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REHABILITATION OF GREEN SPACES WITH ARCHEOLOGICAL VESTIGES FROM DÂMBOVIȚA COUNTY

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Abstract

The present work involves the rehabilitation of the Metropolitan Park in Târgoviște, located between Liberty Boulevard and Mircea the Old Boulevard, identified with Cadastral Number 83026, registered in the Land Book at no. 83026, site where the "Old Metropolitan Church of Wallachia" is located, respectively the Church of the Ascension, declared a historical monument, built between 1508-1537, demolished in 1889, and rebuilt between 1890–1923. Nearby are the ruins of dated buildings from the 16th century.
To enhance and protect them it was proposed, according to the Urbanism Certificate, the consolidation and protection of the stone walls, the marking of the basements of the metropolitan palace on the east side and the rehabilitation of the green spaces related to them, the surface of which amounts to 17629.28 square meters.
The proposal for the redevelopment of the Metropolitan Park and its implementation, according to the design theme, will be done in such a way as to preserve the initial architectural-landscape style and conception, but with the improvements and rehabilitations necessary for better functioning and maintenance, and at the same time the wishes of the citizens of Târgoviște are taken into account. Trees and shrubs of decorative value at the site will be preserved, and degraded ones have been proposed for replacement. at the same time the vegetation of the park will be completed with young specimens that will create valuable landscape compositions.

Key words*: rehabilitation, landscaping, archaeological vestiges, public park.*

INTRODUCTION

This paper presents a case study in terms of environmental and landscape design, architecture and archaeology of the Metropolitan Park - Târgoviște Archaeological vestiges present in this park are part of the historical monument inscribed in the List of Historical Monuments and Archaeological Sites of Dâmbovița County, position 598, code LMI DB-II-a-A-17283, dated XVIth century.
The main goal of the present project is exploring the potential of archaeological sites in the images of landscape and habitat, and namely that ruins are ideally suited to match the vegetation, lines and colours of landscape.
The myth of vestiges associated to nature is described in Hypnerotomachia Poliphili (Stanley-Price, 1997), in the dreamlike encounter of Poliphilo, the main character, with Polia, his lover, in the midst of ancient ruins lost in the wilderness.
Rehabilitation and the new landscape design of the public park satisfies the need for peace and relaxation and supplies the inhabitants of the area with conditions for outdoor movement, contributing to the embellishment of the urban aspect of the city and the preservation of the health of the inhabitants (Burgess Harrison, 1988).
The green space will be planted with trees and shrubs species. For the remaining areas there will be used grassing.

MATERIALS AND METHODS

Methodological approach to any restoration or rehabilitation project is based on such principles as minimum intrusion, reversibility, authenticity-recognisability, which applies to all sectors and disciplines, including archaeology, architecture, landscape and arts (Hartig, 2003).
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architectural-landscape style and conception, but with the improvements and rehabilitations necessary for better functioning and maintenance, and at the same time the wishes of the citizens of Târgoviște are taken into account. Trees and shrubs of decorative value at the site will be preserved, and degraded ones have been proposed for replacement. at the same time the vegetation of the park will be completed with young specimens that will create valuable landscape compositions.

To help preserve nature in the city, the shrubby and arboreal vegetation has been carefully placed at the site for maintenance and possible correction work where appropriate, so as not to pose a danger to residents (Glaeser, 2010).

Rehabilitating this space, the green area is restored to its functionality and vitality, in order to restore the connection between man, nature and history (Pálsdóttir et al., 2015).

The Metropolitan Park in Târgoviste, located between Liberty Boulevard and Mircea the Old Boulevard (Figure 1), identified with Cadastral Number 83026, registered in the Land Book at no. 83026, site where the "Old Metropolitan Church of Wallachia" is located, respectively the Church of the Ascension, declared a historical monument, built between 1508-1537, demolished in 1889, and rebuilt between 1890-1923. Nearby are the ruins of dated buildings from the 16th century.

