

Florian Nepravishtha
Andrea Maligari

MODERNISATION AND GLOBALIZATION

NEW PARADIGMS IN ARCHITECTURE, CITY, TERRITORY



La Scuola di Pinerolo
edtrice



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**FLORIAN NEPRAVISHTA
ANDREA MALIQARI**



La scuola di Pitagora
editrice

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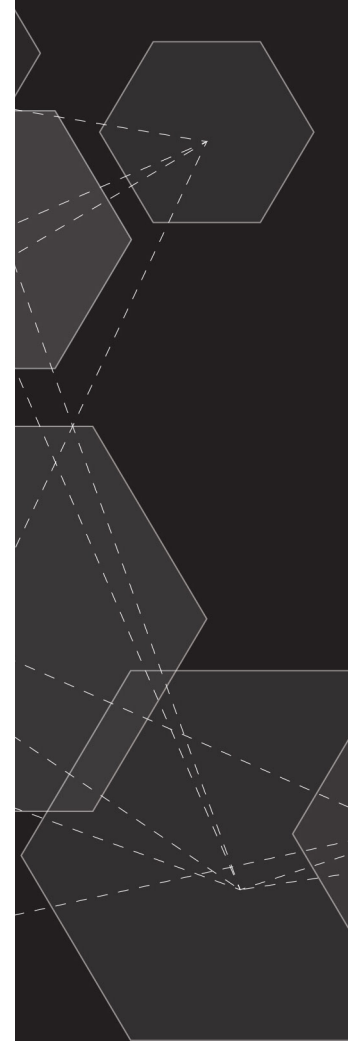


MODERNISATION AND GLOBALIZATION

New paradigms in architecture, city, territory

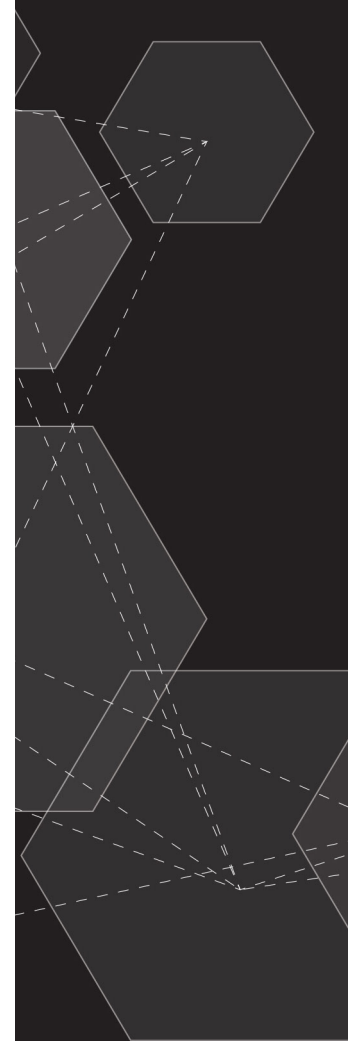


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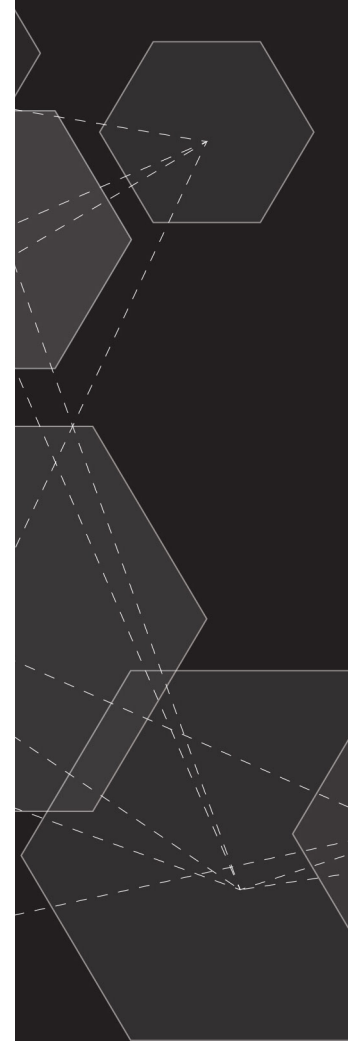
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Introduction

Modernization means the process of adapting something to modern needs or habits (Oxford Languages). However, the results of that process also become obsolete over time because needs and habits change, and buildings fall into decay. In the case of some buildings, as their construction and functional value are declining, the cultural value is growing. By recognizing and acknowledging the cultural values of such buildings, they become cultural monuments. It often happens that the process of rehabilitation of such buildings, and especially complexes, becomes difficult because of the changes that have taken place in the past in the name of progress and modernization.

