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A REDEVELOPMENT SOLUTION FOR THE "ALEXANDRU SAHIA" PARK IN RĂDĂUȚI

Mirela COJOCARIU, Iulia Andreea PRICOP

"Ion Ionescu de la Brad" University of Life Sciences of Iași,
3 Mihail Sadoveanu Alley, Iași, Romania

Corresponding author email: mirela.cojocariu@iuls.ro

Abstract

This study investigates the rehabilitation of a green area found in the city of Rădăuți, Suceava. Since the '60s, the "Alexandru Sahia" Park has been a suitable oasis for its inhabitants, for socializing and relaxation, especially during hot summer days. Considering its current state of deterioration, mainly due to decay of its elements and poor maintenance works, the park no longer fully meets the needs of the community. The proposed solution aims to fulfil the functional, environmental, and aesthetic requirements so that each area can reach its optimal potential from all perspectives and put at the community's disposal a relaxation and recreation oasis, where people could rest or have fun, socialize, and benefit from a higher quality of life. The solution meets both the needs of the citizens living near the park and of the students passing through the park on their way to the three nearby educational institutions.

Key words*: landscaped green areas, redevelopment solution, urban park.*

INTRODUCTION

The evolution, dynamics, and development of cities define today's civilization (Balan-Ionescu (Popescu) and Toma, 2023). Considering this development, urban parks have become one of the key elements in cities, acquiring a growing importance in the lives of city residents (Sadeghian and Vardanyan, 2013) and bringing numerous environmental, physical, psychological, and social benefits. Urban parks are highly important for maintaining and improving physical well-being and health. Their natural elements contribute to lower daily stress, better mood, higher degree of relaxation, and lower levels of mental disorders. (Annerstedt et al., 2012). Parks contribute to achieving social inclusion by creating spaces for social interaction, having a much greater potential compared to other urban facilities due to easy and unlimited access. People need to meet helping a community be able to develop its social ties. Plus, people through interaction actively engage in society and develop feelings of acceptance, set and strengthen relationships through communication and participation in joint activities. (Konijnendijk et al., 2013). Through their social function, parks bring both educational and scientific benefits. Users develop their civic sense, self-respect, and respect for the city through cooperation, personal development, and desire for collective well-being when getting together in landscaped areas (Dascălu D.M, 2016). It is a well-known fact that recreation is closely linked to mental and physical health. A rested body is much more capable of recovering its physical and intellectual strength. During the summer, when temperatures exceed bearable levels, urban parks become places of coolness and relaxation and provide opportunities for active or passive rest. Plus, children develop in their early years through play. It is natural for children to love parks and playgrounds. Studies show that time spent outdoors helps children develop their motor and cognitive skills more effectively and stay more active physically (Li et al., 2022).

Vegetation, parks, private gardens, street alignments, green roofs and facades, as well as water areas, are just a few examples of urban green infrastructure counteracting the negative effects of urban overcrowding. (Aigbokhan et al., 2023; Cojocariu et al., 2022). Along with the earlier mentioned benefits, green areas add a decorative value to a territory that can be associated with the satisfaction a person might have regarding the existing vegetation and its artistic presentation. Therefore, parks can also bring aesthetic benefits meeting the need for beauty and contributing to lowering the aridity

of densely built areas (Dascălu and Cojocariu, 2016).

This study aims to propose a landscape rehabilitation solution for the "Alexandru Sahia" Park in the city of Rădăuți, Suceava County. Its main aim is to enhance the quality of this green space through architectural and landscaping developments of all functional areas of the park.

Such underused areas may be found in any city. It usually happens whether due to unsustainable exploitation or due to a wrong approach. Therefore, rehabilitation solutions are made for areas with high potential. The two examples in this sense are the Metropolitan Park in Târgoviște (Pașcu et al., 2021) and the Dendrological Park in Buhusi, Bacau County (Pașcu et al., 2022).

Landscape rehabilitation aims to preserve the current functions of the park and add new elements needed to create a modern urban framework meeting the current needs of the city's residents in the best possible way. The proposal is targeted not only at those living near the park but also at students passing through the park on their way to the three nearby educational institutions: General School no. 5; Technical College of Rădăuți and Eudoxiu Hurmuzachi National College (Figure 1).

