Landscape Planning Aspects Of Municipal Creekside Greenways In Hungary

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Dr. Ildikó Réka Báthory-Nagy [1]
[1]*Corvinus University of Budapest, Department of Garden Art*

Introduction

As a researcher in landscape architecture, I focus on creekside landscapes: their special characteristics, natural and man-governed processes and abilities to recover. The general aim of my research work is to find better landscape planning and design solutions to improve Hungarian creek valleys' functional, ecological and aesthetic conditions. As a practitioner, besides setting guidelines for restoration, I am engaged in landscape architectural projects focusing on the recreational and ecological development of urban creeksides.

In my present paper I would like to focus on some characteristics of landscape planning that are the elementary determinants of creekside greenways in Hungary. Through an urban greenway project proposed to the town of Veszprém, I intend to summarize some of the present issues and limitations regarding municipal creekside greenway development. The projected area is rather small but includes sufficient general issues to make it a perfect example:

Background

Due to topographical and hydrological conditions, hilly creek valleys, concerning their numbers and sizes, are a determining natural landscape element in Hungary. To prove it by numbers, the creek network constitutes 35,000 linear kilometers in a country of only 93,000 square kilometers. Altogether there are 1800 different urban creeks, presenting many similarities in their landscape planning aspects. 1500 settlements out of a total of 3200 include at least one creek which means we can find a creek-like landscape feature in almost every second Hungarian settlement (Nagy 2001).

Thanks to the surface water management practices of the 20th century the role of creek valleys in landscape structure has been significantly changed, which has resulted in a remarkable ecological degradation of water basins and creeks. By the end of the 20th century the frequency and intensity of floods, the increasing level of water pollution, functional and environmental conflicts revealed the anachronistic nature of contemporary water management practice. Both scientific and administrative boards introduced an integrated water management which could stop and reverse the degradation process and also meet high EU standards (Nagy 2001, Báthory-Nagy 2007).

A basic element of new integrated water management strategies is to help a functional rebirth of creek valleys which have no social interest at the moment (Báthory-Nagy 2007). Creek valleys, even in their heavily modified and regulated

present condition, serve as a potential natural connection between countryside and town (Turner 1996). This connective manner is barely noticed today, neither in use, nor in development. Besides preserving biodiversity on a local level, a restored and revegetated urban creekside would be a perfect target area for local urban greenway development.

Since 1990 several community-raised restoration and development proposals have resulted in planning and design projects. After all these years of preparation there is not one project which could be pointed out as a successfully realized example. While municipal bicycle route networks are growing, no greenways of any kind are developing in creek valleys. Why does a creekside greenway seem to be such a difficult task?

Goals, objectives and method

The goal of my research was to find out why urban creekside restoration projects are not successfully carried out. What is the general lesson of the certain project which could help further landscape planning projects to advance municipal creekside greenway development in Hungary?

By analysing a longterm project of a municipal greenway development of Veszprém I point out generalities of the process which would characterize other, similar projects.

Case Study

Due to pressure from local developers in December 2000, the Municipality of the town of Veszprém decided to promote the development of the downtown section of the Veszprémi Séd Creek Valley. Veszprém is one of the most powerful towns of the Transdanubium of Hungary, and is a county seat. The creek valley has played a dominant role in the development of the town, which could be recognized still in the urban structure. The medieval creek valley was crowded by watermills, mill channels, monasteries, crop fields and vegetable gardens proved by archaeological excavations. As a linear natural element it serves an important ecological corridor as well as providing urban ecological benefits (air filtering, micro-climate regulation etc.) Due to its high cultural and natural potential, scenic values and social values, the whole valley is under protection -- a chain of historical monument areas, protected archaeological sites and nature reserves.

The 3.2-kilometer long urban creek valley, winding to the historical town centre from the North, could be divided into three parts. The easternmost section is the Aranyos Valley, which is relatively wide and shallow, including unused recreational properties of the Catholic Church. It represents a high percentage of green areas and also historical monuments. The middle section, situated the closest to the Castle Hill and the Benedek Hill is rather narrow, deep and asymmetrical. Characterized by dolomite rock walls from the South and East and surrounded by crowded medieval

residential areas from the North and West, this section is the most exposed from the city center, like a natural runner at the foot of the royal town. Presently developed and used as an unspectacular green strip for dog walking, this section carries a high potential of becoming a scenic public park. The westernmost section is the Betekints Valley. With its extensive green spaces, it serves a place for urban outdoor recreation and has a direct connection to the surrounding Bakony Hills. It hosts one of the most important tourist targets of the city, the zoo (.A.D.U.-BCE TTT 2005.)

The recreational use of the valley seems to have been developed by the 18th century. Forested trails, lodges and restaurants were established, a public ambulatory and rifle-range was opened. The largest development took place in the Betekints Valley in 1959 to 1961 when a public amusement park was built basically through community support and so-called voluntary work: a rowing lake, a small railway with a tunnel and several building and attraction were built, followed by park construction. Since then, no remarkable investment has improved the condition of the urban creek valley (.A.D.U.-BCE TTT 2005.)