In this paper, rehabilitation refers to a series of repairs and interventions on existing buildings that bring them closer to the modern usage requirements while preserving their original characteristics and adequate repurposing. This is precisely the case with a historically and culturally valuable but neglected industrial complex, "Sugar Factory", designated as a cultural monument, recognized from the aspect of brownfield regeneration as excellent potential for developing a new city unit of high ecological, cultural and aesthetic values.

Case study – Sugar factory in Čukarica

The Sugar Factory in Radnička Street 3 and 3a in Čukarica is the first industrial, architectural complex in Belgrade to be designated as a cultural property (Decision, "Official Gazette of the City of Belgrade", No.23 / 84). It is one of very few preserved factory complexes from the end of the 19th century in Belgrade, important for understanding and monitoring the urban development of Belgrade since its construction conditioned the establishment of Čukarica as workers' housing. Also, the Sugar Factory is an integral part of the cultural and historical unit of Topčider, which has been identified as a cultural asset of exceptional importance for the Republic of Serbia due to its special natural, aesthetic, cultural and historical values. It is located in its northern part, on the bank of the Sava River, more

precisely the Sava estuary (Zimovnik), in the immediate vicinity of Belgrade Fair, Hippodrome, Ada Mall, a large recreational zone with unique natural values - Ada Ciganlija and Ada Bridge, connecting this part of Belgrade with New Belgrade.

History

The Sugar Factory is the first industrial facility of its kind in Belgrade. Since its founding in 1898 until today, it has had several developmental stages, each accompanied by property transformation and works on the reconstruction and modernization of the factory. It was founded by the main shareholders of a large sugar factory in Regensburg: Alfred Hake, Julius Goldsmith and Max Weinschenko, who in 1900 erected the first facilities in the complex: a machine hall, a drying section, clerks and workers' apartments and a head office building. The first reconstruction and modernization of the factory were carried out under their management. The factory was owned by foreign capital until May 1920, when it was sequestered by a decree on the property of enemy subjects and temporarily placed under the management of the Ministry of Justice, Division for the Management of Hostile Property. In 1925 it became part of the state property and remained state-owned until the Second World War. Once again, during the state management of the factory, major reconstruction and modernization of the factory took place in 1930-1931. The main departments of the reconstructed factory were: beet processing department, refinery, boiler section and power plant.

A new noodle drying section was also built. In response to increased molasses production, a new factory for the production of ethyl alcohol and yeast was built within the complex. In the period 1939-1940, a boiler section with turbine and generator, laboratories, workshops, and finished goods warehouses were built within the complex. Due to the damage during the Second World War, a new reconstruction and modernization of the factory followed after the liberation. Production at sugar factories and ethyl alcohol and yeast production took place at the same time

until 1983, after which sugar production was transferred to Padinska Skela. The plants at the subject location were abandoned, and the equipment was transferred to a new factory or sold out. The ethyl alcohol and yeast production plants continued to operate; in 1984, they were put under the management of the newly formed company (Dimitrijević-Marković, Sretenović, 2008).

Existing state: physical structure and ownership

Numerous reconstruction works resulted in the mixed building structure in the complex, both in terms of architectural values and their function. The oldest and most architecturally valuable buildings date from the foundation of the factory. The machine hall makes the spatial focal point of the complex with its immense size and high chimney. The drying room, with simultaneously built technical material warehouse, have also been preserved, as well as clerks' and workers' flats and the administrative quarters building – which is now a restaurant. These were built similar to industrial, architectural structures in the 19th century in northern and central Europe (use of brick in materialization, simplicity in facade design, reduced decorative elements, etc.).

Nowadays, it is primarily a neglected and devastated area, which does not represent a whole, either functionally or proprietary. The part that once belonged to AD Vrenje, including the part of the machine hall, is also physically separated from the rest of the complex by a wire fence. Residential buildings for former workers and clerks, now with privatized apartments that in the meantime changed owners, are spatially but not functionally part of the complex. Common to almost all non-residential buildings is the lack of maintenance and deterioration, abandonment or endangerment due to inadequate purposes, with the exception of the theatre, with long standing problems about ownership status, formed in one part of the machine hall. In addition to various types of damage, traces of partial, non-professional interventions are visible in almost all buildings. Several buildings that have been recently constructed for various purposes, from housing to a gas pump, additionally spoil the space (Dimitrijević-Marković, Sretenović, 2008) (Fig.1).

