

FROM NEGLECT TO VITALITY: LANDSCAPE DESIGN APPROACHES FOR RECONVERTING LOST URBAN SPACES

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Abstract

A modern city's landscape reflects the diversity and inconsistency of the processes that occur within it. The changing landscape of the city and its surroundings has become a common phenomenon as urban areas expand and technological capabilities for modeling nature develop. The interaction between the natural and artificial environments becomes more intense as urban development pressures the surrounding landscape. The city constantly expands its borders into neighboring territories, gradually diminishing natural potential and bringing more chaos than harmony to the landscape. In this chaos and rapid pace of modernization, attention has increasingly shifted to appearances at the expense of content. Urban spaces that did not align with external trends and influences were abandoned, leading to community fragmentation and a decline in authentic values and traditions. Using this concept as a starting point, the study aims to propose several landscape design approaches and appropriate solutions for rehabilitating degraded or abandoned urban spaces in Romania..

Key words: urban renewal, sustainability, reconvertng urban spaces, rehabilitation strategies.

INTRODUCTION

Do people on Earth have enough space? If the answer is yes, then why does the modern world complain about the decreasing space allocated for housing, forests, water, and wildlife? If the answer is no, then why is the world blind to the possibility of using the spaces left in the collective forgetfulness of society?

The gap in current research on the reversion of abandoned urban spaces is evident in the absence of design strategies that balance multiple aspects, such as ecological, social, and economic factors, as well as the lack of strategies and models for participatory design and the influence of the community on such urban spaces.

The positive influences and aspects of various nature-based methods and their role in urban design are well known; however, the long-term effects, whether positive or negative, of combining these methods in the restoration of abandoned urban spaces are not fully researched.

The main goal of this research is to visualize some of these methods that can be incorporated into a proposed design for an abandoned space in the city of Iași, and to determine whether this

approach represents a better option for the use of these forgotten places by many others.

MATERIALS AND METHODS

For the chosen topic, a mixed approach has been applied to conduct research combining both qualitative and quantitative study methods.

To gain a better understanding of the studied topic, a qualitative approach was utilized, identifying case studies that present abandoned spaces or marginalized sites. At the same time, an analysis was conducted on nature-based solutions that could be put into practice for the reversion of the spaces identified in the research.

As a quantitative method, a spatial analysis of the city of Iași was conducted to identify existing abandoned sites, followed by field visits to document, through photography, the state of degradation of the infrastructure, as well as the vegetation and the surrounding land. During the field visits, we discovered three potential locations that would be suitable for spatial reversion.

The analysis of the existing literature led to the formulation of a series of criteria based on

which the three locations discovered during the field visits were selected.

Luciano Crespi, in his extensive work *Regeneration of Abandoned Spaces: A New Design Approach*, emphasizes the importance of principles such as community involvement in the design solution and maintenance of the revitalized site to ensure the long-term viability of the proposed solution. Sustainable practices, eco-friendly materials, reusing existing structures, and creating a framework that is more attractive from a functional rather than purely aesthetic standpoint, all represent principles that will ensure the long-term success of urban regeneration (Crespi, 2024).

An analysis of the condition of the built spaces proposed for revitalization is essential, assessing their potential to be transformed and reintegrated into public use, while also identifying the needs of the local community (Santos & Ramalhete, 2024).

The history of the site and the importance it has had over time for the community also represented a decisive factor in the selection of the spaces. Places that once represented an important center for the adjacent community, thus having strong historical roots, can be transformed into cultural hubs for the community, enhancing the identity and pride of future users (Ghida, 2024).

Following the ideas proposed by the mentioned authors, the following criteria were suggested for selecting possible urban spaces suitable for their reconstruction:

- to be located in neighborhoods with a high population percentage;
- to be easily accessible, ensuring a smooth connection with the surrounding community;
- the presence of one or more built structures on the site that could provide a starting point for reconversion, while also reducing the costs of building a new structure;
- the possibility of implementing nature-based solutions on the site;
- the existence of a sufficiently large space to create multifunctional areas;
- sites that would have a significant social impact in the community, and whose reconversion would offer an opportunity to involve local residents;

- sites that belong to the municipality or are owned by city authorities and could be used without depending on external investors.

