

¹Serhiy Kravchenko, ²Olga Vigdorovich

¹ *Town-Planning and Architecture Division,
Liubotyn City Council of Kharkiv Region; Town-Planning and
Urbanistics Department, Kharkiv National University of Civil
Engineering and Architecture, Kharkiv, Sumska street 40, Ukraine*
kravchenko_kh@ukr.net

ORCID: 0000-0002-1078-8917

² *Town-Planning and Urbanistics Department, Kharkiv National University of Civil
Engineering and Architecture, Kharkiv Kharkiv, Sumska street 40, Ukraine*

olgavigdorovich@gmail.com

ORCID: 0000-0001-6461-2792

DEFENSE STRUCTURES OF SCYTHIAN ERA AS ELEMENT OF MODERN URBANIZED SPACE (USING EXAMPLE OF LIUBOTYNSKE ANCIENT SETTLEMENT)

Abstract: Analysis of the urbanized territories of historic cities has been made and their impact on development of monuments of architecture and archeology, in particular defense structures of the Scythian era, has been evaluated. The monuments specific features and status, the level of communities' responsibility for their preservation and adaptation to future use have been discussed. Concrete examples of resolving the said issues at the local level are given. The main lines of further development of communities, located in the zone adjacent to historical areas have been determined.

Keywords: territorial community, urbanized territories, monuments of architecture and archeology, small historic cities, local government, zones of historical areas

Problem statement

A large number of the Ukrainian urbanized territories are historic settlements. Their layout design complies with historically formed town-building, which has a significant impact on their further development and allows implementing investment projects within the framework of the current legislation. In other words, it restricts the ability to apply certain spatial solutions so as not to damage the traditional environment.

Considering the current state of the use of historic sites in urban areas, a revealed characteristic alogism is the fact that, despite vast potential tourist and recreational resources of historic cities, tourism industry that is one of the most dynamic in today's world, in Ukraine does not take the lead in the economic and cultural revival of its territories. This fact calls for activating survey of new life-saving approaches to historic cities. In most cases, an inappropriate state of the monuments and the natural environment, as well as lack of favorable conditions for investors require mobilization of the available local economic and human resources. This will encourage a search for the most effective forms of tourism industry organization as a tool for both conservation and adaptation of monuments as natural environment elements and a general way of saving historic territories. Archeological monuments, in particular the Scythian defense structures, occupy their special place, affecting the development of the

territories in a specific way. Monuments of this type can be regarded as of modern urban space elements which, due to their status and influence on the actual terrain, definitely attract people's attention, causing concern for their survival.

The attitude of the authorities and their institutions to this problem is largely shaped by the opinion of the community. Notably, the efforts of citizens and their desire to feel a real part of the community, taking responsibility for the condition of the environment and its historic content, depend on the ability to influence the process of preserving cultural heritage sites. Apart from the on-going decentralization process, nowadays it is very important to explore and reform the methods of state influence, in particular those aimed to preserve and adapt cultural heritage sites, specifically by increasing the added value of a territory due to its tourist attractiveness, which requires research and development of the appropriate state regulation mechanisms.

Analysis of recent research and publications

Questions of improving the mechanisms for public administration and local self-government, related to the functioning and development of cities in accordance with the local specific aspects are discussed in the works by many Ukrainian and foreign experts, in particular V. Babaiev, D. Bater, V. Kuibida, V. Mamonova, V. Udovichenko, I. Vydrin and other scientists. The development of tourism in small historic cities, using historic and cultural heritage sites for this purpose, were studied by O. Boiko-Boichuk, L. Harrison, R. Rosenfeld, Ye. Samartsev, V. Zelenyi. Issues of urban development of the territories were investigated by such scientists as M. Diomin, O. Petrakivska, Yu. Shkodovskyi and others. Studies of the defense structures of the Scythian era, as cultural heritage sites, were addressed by eminent researchers A. Alekseev, P. Gavrysh, D. Hrechko, O. Kriutchenko, A. Moruzhenko, B. Shramko and others.

However, the modern scientific literature lacks comprehensive studies of the problem of preserving archaeological sites, in particular the defense structures of the Scythian era, and using them in their present condition as tourist and recreational facilities, as examples of approaches to collective security problems, and for the purpose of patriotic upbringing of young people considering the territories' historical past.

