of the sustainable architecture. Flexibility is important, especially for the multi-family apartments the useable surface of which is rather small. For the families with low incomes and social cases, flexibility represents a very important element given that can change the function based on the change of family structure. The aim of the research was post occupancy evaluation of subsidized housing, where it was realized that they do not meet the needs of residents, therefore were proposed changes in floor plan based on the average number of family members, realised through annexes. During this research work, analytical method, administration of questionnaires and observation period method was used.

KEYWORDS

subsidized housing, evaluation, function, transformation, sustainability

1. INTRODUCTION

Housing represents one of the main elements to a normal living. In developing countries securing proper housing continues to represent one of the main challenges to overcome. Offering proper housing does not only entail offering a space to live, the latter entails many other aspects as are: presence of green areas, sport and recreation areas, presence of pre-school and educational institutions, etc. Post Occupancy Evaluation (POE) of the buildings is considered to be a very important element. In addition to architects and civil engineers there are many other stakeholders partake in the construction and use of buildings as are: investors, owners, building maintenance staff, however the main actors are the persons who live in certain buildings, therefore in order to perform proper evaluation, the data is gathered from the inhabitants of the buildings [1]. Regarding the housing in general, the challenges predominantly appear with the families with lower incomes and social cases. The purpose of research is POE of subsidized housing that are constructed in the city of Deçan, in order to understand if the existing buildings fulfill the needs of the users based on acceptable minimum criteria.

2. LITERATURE REVIEW

After 1999 multi-family apartments are constructed by the private sector. Public sector has constructed only multi-family apartments for families with lower incomes and social cases. The net surface of the residential units which were constructed prior 1999 are significantly higher than those constructed after this period [2], therefore the evaluation of these buildings is very important. POE is a process of evaluation of the building after they have been utilized

for a certain period of time and it helps in avoiding the mistakes in the buildings that will be constructed in the future [3]. In the process of evaluation, a special kind of importance is paid to the feedback from the users. POE is applied in Great Britain, France, Canada and USA, where the information is obtained through the questionnaires, interviews, site visits and observations [3, p. 2]. These are the usual methods that are used during POE, however it is worth mentioning that the focus always remains with the satisfaction of users [4].

In evaluation of this kind of nature, it is observed that the physical characteristics of the residential units have a direct impact in living satisfaction of the residents [5].

The average of the family members in Kosovo, based on Statistical Agency of Kosovo [6], is 5.9 family members, which is even more pronounced in the families with lower incomes.

2.1. Flexibility in architecture

Flexibility represents of the main factors of sustainable architecture, which contributes to the quality of life of people who live in certain residential units. In addition to all the advantages that flexibility brings, it is very existence seems to be ever increasing critical with passing of time when one would like to change the function of the building [7]. Given the greatest number of population is concentrated in the cities and usually there is lack of construction land in the cities, the flexible buildings are transformed into a very important element, given that flexibility renders the buildings more useful for a longer period of time through the adoptions that enable continuous use [8].

The housing units should be designed in a form that in addition to meeting the basic needs, they should enable functional changes based on current needs of the inhabitants that live in those housing units. In cases where one strives to achieve flexibility in the existing buildings, there should be a functional and constructive analysis of housing units, to identify the elements that cannot be changed and to strive to reach the flexibility based on current need. The period of construction of social housing units has pressured the architects to design smaller size residential units through the efficient organization and rational use of space [9].

3. RESEARCH METHODOLOGY

The performed research is based on the various resources; on review of literature, analysis of plan, period of observation and administration of questionnaires through which were obtained the primary data. The administered questionnaires are filled by the surveyed person. The questionnaire consists of a series of questions including those that deal with living satisfaction, however during the research were used only those that are of more interest. As a case-study the multi-family apartment building in the city of Deçan is considered. The size of sample consists of 21 family units. The residents that live in selected buildings have low

level of incomes and social cases. The data processing was conducted using the Statistical Program for Social Science 22.

3.1. Characteristics of residents and residential satisfaction

During the administration of questionnaires, the greatest degree of percentage from the surveyed persons belonged to the age-group of 41–50 years old. Based on monthly income, the average income of families is 200–300 Euros/month, which implies that the residents find it very difficult to change the residential units even if they do not meet their needs. Regarding the questions that related to the living satisfaction, the residents in general were not satisfied with the number of the rooms, this dissatisfaction is especially pronounced at the families with four or five members. The residents in general felt discriminated compared with the other residents, dissatisfaction that is caused by their grouping in a separate building. In general, the residents were satisfied with the procedures and the duration of distribution of residential units.

