THE POTENTIAL FOR UTILIZING HISTORIC GREEN SPACES WITHIN THE RESIDENTIAL URBAN STRUCTURE

Bronislava Poljak Lamrichová, Zuzana Vinczeová, Attila Tóth
Institute of Landscape Architecture, Faculty of Horticulture and Landscape Engineering, Slovak University of Agriculture in Nitra, Trieda Andreja Hlinku 2, 949 76 Nitra, Slovakia

https://doi.org/10.11118/978-80-7701-087-0-0367

Abstract
In the contemporary urbanized landscape, historic green spaces often represent the only continuous vegetation areas of significant scale within residential zones. With increasing urban density, historic parks and gardens in direct relation to housing are gaining importance as key nodes of public recreation and social interaction. This paper evaluates the functional integration of selected revitalized historic green spaces in Slovakia, focusing on the relationship between preserved historical values and current user demands.
The study is based on the concept of "value tolerance", understood as the balance between the preservation of historical composition and the accommodation of contemporary social and ecological needs. Through comparative spatial and functional analysis, the research examines the extent to which these spaces achieve a balance between landscape conservation and public recreation. By confronting original values with actual patterns of use, the study identifies key challenges in adapting cultural heritage to contemporary public space. The results highlight the potential of historic green spaces to function as high-quality components of urban green infrastructure, strengthening social resilience while preserving cultural identity.

Key words: historic park, residential zone, public space, functional integration, Slovakia

Introduction

Urbanization has intensified the importance of green spaces as key components of urban environments, influencing public health and environmental quality. As populations grow, the availability and structure of urban vegetation are shaped by processes driving both the loss and transformation of green infrastructure (Kondo et al., 2018; Chen et al., 2025). Urban green spaces provide essential ecosystem services, including climate regulation, air quality improvement, and biodiversity support, while contributing to the livability of residential areas (Vinczeová, Tóth, 2025; Bihuňová et al., 2021). They also support physical and mental health and social interaction, although their perception and use vary depending on spatial and socio-demographic factors (Veckalne, Saidkhodjaev, Tambovceva, 2025; Li, Dong, 2025). The role of natural elements in shaping emotional responses further highlights their importance (Yi et al., 2025).
Urban landscapes represent systems integrating natural, cultural, and social values that shape place identity and support diverse uses (Halajová et al., 2016; Kristianova, Štěpánková, 2012). Historically significant environments contribute to urban identity and strengthen residents' sense of belonging (Zhang et al., 2024), particularly in historically significant green spaces, which often represent the only continuous green areas of substantial scale within residential structures. Unlike contemporary parks, many historic sites originally fulfilled economic, symbolic, or representational roles (Bowen, 2013; Tóth, 2021). Over time, they have undergone functional transformation to accommodate recreational use while preserving their historical values and unique natural structures, such as mature trees (Fröhlich et al., 2024; Ouyang et al., 2024).
Historic parks and gardens link spatial and vegetative features with social practices and collective memory. Their significance has enabled their preservation as components of green infrastructure, yet their integration into planning remains challenging due to complex and often conflicting heritage values (Saratsi, White, Holyoak, 2016). This challenge is particularly evident in Slovakia and Central Europe, where historic parks and manor landscapes form a characteristic component of settlement structures. In regions such as Nitra, these spaces are frequently under-maintained or insufficiently integrated into contemporary environments (Kubišta, Supuka, 2005). Landscape architecture reflects the interactions between aesthetic, ecological, and socio-economic processes that shape cultural landscapes (Supuka, Billiková, 2018).
Increasing pressure on these spaces highlights the tension between recreation and landscape protection, which recent approaches address through multifunctional planning strategies (Tóth et al., 2014). At the same time, broader urban transformations often lead to the commodification of heritage environments (Ercan, 2025). Despite growing research, the post-revitalization performance of historic

green spaces in residential contexts remains insufficiently explored, especially in Central and Eastern Europe. This paper evaluates the functional integration of selected revitalized historic green spaces in Slovakia, focusing on the relationship between historical composition and current user demands. Using the concept of value tolerance, it examines how these spaces balance landscape conservation with public recreation.

Material and methods

The research examines a sample of 30 historical parks and gardens in Slovakia, listed as National Cultural Monuments (NKP) or heritage-protected objects. The selection criterion was a completed comprehensive restoration within the last 20 years, reflecting contemporary approaches to integrating heritage into the urban fabric. The methodology employs qualitative functional classification to assess site adaptation within the urban context. Based on operational analysis, sites were classified into four categories by their dominant function (user-oriented function):

A. Cultural-representative – prioritizing heritage presentation, tourism, and official functions.

B. Intensive recreational – areas adapted for active and passive leisure with high infrastructure density.

C. Commercial-residential – historical greenery serving as a backdrop for private accommodation and gastronomic services.

