Fortification Areas in the City as Formations of Urban Greenery - Nysa

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Abstract
Remnants of fortifications and post army's facilities, is one of the few remains of the old settlement category, which has survived to our times, as shown, as separate form of spatial terrain. There is nothing surprising in this, that the ruins of castles or fortifications, surrounded by greenery, have always been the object of interest of many researchers. When asked about their future, always evoke memories of a bygone age.

How, then, to take care of these spaces, how to carry out the revitalization of the urban spaces, which is very often covered with many large-acte legal restrictions, even from the point of view of archaeology and conservation.

Key words: fortifications, urban greenery, revitalization of the public spaces.

Introduction

Post military objects quite often were designed in such a way that sufficiently well to blend into the environment during their operation, even from the point of view of their defense. Today, they are largely unused green urban areas. Many times, unfortunately, much neglected and without any prospects.

A limitation to the revitalization activities is, in a sense of the legal aspect, lack of money for their adaptation to the new features, and, perhaps above all, a lack of vision. The size and location of the objects are often limitation in the actions of future investors or developers. These objects, left without any initiative quickly make its technical life, strongly limiting the possibility of adaptation, which is a sad card of our time.

However, we can not say, that nothing is done on this matter. In recent years, the city of Nysa was awarded with the prize of "Outstanding Earth Architecture in Europe", granted under the EU project "Terra Incognita", co-financed by the European Commission. Two objects of Nysa's fortifications, Bastion St. Hedwig and Water Fort has been recognized and included in the album of 42 European earthen structures.

Methods of research

Trying to interest potential investors in the capabilities of the post military areas and encourage them to similar initiatives arose from my participation and some interesting suggestions for revitalizing objects of this category. Here I present a short presentation of three studies.

Location. General characteristics of Nysa.

Nysa town used to be called "Silesian Rome" due to the large number of churches, in the era of rebirth - the "Silesian Athens" (Fig. 1.). In the "Chronicle of the World" by Hartmann Schedel 1943 it is included as Krakow and Wroclaw.

"For nearly 500 years Nysa was the capital of the episcopal principality and thus, despite the different historical periods, has become rich, economically and culturally. Reign of the Prussian fortress made out of town inhibiting economic development for nearly two centuries (Fig. 2.).

Most Nysa suffered during the conflicts of World War II, in which there has been the destruction of about 80 percent of the town.

Deserve attention not only to the historic churches and houses, but also parks and old fortifications – the legacy of the kingdom of Prussia (citation from "Kroniki Świata" Hartaman Schedl, P.174).
Fig. 1. Plan of Nysa town, 1743. Source: www.nasza-nysa.pl

Fig. 2. Location of Nysa town fortifications in 2013 (red marked the locations discussed in this text). Work by the author

Results

Revitalization of the Fort Prussia – architectural concept assembly of educational buildings of State Higher Vocational School in Nysa (PWSZ in Nysa).

Nysa Fortress, next Kłodzko and the Srebrna Góra, is one of the best preserved historical fortifications in Silesia. It is estimated that the present state is about 60 % of the original building. One of the largest and best preserved forts is Fort Prussia (Fort Prusy).

The co-author was Cornelius Wallrawe.

Fort was built in the years of 1743–1745. It is situated on a hill protected areas, located to the north of it. Formed on the plan of the characteristic, five-pointed star surrounded by a dry moat. Lead inside two gates of the interposed caponier. After crossing the gate, we can enter the tunnel to the courtyard, in the center of which is a room with a well, now filled up but originally having a depth of about 30 meters. The courtyard is enclosed by casemates formed on the plan of an equilateral pentagon.

Behind the moat are five ravelins shielding fort: Ravelin Pommern (Pomerania) is located opposite the entrance gates, Ravelin Westphalia and Ravelin Halberstadt are located on the sides, and on the back two more as bastions – Ravelin Magdeburg and Ravelin Neumark.

Since 1859 until 1869 the fort served as the barracks and a prison, and since 1914 served as a military's hardware store (Fig. 3.). In the nineties, the fort ceased to be the property of the Polish Army, housed a wholesale beverage. Today it is unused, came under the care of the Society of Fortifications Friends. The fort is heavily wooded area with wild vegetation, which originally did not exist. For this reason, the continuous degradation of this beautiful place has been followed (Fig. 4.).