3.2. Observation period

The location where the building is located does not have green areas, playground for the children and the sport areas. There was a lack of lighting in the building and the lighting was provided by the lighting units that are situated along the road, given that building was very close to the street that was used by cars. The maintenance of the building is not in satisfactory level and it is managed by the residents, themselves.

The residents of this building have problems with water supply, and energy blackouts are very common.

4. SUBSIDIZED HOUSING IN DEÇAN

Concept document on social housing mentions that the number of families with low incomes and social cases in Kosovo is rather big. The country has lack of residential units for this category of population. On the other hand, the existing buildings are not in very good physical shape.

The infrastructure is not in the required level, it is features with a lack of walking paths, playgrounds for the children, lighting, commercial malls, etc.

Commercial malls in many places in Kosovo display lack of harmony with the surrounding environment, as well as utilization of various materials and styles [10], therefore one needs to pay special attention to their design.

Among others, the problem in subsidized housing always remains the issues of heating which continues to be one of the main challenges in Kosovo in the last two decades [11].

In Fig. 1 the plan of the characteristic floor of multi-family apartment is presented, which was constructed by the Ministry of Environment and Spatial Planning, this building is constructed in the town of Deçan.



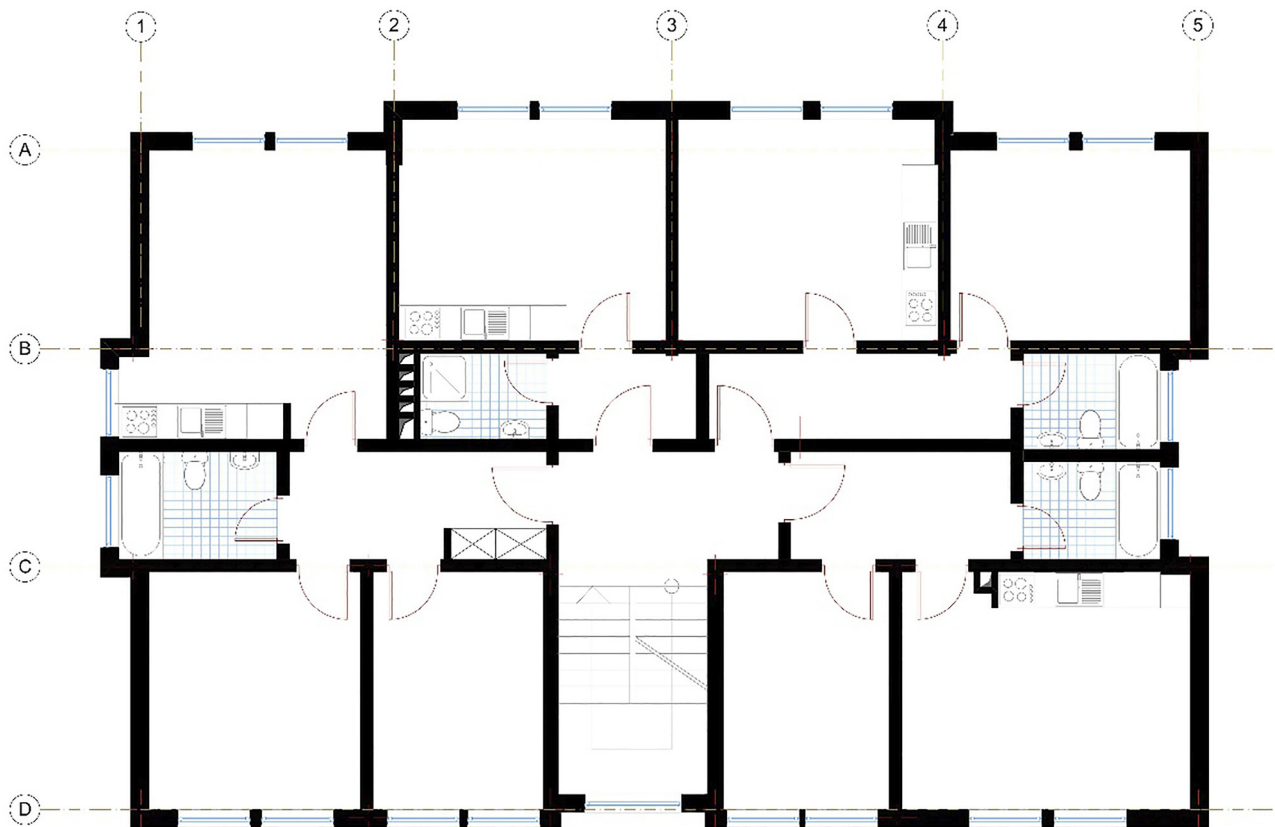


Fig. 1. Characteristic floor plan