The Veszprémi Séd Creek is the most important surface watercourse of the region with a temperamental hydrological cycle. It produces several floods during the year but also has periods in summer when some sections of the creek bed stay dry. In the Betekints Valley the alluvium is open karst, which causes a high level of leaching of surface water towards the karst water basin. In the other urban section there are natural springs just under the creek bed, which could supply the watercourse all year long. The creek has been regulated to have a trapezoid section and it has also been provided with bedding and bank pavement. It is presently used as a rain water and processed wastewater drain (Solymosi at al. 2008).

The project site is 7.45-hectares, including 32 lots, primarily owned by the city, the state or the Catholic Church and opened for public use. The project site has been determined by the help of the Master Plan. Areas showed as proposed public green spaces, transport areas or water management areas along the creek bank were included in the project.

Figure 1. Orthophoto of the project area (Source: Veszprém Municipality)

1n 2001, as a first step, a detailed Local Regulation Plan was developed in which main development guidelines were established. The main goal of the project was to

revitalize the urban creek. The second target of the project was to advance private investments of tourism in the valley, by providing redeveloped public green spaces following the restored creek banks. The major tool of the landscape plan was to propose a continuous public green area zone on both side of the creek, proposing even the previous rowing lake to be regulated as green space. An even more pioneering proposal was to have the creek transformed from a water management zone to a public green space zone. By these decisions, the same manner of development and management could have been ensured along the whole project area. In the final version the lot of the creek, basically including the regulated creek bed and banks, stayed as water management area according to national customs and request of water management authorities, the joint public spaces were regulated as green spaces (A.D.U.-BCE TTT 2002.)

The town's new Master Plan and Local Code -- developed in 2004, two years after the project was launched -- integrated the previously-described goals and landscape planning achievement in a modified way (Műhely Rt. 2004).

— In the Betekints Valley the area south of the creek was regulated as urban forest zone, which has much lower possibility to include paved surfaces, parking, buildings etc. Due to the sizes of lots and the specification of the zone, several lots are not capable in their present form to house a paved pathway, resting deck or a playground. Therefore it has presented a hardship for the future project designers who are supposed to find special construction methods to serve basic needs for pavements and resting areas in an urban greenway.

— Another contradiction of the Master Plan is to re-regulate the previous rowing lake inside the park as a part of the water management zone of the watercourse. In this case, the water management authority plays the major role in its development and use, while the recreational or green space aspect remains secondary.

— The Master Plan has revealed a paradox of legislation on the national level. Watercourses of national importance, such as the Veszprémi Séd Creek, are supposed to be regulated as water management zones, and to be managed as surface channels for drainage -- not to pose a risk for flood or inland water control. Therefore, a 6-meter wide stripe of land on both side of the bank should be maintained and kept clear of objects and trees. Another national law, serving nature protection interests, specifies natural small watercourses as a target place for protecting biodiversity. According to the law, all natural or semi-natural habitats, including trees, must be preserved along the watercourse. The Master Plan calls for water management to be the last word, even in cases where both laws are equally authoritative.

— The surrounding forests of the creek valley and the creek are part of the National Ecological Network in the regional master plan. The regional plan proposed a greenway on the northern side of the creek where there is no

continuous public zone for developing it. The Municipal Master Plan must override the higher regulation in order to be able to develop the greenway.

— Due to a complete lack of interest, urban creek valleys are traditionally developed in Hungary as infrastructural corridors: basic sewage and water supply pipelines, electrical and communication wires etc. The Veszprémi Séd Valley houses one of the main sewage pipelines of the town, three different water supply lines and also some underground telecommunication cables. The safety zones of underground technical infrastructure present a serious limit to development: no buildings, structures or tree planting is allowed. The valley is rather narrow, and the overlapping safety zones leave only a few places free for development.

After accepting the guidelines and rules of the master plan, the municipality made no further steps to implement its regulations at a local level. Basic lot unions or lot splits, lot limit and zone limit corrections of public areas have remained undone. A lack of these legal processes has remained a handicap throughout the whole planning and design process, forcing the decision makers to reshape the project's program several times.

Based on the concept, the town entered the development concept into a multi-step process of asking for EU funds, starting a whole series of design processes. First study plans were developed which were followed by plans asking for building permissions and finally construction plans. The design process was completed by 2008, which switched the project to the realization phase. Construction works start in spring 2010.

