

EXPERIENCE OF WORLD COUNTRIES IN ANALYSIS AND SOLUTIONS OF THE PROBLEMS IN THE DOMESTIC TERRITORIES OF MICRO- COUNTRIES

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ABSTRACT

In the article problems in the internal areas of residential buildings in Tashkent and other large cities of Uzbekistan were considered. Foreign and domestic experience in the reconstruction of courtyards of multi-story residential buildings was analyzed.

Keywords: microdistrict, high-rise, parking lot, residential, car, landscape, design.

Since the independence of the Republic of Uzbekistan, the main attention of our government has been paid to the field of architecture and design.

To study the current state of existing multi-apartment residential buildings in the Republic of Uzbekistan, to evaluate them, to develop a planning-warning system model related to their normal operation, to solve urban planning issues related to them - these are existing residential buildings and their complexes, districts, microdistricts level is to develop the necessary recommendations for drawing up prospective master plans for the renovation of urban residential areas. For this purpose, first of all, it is important to study the conditions of multi-apartment residential buildings in our republic according to their construction period [1].

The decision of the President of the Republic of Uzbekistan "On measures to further improve the system of maintenance and use of the multi-family housing stock in 2017-2021" provides for the fundamental improvement of the technical condition of the multi-family housing stock and its rational use, as well as carrying out repair and restoration works within the specified time limits. was also adopted in order to create the necessary conditions for the improvement of areas adjacent to multi-apartment houses [2].

Currently, the architectural-landscape solution of the inner territory of the multi-storey microdistrict does not sufficiently meet the requirements of modern urban planning. Landscaping is often done in a haphazard and aesthetically unsatisfactory manner. Private cars occupied the sidewalks and playground. The problem of reconstruction and improvement of existing residential buildings is of particular importance. This is due to the large number of residential groups, quarters and micro-districts that fall into the category of physical and spiritual wear and tear.

A common feature of the courtyard areas of multi-storey microdistricts built before independence in our country is their typical solutions. Environments of human interaction with nature are created by creating spaces in the areas between houses to create landscapes. The formation of these cavities is explained by the requirements of insolation and aeration.

The purpose of the study is to analyze the problem of improving the architectural-landscape solution of the inner territory of the existing multi-storey microdistrict. Currently, residential buildings in

Tashkent and other large cities of Uzbekistan, internal areas, as well as in the world practice, consider the solution of similar problems, the main goals are:

- to determine the general problems of the courtyards of existing microdistricts today;
- analysis of the world experience in the organization of yard areas;
- making proposals for the reconstruction of yard areas.

The main problems of organizing yards:

1. Pollution of the territory with household waste.
2. Lack of light in the field area. Lighting of the inner courtyard area is lighting of separate zones located in its inner territory, in particular: entrances and corridors at night; parking lots and sidewalks; playgrounds and walking paths; farm fields. Every area should be lit. In accordance with the standards defined in SHNK [3]. The choice of lighting equipment is carried out by the responsible organization, usually it should consist of lights and facade lighting protected from external factors.
3. Lack of parking spaces, insufficient parking spaces for personal transport of the population (Fig. 1).

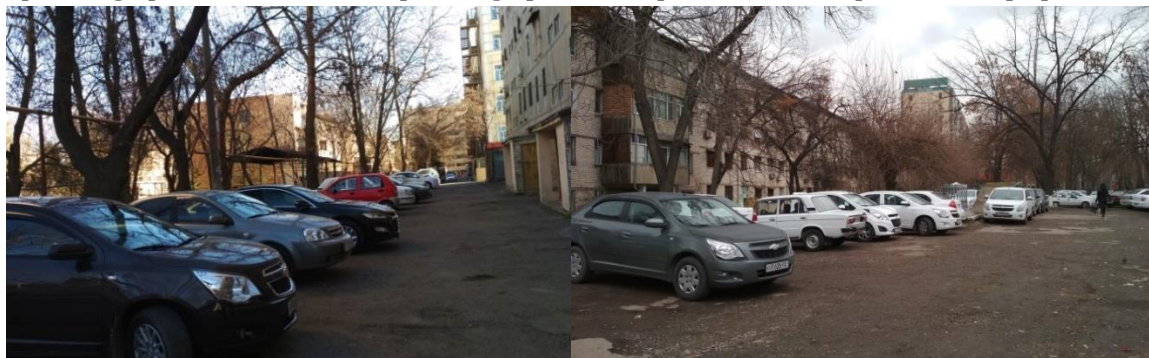


Figure 1. Tashkent city. Natural photographs of residential courtyards. Unauthorized parking

