



The changes of the public open space system of Nagytétény in the aspect of new development

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Abstract: The public open space system of the city is being affected by several factors, which are changing the open spaces' morphologic attributes, functions and group of users as well. One of these factors is the development in the surroundings. A grand development has been planned in Nagytétény, which is in District XXII., in Budapest, that will change the structure of the open space system. Considering these changes a new public open space renewal is necessary.

In our research we demonstrate the possible changes of the public open space system through the example of Nagytétény.

Keywords: city structure, free accessibility, use intensity, development strategy, future effect

1. Introduction

The public open spaces are essential elements of the cities. These most common places for human interactions, influence positively the citizens' psychical well-beings.

The public open spaces form networks in every city, which is one of the most important part of the structure of cities. The public open space systems are always changing in history. They are influenced by several factors, like changes of social demand, current economic situation, including the amount and frequency of

developments in the city. A new development can play a big role in changing the city- structure. It affects a part of the city or sometimes the whole city's future structure. It has a great impact on, not only the built-up areas structure, but the public open space system as well.

The open space system

One of the first definitions was born in Italy in 18th century. Giambattista Nolli, an Italian architect and surveyor, made a map, which shows the public open spaces of Rome. This Nolli map was invented in 1748 and was drawn for Pope Benedict the 14th. It is a map to measure the density of cities, mainly in black and white. Nolli was one of the first people at that time, who used orthogonal rotation representation map of the city, compared with conventional representations in bird's eye view. The map is quite accurate compared to air photography. While buildings are shown in black, white represents the public spaces. It also includes the inner space of the churches and the monasteries and palaces and courtyards. This representation method has become widely accepted in urban design, as a way to show the public space. The method shows that every corner of a public space in Rome is "positive". Wherever you are, you're part of a convex space that surrounds you like a room. Another interesting feature is the combination of the free accessible built-up areas and the open spaces. Buildings define the open space, open space define the buildings¹.

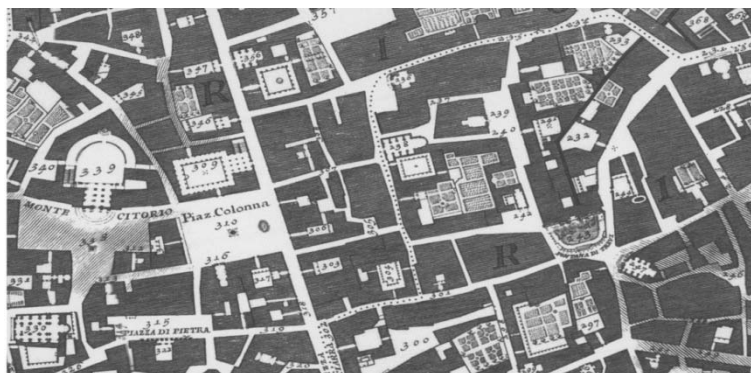


Figure 1: Nolli map

The public open spaces today in Hungary are basically providing the main liberty of the citizens. If we make a map, showing all the accessible open spaces and hiding the other parts - similar to the Nolli map, (in invert marking), with the

¹ <http://nolli.uoregon.edu/preface.html>, 2011.04.06.

definition of these free accessible open spaces² - we can recognize, that these areas are not as big as we would expect.



Figure 2: Accessible open space areas

Material and Methods

The research area, Nagytétény is located in the south-west part of Budapest, Hungary. It is part of District XXII and lays on the right part of the Danube. It is considered to be peripheral in Budapest and in the district as well.

The research started two years ago, when the whole downtown of Nagytétény has been observed, with special attention on the open space system. All the streets, squares, green spaces were classified according to functions, users, aesthetic values, recreational potentials etc. The result of the research was a very detailed analysis, that can provide a great starting point for a development planning process.

The second part of the project was the analysis of the several kinds of factors, affecting the open space system. One of these factors is the “effect of future development”, that presumably changes the open space system. The analysis started with marking all public open space elements of the city. Than these elements were sorted by the intensity of their uses before and after the development. With comparing the current and the future stage, conclusions could be made.

² Free accessible open spaces can be used by the public.

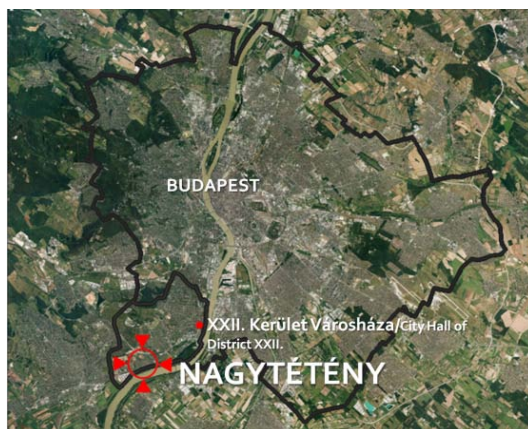


Figure 3: Location of Nagytétény

Results and discussions

History

The history of Nagytétény started in the Roman Ages. On the site of Nagytétény stood a camp of “the Danube limes”, called Campona, a part of the Roman Pannonia. In the Middle Ages Tétény has become an important settlement of the region, but the end of the times of the Turkish Empire it was completely exhausted. Just thirty years later between 1720-31 the castle of George Szaraz was built, being one of the most important landmarks even today. After the castle, between 1753-1754, the church of the village was built as well.



