

Theory and practice of heritage renovation of landscape and recreational spaces in the city of Voronezh. Renovation project for the Park named after A. Durov

A E Yenin, T I Grosheva and V N Salko

Voronezh State Technical University, 84, 20 Let Oktyabrya st., Voronezh, 394006, Russia

E-mail: a_yenin@mail.ru

Abstract. The article is devoted to the problem of renovation of public recreational spaces classified as historic heritage involving the use of systematic approach and analysis. This approach can scientifically justify the place and public significance of a rather specific and relevant type of architectural and urban planning activity consisting in harmonization and interaction between people (population) and landscape recreational environment inhabited by them [1,2]. The purpose of the research is identifying the integrity of historic spaces through analysis of interaction of industrial, household, recreational, and communicational processes in view of their restoration and choosing methods and techniques with specific examples from design practice in Voronezh.

1. Introduction

As urban environment is getting more and more complex and sophisticated in order to provide citizens with all the existing merits of civilization, park areas acquire more and more value focusing on the basic human need of open natural space free from visual, acoustic, and emotional strain.

The selected topic is highly relevant due to lack of attention to park areas from municipal government, which is typical for almost all developed cities focused on designing and constructing new buildings. Therefore, in the context of contemporary urban planning situation it should be emphasized that recreational areas need to be developed and their popularity retained.

Now, as never before, people need a recreational area of a new kind, which would satisfy not only the demands of functionality and clear arrangement but also different esthetic criteria. This will allow increasing the popularity of park areas giving the citizens an opportunity to spend their time in a healthier, more eventful and interesting way.

In addition to the above mentioned aspects, the Park named after Durov has an extremely significant function – preserving Voronezh heritage. It is the main distinctive feature of the park, which requires individual and gentle architectural approach that will ensure its inviolability and, furthermore, will emphasize this feature, making it obvious for the citizens of Voronezh.

2. Main goal and tasks of the project

Main goal and tasks of the project are developing as much as possible all the criteria of public space organization with respect to the Park named after Durov. For each criterion there is a strictly defined



Content from this work may be used under the terms of the [Creative Commons Attribution 3.0 licence](https://creativecommons.org/licenses/by/3.0/). Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

number of tasks which have to be completed in order to implement the concept of park renovation and its transformation into a completely new integral idea-driven space.

A short list of tasks set for the project development:

- Preserving local and national-level heritage
- Making park architecture sustainable
- Increasing the number of regular visitors
- Creating the park's individual image
- Giving meaning and emotional stress to the park area
- Preserving current green areas

The primary objective of the project is building cultural and public places (Memorial museum, café) as well as the places where interests and activities of all age groups are brought together (atrium and recreational areas, hard landscaping). In addition, each functional zone must express a certain idea related to the park's background, its image and content (national heritage area, recreation and emotional understanding area, historic area (associated with A. Durov's work), active and quiet rest area, etc.).

Another task concerning the use of the park and its activity, apart from zoning, is arrangement of locations (amphitheater, venues) for public events – both formal and informal ones.

In order to solve the problem of availability and connections, the park's routes must be reorganized while leaving the established compositional structures unchanged. Moreover, there is a mandatory task of constructing high dominants to make the park notable and recognizable in the overall urban development.

On the whole, the global task of the project is giving the park some bright individual features that would not only make it comfortable but form the basis of its own image.

