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ABSTRACT

The City of Belgrade is situated at the confluence of the Sava and Danube. Accordingly, this geographical position has strongly shaped Belgrade's strategic and geopolitical significance, as well as its identity. In the last two decades, the development of several mega-projects in the area of Belgrade waterfront has had a negative impact on the cultural heritage of Belgrade and its historical cityscape, affecting its urban morphology and typology. The reason for this is that urban regeneration is most often driven by economic interests, while the preservation of meaning and the memory of a place are neglected. Along with these processes, several civic initiatives have emerged that aim to prevent damage to the built heritage and to indicate the need for stronger involvement of citizens in the city's planning and development processes. In order to discontinue the tendency of being driven by economic interest and demonstrate a will to achieve further sustainable development, it is necessary to redefine the procedure for protecting valuable cultural heritage. This could be achieved by creating a new approach to protecting cultural heritage in the domain of urban design and planning, taking into account all the values, tradition, authenticity and identity of a place. Accordingly, the paper will focus on the issues of protecting Belgrade's waterfront heritage, its historical and urban context, its genesis, and its cultural and architectural characteristics. Furthermore, the possibilities for different approaches to the presentation and modern utilization of the abandoned and ruined waterfront heritage will be investigated, in order to define new, common procedures that will be in line with city development goals, citizen expectations and heritage protection measures.

Keywords: cultural heritage, preservation approach, urban revitalization, Belgrade waterfront

АПСТРАКТ

Град Београд се налази на ушћу двеју река — Саве у Дунав. Сходно томе, овај географски положај снажно је обликовао стратешки и геополитички значај Београда, као и његов идентитет. У последње две деценије, развој неколико мега-пројеката, места на подручју обала река, имао је негативан утицај на културно наслеђе Београда и његов историјски градски пејзаж, на његову урбану морфологију и типологију. Разлог томе је што је урбана обнова најчешће покренута економским интересима, док су очување значења и сећања на место занемарени. Заједно са овим процесима, појавио се низ грађанских иницијатива за спречавање досадашњег приступа историјском наслеђу и указивање на потребу за јачим укључивањем грађана у процесе планирања и развоја града. Да би се прекинула ова тенденција и показала воља за постизањем даљег одрживог развоја, неопходно је редефинисати поступак заштите вредног културног наслеђа. То би се могло постићи стварањем новог приступа у заштити културне баштине у домену урбаног дизајна и планирања, узимајући у обзир све вредности, традицију, аутентичност и идентитет места. Сходно томе, рад ће се фокусирати на питања заштите наслеђа обала двеју река, његовог историјског и урбаног контекста, генезе културних и архитектонских вредности. Даље, истраживаће се могућности различитих приступа у презентацији и савременом коришћењу напуштене и уништене баштине на обали, како би се дефинисао нови, заједнички поступак који ће бити у складу са циљевима развоја града, очекивањима грађана и мерама заштите културног наслеђа.

Кључне речи: културно наслеђе, приступ очувању, урбана обнова, београдска обала

INTRODUCTION

The City of Belgrade, the capital of the Republic of Serbia, is situated at the confluence of two European rivers, the Sava and Danube. This geographical position has strongly shaped Belgrade's strategic and geopolitical significance, as well as its urban identity. The city's attitude towards the waterfront has changed over time. It was treated as a hinterland, barrier

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and boundary until the wake of new trends in the renewal and development of cities at the end of 19th and the beginning of the 20th century, when the first thoughts appeared with regard to the need for “lowering the city onto its rivers” and using the waterfront as a gathering place. The main determinant of the approach in the revitalization of the Belgrade waterfront area was the vision of the future city development that can be read from planning documents, shaped by the socio-political context (Vukmirović, 2020). Because of crisis, especially the destruction caused by war, most of the ideas related to the waterfront area have not been fully implemented, but there has been a partial production of space and some construction. The main railway station, residential and commercial buildings along Karadjordjeva Street, King Alexander Bridge, warehouses and industrial facilities, and Old Belgrade Fairground are some of the buildings and complexes created in the past which are today under various measures of architectural and urban protection. Close to the confluence of the two rivers, there is also Belgrade Fortress, which has been inhabited since prehistoric times. Based on archaeological findings on the Upper Town plateau of Belgrade Fortress, the first settlement originates from the Neolithic period.

Until recently, Belgrade’s riverfront has been characterized by devastated industrial zones and public promenades that are in poor condition. However, several mega-projects such as Belgrade Waterfront, K-District and Belgrade Gondola, that have been initiated in the last two decades, are seen as having the power to completely change this situation. Having in mind that these mega-projects are being developed in a socio-political context characterized by insufficiently established neoliberal discourse, public institutions and democratic culture, there have been fears that this would affect the preservation of the industrial heritage, but also the identity of Belgrade in general. With this in mind, the aim of the paper is to point out various circumstances related to the Belgrade waterfront revitalization process seen from the following perspectives: (1) the sustainability and continuity of the waterfront development, (2) the existence and character of the industrial heritage and (3) the approaches to heritage preservation and the ways in which contemporary mega-projects affect the identity of the city. In order to achieve the stated objective, the research covers several phases that will be presented here. The first phase is a short overview of the actual socio-political context that started after political changes at the beginning of 2000, and its planning procedures related to protecting industrial heritage in Serbia. The next part of the research focuses on a study of the waterfront area, in order to present its origins, development, the types of industrial heritage along the Sava and Danube waterfront, the categories of goods and degree of protection. The third phase of the study concentrates on a review of the legislation in the field of industrial heritage protection - international charters and recommendations, the state’s attitude to the suggestions in the charters, and the extent the charters’ guidelines are adhered to in practice. Taking into consideration the principles of deliberative democracy, the

fourth phase of the research covers the analysis of different citizen initiatives that have been recognized as being involved in protection (directly or indirectly): governmental organizations, non-governmental and non-profit organizations, academic and professional organizations, citizen groups and other stakeholders. The aim of this part of the research was to determine the topics and areas of action related to protection of the industrial heritage. The final, fifth, part of the research concentrates on the development and presentation of a new approach, covering suggestions and recommendations on procedures describing how to treat different forms of industrial heritage in contemporary circumstances that are determined by neoliberal practices, with the aim of preserving the identity of the city, based on the attitudes of deliberative democracy (Djukić et al., 2014).

THE REGULATION OF INDUSTRIAL HERITAGE PROTECTION IN SERBIA

Industrial heritage includes all tangible and intangible evidence: document structures, human settlements, nature, and the built environment related to industrial processes, starting from the second half of the 18th century to the present day, while not neglecting earlier roots in the pre-industrial era. It is concluded that Serbia’s industrial heritage has great social value, because it is important evidence about the life of ordinary people and their identity. Also, it has technological and scientific value in relation to the history of manufacturing, engineering and construction, as well as significant aesthetic value in relation to its architecture, design and planning. These values are related to industrial heritage, its materials, components, equipment and methods of installation in industrial environments, and to written documentation and intangible records related to memories and customs.

The significant importance of developing the idea of the need for protection and revitalization of the industrial heritage was initiated by The International Committee for the Conservation of Industrial Heritage (TICCIH). This organization is special adviser to ICOMOS on matters of industrial heritage and gives its opinion on all proposals to be submitted for inclusion on the UNESCO World Cultural and Natural Heritage List, in accordance with the spirit of the Venice Charter. At the National Assembly of TICCIH, held in Nizhny Tagil in Russia in 2003, delegates adopted The Nizhny Tagil Charter for the Industrial Heritage, a document that establishes the basic definitions and principles for the protection and revitalization of industrial heritage. It was concluded that industrial heritage consists of the residues¹ of industrial culture, which have historical, technological, social, architectural or scientific significance. The Nizhny Tagil Assembly further noted that research into industrial heritage should establish appropriate programs, in a way that already

1 These residues include: building machinery; workshops, mills, factories and places for treating and processing materials; warehouses and depots; where the product is, and the transmitted energy used; the infrastructure; and spaces for social activities related to industry (residential buildings, religious and educational facilities).

works for other historical and cultural heritage, which should be supported by appropriate state policy. It is considered that the criteria for the valuation of industrial heritage should be made public and obtain the consent of the public. It is therefore necessary to confirm the value of the heritage through UNESCO, and to put it on the list of world cultural and natural heritage, especially because of the large impact that industrialization has had on the overall development of mankind (The Nizhny Tagil charter for the Industrial Heritage, 2003).

The assembly also emphasized the importance of an appropriate positive public attitudes towards industrial heritage. This means to actively explain the meaning and importance of industrial heritage through publications, exhibitions, media, and providing insight into the most important factories and other facilities, by promoting tourist visits. For this reason, the European Route of Industrial Heritage (ERIH) was established, and it has 140 members from 16 countries. The cultural routes are interactive, dynamic and present the developmental processes of intercultural links, and they maintain the rich diversity of contributions from different peoples to cultural heritage. Based on a complex network structure, ERIH-60 presents major European industrial heritage sites, by means of a developed tourist infrastructure. In the context of the overall network there are more levels. The regional trail connects industrial landscapes and sites at the regional level, uniting the different traditions within a single idea and promoting local specificity.

