

**Białystok (Poland) - green city.
Historical greenways in a contemporary city**

Dorota Gawryluk, Maciej Kłopotowski

*Białystok University of Technology (Poland), Department of Construction and
Environmental Engineering, Landscape Architecture Teaching Team*

Introduction

In contemporary theories of city design the issue of green corridors appears more and more frequently. They concern the development of greenways of communicative, ecological and recreational functions. Their purpose is to change the modern city landscape. Routes network dominant in the city space is to be replaced by ecological structures, improving the quality of life and introducing the green into the city. This issue is discussed by a number of research teams and relates to the cities of different scale. Conducted works tend to indicate the direction for transformation of the existing urban structures. This process is to be accomplished by adapting the existing space or formation of new - greenways. Specific solutions for individual cities which create their own green corridors are based on local conditions and include defined cultural values of the place.

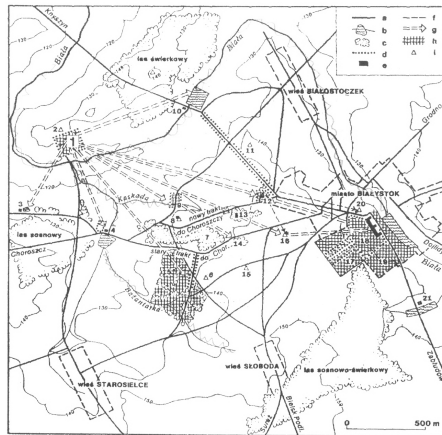


Figure 1. Elements of the Baroque spatial arrangement composition of Branicki's premises in Białystok (Turecki, 1996)

This attitude is presented by a team from Białystok who searches for a new shape of the city in relation to the history. The authors in their works refer to the spatial composition formed in the eighteenth century on the initiative of Hetman Jan Klemens Branicki, in the valley of the Biała River, which became

the nucleus of the city of Białystok (Jan Klemens Branicki - lived from 1689 to 1771, he was one of the biggest Polish magnates in the eighteenth century, the owner of 12 towns, including Białystok, 257 villages and 17 palaces (Dobroński, 2012). The spatial arrangement of Branicki's premises during its founding was multi-elemental and the area equaled the size of a modern city. The individual elements of the composition (villages, architectural and natural objects) were connected by roads, which may be the prototype of today's system of the town green corridors (Turecki, 1996). The essence of the presented works is an attempt to make the elements of eighteenth-century composition readable in the structure of the modern city (Il. 1), and the green corridors reproducing the old communication links can make the tool for its realization.

Background/Literature Review

The composition of the town and spatial arrangement of the residence of Jan Klemens Branicki in Białystok is widely known because it was published in a number of general studies (Bogdanowski, 2000; Ciołek, 1978; Majdecki) and detailed research (Nieciecki, 1998; Maroszek 2000, 1985). The history of the town development and related spatial transformations are also known from monographs devoted to this subject (Dolistwoska, 2009; Dobroński, 2012). The system of the town nature was researched in separate publications in the field of ecology and spatial planning (Jaros, 2011; Zalewska, 2013). For many years the issues of green areas in towns have been described in publications on the history and theory of urban planning (Tołwiński, 1963; Chmielewski, 2010) and shaping the green areas (Ptaszycka, 1950). Recent researches in this area conducted in Europe are available in the form of publications included in the conference materials and professional journals (EPOS 2010, 2013, science journals: *space & FORM*, *Landscape Architecture* in Polish and English languages).

Goals and objectives

The aim of the conducted research is to determine the possibility of introducing green corridors forming a new functional structure of the green areas in the city of Białystok. Their role would be creating the ecological networks of the already existing green objects and new ones, designed for the needs of carried out activities. The system should be based on the most valuable historical and cultural elements originating from the time of Branicki. Thus, the new nature structure will connect historical cultural values and contemporary nature ones.

Methods

The adopted research method is based on relating (comparing) the modern spatial layouts and design proposals to the city's Baroque compositions from the time of Jan Klemens Branicki. It involves a comparison (on the basis of maps and projects) of the readability and preservation state of historical and contemporary green corridors in the city structure. Consequences of the carried out analysis and spatial studies are conclusions setting out the state of preservation of the historical spatial arrangement of green composition in the city. The authors in their work base on the existing planning studies and available studio works. They also use students' work carried out under their guidance. This is because there are no other professional sources. None of the modern city planning studies directly refers to the entire landscape composition of Branicki's layout. Summing up their work the authors seek legal feasibility of actions identified in such a way.