The following problems of the park's current state have to be solved:

- overall dilapidation and desolation
- absence of intuitive zoning (visitors can not find their way around, constructions are placed chaotically, the space is not structured)
- ambiguous past (the circus building in the vicinity of the literary necropolis triggers negative emotions, Voronezh citizens want to preserve the historic memory of Mitrofanyevskoye cemetery)
- shortage of parking spaces (at present, there is free parking on the territory in front of the circus, entry to the park is prohibited by the road sign, however, the lawn and paths of the park are constantly blocked with cars because of the introduction of paid parking)
- low number of constructions in the park (in addition to playgrounds and a sportsground, there is only one construction – the “Charlie” café. Whether it is still functioning or not is not clear, and its appearance does not fit into the space of the park)
- absence of entrance space and isolation (a large shopping centre “Evropa” blocks the view of the park along 20 years of Oktyabrya street, so most citizens passing and driving by do not notice it)
- insufficient illumination
- narrow focus (the vast majority of visitors are residents of neighboring blocks of houses, young families with children, seniors)

3. Retrospective analysis

Post-war time marked the beginning of a new life for the city. Therefore the question of constructing a new circus building came up in keeping with the development of Voronezh cultural life. Several projects had been designed but none of them were approved due to absence of a convenient location.

However, at some point the authorities turned their attention to a block adjoining Moiseyeva Street where Novo-Mitrofanyevskoye cemetery that had originated in 1828 and Vsesvyatskaya church built in 1836-1851 were situated (figure 1).

To the left of the church, there was a chapel on the family vault of the Klockovs designed by the architect S. L. Myslovsky, their relative (figure 2).



Figure 1. Vsesvyatskaya church

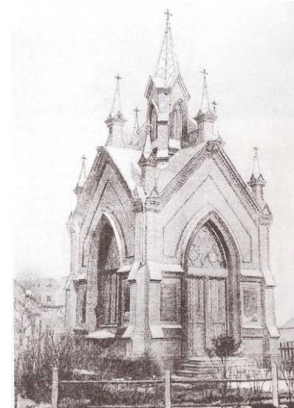


Figure 2. Chapel

In 1831 thousands of Voronezh citizens killed by cholera epidemics were buried here, in this cemetery (figure 3).



Figure 3. Novo-Mitrofanyevskoye cemetery



Figure 4. Park entrance



Figure 5. Public amenities

The cemetery stopped functioning in 1930s, Vsesvyatskaya church was closed. The premises were taken over by a blacksmith's shop, then by a clothes factory. In 1940 a park was built on the site of the cemetery, and people called it "Park of the Dead and the Living" (figures 4,5). A legend still exists in the city that workers and children played with skulls when the park was being built.

The "Kommuna" newspaper dated July 19, 1940. CULTURE AND RECREATION PARK OF FACTORY-16. "Not so long ago this huge green area was deserted. Now you can hardly recognize it – it has changed so much. There is a high wall around the area and a beautiful arch at the entrance. There is a monumental sculpture of Stalin in the center of the main alley surrounded by flowerbeds and lawns. The park of Voronezh factory number 16 has been created in record-breaking time – only two months. An outdoor cinema, an open-air stage, a reading room, a dancing floor, and a café can be found here. At the bottom of the park there are two shooting galleries, one for small-calibre guns and another for wind guns. There is also a big sports area. An obstacle course for qualifying standards of the Ready for Work and Defense program is being built; tennis, two volleyball, basketball and croquet courts as well as the shower are being equipped. Such rides as "flying people", "rocking boats", "giant steps" are being installed. The park will be formally opened on July 27, on the eve of the USSR Navy Day".

Only a piece of the former cemetery where poets A. V. Koltsov and I. S. Nikitin as well as writer E. M. Militsyna had been buried was left intact by the authorities (figure 6).



Figure 6. A. V. Koltsov's burial place



Figure 7. Transport junction

In 1964 the church was demolished, and it was decided to build a new circus within the territory of the former cemetery and Modern Park. The circus was intentionally moved to the center of the area by 100 meters so that it would be possible to construct a two-level road junction at the intersection of 20 years Oktyabrya Street and Kirov Street (figure 7).

It was a typical circus building with seating capacity of 2100, the same as the one in Novosibirsk. Local positioning was done by the architect A. G. Buzov (figures 8,9).