When it comes to the protection and preservation of industrial heritage, the Republic of Serbia cannot be really taken as a representative model. A common problem in the state is lack of recognition for the importance of cultural and industrial heritage and the absence of a clearly defined cultural policy which would enable a stimulating atmosphere for dealing with the latter. Also in favour of that is the fact that there are not enough competent and skilled people who could be the driving force for treating this problem, resulting in the absence of intersectoral partnership and cooperation between the relevant institutions, organizations and bodies. The issue goes further as there is no recognition of industrial heritage, which is a substantial segment of cultural heritage and a part of the city's cultural identity, although it possesses large development potential.

The latest attempt in Serbia to protect industrial heritage is the Protocol for the Integral Protection of Industrial Heritage. The protocol was signed in April 2007 for partner cooperation within the integral protection of industrial heritage. The signatories of the protocol were the Ministry of Culture of the Republic of Serbia, the Institute for the Protection of Monuments of Culture of the Republic of Serbia - Belgrade, thirteen institutions with regional responsibility, and the Museum of Science and Technology. In addition, in November of the same year the Council for the Protection of Industrial Heritage was formed, which consists of five members representing the following institutions: the Ministry of Culture, the Institute for Protection

of Monuments of Culture of the Republic of Serbia – Belgrade, the Institute for the Protection of Monuments of Culture of Vojvodina – Petrovaradin, and the Museum of Science and Technology, which runs the administrative and technical affairs of the Council. The Museum of Science and Technology is generally one of the biggest driving forces for actualizing this topic. The museum also has an Industrial Heritage Protection Service, which was formed in 2001 within the existing Department for Protection. It was formed for the systematic protection of scientific and technological industrial heritage. This protection deals with research, recognition and photo documentation related to industrial objects. So far, the Protocol for the Integral Protection of Industrial Heritage has been the first important step in Serbia towards constructing a legal framework for all further activities regarding industrial heritage. The initial conditions for implementing this document's clauses will enable Serbia to join international organizations dealing with industrial heritage, such as ERIH, E-FAITH, TICCIH, etc.

In May 2009 the Ministry of Culture of the Republic of Serbia held a conference titled *Cultural policy within the area of cultural heritage*, in order to introduce the present condition of cultural heritage in Serbia and models of protection, as well as problems which institutions are facing concerning the preservation of heritage. It also focused on analyzing the present condition of cultural heritage, including examples of good practice that offer possible solutions. Specific results of the conference are still not visible within the state body or institutions, but at least some steps are being made by the state to approach the issue of cultural heritage from the top-down level, not vice versa as is usually the case in Serbia.

Besides the above, the issue concerning the preservation of industrial heritage in Serbia also include its instrumentalization by investors in urbanism. Interpreting the recommendations² in a peculiar way, entrepreneurs often use the term industrial to promote a location, even when there are no traces of industry left on the site. This is in line with the urban renewal strategies in which heritage is increasingly used as a driver of renewal and a tool for attracting investment. Accordingly, heritage in general, and even industrial heritage, has in recent decades become not only the basis for promoting the memory of the industrial past, but also a marketing tool in urban renewal, used to successfully sell restored spaces (Cizler, 2016). Market-led development is often a threat to public spaces and to heritage, which also characterizes the situation in Serbia, especially in Belgrade, where several mega projects are being implemented. In this regard, entire parts of the city in the close vicinity of the city centre are owned and developed by the private sector, and

2 The Council of Europe Recommendation R (87) 24 on European Industrial Towns states: that the disadvantages of industrial cities and regions should be turned into assets and opportunities, particularly through the re-use and redevelopment of public services and infrastructure and the mobilization of existing human resources; that the wealth of the historical and architectural heritage of industrial cities and regions should be rehabilitated so as to constitute a considerable source and potential for future development; that governments have amassed a wealth of experience and have the potential to promote and respond to innovation and new challenges; and that industrial renewal policies should, wherever possible, be based on a change of function and the revitalization of existing facilities.

new projects are being built on them, based almost exclusively on high-value apartments and offices for large firms, located at industrial heritage sites. Spaces created in this way could threaten the democratic control of space, as well as the local context and activities, with one of the main consequences being a lack of public spaces. That leads to the question of how to deal with heritage protection when cities are so heavily influenced by and dependent on the market. On the other hand, the lack of greater public and civil sector involvement often results in a lack of non-commercial and public space in the city.

Other issues are related to the situation that the preservation of industrial architecture in Serbia is often compromised by a lack of appreciation of its value. Because most of these buildings and sites date from the 18th to the 20th century, sometimes they are not regarded as sufficiently old enough to attract the attention of either conservation experts or citizens and users. They do not understand that the buildings which represent their everyday environment actually possess the value and characteristics of monuments. For that reason, industrial heritage sites are exposed to degradation processes, and they are neglected and left to decay. Even though some effort has been made in Serbia to find a more adequate conservationist approach, as well as to modernize the legal and administrative systems, integrate conservation into the planning process, and achieve greater co-operation between the protection service and urban planning, it is becoming more and more difficult to protect the endangered urban heritage, while the preservation of its authenticity and integrity is becoming a prime professional task. Although the conservation of cultural heritage has been integrated into the law, planning process and master plans, for example in Belgrade, aiming to involve a large number of stakeholders and citizens, in practice we can see many problems and inconsistencies in implementing those goals.

However, in order to involve other actors (such as the creative and civil sectors) in the process of preserving the industrial heritage, it is necessary to be sufficiently informed about its importance and potential. According to Cizler (2016), a change in public attitude towards industrial heritage and recognition of its value is linked to protests and initiatives, mostly from volunteers, enthusiasts, artists, historians and industrial archaeologists outside official institutions. In line with that, art, culture and small businesses can be seen as unexploited potential for regenerating urban life, and as central players in urban renewal and protecting industrial heritage, based on the new purposes that will inhabit these spaces and make them visible and accessible to the public.

With this in mind, the research examines 11 industrial heritage buildings and sites located in Belgrade's waterfront area, covering the locations known as the Sava and Danube industrial zones. These industrial areas evolved at the same time as the development of a newly liberated state, following different periods of crisis and rise, until the moment when its intense transformation, which had been predicted decades previously, began.

THE HISTORY OF BELGRADE WATERFRONT'S DEVELOPMENT AND ITS INDUSTRIAL SITES

The close relationship between the two rivers, the Sava and Danube, and the city is one of the main elements of Belgrade's specific historical and cultural identity, authentic urban morphology and special cityscape characteristics. The modern urban development of Belgrade in the early 19th century, after the establishment of The Principality of Serbia and its partial political autonomy within the Ottoman Empire, is connected with the rapid development of trade and river traffic and the establishment of the first manufacturing workshops (Dajč, 2012).

The economic centre of the city was in the area of Sava Port, which was the main connection for Belgrade and Serbia with the Austrian Monarchy and Europe. Therefore, it developed into a new trade and transit district where trading houses, hotels and warehouses were built. It displayed the new European spirit, as well as liberation and modernization, and many foreign travellers left testimonials that the area was very colourful and vivid. After the declaration of the Kingdom of Serbia in 1882, stronger ties with Europe were established, especially with the Austro-Hungarian Monarchy. Foreign capital arrived in Serbia, the first industrial factories were built, and the state experienced constant economic growth. This was especially supported by the construction of the railway (1881-84) and the first railway bridge over the Sava River. The railway had a crucial impact on Serbia's future development and Belgrade became a link between Europe, Sofia and Istanbul. The greatest changes were made around the Sava River's right bank, where the Railway Station (Fig. 1) was built in 1884, which today stands as proof of the technical and architectural development of Serbia (Nikolić & Roter Blagojević, 2018).

The expansion of the city toward the riverbank was planned, with a new structure with square blocks covering the area between the railway station and the riverbank, as recorded on the *Bešlić plan from 1898*. However, this was not implemented, and today this area is a part of the Belgrade Waterfront project. New industrial complexes were built at the south-west entrance to the city, in the *Mostar* industrial area, near the Sava River and the railway bridge, and in *Palilula*, near the Danube River. The attractiveness of the Danube area was a result of the railway connection, the accessible water supply and wastewater discharge, and vacant, undeveloped land.

On the Danube riverbank area (near Pančevo Bridge), the First Industrial Slaughterhouse was built in 1895, and it has recently been in the process of evaluation as a cultural property with preventive protection. The railway, parallel to the riverbank, was built in 1898-99, and linked the new industrial area on the Danube with the Railway Bridge on the Sava, cutting the connection time between the city and the rivers.