Rehabilitation opportunities and problems

Despite its relatively poor condition, the complex has mostly preserved its ambience. All the facilities, regardless of their condition and individual values, participate in its

formation and testify to the establishment of the factory. These points to the necessity of planning the actions and preserving the complex with all its buildings. This is supported by all relevant institutions involved in the planning process, the Republic Institute for the Protection of Cultural Monuments, the Urban Planning Institute of Belgrade and the Belgrade City Assembly.

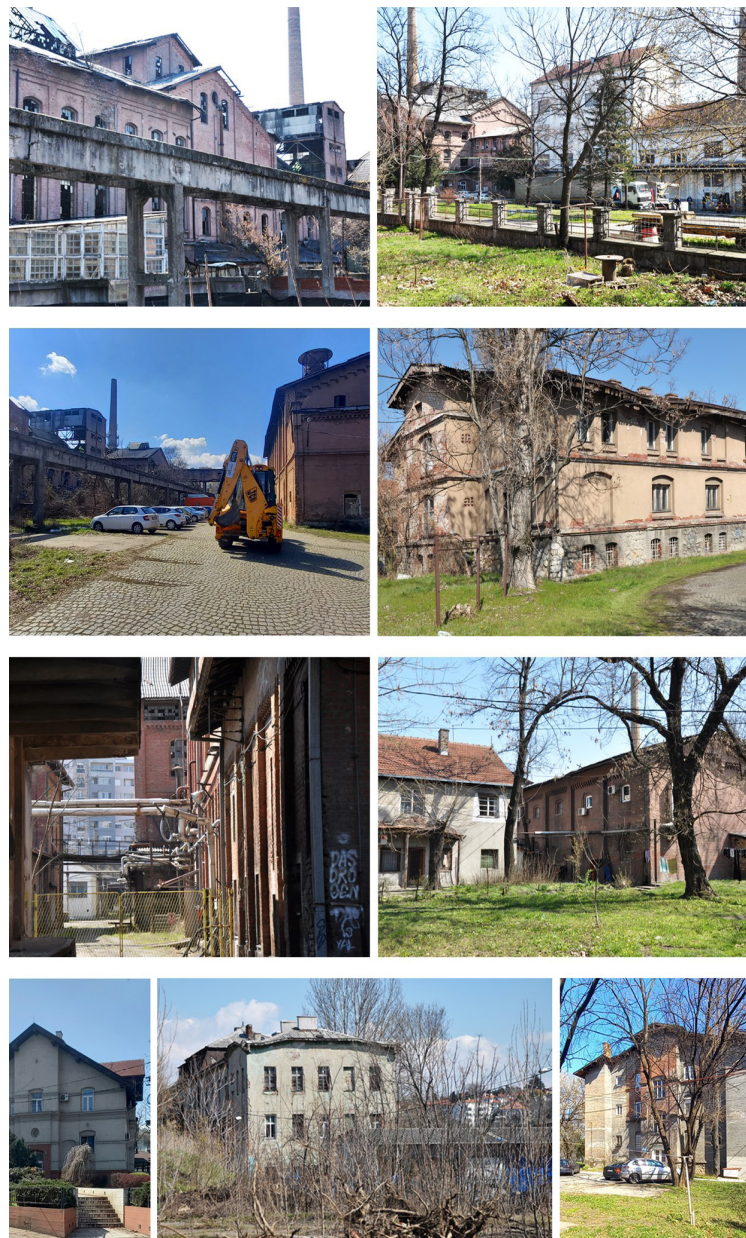


Figure 1. Current state of the Sugar Factory. Source: Dimitrijević Marković, Pucar.

Plan basis for interventions in space

The plan creates conditions for good urban design but also successful rehabilitation of space and facilities. In the Detailed Regulation Plan for the spatial cultural and historical unit Topčider - Phase II, Unit 1, (Official Gazette of the City of Belgrade, No. 98/16)/DRP), the factory space is defined as a construction complex, with eighteen building lots for other purposes, of which seventeen building lots were formed around the existing evaluated buildings. In contrast, one is intended for the construction of a new facility, and one public lot covering the remaining space intended for open and green spaces in the function of the facilities in the complex. The DRP permits fencing of the whole complex, except for the building plots within the complex, their parcelling or re-parcelling, and changing the boundaries of the building complex (Fig. 2).

All the remaining buildings in the complex (one historic building that has lost its value due to many transformations and newer buildings that significantly devastate space) are planned for removal.

