

UDC 711.437:719:725.96  
DOI: 10.56318/as/2.2025.72

**Nadiya Sosnova\***

Doctor of Architecture, Associate Professor  
Lviv Polytechnic National University  
79000, 12 Stepan Bandera Str., Lviv, Ukraine  
<https://orcid.org/0000-0003-2570-1236>

## **Defence housing in the 18<sup>th</sup> century and its genesis in the cultural landscape of the Ukrainian village**

**Abstract.** In Ukraine, the register of monuments that characterise the cultural suburban landscape includes only a few objects. However, the remains of walls or ramparts of defensive dwellings and their territory are not officially recorded, and, in most cases, their historical boundaries are not considered when distributing village land. The purpose of this study was to characterise the planning and spatial solution and genesis of defence housing from the 18th century in the cultural landscape of the Ukrainian village. The study was conducted in the Lviv region. The study was based on a comparative analysis of the functioning of defence housing at three stages of its existence. About 40 objects were analysed for their location in the village structure. The planning and origin of 3 defence housing objects were studied in detail. No small rural defence courtyards exist in the Lviv region as of 2025. However, the land within the defensive walls and on the site of former gardens created during the development of the defensive yard into a residence estate is often undeveloped. Defensive courtyards, which have undergone a long evolutionary path, are a particular type of dwelling in landscape architecture that evolved into the complete opposite – from a walled dwelling to a dwelling with a garden and a park. The defence housing study confirmed Eastern Galicia’s intensive urban development. Fixing memory of the region’s culture and architecture by marking the territories of former defensive structures is appropriate when creating tourist and educational routes in historical centers of settlement

**Keywords:** defensive structures; fortifications; countryside; territory planning; castle

### **INTRODUCTION**

As of 2025, no fully preserved objects, such as a dwelling with defensive structures or its later transformation into a residence, exist. However, certain preserved elements of the region’s historical and cultural landscape and knowledge about them contribute to forming its established diversity and identity. Documentation of data about an object that does not officially have the status of a monument but is essential in recording the region’s historical development is the basis for developing a regional planning strategy and master plans for settlements.

Most studies dedicated to defensive housing primarily focus on the description and classification of such objects. The most comprehensive recent research on the defensive architecture of the western region of Ukraine includes the study by M. Bevz (2020). The scholar introduced into academic circulation the cartographic source titled “Lemberg. General Carta von dem Marche der bey Hommona in Hungarn gestandenen K.K. Trouppen, bis zur Hauptstadt Lemberg in Pollen, 1772.” A detailed examination and interpretation of the depiction of the terrain and defensive

### **Suggested Citation:**

Sosnova, N. (2025). Defence housing in the 18<sup>th</sup> century and its genesis in the cultural landscape of the Ukrainian village. *Architectural Studies*, 11(2), 72-83. doi: 10.56318/as/2.2025.72.

Journal homepage: <https://arch-studies.com.ua/en>

*Architectural Studies*, 11(2), 72-83

Received: 02.12.2024 Revised: 03.05.2025 Accepted: 01.07.2025

\*Corresponding author



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)



architectural objects presented in this map holds significant academic value, as this cartographic material has not yet been thoroughly analysed by researchers.

The existing descriptions of defensive structures in the region of Galicia have been supplemented, and for certain objects, graphic reconstruction proposals were developed by researchers O. Okonchenko & I. Okonchenko (2022). Their study identified key contradictions arising in typological classification of defensive structures. M. Bezv & T. Pinyazhko (2022) demonstrated that the mid-19<sup>th</sup>-century fortifications of Galicia represent objects of modernisation within the Venetian-Renaissance tradition in Austrian military architecture. This finding underscores the uniqueness of Galician defensive architecture within the broader context of both Austrian and European architectural heritage. The researchers also proposed three principal methodologies for the contemporary preservation, conservation, and musealisation of mid-19<sup>th</sup>-century fortification structures in Galicia. These methodologies were provisionally named according to the nature and type of intervention: adaptation-worldview oriented, historically-symbolic, and informational-complementary.