After WWI, Belgrade was the capital city of the new Kingdom of Serbs, Croats and Slovenes (later the Kingdom of Yugoslavia), and it rapidly grew. The city lost its centuries-long border position, and large-scale reconstruction was planned. One of the basic goals of the city authorities was a modern city

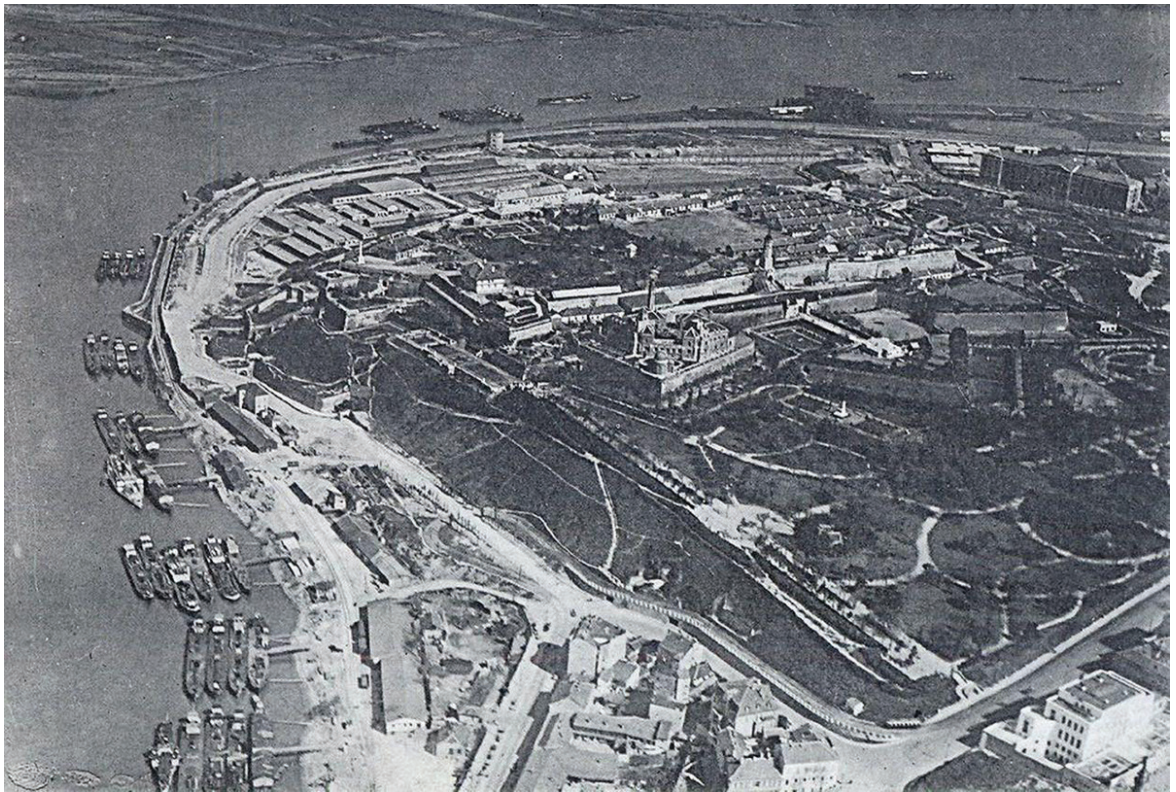


Figure 1: Belgrade and its industrial sites along the waterfront in 1936 / Слика 1: Београд и индустријско наслеђе уз обалу из 1936.

community infrastructure. The first Master Plan was completed in 1923 and one of the main problems it highlighted was that of traffic, especially river and railway traffic, with the consideration that such traffic was of vital importance to the successful future planning, growth and development of the city. In order to connect Belgrade with the Pannonian Plain, new bridges over the Sava and Danube were planned (Dajč, 2019; Dajč & Samardžić, 2011).

The general urban plan from 1923 foresaw that Belgrade would become the capital of a great state. The plan emphasized the importance of the river banks. It also highlighted the relocation of transit traffic along the Sava coast, as well as the main railway station. The idea was to plan a pedestrian zone that would connect the Sava and Danube banks across the area of Belgrade Fortress. However, relocating the station was too much of a challenge, so the idea was abandoned. The biggest shortcoming of the 1923 plan was the impossibility of a clear demarcation between the city and its suburbs, where factories and new housing estates for workers were planned to be built. Urban planners considered this plan a failure, because it was too focused on the city centre, and less on the settlements on the outskirts of the city (Dajč, 2012).

During the 1920s and 1930s, the 29 industrial facilities from the beginning of the 20th century very quickly increased in number (see Figure 1), so that in 1941 Belgrade had 206 registered industrial facilities. The majority were located along the banks of the Sava and the Danube, at *Čukarica*, *Mostar*, *Savamala*, *Dorćol*, *Palilula* and *Karaburma*. We can say that this industrial heritage represents a part of the European heritage and memory, since a great number of the industrial buildings were built by architects from Central European countries (Hungary,

Austria, Bohemia, Germany and France) and the typology of the buildings is similar to European buildings, although specific local elements can be noticed. One of the major facilities was the new municipal power station, *Snaga i svetlost (Power and Light)*, erected in 1932.

Many buildings along the riverbanks were severely damaged during WWII by the German bombardment in 1941, as well as by allied forces in 1944. Consequently, the period immediately after the war was characterized by the loss of half of the industrial facilities, bringing their total registered number in 1950 to 90. The establishment of a new political framework and socialist state brought significant change to the industrial sector. In addition to the processes of a planned economy, the industrial sector was also shaped by the process of homogenization of individual locations and manufacturing facilities. The spatial distribution of the manufacturing facilities themselves remained unchanged, with a higher proportion of facilities on the waterfront (along the Danube). The period of the 1960s was characterized by the constant annual growth of industrial production, with an attempt to relocate manufacturing to suburban areas, within the framework of the new homogenization processes for industrial facilities. The period of the 1970s and 1980s was characterized by a process of relocation of industry from central city areas, but also by the opening of new facilities on the waterfront. In this period, the economic sector lost touch with innovation and the processes of modernizing industrial facilities.

A period of disintegration in the 1990s considerably increased the negative trend in the industrial sector, accelerating the processes of degradation and the closing of numerous industrial

complexes. This process, as well as a poor strategy for industrial production, additionally increased fragmentation of the market. Industrial production dropped by 20%, and the negative trend that started in the 1980s reached its culmination. In the urban development plans, the riverbank area was never considered as an integral part of the city fabric, and a major part of the old industrial zone is today dilapidated and neglected (Nikolić et al., 2020).

Regardless of its state of neglect, the specific historical and urban identity and use of the Sava Port area have been preserved until today. The area is a basic element of the historical cityscape of Belgrade and the Sava River waterfront and a focus of interest for planners and investors. The most important areas on the confluence are *Belgrade fortress*, a listed cultural monument of outstanding value, and *Kosančićev venac*, a cultural and historical unit of great value.

Selected industrial heritage sites and buildings include 11 buildings situated along the Sava and Danube waterfronts in the areas of the former Sava and Danube industrial zones. Starting from the Mostar industrial area they are [1] Milan Vapa's Paper Factory, [2] the state printing house building (BIGZ), [3] the steam mill located in the former Mostar industrial zone; [4] the firebox, turntable and water tower of Belgrade Train Station, [5]

Belgrade Train Station in the Belgrade train station complex; [6] Belgrade Port Customs building, [7] Belgrade Port Customs warehouse, [8] Belgrade Port Warehouse (Beton Hala/Concrete hall) located in the area of Sava Port and Savamala, [9] Belgrade single-track railway – *Klanicka pruga*, [10] the old textile factory (BEKO) and [11] the municipal power station *Snaga i svetlost*, situated in the area of the Danube industrial zone. All of the selected buildings are located on very attractive locations in Belgrade, which are currently the subject of the largest construction projects in the city, namely Belgrade Waterfront, Belgrade Linear Park, K-District and Marina Dorćol (Fig. 2).

With regard to the selected industrial heritage sites and buildings, the research will have the following research structure, representing a) a short historic overview of the site, b) the present situation and use of the buildings, c) the level and character of the industrial heritage protection and d) the presence of the grassroots initiative that advocates the conservation of this facility or complex. The research methodology is defined in order to show the attitude towards and treatment of industrial heritage, through a comparative presentation of planning and implementation, as well as the ways citizens respond to the mentioned building initiatives and their awareness of the need to preserve the industrial heritage.

Figure 2: Map of the industrial and technical heritage along Belgrade Waterfront / Слика 2: Мапа индустријског и техничког наслеђа дуж београдског приобаља



Mostar industrial zone

One of Belgrade's former industrial zones is located along the left bank of the Sava River, from Ada Ciganlija to Mostarska Petlja, along Vojvode Misić Boulevard, called Mostar industrial zone. This zone was active in production until the 1970s, and is rich in the material remains of its industrial buildings. Most of the buildings do not have their original function: some have been demolished, but some of them are working according to their original purpose, such as the Institute for Manufacturing Banknotes and Coins in Topčider. A number of industrial heritage sites have been revitalized. Some buildings whose purpose has been changed are in good condition, primarily because of the solidity of the construction and the care of the current owner. This research covers the following buildings in the Mostar industrial area: Milan Vapa's Paper Factory, the state print-shop (BIGZ) and the steam mill, known also as the Old Mill "9th May".

The Milan Vapa Paper factory, a cultural monument, was built by industrialist Milan Vapa from 1921 to 1924. The factory building and plant were designed by architect Karl Hanisch. The factory building contained premises intended for the production and storage of securities, followed by the owner's office, the kitchen, the dining room, the infirmary and the rest rooms. The architectural design of the building clearly

emphasizes the principles of academicism in architecture, and the representation of the main facade towards Vojvode Mišić Boulevard is most representative. With its urban position, it is a material testimony to the existence of an industrial zone along the right bank of the Sava River. Today it is one of the most preserved objects of industrial architecture in Belgrade and Serbia. The factory complex does not have the old original machines. It now houses offices and warehouses (Institute for the Protection of Cultural Monuments of the City of Belgrade, 2012a) (Fig. 3).