Despite the lack of proper care and custody of funds for monument, the state of the fort is rather good. It is in a very good condition, so it's possible to find a way to its appropriate development.
The aim of this part is revitalization of the fort Prussia and its immediate surroundings, combined with the existing building of the Institute of Architecture and Urban Planning at the State Higher Vocational School in Nysa. Designed complex of buildings with the didactic function "Collegium Artium", for the purposes of the Institute of AIU and the Conservation and Protection of Monuments (KiOZ). Currently, the university does not have the building fully satisfying the needs of both specialities (Fig. 6.).

During the design process the object of the fort has been converted into workshops for the students.

By closing the courtyard from the top of the new cover, the property received a new form.

The inspiration for the design of the roof was a turtle's shell. Glazing allowed to maintain contact persons staying inside with the outside world, particularly giving a sense of relaxation in surrounding countryside. Despite the problems relating to construction, building physics, and generally known nuisance of such structures, in respect of the above aspects, the solution was chosen deliberately.
The new tissue is also the entrance hall, the construction of which closes the open before caponier input and connects to the bridge leading to the main building. Roof covering is made of laminated timber structure; has a large amount of glazed surfaces, which provides the right amount of sunlight and contact with nature of interiors. The shutters protect the interior space from overheating and overexposure during the intensive operations of sunlight (Fig. 5, 7.).

**Fig. 6. The architectural concept team of educational buildings PWSZ in Nysa (Diploma work. Author Tycjan Książek. Promotor PhD arch. Konrad Dobrowolski, 2005/2006) – general view of the assumptions.**

The scope of the study includes: A) Building for the students’ workshops (Adapted Fort Prussia); B) The bridge between workshops and the main building of the Institute; C) The main building of the Institute of AIU and KiOZ, D) Underground parking

**Fig. 7. Ground plan and cross-sectional adaptation of the Fort for student workshops (Diploma work. Author Tycjan Książek. Promotor PhD arch. Konrad Dobrowolski, 2005-2006)**

**Revitalization of Jerusalem's redoubt – an architectural concept of multi-purpose building with a skateboarding park.**

"...Line of the berms, running along the Kornel Ujejski street in Nysa, coming from the redoubt of Jerusalem to the West and the East, was built in the period of 1742–1756 and expanded in part in 1790 and 1864, lost its importance after 1888, and since 1926 to 1934 was partially destroyed" (Malachowicz, Stupak, 1986, p. 21). For today only redoubt of Jerusalem with the shaft on the south side has survived (Fig. 8.). The whole of this line of fortifications protected the western suburb of Radoszyn, with a range of Fort Prussia to the Nysa Klodzka river, near the city's fortifications.

"Redoubt of Jerusalem was built in 1748. Inside the infirmary barracks were erected, and since 1882 to 1883 it was adapted to artillery batteries. Since 1819 it has been used for economic purposes" (Malachowicz, Stupak, 1986, p. 22). After the World War 2, it was rebuilt as a sports stadium pitch. Currently it serves as a site overhaul for driving schools.
Redoubt Jerusalem is built on a square (approximately 65 x 68 m) with rounded corners in the West and East. Other sharp corners are connected to the shafts.

Redoubt had no casemates. Interior place is surrounded by a brick wall. Main terrace with two smaller artillery was located in the western corner – outside. The western side of the redoubt is a gate in the form of the intersection of the shaft from reaching the bridge. Currently shafts are completely distorted and rebuilt the grandstand pitch, and northern and western escarpments are mostly obscured by elevated embankment therein. The whole is covered with wild trees and bushes.

Judging by the immediate environment around the redoubt, among other things, a well-functioning municipal swimming pool in the architectural concept continues the city's road to locate in this part of the Nysa service function – sports. The proposed solution is a multi-purpose facility, service, office and recreation, shop and squares for skateboarding (Fig. 9.).

Any revitalization of this space, based on the concept's solution, significantly raise the rank of the place, not rubbing at the same time preserved to the present character of history. Location object "drowning" in green, promotes both work and leisure people that benefit from it. It also increases the quality of the urban landscape (Fig. 10.).

Revitalization of Cardinals redoubts – architectural concept of the multi-purpose building with hotel.

The conceptual design of Cardinals redoubts located in Wyspiańskiego street implies giving it a new function of a small hotel (30–50 people) with associated services and the establishment of a
new facility that meets the needs of recreation and exhibition center. Placing a hotel in redoubt is particularly advantageous because of its proximity to the City Park and the river, making many forms of activity.