According to the DRP, the retained buildings will be re-purposed as facilities with cultural and cultural education facilities: museum exhibitions, galleries, theatres, cinemas, libraries, art and educational workshops, etc.

On a smaller scale (up to 20% of each building), the introduction of commercial contents is allowed, such as catering facilities, bookstores, souvenir and promotional material shops, etc.

In addition to the contents and purposes of the complex, within the clearly defined lines of buildings, the construction of a new building is allowed, with P+2 height and an area of up to 2400 m².

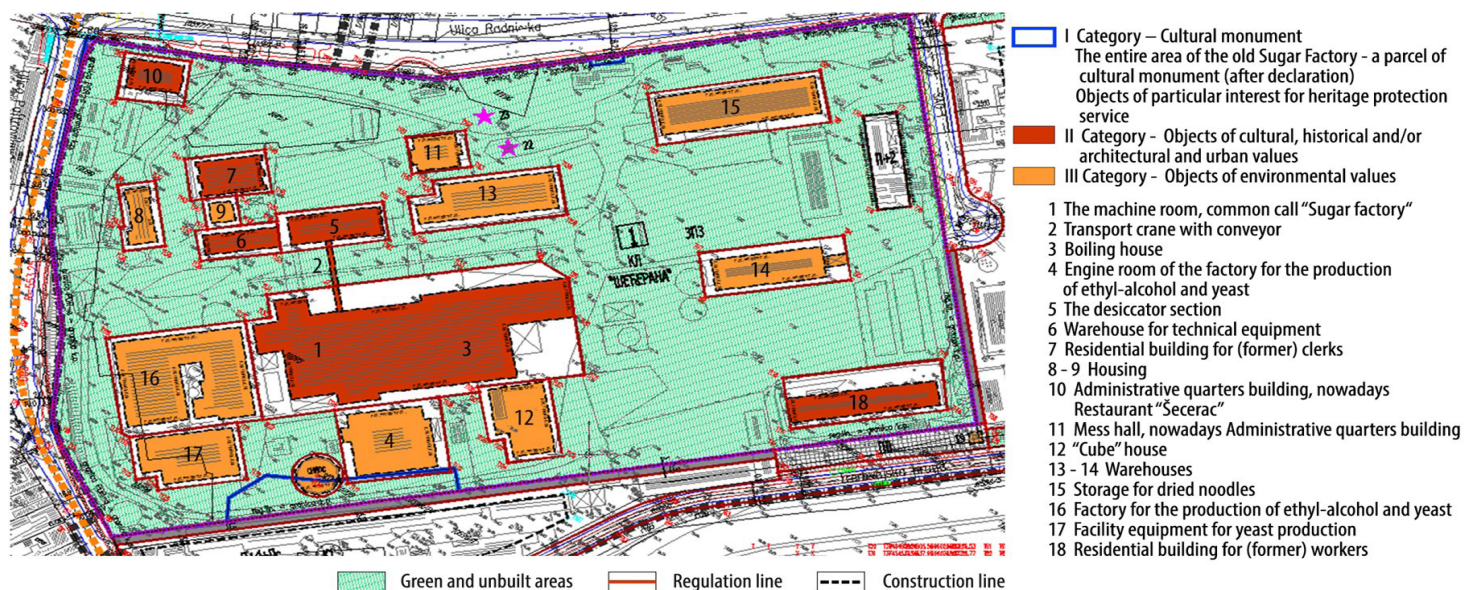


Figure 2. Sugar factory – Purpose plan area. Source: DRP no. 98/16.

The complex, including all the buildings, is classified into several categories, and possible interventions are defined respectively. The complex is classified as category I, which requires strict protection measures to preserve the urban and architectural authenticity of the space, i.e. the environment. Hence, it has to be treated as a single whole. The facilities within the complex, directly related to the factory's construction and development phase, are classified as Category II and III facilities. They are planned to be retained and re-purposed, restored, rehabilitated and revitalized solely within the existing size and dimensions.

The negative effects of past changes on the current rehabilitation of the complex according to the DRP

The plan gains its final sense only through realization. It requires considerable financial resources and a clear goal, i.e. political will. In the case of this complex, besides the funds for the renovation and re-purposing of evaluated buildings and adequate landscaping, it is necessary to provide financial resources. Also to find ways to solve problems related to the ownership structure in this area, which appeared as a consequence of changes made to

improve and modernize the factory and production process. Apartments in purpose-built residential buildings for workers and clerks were privatized in the 1990s, thus enabling a change of ownership.