Currently, one of the main problems of residential yards is the excessive number of cars and the lack of parking spaces. Self-parking of cars in the courtyard not only creates visual nuisance, but also limits access to green spaces. The main mass of cars occupies sidewalks, lawns and playgrounds located directly in the yard, that is, on the sidewalks. The organization of the parking lot stops the spontaneous emergence of parking lots and creates an opportunity to properly organize the movement of cars in the yard [4].

4. Unsatisfactory state of landscaping (Fig. 2).

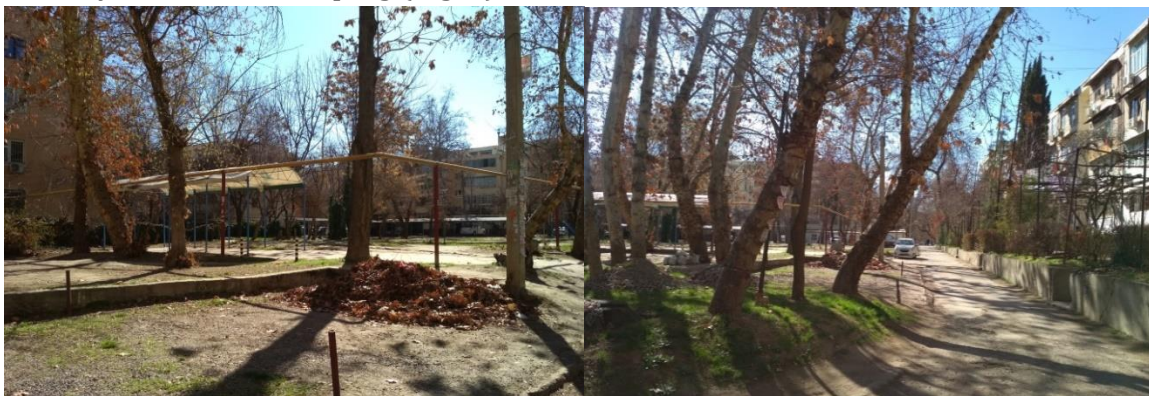


Figure 2. Tashkent city. Natural photos of residential backyard landscaping

No one cares for existing plants, they take on the appearance of thickets. The lack of an irrigation system in the yard makes it difficult to care for plants. By organizing the improvement of the interior

space, the quarters allow to separate functional areas for active and quiet recreation and qualitatively improve the microclimate of the area.

5. Unsatisfactory condition of children's playgrounds, lack of recreation areas in the yard (Fig. 3).



Figure 3. Tashkent city. Natural photographs of courtyards of residential areas.

The current state of the pitches

Equipment for young children and sports fields has lost its appeal and functionality. The lack of conditions in the areas reserved for children to play football and games instead of playgrounds turned into parking lots.

6. Restricting the access of special service vehicles to the territory: ambulance, fire, gas service in connection with unauthorized parking (Fig. 4).