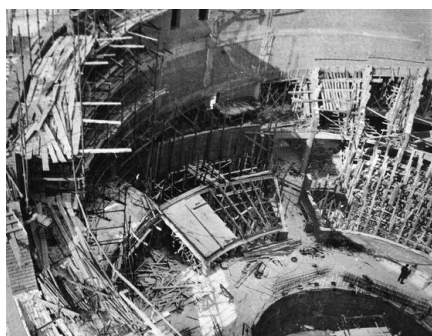


Figure 8. Construction period



Figure 9. Current state

The construction had been finished by the autumn of 1972. At that time, the last attempt was made to destroy the remainders of the cemetery by demolishing the necropolis and moving A. V. Koltsov and I. S. Nikitin's ashes to Nikitin's memorial house. Nevertheless, local artistic community managed to prevent it.

Comprehensive restoration works have been carried out in the park since 2008. Old-aged, hazardous, and dead trees have been completely cut down; sanitation pruning of the preserved tree crowns has been conducted. New green areas have appeared in empty spaces. The fountain which did not work before the restoration is now functioning. Illumination and a network of paths have been restored; benches, playgrounds and sportsgrounds have been installed.

4. Concept development

There is a popular phrase "to start from a clean slate" meaning it is necessary to create a completely new thing destroying the existing ones. All too often it is true for construction when builders driven by

contemporary needs find it easier and cheaper to demolish old desolated buildings. The result of this approach is not only losing historic sites but also total absurdity, of which the Park named after Durov is an example. First they organize a recreational park on the site of the cemetery making a necropolis of the remaining tombs and then they build a Circus right opposite the burial places.

Such horrible attitude to one's own history, to the memory of ancestors provokes rightful indignation in citizens who do not remain indifferent to this problem.

Studying the park's history, the amount of news related to it, people's views on the park on the whole, one involuntarily comes to the conclusion that no matter how much effort was made to do visible repairs, sooner or later the park falls into decline. There are even urban legends about ghosts living in the park area.

It becomes obvious that qualitative change of the park requires really delicate work that should harmoniously combine all the existing intricacies and offer a fresh perspective supported by the needs of current and future generations. People should stop ignoring the past, admit their mistakes and try to correct them. History can not be rewritten. It should be taken into consideration even if its events seem shameful. Therefore, the park's concept can be expressed as follows: connecting the past, present, and future [3].

The park already has a certain spatial frame in the form of alleys and foot walks, which are rather logical and well-established for visitors, so it is highly important to preserve it as the basis for a new project.

5. Facilities being designed

The concept of the park can be best revealed through the facilities planned to be built within the project:

5.1 Café

If we consider the image of the designed café and analyze the location of neighboring buildings and pedestrian routes, the café will be mostly often visited by students, families, and business people. For this reason, the café should be placed in one of the traffic flow ways that runs through the entrance in Voroshilova street to the café "Charlie" (figures 10,11).

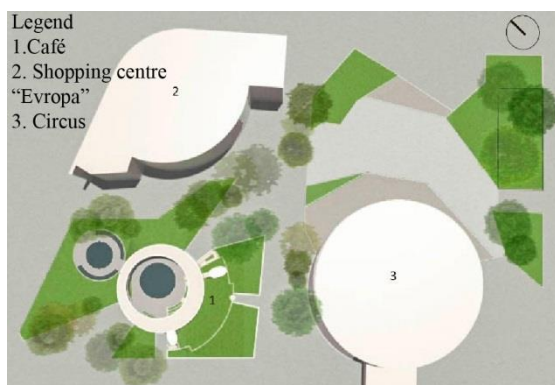


Figure 10. General layout plan



Figure 11. Object visualization

The shape and composition of the atrium café is based on the need to install a facility that would act as a significant compositional unifying factor and intensify with its volume the part of the park where it is situated. Taking over a part of the shopping center "Europe" powerful dominance, the facility will mark entrance spaces on both sides of the park and will become popular due to active pedestrian flow. In addition to the café, there will be a gallery and exhibition space in the building. The construction appears a bit elevated above the ground, so the free space of the ground floor can be shaped as some kind of an amphitheater intended for the recreation zone.

