

Balkan Architectural Biennale - BAB

is a traditional event in the field of architectural, urban design planning theory, art and practice that is being held for the second time in the period from 7, to 14, of December in 2015., venue Yugoslav Film Archive in Belgrade with the support of the Ministry of Culture and Information of the Republic of Serbia, Serbian Chamber of Engineers, the Yugoslav Film Archive, Collective for the integration of space and architecture. 8AB is a regional project which is held every second year in Belgrade with a vision to be a guest in other Balkan cities through supporting events throughout the year.

# BALKAN ARCHITECTURAL BIENNALE 2015 CONFERENCE PROCEEDINGS

# "capital a"

08.12 - 10.12.2015.

Belgrade

**SERBIA** 

 $\mathsf{B}\mathsf{A}\mathsf{B}$ 

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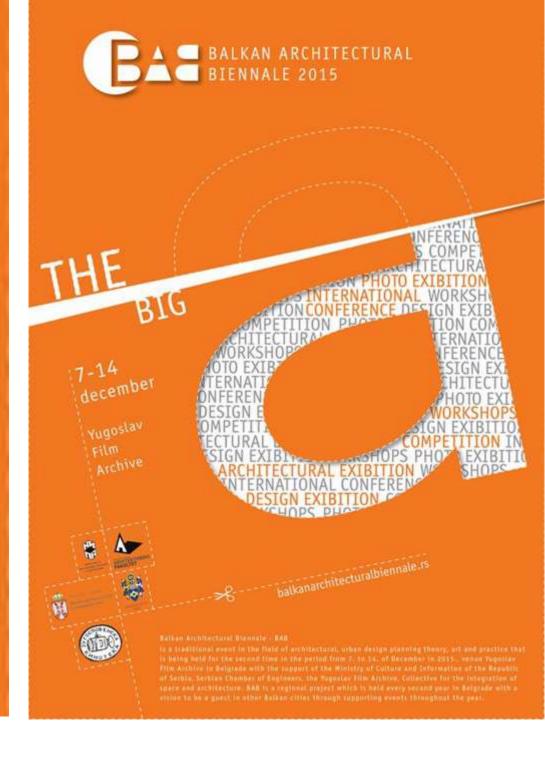
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## **PREFACE**

The conference "capital a" discusses position and role of architecture in the Balkans. The aim is to examine the framework in which the architecture of the Balkans appears, by setting architects' wishes, society's abilities and the final results of Balkan architecture into a single critical context. The question that arises, therefore, is how our learned and generally accepted experience of architecture fits into our everyday life.

One of the goals of the conference is to form certain frameworks as well as the consideration of potential opportunities for future development of Balkan architecture. The starting point for such thinking certainly should be the opportunities of our societies, their limitations and their advantages.

**Architecture in the Balkans** –between vision and capabilities - The reality of Balkan architecture –away from utopia; - Possibilities in utopian thinking in the context of the modern Balkans; - Low Tech solutions as a framework for a new approach to architecture in the Balkans; - Ecology as a framework for a new architecture of the Balkans.

A critical framework of the contemporary architecture of the Balkans - Architecture of the Balkans "between culture and form"; - The relationship of Balkan architecture towards dominant cultural patterns of the late 20th and early 21st century; - Experimentation as a method in contemporary architecture of the Balkans.

A city from Architecture - Architect's thought constructs, their creations, principles and realizations in city building; - City concepts of importance for architectural theory and practice; - Relations between architectural space and the totality of the cities as social, cultural, anthropological, economic, political artefacts and systems; - The city and architecture through the lens of the relationship of man and citizen, needs and desires; - The role of the architecture in contemporary city building and historical development of the city.