Figure 1. City plan of the park and the three educational units (67 - "Alexandru Sahia" Park; 19 - General School no. 5; 20 - Rădăuți Technical College; 22 - Eudoxiu Hurmuzachi National College)

MATERIALS AND METHODS

To carry out the study, we have reviewed the literature in the field and studied the archival resources on the park's history. We have used the following methods investigations, on-site analysis, review, and interpretation of the current literature.

After having done the on-site analysis and the literature review, we have developed a concept for restoring this green space. To reach the aim, the following objectives were taken into account:

- Refurbishment and design of new pathways ensuring access to all areas of interest;
- Refurbishment of the building, the island, and the basin;
- Design of a new playground area with elements divided by age groups;
- Set up relaxation and study areas for students;
- Proper furnishing of all areas;
- Restoration of the existing vegetation and removing unesthetic specimens or those that is in danger of falling.
- Proposals for new plant compositions.

RESULTS AND DISCUSSIONS

The level of attractiveness of green spaces is primarily determined by their ability to meet the needs for urban comfort and quality of life, in general (Cojocariu et al., 2023). Currently, various forms of urban green spaces are the main elements of the built environment affecting directly the quality of life (Istrate et al., 2023).

The "Alexandru Sahia" Park is just a few steps away from the House of Culture and 500 meters away from the historic city centre of Rădăuți. Its surface is approximately 11.300 m² (Figure 2).

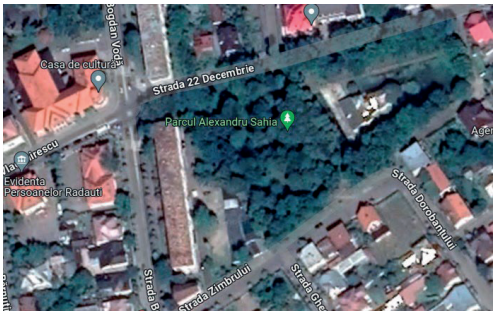

Figure 2. Aerial view of the "Alexandru Sahia" Park in Rădăuți (Google Earth)

The park was built at the beginning of the fifties, being back then a landmark of the city of Rădăuți. A postal card dating back to 1953

(Figure 3), shows the image of the island in the park of the time.

Figure 3. A postal card - The picture of the island in the "Alexandru Sahia" Park
(Photo 1953, Ion Petcu)
(https://cartipostale.cimec.ro/Detaliu.php?id=11397&criteriu=pat)

The park called by the people "On the Lake" was seen by the locals as a beautiful spot with many weeping willows around the lake and in the middle of the island. The boat rides on the lake were a common entertainment activity back then. Another postal card from the eighties shows the charm of this place created in a city in the province (Figure 4).

Figure 4. Postal card – View from the park (1980)
https://www.hippostcard.com/listing/postcard-romania-radauti-vedere-din-parc-lac-pord-natura/27590127

The existing buildings in the park today were built later, losing quickly their usefulness. Their questionable architectural quality and the fact that there was no unified approach to the whole area are the two possible causes of their abandonment. In recent decades, the park has not been a priority for the local authorities. Without proper maintenance, its elements, both built and natural, have deteriorated significantly. There have been attempts to revitalise the area, but these have not been backed up by a coherent and integrated vision. The idea for a redevelopment proposal came from a desire to restore the park to its former beauty and usefulness.

The analysed area comprises a series of functional areas, such as green spaces, promenade areas, a playground, an area of fitness bars, a lake, and an island located in the center. The site analysis underlines the degree of deterioration of the lake basin, pathways, furniture, and the state of aging or unhealthy plant specimens. Also, destroyed or even missing railings surrounding the island and the lake, as well as some damaged parts of the playground may become a real danger for children. The built elements on the lake have been abandoned and the lack of maintenance enhance the sense of area's abandonment. There have been acts of vandalism, and in combination with litter and lack of park maintenance, the overall image is deplorable (Figure 5).

Therefore, measures are needed to repair these irregularities in the existing areas and propose new functional areas which would meet the residents' need for resting and socialising places. Plus, the building found on the island could provide a suitable space for setting up a café or a restaurant, which, together with the lake area, may contribute to the functional and aesthetic enhancement of the entire park.