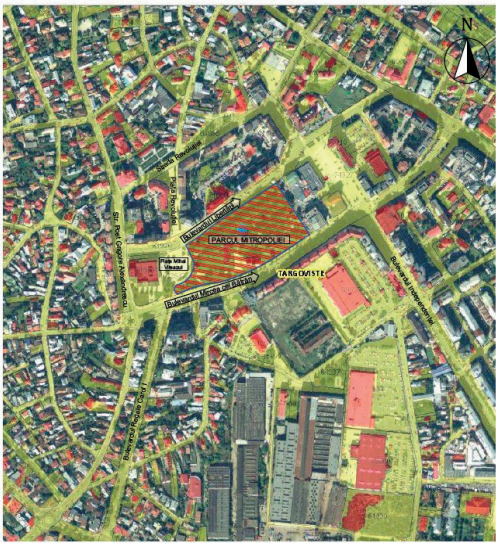

Figure 1. Area layout plan

We have included in this project (Table 1) species that are also suitable for planting in early spring. However, much better results can be obtained by planting trees in autumn between October and November, maybe even later, but not less than 15-20 days before the frost.

Table 1. List of proposed tree and shrub species and quantity

Nr. crt.	Specie name	Container type	Size (cm)	Quantity.
1	*Berberis thunbergii* 'Atropurpurea Nana'	pot	30-50	20
2	*Berberis thunbergii* 'Maria'	pot	30-50	20
3	*Betula utilis* 'Jacquemontii'	pot	250-300	15
4	*Betula utilis* 'Jacquemontii'	pot	300-350	15
5	*Buxus sempervirens*	ballot	80-100	20
6	*Buxus sempervirens* 'Angustifolia'	ballot	40-60	20
7	*Ligustrum ovalifolium* 'Aureum'	pot	30-50	30
8	*Ilex aquifolium* 'Crispa'	pot	80-100	20
9	*Spiraea japonica* 'Crispa'	pot	40-60	10
10	*Spiraea x vanhouttei*	pot	150-175	10
11	*Syringa vulgaris* 'Katherine Havemeyer'	pot	150-175	10
12	*Viburnum opulus* 'Roseum'	pot	40-60	10
13	*Juniperus horizontalis* 'Blue Forest'	pot	40-60	15
14	*Pinus mugo* 'Hesse'	pot	30-40	20
15	*Thuja occidentalis* 'Smaragd'	ballot	150-175	15
16	*Lavandula angustifolia* 'Rosea'	pot	15-20+	60
17	*Pinus ponderosa*	ballot	300-400	10
18	*Magnolia tripetala*	ballot	300-400	12
19	*Platanus orientalis*	pot	600-650	6
20	*Quercus robur* 'Fastigiate Koster'	ballot	300-350	10
21	*Tilia cordata* 'Greenspire'	pot	200-300	40
22	*Picea abies* 'Inversa'	pot	175-200	6
23	*Picea pungens* 'Hoopsii'	ballot	200-250	4
24	*Prunus cerasifera* 'Nigra'	pot	T 220	30

Mainly there will be uses ancient topiary species as boxwood, pine, thuja, oak and juniper (Paraskevopoulou et al., 2010).

Landscaping will involve deforestation of existing vegetation; land modeling; planting of trees, shrubs, flowers, etc. with complete coverage of areas and care of existing vegetation. The arrangement of green spaces refers to those with unlimited access, in this case the arrangement of the Metropolitan Park, the transformation of this public space into a space for recreation, socialization, culturalization (Derek, 2002).

RESULTS AND DISCUSSIONS

The landscape objective of the investment is to arrange and transform the land into leisure areas for the community while ensuring the improvement of environmental factors and living conditions in urban areas and beautifying the urban aspect of the municipality.