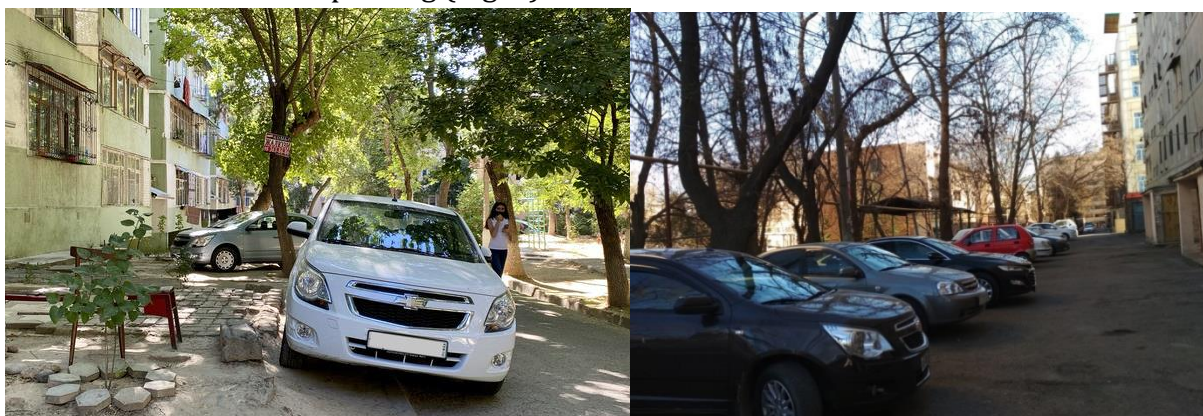


Figure 4. Tashkent city. Examples of vehicles blocking access roads to fire engines

Reasonable solution to all the above problems can be done by reconstruction, re-design of yard areas. Significant progress in the field of reconstruction of residential buildings and neighboring areas is made in Western European countries. The main feature of the yard area regulation in European countries is that the improvement of the yard is carried out at the expense of the population. When allocating budget funds, first of all, internal sidewalks and roads are laid, and then lawns. After that, if the budget allows, lighting, installation of platforms, KASH, playgrounds are also built at the expense of residents, and in order to save money, one playground is being built for several houses. More than usual, the whole fields are placed in parks and squares (Fig. 5).



Figure 5. Amsterdam. Examples of views of the courtyards of residential areas

The main concept of European courtyards is the "car-free courtyard". This concept appeared in America in the 1980s and 1990s, the reason for which was the rapid growth of private transport, which resulted in the appearance of self-parking. At that time, yards were not designed for such a large number of cars, which led to the creation of projects that exclude the possibility of self-parking [5].

Although the courtyards in Helsinki have a limited area, they are used as efficiently as possible. First of all, courtyards are designed as recreational areas for children and their parents, as well as for adults. There are the following ways to beautify the yard:

- unique children's equipment for each yard;
- high-quality coating;
- lack of parking spaces for cars and bicycles in yards;
- plenty of daylight;
- maximum greening of the area;
- placement of street cafes.

Also, part of the functions of the yard are brought to the area of parks and squares, thus connecting a part of the area inside the quarter with the whole city's green spaces [6].

In France, the reconstruction of areas is aimed at reducing the negative impact on living conditions, water and energy consumption. It is also important to create favorable conditions for human life. In France, there is a high quality environmental standard (Haute Qualité Environnementale, HQE) — a green body structure standard [7]. Priority areas in creating courtyards:

- reduction of air pollution;
- increase the mobility of the population;
- thoughtful zoning of the yard area;
- yards without cars.

In order to solve the problem of parking cars under the yard areas, two-story underground parking lots are being designed. In landscape design, wild-growing trees, grasses and shrubs are mainly used in yard landscaping. Architects and designers pay a lot of attention to the design of entrance groups. This accent gives individuality to each yard (Fig. 7).

Playgrounds for children are installed in public places such as parks, squares, avenues. Sports fields were also taken out of the yard.



Figure 7. A new district of Paris

Landscaping in French courtyards (Figure 8) often goes beyond the boundaries of the site. First, you must meet the requirements of the law. Secondly, it allows creating common recreation areas for residents. The more people communicate with each other, the safer the area becomes. Thirdly, the first to be happy to visit is to live in buildings that have such common recreation areas.

Parking is done as far as possible from the windows of residential buildings. This is done so that people can use the landscaped yard in the residence as much as possible. Due to the unevenness of the land, the inner courtyard area is zoned[8].

Yard areas restrict the movement of private vehicles. There are parking spaces for bicycles only in the yard area. Multi-storey garages are moved outside the residential area.

Singapore- in Singapore Double Bay Residences built in 2012 residences are complexly built, Closed block of 14 thirteen-story buildings more like a good hotel. Indoor area, swimming pool, saunas, jacuzzi and spa salons, gym, tennis and basketball courts, running tracks, library, karaoke rooms and barbecue.

There are only taxi stands here. There are no parking spaces for cars, not even for guests. There is a separate building for cars. Users pay for each month, set special signs in their places (Fig. 8).