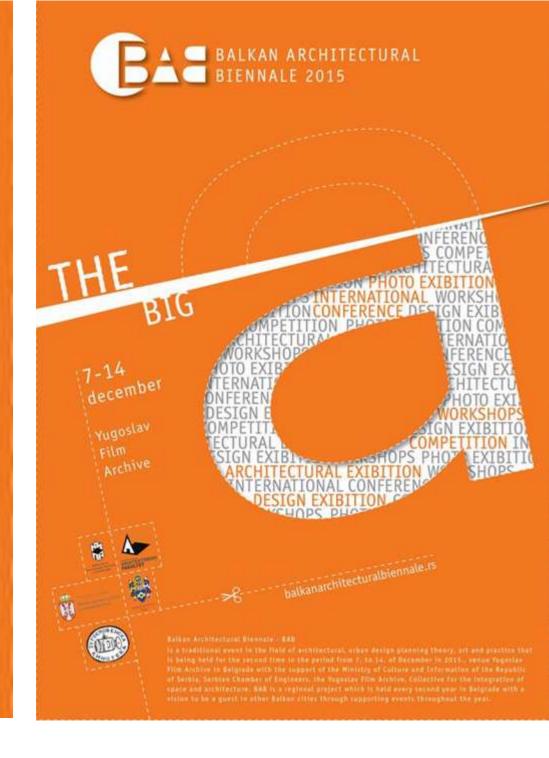
**Architecture in the history of the Balkans** - Balkan modernism in the architecture of the twentieth century; - The history and tradition of architecture in the Balkans in the twentieth century; - Historical development of architecture in the Balkans-dominant influences and cultural contexts.

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## **PAPERS**



# THE STUDY OF THE STATE OF PUBLIC PARKS IN THE CITY OF NIS AND SUGGESTIONS FOR THEIR IMPROVEMENT OR REVITALISATION

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#### **Abstract:**

The subject of the paper is research of the current state of parks in the city of Nis and the needs of users of public urban green spaces. In the city of Nis there is a large number of parks which are designed for relaxation and recreation of citizens and visitors, but is that number sufficient? What is the exact number of parks? Which category do they belong to? What is their primary purpose? How frequent are they visited? Are parks attractive to users? Do they meet all the functional needs? Are they maintained adequately? What is the state of mobiliard and lighting? ... These are some of the main questions asked at the beginning of this research. The aim of the research is to assess the general situation and give a clear overview of public urban green spaces in Nis; to detect new needs and deficiencies and, based on that, give suggestions and find guidelines for improvement and

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urban regeneration, all that in order to improve quality of public green spaces. Methods used in the study are: analysis and synthesis, comparison, description, classification and survey. The work is complemented by numerous photographs and graphic presentations for a better and clearer consideration of the problem. The study also includes deeper analysis of park on the Square of Sindjelic, with proposal for its regeneration. Paper tends to give a complete picture of green areas in the city, which is one of the largest cities in the country. The state of urban green spaces in the city of Nis, in some way, reflects the situation of urban green spaces in other cities in region, and perhaps beyond, given that the situation may, to some extent, be replicated on similar urban structures beyond the boundaries of the studied area.

Key words: green areas, parks, regeneration, urban cityscape

#### 1. INTRODUCTION

Parks are important part of urban structure. They are necessary for one of the elementary urban functions - recreation. Their formation can be planned or spontaneous. The formation of parks is affected by different factors. "Although a series of transformations of urban space are primarily related to form, for the study of morphogenesis of elements in the structure of the city - such as today's parks - it is necessary to observe the transformation of its functions, or the part of the city where park is located, as well as the urban context. Factors that, in less or more extent, influence the morphogenesis of parks are: natural forces and relationship to the site, the development of urban structures and park's position compared to urban nucleus, functions' changes and symbolic aspect of space."[1] On the development of parks in the city of Nis, as in most cities of Southeast Europe, important influential factors are also the socio-economic and political conditions. In recent decades, the region of Southeast Europe has experienced a dramatic structural transformations, which are related to the political situation, economic development, social changes, land restitution and other similar changes. The post-



socialist period has left obvious effects in terms of urban planning in Nis, which largely influenced the formation of park areas. [2]

Although Nis is the third largest city in Serbia, it could be classified as mediumsized city. In the city of Nis there is a large number of green areas, but not all of these areas can be considered as parks, because they are not sufficiently equipped to obtain that status. On the basis of their purpose, functions and position in the urban structure, different groups of parks can be distinguished and the two most fundamental would be: parks within residential complex or between residential buildings (which have public character, but are primarily designed for residents of housing complex) and parks designed for wider city population, which area of gravitation is actually the whole city.

