



International Conference on Urban Planning



ICUP2022

PROCEEDINGS

Serbia, Niš, November 9-10, 2022



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INVESTOR ARCHITECTURE – CASE STUDY: THE CITY OF NIŠ

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ABSTRACT

Recently, Niš, the 3rd largest Serbian city, has faced the increased demand for apartments, which has led to the rapid growth in the residential sector. Many high-rise buildings are randomly springing up all over the city, changing its skyline and existing urban pattern. The demand for living space is high, but the quality of the same offered on the market is quite questionable. This paper is focused on a case study of newly constructed residential district in the city of Niš, which aims to valorize its architectural and urban characteristics in order to figure out the level of impact that such construction trend is leaving on the city and its residents. The case study done for this research could serve as a representative sample, which depicts the current state of the architectural trend not only in Niš, but in the whole country.

Keywords: residential architecture; investor architecture; urban pattern; the City of Niš

INTRODUCTION

In recent years, Niš has become big construction site when it comes to housing construction. It seems that the famous Čika Jova's (Jovan Jovanović Zmaj, Serbian poet) verses, "wherever you find nice place, plant a tree there", are reinterpreted in Niš in the way: "wherever you find nice place, plant the building there", and that in the literal sense! Spaces that were once planned as green areas between buildings are turning into buildings, and new "neighbors" significantly change the conditions of micro-location (Fig. 1). Thus, apartments in old buildings, primarily oriented towards free spaces, with adequately planned views, suddenly lose their initial characteristics. It occurs an obvious destruction of privacy, insolation, compositional unity etc., that is, basic factors that are important for the normal life in a multi-family building, as well as architectural harmony. The physical proximity of neighbors, and often, direct visual contact achieved by insufficiently thought-out placement of facade openings of new buildings, mismatched with the position of the openings of existing buildings, directly affect the reduction of the level of privacy, both for current and new future users. The distance between buildings is no longer adapted to the adequate insolation of residential units. New buildings cast a shadow on old ones and vice versa. Spaces aimed for rest and recreation are permanently lost, and the new architecture is often not adapted to the context. A bunch of new problems arises.



Figure 1: Newly constructed building in the space that once used to be open air space between two residential buildings.
<https://www.google.com/maps/preview>

Although the economic situation of Niš is not at an enviable level, especially compared to the capital of the country, it can still be noticed that there is a certain progress in the economic sense, which has caused the demand for apartments in Niš - the demand that, could be said, has never been bigger. Evidently, there is demand, as well as offer, but what is questionable is the quality of the market offer and also what future users are willing to accept from the market.

The residential architecture of Niš is very specific. It is woven from a mix of different styles or simply something that cannot be called a style, but, perhaps, the influence of various political and economic circumstances and difficult times that the city faced during its existence, i.e. the struggle of expertise and inexperience. A large number of buildings were created by illegal construction, i.e. without a construction permit, and therefore without any control or approval. The fact that a huge number of buildings were "wildly created" conditioned the adoption of the Law on Legalization of Buildings [6]. Although this law will not solve the problems caused by unplanned construction, it still tries to put the situation in order, at least in the legal sense.

THE ANALYSIS OF THE LOCATION

The space in the city municipality of Pantelej, bordered by St. Pantelejmon Boulevard from the south, Matejevac Road from the east, Studenička Street from the west and Gornjomatejevačka Street and the A4 highway from the north, with an area of about 62 ha, represents a great potential for the expansion of the city (Fig. 2a). According to the General regulation plan of the city municipality of Pantelej - Phase I [3], the location is primarily intended for residential use. With newly designed streets, the given location should be divided into blocks, in which it is possible to build family and multi-family residential buildings. The location itself is very favorable for the development of a new residential area. The natural and man-made factors found on the site give the location an advantage over many other potential locations in the city. The terrain is generally flat, the insolation and ventilation are excellent, and the distance from the central city core is not far. In terms of infrastructure and public transport, the connection with all parts of the city is good.

After the construction of Somborski Boulevard (the old name of St. Pantelejmon Boulevard), i.e. the connection of Matejevac Road with Kosovka devojka Street, began the expansion of the construction of multi-family buildings in this part of the city. The existing settlement started slowly to expand from Studenička street to the east, that is, from Somborski Boulevard to the north. With the gradual construction, which was at first without adequate control, a new settlement began to spring up, which brought a large number of new residents to this part of the city and initiated the development of the accompanying service and commercial activities.