The furniture is damaged, and dirty, its quality being poor and unsuitable for an urban area. Trash bins are insufficient or improperly positioned, litter is being thrown into the lake. The furniture in the children's playground area is destroyed, posing a real danger for children. The park lighting is not functional, insufficient for the park's needs, and severely damaged. The water in the lake is dirty, full of garbage, and could pose a risk to the health of the residents.

Figure 5. Images showing the current state of the park (original)

Also, the insular shore has a high risk of collapse as portions of it have already detached. The building on the island was abandoned, and its annexes serve no functional or aesthetic purpose. The functional areas in the park comprise an inadequately placed, aesthetically unpleasing, almost entirely destroyed playground and a recently arranged area of fitness bars, although being in a better condition, they are disconnected from the overall layout and seem to be unused due to the park's overall appearance. This area features a non-aesthetic enclosure bringing a sense of isolation from the rest of the park.

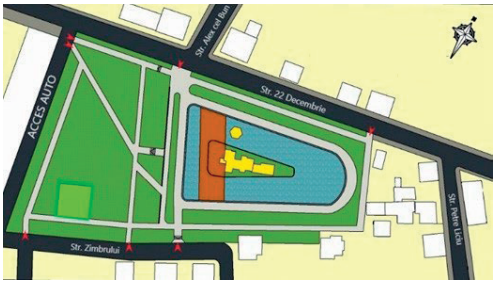

Figure 6. Current park plan

After identifying the actions and the elements requiring either changes or improvements, we proposed rearranging specific park areas and functions, and also for rehabilitating the existing ones. The layout of the pathways is shown on the plan describing the current situation (Figure 6). Many of these pathways provide direct access to the roadway, with the side path serving as a sidewalk for those wishing to cross the nearby 22 December Street. On the opposite side, there is no sidewalk, forcing pedestrians to walk on the lawn area when crossing Zimbrului Street.

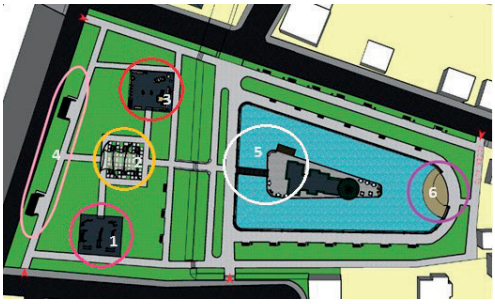

Figure 7. Proposed landscape redevelopment plan

The pathways inside the park have been partially redesigned so that it could ensure a good connection between the proposed functional areas. Plus, a sidewalk strip was proposed on Zimbrului Street. The island cannot be accessed as there is no access route to it. The island comprises some deck extensions, on which there had been previously arranged terraces that are currently in disarray. The existing fitness area (1) in the park has been linked with the rest of the proposed areas by removing the fencing around it and incorporating it into a compositional design. Also, there is a children's playground area (3), a study/dining area (2), and

several spatial extensions for relaxation (4) (Figure 7).

The Lake

The park's main attraction point is the lake. "Water has the gift of adding charm to a landscape, especially when accompanied by ingenious landscaping, balanced architectural elements, and subtle plant arrangements". (Dascălu and Cojocariu, 2016).

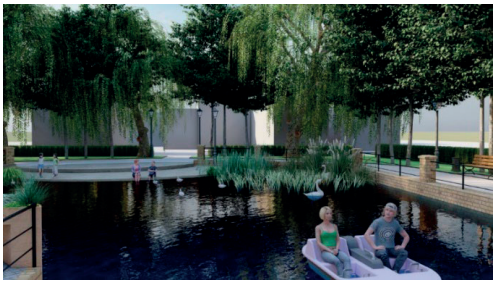

Figure 8. Front view of the deck

"Water has the quality of drawing attention to a landscape, being one of its most interesting elements" Al-Suwaid et al, 2022). Therefore, the proposal aims to refurbish the lake and create an ambiance made of architectural elements and specific vegetation.

Also, the proposal suggests the creation of a habitat for lake-specific bird species, so a deck will be built in its vicinity (area 6 in Figure 7), where users will be able to interact with the birds or cool off near the water. Suitable vegetation is proposed for the lake area (Figure 8), typical for the lake water and its sides. There could be encountered such water-loving species as *Typha minima*, *Scirpus lacustris „*Albescens*"* and *Scirpus tabernaemontani „*Zebrinus*"*, *Juncus ensifolius* and *Phragmites karka* (Figure 9).