The state printing house (BIGZ), a cultural monument, was built between 1936 and 1940. The project was carried out by the prominent architect Dragisa Brašovan, one of the leading architects of the Modern movement in Serbia. It is a multi-storey building, which is particularly significant, since for the first time in Belgrade's architecture a reinforced concrete skeleton structure was applied. The design of the building is dominated by horizontal and vertical surfaces with a pronounced use of glass in the design of the facades. The design of the building is in the spirit of the European modern architecture of the time, with the distinctive influence of Bauhaus architecture. The factory complex does not have its old original machines (Institute for the Protection of Cultural Monuments of the City of Belgrade, 2012c).



Figure 3: The Milan Vapa Paper factory/
Слика 3: Фабрика хартије Милана
Ване



Figure 4: The Old Mill, after
reconstruction (left) and The State
Printing House (BIGZ) / Слика 4:
Стари Млин пре реконструкције
(лево) и Зграда државне
штампарије (БИГЗ)



Figure 5: The main railway station, today a museum / Слика 5: Главна железничка станица, данас Музеј

The steam mill, a cultural monument, was built in 1902 and was the first mill in Serbia that belonged to a shareholders' association. It was equipped with contemporary machines, and with the level of its technical equipment it could compete with the mills in much better developed countries. Besides steam power, it also had electric generators and was the first mill in Serbia that introduced electric power in 1912-1913. Between the two world wars, owing to its capacity and production, it was one of the biggest and most important mills in Yugoslavia. The building of the steam mill, called the Old Mill, was a characteristic edifice of industrial architecture subject to its function. Its complex, in which it had been the oldest mill in the area, was demolished and a new facility was constructed in its place with a new purpose, a hotel. Its demolition is particularly debatable, since at the time of demolition the facility enjoyed legal protection (Institute for the Protection of Cultural Monuments of the City of Belgrade, 2012d) (Fig. 4).

Belgrade Railway Station Complex

The Belgrade train station complex covers all the building and structures related to Belgrade's main train station. Accordingly, the research covers the following buildings and structures that are of importance as industrial heritage: Belgrade Railway Station and the firebox, turntable and water tower.

The main railway station, a cultural monument of great importance, was built in 1884, according to a conceptual design by Austrian architect Von Vlatich, and it was designed by architect Dragiša Milutinovic. It is one of the first railway stations in Serbia to be built, with a project that included all of the related facilities, in a similar way to other significant railway stations in Europe, in the second half of the 19th century. The building was designed in the spirit of academicism. It is a testimony to the architectural and technical development of Serbia in the second half of the 19th century (Fig. 5).

The railway station complex also includes the firebox, turntable and water tower, which are covered by prior protection. The buildings are located at the point where the Mostar industrial zone and Belgrade train station complex meet. This group of buildings was completed in 1925 and started operating a year

later. The firebox was built according to a project by engineer Nikola Raičković. The firebox building had a large modern semi-circular hall designed to house steam locomotives on the track, with 31 places for locomotives, a new turntable and an administrative building. The lodge complex also housed a blacksmith's shop, a scraper, a workshop, a foundry and a gas factory. The water tower was situated on the location of the existing one, but it was destroyed during WWII (Institute for the Protection of Cultural Monuments of the City of Belgrade, 2012b).

Sava Port area and Savamala

Sava Port and Savamala are located next to the Belgrade railway station complex. As one of the most important central areas of the city, they include several buildings and structures that served the purposes of Belgrade Port, such as Belgrade Port Customs building and warehouses. The area of Savamala is known as an important former trading zone of the city and one of the locations that have undergone major transformations.

The old main Sava Port building was built around 1880 and was one of the most beautiful palaces in the Savamala area. It was used as a customs office for Belgrade Port, and later became a Naval Museum. During the typhoid epidemic of 1915, and then for the major influenza epidemic (Spanish flu), it was used as a quarantine facility, from which it derives its current name – Spanish House. Belgrade Port Warehouse is situated in the near vicinity of the Belgrade Port Customs building. It was built in 1884. This area is also characterized by other residential buildings and warehouses from the late 19th and early 20th century, in the area well known as Savamala (Fig. 6).

Concrete Hall was built in 1936-1937, as a river dock warehouse for Belgrade Port. The back of the hall was used as a railway tunnel for a single-track railway line that went to the Slaughterhouse. At the end of the 20th century, Concrete Hall became abandoned and ruined, but in the last decade, its excellent position on the riverbank and view of the confluence have caused these old warehouses to have a new use as a recreation and tourist facility (Fig. 7).



Figure 6: Belgrade Port Area (1933) /
Слика 6: Београдско пристаниште
(1933)



Figure 7: The Concrete Hall building /
Слика 7: Бетон хала

Figure 8: Belgrade textile factory
(left) and New exclusive housing and
business centre (right) /
Слика 8: Фабрика текстила, (лево)
и Нови комплекс за становање и
пословање (десно)

Danube industrial zone

The Danube industrial zone was developed in the area stretching from Dorćol to the present-day Pančevo Bridge and further on towards Karaburma. The attractiveness of the area depended on transportation advantages, water supply, wastewater discharge on vacant undeveloped land, and the proximity of the municipal power station built near the Danube in 1892. Moreover, this was the first industrial zone connected to the railway system, which was a considerable boost to its further development. Among other buildings, it includes the following objects and sites that are of great importance for this research: the single-track railway known as Klanička pruga, the old textile factory (BEKO), the Snaga i Svetlost thermal power station and Kosta Šonda's Confectionery Factory.

Ten years after the central railway station was commissioned, the construction of a slaughterhouse on the Danube began. The Klanička pruga single-track railway, which was commissioned in 1899, ran from the main railway station along the coast of the Sava River, through the dock along the Sava quay in front of buildings with storerooms and shops, and continued around





Figure 9: The Snaga i Svetlost thermal power plant /
Слика 9: Термоелектрана „Снага и светлост“

the Lower Town and across Jalića to the slaughterhouse. The Klanica railway station (later the Danube station) was also opened on this line, which, received new tracks over time. It had previously been a “blind track” which stopped at a gorge, until the construction of Pančevo Bridge, after which it continued across the river to Banat. In the interwar period, the railway grew into an industrial railway to serve the Danube industrial zone. Altogether, the Belgrade train system was modest, but due to railroads running parallel to the Sava and Danube rivers, it was difficult for any future urban development (Vuksanović-Macura, 2015; Mihajlov, 2011).

The Belgrade textile factory building was built in 1931. It is a complex under previous protection. It is located in the Danube industrial zone and belongs to the complex of Belgrade Fortress, with protection as a cultural monument of outstanding value. This fact is of great importance, because all discussions related to this area start and end with it. Today, this complex has been largely demolished and a new complex has been built for exclusive housing and a business centre (Fig. 8).

The Snaga i Svetlost thermal power plant, a cultural monument, was built from 1930 to 1932, according to a project by the Swiss Society for Electrification and Transport from Basel. The complex consists of a power plant building, a crane, a pumping station and a filter plant. This industrial complex is one of the most significant parts of the interwar period, with a distinct Bauhaus style influence in its design. In addition to its architectural value, the complex attained significant technical achievements related to AC power. The buildings are in very poor condition today, they are abandoned and in ruins. Within the complex there are remains of machinery and other machine plants (Fig. 9).

PLANS FOR THE PARTICULAR INDUSTRIAL HERITAGE SITES

Along with the database of the current urban plans of the city of Belgrade, most of the selected locations with the former industrial buildings are covered by planning documents of different character (Fig. 10). The provisions of the following planning documents apply to all sites: The Regional Spatial

Plan of the Administrative Area of the City of Belgrade (2011), The General Urban Plan of Belgrade (2016) and The Plan of the General Regulation of the Construction Area of the Local Self-government unit - City of Belgrade (2016).

The Regional Spatial Plan emphasizes the identity of the City of Belgrade as an increasingly important basis and support for the development of the economy, and especially for the development of tourism, as well as for the empowerment of the citizens’ sense of belonging to the territory which they inhabit. In this context, the natural and cultural heritage is seen to play a special role, and the city will strive to value this part of its capital to its maximum cultural and economic value, thus competing with the metropolises in the European environment. Thus, cultural heritage, as the most physically and spiritually important resource, with the necessary respect for high standards of protection and sustainable development in general, is seen as an incentive for the overall economic development. Besides considering cultural heritage as a generator of tourism and wider economic development, the dimension of social sustainability is also recognized, with its role to ensure live and interactive communication with future generations through the preservation of significant features relating to the development of society, historical areas and national culture.