Results

Baroque eighteenth-century composition of Jan Klemens Branicki's residence foundation was based on the natural conditions resulting from its location. It included topography, the river valley, natural forests. In this system, a number of architectural and functional elements were introduced, which were then combined by road network and landscape links. The road network was based on communicating the palace with the summer residence located in Choroszcz (15 km west of Białystok). The road system was laid out in an attractive landscape that allowed watching other elements of the composition during the travel time. The individual parts of the system were formalized in varying degrees (from representational avenues to wild field roads).

The most important landscape space element of this composition was a hillside Wysoki Stoczek, where the Wysokostocki Manor was located – a place of usual stops on the route between the palaces. From the hillside further hills and architectural objects were visible. This layout was formed with the palace and gardens adjacent to it, animal areas and the town as well as surrounding villages (Białostoczek, Słoboda, Starosielce) and the tavern village Nowe. On the area of possible observation natural elevations were visible, the spatial importance of which was emphasized with architectural objects.

The whole composition was completed by the rivers Biała and Bażantarka with objects localized on them, among others the Marczyk's mill (Bończyk-Kucharczyk, Maroszek, 1985; Nieciecki, 1998).

Until 1939 the spatial development of the city was related to economic conditions. The most important of these was development of an industrial centre in the textile industry (Dobroński, 2012). The next phases of spatial development of Białystok involved an increase in the amount of buildings located concentrically in relation to the Kościuszko market (the central element of Branicki's town) and along the main communication routes leading to Warsaw, Grodno and Suraż. An important factor contributing to urban area development was the introduction of the railway line, which set a new, western and northern border of the city's spatial development. The town in large part was developed spontaneously (and even chaotic) (Dolistowska, 2009).

Growing city began to absorb the elements of Baroque composition. Analysis of this state allows identification of three different ways of treatment of the existing spatial composition. 1) Complete elimination of the elements of Baroque composition, which was related to the spatial development of the city. This applies in particular to the former alder forest through the area of which the railway line was laid out, that resulted in successive building over this area. 2) Leaving the relics of the spatial arrangement in the form of green areas linking the palace, through the animal areas, with the pine and spruce forest. The recognized value of this system resulted, in the interwar period, in its regeneration and organization of new urban parks on its basis (Bończyk-Kucharczyk, Maroszek, 2000). 3) Non-interference in the spatial arrangement, which in particular applies to the hillside Wysoki Stoczek, the areas of Antoniuk, Białegostoczek, Bażantarnia and Marczuk, which in that period were outside the heavily urbanized area and they were not attractive for investments.

The spatial development of the city after World War II was mainly its reconstruction after the war (Dobroński, 2012). Reconstruction of the city took place in the spirit of contemporary urban trends characteristic for socialist countries (Chmielewski, 2010). In Branicki's spatial composition the combination of inner-city greenery and the suburban areas was still honored, including through the former animal areas the so-called green wedge (Ptaszyńska). The valley of the Biała River has become an important green corridor in the structure of the city, which was the result of liquidation of located along the river industry dated from the end of the nineteenth century. The area around the hillside Wysoki Stoczek remained not invested in.

Dynamic development of the city since the early 70s of the twentieth century has resulted in construction of several large housing estates. They were built in the areas available for investments, including old villages (Dobroński, 2012). These actions changed completely the spatial meaning of the hill Wysoki

Stoczek. They changed also the range of views from it and obliterated the previously visible terrain. Developing town gradually increased the height of the buildings and realized the spatial objects of municipal urban infrastructure (telecommunication masts and chimneys of two power plants were completed at that time). Today, they set new height dominants of the town. Green corridors linked with transportation routes have become a completely new element in the city structure. In the late 70s of the twentieth century it was assumed that in the future some tram lines would be completed in the city and until then straps of land were reserved.