The construction of a new factory for the production of spirits and yeast within the complex was logical and desirable for the production process and the overall performance improvement. However, it enabled the division and transformation of the ownership structure in the newly created social circumstances.

In order to be renewed and to acquire new cultural content defined by the plan, it is necessary to reconnect it to the whole functionally. Renovating and re-purposing all of the evaluated facilities of both factories and a large number of privatized apartments in residential buildings and remove facilities that devastate the space. Addressing this problem burdens the operational aspect additionally. It financially increases the enormous costs of rehabilitating brownfield sites and facilities and complexes, so the question arises whether the plan still came too late.

It could have been avoided with timely consideration, given that the Sugar Factory was established as a cultural monument in 1984 when the plants for the production of spirits and yeast were placed under the management of the newly formed company. The privatization of apartments began a few years later. Although the value of the complex was recognized, there was no clear definition of protection measures, i.e. a clear vision of the future of this complex. If it existed, there would be an opportunity to maintain the integrity of the complex and prevent the actions that led to ownership transformations, which today represent an aggravating circumstance for the rehabilitation of the complex.

However, the fate of the plans is uncertain. The plan in question is supported by the Draft Amendments to the General Regulation Plan - City of Belgrade (UNITS I – XIX) / GRP, phase I. On the other hand, the second phase of GRP is planned to be realized later to align with the future General Urban Plan of Belgrade 2041, whose development is in progress and should be adopted by the end of 2021. Time will tell how much GUP BG 2041, as a strategic urban plan, will leave the existing DRP unchanged, including the DRP for the spatial and cultural-historical unit Topčider, phase II, unit 1.

Following the adoption of the above mentioned DRP, Belgrade Land Development Agency, in cooperation with the Association of Architects of Serbia, launched an open, poll-based, single staged competition for an urban-architectural solution of the broader area of the Hip-

podrome, which included the space of the Sugar Factory. Participants were required to offer architectural solutions for constructing a new facility and the landscaping of the complex. Architectural solutions for the revitalization and reconstruction of evaluated buildings were not the subject of the competition, but merely the submission of proposals for their contents that would agree with the purpose and contents of the open public space whose design was the subject of the open competition. This competition was used to promote the location in Radnička Street (former Jugopetrol) as a location in preparation for ceding to investors, favoured it as the most commercial. However, one of the goals of the competition was a comprehensive view of all three complexes (Sugar factory, Hippodrome and Jugopetrol). Also, the recently built pedestrian walkway across Radnička Street, which connects location with Ada Ciganlija, deviates by shape and position from the first-prize winning competition solution, favouring the shopping centre in relation to the protected complex (gradnja.rs), (Fig.3).



Figure 3. Newly built walkway in front of one of the valued buildings of Sugar factory. Source: Dimitrijević Marković, Pucar.



2007



2021



2021

Figure 4. Visible deterioration of valued buildings (2007-2021). Source: Dimitrijević Marković, Pucar.

The authorities of the City of Belgrade still intend to acquire ownership rights over the complex of the Sugar Factory and enable the conversion of this space into a cultural centre. The city government also announced the takeover of the management of the K.P.G.T. Theatre, which is located in the part of the machine hall. The status of tenants in residential buildings remains undefined.

There is an announcement by the main city planner that the tenants will move out of the complex, but not before 2023 after new residential buildings are built for them.

What will happen remains to be seen? The fact that the condition of most facilities is such that any delay leads to further decay. (Fig. 4)

Buildings of more modest dimensions and architectural values in the complex are particularly sensitive, and their restoration, unless they completely collapse in the meantime, could be called into question. The situation supports this thesis with many brownfield sites in Belgrade where existing complexes are being cleared to allow space for new construction, with the possible retention of one building, but only if the space enjoys some form of protection.

Conclusion

The basic prerequisites for successfully rehabilitating abandoned architecturally and historically valuable industrial complexes are their timely identification and designation as cultural property, with clearly defined values. Furthermore, measures of protection of those values, respected by urban planners and incorporated into the urban plan, which, as a rule, should be devised and adopted before potential investors get interested in the complex. Another prerequisite is clearly expressed political will to support and carry out the planned rehabilitation and a strong, responsible and conscious community to encourage and control it. Researchers have analysed the typology and morphological development of industrial heritage and the potentials and opportunities for sustainable regeneration (Nepravishta, 2015) and urban strategies for the transformation and reuse of post-industrial areas (Ozturk, Cahantimur, Beceren Ozturk, 2013). By analysing the transformations and their consequences, some lessons can be learned for future modernizations.

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