CYCLING ROUTES AS RECREATIONAL CONNECTIONS BETWEEN THE CITY OF NITRA AND ITS SURROUNDING LANDSCAPE

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Abstract
Cycle routes are an important recreational equipment of the landscape, whether urban or rural and open landscape. They provide active relaxation, but also the opportunity to learn, try new things, and discover new places. Their equipment is very important, not only in terms of construction, but also to provide the comfort of the users. The placement of rest areas, view points, or interesting elements—artistic or educational are essential for their attractiveness. The Paper provides an overview of the cycling network around Nitra and the possibilities for connecting interesting points, supplemented by the interventions of colleagues from the Institute of Landscape Architecture, whether it be rest areas or visual-interactive elements. The Paper presents as an example a student proposal for the design of the Water company garden in Nitra, which aims to open up its space to users and cyclists in the surrounding area.

Key words: Landscape architecture, intervention to the landscape, leisure activities, cycle paths, Nitra region

Introduction

The specific function of cycle paths is not only the transport but also recreational use (Kliková, 2025). There are 36.3 km of marked bike paths in Nitra in the immediate vicinity of the city, and about 21 cycle routes with total length up to 100 km (including the wider area – Zobor, Dražovce, Párovské Háje) (Source 1 (2025). Nitra's true recreational potential stems not only from the city's bike trails, but especially from their connection to the countryside surrounding the city. The cycle roads can be a key element in the development of sustainable tourism, the support of local communities (Mišovičová, Pucherová, 2024), the expansion of opportunities for recreational and educational activities (Bihuňová, Zajícová, 2025), and the integration of recreational elements and greenery into the landscape (Čibik, 2023; Bellerová et al. 2025). The vegetation elements that line the cycle trails create a linear green feature in the landscape, promote biodiversity, and serve as a significant visual characteristic of the environment (Tóth, 2022; Kuczman et al., 2024). Cyclists' expectations for the cycleway environment and the supportiveness of the environment for cyclists' activities induce affordances to be actualised from inside-out (cyclist to cycleway) and outside-in (cycleway to cyclist) (Qi et al., 2021).

Material and methods

The area in question is located in the northwestern part of the city, between the Nitra River and the Dobrotka Stream. A major landmark is Sihoť City Park, located within walking distance.
The area of the Waterworks garden is located within the premises of the West Slovak Waterworks Company. It is situated on the outskirts of the city of Nitra. The site is located approximately 200 meters northwest of the regulated channel of the Nitra River. The Dobrotka Stream flows near the site, alongside which runs a bike path leading to the Dražovce district. Access to the site is possible via the bypass (Road No. 51 and R1a). The Sihoť City Park is located 500 meters from the site, and the historic city center is approximately 1.5 km away.
The ZBGIS map portal was used as the basis for determining the dimensions and drafting the design. Additionally, a geodetic survey document provided by the Western Slovakia Water Company was utilized. Current orthophoto mosaics, together with cadastral mapping, provided insight into the current land use of the study area. Additionally, base maps from the following portals were used: OpenStreetMap and Googlemaps.
The tree inventory and terrain survey were done in 2025. The data were recorded in a table summarizing the current condition of the trees.

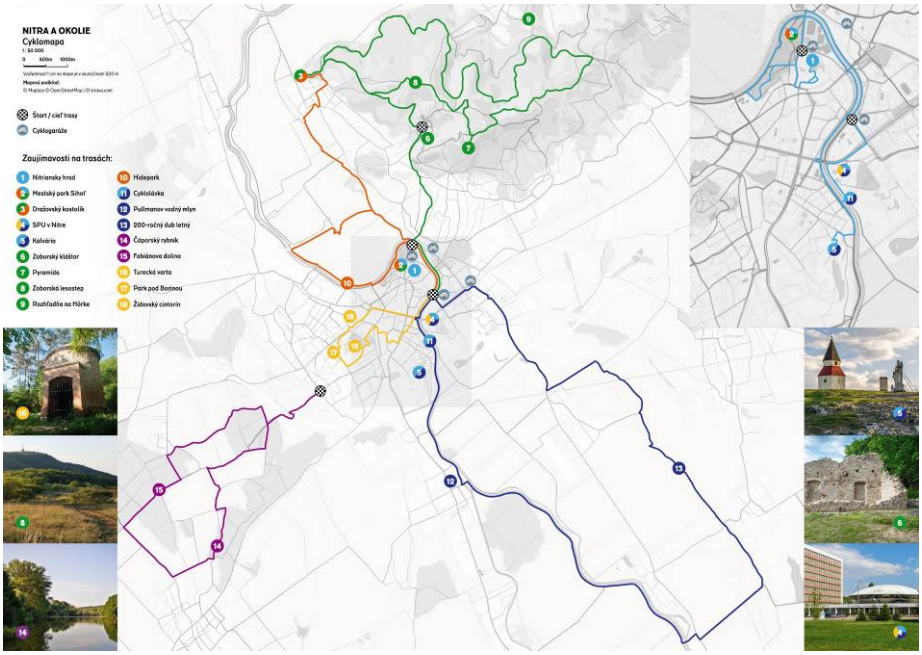

Fig. 1: Map of marked cycling routes in Nitra and its surrounding (Source: https://www.nitra.eu/8649/cyklotrasy)

Fig. 2: Localisation of the Water company garden in Nitra, with connection to the city park and cycling route

Fig. 3: Current situation of the Water company garden with the inventory of the greenery

A total of 21 tree species were inventoried, with the most common *Fraxinus excelsior* (6 pieces), *Salix x fragilis* (4 pieces), *Populus nigra, Juglans regia* (3 pieces), *Cerasus avium* (2 pieces), *Populus alba, Rhamnus catharticus, Robinia pseudoacacia* (1 piece). 20% of the inventoried trees were young trees, 65% mature trees, and 15% senescent trees.