The current condition of parks is very important for their functioning. Usage level of park greatly depends on the level of equipment and maintenance. In this regard, in the paper was carried out a brief analysis of park areas in Nis, in order to examine the general situation and present a systematic and comprehensive review of urban public green spaces in the city. By estimating the situation it is possible to notice if there are any deficiencies and new needs and thereby estimate in which direction to go in terms of improving the quality of parks.

#### 2. OVERVIEW OF PUBLIC PARKS IN THE CITY OF NIS AND THEIR **GENERAL CONDITION**

This paper analyzes a total of 17 public parks in the city of Nis. Following parks are analyzed:

- 1. Park in the Fortress of Nis,
- 2. Park "Sedmi juli" (together with the part of the Nisava's quay),
- 3. Park on the Nisava's quay near the bridge "Mladost",
- 4. Park on the Square of Sindjelic,
- 5. Park on the King Milan's Square,
- 6. Park of Saint Sava,
- 7. Park "Cair",
- 8. Park on the Republic Square,
- 9. Park on the Square of October 14, (near the "Saborna" Church),

- 10. Park on the King Alexander's Square,
- 11. Park on the Square of Pavle Stojakovic,
- 12. Park on the Square of Mija Stanimirovic,
- 13. Park near the Main railway station (in Dimitrije Tucakovic Street),
- 14. The Memorial park Bubanj,
- 15. Park near the pedestrian bridge in the Municipality of Mediana,
- 16. Park behind the Nis Express garages,
- 17. Park on the University Square.

In addition to these parks, the city has a large number of parks within the residential complexes, or between residential buildings. They are "semi-public", open to the public but are primarily intended for residents of the housing complex. These parks are not the subject of this paper. Also it is important to emphasize that there is one small skate park in the city, which also is not included in the paper, because of its different functional characteristics.



Figure 1. Overview of analyzed park areas in the city of Nis

Parks are firstly identified on the city of Nis' map, with the help of orthophoto record of the city that can be found on the website gis.ni.rs and images on the website google.rs/maps. Each urban public green park area has been marked and became the subject of further analysis of this research. Overview of the listed parks is shown on the



map of the city of Nis in Figure 1. All listed parks were then visited and the material for research was collected (primarily photos).

#### 2.1. Classification of the public parks in the city of Nis

Identified public city parks can be classified based on a different criteria. Here are made the following classifications.

- 1. According to the size, parks are divided into:
  - o parks of a small size (up to 1 ha)
  - o parks of a medium size (1-10 ha)
  - o parks of a large size (over 10 ha)

In the group of parks of a small size are categorized following parks: Park on the Square of Sindjelic, Park on the King Milan's Square, Park on the Republic Square, Park on the Square of October 14, Park on the Square of Pavle Stojakovic, Park on the Square of Mija Stanimirovic, Park behind the Nis Express garage, Park on the University Square.

In the group of the parks of a medium size are categorized following parks: Park of Saint Sava, Park ``Sedmi juli``, Park on the Nisava's quay near the bridge ``Mladost``, Park on the King Alexander's Square, Park near the Main railway station, Park near the pedestrian bridge in the Municipality of Mediana.

In the group of the parks of a large size are categorized following parks: Park in the Fortress of Nis, Park ``Cair``, The Memorial park Bubanj.

The total share of the mentioned categories of parks is graphically illustrated in Figure 2.