Figure 9. Side view of the deck

The island and the building

The refurbishment proposal contains the removal of the annex buildings on the site to create a suitable area for strolling around the lake. Moreover, a bridge (area 5 in Figure 7) is aimed to be built in order to connect the island to the rest of the park (Figure 10). The old railings were replaced with the new ones harmonising with the rest of the arrangement. A small pier was built, from where visitors can rent water bikes (Figure 11).

Figure 10. Bridge view

Figure 11. Pier detail deck

The building on the island will host a restaurant. The island's land could serve as a space for arranging terraces (Figure 12).

Figure 12. View from the restaurant terrace

For the decoration of the terraces, we suggested several planters with plant compositions, mainly containing floral species and decorative grasses.

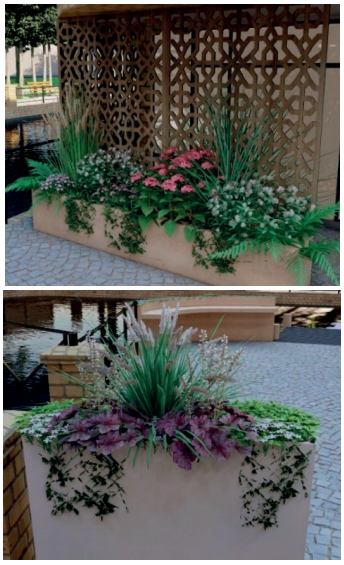

Figure 13. a, b Plant compositions in planters (original)

For the first composition (Figure 13 a), the following species were used: *Hydrangea macrophylla* "Little Pink", *Spiraea japonica* "Little Princess", *Matteucia strupthioides, Calamagrostis acutiformis* "Karl Foerster", *Koeleria glauca*, *Dianthus caryophyllus* "Pale Pink", *Dichondra argentea* "Emerald Falls". The second composition (Figure 13 b) was made by combining the following species: *Heuchera micrantha* "Palace Purple", *Pennsietum alopecuriodes* "Bianco", *Koeleria glauca, Dichondra repens, Hedera helix* "Variegata", *Phlox subulata* "White Delight".

Functional areas

Besides the walks that visitors can take inside the park, they also need other well-designed spaces that would meet their various needs. To meet the need for relaxation, socializing, and beauty, two functional areas were proposed inside the park, in addition to the existing fitness area, a playground, and a study or outdoor dining area. The fitness area was enhanced by adding seats (Figure 14), made of high-quality and water-resistant material blending visually with the other elements in the surrounding areas.

The current chain-link fence was replaced with a green fence of *Lonicera nitida* "Maigruen", which provides a touch of privacy to the area, besides its decorative role. The foliage and flowers of the fence will contribute to the overall decor.

Figure 14. Fitness area (plan and view)

A playground for children was designed with facilities suitable for multiple age groups. In terms of design, it matches the overall concept. For the age group of 0-2 years, we chose a small tunnel equipped with a very short slide and a sandbox. Children aged 2 to 5 can enjoy spring rockers and a supported swing, while those aged 6 to 9 could climb ropes or use the interactive wall to invent games, slide down slides, or use the larger swings, due to their greater agility and strength compared to the previous age group. Figure 15 illustrates some of the proposed playground equipment. The playground surface will be made of protective material ensuring safety in case of falling.

In the relaxation area arranged for studying or dining (Figure 16), we suggested building a pergola providing protection against birds nesting in the nearby trees. Tables with seating were placed so that students could meet after classes and work on assignments together, while the elderly could play strategy games. This space serves a dual purpose as it can also serve as a relaxation area.

Figure 15. Playground equipment

Figure 16. Study area (plan and view)

The land surface in the study area was made more dynamic by a play of scree and vegetation. To shape visually the area, we suggested the perimeter vegetation clusters. We suggested decorative grass species such as *Pennisetum alopecuroides, Festuca rubra, Festuca glauca, Miscanthus sinensis, Stipa calamagrostis* "Allgau"*, Hakonechloa macra*, and the *Juniperus procumbens* "Nana" shrubs. The ornamental assortment in this area was enriched by *Lavandula angustifolia.* During the evening, the decorative lighting ensures good visibility and contributes to the decoration of the entire area by means of luminous spheres placed directly on the lawn.