Most studies on defensive housing focus primarily on buildings and their individual elements. Based on the examination of a complex of castles that functioned as fortifications in the mid-16<sup>th</sup> to 17<sup>th</sup> centuries in the western region of Ukraine, O. Okonchenko *et al.* (2020) identified and analysed five variants of the spatial and volumetric structure of gate complexes. Their study of castle entrance nodes as dominant architectural elements led to the conclusion that, during the 16<sup>th</sup>-17<sup>th</sup> centuries, early forms of tower and bastionette defence systems continued to function alongside bastion-type fortifications. This conclusion regarding the prolonged genesis of defensive structures substantiates the relevance of studying defensive housing within the landscape of the Ukrainian village, as objects with a long evolutionary history serve as the most significant evidence of regional cultural heritage.

M. Rocha *et al.* (2024) investigated the specific features of reconstructing defensive structures based on their original building materials. The researchers provided a rationale for conservation interventions applied to defensive military structures built with rammed earth. The aspect of stabilising the soil form of such defensive structures is particularly important in cases where later architectural additions have a low degree of preservation. The range of combined measures for conservation, reintegration, and reconstruction was classified into four categories: 1. Conservation of walls, which prioritises the preservation of the original material over the restoration of the fortification's original appearance; 2. Consolidation of walls, which involves strengthening the structure using materials similar to the original; 3. Restoration of the structure; 4. Reintegration or replacement of the finishing surface. This data collection method is particularly significant for Ukraine, both for researching historical sites in mountainous areas and for digitising as many monuments as possible that are

at risk of destruction during the wartime.

An opposing method in the study of defensive structures is the analytical data collection method. O. Okonchenko & I. Okonchenko (2022) developed a methodology for studying an object based on their characteristics that identify them within a specific system of defensive structure organisation. Defensive structures are increasingly being regarded as cultural tourism objects. S.K. Remya (2024) substantiated the significance of forts, which serve as enduring symbols of the region's history and valuable cultural heritage, highlighting the distinctive features of the local building culture.

The purpose of the present study was to identify the features of the planning and spatial solutions of defensive housing in Ukraine, particularly in Galicia, and to trace its genesis. According to the stated purpose, the key research objectives were defined as follows: to establish and characterise the key stages in the formation of defensive housing systems and their typology; to determine the distinctive features of Galicia's regional defensive architecture, particularly the principles of landscape localisation, from the late 18<sup>th</sup> to the early 20<sup>th</sup> centuries.

## MATERIALS AND METHODS

The study was concentrated on the Lviv region. The study was based on the review of scientific papers and archival sources, including cartographic materials, with their subsequent systematisation. The study performed a comparative analysis of the functioning of defence housing at three stages of its existence: of the end of the 18<sup>th</sup> century, at the turn of the 18<sup>th</sup> and 19<sup>th</sup> centuries, in the 19<sup>th</sup> century. The research methodology was based on the processing of cartographic materials and their comparative analysis. To explore each stage of the object's development, the study analysed exactly those cartographic materials that ensured the reliability of the object's indicators, its parameters, and the planning structure where it was located. Maps by F. von Mieg, made in 1:28,800 scale, record the entirety of housing, both defensive and residential, in the western lands of Ukraine at the end of the 18<sup>th</sup> century (Petryshyn, 2006).

