

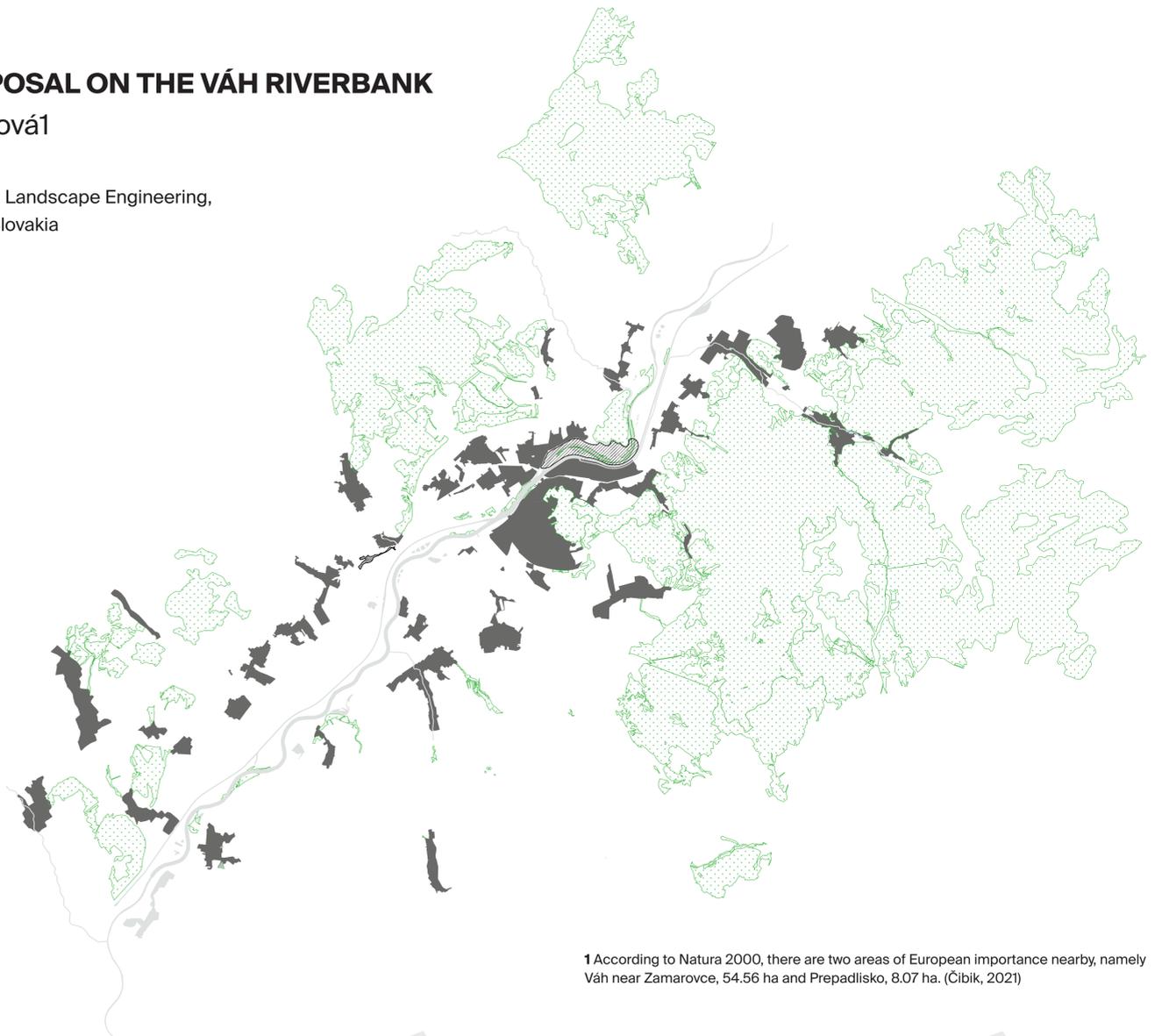
ARTIFICIAL WETLAND ECOSYSTEM PROPOSAL ON THE VÁH RIVERBANK

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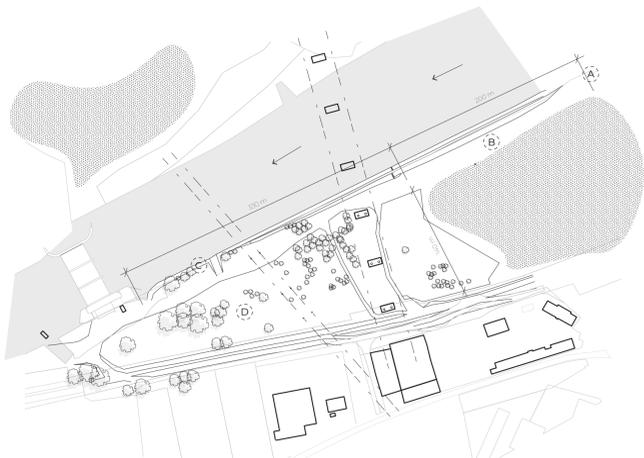
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Abstract

