

WATER/SPACE/ENERGY
Possibilities of using riverbanks
within the city

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DLA THESES IN ENGLISH

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ABSTRACT IN ENGLISH

For over two decades, the rehabilitation of urban riverbanks has been an ongoing issue in European urban design. The utilisation of riverbanks and their connection to urban circulation are linked to the renewal of transport systems and urban public space rehabilitation efforts. There are numerous diverse requirements for urban waterfronts. We expect them to be attractive, to engage us in activities, to provide a relaxing green environment on the coast, to be accessible to everyone, to be transparent and safe, to be functional and homely at the same time. The riverbanks of Hungarian domestic settlements can hardly meet most of these demands. The aim of the dissertation is that the planning program and the extent of the intervention set up during the river rehabilitation find its proportional place in relation to the scale of the river and the city.

The role of riverbanks and their built environment within the city is undergoing continuous transformation, and is not in a static state even today. The dissertation examines the uses that are related to urban water utilisation, analyses the historical background of the uses and their impact on the urban structure.

Some architectural solutions reclassify the water surface. Instead of spectacular scenery, water is interpreted as the city's active public square. They also create physically connections, creating "bridges" between people and water; transforming people into users, and transforming water into a partner. The purpose of structures is often to acknowledge the presence of water. They also create a physical connection with the river as a natural element, providing more meaning and multiple uses.

In the case of regulated and cyclically varying water levels, the architecture of two different types of water surface differs in terms of material use, form, and narrative. In an urban context, consistency and predictability greatly influence usage. The accessibility of the regulated water surfaces and the architectural means thereof are different from

those of the periodically flooding or fast-flowing rivers. Connections vary accordingly.

The stratification of river rehabilitation requires the integration of the river's multiple qualities into the planning process. For this purpose, the three categories of design to be surveyed are network-surface-matter, which can integrate the urban, physical, mapping, materiality and metaphysical meaning of the watercourse into the design process.

The dissertation examines the role of medium and small watercourses within the settlement. The main research site and primary case study of the research is the relationship between the built environment of Mosonmagyaróvár and its rivers. The urban Lajta branches and the Moson-Danube serve as a benchmark for other domestic and international examples. The bed and bank rehabilitation completed at the Lajta Malom Branch is also the final project of the DLA dissertation.

THESES IN ENGLISH

THESIS 1:

Unlike natural rivers, urban canals do not have an inherently representative role. Their identity is linked to the industrial heritage and imprints of local urban history. When installing new features, it is advisable to boost local usage.

THESIS 2:

The number of private plots responding to the waterfront and the nature of their relationship are related to the role of the watercourse in the city.

The number of connections indicates river's embeddedness in urban life, and the diversity of connections may be viewed as a measure of the city's adaptability.

THESIS 3:

Human capabilities such as the distance of vision and speed of walking can serve as a design premise for the optimal distribution of static, individual urban design elements along the riverbank.

The density and type of the built environment can provide a formula to the likely means of transport and types of shoreline usage along a given stretch of the river.

THESIS 4:

During planning, the system of three layers, **NETWORK - SURFACE - MATERIAL** helps to determine the extent of intervention in proportion to the river, the city and the people.
