

## HOUSING ESTATE – OPPORTUNITIES AND THREATS FOR RECREATIONAL ACTIVITIES

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### Abstract

The open public spaces for everyday recreation of city dwellers are under the close attention of several municipalities in Slovakia. Some cities are coming up with bold concepts for the development and revitalisation of recreational areas in the housing estates. Klokočina is an urban district of the regional town of Nitra. It is formed mainly by housing estates, in the peripheral part there are family houses. Klokočina has 26 000 inhabitants, who live mainly in prefabricated buildings. The area provides views of the surrounding countryside. In the vicinity there is a wooded hill Borina. It is one of the largest and most dynamic districts of Nitra. Its origin and development are closely connected with the process of urbanisation and industrialisation in the second half of the 20th century (between 1970s and 1980s). The Paper presents landscape architectural ideas of revitalisation and improvement of the open public spaces with emphases on the increasing the recreational activities and equipment for everyday recreational demands. The proposals took into the consideration also possibilities of adaptation for climate changes.

**Key words:** landscape architecture, every day recreation, urban design, greenery, Nitra

### Introduction

The integration of high quality urban green spaces into the structures of residential zones has gained increasing attention in recent years due to the challenges associated with urbanization processes and population growth in cities (Trubka, Glackin, 2016). This trend is not limited to urban centres, but also spread out into the residential zones. At the same time, social cohesion is weakening, urban society is perceived as individualistic and not connected to the environment (Kristiyanoro, Simirmanta, 2019). Cities are trying to respond to these challenges through neighbourhood concepts revitalisation (Supuka et al, 2019; Vinczeová, Tóth, 2025).

Green spaces around housing significantly affect the quality of life (Celik, Jaiyeoba, 2023). The loss of these areas due to unplanned urbanization leads residents to seek alternative locations where they can fulfill their social and cultural needs in conjunction with nature (Gel, Şatiroğlu, 2021). Linking housing and green infrastructure is not just an aesthetic aspect, but a key component of sustainable urban development. Green infrastructure and nature-friendly solutions play a key role not only from an aesthetic point of view, but especially from an environmental and social point of view. They support sustainable development, link the built and natural environment (Tóth, 2022) and are part of the concept of the fourth nature (Back Prochnow, Čibík, 202).

The World Health Organization (WHO, 2018) points to the importance of housing quality for the health of residents, which should therefore be complemented by quality green and social spaces.

The new Athens Charter (1998), adopted by the European Council of Town Planners, offers an updated view of settlement planning - emphasising social inclusion, quality of life, sustainability, resident participation and cultural identity (ECTP-CEU, 1998, Čibík, 2024). In the context of settlements such as Klokočina, the application of these principles implies the need for an integrated approach

Today's housing estates lack a hierarchical structure of public, semi-public and semi-private spaces in which social interactions between residents can take place (Petríková, 2011) and public life can emerge, bringing new conflicts into their environment. One of the main problems of degraded housing estates is the lack of interest of residents in public spaces. These spaces are still in the position of a territory belonging to everyone and yet to no one; the community of residents is oblivious to them. The quality of public spaces in housing estates lags far behind the quality of private and semi-private spaces in apartments and houses. Public spaces and their quality are a key factor in promoting community life. As Worpole (2007) states, the success of a public space depends not only on its design but also on the people who inhabit it.

### Material and methods

The area, which is presented in the Paper is part of the team work, which was done during the Winter semester 2024 at the FHLE SUA Nitra. The segment shows one part of Klokočina III district, situated

on the south-western part of the city. This housing estate represents one of the most extensive residential structures of Nitra. Klokočina housing estate has all together approximately 26 000 inhabitants, it forms a dense residential zone, dominated by panel housing estates, while in the peripheral parts there are family houses, which creates a diversified urban structure. An important landscape feature in the northeast border is Borina hill, which provides recreational zone and visual landmark.

Methods used during the elaboration of the landscape architectural proposal reflected climate changes and increased demands on the recreational equipment of the open public spaces were: 1. Terrain research, which was done from September till October 2024. The main aim of the research was to collect information of current state and equipment of the area and also inventory of the greenery. 2. Indoor work included analyses and syntheses of all data and information obtained during outside research, literature review, analysing different map portals (zbgis, googlemaps, openfreemaps, mapy.cz). The landscape architectural proposal was done into the dwg document, provided by the Nitra Municipal Office, which presented also technical infrastructure of the chosen area.