The new café will replace the old one, although it will be completely different in position and structure. The whole utility section will be fit into artificial relief which is aimed at visual separation of the park from the rear yard of the shopping center “Europe”. The loading place for the café can be shared with the shopping center “Europe”.

5.2 Children's area

As families with children will make up a great number of the visitors, designing children's playgrounds is one of the most important points in renovation of the Park named after A. Durov.

Through playing children get to know more about life, themselves, and people around them, they learn about the basis of social relations. As tactile, visual, acoustic sensations develop, children begin to perceive images in a more accurate, complex, differentiated way.

Therefore, the development of correctly organized spatial environment (children's playground) boosts the development of children's educational level within the surrounding areas.

Our time is characterized by marked acceleration in children's intellectual and physical development, which sets new tasks before architecture. Architects are trying to respond to new pedagogical trends by creating flexible transformed compositions satisfying different educational methods (figure 12).



Figure 12. Children's playground

Since the place of designed playgrounds has great foot traffic and is the only one of a kind for the whole district, playgrounds must perform not only “physical” but also meaningful and informational functions.

Here a theme playground dedicated to a big game will be relevant, so that the playgrounds of the micro districts would form a set of interesting and unique games where it is cost-efficient to utilize complex actively used equipment.

5.3 Sports areas

Within the context of modern trends of urban environment development, it is important to provide citizens with the access to sports facilities as their popularization and active use help to develop the culture of sports, to promote the ideas of healthy lifestyle, self-improvement, and spiritual development among people. That is why it is necessary to build a sports center on the park grounds. Sports grounds and gyms are designed as parts of a whole center and act as individual functional areas.

It is essential for building sports grounds that the area where they will be located is a plain horizontal surface. Sports and health area may include a gymnastic area, playgrounds (tennis, volleyball and basketball) and a shower area.

5.4 Amphitheatre for performances

This will be a small stage available for formal (city festivals, concerts, etc.) and informal events. It is interesting locations and recreation areas for people of all age groups.

5.5 Sacred Place monument

It is necessary to design some kind of a monument that will be not just a historical museum but modern space aimed at preserving, dissemination, and popularization of cultural and historic heritage among the citizens. The initial version of the monument's name is Place of Memory or Sacred Place.

The main functions of this construction are:

- paying respects to the history of the place through architecture, exhibitions, etc.
- holding exhibitions, installations, presentations and carrying out different projects related to history, not necessarily of Voronezh region only
- providing various historic education organizations of the city (Voronezh society for history and culture, online media portal "Our history" and so on) with a venue and resources for lectures, interactive excursions, exhibitions, etc.
- -digital database of our region's history including the information from rare sources (old books, documents and so on)

This place serves to combine all the information about life of our city and to acquaint the citizens with it in a convenient and attractive way.

The new monument will be an addition to the old buildings acting as a connecting element between original constructions of the past and the present.

The inner space must be intimate, calm, and quiet, like the atmosphere in a small temple where one can be left alone with one's thoughts.

As for the exterior, the building should not be high, 2 stores maximum. It is a good idea to dig it in for 1 store. The architectural image of the construction must be laconic, understandable, and simple, not fanciful (figure 13).

6. Availability of underground parking

Right now it is a critical problem.

Parking offers plenty of advantages, including: Creating a parking space in front of the Circus will help to clear out the park of the cars left on the lawns due to shortage of spaces (figure 14)

Convenient design of the parking area ensures that at least two cars can easily pass around each other without accidents.

The parking area will be equipped according to the latest technological solutions. For instance, in addition to the above-mentioned security cameras, there is also powerful inflow exhaust ventilation, a fire-extinguishing system, and smoke detectors. The parking will be kept clean and tidy (figure 15).