The foregoing stipulates in-depth exploration of the possibilities of implementing state policy in the fields of tourism, preservation of cultural heritage, and natural environment conservation, taking into account the recreational capacities and specific ecological features of the territories as resources for their development and increasing their added value, and as a tool to encourage young people to take care of their places of residence.

The paper objective

The function of fortified settlements, related to the need for addressing collective security issues, led, at one time, to emergence of a large number of settlements, some of which were built on pre-existing open settlements. It indicates the decision (back in those days) to apply a passive defense strategy. Unfortunately, this remains relevant today, against the background of the threat to the country's territorial integrity. It is known that fortresses that were built before the massive use of gunpowder, over time, when new weapons appeared, lost their defense value. Yet, surprisingly, the earthworks and underground structures that were built at that time using the natural features, despite a continuous progress, are still topical today.

Thus, the present paper objective is to study the ways to preserve archeological and fortification sites in order to use them, on the one hand, as elements of modern defense structures, and on the other – as cultural heritage monuments enhancing the urban areas' attractiveness for tourists, making their communities self-sufficient and capable of patriotic upbringing of the young generation, using the example of Liubotynske settlement.

Presenting main material

Taking into account the absence of a comprehensive approach to preservation of historic areas and monuments, as well as the lack of the necessary town-planning documentation and its typical obsolescence and inadequacy, the Ministry of Regional Development, Construction and Housing, and Communal Services of Ukraine has started working on the issue of historic areas development. Today in Ukraine 401 populated localities are assigned the status of a historical settlement, only 24% of them having approved historic and architectural basic plans (HABP) which determine the boundaries of historic areas and regimes of using monument protection zones. Considering the above, the possibility of stimulating local authorities for making HABP and introducing new conservation mechanisms for these areas is being explored (Dreamdim, 2019). As regards the city of Liubotyn, the executive committee of the city council was the first in Kharkiv region to develop its HABP, indicating historic areas, and to have it approved by the Ministry of Culture of Ukraine. Obviously, this imposes certain restrictions on potential investors, which is reflected in developing the city master plan. But, at the same time, as a well-known Ukrainian urban planner M. Diomin rightly believes, the restrictions constitute the specifics of urban planning and architecture. In his view, the specificity of the spatial planning of urban development sites (cities, towns, settlements) is that it is carried out under persistent constraints – financial, economic, environmental, technical – and scarcity of resources (territorial, water, energy, labor, etc.) (Diomin and Petrakivska, 2004). However, when developing historic territories, we have to agree to this situation.

Kharkiv region, inhabited since time immemorial, has vast archaeological treasures – from primitive Stone Age tools to medieval monuments. Some of them are found right on the surface, but mostly they are hidden in the upper soil layers, and become available for study only after special archaeological research. But sometimes, to prove the relevance of this research, in addition to the wish of professionals, the will and persistence of communities is also needed. However, the limiting factor for the development of territorial communities as self-governing elements is a different position of their local governments and public authorities as to the communities' role in planning of their territories. This is even more relevant for small historic towns, for which their monuments of national importance can become a key resource. Under the law, since these monuments are patronized by the state, the major contradictions may arise precisely when the management of the monuments is transferred to territorial communities. To improve this mechanism and its implementation elements will require additional legal grounding and practical recommendations.

The fact of our time, regrettably, is that the state has not defined clearly the way (attractive to investors and local communities) to work out issues of preserving the monuments of archeology, history and architecture, in the first place those of national significance. With the lapse of time, having low margin of safety, the monuments deteriorate, which poses the major problem. The situation with archeological sites has its own specifics. Given that the sites are a national asset, solutions are to be sought for at the state level. In heavily urbanized areas, this problem should be addressed in the most responsible way, regarding cultural heritage sites as a public resource; while in the case of transferring them to the local level i.e. to the communities, on whose lands they are located – as a communal resource, which requires an adequate regulatory support. Such a state of affairs arouses the community's misunderstanding as to why the initiative of preserving the monuments of national significance owned by the territorial communities and often being the property of regional public utility companies (e.g. the country retreat palace in the city of Liubotyn), does not come from the regional level, along with proposals of proper mechanisms that would allow Liubotyn's territorial community to maintain them. The lack of constructive suggestions is seen by the community as a wish to shuffle off the burden of resolving the nationally important issues on to its shoulders. Today, the development and security of the community-run areas are the city community's deep concern, just as it was for the builders and residents