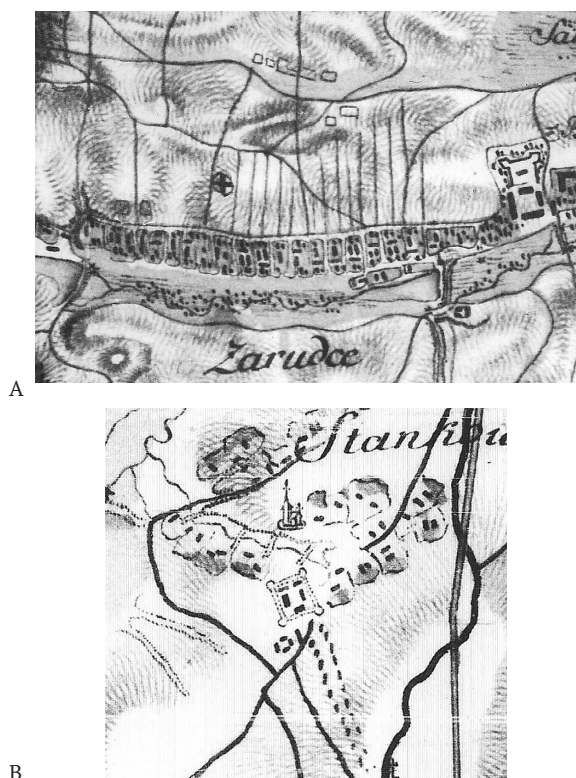
Buildings, including castles and palaces, are shown on the map as a plan, in contrast to the axonometric depiction of sacred structures. In the study of defensive housing, it is crucial that F. von Mieg's map accurately reproduces the configuration of defensive walls and surrounding ramparts – quadrangular, rarely pentagonal, with towers, bastions, and interior buildings. The abbreviated signatures existing at significant sites, namely E:h (Edelhof), M:h (Mayerhof), z:h, w:h (or simply hof), determine the type of construction – a nobleman's estate or a manor; Schloss – stone castles and palaces; Alte Schanze – abandoned fortifications, ruins (Petryshyn, 2006). Evolution of ancient defensive housing in the 19<sup>th</sup> century was documented in the following cartographic base covering the entire western part of Ukraine: cadastral maps. Cadastral maps were drawn for each settlement of Galicia in 1850-1860. The scale of 1:2,880 is optimal for analysing the natural



conditions and planning structure of villages (Lisovska, 2000). The territories of the ancient defence courtyards were peculiar in that they were mostly vacant and undeveloped due to their location in the natural landscape. Identification of the former courtyard site was possible by mapping, scaling, and overlaying historical materials on satellite imagery. Georeferencing to satellite imagery helped to obtain the exact coordinates of the objects on the ground.

## RESULTS AND DISCUSSION

The first stage of the study analysed network of defence housing facilities as of the end of the 18<sup>th</sup> century in the Lviv region. On a map, F. Von Mieg recorded the network of defensive housing as of the end of the 18<sup>th</sup> century (Petryshyn, 2006). Analysis of the map helped to classify defensive housing according to the planning features of its defensive structures. Quadrangular fortresses with bastions and courtyards with corner towers were recorded regularly in Porichchia, Reklynets, Vysotske, Perespa, Hriada, and Zarudtsi villages (Fig. 1, A). Quadrangular fortresses with bastions were found in Stankiv (Fig. 1, B). Lisok, and Romaniv villages. Pentagonal structures with bastions were less common. In the Lviv region, two villages with the same name, Lyashky Murovani (after 1946 both villages were renamed to Murovane), had pentagonal defence complexes.



**Figure 1.** Castles and courtyards built in the 18<sup>th</sup> century, preserving defensive structures

**Notes:** A – Zarudtsi village, Lviv district, Lviv region, map sheet – 261; B – Stankiv village, Stryi district, Lviv region, map sheet – 218

**Source:** H. Petryshyn (2006)

The defences of the courtyards consisted not only of defensive walls but were supplemented by hydrologic means. The types of localisation of the defensive structure in the landscape were as follows: type 1 – a river on one side of the object and a canal built from the river on the other three sides, for example, as in the village of Ostriv (in the half of the 20<sup>th</sup> century the village was renamed to Chorni Ostriv, Zhydachiv district) (Fig. 2, A); type 2 – the site was surrounded by a river that flooded large areas around it during the flood, reinforced by earthen ramparts, e.g., in the village of Mlyniska, Stryi district; type 3 – the site was located on an island, e.g., in the villages of Honiatychi and Zaderevach, Stryi district. Some of the bastion fortifications were on swamp islands, such as in the villages of Pechikhvosty in the Lviv district, Vaniv in the Chervonohrad district (Fig. 2, B), Novosilky and Koniushkiv in the Zolochiv district. According to the original canons of defence housing construction, some fortifications were localised on the hills. These included the sites in the villages of Volytsia, Hriada, and Ruda (since the 20<sup>th</sup> century – Zamok) in the Lviv district and Reklynets in the Chervonohrad district.