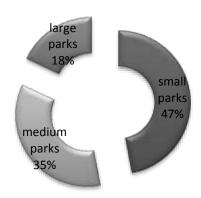


Figure 2. The percentage share of parks according to their size



#### 2. According to character, or primary function, parks are divided into:

o parks that have flow character, in which passersby briefly stop (Park on the Sindjelic's Square, Park on the King Milan's Square, Park on the Republic Square, Park on the King Alexander's Square, Park on the Square of Pavle Stojakovic, Park on the University Square);

#### o parks intended for a short daily break

(Park in the Fortress of Nis, Park ``Sedmi juli``, Park ``Cair``, Park on the Nisava's quay near the bridge ``Mladost``, Park of Saint Sava, Park on the Square of October 14, Park on the Square of Mija Stanimirovic, Park near the Main railway station, Park near the pedestrian bridge in the Municipality of Mediana);

- parks intended for a larger daily break or vacation
   (The Memorial park Bubanj)
- o **parks intended for recreation** (Park behind the Nis Express garage).

It is important to make a note that parks do not have exclusively these functions, but these are functions that prevail in their use. All the parks are designed for rest and recreation, and can, depending on the specific situation, have a flow character or be intended for short or long stay.

#### **3.** According to the number of users, parks are divided into:

#### o less popular

(Park on the Republic Square, Park on the Square of Pavle Stojakovic, Park on the Square of Mija Stanimirovic, Park near the Main railway station, Park on the University Square);

#### o medium popular

(Park on the Nisava's quay near the bridge ``Mladost``, Park on the Sindjelic's Square, Park on the Square of October 14, Park on the King Alexander's Square, The Memorial park Bubanj, Park near the pedestrian bridge in the Municipality of Mediana, Park behind the Nis Express garage);

#### o very popular



(Park in the Fortress of Nis, Park ``Sedmi juli``, Park on the King Milan's Square, Park of Saint Sava, Park ``Cair``).

This division is affected by many factors. One of the most important is the position of the park within the city area (Figure 3a) and the scope where the park gravitates (Figure 3b). Another important factor is the existence of diverse contents in park, as well as the general condition of the park rated in the table shown in Figure 4. For example, the Memorial park Bubanj is ranked as the park of medium popularity, although its size and potential, as well as good connection to the city core, tend to place it on the top of the list of most visited parks. The reason for this primarily lies in inadequate care of the park, bad lighting, destroyed mobiliard, desecration of cultural monuments etc. It can be concluded that the most visited parks are those located close to the central core of the city and those which offer a greater number of different content.

Parks' visitation depends largely on the part of the day and season of the year. It is clear that with improvement of weather conditions grows the number of visitors. Parks are the most visited during the summer, late spring and early autumn. During the hot summer days, the parks are the most visited in the late afternoon and early evening. Parks like the one in the Fortress of Nis and ``Sedmi juli`` are particularly alive at night during the summer, especially on weekends, when young people gather for fellowship and fun.



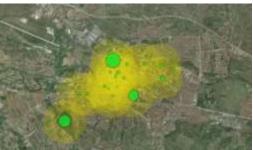


Figure 3. a) parks' position within the urban structure and the level of popularity (red - the most visited, orange - less visited, yellow – the least visited), b) the scope of gravity

#### 2.2. Analyze of the condition of the parks

The current condition of each park was recorded on site: condition of greenery, main mobiliard (benches, trash cans), lighting, paving, enabled accessibility for people



with special needs (the existence of ramps) and the level of maintenance and cleanliness. The results of the observations are given in the Table (Figure 4). Parks were evaluated, based on the mentioned criteria, by numbers from 1 to 5, where 1 is equivalent to the description ``very bad``, and 5 to the description ``excellent``. Based on individual assessments, it was calculated the average score for each park separately and total average score of all parks.

The average score of all parks is 3.35. This indicates that the general condition of parks in the city, based on the evaluated criteria, is at a medium level. At the individual level, the condition of most of the parks is about average. Only 3 out of 17 parks has received a rating of 4 or more, ie. it is estimated that their general condition is very good. None of the park has received maximum points, which means that in all parks there is plenty of space for improvement of their quality. With extremely low grade stands out the Memorial park Bubanj, which state was rated as very poor. View of the total score of the individual parks is shown with the chart in Figure 5.