of the ancient Liubotynske settlement. This stipulates the study and analysis of the specified territory throughout the period of two and a half thousand years. Most likely, the impetus for the start of extensive construction works in the area of the Left-bank Forest-steppe, in modern phraseology – a construction boom, in the late 6th–early 5th centuries B.C., was given by some external danger. Alongside with giant settlements, the fortification length of which measured up to 37 km (Bilske mound) (Shramko, 1987, p.25–36), there appeared numerous small fortified settlements. For instance, the length of Liubotynske settlement defense structures is only 800 m. The defense structures were probably part of a defense system, considering that no less than 120 fortified settlements appeared at that time in the Left-bank Forest-steppe (Moruzhenko, 1989, p.33; Dreamdim, 2019., p.28; Grechko and Shelekhan, 2012, p.47–64; Shramko, 1987, p.61–76). Research materials show that ordinary settlements were erected within a short time, being repaired and rebuilt afterwards over their entire existence. Of note, those works were far more labor-intensive than the construction of household outbuildings, dwellings, or erection of burial mounds and structures, the experience of which people of that time might not have, although ground works were a normal activity in the life of the ancient population of Liubotynske settlement. (Fig. 1).

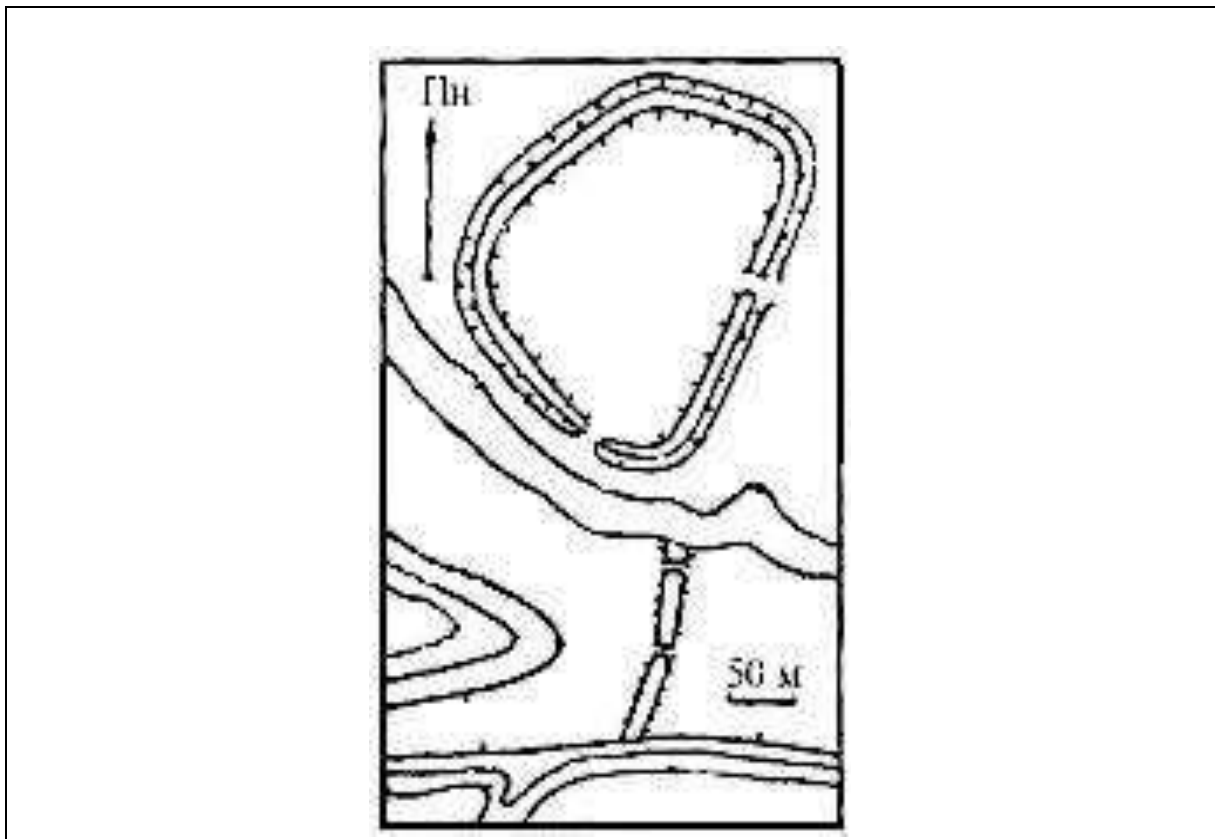


Fig. 1. Plan of Sheiermanivske (Liubotynske) settlement (according to B. Shramko) of the 6th–5th centuries B.C. the city of Liubotyń, Kharkiv region