The first identified site represents one of the currently non-functional wings of the Iași Clinical Hospital of Pneumoftiziologie. The second site represents the abandoned building of the former Dermatology clinic and the adjacent land. The third site represents the unfinished structure of the Olympic swimming pool, the construction of which began 35 years ago and has remained in ruins for 30 years since the work was halted (Figure 1).



Figure 1. The three representative locations identified (OpenStreetMap)

Site number two was chosen to describe the proposed principles for reintroducing abandoned sites into the city's viable urban network, namely the former Dermatology hospital building and the adjacent green space, located in the northeastern part of the city.

The area of the site under study is 3,388 square meters, and the construction year is 1950. The initial function of the building was a kindergarten. Regarding property rights, it is a public space, owned by the City Hall of Iași. There are three existing buildings on the land: Building C1, C2, and an annex, and the current state of the space is abandoned (Figure 2).

Analyzing the site's location from a broader territorial perspective, it is notable that it is situated in the northeastern part of Iași, specifically in the Tătărași neighborhood, one of the oldest and most historically significant districts of the city.

Originally a vast green area of forests and hills before 1850, the neighborhood became home to a diverse range of nationalities, so that by the 1950s, it was one of the most developed areas of the city (Baciu G. et al., 2007) (Figure 2).

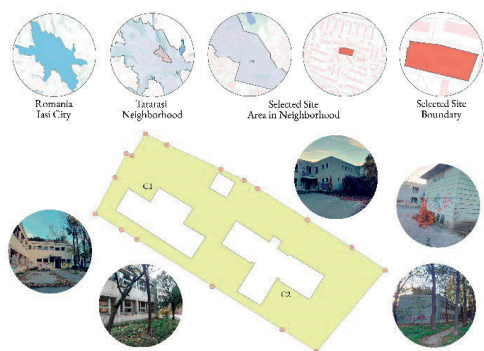


Figure 2. The physical context of the site and the current condition of the space

The proposed design solution was based on the following stages: defining the purpose and function of the rehabilitated site, site investigation and analysis, establishing the concept and implemented solutions, analyzing and justifying the proposed solutions for implementation, and evaluating the outcome. For the digital development of the actual solution, specialized landscape design software such as AutoCAD, SketchUp, and Lumion was used.

RESULTS AND DISCUSSIONS

Defining the purpose and function of the rehabilitated site

The main approach to the identified issue is the implementation of a multilateral design, based on the needs of the community and the promotion of civic spirit.

By creating a space dedicated to the community and involving its members in managing and maintaining it, cultural identity can be strengthened, which is often absent in the present, where the cult of personality and focus on individual needs prevail. The participation of community members in implementing sustainable principles will contribute to preserving biodiversity and sustainability (Nijhuis S., 2022).

Site investigation and analysis

Being one of the oldest neighborhoods in the history of Iași, the area occupied by Tătărași was overtaken in the 1950s by numerous block constructions. Thus, through a spatial analysis of a 500-meter radius from the site, approximately 3,000 apartments were identified in the immediate vicinity of the site (Figure 3).

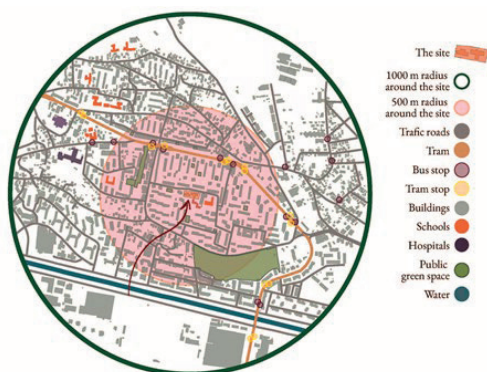


Figure 3. Spatial analysis of a 500-meter radius and 1000-meter radius from the site

Most of the blocks are 75 years old, indicating a diverse demographic range among the population living in this area, including elderly residents who have witnessed the area's evolution as well as young families with children who represent the community's next generation.