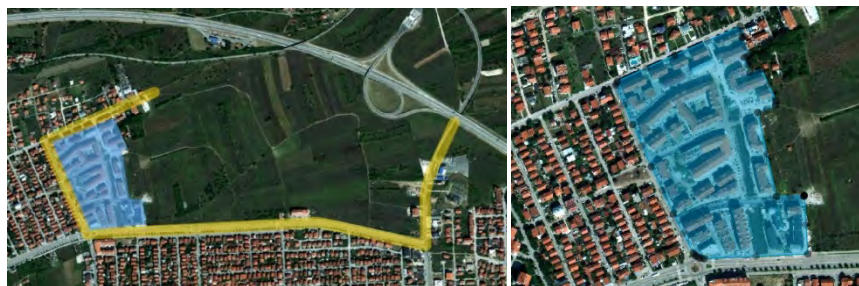


Figure 2: a) The area of the settlement's expansion; b) The subject location.
<https://geosrbija.rs/>

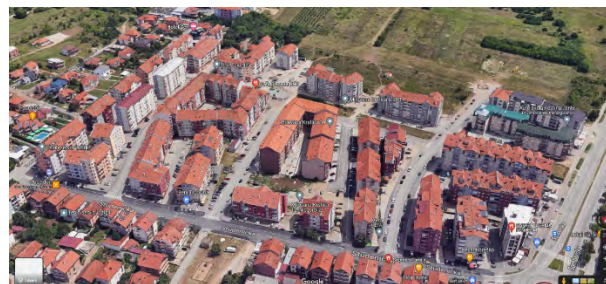


Figure 3: The view of the subject location
<https://www.google.com/maps/preview>

For the purposes of this work, an urban-architectural analysis of a part of the residential area in the city municipality of Pantelej in Niš, bordered by St. Pantelejmon Boulevard in the south, Studenička Street in the west and Gornjomatejevačka Street in the north, was carried out (Fig. 2b, Fig. 3). On the eastern side, the space

is undeveloped and currently there is a field with low, medium and partially high greenery. The approximate area of the analyzed location is about 8.2 ha. If we exclude a couple of family buildings, on the periphery of the analyzed location, the settlement is built with multi-family buildings that are organized in the form of closed or open rows or are placed as free-standing buildings. The maximum number of stories of the buildings is ground floor + 6 stories + attic. The first buildings in this part of the settlement sprouted about fifteen years ago, and constant construction continues to this day.

Why was this particular part of the settlement chosen for the analysis? Because it concentrates a large number of examples of the city's contemporary architectural practice in one place; because the construction of the space started from scratch (the space was free for construction); because the buildings of this settlement can be taken as a representative sample of contemporary tendencies in investor architecture, because the analysis does not only refer to buildings as individual, but also to the broader aspect of urban planning and fitting. The aim of the paper is to point out, through a case study, the problems faced by the City of Niš in the process of accelerated housing construction and to appeal to the urgency of alarming the profession in order to prevent the inhuman construction, which has taken off. The idea is to raise awareness of the problems faced by contemporary construction practice in Niš and to point out the exigency of the action of the profession. Therefore, the scope of the work is investor architecture, shown through the analysis of one representative example. The main scientific methods applied in the work are the analysis of data recorded on the site, synthesis and comparison.

After the visit of the location and the analysis of the recordings collected there, the following problems, which will be shown in more detail, were identified: parking problem; lack of sufficient green areas; absence of high-quality common spaces for social interaction of residents and children's play; poor furnishing of the open space areas; inadequate physical distances between buildings; safety and privacy of apartments on the ground floor level; aesthetic value of the architecture of buildings.

Parking

Parking is one of the main ongoing problems in the city of Niš. When it comes to the inherited core, it must be adapted to the situation, but when it comes to newly built spaces, it is imperative to plan adequate parking in advance. This does not mean simply meeting the rules prescribed by the appropriate planning documents, but also a deeper analysis of the form and manner of parking, primarily in relation to other functions that dominate the location. It is desirable, for example, when it comes to above-ground parking, to predict the parking lot at an adequate distance from the entrance to the building, to make a distance between the parking and the ground-floor apartment units by the insertion of an appropriate green buffer zone, not to disrupt pedestrian communications around the building, and the like.