The facts that Liubotynske settlement was located on the gentle slope of the left bank of the Liubotyńka river – a tributary of the Udy river which flows into the Siversky Donets, and had no natural landscape protection speak in favor of the idea that it was built around the pre-existing settlement, after the appearance of an external threat. According to O. Moruzhenko classification (Shramko, 1975, p.69, 73), the settlement refers to settlements of the 2nd type (has a fence on all sides), the 2nd class (plateau-based). In view of the researcher, Liubotynske settlement is typical of the Dnieper Left Bank and is rarely found in other places. When N. Fuks explored the area in the early twenties of the last century, a

quarter of the site was unplowed and fenced with a mound and a moat, with a total width of 20 to 30 m, and 4 to 5 m in height. Due to intensive plowing, the mound and moat can hardly be seen now. In the 1960s, B. Shramko's expedition studied the mound section; as a result, 7190 sq. m were explored, which accounts for 17% of the settlement area. The excavations revealed the remains of 18 residences, each being a complex of farm pits and premises, buried dugouts and half-dugouts (Fig. 2).

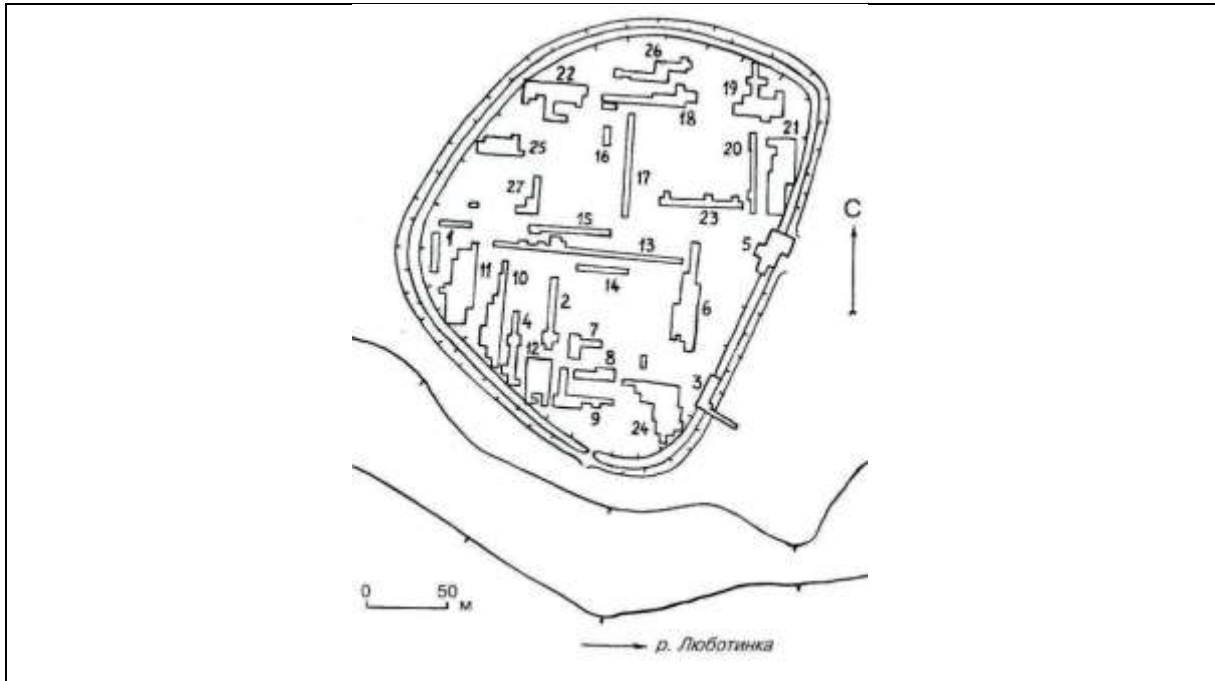


Fig. 2. Reconstruction of Sheiermanivske (Liubotynske) settlement by B. Shramko, the 6th–5th centuries B.C., the city of Liubotyn, Kharkiv region

