

THE POTENTIAL OF RIVER IN URBAN SPACES

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Abstract

This article, "The potential of river in urban space " is the theme about changes embankment zones and rivers. Article is based on author's scientific research which aimed to the theoretical part and practical part. The origin theoretical part is an outline of possible uses and waterfront concepts, their problems and inspiring examples of solutions. On the basis of information obtained are systematised the basic problems of the waterfront and rivers and principles of their solutions. The paper on the practical part presents the concept of ideological solutions waterfront area at the northern periphery of Prostějov, the river Hloučela. Design concept precedes the analysis of literary sources and evaluation of selected objects waterside areas. The concept design is also based on the results of the analyzes, analyzes and investigations. The principles are identified as working in the design model object. The solution tries to understand and reproduce the natural essence of the river and its landscape and capitalize on potential Hloučela mainly within the natural corridor on the outskirts of town.

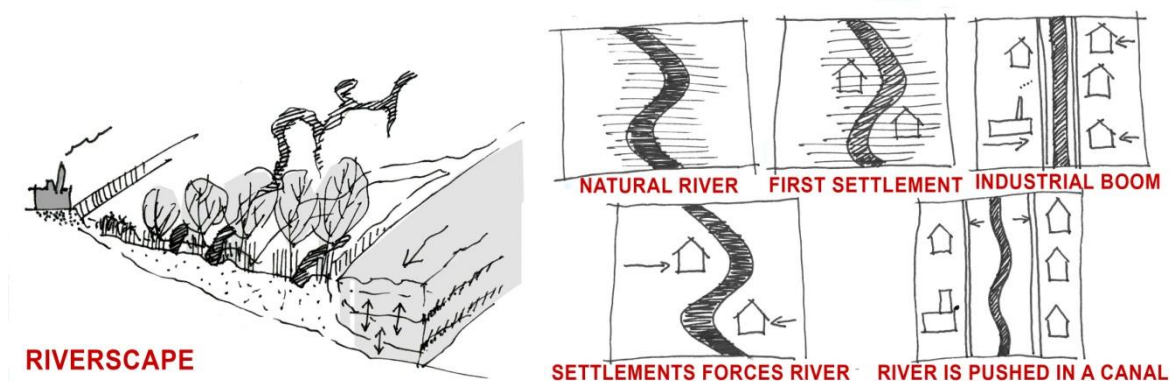
Keywords: River, riverfront, riverscapes, natural park, public space

Introduction

First of all some historical relation is needed to be set. In almost every industrial city, many rivers flowed. The city and river always belonged to each other. Settlement wouldn't exist without a source of water of course. Rivers shaped the city – forming borough boundaries, transport network and so on. Rivers eventually gave way to railways, roads and sewers. But as cities grew rivers become undesirable. Solution two centuries ago, in some cases, was to bury rivers underground and merge them with sewer networks. River surrounding was wet and swampy obviously. And that's the reason why some places were determined to become parks – according to adverse conditions for settlements. And that's fortunately why unsettled places are running along rivers. But there were another way of course, which were settled places.

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Due to flood danger by splitting water from river, the river surrounding was obviously unsettled. We have to keep in our mind that riverscape has its own morphology. It is important to think about morphology while using these piece of land. To go into deep knowledge we have to discuss every part of origin unsettled riverscape. There is a river terrace, flooding area (glay), sparse vegetation, periodical pools, floodingplain forest, periodical shoulder of river, aluvium, side arm of river, aggregate rampart. It is obviously beneficial, if riverscape is led to be unsettled. Ideal use for such a landscape is let's say park, urban park in a case of city. These unsettled places are obviously very precious in the city and is need to be used as a public spaces.



According to theoretical part of a origin author’s scientific research, it would be usefull to mention some very important topology concerning riverscapes:

Types of processes in riverbed and riverside:

- A. temporary flow fluctuations
 - sub-process 1: vertical water level fluctuation
 - sub-process 2: lateral spread of the water
- B. morhopodynamic proces
 - sub-process 1: sedimentation shift within the river
 - sub-process 2: self-dynamic river channel development

Limits in designing riverscapes:

- environs network in general
- flood limit
- limit of self-dynamic river channel development
- limit of controllability of river processes
- structural and vegetational diversity on riversides

Basic potential of rivers in urban spaces

- to offer some meeting point in natural close environment
- place to observe natural processes
- negative barrier in permeability in city
- veins for transport
- creator of microclima in city
- substance that brings smell and voice to the environment

We have to relalize, that water is the main attractor in such a environment as city is. It is important to allow citizens to go as closer to the water, as it’s possible.