Figure 4: Unorganized free space between buildings, occupied by cars - a potential place to create a square with greenery, facilities for residents to gather and socialize and children to play.
<https://www.google.com/maps/preview>

Based on the construction rules for high-density housing in the city area given by the General regulation plan of the city municipality of Pantelej - Phase I [3], for the analyzed location it is necessary to provide a parking space within the building plot, which should be dimensioned based on the condition to provide at least one parking place for each apartment and additionally one more parking place on 70 m² of usable area of the office space. By examining the situation on the site, it is concluded that, despite the existence of a certain number of underground and above-ground garages and planned (marked) parking spaces, a sufficient number of parking spaces is not provided for the housing capacity that currently exists. In this regard, a large number of "wild" parking lots were created, which occupied almost all free areas, ideal for other types of content (Fig. 4). It was also noticed that the majority of above-ground parking lots are inadequately designed, primarily in terms of their positioning. Cars are practically everywhere around the buildings. This resulted in a large amount of

concrete and a reduction (or, in some parts, the absence) of greenery. The main views of most residential units are directed towards concrete and cars. Parking right next to the building seriously impairs the quality of the living in ground-story housing units: there is constant noise, the emission of harmful gases in the immediate vicinity of the living space is increased, and the degree of privacy and the views are unnecessary to be discussed (Fig. 5).



Figure 5: a, b) Parking on unorganized surfaces; c) Parking right next to the ground-floor housing units.

Green areas

According to the construction rules for high-density housing in the urban area, given by the General regulation plan of the city municipality of Pantelej - Phase I [3], for the analyzed location, it is necessary to provide greenery and free spaces within the construction plot that should be the size that is at least 20% of the area of the construction plot. On the site, we find a different situation: the greenery exists only in traces. The only more significant green area (Fig. 6) was retained by the protest of the citizens of the settlement in 2020, when the residents came out into the streets to fight against construction in the settlement and demand a green and more organized settlement. Accustomed to the practice that buildings spring up in the neighborhood like mushrooms, the citizens made a protest walk and managed to keep the only free area that existed on the site, which was in danger to be turned into another inhumane building for living. The existence even of this kind of free area is a big advantage for the whole settlement, especially for the buildings that extend along its edges. However, its full potential is still not used. Apart from the "breathing space" that neighboring buildings gained, slightly better views and better ventilation of this part of the settlement, the useful value of this space is still at its minimum. It mainly contains unplanned, low-lying greenery, partially enriched with young trees in some parts and a small part equipped with modest furniture for children's play, maintained in an inadequate manner.



Figure 6: Free space that was threatened by the potential construction of new residential buildings.
<https://www.google.com/maps/preview>

The formation of parking lot in a place where there should be common open areas, thus the consequent loss of parks, spaces for children to play, for walking, for sitting and resting, significantly affect the quality of life and the comfort of housing. In addition, the residential units at the location are mostly of small, reduced, areas, adapted to the low paying capacity of customers. In this regard, in order to reduce the square footage of the apartment, the open areas within the apartment are generally designed with minimum square footage, so it is necessary to supplement them with common free areas. Although small, the apartments are often home to multi-member families, who cannot even use their balcony at the same time.

Spaces for social interaction of residents and children's play

“Liveability of a place is justified by the habitable and comfortable environment of the place. The factors that classifies the liveability of a place are built and natural environment, social stability and cultural, recreational and entertainment opportunities. More the liveability of a place, more will the quality of living in that community. ... Liveability and open spaces are very strongly connected to each other and go hand in hand.”[1] The humanity of the settlement is mainly reflected in the existence of spaces that promote social interaction between its inhabitants, provide conditions for rest and relaxation and introduce nature into the urban environment. Elements such as greenery, water or natural shade are imperative of contemporary urban design. At a time when social alienation has taken hold, it is necessary to try in every way to animate residents, to encourage social gatherings, encourage the neighbors to socialize and join common activities, which is possible to achieve through urban planning. In the analyzed location, there are almost no such spaces. If we exclude the modest children's park, mentioned in the previous section, or a couple of improvised gardens (Fig. 7), all other spaces between the buildings are absolutely unattractive, one might even say repulsive, for a longer stay and serve exclusively as communications to the entrance to the buildings intertwined with vehicular traffic. Although they are not currently used for that purpose, it is possible to map places convenient for the formation of spaces for social interaction of users in the form of smaller squares or transitory gardens with outdoor furniture for sitting and relaxing. Figure 8 shows an example of a possible transformation of the use of the space, which would, in addition to useful outdoor functions, also contribute to the improvement of the residential comfort of the residential units themselves, through the completion of the visual ambience of the surroundings.



Figure 7: a) Spontaneously created space for socializing; b) Fenced garden.