It was also discovered that originally the defense structures of the settlement did not have a fencing mound, but was surrounded by a moat and wooden-earthen walls (excavation No 3). A wall consisted of two wall units – inner and outer – which were made of split logs about 20 cm thick, the distance between them being filled with various soils. The logs were laid horizontally along the defense line and fixed with vertical risers with a max. spacing of 10 m. The inner wall unit was 2.7 m high, and the outer wall unit was slightly higher. The width of the wall was approximately 1.8 m (Fig. 3.).

However, as O. Kriutchenko states in his research (Kriutchenko and Pelyashenko, 2012), the labor inputs in constructing such settlements were quite large. The researcher measured the amount of defense construction works by calculating the scope of work on erecting one linear meter of the mound and multiplying it by the total length of the fortified line (800 m). Thus, the total amount of the earthworks on Liubotynske settlement is about 40,000 cu. m, with 15,000 cu. m used in the first construction period. The rest (25,000 cu. m) was filled up in the second construction period, the earthworks of the first construction period forming the basis for the second one. The quantity of the fill was determined using the formula for calculating the volume of a segment of a sphere or an ellipsoid, depending on the mound shape (Shramko, 1998, p.11-21).

Interestingly, the fill of the steppe imperial mound Chortomlyk (82,000 m³) is more than double the fills of both the construction periods of Liubotynske settlement (about 40,000 m³). But at the same time, the amount of soil of Gryshkovsky grave-mound that has 51 burial hills is approximately 462 cu. m (Grechko and Shelekhan, 2012, p.16-49), which is just a little over 1% of the total amount of the Liubotynske settlement mound. In the Scythian times, the construction of defense structures was time-

and labor-consuming. Thus, for the excavation period, the population had to be exempted from food production and handicraft.

However, in the opinion of O. Kriutchenko, historical data prove that long-term construction was out of character for that time. On the contrary, in case of necessity, with the relevant knowledge about the basic construction methods, defense structures were built in record time. For example, in 54 B.C., fuelled by the defeat of the Romans in the Battle of Aduatuca, a nationwide Gallic uprising broke out. The rebels' joint forces surrounded the Roman camp commanded by Cicero: "Failing to manage their expectations, the Nervii are surrounding our camp with a mound ten feet high and fifteen feet wide. They received that knowledge from us in their dealings with us in the previous years, and used the instructions of some of the Romans from our army whom they captured. But in the absence of iron tools worthy of this work, they were forced to remove the turf with their swords, raking the earth with their hands and carrying it away in their cloaks. This helped us get idea of their numbers: in less than three hours, they erected a fortification line ten miles in circumference, fifteen feet high. In the following days they began to make and erect towers about the height of the mound, prepare pole hooks, and line up in the 'testudo' array, which they had also been taught by the same captives..." (Tsezar, 2002, p.305). That is to say, in three hours the Nervii and their allies (Goldsworthy, 2006, p. 304) erected a mound almost 2.96 m high and dug out a moat 4.44 m wide, and extended this line for 8 km 880 m, encircling the Roman military camp. For comparison, it is about a quarter of the perimeter of the fortifications of Bilske settlement, or eleven perimeters of the Liubotynske settlement mound.