All the solutions aim to lead to the symbiosis of greenery and archaeology that offer the chance to provide a romantic, or otherwise architectural and evocative, setting for the ruins. By greenery we mean not only the plants, but the overall arrangement and decoration contributing to turning an archaeological site into an enjoyable park.

Currently, the land is used as a park for leisure, but is in a fairly advanced state of degradation (Figure 2). The project provides for the arrangement of green areas consisting of park and garden for unlimited public access. On the site and within the limit of 10% of the surface of the green space registered in the Register of Green Spaces, constructions and arrangements will be placed consisting of: pedestrian alleys, modern, sustainable and good quality urban furniture, recreational areas and artesian wells.

To help preserve nature in the city, the shrubby and arboreal vegetation has been carefully placed at the site for maintenance and possibly correction work where appropriate, so as not to pose a danger to residents. In this space, by rehabilitating the green area, the place is restored its functionality and vitality, in order to restore the connection between man and nature. Thus, in this space by respecting the design principles, the beneficiary will not be aware of the specific forms in the plan, but will be delighted by the countless pleasant relationships produced by the designed environment (Nordh et al., 2009).

Particular interest will be given to the regeneration and rehabilitation of the extrapolated area throughout the city, which can provide the basis for highly appreciated and publicized examples. In order to confirm the need for good practices in sustainable design, the present study considered the regeneration and rehabilitation of the site in a different way, but the result is as expected.

All these choices are representative of the basics of an archaeological park, the union of nature and archaeology. Vegetation, terrain modelling and natural materials furniture can be designed purposefully for archaeological sites.

Thus, in order to highlight the ruins of the Metropolitan Park and protect them, stone masonry will be provided at the top, consolidating or marking the ruins at a higher level of the walls of the old cells, marking the cellars of the metropolitan palace on the west side, including their protection at the top with stone masonry, the restoration of the main access tower to the precinct, the restoration of the walls of the old chapel of the Metropolis, the marking of the fountain of the old Metropolis and the arrangement of access alleys (Soromenho, 1994).

Given the analysis of the existing situation, the following main interventions in vegetation are proposed:

- deforestation of the incomplete lawn area that does not meet the requirements from the landscape point of view;
- cleaning the entire surface of plant debris;
- installation of an automatic irrigation system;
- planting trees and shrubs;
- land preparation works in order to install the lawn by sowing;
- in order to create the entertainment areas, it was decided to remove three trees that had an unbalanced crown and were in a period of decline.

The development project (Figure 3) of the Metropolitan Park in Târgoviște, Dâmbovița County, aims to achieve a landscaping that supports both the street alignment and completes it with the proposed volumes of vegetation and green species related to the park, and aimed the following aspects:

- the realization of a delimitation on the street esplanade of the road and in the afferent course of this street for the realization of a microclimate inside the site;
- planting trees, shrubs and flowering species in this area will achieve a special atmosphere and decor, throughout all decorative seasons;
- making alignments of medium shrubs to mark the street esplanade.

Figure 2. The existing situation at the site level

Figure 3. Systematization of the Metropolitan Park, located in Dâmbovița County, Târgoviște

In the proposed landscaping solution (Figure 3), the natural landscape of the area was taken into account, and finally the Park must be integrated into the landscape, the final effect also being as natural as possible. The central alignment of this arrangement, we can say that it is perceived as the point of interest, because all perspectives converge towards the central area. The species used for this purpose (*Prunus cerasifera* 'Nigra', *Platanus orientalis*, *Tilia cordata* 'Greenspire'), due to their size, arrangement and canopy, ensure openness and accessibility.

It is important that the periphery of the arrangement will be less highlighted than the center, to frame and fill the sides and to avoid the scattering effect (Csemez & Jombach, 2011). The general design of the park depends primarily on the position of the compositional units (groups) but also on the position of each plant, related to each other, also on the structure of the place, rather than on the characteristics of the plant. Therefore, the design proposes the beautification and rehabilitation of the area, so that it has a natural, landscape aspect (Figure 4).