Development of the new functions includes sport places – recreation, including an indoor swimming pool with a pool of Olympic length, indoor playground with a climbing wall, a cultural – exhibition hall connected to a conference room and catering – kitchen service, free of charge restaurant with a terrace. Also developed green issue introduced into the interior of objects as atriums and ramps connecting the interior with a green roof, acting as a rest and recreation.

At the start of the design work an object was a warehouse of scrap and waste. The project has set itself the goal of propagation the monuments of defensive architecture and enhances the quality of the landscape along the river, in the context of tourism and recreation.

Shape of the new building is designed to direct the movement of pedestrians walking on the Wyspiański street side object redoubt. From the river through the central reservation and designed the green roof is blend in with the landscape riverside and invite to the interior of the object.

Cardinals' Redoubt originally was on the island, once a fortified building. Redoubt "(...) built from excavations and embankments bricks wall with outer corners and buildings with vaulted rooms. Founded on a plan similar to a square with a side length of about 90 m, with a circular courtyard surrounded by a barrel vaulted foundation, with ornamented, classical gateway to the south-east and the ramp leading to the terrace ground artillery from the north. (...) The moat outside – buried. External walls plastered preserved in good condition with minor damage outside corners" (White card of…, 2010).

Intention of the conservators, the elimination of the trees and shrubs from the wall and crown redoubts and changes of the function, maintenance of the historic fortress gate and corners (Fig. 11, 12.).

Developed area adjacent to the river's greenery. Cardinals' redoubt is densely and irregularly overgrown with wild trees and shrubs. On the western side of the area directly adjacent to the City Park, the form of downtown green areas is being planned.

The proposed formation of land claims is a continuation of the assumptions of one of the founders of the Bauhaus – Wassily Kandinsky, who in his treatise "Concerning the Spiritual in Art" includes a thesis on the plan, and space. According to him "(...) each point has an extension of color and sound, it is also the most original element of the composition, (...) while the line is the product of a life that point gave specific direction. (...) The plan initially has the shape of a square or rectangle, helps to convey the original tone image" (Fig. 13, 14.).

Fig. 11. Aerial view of Nysa 2012.
Source: www.nasza-nysa.pl

Fig. 12. General view of the interior and the main gate to the Cardinals redoubts. Photo by author
Conclusions

In none of the cities in the Silesian province, also in Nysa, the fortifications have not survived in their entirety up to the present time. Some were modernization in the modern edges, others declined, when the military role of cities reduced. The walls were torn down, especially at the beginning of the nineteenth century, during the Napoleonic campaign. They were an obstacle to the rapidly developing cities, primarily for their communication systems. At the moment, very often are more or less organized urban greenery. Often, city officials care more about the green areas around the fortifications than about monument itself, which despite of everything has a huge impact on the urban landscape and the favorable actions could serve recreation and provide for more attractiveness, and improve the comfort of urban life. Looking at the monuments, fortifications,
such as objects directly related to the European Cultural Heritage, we can soon expect many questions about the quality of this space. The next questions will be raised about the impact of fortification on the development and current state of contemporary cities. It is still underrated. This depends on both new opportunities, including investment and consequent specific constraints. There it came down only to close the urban development, as exemplified by Nysa, but were associated with extensive infrastructure development, while the forts functioned, deliberate planting of fortress vegetation, whose relics remain up for today, but also with the possibility of acquiring land today that for many years, with considerations on its nature were closed for business investment.

An important problem is the development of sufficiently attractive utilities for objects whose functions have lost their military importance. Awareness of the use of the surviving buildings of military architecture and their green surrounding is quite common in society, but worse is the case of the use and adaptation to contemporary needs the facilities of the nineteenth and twentieth century. Forgotten forts, an enormous volume of times, hidden among the greenery, and often overlooked, despite their location in the center of modern housing estates, have become a place for the scrap and meetings of people living on the margins of society.

Attempting to create a proposal for a new quality for these spaces, the concept of architecture standing hand in hand with preserving green space surrounding the object, it seems the only alternative for their survival. There should be assessed the issue of the size of interference with the existing urban space, or to discuss about the quality of the created architecture, but none undermines the desirability of efforts to show the possibilities of space.

List of literature