Accordingly, the plan defines the general objectives of heritage protection such as: stopping the further degradation of existing spaces and physical structures; preserving the most valuable examples of cultural heritage; defining methods and procedures for working on urban conservation and restoration in specific cases; defining guidelines for raising the quality of the environment in cultural and historical areas; creating the preconditions to activate the economic potential of cultural heritage rich areas; creating a dynamic community and a sustainable local economy; facilitating the creation of new and strong visions of cultural diversity in heritage, as a symbol of economic and political power, using a new, harmonized language of urban and rural forms and creating a new scale of value for the total immovable cultural property stock; and synthesizing sustainable development that is fully integrated with heritage and other conservation.

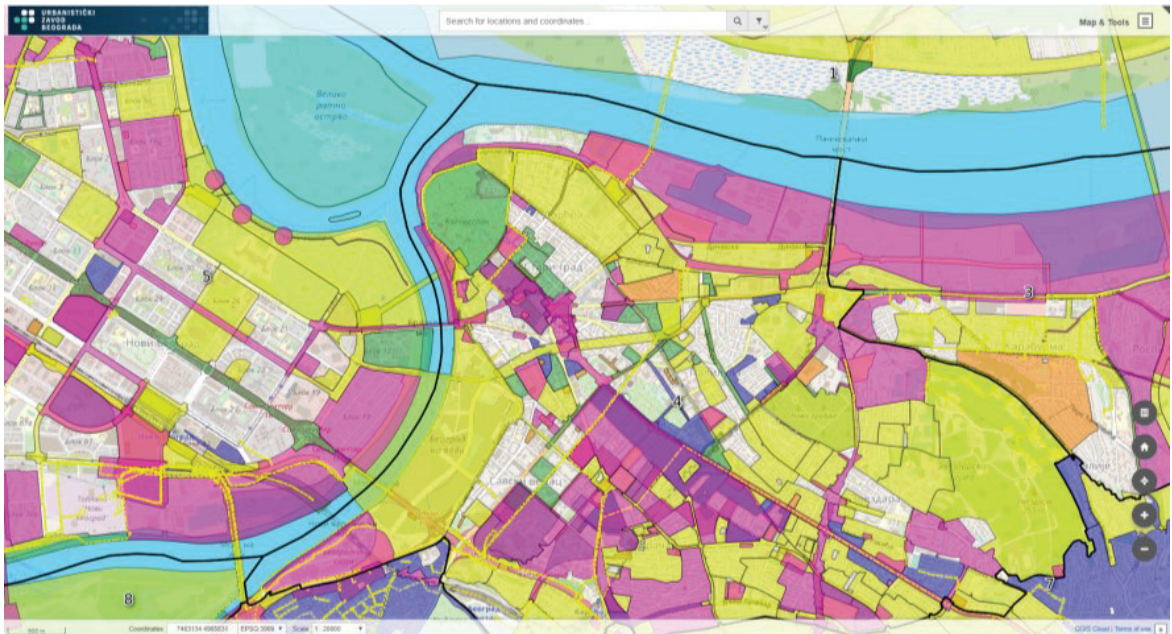


Figure 10: Overview of current urban plans for the City of Belgrade / Слика 10: Преглед актуелних урбанистичких планова града Београда

The plan provides demarcation in terms of the value of cultural heritage and its concentration in four areas, with four different levels of treatment regarding the built heritage - areas of integrative conservation, areas of general renewal, targeted urban regeneration areas and areas of occasionally concerted interventions in the urban tissue. Integrative protection has particular importance in the plan, which is seen as an approach that encompasses more effective protection mechanisms within a range of legal and economic instruments. On the one hand, it would work to deliberately introduce cultural heritage into economic flows, and on the other, seek a balanced compromise between heritage protection doctrine, daily needs and patterns of economic circulation. Accordingly, the plan recognizes the role of creative industries and constructive innovation in heritage conservation, the potential of cultural heritage to enhance the value of an investment site, and, of course, the need to restore, revitalize and change the use of industrial heritage buildings as an incentive for economic and cultural development.

The General Urban Plan of the City of Belgrade further elaborates the guidelines provided by the Spatial plan but also cites certain degrading elements such as the treatment of heritage, objects of natural and cultural heritage, or the sites and complexes of industrial archaeology as cultural and tourist attractions. In this way, priority is given to tourism and economic aspects, which can be interpreted as neglecting the social dimension and its importance.

In accordance with the recommendations of the spatial plan, areas with four different levels of treatment of the architectural heritage have been defined. These four areas include (1) the area of integrative protection, (2) the area of general restoration, (3) the area of directed urban renewal and (4) archaeological and monumental heritage. The first two areas are important for the research, because they include Belgrade Fortress and Kosačićev Venac, to which the rules in the field of integrative protection apply, and Belgrade Historic Core, Savamala and

Belgrade Industrial Zone, which belong to the area of general restoration. For the first area, application of the method of integrative conservation, as a comprehensive conservation approach in the treatment of cultural heritage³ is suggested. The second area uses the combined application of integrative conservation, urban renewal and landscaping, adjusted to the scale and level of the value of the built heritage.

One of the primary tasks that defines the GUP is to raise awareness of the importance of preserving and protecting cultural heritage as the basis of national and cultural identity, and in the context of long-term economic benefits and profitability, it should lead to qualitative shifts in planning, protecting and improving the use of immovable resources and cultural property. In addition, an important segment of planning is urban protection, which has the task of planning and integrating the overall urban and architectural heritage into the contemporary life course of the city as a factor in its overall development. The mechanisms of urban protection are horizontal and height regulation, preservation of silhouettes and vistas, and the application of materials, colours and architectural elements, which define the space and physical structure of a certain area.

The General Regulation Plan of the Construction Area of the Local Self-government unit – the City of Belgrade states that in order to implement the plan in accordance with the commitment to sustainable development and the preservation of cultural identity, direct cooperation with institutions for the protection of cultural monuments and the implementation of binding rules for protected objects or entities relating to the form of objects and spaces are necessary. Rules that may deviate from the general parameters for the specific purpose of the general regulation plan can best be achieved by incorporating

³ It involves a set of methods used by the Cultural Monuments Protection Service under the provisions of the Law on Cultural Property and the method of urban protection.

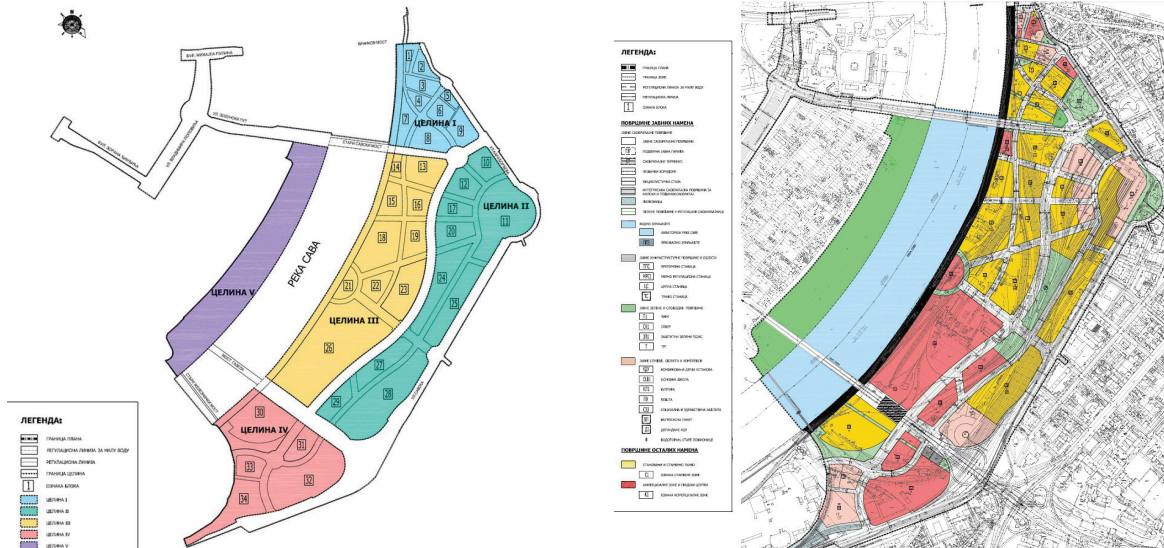


Figure 11: Spatial plan for the special purpose area of the development of part of Belgrade's coastal area - the Sava riverfront area for the Belgrade Waterfront project, 2015. a) Division of the area into five units and b) Land use. / Слика 11: Просторни план подручја посебне намене за развој дела обалног подручја Београда - подручје обале Саве за пројекат „Београдска рива“, 2015. а) Подела подручја на пет целина и б) Намена земљишта.

the retained building into a new construction while preserving and emphasizing its qualities. This can also be interpreted as purely reliance on professionals to define how to protect and preserve certain cultural assets and heritage.

The plan divides Belgrade into twenty distinctive territories. Within each unit, all protected objects are listed and tabulated accurately. In this regard, most of the objects and complexes covered by the survey belong to Unit 1 - Centre of Belgrade, while only 2 facilities (BIGZ and the Old Mill) belong to Unit 14 - Banjica, Dedinje. Unit 1, the centre of Belgrade covers the historic centre of Belgrade, Terazije, Slavija, St Sava Plateau, Port of Belgrade, the Sava amphitheatre and Prokop, and as such it reflects the historical development and growth of the city from the city nucleus - Belgrade Fortress, Belgrade Beam and King Alexander Street towards the Smederevo Road and its growth towards the banks of the Sava and Danube.