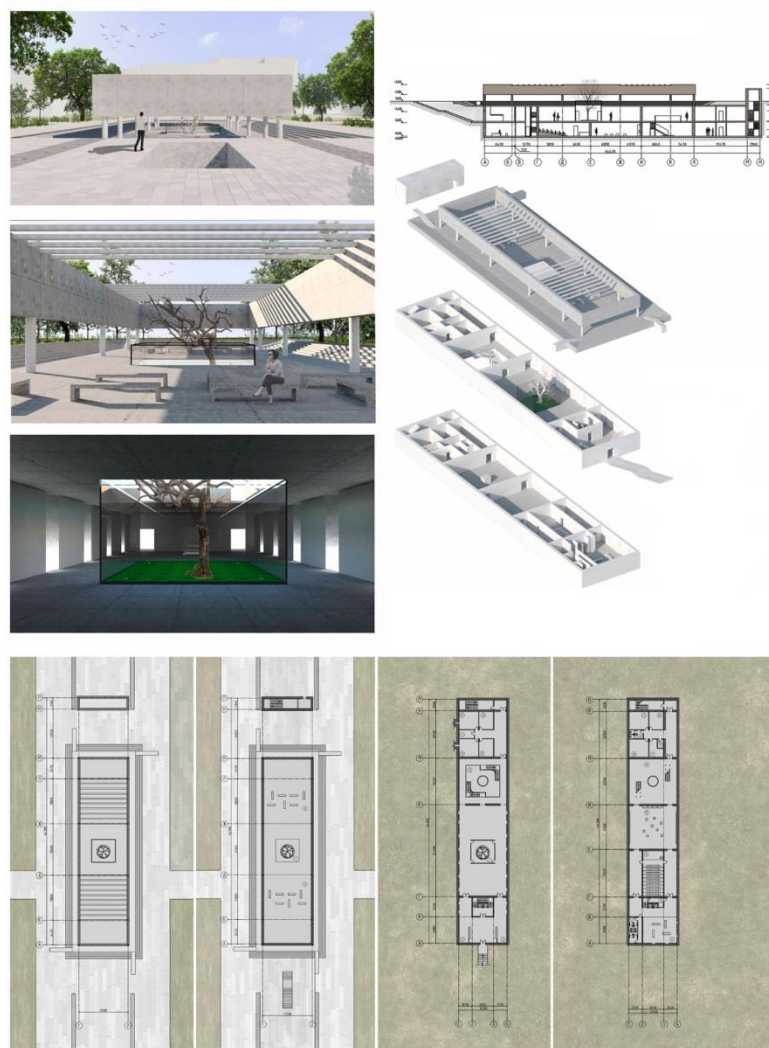


Figure 13. Sacred Place monument.



Figure 14. Uncontrolled parking.