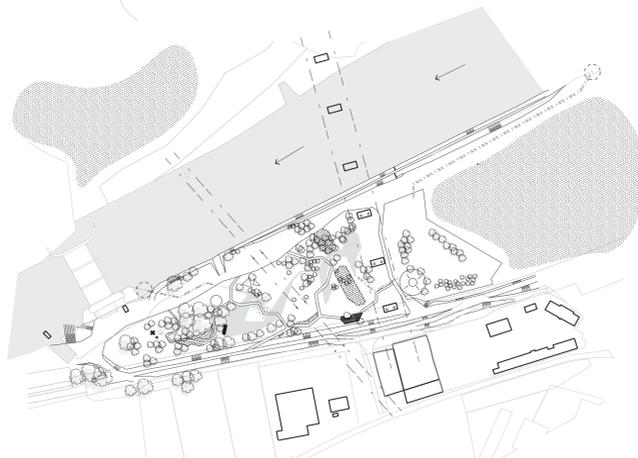
Wetlands are not only valuable biotopes, but also highly attractive recreational landscape elements. They can significantly enhance the appearance and overall quality of the environment through their ecosystem functions, services and benefits. The importance of wetlands is closely linked to their functions in the ecosystem, which are also becoming essential for humans. Their existence in the landscape is conditioned by the presence of water, which has a socio-economic importance in the environment and offers several opportunities for active and passive recreation in various forms. Civilisation trends in recent years have led to the transformation and destruction of existing wetlands and one of the ways how to partially bring them back to the landscape is in the form of designed wetlands. The paper focuses on contemporary trends in wetlands design as well as on finding their connection with peri-urban and urban structures through research by design. The presented study is based on a compromise between contemporary human needs, in the form of high-quality public space, the values of original wetlands and the local landscape character. The study area is situated in the city of Trenčín (Trenčianske Biskupice), Western Slovakia in the Váh river basin. The aim of the proposal is to restore the lost identity of this place based on fragments of the past, when the river Váh had an unregulated flow and often changed the geomorphological character of its riverbed. Based on this original spatial character, we proposed a rich network of wetlands, paths and pleasant nooks surrounded by vegetation structures of rich species composition.



1 According to Natura 2000, there are two areas of European importance nearby, namely Váh near Zamarovce, 54.56 ha and Prepadisko, 8.07 ha. (Čibík, 2021)



2 Situation of the area (Čibík, 2021)



3 Contemporary design, the first phase of the proposal (Čibík, 2021)



4 Final design and the final phase of the proposal (Čibík et al., 2021)

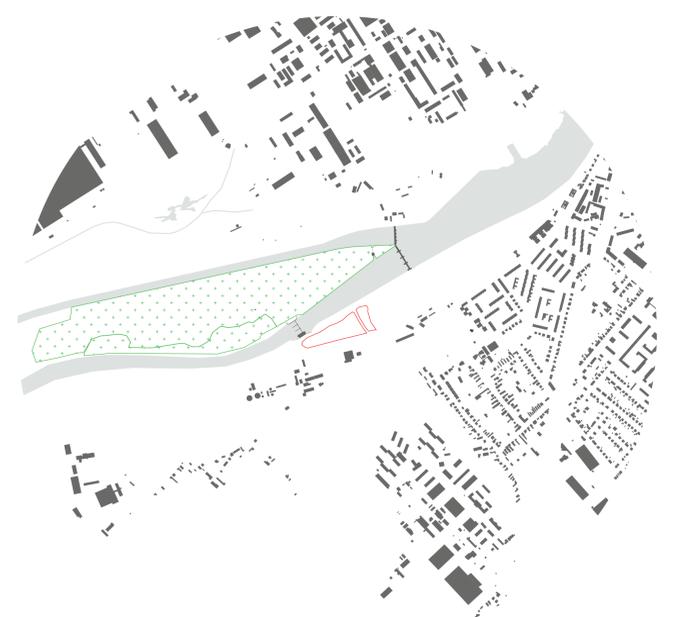
Results

The area is functionally divided into several points of interest with a wide range of uses, which are connected by a network of paths in a combination of threshing floor and wood. From the main bike path leading along the embankment, we designed a ramp that naturally leads the visitor to the depot for cyclists, which is a simple wooden platform with an exterior furniture. There are *Salix alba* L. and *Fraxinus angustifolia* Vahl. close to the area, which provide shadow and cooling even during hot summer days. Other attractive elements for rest and relax, which we get alongside the diverse wetland ecosystem, are points of interest with site-specific installations, or a mirrored water surface in the shape of a circle, which is part of a Corten vessel with a diameter of seven meters. A circle that has neither a beginning nor an end is a symbol of unity and eternity. The water surface, which has a shallow bottom and mirrors the surrounding trees and sky, creates a spiritual impression. Such a quiet place is also a pier shaped like a bench with a backrest, or nets between trees, where users can enjoy reading a book or a picnic with friends and family members. The design includes children's playgrounds, which are placed on a soft surface made of natural stone of small fraction. Along the service road, which we had to leave untouched for the management of

technical objects of the river basin, there is a water channel that enables functioning of the entire wetland ecosystem, connected by wooden bridges and supplemented by rich plantings of grass, shrubs and trees. The design also describes the reconstruction of a concrete tower located at the riverbed, which will be re-design into a new lookout tower. The second essential axis of our thinking was the social dimension of the area, representing a democratic place on the periphery of the urban landscape. Democratic with its accessibility, freedom of activity and equality.

Conclusion

We bring multi-layered activities to the locality and thus we give visitors the opportunity to spend their free time meaningfully in an area that is sustainable, naturally scarce and supports biodiversity. However, the use of wetlands by visitors must not adversely affect the ability of future generations to use them. Wetlands belong to the most endangered ecosystems and this fact must be appealed to the protective instinct of tourists. Quality tourist infrastructure helps to create a destination to which visitors like to return. On the other hand, disproportionately high availability can lead to the degradation of natural resources.



5 Location of the area within the city (Čibík, 2021)



6 Visualization 1 (Čibík, 2021)



7 Visualization 2 (Čibík, 2021)



8 Visualization 3 (Čibík, 2021)