Thus, the area of the Belgrade fortress, as a protected cultural property of great importance, also has an impact on the localities in its contact zone: Beton Hala (Concrete Hall) situated in the area of Belgrade Harbour and the BEKO factory complex. According to the plan, Beton Hala will be retained and transformed into a commercial dock space and passenger dock facility, while the BEKO block will be retained, and its transformation is anticipated. The largest transformations foreseen by this plan are expected in the zones of the Sava Amphitheatre and the Port of Belgrade. Instead of transport and production activities, these areas are supposed to become future urban centres. The intensive transformation zones include Milan Vapa's Paper Factory, Belgrade train station and its complex, including the firebox, turntable and water tower, Belgrade Port Customs building, Belgrade Port Customs warehouse, Belgrade single-track railway – *Klanicka pruga* and the *Snaga i Svetlost* municipal power station. For these zones, the plan envisages the application of mixed commercial, public and residential uses in future regulatory developments.

Through planning, new high quality, attractive and urban neighbourhoods with accessible public spaces, especially along the river, should be provided. Transformation zones require public expert examination in the context of urban planning competitions and audits.

The complex where the state printing house (BIGZ) and the Old Mill are located, belongs to the Unit 14 - Banjica, Dedinje. The location is marked as Zone 16.M 1.1 and is designated as an area for the immediate application of construction rules. For the construction of a new building in this zone, it is obligatory to design an urban project, while the height of the wreath and the architectural design of the building are determined in accordance with the conditions of the competent institution for the protection of cultural monuments. The implementation area is characterized as a mixed city centre – a combination of commercial purposes with housing and business.

The General Regulation Plan, which is committed to sustainable development, cultural identity, and the conservation of space, proposes direct cooperation with institutions for the protection of cultural monuments, and the implementation of binding rules for protected objects or entities relating to the form of objects and spaces. In cases of deviation from the general parameters for the specific purpose of the general regulation plan, it is best to incorporate the retained building into the new construction, while preserving and emphasizing its features. Lower order plans define more specific conditions for individual objects and complexes, which will be outlined below.

The spatial plan for the special purpose area of the development of part of Belgrade's coastal area - the Sava riverfront area for the Belgrade Waterfront project (SPSPA Belgrade Waterfront, 2015) covers most of the subjects from the study area. It is divided into five units (Fig. 11). In relation to the division of the area defined by the plan, Milan Vapa's Paper Factory belongs to Unit IV, the firebox, turntable and water tower of Belgrade Train

Station and the station itself are situated within Unit II, while Belgrade Port Customs building and Belgrade Port Customs warehouse are in Unit I.

Unit I belongs to the part of the city formed at the end of the 19th and the beginning of the 20th century, known as Savamala, and it represents a zone of special cultural and historical significance. The plan envisages the protection of views from Terazije Terrace, retention of the existing street matrix and construction limited to small compact blocks with low floors (max. GF+4+A / 18.5m), reconstruction of all cultural monuments and connection of the entire area with the Sava coast using green areas and corridors. In the area of **Unit 2** there are significant historical buildings that need to be protected, first of all the train station and post office buildings, as well as the train station complex turntable with a water tower and a firebox. This will preserve the memories of the old function of the site. Unit 2 is also a public content zone, so the plan is to create new public complexes intended for culture. The construction conditions in this part of the amphitheatre mean that it is not possible to build compact blocks (max GF+8+A), while the part with the newly planned boulevard leaves the possibility of slightly taller buildings (max GF+12+A). The special character of construction is retained in the area around the old railway station where only lower floors (GF+4+A) are allowed. Within this unit, a new Sava Square is envisaged, as well as the formation of a large city park. This preserves the existing ambient in the area dominated by the train station facility. **Unit 4** is largely residential, but commercial and public facilities and complexes are also planned. Here, the commercial zone would be located along Gazela Bridge and closer to the Mostar Loop, while housing would be along the river. The commercial zone, in correlation with the Old Mill and BIGZ buildings, would be a zone with a special character to its construction, so the height of the buildings could go up to a maximum of 60 meters. A special character is also planned for the residential area with parking areas and connections to the primary roads, while a much lower floor is recommended for residential enclosures (GF+6+A). This zone is also the location of the protected Milan Vapa Paper Factory.

By examining the land use plan, it was determined that the following purpose is foreseen for individual objects: culture is foreseen for the warehouses in Savamala, the old railway station and its complex of a turntable, water tower and firebox, while the transformation into commercial zones and city centres is being planned for the complex where Milan Vapa's Paper Factory is located. Although the SPSA plan envisages radical transformation of the whole area, dominated by high-rise buildings, at some locations of the plan much more moderate urban solutions are proposed. This primarily refers to the Savamala area, which will be preserved and protected in its entirety, without any height popping. In addition, some of the public contents and facilities within the Belgrade Waterfront project will be the subject of open architectural competitions, and a competition for the solution of the whole around the Railway Station and Sava Square is expected.

As previously stated, the Plan of General Regulation directly applies to the location where BIGZ and the Old mill are built, because there are no lower-level planning documents adopted for this location. These facilities are mentioned in the spatial plan for Belgrade Waterfront as objects in the immediate vicinity which are monumental and representative examples of Belgrade's architectural and industrial heritage.

Beton Hala with an accompanying railway tunnel is defined by the **detailed regulation plan of the spatial unit Kosančićev venac** (2007). These structures are situated on parcels P10 (Beton Hala) and P7 (Railway tunnel). Due to its size, Beton Hala significantly participates in the silhouette of Belgrade and Belgrade Fortress, which is why it can be altered only for essential purposes. On the roof of the building and the tunnel, pedestrian public space is envisaged. With regard to the planned use, both Beton Hala and the tunnel are seen as facilities of public interest that are intended for public functions and related facilities. During the period of adoption of this plan, some segments of the Beton Hala building have already been reconstructed and converted into galleries, clubs and exclusive shops. Thus, the plan practically supports the initiative on the basis of which this space has begun its successful transformation. This plan also mentions the relocation of the existing railway line (Klanička pruga) but deals only with interventions and safety measures concerning the period that the rail is still present in the area.

The detailed regulation plan for the block between Dunavska and Tadeusa Koščuškog streets and Vojvoda Bojović Boulevard was adopted in 2012. The main building of the BEKO Textile Industry (GF+3+A) in an urban and architectural sense is an object of importance because of its cultural and historical value. Accordingly, the plan prescribes following protection measures that include reconstruction, with the extension of floors and attics, the restoration of facades, and the change of use into attractive commercial content - in accordance with the closer conditions of the Republic Institute for the Protection of Cultural Monuments and the static characteristics of the building. The BEKO building can be reconstructed and upgraded to GF+4+A, with a maximum wreath height of 27m. The facility is planned as an office building with open office space. In the hinterland of the existing building, two new office buildings are planned that, with BEKO, should function as a modern business complex.

The detailed regulation plan for part of the central zone – the spatial unit of Marina Dorćol (2005) notes that its subject area is under previous protection as a unit called Old Belgrade. The plan also refers to the designation of the GUP, whose list of cultural and historical heritage under the heading "List of objects of industrial architecture" includes the Snaga i Svetlost power plant and the crane above Marina Dorćol. It is also stated that these objects are monuments of industrial heritage that are very specific and insufficiently explored in the history of our city. It is suggested that in further elaboration, in order to determine the adequate treatment of these objects, it is obligatory to cooperate with the Museum of Science and Technology, which is a competent institution for objects of