D. Educational-social – sites integrated into educational, healthcare, or social service complexes.

Results

The analysis of 30 selected historical landscape architecture sites in Slovakia restored after 2006 (Tab. 1) demonstrates a diverse range of functional integration into contemporary urban fabrics . Their spatial distribution (Fig. 1) reflects a nationwide trend toward heritage revitalization, where value tolerance—the capacity of a site to accommodate new uses without degrading its historical essence—emerges as a decisive factor for successful restoration.

The primary findings, based on the dominant user-oriented functions, are as follows:

- Intensive recreational function (43%, 13 objects): This represents the most frequent category within the sample. These areas, situated in direct proximity to residential zones, have been successfully transformed into key nodes of public life. The high prevalence suggests that the spatial tolerance of these sites is substantial, as they have effectively integrated modern infrastructure—such as playgrounds and urban furniture—while preserving their fundamental historical character.
- Cultural-representative function (37%, 11 objects): Comprising 11 sites, this category focuses on the presentation of monumental heritage values and tourism. In these locations, functional tolerance is lower; the priority remains the preservation of authenticity, which naturally limits the scope of invasive activities in favor of passive recreation and official functions.
- Commercial-residential function (13%, 4 objects): Represented by 4 sites, this model manifests value tolerance through a strategic balance between private economic interests and the preservation of the historic *genius loci*. In these cases, the historical greenery provides a high-quality functional and aesthetic backdrop for private hospitality services.
- Educational-social function (7%, 2 objects): The smallest group (2 sites) demonstrates a specialized form of functional adaptation where the historical environment serves as a framework for educational, healthcare, or social service processes.

The research confirms that restoration processes since 2006 have shifted the focus of historic parks from purely symbolic or private representational roles toward multifunctional public assets. A key observation is that the degree of value tolerance is not static; it increases in correlation with the proximity to residential urban structures. The identified models indicate that historical sites are no longer isolated monuments with heritage value, but active social spaces and resilient components of contemporary urban green infrastructure.