Currently, the city continues to grow. Successive aims of its development are based on the new economic conditions. City development strategy includes shaping it as a major research center (Strategia,). Since the end of the twentieth century the natural conditions have become increasingly important. Currently, they include parks and squares of the city, riverside boulevards, garden allotments and cemeteries, forests and fallow lands (Fig. 2a). These objects are scattered, they do not constitute a coherent system. The only element unifying them is the greenery located in the river Biała valley. Composition aspect of the former Baroque layout (including nature-landscape) is limited to the areas directly adjacent to the palace, and landscape studies fully honor the existing historical buildups. Both the planning works and theoretical research are aimed at the creation of greenways - green corridors in the city. It seems reasonable while shaping them, to look for references to the ideas of composition from the late eighteenth century, including characteristic alley plantings.

Currently, the city continues to grow. Successive aims of its development are based on the new economic conditions. City development strategy includes shaping it as a major research center. Since the end of the twentieth century the natural conditions have become increasingly important. Currently, they include parks and squares of the city, riverside boulevards, garden allotments and cemeteries, forests and fallow lands (Fig. 2a). These objects are scattered, they do not constitute a coherent system. The only element unifying them is the greenery located in the river Biała valley. Composition aspect of the former Baroque layout (including nature-landscape) is limited to the areas directly adjacent to the palace, and landscape studies fully honor the existing historical buildups. The studies lack attempts to seek reconstruction of elements of Jan Klemens Branicki's composition. Both the planning works and theoretical research are aimed at the creation of greenways - green corridors in the city. It seems reasonable while shaping them, to look for references to the ideas of composition from the late eighteenth century.

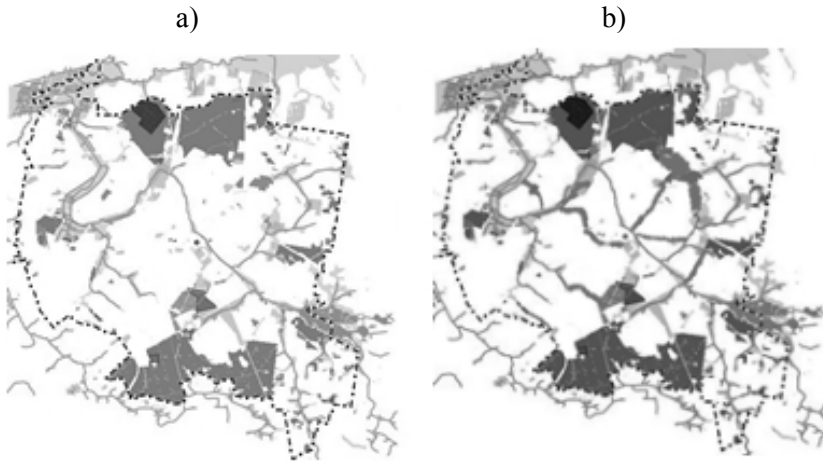


Figure 2. a) The green areas in the city of Białystok – current status; b) Theoretical study of greenways in Białystok (fig. Zalewska A., 2013)

Discussion

Currently, spatial development of Białystok is realized on the basis of the planning documents. The authors of studies, which are based on "Study of conditions and directions for spatial development of Białystok" (Studium) assume that future green areas in Białystok will be connected with the suburban areas. This is to occur through the green corridors based on the existing parks and green areas linked with the rivers valleys. They accept also the possibility to interrupt the green wedge existing since the time of Branicki, located south of the palace (realization of the University of Białystok Campus). These studies are based on the spatial and economic conditions, and most of all on ownership determinants.

The subject of green corridors in Białystok is raised also in theoretical studies carried out at the Technical University of Białystok (These issues are willingly researched on the faculties of Landscape Architecture and Spatial Management). In carried out study works a theoretical model of new green corridors in the city was developed. The priority was to link the existing objects in the network to form a new system of urban greenery. Pursuing this assumption the existing objects and corridors were used and reconstruction of the existing routes and realizing completely new ones was planned. Working on this project the aspect of composition related to the restoration of the composition idea of links and green spaces dated at the end of the eighteenth century was omitted (Fig. 2b).

The authors of this paper undertook efforts to identify opportunities to make the Baroque composition of green areas around the residence of Branicki legible in today's urban structure. Basing on the experience of studies mentioned above and a series of analysis and spatial studies the authors state as follows: restoration of the valuable Baroque layout is not possible because of the historical buildup, including the present method of investment in areas that were key elements of this composition. However, there is a possibility to refer to the Baroque principles of greenways (alleys) connecting important elements of the city composition. Some actions should be undertaken which, thanks to the new green corridors, would reproduce views and panoramas from the time of Jan Klemens Branicki.