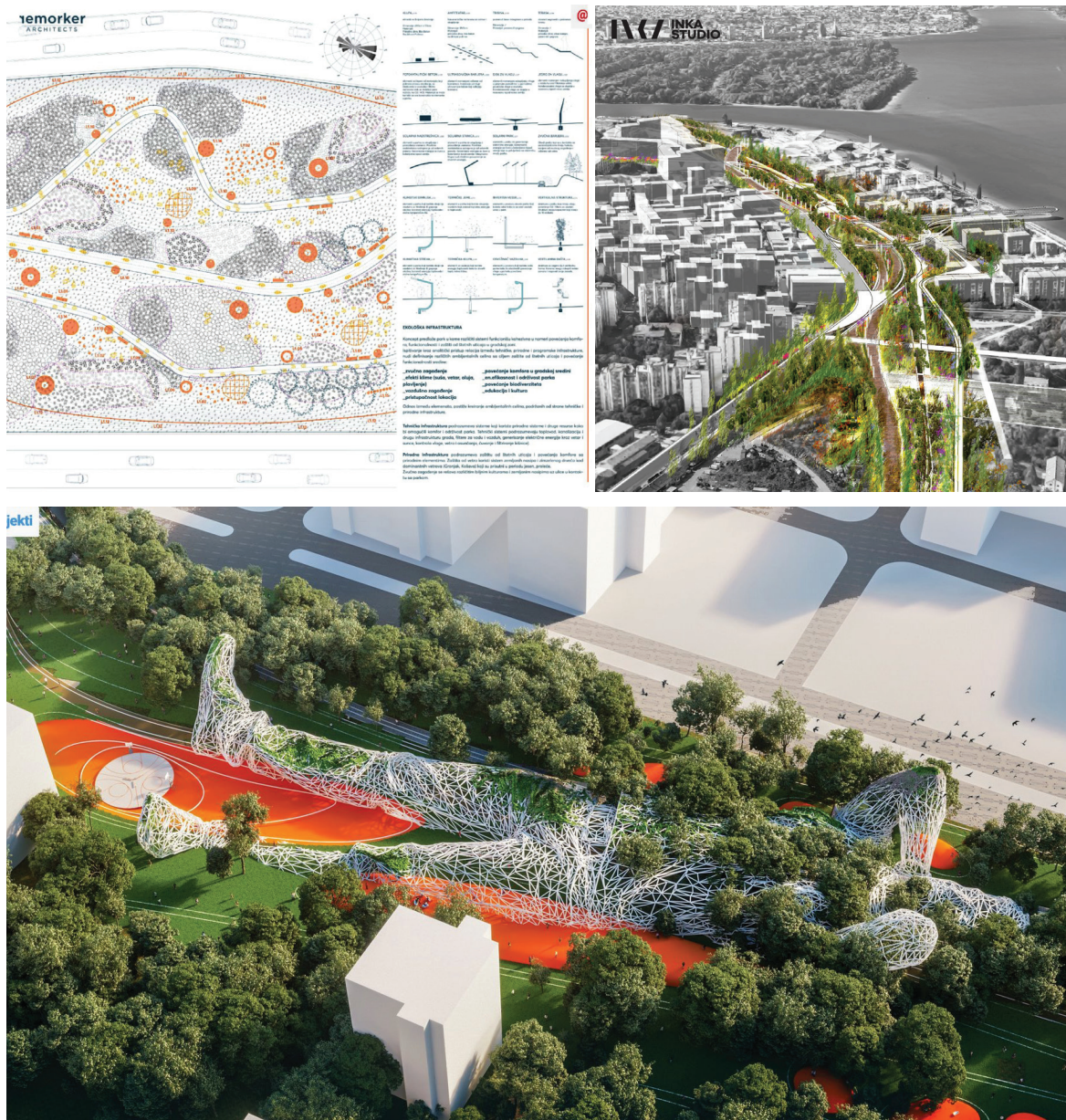
industrial heritage. In addition, it is noted that these buildings are of historical and architectural value, and given that Dorćol is part of a city that does not have many preserved buildings from earlier periods, it would be desirable to preserve and integrate them into modern facilities.

In relation to the area of Marina Dorćol, the DRP states that the power plant complex, part of the industrial heritage of Serbia and Belgrade, is a unique unit made up of a crane with a sleeve (pool) containing a pumping station and a water pump, as well as belonging to the land. Ideally, it would be an area with commercial amenities, while the building of the old power plant is beyond the plan. It is suggested that the power plant facility, separated from the context of the plan, but with the marina complexes itself, should be viewed more broadly, so that the power plant, a historically indisputable valuable environment, is better protected and as such placed in a favourable relation to the plan.

It is interesting to note that the complex around the marina belongs to the DRP for Marina Dorćol, while the facility of the Snaga i Svetlost power plant is covered by the **detailed regulation plan for part of the Ada Huja area** (2012). The importance of the territory covered is very important for the city, despite the fact that it is neglected and dilapidated. Accordingly, special attention is given to industrial facilities, which will be preserved and rehabilitated as a precondition for further development of the remaining industrial heritage in Belgrade. This would achieve the planned goals, which include affirmation of urban continuity and treatment of industrial heritage as a non-renewable resource and a stimulus for economic development.

The power plant facility is viewed in terms of its architecture that reflects the modernist approach, characteristic of European construction practice during the interwar period. Therefore, the building has been retained in its existing dimensions

Figure 12: Belgrade Linear Park - 3 of 10 winning proposals: Remorker studio, INKA studio, team Vukmirović, Vujović, Čorić, Radić / Слика 12: Београдски линеарни парк - 3 од 10 победничких предлога: Remorker studio, INKA studio, тим: Vukmirović, Vujović, Čorić, Radić.



and volume, with the use of conservation methods for its rehabilitation and affirmation. This includes a reconstruction of the original appearance of the exterior architecture and the characteristic details. By analyzing both plans, it can be seen that cultural content (cultural centres, museums, entertainment centres) with compatible purposes is proposed for the whole complex. The plan also prohibits the construction of facilities that, by their architecture, size and height, threaten the power plant facility.

Considering the Belgrade single-track railway *Klanicka pruga*, there is currently no valid plan for the entire railway line, except that a decision was made in 2018 to create a detailed regulation plan for a linear park. That plan will deal with the future transformation of this space into a large urban linear park that will be used as a connection between the city and its waterfront (Fig. 12).

By looking at the planning documentation, it can be concluded that all the objects covered by the research are represented in these documents, both generally under the term industrial heritage and individually as protected cultural monuments. Higher order plans outline general measures and approaches, while treating industrial heritage as a very important development component in preserving Belgrade's identity, as well as improving tourism and creating economic benefit. The protection measures mentioned are defined by the institutions dealing with heritage protection, while the dialogue and involvement of other stakeholders in these processes are not mentioned (except in the spatial plan, which recognizes the importance of creative industries and constructive innovation). The lower order plans indicate individual objects, their degree of protection and their future treatment, which should also be determined more closely by the Institute for the Protection of Cultural Monuments. Considering that the industrial heritage sites are located in very attractive areas for construction, the plans mainly emphasize the economic importance of preserving these facilities.

DISCUSSION IN LIGHT OF THE NEW APPROACH TO PROTECTING INDUSTRIAL HERITAGE PROTECTION

Due to tourism being a recognized generator of economic development, it can often result in commercialization and exaggerated interventions on cultural heritage, for the sake of providing comfort and variety in the tourist offer. Historical units in representative locations within the city core are particularly exposed to economic and political influences that are often contrary to conservation practices. Conservation is also largely dependent on funding, and in Serbia this is mainly from the state budget or foreign funds, which gives special weight to the conservation and politics of relations, i.e., to confront the interests of the state, city and local self-government.

In contemporary circumstances, the focus of preserving cultural heritage rests on self-sustainability and an integrative approach, and cultural tourism is recognized as a driving force and a fundamental factor in the self-financing of heritage, by

combining economic gain and fulfilment of the basic goal of protection, which is spreading knowledge about culture and the history of a place. Often, the economic gain from cultural tourism is oversimplified in relation to reality and it is often the case that it dictates conservation. Focusing exclusively on cultural tourism and the adaptation of heritage, primarily to the needs of tourists, in addition to often unjustified interventions, the issues for which the urban history of the city and its heritage are related are being ignored, because in order to meet the needs of tourists, emphasis is placed on the general values of comfort, which leads to globalization and loss of the original ambience and the spirit of the city. Also, both restored and revitalized areas become inaccessible to the local population, due to the high cost of living and the excessive number of tourists.

Similar problems and difficulties common in the rehabilitation of historical urban structures require active methods which will, through integrated management, enable their new role associated with social, urban and conservatory issues. The focus should be directed to: the preservation of social links which hold the community together; preservation or revival of residential functions; preservation of economic, social and cultural functions in a certain balance; help to improve environmental conditions; restoration of as many buildings as possible in a sustainable manner; and protection of the human ambience in a world dominated by global networks, which are diminishing contact between people and fostering alienation. Some industrial buildings on the Sava River can be successfully revitalized with appropriate tourist and cultural facilities (hotels, museum and gallery spaces, etc.), which would lead to significant tourist potential for this part of the city. *The Vapa Paper Factory*, *the Sugar Factory* on Čukarica, near to the Ada Ciganlija recreational area, and the old *Printing Shop*, which are listed cultural monuments, can be successfully revitalized, and can also obtain new facilities due to the degree of preservation required for this authentic architecture (Tab. 1).

Voluntary and long-term actions have to be based on the preservation of recognizable urban values, the establishment of political commitment and the development of a suitable management framework. Urban values are: *identity* – recognition of morphology and typology, the significance of rehabilitation of public areas, and the change of architectural perception – residents should identify themselves with the surrounding buildings; and *complexity* – diversity in a social and functional sense, ensuring that different social groups and features can exist together and that they can change.