No.	Object	Location	District	Origin	Current Prevailing Style	Current Area (ha)	Original Use	Current Use
1	**Park Hotel Tartuf**	Beladice	Zlaté Moravce	Late 19th cent.	Engl. Land. (Neoclassic.)	5.2	Residential (nobility)	Hotel, gastro, gallery, park
2	**Bratislava Castle Garden**	Bratislava	Bratislava	18th cent. (rest. c. 1740)	Baroque (geometr.)	3	Representational	Public park (represent.)
3	**Medical Garden**	Bratislava	Bratislava	Late 18th cent. (1770)	Baroque (reconstr.)	0.8	Representational	Public park
4	**Janko Kráľ Orchard**	Bratislava	Bratislava	1774–1776 (oldest public park)	Engl. Land. (classicist)	3.5	Residential (summer)	Public municipal park
5	**Grassalkovich Garden**	Bratislava	Bratislava	18th cent. (c. 1760)	Engl. Land. (classicist)	42	Public orchard (floodplain)	Public park
6	**Budatín Park**	Budatín	Žilina	18th cent. (Baroque), 19th cent. (Landscape)	English Landscape	4.7	Residential (fortif.)	Public park with restricted access
7	**Park at Dolná Krupá Manor House**	Dolná Krupá	Trnava	Late 18th/early 19th cent. (1793–1820)	English Landscape	17	Residential / Cultural	Museum, tourism
8	**Park at Dolná Strehová Manor**	Dolná Strehová	Veľký Krtíš	1st half of 19th cent.	English Landscape	4.5	Residential	Park, Museum, memorial site
9	**Dudince Spa Park**	Dudince	Krupina	20th cent. (spa development)	English Landscape	15	Spa-related	Park, Spa recreation
10	**Park at Gbeľany Manor House**	Gbeľany	Žilina	1st half of 19th cent.	English Landscape	4.2	Residential	Public park, Hotel, gastro
11	**Park at Hanušovce Manor House**	Hanušovce	Vranov nad Topľou	18th cent. (Baroque-Landscape)	Baroque, Engl. Land.	3	Residential	Park, Museum, education
12	**Hlohovec Castle Park**	Hlohovec	Hlohovec	Late 18th/early 19th cent. (1790–1800)	Engl. Land. (Empire)	16	Residential	Public park, Culture, observatory
13	**Park at Humenné Manor House**	Humenné	Humenné	18th–19th cent.	English Landscape	7.5	Residential	Park, Museum, skansen, leisure
14	**Košice Municipal Park**	Košice	Košice	1860s	English Landscape	10	Public municipal orchard	Park, Recreation, sport
15	**Lednické Rovne Park**	Lednické Rovne	Púchov	Late 18th cent. (1799)	English Landscape	18.5	Residential / Botanical	Public park, Educational, recreation
16	**Malinovo Park**	Malinovo	Senec	1st half of 19th cent.	English Landscape	12	Residential	Public park (in process), Education
17	**Park at the Manor House**	Moravany nad Váhom	Piešťany	19th cent.	English Landscape	5	Residential	Park, Artist residence, gallery
18	**Predná Hora Area**	Muráň	Revúca	Early 20th cent. (c. 1912)	Engl. Land. (eclect.)	9	Hunting / Residential	Sanatorium area, Healthcare
19	**Sihot Park**	Nitra	Nitra	1st half of 19th cent. (1831)	Engl. Land. (municipal)	20	Economic / Public	Public municipal park
20	**Park at Nová Ves n. Ž. Manor House**	Nová Ves nad Žitavou	Nitra	19th cent.	English Landscape	5	Residential	Social services
21	**Park at Oponice Manor House**	Oponice	Topoľčany	1st half of 19th cent. (c. 1844)	Landscape (English)	8.5	Residential	Publicly accessible park, Hotel, gastro
22	**Piešťany Municipal Park**	Piešťany	Piešťany	1820–1830 (est. by Jozef Erdődy)	Landscape (spa-related)	22	Spa-related	Spa park, Culture, wellness
23	**Historic Park at Snina Manor House**	Snina	Snina	Late 18th cent. (1781)	Landscape (classicist)	4	Residential	Public park, Municipal gallery
24	**Park in Strážky**	Spišská Belá	Kežmarok	19th cent. (English park)	English Landscape	6.5	Residential	Park, Gallery, tourism
25	**Park at Stupava Manor House**	Stupava	Malacky	18th cent. (Baroque), 19th cent. (rest.)	Landscape (Baroque)	20	Residential	Public park, Social services, markets
26	**Trebišov Municipal Park**	Trebišov	Trebišov	Late 18th cent. (1790 and later)	English Landscape	62	Residential / Represent.	Public park, Museum, sport
27	**Rose Park**	Trnava	Trnava	20th cent. (interwar)	Combined	1.5	Public space	Public park, representation
28	**Park at Voderady Manor House**	Voderady	Trnava	Late 18th cent. (orig. Baroque)	English Landscape	14	Residential	Park (restricted access), Hotel
29	**Želiezovce Park**	Želiezovce	Levice	Late 18th cent. (1783 – Esterházy)	English Landscape	12	Residential	Culture, municipal park
30	**SNP Orchard**	Žilina	Žilina	Late 19th cent. (c. 1891)	Engl. Land. (Secess./Ecl.)	1.8	Public space	Park, Transit, short-term leisure

Tab. 1: Overview of analysed objects of historical landscape architecture in Slovakia restored after 2006