The building is constructed in 2004 and it has twenty-one residential units. Figure 2 represents the average number of family members that live in apartments that are in the building.

The building has three types of apartments based on the number of rooms Fig 3: studio apartment, one bedroom and two bedroom apartments, whereas the pictograms show the average number of family members.

Taking into account that the apartments do not fulfill the needs of the users based on the number of members of family, on the other hand the building is not very old to be demolished to construct a new building, it is planned to have appendices to the building Fig. 4. That functional solution

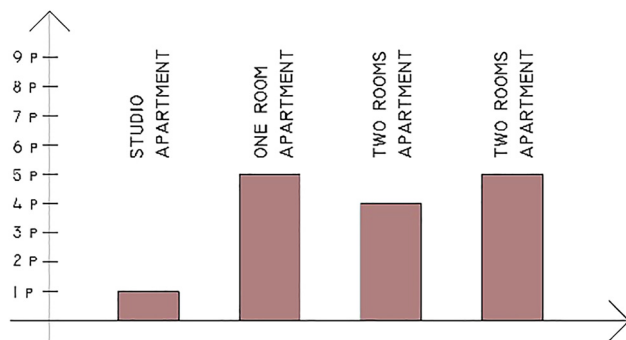


Fig. 2. The average number of members based on the typology of apartments

would be enabled by the skeletal construction system which the building has.

The building does not have lift and the ramps for the persons with special needs, on the other hand it has basement, which is not used by the inhabitants given that it is filled with water that smells bad.

5. TRANSFORMATION OF RESIDENTIAL UNITS

In order to meet the needs of the users, there were some annexes added to the building in horizontal manner, where several apartments were extended only in one direction, while some others in two directions based on need. The extensions did not result in degradation of green surface, which anyhow barely exists. The extensions enabled to the residential units to be added one or more rooms. An integral part of the building is the elevator which increases the comfort in general. In Fig. 5 the performed interventions can be seen, where for the design proposal is used Archicad 23.

6. FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Taking into account that the housing units that were taken as case study in this research do not meet the needs of the