According to the authors the spatial transformations of the city which occurred at the beginning of the twenty-first century and were related to the reconstruction of its transportation system, allow for undertaking work that will lead to a significant reduction, and in some places elimination of traffic in the city centre. The areas released in this way, in line with the concept of modern green cities, should be used for natural attractive recreation areas. According to the authors, these measures should be correlated with historical studies and the accepted priority of making gradually readable the most valuable elements of Baroque composition. Due to the existing legal conditions, such activities are only possible through an appropriate spatial policy of the city.

Conclusion

Summing up the results of the study and based on the analyzed sources the following should be stated:

- in the history of the city of Białystok the most valuable and most attractive natural spatial arrangement of green areas existed at the turn of the eighteenth and nineteenth centuries and was related with multi-element Baroque composition of Jan Klemens Branicki's mansion. Individual elements were linked by green corridors - natural system of modern Białystok is based and should continue to be based on a combination of greenery in the city centre and in suburban areas. Connecting elements (that build the system) are green corridors. They are created by nature corridors and transportation routes.
- it seems reasonable to introduce in future city design studies the element of reconstruction the most valuable pieces of Baroque spatial composition - viewpoints links and adoption as a rule the Baroque principles of green corridors construction, since they are essential elements of the structure of spatial composition.

- this can be ensured by learning and applying good practice and theoretical studies conducted for specific cases, and on their basis implementations made in the form of the local law provisions

Acknowledgement

The publication was carried out as part of statutory research no. S/WBiIS/2/16

References

- Bogdanowski J. (2000). *Polskie ogrody ozdobne. Historia i problemy rewraloryzacji*, Arkady, Warszawa
- Chmielewski J. M. (2010). *Teoria urbanistyki w projektowaniu i planowaniu miast*, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa
- Ciołek G. (1978). *Ogrody polskie (Wznowienie przygotował i uzupełniające rozdziały napisał Janusz Bogdanowski)*, Arkady, Warszawa
- Dobroński A. Cz. (red. naukowy) (2012). *Historia Białegostoku*, Fundacja Sąsiedzi, Białystok
- Dolistowska M. (2009). *W poszukiwaniu tożsamości miasta. Architektura i urbanistyka Białegostoku w latach 1795-1939*, Rozprawy Naukowe nr 177, Biblioteka Architektury i Urbanistyki, OWPB, Białystok
- Jaros M. (2011). Zmienność terenów zieleni w strukturze miasta Białegostoku., *Budownictwo i Inżynieria Środowiska* Nr 2011/3, pp. 301-306
- Kucharczyk K.; Maroszek J. (1985). *Białostockie założenie przestrzenne w XVIII wieku*, *Studia i Materiały do Dziejów Miasta Białegostoku* T. IV, 1985, pp.57-70.
- Nieciecki J. (1998). *Barokowa kompozycja w dolinie rzeki Białej w XVIII w.*, *Studia i Materiały "Ogród Branickich w Białymstoku. Badania-Projekty-Realizacja"* *Ogrody* 4/10, 1998, pp.16-22.
- Ptaszycka A. (1950) *Przestrzenie zielone w miastach*, Ludowa Spółdzielnia Wydawnicza, Poznań
- Studium uwarunkowań i kierunków zagospodarowania przestrzennego Białegostoku*, (2014). Uchwała nr LV/634/14 Rady Miasta Białystok z dnia 10 lutego 2014 r., <http://arch.um.bialystok.pl/360-studium/default.aspx>
- Tołwiński T. (1963). *Urbanistyka. Zieleń w urbanistyce*, Państwowe Wydawnictwo Naukowe, Warszawa
- Turecki A. (1996). *Plan du chateau et de la ville de Białystok avec ses environs*, [w:] *Ochrona relikwów urbanistycznych Białegostoku*, *Zeszyty Naukowe Politechniki Białostockiej, Nauki Techniczne* Nr 108, *Architektura* Z. 16, Białystok, pp. 7-16.
- Zalewska A.(2013). *Tereny zielone w strukturze urbanistycznej Białegostoku*, thesis, promotor M. Kłopotowski, Białystok University of Technology