## Results

Inventory of the chosen segments of the area included 188 trees. The most abundant species include *Acer platanoides* L., *Acer campestre* L., *Picea abies* (L.) H. Karst.. The other species were: *Picea pungens* Engelm., *Betula pendula* L., *Tilia cordata* Mill., *Tilia x europaea* L., *Pinus nigra* Arn., *Prunus avium* L. Moench, *Fraxinus excelsior* L., *Fraxinus pensylvanica* Marschal., *Carpinus betulus* L., *Liriodendron tulipifera* L., *Juniperus virginiana* L., *Malus sylvestris* Mill., *Prunus cerasifera*, *Acer tataricum* L., *Pseudotsuga menziesii* (Mirb.) Franco, *Platanus x acerifolia*, *Aesculus hippocastanum* L. and others.



Fig. 1: Landscape architectural proposal of Klokočina III district in Nitra (authors: Matejková, Fecková, Beňo, Görscoová, 2024)

Landscape – architectural proposal of the revitalization is aimed to the increase recreational quality of the space and at the same time also supporting the biodiversity of the place. Proposed solutions lead to improvement of the microclimate conditions and water retention of open space. The whole concept of the revitalisation of Klokočina III was supported by the main idea “connection”. We wanted to make the open spaces more accessible for the pedestrian movement and barrier free movement. The term “connection” was elaborated also from social point of view, where we have created several bigger and smaller centres, where inhabitants of different age categories could meet. We have added plenty of resting place and interactive spots, which could be used for supporting the community life. Children

playground has been extended by play elements and sport equipment. Proposed trees are *Carpinus betulus* 'Quercifolia', *Quercus robur*, *Gleditsia triacanthos* 'Sunburst' and *Fraxinus excelsior* 'Altena'. The flower meadows reduce the maintenance requirements of the area and provides shelter and food for insect and bird species, thus increasing the biodiversity of the area. On the south exposed walls of residential buildings, which are without windows, vegetation walls with climbing plant species are proposed. The aim of the vegetation walls is to reduce the overheating of the building. Non permeable surfaces at the parking plots are replaced by permeable pavement or permeable concrete.

## Discussion

As strengths of the area could be consider: 1. urban greenery structure (there is high proportion of green spaces and grown up trees), 2. views to the city and surrounded landscape, 3. good transport accessibility (public transport, cycle paths,...). On the other hand the poor conditions of equipment (children playgrounds, rest zones, missing sport possibilities), lack of community meeting places and lack of social public services, presence of abandoned areas are weaknesses of the Klokočina III district.

How could be the quality of the open spaces improved? What are the main tasks and possibilities? Greenery play the key role in the process of climate change adaptation. There is a possibility to set up new plantations (flower beds, meadows, trees, but also integrate green roofs and green walls). Klokočina district was built on the hill, so there are several possibilities to manage the storm rain water and implement water retention in green public spaces. The community and social life could be supported by establishing better furnished and maintained places. Inhabitants of the housing estate are willing to contribute to the improvement of the open space quality and also representatives of the city municipality are looking for the possibilities how to revitalise open green spaces.

## Conclusion

Applying the principles of the New Athens Charter to housing estate such as Klokočina, requires a comprehensive and integrated approach. Instead of piecemeal solutions, it is necessary to seek synergies between different planning areas and to involve all relevant actors - municipalities, residents, professionals and developers - in the process. The aim is to transform these often mono-functional formations into vibrant, sustainable and socially inclusive urban neighbourhoods that provide a high quality of life for their residents and contribute to the overall vitality of Nitra.

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### Souhrn

Otvoreným verejným priestranstvím pro každodenní rekreaci obyvatel měst věnuje pozornost několik obcí na Slovensku. Některá města přicházejí s odvážnými koncepcemi rozvoje a revitalizace rekreačních ploch na sídlištích. Klokočina je městská část krajského města Nitra. Tvoří ji převážně sídliště, v okrajové části se nacházejí rodinné domy. Klokočina má 26 000 obyvatel, kteří žijí převážně v panelových domech. Oblast poskytuje výhledy do okolní krajiny. V blízkosti se nachází zalesněný vrch Borina. Je to jedna z největších a nejdynamičtějších částí Nitry. Její vznik a rozvoj úzce souvisí s procesem urbanizace a industrializace v druhé polovině 20. století (v 70. až 80. letech 20. století). Příspěvek představuje krajinářsko-architektonické představy o revitalizaci a zkvalitnění otevřených veřejných prostranství s důrazem na zvýšení rekreačních aktivit a vybavení pro každodenní rekreační nároky. V návrzích byly zohledněny i možnosti adaptace na klimatické změny.

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