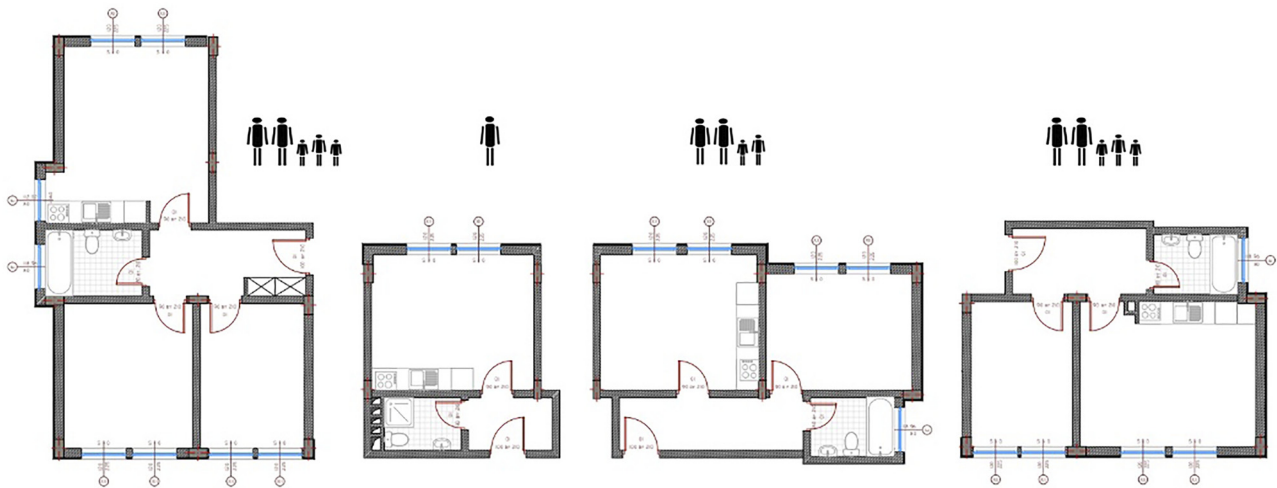


Fig. 3. Typologies of housing units

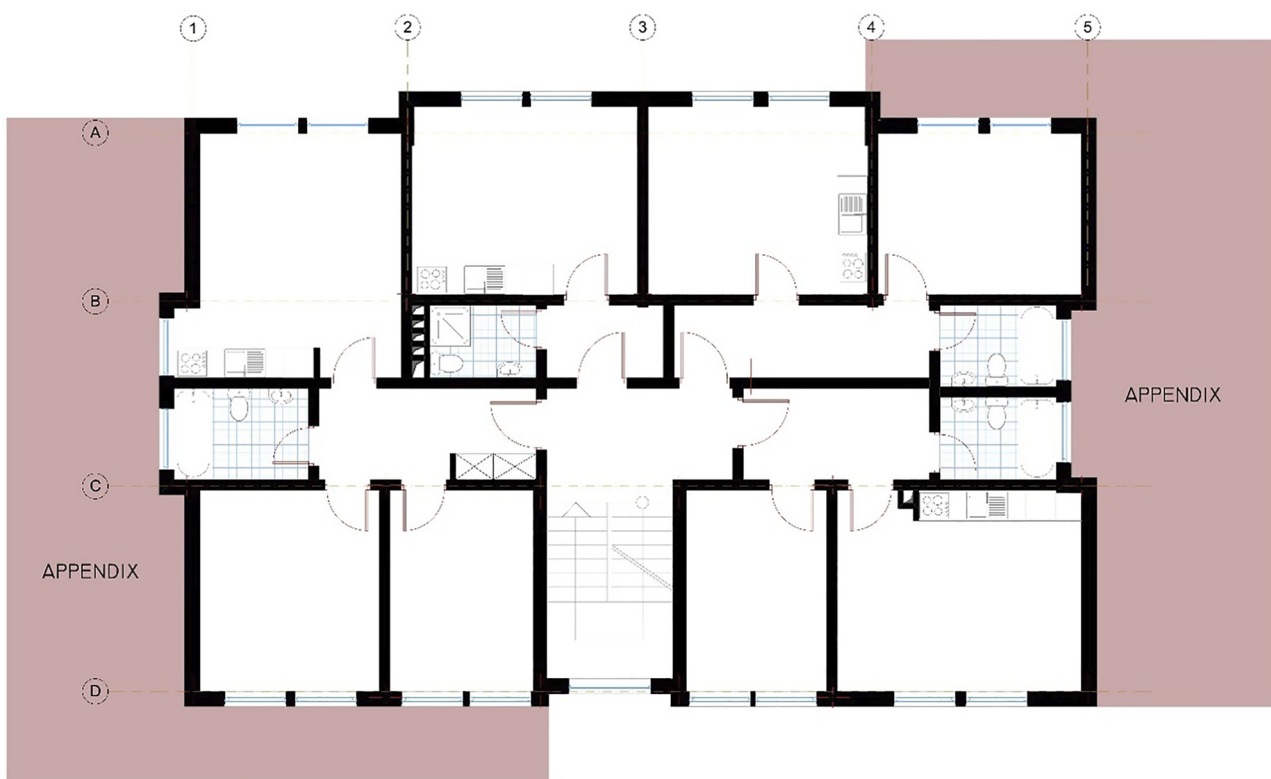


Fig. 4. Planned appendix to the existing building

users, it is recommended to increase the useable surface of the subsidized multi-family apartments, given that this would enable the increase of satisfaction of the living.

Given that the building was constructed not long ago, it is considered that bringing it down is not a suitable solution. Various researches indicate that the displacement of the residents from one quarters to the other negatively influences the living satisfaction of the inhabitants, therefore the extension through annexes is considered the most suitable solution.