REDNI BR.	NAZEV PARKA	OPSTE STANJE				7000000000	(V.W.))	2620	100000000000
		OSNOVNOG MORILITARA	BANVETE	POPLOČANI A	ZELENILA	RAMPI RAMPI	CISTOCS	OCENA	PROSECNA
1	Park n Niškoj terdavi	3	2	3.	- 3	3	4	18	3
2	Pirk Sedmi juli	3	3	3	4	2	4	19	3.166667
3	Park na nišarskom keju kod mosta Mladosti	4	4	4	4	4	3	23	3.833333
4	Park sa Sindeličevom trgu	3	2	2	3	5	3	18	3
5	Pirk na trgs Kralja Milana	4	4	5	- 5	5	4	27	4.5
	Park Svetog Save	4	4	4	4	4	4	24	4
1	Cair	3	3	2	3	4	3	18	3
	Park na trgu Republike	4	3	4	- 4	5	4	24	4
	Park on trgs 14. oktobra	3	3	3	3	3	3	18	3
10	Park na trgo Kralja Aleksandra	3	3	3	3	4	3	19	3.166667
11	Park na trgu Pavla Stojakovića	3	3	2	3	4	2	17	2.833333
12	Park na trgu Mije Stanimirovića	3	3	3	4	4	3	20	3.333333
13	Purk kod Glame řelezničke stanice	3	3	3	. 3	4.	3	19	3.166667
14	Spotten-pirk Bulunj	1	1	1	3	3	1	10	1.666667
15	Pirk kod priačkog mosta	4	3	4	4	4	4	23	3.833333
16	Park iza Niš ekspres garaža	4	4	4	3	4	4	23	3.833333
17	Park na Univerzitetskom tryn	4	3	3	4	4	4	22	3.666667
PROSEČNA OCENA		3.294118	3	3.117647	3.52941	3.882353	3.294118		941176

Figure 4. Tabular overview of condition estimation of analyzed parks

The greatest deficiencies noticed on the site are: outdated or destroyed mobiliard (Figure 6a), lack of lighting or, as is the case of the Memorial park Bubanj, totally destroyed lighting (Figure 7a), partially destroyed or unattractive paving (Figure 6b),



inadequate maintenance of greenery, poor hygiene (Figure 7b). It is certainly necessary to pay attention to these items, because they are essential for the functioning of public green areas.

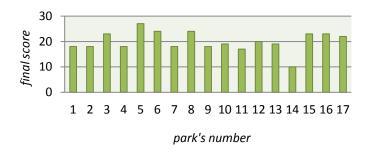


Figure 5. Display of the parks' score

A large percentage of the overall mobiliard is possible to repair or repaint. It is not strictly needed to exchange it for a new one. This is beneficial from an economic point of view, but if architectural aspects are also observed, it is proposed replacement of mobiliard (especially benches), with new attractive and modern models.

Illumination affects visitors' attendance in the parks at night. By improving lighting, number of visitors during night time will be increased. Poorly lit parks are unsafe and users often avoid them. It has been noticed that none of the park has a floor lighting. Also, the monuments that exist in the parks are not adequately highlight with lighting systems, and during the evening they are quite unnoticeable. Lighting is very important category in architecture. Play of light can create new shapes and forms that lead to different perceptions of space. By using different types of lighting can be created interesting dynamic environments attractive for stay. Therefore the lighting improvement is other important guideline to improve the quality of park areas.



Figure 6. a) outdated and ruined mobiliard, b) destroyed paving



Very outdated or damaged paving crashes the nice picture of park. Excessive use of concrete dominates in all the analyzed examples. The proposal is to introduce more of ``transparent`` paving models for footpaths and increase the use of natural materials (wood, gravel, combination of grass and tiles etc.). It is recommended to put more emphasis on permeation of natural elements and built space.