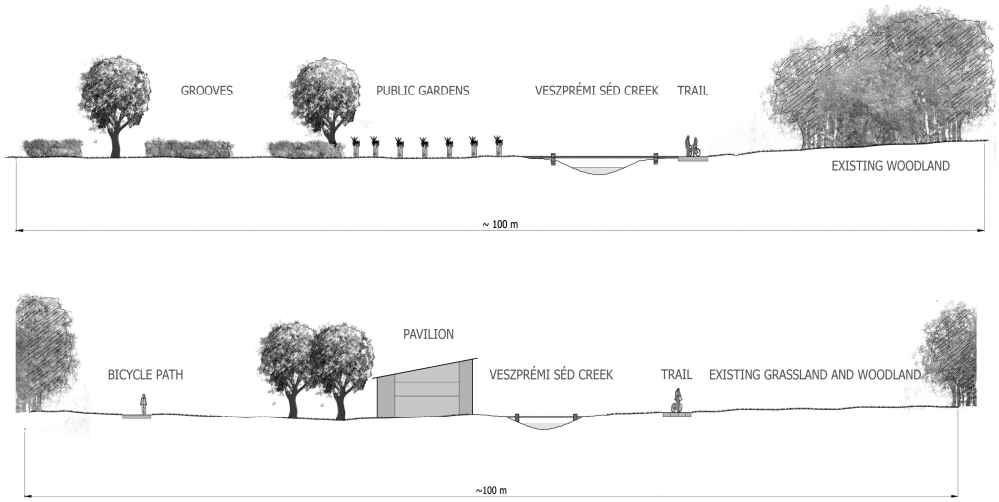

Figure 2. Projected cross-section of the municipal greenway in the Betekints Valley (Source: A.D.U.-BCE TTT 2005)

The planning period, besides the difficulties detailed above, was characterized by a series of hardships. Members of the local authority as well as the decision makers and the legal environment have changed in the meantime. All these processes caused an alteration of the development goals, the size of the development area and also the nature of the problems to be solved.

Results

The main results of the research could be understood as the comments and – even more likely -- the questions raised and listed below regarding the conflicts, contradictions and paradoxes of the various legal regulations affecting creekside landscapes.

National laws on water management and nature conservation are not harmonized to serve creekside greenways. Management zones of creeks, 6 meters on both sides, are strictly developed for flood control and basically no trees are allowed within. According to the nature conservation regulations, it is necessary to maintain and preserve natural vegetation along the creeks including trees. Which regulation should be kept? How green is a creekside greenway without trees?

Regional ecological and recreational corridors are marked and determined by regional plans. Some creek valleys with regional importance could be marked as ecological corridors and recreational routes, while others with local importance are not recognized. In many cases, objectives set by regional plans could not be realized in a local level because they are not 'sensitive' enough for local conditions (ownership, local management etc.) How is it possible to serve the higher law if we lack the suitable local legal conditions?

Legal framework and regulations stated by Master Plans and Local Codes can cause not only a strict reduction of constructing buildings, in the name of nature preservation, but also a decrease of the development of green spaces and essential pavements for greenways. Present development rules governing recreational forests set a tight frame for a recreational green corridor development, which is contradictory with the development goals. How can we harmonize local needs and regulations in planning?

Urban creek valleys are congested with infrastructural networks. Strict standards of implementation and management as well as restricted use and development of buffer zones set a serious limit to greenway development in a narrow creek-side corridor. How can we handle infrastructure and green corridor in the same place?

Creekside green corridors are rather narrow. In the present state of Hungarian society, a private land owner will not be willing to grant an easement from their land to serve a public use in which he has no direct interest. How can we change this situation? If we want to be able to develop a municipal greenway, must we occupy only state or municipal land?

Discussion and Conclusion

The above questions cannot be answered sufficiently through landscape planning tools alone. By x-raying the project and pointing out the paradoxes and contradictions existing at the national and municipal levels of landscape planning and legislation, it would even be unprofessional to do so. The sole attempt I wish to make is, on the trace of Schwarz' guidelines (Schwarz 1996), to draft a planning 'checklist' outlining what to do before starting a municipal creekside greenway project.

— Have a clear view of such a long lasting and complex project! First of all, the municipality and the community must have a clear vision of what they are projecting. Looking at case studies or visiting project sites could be one way of finding a clearer vision!

— Set up a separate management team! On a municipal level there is a need for a team of professionals that carries the project through to its logical conclusion, once all the preparation work is done. The paradoxical legal framework and common judgment require continuous negotiation and compromise among national authorities and municipal goals, and this duty calls for professionals.

— Reimplementation of a municipal technical infrastructure network must come first! Municipal creekside greenway projects could not be begun before the reorganization of the technical infrastructure lines currently occupying a significant amount of territory.

— Let the community play a significant role in the project! If the community is involved and discovers its own social and personal benefits in the project, it can help ensure better stewardship and management of the realised greenway and reduce costs.

— Have a broad spectrum of communication on all levels! Work progresses more easily if all participants clearly know the goals, objectives and tasks. It is highly advisory to have a separate communication strategy for the project.

— Until all the above are reached, municipal creekside greenway development in Hungary can succeed at a moderate level at best.

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