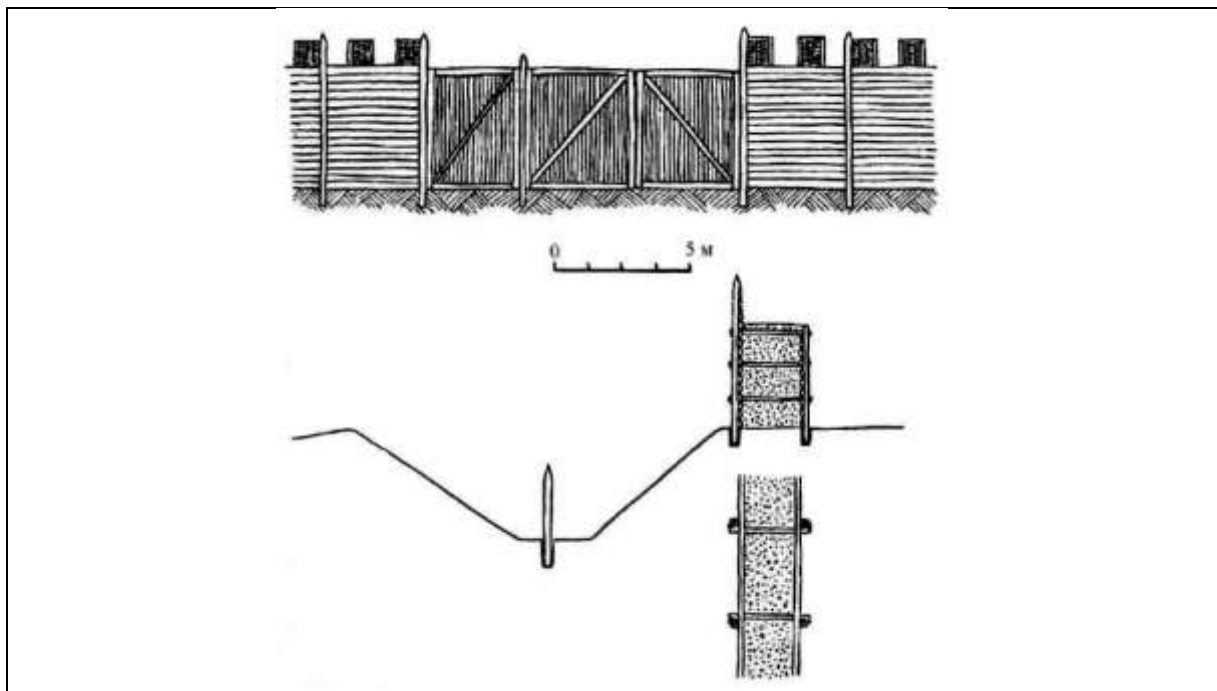


Fig. 3. Reconstruction of defense structures (according to B. Shramko) of Sheiermanivske (Liubotynske) settlement, the 6th–5th centuries B.C., the city of Liubotyn, Kharkiv region

Defense fortifications have always been a result of collective activity and an important indicator of the ancient society's development. The planning of such spatial solutions and coordination of construction works required a certain level of technological and social development. Such types of defense structures as long mounds support this opinion (Grechko, 2010, p.101). Organization of defense structures construction outside settlements, aiming to protect their borders, shows understanding of the need for collective defense.

From the point of view of town-planning and urbanism, such settlements as Liubotynske settlement can be regarded as administrative units that appeared for common defense because of a continuing threat. The erection of settlements could be caused by various factors; however, their main function was fortification. Their emergence testifies to the decision of the local population (local authorities) to plan their settlements based on a defense strategy to allow for their further existence and development, protection and control over their own territory.

Conclusions

In summation, it should be noted that the settlements of the Scythian era, in particular Liubotynske settlement, indicate that previously their population lived in more secure conditions (without the need for protection), as evidenced by the settlements' location in places less successful in terms of defense, but convenient for peaceful development. The path of urban development, in this case, lay through militarization of the settlement and mobilization of its population for defense works, organizing their lives along military lines. The main motivation was the sense of danger and the need for collective defense – protection of the descendants (nation) from inevitable death. An important factor that remains a model in these modern days is unity in the face of external threat, and the capacity of the then population, without advanced engineer construction equipment, to promptly carry out a large amount of work, ensuring the population' sustainment. Regardless of its urbanization level, the territory, as one of the characteristics of the state, has always been protected by people who saved their values and traditional way of life. This requires from public authorities and local governments, despite cosmopolitanization and challenges of the globalized world, creating a system of values that would distract young people from bad habits, form the meaning of their lives, and serve as a role model and source of pride, linking them to their ancestors' land, their Motherland.

Conservation and adaptation for public and commercial purposes (within the limits of legislation) of archeological, architectural, and natural monuments can be realized provided the monuments are regarded as the key resource of territorial development, taking into account their landscape features and natural phenomena. It is imperative to regulate legislatively the financing of conservation measures from different budgets. This will increase the motivation of territorial communities, local governments, and public authorities, which will allow implementing joint activities within the framework of public-private partnerships and encourage the territorial communities of small historic cities to take the ownership of the monuments in question, providing urban historical areas with opportunities to develop along tourist, recreational and resort lines.

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