Political commitment at the national and local level is necessary for the success of the rehabilitation of historical urban centres by means of financial help and legal regulations. Local authorities should be linked to the social and private sector. Rehabilitation should be a part of official policy, so that the rehabilitation of old buildings is ensured, and help to low-income residents provided in the light of gentrification, the creation of exclusive urban neighbourhoods. Active democratic participation of the

| Location | Heritage site of interest | Actual state and character of the site | Level of preservation | Plan for the location |
|--|----------------------------------|--|--|---|
| Mostar industrial zone | Old Mill | Reconstructed, occupied | The facility enjoys legal protection | Hotel |
| | BIGZ | Devastated, poor condition, occupied | Cultural monument | Mixed use |
| | Milan Vapa's Paper Factory | Devastated, poor condition, occupied | Cultural monument | Commercial zones and city centres |
| Belgrade Train Station Complex | Firebox | Devastated, very bad condition, unoccupied | The measures of previous protection | Culture |
| | Old Railway Station | Under reconstruction | Cultural monument of great importance | Culture |
| Belgrade Port and Savamala area | The Old Port House | Devastated, very bad condition, unoccupied, the space is not in a usable condition | No protection measures have been defined | Culture |
| | The Old Warehouse | Devastated, poor condition | No protection measures have been defined | Culture |
| | Concrete Hall | Partially reconstructed space, occupied | The protection of the facility is defined within the spatial cultural and historical unit of Belgrade Fortress | Public functions and related facilities. Hospitality |
| Danube industrial zone | Beko | Reconstructed, occupied | Complex under previous protection | Business centre |
| | Old power plant Snaga i Svetlost | Devastated, very bad condition, unoccupied, the space is not in usable condition | Cultural monument | Culture |
| | Klanica railway | Devastated, very bad condition | No protection measures have been defined | |

Table 1: Review of the main characteristics of the industrial heritage presented in the paper / Табела 1: Преглед главних карактеристика истражених зграда индустријског наслеђа

wider community is required (local residents and interested investors), with their organic interconnection in the process of making decisions on changes, as well as the creation of decentralized and interdisciplinary teams which design plans and interventions. This makes the process of planning flexible and changeable depending on the wishes of the local residents, entrepreneurs and investors. Rehabilitation should be based on sustainability and the preservation of an optimal environmental state of the vicinity, in addition to which traditional construction materials and techniques should be employed when renovating or constructing new buildings, along with the removal of heavy traffic and pollution and the restriction of motor traffic and similar. Coordinated, controlled and sustainable tourism management should be put in place, in order to generate income through the work of the local community, but without excessive pressure from the new tourist functions, which could damage the state of protected historical environments. The ultimate goal is to connect the past with the present and the future needs of the community.

Through the transition of society, socio-economic relations and competencies are also changing. Different actors and interest groups are involved, and funding receives different scope and pace. Laws and regulations in the field of cultural heritage in Serbia have not followed these changes with other laws, which

puts cultural monuments, and the protection services, in an unhealthy situation. Common for all transition countries is that urban development is taking place at a much faster pace than in the West, and urban resources are limited; there is also a desire to modernize and speed up the process of urbanization. All this contributes to the proposals and ideas about various, sometimes overly unsuitable, content in historical areas, primarily under the justification of the development of cultural tourism and the economy. In this sense, it is necessary to prevent the negative aspects of the development of tourism, such as: a) inadequate consideration of potential conflicts between tourism development projects and the protection of heritage, which most often leads to the development of bad plans and adverse impacts on natural and cultural heritage, as well as in the way the lives of local communities; b) conservation, interpretation and tourism development programs based on an inadequate understanding of the complex and most often conflicting characteristics of an area can lead to the loss of its authenticity and recognition; c) the lack of an adequate and appropriate presentation of the importance of heritage, both to visitors and local communities, can lead to misunderstanding and a poor relationship with the culture and heritage of the area in the wider sense. This can prevent or significantly reduce public and political support, as well as the available financial resources for the protection and promotion of heritage.

Based on the above, it can be concluded that these problems are in accordance with the views of the contemporary methodology of protection, and that the laws and strategies that define the field of tourism offer a framework for an integrative and self-sustainable approach to the protection of cultural heritage, which is also sought in the contemporary approach to the protection, revitalization, and presentation of historical spaces. It is necessary to devise long-term plans for Belgrade Waterfront which will increasingly involve various official and civil initiatives, make the area attractive for investment but with the preservation of cultural character and old construction stock. During future planning and design, radical changes such as the demolition of old buildings with environmental character and the construction of new buildings with dominant height should not be permitted. However, real and coordinated changes which will take into account the past should be created, in order to create diverse environments which will represent a harmonized blend of the old and new in accordance with modern needs. By establishing monitoring, a consistent plan for the protection and revitalization of the Sava and Danube coastal areas will be implemented consistently. Monitoring should consist of two segments: one is monitoring the state of the whole plan, and the other is monitoring its implementation.

CONCLUSION

We can conclude that architecture representing industrial heritage in Belgrade is an extremely valuable and inseparable part of its cultural heritage, but many industrial complexes and buildings are in extremely poor condition, either due to decay and inadequate maintenance, or due to incorrect renovations and conversions. The main problem with regard to such phenomena is inadequate legislation. Therefore, the most important issue of protecting industrial architecture refers to keeping a record of the work and registration in the protection system. Out of a large number of industrial heritage complexes in Serbia and Belgrade, only a few of them are included in the register of Immovable Cultural Property, and thus in the relevant legal provisions, which we have presented through this research. This condition of the register indicates that during the last decades the system and practice of protecting architectural and urban heritage of this type have not always been based on the results of scientific and professional research work. In addition to the facilities covered by the register, there is also a category of cultural heritage in the protection system that enjoys prior protection. These are objects or spatial units that have certain characteristics, but their inclusion in the register requires additional processing of documentation and declaration of immovable cultural property. This is the case e.g., with the Slaughterhouse Complex, which is included in the research in this paper. Previous protection in the Republic of Serbia lasts for three years, but very often that period is extended, so that in this category cultural heritage can enjoy this status for decades.

Within the conventions and recommendations related to the issue of industrial heritage protection, two key goals of the new protection policy are represented - the creation of a comprehensive register of buildings and the raising of public awareness regarding the value of this type of heritage. In addition to the need to identify industrial heritage, create a register and carry out appropriate valorisation, international charters emphasize the need to develop appropriate protection techniques and methods, as well as to disseminate knowledge in various professions, especially the need to oppose the demolition and distortion of significant works. The demolition and distortion of part of the industrial heritage in Belgrade is very pronounced, so it is very common for complexes that are under legal protection, such as the former Old Mill complex, to disappear permanently, all in order to suit different interest groups. In this way, the Law on Cultural Heritage in the Republic of Serbia is absolutely not respected, and due to the extremely strong influence of the mentioned groups, protection institutions, and various civil initiatives cannot oppose such phenomena. Industrial heritage is mainly used for marketing purposes when it comes to investor urbanism, but unfortunately the investors themselves decide on the final purpose of the facilities, with the support of the government, which mostly coincides with the planning acts. From this it can be concluded that the state, investors and various interest groups are in direct collaboration, without respect for the protection institutions that deal with this issue, or the professional public and their court.

Another key issue regarding the protection, revitalization and presentation of industrial heritage refers to the insufficient information shared with the professional and general public about the history, theory and practice of industrial heritage, as well as the issue of its protection. The main reason for this situation is insufficient research into some aspects of architecture and urbanism of the 19th and 20th centuries in Serbia, as well as the lack of study on this topic in the system of primary and secondary education. Moreover, developing public awareness is perhaps the most important part of preserving architectural heritage. In parallel with these activities, it is necessary to start a series of promotional and educational projects, as well as public discussions, which would aim to raise awareness of professionals and the general public about this type of heritage. Also, projects should deal with the development of strategies for the efficient collection of documentation, materials and information to identify works and form the register, as well as to encourage and support journalistic activities, and the organization of exhibitions, professional and scientific gatherings, workshops etc. For these projects to be successful, they should be based on the participation of all relevant actors, architects, urban planners, planners and participants in education and protection, as well as responsible persons in all administrative and institutional structures, with the obligatory involvement of the general public.

Based on previous research, we can conclude that citizens, to some extent, recognize the basic characteristics of industrial heritage and that initiatives by individual citizens are generally

proportional to the importance of the object of industrial heritage. This can be seen especially through various creative ideas, which are primarily focused on culture and education, and which citizens through various alternative events bring into industrial complexes with less monumental characteristics, while objects with pronounced monumental characteristics, such as the Main Railway Station can be used for example for museum contents. Very often, civil initiatives overlook the need for new purposes for such spaces, so in some cases these initiatives are made up of citizens who want to preserve the original purpose, as is the case with the Main Railway Station; this can also relate to new cultural and educational purposes. However, in practice, proposals by NGOs and citizens are ignored. Public institutions, such as the city, should make an effort to involve citizens and NGOs in decision-making processes, even online, because it is in their interest - a common idea, which is generally positively accepted and later nurtured, which is very important from the aspect of identity. This refers primarily to City institutions, such as the City Secretariat of the City of Belgrade and the Urban Institute of the City of Belgrade, but also to the Institute for the Protection of Cultural Monuments of the City of Belgrade, because they are currently very out of touch with the public and with NGOs. This is especially important, because planning acts generally refer to their opinion and final decision.

In recent years, the current authorities in the city of Belgrade, for marketing purposes, invite the most famous architectural studios from around the world to propose revitalization projects for certain industrial zones and complexes within the city, but without a previously announced international competition. The ideas of the city authorities are related to popularizing the city and attracting foreign investment, through such proposals and projects. However, the domestic professional public, non-governmental organizations and groups, as well as citizens are completely left out of these processes, without any opportunities to present their proposals and their critical judgment. Such current phenomena are certainly not in accordance with international charters and recommendations on the protection of cultural heritage, or with the principles of protection, revitalization and presentation of industrial heritage.

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