

# The Criteria for Evaluation of Urban and Architectural Development Opportunities of Osijek Abandoned and Repurposed Industrial Areas

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LUCIJA KRAUS

## CRITERIA FOR EVALUATION OF URBAN AND ARCHITECTURAL DEVELOPMENT OPPORTUNITIES FOR OSIJEK'S ABANDONED AND REPURPOSED INDUSTRIAL AREA

### KRITERIJI ZA EVALUACIJU URBANISTIČKO-ARHITEKTONSKIH MOGUĆNOSTI RAZVOJA NAPUŠTENIH I PRENAMIJENJENIH INDUSTRIJSKIH PROSTORA U OSIJEKU

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In today's Osijek there are large, abandoned and devastated industrial areas from the period 1856-1945. This research was motivated by the lack of clear, systematically organized evaluation criteria for these areas, defined from interdisciplinary and transdisciplinary points of view. The research first focuses on the systematization and classification of industrial and existing former industrial areas of Osijek from the period 1856-1945. The second focus is put on defining the criteria for the evaluation of urban architectural development possibilities of abandoned and repurposed industrial areas (NiPIP).

The researched areas are complex because over time they have changed to a significant extent, following the progress of technology. These areas always retain at least a part of their historical industrial identity, which is why it is not possible to unambiguously define it as an industrial heritage area, brown-field area, historical industrial area, industrial area, former industrial area, abandoned industrial area, repurposed industrial area, abandoned industrial area. Today's conceptual definition of area contains parts and/or combinations of all previously mentioned concepts. However, in the context of the original and longest-lasting purpose of that area, the area that this doctoral thesis deals with is an industrial area or a historical industrial area, which has changed due to the influence of time and the advancement of technology.

Using the collected data, a critically systematized database of industrial and former industrial areas in Osijek from the period 1856-1945 has been created, and it is divided into two catalogues. The processed and collected data are systematized in catalogue units for urban complexes of abandoned and repurposed industrial areas (Catalogue 1, Annex I) and catalogue units for individual buildings of abandoned and repurposed industrial areas (Catalogue 2, Annex II). In addition to field research, the work combined: analytical and comparative methods, and the survey method, which was used in the analysis of criteria set from interdisciplinary and transdisciplinary points of view.

The research resulted in a typological classification of industrial and former industrial areas of Osijek that were created and/or established before 1945. The first step in this part of the research was related to the collection of literature, on the basis of which the mentioned areas were identified. Key photo documentation was collected through field research and quantitative and qualitative data on these areas were defined. The analysis and comparison of existing areas was made on the basis of a critically systematized database of industrial and former industrial areas of the city of Osijek from the period 1856-1945.

The research identified 53 industrial and former industrial areas in Osijek that were created before 1945. Today, 12 industrial or former industrial areas still exist in their entirety or in fragments. Industrial and former industrial areas of the city of Osijek, created from 1856 to 1945, considering their current state, can be typologically classified into abandoned, repurposed, and those with an active original purpose. However, the above-mentioned divisions can overlap, so the further observed areas can be divided according to the degree of representation of one type or another type of area. Abandoned areas are divided into completely abandoned, partially abandoned and minimally abandoned areas. Repurposed areas are divided into total or complete repurposing of areas, partial repurposing of areas and repurposing of buildings, depending on the share of repurposing. As for industrial areas, they can be with or without historical identity.

The basic criteria were created using the information gathered from the review of available literature, field research, Catalogue 1 and Catalogue 2 and are used to create a survey. The basic criteria are classified into five groups of criteria, and they consist of: the urban group of criteria with nine criteria, the conservation group of criteria (at the level of the urban complex and at the level of individual buildings) with 18 criteria, the architectural group of criteria with four criteria, the construction-technical group of criteria with five criteria and the cultural-identity

group of criteria with five criteria. There is a total of 40 basic criteria for evaluating the urban-architectural development possibilities of abandoned and repurposed industrial areas in Osijek.

98 respondents from the fields of humanities, technical and social sciences took part in the survey to define the importance of certain groups of criteria and the criteria of urban-architectural opportunities for the development of abandoned and repurposed industrial areas from different interdisciplinary and transdisciplinary points of view.

Based on the results of the survey, the basic criteria were defined and quantified, resulting in significant or unavoidable criteria for the evaluation of the urban complex of NiPIP and the possibilities of its development are mostly criteria from the conservation group of criteria, namely the ambient value of NiPIP, the value of originality of NiPIP, the visual value of NiPIP, the value of rarity of NiPIP and the value representativeness of NiPIP as well as one criterion from the cultural-identity group of criteria (identity of place NiPIP). While the indispensable criteria for the evaluation of an individual building of a NiPIP and the possibilities of its development are mostly criteria from the construction-technical group of criteria, namely: feasibility of reconstruction of an individual NiPIP building, bearing capacity of an individual NiPIP building, basic requirements for an individual the NiPIP building. These significant criteria include the adaptability of an individual NiPIP building and value of the rarity of an individual NiPIP building.

The proposal of criteria for the evaluation of NiPIP of the city of Osijek, and the proposal of a model for the application of the mentioned criteria will enable a new approach to the research of Osijek and the education of various professions related to the development of Osijek. In addition, the results of field research and the conducted survey present a contribution to the integral evaluation of urban-architectural elements of former industrial areas as a contribution to the guidelines for the protection and restoration as well as the conversion of industrial heritage.