The next important step is to improve the system of greenery maintenance. High, medium and low greenery are the most important elements of the parks. Without vegetation, the park does not exist in all analyzed cases, it is noticed the inadequate treatment of green areas - not enough irrigation, uncut grass, overgrown plants etc. The only exception is the park on King Milan's Square in the center of town which boasts with tidy and neat floral carpet.

And finally, poor hygiene, which dominates everywhere in the most of the parks. There is already almost sufficient number of trash bins. Increasing their number would partially solve this problem. However, the biggest culprits are visitors who don't pay attention to such the environment and put garbage in inappropriate places. Raising awareness about the importance of environmental protection and culture of behavior is the only way to resolve this problem.





Figure 7. – a) destroyed lighting, b) the inadequate garbage disposal

In addition to these basic categories, on the site is also recorded the existence of other content such as monuments, facilities and equipment for children to play, equipment for outdoor exercise (Park behind the Nis Express garage), drinking fountains, etc. For every compliment is a solar panel installed in the park ``Cair``. Although a unique case, this installation is good to raise awareness about environmental sustainability and energy efficiency. What is noticeable is the absence of fountains. Fountains are a desirable



element in all the parks (according to survey conducted in this research). They would greatly enriched areas in parks and attract more visitors during summer months.

#### 3. CASE STUDY

In this chapter is presented a case study of the park on Sindjelic's square. This park is selected as representative examples.

#### 3.1. Park on the Square of Sindjelic

Park on the Sindjelic's Square is listed as a park of small size. It is typical representative of the parks formed within squares, which are numerous in Nis. It is located within a central city core, across the National Theatre and the City's Court. Two sides of park are bordered by roads, on the third side is "dead end "turned into a parking lot, also the access to the apartment buildings which exist there, while the fourth side of the park is defined by the gas station (Figure 12). The square itself is in such a position that mainly serves as a connection path for pedestrians. People temporary stay in the park, without major retention and use it as a temporary resting place. Because of its location, it can be said that this park has very expressed flow character. It connects important contents of the city and is an inevitable path for passersby.



Figure 12. Photos of the Park on the Sindjelic's Square

Park has a simple geometry. From content, there can be found: a monument, a drinking fountain and benches for rest. In greenery prevail grass, trees and flowers around the monument.

Due to the good location, it is necessary to make regeneration and reconstruction of the park in order to create a space that will be aesthetically and formally better and will



make the park more attractive for stay, at the same time respecting the fact that the park has largely flow character. The key factors that should be considered during reconstruction are: facilities in the immediate surrounding (nearness of the center, faculties and high schools), high traffic frequency and the existing views.

In this section of the paper is presented one Conceptual urban-architectural design of renovation of this park, which was done in the framework of the elective course "Studio urbanism" at the Faculty of Civil Engineering and Architecture in Nis. This design may serve as an example to show the results of the analysis or in which direction can go park improvement. Design solution proposes reorganization of park area into an Internet-park, which has a logic considering the fact that there are many educational facilities in the nearby (Faculty of Philosophy, Gymnasium Bora Stankovic, Gymnasium Stevan Sremac, Art and Music School). But the design also tends to maximally keep the existing greenery. Knowing that work and rest need more calm and intimate atmosphere, the idea is to separate, in some way, the park space from the noisy neighbourhood and create some kind of isolation from the surrounding noise, close the views towards streets, parking space and gas station, because these urban elements are definitely not desirable in the park. This is achieved by introducing denivelation, ie. by rising green areas and creating barriers to the mentioned elements.

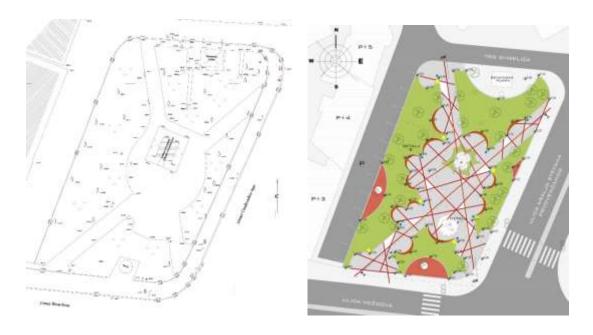


Figure 13. a) Current state of the park, b) proposal for the park renovation



Denivelation is achieved by creating a not very high hills made of the earth planted with grass (Figure 14). Earth follows the irregular curving form of a concrete wall from which console benches go out. The walls are variable in height, made of concrete, and they meander forming a semicircular and arc spaces, which are distanced from the main footpaths and are used for sitting. This way they create calmer atmosphere, where people can rest themselves or surf on internet. At the same time, meandering walls create dynamic composition and break the monotony of the space.

