Some Trends in the Formation of Recreational Spaces in Urban Development

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Abstract. The article deals with the experience of building modern areas. This is due to the fact that they have the characteristic features of an urban environment. Often it is in them against the background of increasing density of buildings and simultaneous remoteness from the center there is a lack of quality recreational areas. In this case, it is about improving the quality of the environment, not meeting the minimum allowable requirements for the environment. The necessity of forming a green component in recreational spaces is indicated.

The classification of green areas in the structure of building is considered. The purpose of recreational spaces is defined. The principles of recreational spaces in the modern urban environment and features of their formation are considered.

1. Introduction

The transition to urban development of territories entails irreversible changes in the way of life of the population and in the structure and organization of the environment. There is a need to increase the area of development of various functional purposes. When limiting the territorial budget, it leads to a significant change in the characteristics of construction. First of all, the changes concern the architecture that forms the artificial space.

Modern architectural space must meet not only the basic requirements (functional and technological, physical and technical, artistic and compositional, strength, economic). It must fully meet the needs of modern man. In view of this, it becomes necessary to talk about versatility. In this aspect, a special role is given to the formation of recreational spaces [1].

Recreational space refers to an area or space intended for the organization of recreation and leisure of the population. At the same time, their functional value can be different. It can be children's, playgrounds and sports grounds, creative areas, recreation areas. This not only improves the quality of life of the population, but also has a certain economic benefit [2].

Considering the social aspect of the formation of modern cities, it is necessary to highlight the deficit of recreational and leisure areas. Within the framework of modern society, such spaces are becoming increasingly important due to the significant limitation of the temporary budget of the economically active population. It is also necessary to note the availability of recreational and leisure areas for various groups of the population, such as the elderly, people with disabilities, as well as people with limited mobility.

A powerful landscaping system is of particular importance in the formation of recreational spaces [3]. The positive impact of the greening system on the quality of life of the population has been...
repeatedly noted. In this case, positivity is considered both from an ecological and aesthetic point of view [4].

2. Subject, tasks and methods
The subject of the study were the trends in the formation of recreational spaces in the urban environment, taking into account the modern features of its formation.

The aim of the work is to study the features (environmental, urban, social) of the formation of recreation areas in modern urban development.

Research methods include:
- Field surveys of recreational spaces formed in the urban environment;
- Systematic analysis of trends in the formation of recreational spaces;
- Analysis of pilot projects and integrated assessment of design solutions.

3. Results and Discussion
It is traditionally accepted to consider landscaping as a mandatory part of the recreation system of urban spaces. In turn, the improvement involves the formation of interconnected functional and green areas. Green areas can be presented both in the traditional form and in the form of design elements.

The development of urban greening system is interconnected with the territorial resource.

Green areas of settlements are divided into the following types:
- suburban;
- intracity;
- local.

Suburban green spaces are located in relative proximity to the administrative boundaries of the city. Their main focus is environmental recreation and leisure. Green areas of this type are divided into common areas (parks, recreational areas, Logopark, Hydropark and others), territories of limited use in view of their special significance in the system of landscaping and urban planning (reserves, national parks, green buffer zone from the water intake stations and wastewater treatment plants, stationary objects of special purpose areas for collective use and horticultural non-commercial partnership).

Intra-urban green spaces are aimed at meeting the needs within the territorial boundaries of the city. They are distinguished by the inclusion in urban development. They are compact. Intra-urban green areas are divided into the following groups: General use, aimed at the organization of daily leisure and recreation of the population (parks of culture and recreation, urban gardens, squares, boulevards, landscaped streets, plantings at the institutions of administrative and public purpose), and special purpose (sports parks, amusement parks, exhibition parks, Botanical parks, Zoological parks, historical parks, ethnographic parks, memorial parks, children's parks, protective zones of industrial enterprises, fire, reclamation and protective-ameliorative plantings, plantings along roads, cemeteries, nurseries, and crop production farms).

Local green areas include areas with limited access to persons, for example, in pre-school institutions, educational institutions, research institutes, industrial or industrial enterprises, residential areas and neighborhoods, individual homes.

In the formation of recreational urban spaces for everyday leisure and recreation are of great importance intra-urban and local green areas.

The formation of intra-urban recreational areas has 2 directions:
- formation of recreational areas on the basis of intra-urban green areas
  In this case, it is assumed their improvement, partial re-equipment for new functions (construction of Bicycle paths, playgrounds and sports grounds, systems of engineering and technical equipment).
  conversion of urban areas for recreational functions
  In this case, the territories previously having a different purpose are considered. In this case, consider some examples of reorganization of urban spaces for recreational areas [5].