Due to the high percentage of the population in the area, there is also a large number of cars, and the poor road infrastructure and lack of adequate parking spaces have led to the transformation of the green spaces around the blocks into unofficial parking areas, further reducing the spaces intended for the community or activities for larger groups.

Due to its age, the neighborhood is considered one of the richest in mature vegetation. However, the lack of a green registry for the city and inadequate tree maintenance has led to the decline of many existing species. The state of the shrub vegetation is even more neglected, predominantly consisting of uncontrolled, spontaneous growth, which has led citizens to avoid the remaining green islands.

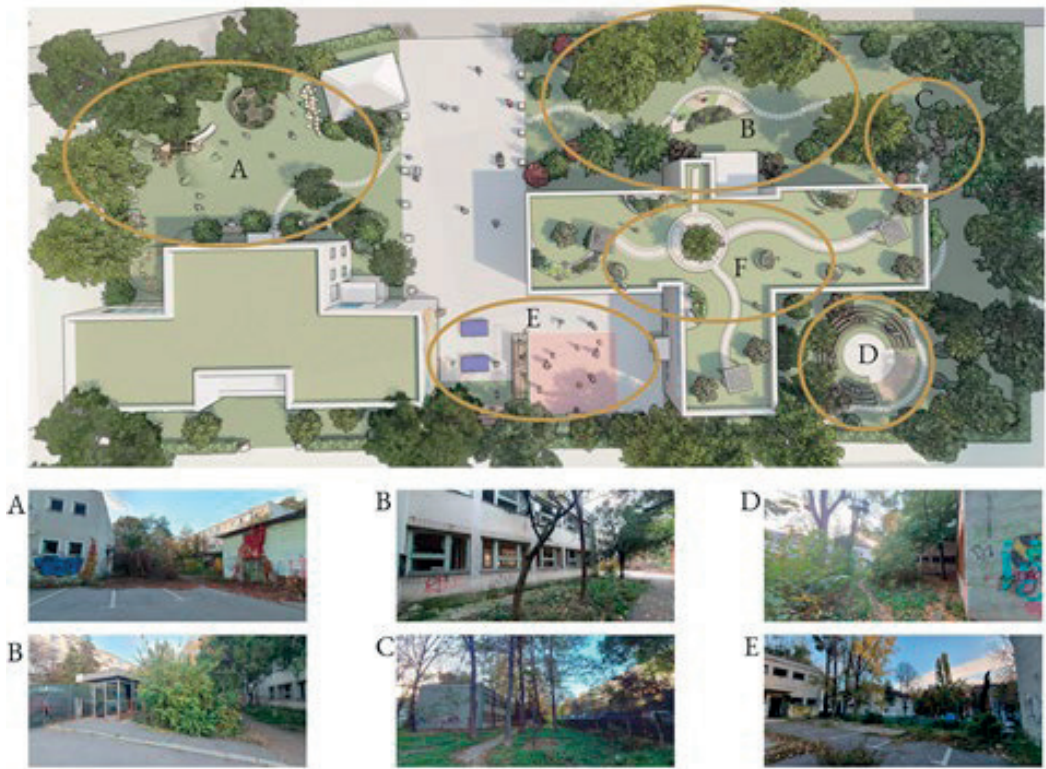


Figure 4. Representation of the existing areas and the proposed design

Analyzing and justifying the proposed solutions for implementation.

The design is structured around 6 major areas of interest (Figure 4).

The first area marked with an A on the plan is dedicated to activities for children and parents. The time children spend with their parents is very important for their psychological and social development. Among the long-term benefits of this type of interaction, the following can be listed: the development of better social adaptability, the ability to manage emotions and frustrations that may arise, and an increased level of resilience to problems that may later occur during the adolescent's development. The time spent together provides parents with the opportunity to model positive behaviors, strengthening values and laying the foundation for lasting connections (Waters et al., 2023).