The plants used in the arrangement of this park, have different ways of growth, forming a unique mass and volume, intervening changes as the plant matures. These shapes of the species used, whether pyramidal, spherical, weeping, columnar or spread, compartmentalize and define space. Some shapes are much more dynamic than others and have been used to attract attention The groups of trees and shrubs were placed so that in addition to the decorative purpose, they serve other purposes such as sanitary, protection against the prevailing wind, masking certain areas, visual and acoustic insulation of the pedestrian surface from the road surface and not lastly for highlighting the compositional units and for making the connection between the pedestrian area and the park (Papafotiou et al., 2017).

Figure 4. Proposal for landscaping of the Metropolitan Park, located in Dâmbovița County, Târgoviște

In the production of mixed groups of deciduous trees (*Platanus orientalis*, *Betula utilis* 'Jacquemontii') and conifers (*Picea abies* 'Inversa', *Picea pungens* 'Hoopsii', *Pinus ponderosa*), a special effect was obtained by placing different specimens of deciduous trees in the planes close to the viewer and using softwoods in the planes, to create a dark background, which highlights the first (leaf species). Another special effect was obtained by combining in the same group specimens of different heights and ages, not indicating the homogeneity of ages and heights in a group. The association of ornamental shrub species and their grouping also took into account the psychic influence of the crown shape on passers-by (Irvine et al., 2009).

Thus, it was desired that the compact groups of trees and shrubs print order, solemnity and determination, those formed by species with pyramidal or conical bearing give the impression of stability and height, the groups formed by specimens with spherical, tubular or umbrella crown to inspire feelings of calm, protection and tranquility, being located in areas intended for passive rest, where many banks are present.

It was proposed to use an odd number of copies and arrange them according to different irregular geometric shapes such as triangle, quadrilateral or pentagon, positioning the highest specimen or specimens in the area of interest and the smallest to the periphery of that geometric shape (Lindal & Hartig, 2013). Thus, the visibility of the group from all directions is ensured, the decorative effect being complete.

The urban grid is even more emphasized with the use of shrubby native plants (Papafotiou et al., 2017).

For turf surfaces, a lawn roller and a 20 cm layer of topsoil were provided, which should

ensure a good development and maintenance of the lawn over time. All surfaces that will be provided with turf will have the level of the land before mounting the rollers 2 cm lower than the upper level of the curbs inside the arrangement, to avoid migration of soil outside the green space thus avoiding soiling of paved or asphalted surfaces (Gatersleben & Andrwes, 2013).

The large lawn area (6000 sqm) functions as a common denominator, connecting the compositional units, ensuring the balance of the arrangement (Girardet, 2001). Also, the groups of shrubs that provide the colour palette of the arrangement are much better highlighted, in contrast to the green background of the lawn (Figure 4).

There were designed pathways naturally created that connect its main interest spots composing an organized system. Additionally, the ornamental vegetation that was chosen alongside would add aesthetic and functional value to the site.

CONCLUSIONS

In the proposed solution, the symbiosis of plants, landscape and archaeology offers the chance to provide a romantic atmosthere, a symbiosis of ruins and greenery, with an architectural approach respectful of the principles of conservation, authenticity, reversibility. The solution considers the regeneration and rehabilitation of the site in order to provide recreational, educational and aesthetic qualities in modern growing cities.

The plant species (boxwood, pine, thuja, and juniper) were chosen based on historical information on their use in ancient times, designating the local character of the site, but also can provide elegant formal structure in harmony with green spaces with archeological vestiges.

Making use of an odd number of copies and arrange them according to different irregular geometric shapes such as triangle, quadrilateral or pentagon and positioning the highest specimen or specimens in the area of interest and the smallest to the periphery of that geometric shape ensure the visibility of the group from all directions is ensured, the decorative effect being complete.

The arrangement of green area and nature-based rehabilitation of the Metropolitan Park, transform this public space into a space for recreation, socialization and culturalization.

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