In recent years, Moscow has been improving the Central streets of the city in order to improve their recreational purpose [6]. The program suggests:
Changing the paving, choosing the new one by the color of nearby buildings;
Installing a modern lighting system;
Widening of pedestrian zones (according to the announced data the plan is to widen the present pedestrian zone approximately to 30% by narrowing the roadway or constructing a new pedestrian zone along the street front);
Tree-planting (it is planned to be done along the roadway to separate it from the pedestrian zone, but the soil is still considered to be unfit for growing plants);
Improving of visual comfort (it suggested to remove the advertising billboards for preserving the historical look of the city);
Reconstruction of bus and tram stops;
Development of pedestrian crossings;
Arrangement of parking lots for cars, including taxis.

The difficulty, in this case, is the impossibility of a complete replacement of the functional purpose of the territories. In view of this, it is not possible to reveal the recreational potential to the full. Although, without a doubt, these events are of great importance for the city. The comfort of urban space is increased. Figure 1 shows examples of landscaping [7].

Figure 1. Examples of reconstruction Nikitskij, Gazetnyj, Bol'shoj Kalashnyj lanes in the project KASK, OOO (Moscow 2016).

Another example of the reconstruction of the urban area for recreational space can be the embankment in the city of Tula. The embankment is located between the territory of the Tula Kremlin and the Tula Arms factory. In recent years, access to the river was a closed factory area. In view of what the embankment was not intended for stay of people.

The impetus for the reorganization of the territory was its condition and the objective insufficiency of recreational spaces for the population. They traditionally belonged to the Park of culture and recreation Belousova and Komsomol Park. However, the historical part of the city was in ruins for a long time (figure 2).

The area of the reconstructed embankment was 21 hectares. Due to the peculiarities of its location in the structure of the city, under the reconstruction were also adjacent historical neighborhoods. Including the street Metallistov, Krestovozdvizhenskaya area, part of the street Sovetskaya, in the square named Mosina, previously not intended for leisure. They are United by a system of pedestrian zones and public spaces. Also allocated areas of active recreation (sports and playgrounds, tennis court, Playground, bike path), creative leisure (amphitheater, stands, stage) [8]. Characteristic zones are shown in figure 3.
Figure 2. Urban planning scheme of territories near the reconstruction zone: zone of the reconstructed territory - green; historical development zone - blue; industrial development zone – red.

Figure 3. Characteristic fragments of the reconstructed waterfront (Tula, 2019).

Another example of the formation of recreational areas in an urban environment is a Park in Seoul (Republic of Korea), built on the site of a previously functioning urban overpass. The peculiarity of this space was the emphasis towards natural areas. Both pedestrian areas and natural plantings have been recreated along the river (figure 4).
Recreational spaces of local importance are of particular importance for the urban environment. Traditionally in this case it is said about yard spaces.

The actual trend is the formation of yard spaces of closed type. Such yard spaces assume active formation of a natural component in combination with functional zones. In the functional design of the yard space should be allocated C zones:\[6:\]
- Children's play area (includes children's towns, small architectural forms of different configurations, areas with special coating);
- Sports area (playgrounds, bike paths, treadmills, etc);
- Park area.

In this case, it is supposed to restrict entry into the yard. The exception is the transport of technical services.

Today, a number of large development companies are already providing pilot projects for the construction of individual neighborhoods on the basis of the construction of buildings with closed courtyards. Often, in this case, resort to the device of recreational areas on an artificial basis—a platform raised above ground level [10]. In this case, it is necessary to take into account the vegetation in terms of impact on the structure. The difficulty lies in the need to form structures without defects [11].

Of particular importance are recreational values in the architectural space of buildings [12]. Despite the limitations of the functional purpose, such spaces are becoming more popular. Their main focus is the environmental provision of the environment, rarely the formation of Spa areas. The formation of playgrounds in this case has no relevance in view of the lack of social context.

When designing them it is necessary to consider the following features:
- Restriction of access, in this case we are talking about the formation of personal recreational space;
- Recreation area is limited by space-planning solutions;
- For the formation of recreational space it is necessary to take into account the technical features of the building [13, 14];
- When developing space-planning solutions it is necessary to provide technical and technological premises and spaces;
• Possibility to use non-standard design solutions. In this case, we are talking about the formation of recreational spaces in artificial areas. For example, roof gardens, winter gardens, green rooms or green elements in the architectural environment.

4. Summary
Creation of high-quality multifunctional recreation is an important task of modern architecture. The difficulty lies in the need for a comprehensive consideration of the purpose, functionality of the designed spaces. It is necessary to take into account both the territorial features, their qualitative state and social significance, as well as the environmental quality of the environment [15, 16].

The formation of each type of recreational spaces for recreation and leisure is equally important for the modern urban environment. At the same time, their functional zoning should be determined by the accessibility of the population, the convenience of their location, the presence of closely located alternatives.

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