Results

The area of the garden was divided into 3 zones: a social zone, a park zone, and a natural zone. Each zone has a specific character and is defined by its degree of openness, vegetation composition, and proposed street furniture and equipment. Through this division, the space is conceived as a gradient—a transition from an urbanized to a natural environment. The overall form is inspired by the natural flow of water—specifically, the vibration and shape of a water droplet upon hitting the surface. This motif is translated into the shaping of the main circulation routes and spatial structures. The design also employs metaphorical language—water as a bearer of life, movement, and technological value—thereby creating a strong conceptual framework with an emphasis on symbolism and education.

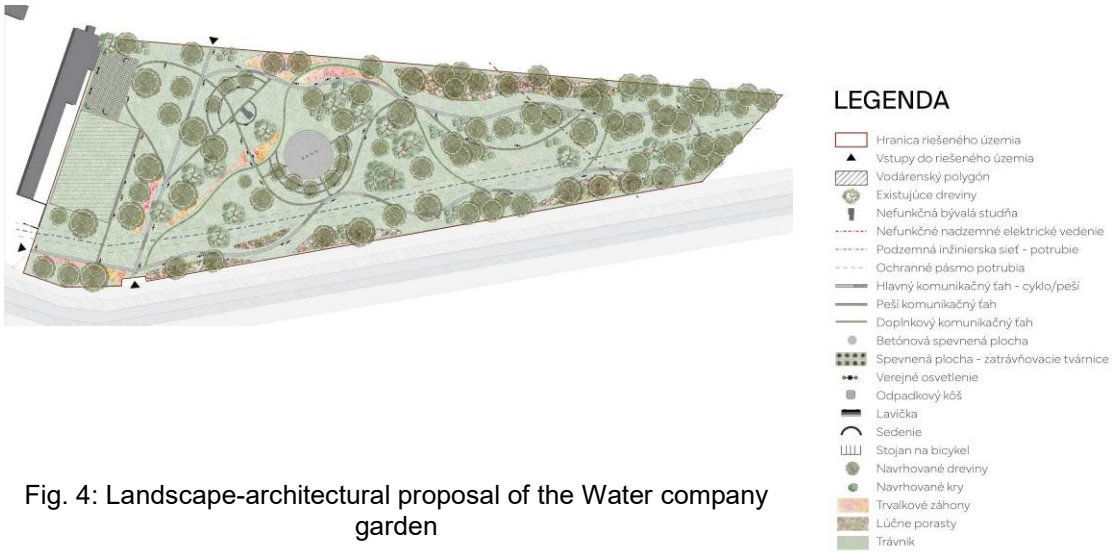

Fig. 4: Landscape-architectural proposal of the Water company garden

The concept also integrates a rain garden element, serving as a technological and ecological component for rainwater retention. Another significant feature is the proposed lookout point/well, which has the potential to become an iconic element of the design. The drawing clearly illustrates the hierarchy of circulation relationships, the balanced placement of functional areas, and the logic of the routing.

The proposed trees are: *Acer campestre ´Elsrijk´* - 13 pc, *Tilia cordata ´Winter orange´* - 19 pc, *Tilia platyphyllos* – 7 pc, *Acer platanoides ´Drummondii´* - 6 pc, *Quercus robur ´Fastigiata´* - 6 pc, *Carpinus betulus* – 6 pc, *Sorbus domestica* – 7 pc, *Fagus silvatica* – 7 pc, *Liriodendron tulipifera* – 6 pc, *Celtis australis* – 8 pc, *Malus ´Everest´* - 8 pc.

Discussion and Conclusion

The landscape architecture design for the Waterworks Garden in Nitra presents a comprehensive solution for transforming an unused industrial site into an ecologically functional space open to the public. The design reflects the principles of sustainability, inclusion, and environmental education. The landscape-architectural design is not only a landscape intervention but also a vision for the development of urban peripheries through greenery and water.

The revitalization of the site would help make the local cycle path—which connects the city Nitra with the Drazovce district—more attractive. There are already interventions along this route in the form of land art elements /AMFI/ (Čibik, 2023) and public gathering spot – fire place (Bellérová et al., 2025). The city of Nitra is gradually planting accompanying vegetation along the cycle paths, but places for rest and relax have not yet been built at acceptable distances.

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Souhrn
V Nitře a jejím bezprostředním okolí se nachází 36,3 km značených cyklostezek a v širším okolí města až 100 km. Projekt krajinářské architektury pro Vodárenskou zahradu v Nitře představuje komplexní řešení přeměny nevyužívaného průmyslového areálu na ekologicky funkční prostor otevřený veřejnosti. Návrh odráží principy udržitelnosti, inkluzivity a environmentální výchovy. Finální návrh není pouze krajinářským zásahem, ale také vizí rozvoje městských okrajových částí prostřednictvím zeleně a vody.

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