Principles of approach in creating riversides– how to allow people to go closer to to river

- a broader intermediate level of bankside offers spaces for lingering by the waterside and temporary uses
- a staged transition to the water over several broad terraces permits several uses to coexist
- broad riverbank steps create public space beside the water, offering direct contact with the river at various water levels
- where the riverbank wall is breached at a single point a place to linger at the waterside can be created
- an opening to the watercourse at right angles to the bank is the spatial counter – concept to parallel access

- opening in flood protection walls can create direct access to areas which are subject to flooding
- by installing removable flood barriers or windows flaps, sightlines and visual connections to river can be retained
- balconies jut out at specific places into the river space and invite people to linger by the river
- boulders and stepping stones which rise above the mean water level enhance the experience of flowing water by making direct contact possible
- on riverbank promenades that are often flooded, stable foundation and the choice of exceptionally heavy or flood-resistance material for the furniture and fittings are important
- planting in a river's flood area at the foot of the riverbank wall can enhance the space considerably
- floating islands open up spaces that were previously inaccessible

The aim of this contribution is to show how to apply theoretical knowledge in a case study. For this reason a concrete place was chosen. It is exactly Hloučela river in the city Prostějov. Design concept precedes the analysis of literary sources and evaluation of selected objects waterside areas. The concept design is also based on the results of the analyzes and investigations. The principles are identified as working in the design model object. The solution tries to understand and reproduce the natural essence of the river and its landscape and capitalize on potential Hloučela mainly within the natural corridor on the outskirts of town.

Original concept was to allow river as much space as possible due to river liberation. Following maps and visualisations are there to see more details about this model project.

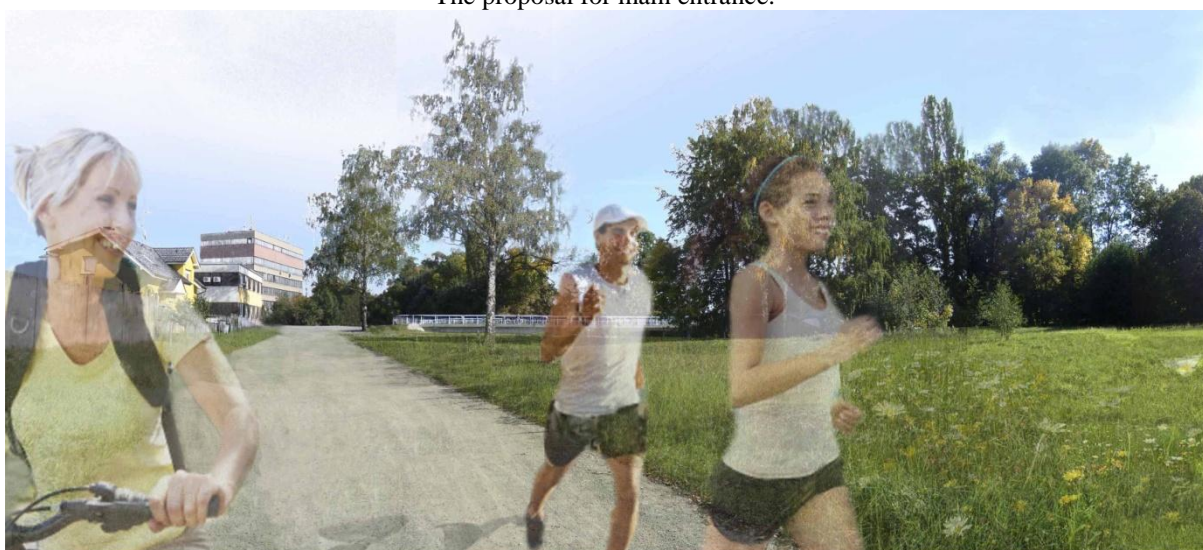
Legend for map

1 the main entrance **2** the beginning of promenade **3** pedestrian zone **4** meadow for games **5** ford over the river **6** playground by the buildings **7** relax place in the meander **8** parking **9** pedestrian corridor to street **10** outdoor furniture shaped in river Hloučela shape **11** newly build pedestrian access **12** promenade **13** parking **14** footbridge **15** rest corner **16** natural children playground **17** observatory of the river flow **18** hornbeam wood **19** café **20** relax place with furniture in shape of leaves **21** natural trail **22** route for cycles **23** sunny meadow **24** meadow for dogs **25** shadow part **26** transition **27** periphery route