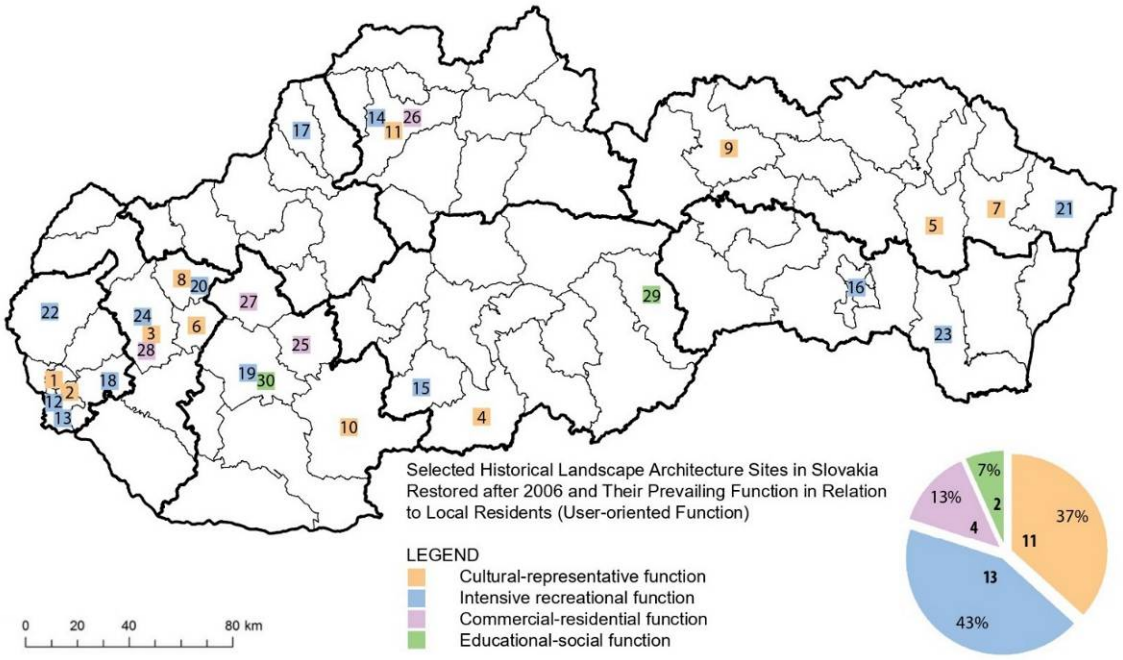

Fig. 1: Spatial distribution of historical green space sites in Slovakia with their prevailing functions and corresponding chart (Author, B. Poljak Lamrichová, 2026)

Discussion

Research findings confirm that historical landscape architecture sites are integral to urban structures, with their post-2006 functional transformation reflecting contemporary user needs. The dominance of intensive recreational functions suggests these spaces are vital public hubs capable of meeting the demand for high-quality outdoor environments within urbanized landscapes. A significant point of discussion is the large number of unaddressed historical sites in Slovakia, many of which lack formal heritage protection. This "grey zone" holds substantial potential for urban development; the absence of strict protection may paradoxically allow for more innovative uses, including commercial-residential models or specialized social support systems.

However, the objective should remain the perception of historical values as added value that enhances location attractiveness for both residents and investors. The core theme remains value tolerance—determining where functional adaptation ends and the degradation of historical essence begins. Historical values, including compositional axes and biotic elements, should be viewed as a framework for new functions rather than a hindrance to development. Supporting these sites through public and private resources is essential for preserving cultural identity and providing ecosystem and social services. Effective management of historical greenery requires a sensitive balance: utilizing these assets for public benefit while strictly respecting their historical integrity.

Conclusion

Historical landscape architecture sites represent an irreplaceable goldmine of potential for enhancing the quality of life within contemporary urban fabrics. The analysis of 30 selected sites restored after 2006 clearly demonstrates that thoughtful functional integration provides profound added value, transforming historical greenery into a fundamental pillar of urban resilience. The 43% dominance of recreational functions confirms that even heritage-protected areas can successfully absorb high urban pressures when value tolerance is strategically established. This approach ensures that monuments do not remain static relics of the past but instead become vibrant, living components of the modern city.

Simultaneously, it is necessary to advocate for the intensified restoration of additional historical parks and gardens in Slovakia that currently remain in poor condition. Their untapped social and ecological potential should not be viewed as a burden, but as a strategic opportunity for settlement development. The successful adaptation of the studied sites serves as a powerful argument for prioritizing historical greenery in urban planning as fundamental components of green infrastructure. These sites are apable of providing a wide range of ecosystem services—from microclimate regulation to supporting social cohesion and the mental well-being of residents.

Ultimately, working with cultural heritage demands a visionary equilibrium between preserving historical values and meeting contemporary social demands. Properly managed and professionally executed restoration is not merely an act of respecting history; it is, above all, a bold investment in a resilient and attractive future. This research confirms that when restoration is approached with methodological precision, cultural heritage and modern urban life can exist in a productive symbiosis. This mutual link not only enhances the quality of the living environment but also preserves the unique cultural narrative of our country for future generations.

References

Bihuňová, M. et al. (2021). Urban Green Areas and Woody Plant Composition: Dwelling Space Quality Factor in the Klokočina Housing Estate. In *Ekológia* (Bratislava), 40(1): 80–90.

Bowen, J. P. (2013). From Medieval Deer Park to an Enclosed Agricultural and Developing Industrial Landscape: The Post-Medieval Evolution of Lilleshall Park, Shropshire. In Midland History, 38(2): 194–212.

Chen, J. et al. (2025). Contrasting Effects of Urbanization on Vegetation between the Global South and Global North. In *Nature Sustainability*, 8: 373–384.

Ercan, M. A. (2025). Evolving 'Place Identity' of Ankara's Historical and Symbolic Public Space, Gençlik Park. In Planning, 35(2): 187–210.