Image 1: The castle of George Száraz

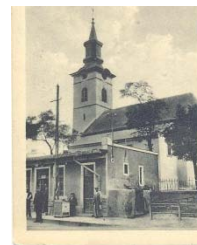


Image 2: The church of Nagytétény

In 1861 the railway service has started. From that time Nagytétény has been evolving rapidly. Traditional streets were built around the castle and the church, where serfs, menials and craftsmen lived. From 1910 several kinds of factories, mills started operating, and when Great-Budapest was created in 1950, Nagytétény

became a part of the Capital. The city became an industrial centre. After 1950, the city had no significant development in trade, service and tourism, only in the industry. After the political changes in Hungary at the beginning of the 90's the heavy industry was broken down. Because the accumulated chemical pollutions, in this area the building operations of residential areas were blocked by administrative appliances. So the status of 1990's city-structure was preserved in Nagytétény. Only the industrial areas were slowly turned into logistic centres³.



Image 3: Typical streetviews

Present Stage

Currently, the old city-structure is dominant, only some residential and industrial areas developed around Downtown. The arrangement of the city is linear. Every significant object, most particularly the church, is attached to the main Road of Nagytétény, which leads to the centre of Budapest. The city has two dominant elements, the church and the castle. The church is in the centre, and the castle is slightly in a peripheral position.

The whole city is surrounded by busy traffic ways. There are two motorways on the northern - eastern and western parts, a main road on the southern part, and railways on the northern and southern parts. River Danube, running on the southern part of the city, is hardly accessible because of the disjunctive effect of these traffic areas. Actually the whole city is isolated from the surroundings.

In the future a new residential area will be built on the south-east part of the city. This new development area could solve this isolation problem, so this is supposed to be a great opportunity to create linkage between the city and the River Danube.

³ Berza, L. (1993), Budapest lexikon II. (L–Z). 2., bőv. kiadás: The History of Nagytétény, *Akadémiai Kiadó*, Budapest: pp. 513



Figure 4: The structure of the city

The map of the public open space system shows, that the city has a pretty big amount of open space areas, but if we observe the accessibility of them, we can see, that most of these are completely isolated. For example almost the whole green space next to the River Danube is inaccessible.

In the aspect of the use intensity of these open spaces there are four categories. The first is the intensively used areas, that include the church and the Nagytétényi Road with its surrounding. The second is the average used areas, that include the green spaces of residential areas, the castle and the cemetery. The third one is the limited used areas, like the abandoned industrial areas, the public park next the castle in the neighbourhood of the railway and the unused agricultural areas. And the fourth one is the minimum used areas, like the areas next to River Danube and the isolated areas by traffic ways.

As we can see, the areas used most intensively are located in the city-centre, on the edge of the city the open spaces are almost completely unused. For example the castle, which is a very good touristic target, is currently used by only a few visitors, or the valuable public park next to it is almost unused.



Figure 5: The public open space system of Nagytétény



Figure 6: The uses of the open space system of Nagytétény

Development areas

In the city's development strategy two parts of the city will be developed in the present future. The municipality recognized that they have to do such developments, that can strengthen the city structure, and give the opportunity to resolve the isolation problems. One of these developments is located in the centre of the city and the other one is on the riverbank.



Figure 7: The development areas in Nagytétény

The renewal of the city-centre

The aim of the first development, the renewal of the city-centre, is that the castle and the historical city-centre should be developed at the same time to create a liveable city with greater cultural-touristic values. With this development, the castle could be a flagship of the city-centre area, and the north-south axis can be strengthened. The goals of the development are:

- to improve the quality of the green areas
- to strengthen the visual contacts and the linkage between the open spaces, which are perpendicular to Nagytétényi Road, between the castle and the renewed main road
- to redesign the most important squares from the 18th century city structure (the square in front of the church, Szentháromság Square, Szent Flórián Square).
- to create the missing city-gates

This development has just started, and the constructions of several squares are in progress⁴.



Figure 8: The renewal project of the city centre

The Danube Spirit project

The other development is on the riverbank, the south-east part of Nagytétény, called Danube Spirit project. This is the first extensive real estate development project of South-Buda. The purpose of the seller (the municipality of the district) was, that the development should fit in the project of the renewal of Nagytétény's city-centre. It should valorize the surrounding areas, create new workplaces, build

⁴ M. Szliágyi, K., Almási, B., Nagy, I.R., Szabó, T., Filinger Zs., (2009), Nagytétény történeti központjának rehabilitációs engedélyezési terve – tervezési koncepció és program, Budapesti Műszaki és Gazdaságtudományi Egyetem Építészettörténeti és Műemléki Tanszék, Budapest, pp. 27-30.

apartments, and give a new publicly used riverbank for the inhabitants of the district. During the development program all the well-designed public squares, streets, parks, other public green spaces and the whole riverbank, which is more than 20% of the whole area, could improve the citizens' quality of life. The development would solve the problem of the waste recultivation and it can reduce the isolation between the eastern and southern part of the city.