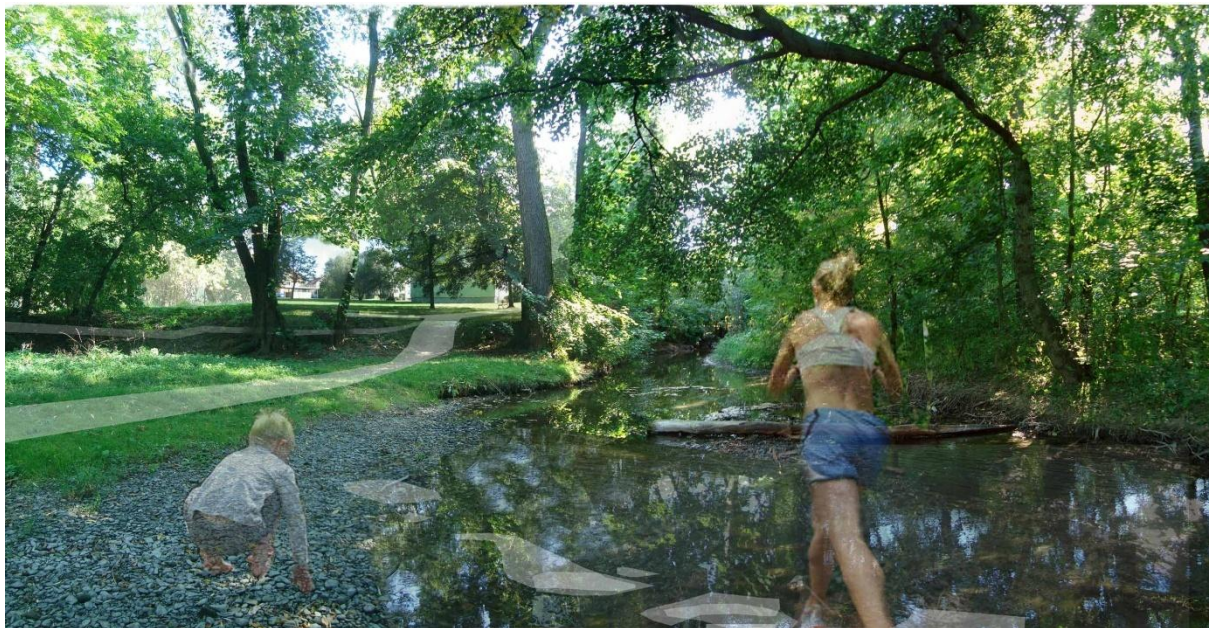
The proposal for main entrance.



Newly build cycle route.



Meadow for games.



Newly build ford.



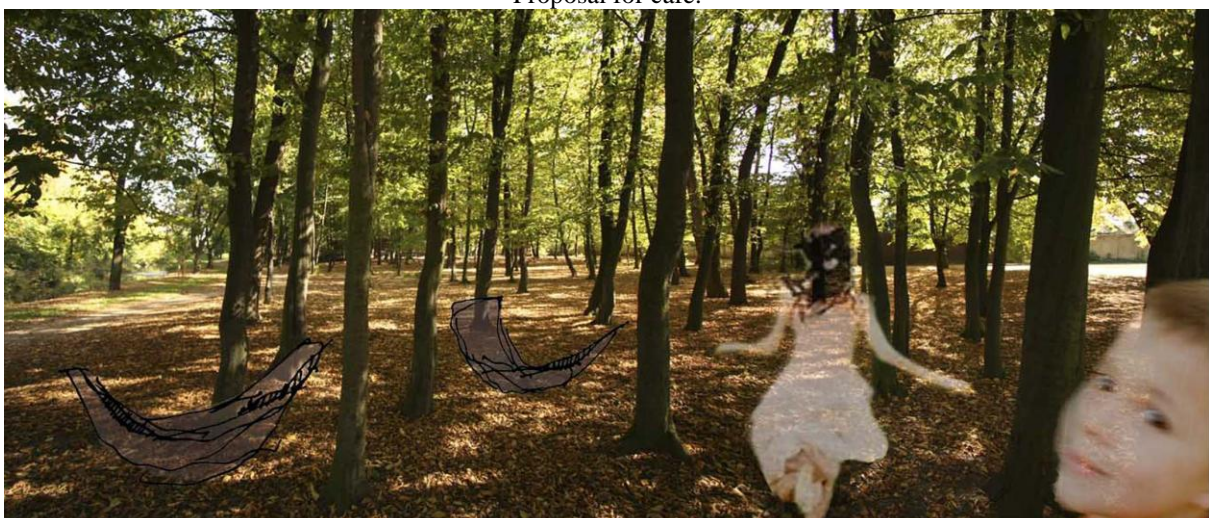
Original bench in a shape of river Hloučela.



Natural children playground.



Proposal for café.



Outdoor furniture.