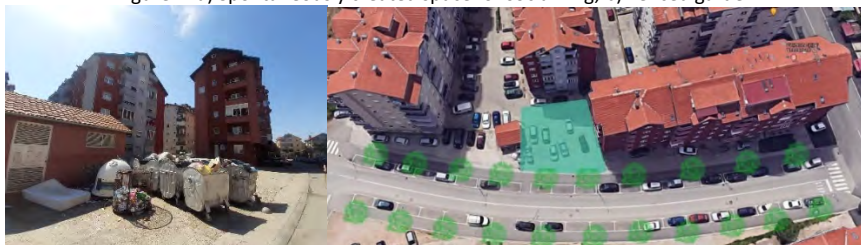


Figure 8: The space that is currently used for garbage disposal containers and informal parking, ideal for forming piazza.
<https://www.google.com/maps/preview>

Poor furnishing of the open air spaces

By recording the current situation on the site, it is concluded that the settlement is particularly lacking in urban furniture, above all in the most basic ones - trash cans, benches for sitting and lighting outside of the residential streets. It is a common practice in Serbia that private investors, as is the case in this location, do not take too much care of the parts of the plot that they cannot charge. To provide an apartment, eventually parking and that's the end of the story - that's roughly the impression one gets. Whose obligation is the arrangement of free spaces, that is, in which way it is necessary to arrange free spaces, seems that is not very clearly defined. It is logical that the investor within the building plot has the obligation to arrange the parterre as well, which he often does only in the drawings, while in practice the matter remains unfinished. It is interesting the fact that on a large part of the analyzed location, the investor, and plot owner, is the same person (data found by looking at the Real Estate Cadastre), which could make the design and furnishing of the open spaces easier, by unification.

Physical distances between buildings

The basic element that affects the quality of the living space is the orientation and sun exposure of the space. "One of the highest values in town planning evaluation of a housing complex is the way buildings are grouped in space. Their mutual position, insolation conditions, accessways and potential for arrangement of open space areas directly and mostly depend on the compositional arrangement." [2] The Rulebook on conditions and norms for the design of residential buildings and apartments [4] provides basic guidelines when it comes to the disposition and orientation of apartments, and the construction rules for high-density housing in the urban area, given by the General regulation plan of the city municipality of Pantelej - Phase I [3], prescribe that the distance between buildings has to be at least half the height of a higher building, that is, it can be a quarter of the height of a higher building, if the buildings on the opposite sides do not contain openings for lighting of residential premises (except openings for auxiliary rooms). Getting to know the situation on the site, one comes to the conclusion that in most cases, physical distances are highly debatable. In some parts, the distance of neighboring buildings is exactly at the minimum, while in some parts it is far below the minimum (Fig. 9). And this stands out as the biggest problem. The mutual vicinity of the buildings directly affects the residential comfort of the units. Primarily, the apartment units are in the shade, so the sun exposure is low. Due to reduced air circulation, ventilation is also reduced. In a large number of cases, due to the opposite setting of the openings, users are exposed to direct views of the neighbors from across.

Also, another problem, when it comes to distances, is that the users were not initially familiar with the future development of the location, that is, when buying apartments, they did not know if and in which way the area around will be built in the future. For example, the building at the corner of Studenička Street and St. Pantelejmon Boulevard did not exist nor was there any indication that it would be located there, due to the proximity of the roundabout and the relatively small free area. The residents of the building next door may have chosen that location and those apartments because of the southern orientation and views that will not end few meters from them, which was the case after the new building was added.

The distance between the buildings is now impossible to change, but the space between the buildings could be enlivened with greenery, which would also create a visual barrier in between.



Figure 9: Distances between the buildings and the use of in between space.

Safety and privacy of ground floor apartments

The situation found on the site indicates that apartments on the ground floor have lower quality living conditions than apartments on higher floors. All the identified problems mentioned above are also the causes of the poor quality of the living space of the residents on the ground level. Ground-floor apartments in multi-family housing differ in their characteristics from apartments on higher floors, even if their functional solutions are the same. The fact that they have direct contact with the ground, apart from certain limitations, also brings numerous advantages, which should be used in favor of increasing the living comfort of these residential units. Ground floor apartments within the buildings possess some characteristics of individual housing, which is a great advantage. If housing has significant individual characteristics, its quality is improved [5]. So, if there is a possibility, it is desirable to attach a part of the yard to the apartments and provide them with a larger open area. As this is not possible in this case, due to the already small open spaces between the buildings, which are used as pedestrian and vehicular communications, the uses of public areas should at least be reorganized:

stationary traffic should be distanced from the facade fronts and a buffer layer, at least with a minimal strip of greenery, should be created (Fig. 11). Direct parking next to openings or terraces of residential units creates unhealthy living conditions. Exhaust gases from cars directly pollute the air that enters apartments through facade openings. The noise and vibration generated by the car disrupts the normal functioning of the occupants. Views from the apartment to the outside space are unattractive and do not offer visual rest. The absence of a barrier at the private-public transition threatens the intimacy of housing. Users are exposed to the random glances of passers-by, which greatly disturbs peace and privacy (Fig. 10).