Figure 17. Pergolas

Adjacent to the pathway on the western side of the park, we added two more generous spatial extensions with pergolas (Figure 17), adding an extra touch of elegance to the entire park. These also serve a dual purpose, providing a relaxing and also an intimate space, shielded from the

traffic flow of the pathways. The pergolas were decorated with *Lonicera japonica* "Halliana".

Furniture

Urban furniture should display several basic qualities: comfort, security, shelter, and design (Mexi A. and Tudora I., 2012). So, the furniture was replaced by benches following the same style and rearranged in such a way that the view was not obstructed by trees. The ambient lighting of the park was done with classical lanterns matching the rest of the elements. Also, the aim was to prevent light pollution and reduce unnecessary energy consumption.

Vegetation

Most of the initially present vegetation in the park was preserved, the trees including species of with species wild chestnut *(Aesculus hippocastanum)*, green ash *(Fraxinus pennsylvanica)*, hornbeam *(Carpinus betulus)*, silver birch *(Betula pendula),* Norway maple *(Acer platanoides)*, black locust *(Robinia pseudoacacia)*, walnut *(Juglans regia)*, oak *(Quercus robur)*, silver lime *(Tilia tomentosa)*, Norway spruce molid *(Picea abies),* and white willow *(Salix babylonica).*

In the case of willow trees showing wounds, if healing could still occur after cleaning and treatment, then they will be preserved, while the specimens at high risk of collapse will be eliminated.

A hedge of *Prunus laurocerasus* was suggested for the sides of the park on the 22nd of December and Zimbrului Streets as to provide protection and prevent accidental access from the road. So as not to completely block visibility towards the park, the fence will be maintained at a maximum height of 1.5 m.

To achieve special aesthetic effects, plant compositions were created that could be found in several areas of the park. As the tree canopies cover almost the entire planting area, we have selected semi-shade tolerant species.

The lawn is the background stressing out the elements of the park. Taking into account the lack of irrigation, moderate degree of shading, low frequency of mowing, and its use as an ornamental lawn with low traffic, we are suggesting the use of a seeding mixture of *Festuca rubra, Trycophylla*, *Festuca rubra* ssp. Comutata and *Lolium perenne* for the lawn replantation. On the planting area, the soil will be prepared and fertilized to ensure proper plant development.

All these aspects presented in the proposal for the redevelopment and rehabilitation of the "Alexandru Sahia" Park contribute to the creation of an urban environment preserving nature, fighting pollution, and meeting the outdoor recreational needs of the residents. The elements were chosen in line with the style of the entire development by applying the principle of unity in diversity. The aim was also to achieve a stylistic unity between all elements as to achieve a harmonious and balanced space that complies with the principle of aesthetic values. Another principle used in the redevelopment proposal was that of efficiency. Therefore, the most suitable uses of the park were first identified and then used to make reasonable proposals to give a new life to the studied location by exploiting to the fullest the qualities of the landscaped area.

CONCLUSIONS

The article presents a proposal for transforming the currently neglected and unused space of the "Alexandru Sahia" park into a functional, aesthetic, and pleasant park.

Research conducted globally on the benefits of parks in enhancing the quality of the surrounding ecosystem and human life has shown that both the environment and people suffer without parks.

People go to parks to relax, refresh themselves, and lower the anxiety of everyday life. Leisure activities in nature improve the mood, reduce stress, and increase the quality of life.

The set objectives led to the delivery of a satisfactory result from all perspectives. Functional, aesthetic, and technical aspects of the space were taken into consideration, and an environment meeting both practical and emotional needs of the park users.

The suggested proposal puts at the disposal of the community an oasis of relaxation and recreation, where residents can rest or have fun, socialize, and improve the quality of their lives in all possible ways.

Created functional and sustainable landscaped areas comprising a playground, a study area, a pier, a pergola area, and an island terrace

provide to visitor's various leisure and recreation options.

The lake and the vegetation, the elements of the natural setting bring numerous physical and psychological benefits, and together with the other elements and furniture, create a new, modern, and sustainable ambiance environment.

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