The results of the research indicate that the inhabitants feel discriminated from the other part of the population; therefore a mix of population based on the monthly incomes would decrease this dissatisfaction. It is recommended to create a symbiosis of these buildings with senior care homes, whereby one could employ the inhabitants of these buildings who are mostly unemployed, especially the women. In addition, it is recommended that a number of families be put in buildings that are constructed by the private sector through certain agreements of cooperation between public

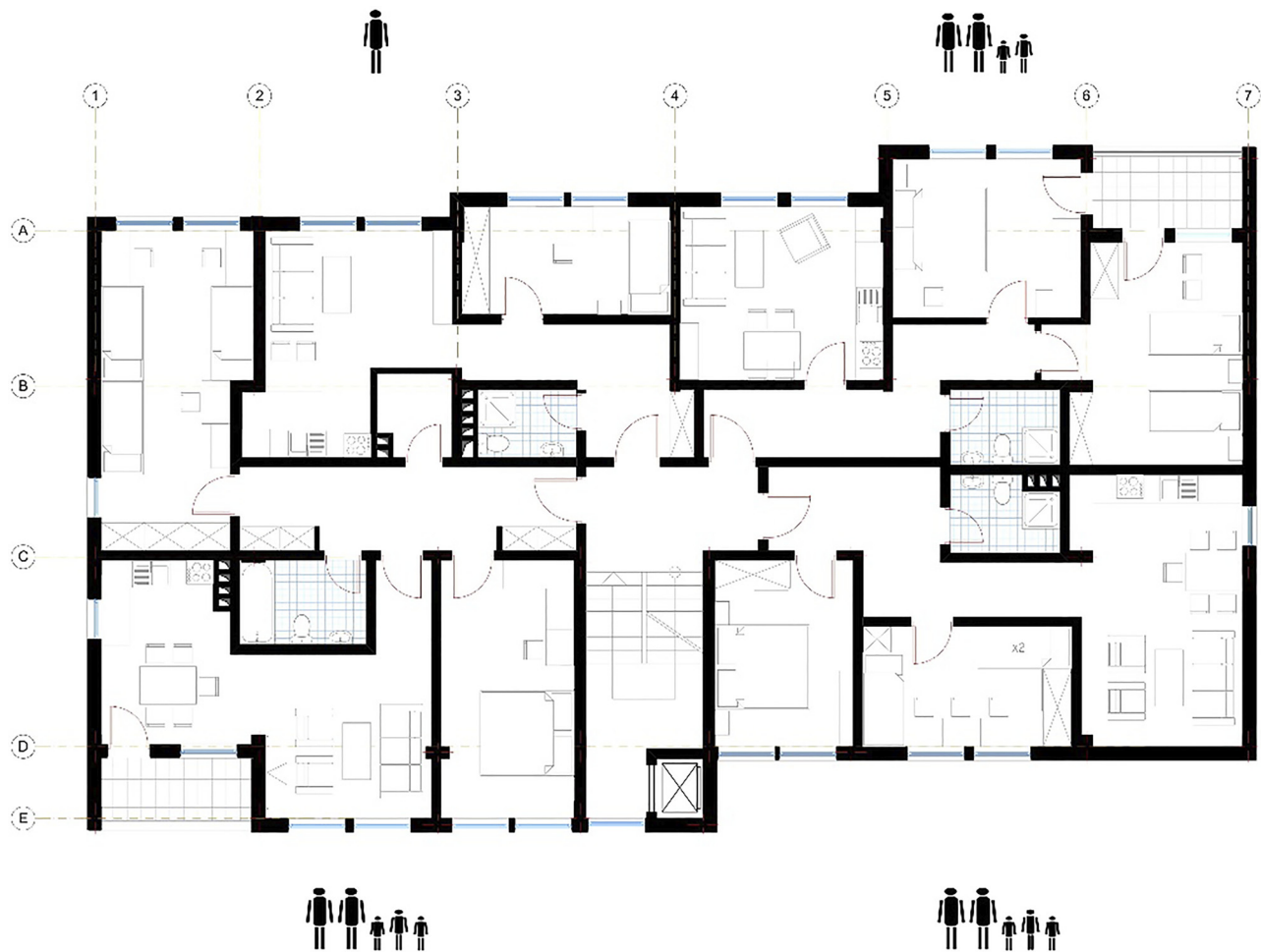


Fig. 5. Transformation of residential units

and private sector, in order to create a mix of population. The evaluation performed after the use in Kosovo is very important to be performed in other types of buildings such as: senior care homes and in pre-school institutions.

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