Fröhlich, A. et al. (2024). Public Safety Considerations Constraint the Conservation of Large Old Trees and Their Crucial Ecological Heritage in Urban Green Spaces. In Science of the Total Environment, 948.

Halajová, D. et al. (2016). Memorial Landscapes & Outdoor Recreation: Evidence of Landscape Multifunctionality by the Case Study Jankov Vŕšok, Slovakia. In Public Recreation and Landscape Protection – with Nature Hand in Hand: 105–113.

Kondo, M. C. et al. (2018). Urban Green Space and Its Impact on Human Health. In *International Journal of Environmental Research and Public Health*, 15(3): 445.

Kristiánová, K., Štěpánková, R. (2012). Historical and Cultural Values of Forest Landscape in Iliašovce, Spiš Region – Protection and Presentation for Tourism. In Public Recreation and Landscape Protection – Hand in Hand: 93–97.

Kubišta, R., Supuka, J. (2005). The Important and Less Known Historical Parks and Gardens in the Nitra Region. In Životné prostredie, 39(3): 138–142.

Li, Z., Dong, T. (2025). Exploring the Mental Health Benefits of Urban Green Spaces Through Social Media Big Data: A Case Study of the Changsha–Zhuzhou–Xiangtan Urban Agglomeration. In Sustainability, 17: 3465.

Ouyang, C. et al. (2024). Exploring the Correlation between Tree Structure Characteristics and Carbon Storage in Historic Gardens Using TLS Technology: A Case Study of Jian Xin Pavilions at Jingyi Park, Fragrant Hills Park. In Heritage Science, 12: 380.

Saratsi, E., White, J., Holyoak, V. (2016). Taking Account of Heritage Values of Urban Parks and Gardens. Report.

Supuka, J., Billiková, M. (2018). Cultural Landscape Reflection on Landscape Architecture. In Životné prostredie, 52(4): 200–205.

Tóth, A. (2021). In the Footsteps of the Károlyi through Their Gardens and Parks in Today's Slovakia. In Heritage, Landscape and Restoration of Historical Gardens: 25–60.

Tóth, A. et al. (2014). Towards an Inclusive Approach to Recreation and Landscape Protection. In Public Recreation and Landscape Protection – with Man Hand in Hand: 335–339.

Veckalne, R., Saidkhodjaev, A., Tambovceva, T. (2025). Public Perceptions of Urban Green Spaces: Effects on Physical and Mental Health. In *Urban Science*, 9: 128.

Vinczeová, Z., Tóth, A. (2025). Urban Green Spaces and Collective Housing: Spatial Patterns and Ecosystem Services for Sustainable Residential Development. In *Sustainability*, 17(2538): 1-18.

Yi, K. et al. (2025). Benefits of Various Urban Green Spaces for Public Health Based on Landscape Elements: A Study of Public Visual Perception. In Forests, 16: 648.

Zhang, F. et al. (2024). Effects of Urban Landmark Landscapes on Residents' Place Identity: The Moderating Role of Residence Duration. In Sustainability, 16: 761.

Acknowledgement

This paper is an outcome of the following projects: VEGA 1/0535/24 STRO:ViD - Cultural Ecosystem Services of Trees in Public Open Spaces of the Slovak Countryside, VEGA 1/0775/26 HistorKA - Historical Development, Works and Personalities of Landscape Architecture in Slovakia, funded by the Ministry of Education, Research, Development and Youth of the Slovak Republic; and GA SPU 04-

GA-SPU-2025 Planning and Design of Residential Green Space Systems in Housing Zones of Urban Landscapes, funded by the SUA Nitra Grant Agency.

Souhrn
Článek analyzuje funkční integraci historické zeleně do soudobých obytných struktur měst na příkladu 30 revitalizovaných lokalit na Slovensku. Výzkum prokazuje, že tyto plochy nejsou pouze památkovými relikty, ale klíčovými pilíři sociální interakce a kulturní identity, přičemž dominantní (43 %) je jejich intenzivní rekreační využití. Hlavním přínosem práce je aplikace konceptu „value tolerance“ (tolerance hodnot), který definuje míru přípustné funkční adaptace bez degradace historické podstaty díla. Výsledky naznačují, že správně manažovaná obnova zvyšuje odolnost městského prostředí a kvalitu života obyvatel. Práce zároveň apeluje na systémovou revitalizaci doposud opomíjených areálů, které představují strategickou investici do udržitelného rozvoje sídel a zachování kontinuity kulturní krajiny.

Contact:
Ing. Bronislava Poljak Lamrichová
E-mail: xpoljaklamri@uniag.sk