Benches are designed as consoles that protrude from the wall and follow the form. Benches are covered with wood on the top, in order to be comfortable for sitting.

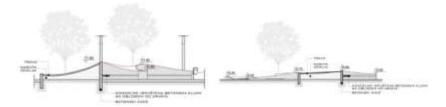


Figure 14. Denivelation through the park

In contrast to the curved lines of greenery, paved parts are made totally opposite, intersected by straight lines (Figure 15). In designing prevail smoothing tones of white and gray. There is also red color, to bring a touch of warmth to the space. In the form of paving also occurs the irregularity - many straight lines which intersect each other at different angles, highlighting the different moving directions in the space. The existing main lines have been retained because they seem to be the most logical, and these are the paths that diagonally intersect the area. These lines are presented with borders in tiling, and some of them have floor lighting, which creates special effects at night. The entire paving is designed to be made of stamped concrete, because it seemed modern, is simple and cheaper solution.



*Figure 15 – 3D presentation of the projected solution* 



Although the overall solution is quite simple, it seems as complicated. In this regard, the idea for the fountains is that it should be as simple as possible, but at the same time effective. (Figure 16). Fountain follows the curves of form and consists of two clearly differentiated part. One of the parts serves for drinking. Its shape, size, height and color works effectively on the environment, and does not obstruct views towards the theater. Fountain is emphasized with the floor lamps and decorative, fine gravel, which is a natural material and fits perfectly into the environment.

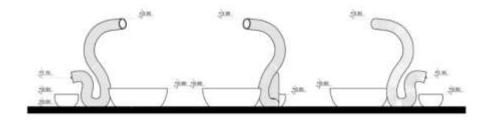


Figure 16. – 2D appearance of the fountain

#### 4. DISCUSSION AND CONCLUSIONS

Given the size of the city, the number of parks in Nis is sufficient. Parks are distributed throughout the whole city structure, but the largest number is in a narrower or broader central city core. However, due to good transport connections (especially of public transport), all parks are relatively easily accessible to all citizens equally.

Analysis of the general condition of parks in the city has shown that, in general, all the parks in the city have outdated furniture, poor lighting and paving that requires reconstruction. To the maintenance of greenery and hygiene should be paid bigger attention, through the services that are responsible for it, as well as through raising awareness about the culture of behavior towards the common public areas.

The architectural and urban terms, parks are very similar to each other. They have very simple shape, without any elements that would be singled out and would make parks' space distinctive and representative. In most parks, there are monuments. That are sculptural forms that characterize the park and represent the artistic, cultural and historical moment of the city. However, it is noticeable that the cultural monuments, regardless of

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their meaning and importance, do not receive adequate attention. When it comes to

architectural aspect, they are an important feature, so it is necessary to point them out in

space. The situation on the site shows that they are placed in the background, and are

almost imperceptible. That made a situation that a large number of citizens do not even

know they exist.

Existing functional facilities are very basic: spaces for children to play, drinking

fountains, benches for rest. In the park "Sedmi juli", which is observed together with a

part of the Nisava quay, there is an amphitheater, one of the most popular places for

socializing of young people in the city. During summer time, this park is also the most

popular among the whole citizens, because it is the only one that offers sitting by the river.

Lack of water surfaces, such as fountains, artificial lakes, etc. is main big deficiency of

parks in Nis. These elements are at the top of the list of desirable contents in the parks of

Nis among the respondents in the conducted survey.

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