Figure 10: Apartments on the ground floor - concrete, cars, absence of planned greenery.



Figure 11: A simple way to improve the ambience of the building and ground floor apartments.

Design value

It is easy to come to the conclusion that the feature of investor architecture is often actually the absence of architecture. This may be too harshly stated, but a large number of examples confirm this claim. In the analyzed location, different approaches can be observed when it comes to the design of buildings. Mostly, the form derives from the function, without an additional tendency to play with masses and volumes, which makes the architectural composition, by itself, and also in the wider context, tend to become monotonous and boring. On the other hand, facade decorative elements - such as accentuated edges of openings (window framing with a striking color), accentuated lines of mezzanine panels or ornate details of fences on the apartment open areas tend to push architecture into the field of kitsch. The random selection of colors, without a deeper analysis of the environment, introduces disharmony into the space and creates chaotic and unattractive image that characterizes the entire neighborhood (Fig. 12).



Figure 12: Unevenness of aesthetic expression of the buildings.

CONCLUSION

Based on the analyzed residential complex, it can be concluded that when approaching the design of the new building, a more detailed elaboration of the concept in all aspects, and above all, in the functional and aesthetic aspects, is inevitable. The key problems that stand out on the site, and which can be solved at this stage, are definitely parking and the lack of green areas. The proposal is to group smaller parking lots into larger ones and locate them in places sufficiently distant from the ground floor apartments, in order to improve the living conditions of those tenants, and disburden the rest of the free area from stationary traffic. Parking lots should be paved with grid paving slabs that allow grass to grow, which could, at least in a minimal percentage, compensate the lack of greenery – the imperative is to get rid of asphalt as much as possible and strive for more natural materials in the parterre. This will significantly improve the ambient value of the space, and also significantly affect the microclimate of the settlement. Also, the proposal is to regulate by law that an investor must be obliged to arrange the area around the building and to equip it with all the necessary outdoor furniture that will be used by the residents.

In the already built-up parts of the city, we are faced with an existing physical structure that is very difficult or in some cases even impossible to change. On the other hand, in the analyzed area, we encounter pure free space, with absolute freedom for planning and designing. The question arises: why was it allowed to reach the current situation of the settlement, in such, one could say, almost ideal, conditions?

The conclusion of this work is that, if the damage has already been done, the interventions can attempt to mitigate it, and the existing bad practice should be taken as a negative example and a lesson for the further construction of this location and other similar locations in the city.

The issue is more complex, because many actors are involved. Is it the fault of the investors who, in the majority of cases, are primarily guided by the idea of maximum profit? Or is it the fault of the experts hired by the investor to plan and design the space? Or is it the fault of those responsible for project approval? Or is it maybe the fault of those who will live in the apartments? The chain of actors is not small, and each link in the chain bears its own responsibility. By harmonizing the needs, possibilities and obligations of all, a solution can be reached.

The investor has a clear goal - to make money and he does not hide it. The buyer's goal is to buy himself a place to live as cheaply as possible. If he is not aware of what is good and what is bad, he is satisfied with what is offered, and the main problems arise later, during the use. In this regard, it can be reached the conclusion that it is necessary to educate future users, buyers of new real estate. One gets the impression that people just need to have a roof over their heads, without delving into what kind of living conditions that "roof" will bring to them, which is, by the way, paid very dearly. Because as long as there are buyers, there will be sellers. Investment architecture has become a trend in Serbia. The primacy is given to the profit of individuals, and the most important, basic thing, which is man, as a user of space, is completely marginalized and neglected. Rational construction is not the synonym for a bad construction, and a bunch of successful international examples of good practice can prove it.

And finally, behind everything should stand the profession. There must be quality control of what is offered on the market and there must be clearly defined criteria that must not be lowered at any cost. Also, the state could stand on the side of its citizens and with certain subsidies encourage not only users, but also those who design, plan and build. It is necessary to create more detailed master plans, announce calls for tenders and to make more studious assessment of resources. Much more should be invested in the process that precedes design, analysis, and not use an established pattern that has proven to be a template that sells easily and quickly.

Also, what is most important, humanity must come first. The end user must be at the center of planning and design process. The main question: "for whom it is being designed", should be reviewed in more detail, because it is questionable how the investor sees the user.

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