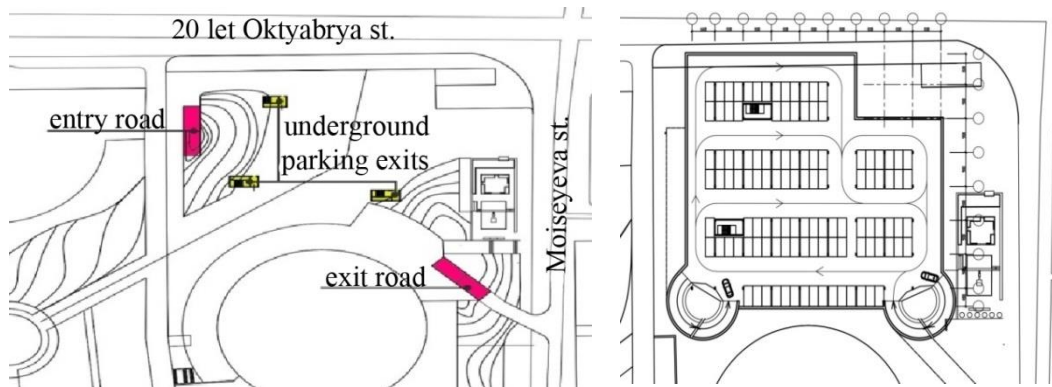


Figure 15. Underground parking layout

7. Conclusion

The principal goal of any renovation project for a park and recreation area is creating a sustainable, dynamic, effective, comfortable architectural environment which would combine strict functionality with esthetic artistry. In order for such result to be achieved, the area must be fully analyzed with account taken of special factors, such as location, history, structure, emotional coloring. Based on the obtained data, an idea, image, and model solving the main problems of the park area will be formed.

When it comes to the park named after A. Durov, one of the principal goals of renovation is preservation and actualization of local history related to this significant place as well as encouragement of visitors' interest to learning the park's history and development of appropriate emotional perception. This can be achieved by creating a culture and exhibition center "Museum of National Historical Memory" and organizing corresponding improvement contributing to thorough understanding and emotional experience of visitors in this area.

Renovation of pedestrian routes plan, installation of compositional accents in the form of large eye-catching constructions, building entrance groups – all of these will make the park space integral, logical, convenient and distinguish it among the total bulk of urban development.

Finally, active introduction of hard landscaping, abundance and variety of places for public interaction will revive the park and give it functional and emotional sense. There will be more visitors of all age groups, some of which will become regular ones. Solving the parking problem will also make the area more available and, as a result, increase the park's popularity.



Figure 16. General layout

All in all, this renovation project is a completely fresh angle on the established order of things in the park named after A. Durov. Its ambiguous image considered a disadvantage can be turned into uniqueness and distinguishing feature. Breathing life into this special place and making it active is the task to be solved not only within the framework of improvement of city-wide ecological and city-planning environment but also in the context of cultural life enrichment and development (figure 16).

Architectural and city-planning reconstruction of landscape and recreation parks (LRP) initiated in Russian cities including Voronezh creates conditions for the development of new reconstruction methods and techniques using systematic approach and appropriate analysis and design principles. Concept formulation of LRP renovation project is based on understanding the space as a demo ecosystem, achieving effectiveness, interrelated work of all the components and running processes (productive, household, recreational and communicational). Thus LRP integrity is achieved. The algorithm of LRP functional modeling of a remarkable historic site in Voronezh has been developed with the involvement of the authors. Experimental verification of the accepted decisions can only be conducted with a retrospective analysis of project proposals. Interaction and mutual influence of LRP processes and their components as well as the use of systematic methods and techniques of forming artificial (architectural) landscape recreation environment – this is the best guarantee of preserving LRP sustainability as a demo ecosystem.

References

- [1] Bertalanffy L von 1969 *General system theory – critical review* General system theory research, collection of translations (Moscow: Progress) 23-82
- [2] Yenin A E and Grosheva T I 2017 *System approach to renovation of landscape and recreation spaces* Building and reconstruction **4(72)** 101-109
- [3] Grosheva T I 2019 Theoretical foundations and practice of urban landscape and recreation spaces reconstruction *Russian journal of building construction and architecture* **1 (53)** 124-139
- [4] Lavrik G I and Vasilenko N A 2008 City landscape as one of health improvement systemic factors *Shukhov BSTU bulletin* **1** 34-40
- [5] Nefedov V A 2012 *City landscape design* (Saint Petersburg: Lyubavich)
- [6] ed Moatafali M and Doherty G 2010 *Ecological Urbanism* (USA: Harvard University Scholl of Design, Lars Muller Publishers)
- [7] Duani A 2015 Landscape Urbanism and its Discontents Dissimulation the Sustainable City *Journal of the American Planning Association* **80(4)** 449-450 DOI: 10.1080/01944363.2014.998137
- [8] Weller R 2008 Landscape (Sub) Urbanism in Theory and Practice *Landscape Journal* **27(2)** 255-278