The developed area is more than 32 hectares, the built-up area can be 40% of this. The public transport support would be provided by a new railway station and a bus stop. The linkage between the city-centre of Budapest and Nagytétény would be solved by water taxi, and water bus service. Currently the developed area can be reached hardly on foot, that is why a direct linkage is necessary between the Danube Spirit area and the castle, the castle park, and the old city-centre. This connection would be a pedestrian and bicycle overpass above Road 6, which goes on the north side of the area⁵.

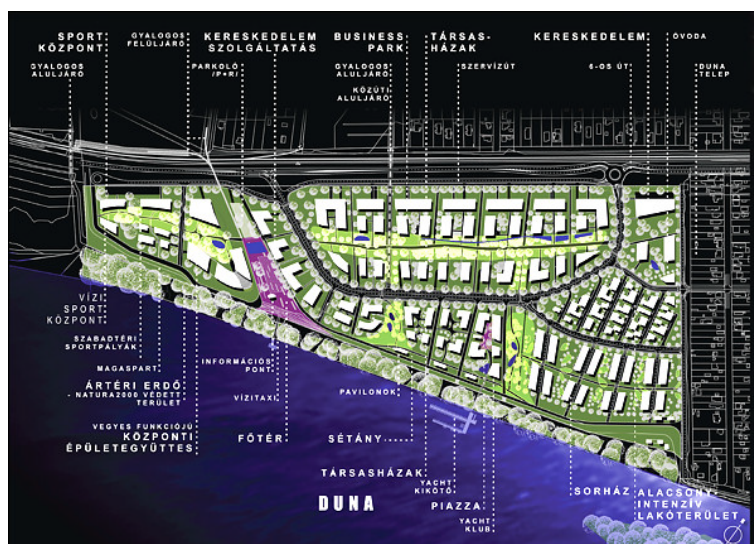


Figure 9: The Danube Spirit project

⁵ <http://www.dunaspirit.hu/fejlesztes>, 2011.04.06.



Image 4: Design views of the Danube Spirit project

In the long run these two developments, the renewal of the city-centre and the Danube Spirit project will transform the city-structure and affect the open space system of the city. If they were achieved successfully, the city's lateral axis would strengthen, the main parts of the city, the church, the castle, part of the ancient Campona, the Danube Spirit and the riverbank would connect to each other complete the present Nagytétényi Road main axis.

The uses of the open spaces after the developments

The effect of the developments on the open space system can be clearly concluded. The intensity of the uses would change. First of all, if the important squares of the city got their appropriate functions, their intensity of use would increase. Secondly, if a new lateral axis came into existence, the open spaces, that are actually forming this axis, would be more used. Because of this lateral axis, the city centre would be shifted and some peripheral elements would change to centre elements.

The next map of open space-use intensity shows the status of the uses after the developments. If we compare it with the current status of uses, many differences can be seen. Expectedly the intensively used areas would be the expanded centre of the city, the church, the squares along the new lateral axis, the castle, the public park in front of the castle and the area of the Spirit project. The riverbank would become an averagely used area next to the housing estate's green areas and the cemetery. The unused agricultural area and the abandoned industrial area would still remain limitedly used areas and the isolated areas by traffic ways would remain minimally used areas.

The most prominent use intensity changes can be observed at the riverbank, at the Spirit project area and at the public park in front of the castle. The intensity changes at the riverbank and at the Spirit project have been planned, but the public park's renewal is not part of any development project, however this public park actually would become the new centre of the lateral axis because of the centre shifting, mentioned above. The meeting point of the new Spirit project and the old city would be here, and the planned railway station would be placed here as well. These plus functions require to redesign the park to fulfil its new role. The investors and the government should cooperate to add this park into the process of the strict planning process. In these kinds of big investments it is hard to make agreement between the investors and the municipality, because of financial problems, but without the renewal, the development aims could be realized only partially.



Figure 10: The uses of the open space system after the developments

Conclusions

The development strategy of Nagytétény is a very complex and a well-built strategy. It transforms the city-structure in a good way. It serves the needs of the city and the city's inhabitants. It has a great effect on the open space system, because it tries to involve all the important elements of the city into the "city's circulation". But if we observe the future status of the city's open space elements, not only the renewed ones, we find out, that one of an apparently insignificant open spaces, a public park, which is furthermore a valuable green space, will be one of the most essential parts of the whole city-structure. If this park will not be renewed,

the whole concept of the development would not work properly. The conclusion is, that during the planning process, designers should investigate not only the current status of the planning area, which has a sharp boundary as usual, but they have to observe the current status of the whole surroundings, and the future effects of the renewed areas on the other part of the city.

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