The area is designed to meet the needs of a wider variety of ages, equipped with smaller subzones for both active and passive rest (Figure 5).



Figure 5. Representation of playspace

Area B (Figure 6) presents the implementation of two nature-based solutions, namely the integration of a sensory area with natural

materials and perennial plants and an area dedicated to insects and biodiversity, which also have an educational character, with learning opportunities, for both adults and children, about biodiversity conservation and how they can contribute to it.



Figure 6. The representation of the sensory path and the space dedicated to insects

One of the issues created by rapid urbanization is the involuntary development of spaces that can be harmful to mental health, highlighting the need for the implementation of solutions that would combat sensory overload caused by inadequate urban environment design. Thus, incorporating sensory pathways into the design would facilitate a temporary escape from the chaotic landscape of the built environment, offering community members a much-needed refuge (Lauv, 2024).

The incorporation of a sensory garden, regardless of its size, represents a high-potential model for urban environment development, aligned with the principles of smart and sustainable urban development (Zajadacz & Lubarska, 2023).

The analysis of an extensive study of 728 papers, described in the work *The Application of Rain Gardens in Urban Environments: A Bibliometric Review*, clearly demonstrates the growing interest in incorporating rain gardens into urban design. These are described as one

of the nature-based solutions with a fundamental role in managing water within urban environments (Wang et al., 2024).

In this context, it is proposed to implement a rain garden space in area C, which will be beneficial both ecologically and aesthetically (Figure 7).



Figure 7. The representation of the rain garden

Zone D, with its circular-tiered seating design, serves as a gathering space for the community, providing an area for activities such as meetings, celebrations, performances, games, or outdoor evenings. The circle is a fundamental symbol, representing perfection, unity, and spiritual harmony. For this reason, the core community space was designed in a circular shape (Figure 8).

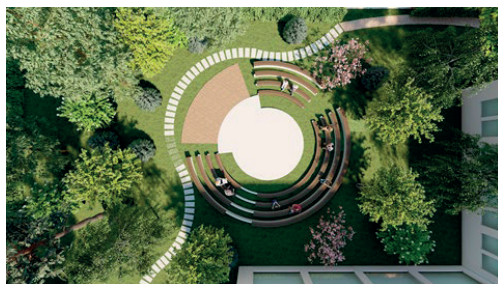


Figure 8. The representation of the space dedicated to community gatherings

Another area with a significant social character and impact is Zone E, dedicated to intergenerational play activities. Intergenerational play creates unique bonds by combining the energy and curiosity of youth with the wisdom and experience of older generations (Figure 9).



Figure 9. The space dedicated to intergenerational play

The last zone, but not the least important, is the one dedicated to the vegetable and herb garden, located on the roof of Building C2 (Figure 10). The concept of green roofs and vegetable gardens not only makes use of otherwise unused spaces but also provides an opportunity for educational activities for community members. By implementing this concept, the goal is to educate the community about healthy eating and the origins of food while fostering a connection with nature and a sense of environmental responsibility in younger generations. In this way, the rooftop garden is transformed into a living classroom and a symbol of green urban regeneration.



Figure 10. The rooftop garden

CONCLUSIONS

The proposed design for the study creates a connection between history and people, serving as a model where each proposed element contributes to a narrative advocating for renewal, inclusion, and shared identity. To achieve the harmonious integration of design elements in the reconversion of an abandoned space, it is necessary to consider the

neighboring residents of the site and their needs.

The implementation of design methods based on nature-inspired solutions is essential, as well as their appropriate selection, considering the physical characteristics of the space.

A history-based approach to the site can significantly contribute to creating a design rooted in the strong character of the local community's culture, thus refreshing the collective memory of the space.

The aim of the study was to create a community hub suitable for people of all ages, promoting inclusion and respect for the surrounding environment.

It was demonstrated that by repurposing an abandoned space, it can be reintegrated into the urban network, promoting biodiversity within the built environment.

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