Figure 8. Double Bay Residences residential complex in Singapore

Landscaping in Singapore is done in a very beautiful and unique way. The apartments on the first floor have a small plot of land, and each resident has a porch here. The playground is located in the yard. There are sports fields for adults. There is also a tennis court and a basketball court (Figure 9) [10].



Figure 9. Double Bay Residences residential complex in Singapore

The climate has a major influence on the habitat in Singapore in terms of forming conditions. Singapore's backyards are full of elements, entertainment, sports, as well as the necessary relaxation for relaxation. All types of its devices are used for landscaping - inside the floor, on supporting walls, vertical landscaping. One of the methods of greening is the establishment of green gardens on the roofs of houses (Fig. 10). As the average air temperature in the region reaches $+30^{\circ}\text{C}$, recreation and sports for children's games are placed on the first floors of residential buildings.



Figure 10. An example of Green Roof Gardens in Singapore

Russia - On Mytishchinskoy Street in Moscow, the problem of walking and children's playground was solved in a very interesting way: a courtyard, a playground and even a field were placed on the roof of an underground parking lot (Fig. 11) [11].

The inner courtyard of the high-rise residence is built on the roof of the underground garage. There is also space for a soccer field, volleyball and playgrounds for the little ones. Benches, urns and paths made of tiles and natural stone are all present here. Of course, this is not a cozy yard for children, but nevertheless, for young mothers and the younger generation, in a way, the landscape part is separated with cars. And the cars are designed under the open landscape area of the area. By designing in this way, conditions have been created for residents to use this area.



Figure 11. An example of improving pedestrian and transport communications is the courtyard area of a multi-storey residential building, Moscow, Mytishchinskaya Street 3

A distinctive feature of the formation of the "Sloboda Vesniy" microdistrict in the city is the division of the Krasnoyarsk region into levels. There are three levels in total: underground (technical), ground (spatial) and high (pedestrian).

The underground level includes parking and transportation services.

The ground level is a system of private and semi-private spaces. Preventing social conflicts Playgrounds are designed with age restrictions in mind.

The raised level is a pedestrian area that defines the traffic environment of the second level. Here, contact points, views or observation in the private yard area are possible (Fig. 13).



Figure 13 -Example of a residential complex in Sloboda Vesny microdistrict, Krasnoyarsk

Currently, after analyzing the yard areas of residential buildings in Tashkent and other large cities of Uzbekistan, the current condition of the yard areas does not satisfy the needs of the population for recreation, recreation and leisure. Through public observation, it can be seen that the lack of parking, substandard landscaping and playgrounds are having a negative impact on the residents of the area. As a result of the analysis of the world experience in the organization of the courtyard space, the main methods of reorganization of the space were determined.

Top tips for renovating backyard spaces:

- design of parking lots outside the inner territory of the yard areas;
- design of underground parking lots with operable roofs;
- design of Green roof gardens on the roofs of residential buildings;
- equipping plots with appropriate equipment for various purposes, small architectural forms;

- complex beautification and greening of the area;
- placement of playgrounds in parks, squares [9].
- have a hard surface, lighting, garbage collection containers, fire fighting equipment;
- having specially designated places for entering and exiting the territory;
- to have other barriers that prevent entering (exiting) the territory by bypassing the specially designated entry (exit) area;
- if the territory is intended for placing cars in several rows, it should be divided into lanes;
- there must be specially equipped (at least two) places for the disabled;
- a cashier's room (booth) adjacent to the designated entrance (exit) in a visible place, with large letters on the outside for temporary storage of motor vehicles to have records of tariffs and conditions for providing paid services.

It is necessary to use the best methods to solve the identified problems of the yard areas of multi-storey residential buildings.

Listening to trends and the needs and opinions of residents (conducting sociological research and public discussions).

In summary, The implementation of the above solutions and recommendations in the design and landscape design projects of multi-storey building courtyards would have had a positive effect not only on the residents of the microdistrict, but also on the ecology of the environment. By building parking lots and multi-storey garages in the courtyards or inner areas of the micro-district, it is possible to eliminate the turning of the sidewalks and basements of houses into parking lots for cars, as well as create a basis for the safe movement of residents and children in the inner territory of the micro-district.

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