**Figure 2.** Defensive castles and courtyards that included water channels, a river, and a pond in the system of defences

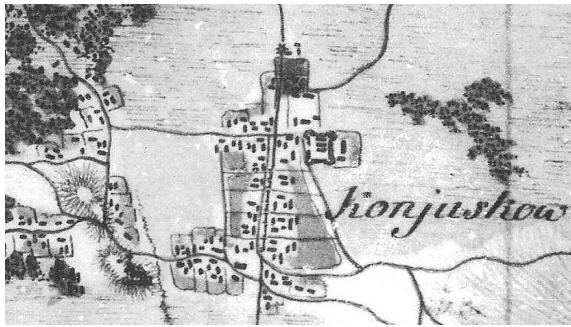
**Notes:** A – Ostrov village, Stryi district, Lviv region, map sheet – 266; B – Vaniv village, Sheptytskyi district, Lviv region, map sheet – 288

**Source:** H. Petryshyn (2006)

On the border with Small Polissia, the Podillia Upland forms a ledge up to 200 meters high (Marynych, 1989-1993), in front of which there is a strip of condensation of



ancient family estates of historical origin that developed from a defensive court. Thus, in the Zolochiv district of the Lviv region, defensive courtyards were established in the villages of Khylychty, Liatske (now Chervone), Lisok, Vy-sotsko, Koltiv, Chernytsia, Holoskovychi, Peniaky, Pidhirtsi, Ponykva, and Koniushkiv (Fig. 3). Some had a long-standing origin and developed into representative complexes with a park. One of the factors of development is arguably soil quality. The lands bordering Polissia are among the most fertile and have a soil quality score of 100 (Petryshyn, 1990).



**Figure 3.** Koniushkiv village, Zolochiv district, Lviv region  
**Notes:** map sheet – 358  
**Source:** H. Petryshyn (2006)

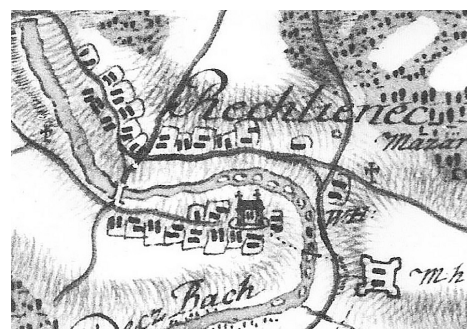
In the second half of the 18<sup>th</sup> century, changes occurred in the development of Galician architecture. The Tatar-Turkish attacks subside, and the defensive factor ceases to dominate the settlement. The loss of the key factor in the construction of defensive housing – the need for protection – was the basis for a new stage in the functioning of ancient defensive courtyards and castles – the elimination of defensive walls. The liberation of housing from restrictive enclosures gave impetus to developing new principles of open composition in family, noble, and other wealthier settlements. The further development of the former fortified courtyards followed two paths. The first was conservation, which later led to destruction, e.g., in the villages of Zaderevach, Pechikhvosty, Vaniv, and Chornyi Ostriv. The second was adaptation, i.e., turning old defensive courtyards into residential areas, sometimes with their transformation into palace and park complexes, e.g., in the village of Pidtemne, Lviv district (Matsiuk, 1997).

The second stage of the study analysed the transformation of defence housing at the turn of the 18<sup>th</sup> and 19<sup>th</sup> centuries. In that period, most of the defensive courtyards in the Lviv region no longer had walls, but the fortifications, such as earthen ramparts, ditches, and ponds, remained. Once redesigned for defence, the terrain did not contradict the new trends in estate construction, especially in those objects built near a river or pond, as water became one of the structural components in the landscape of a new – no longer defensive, but representative – dwelling.

For example, the castles in Mykulintsy, Bessidy, Lahodiv, Koltove, Zamochoch, Malchytsi, Medynychi, Pidhorodtsi, Obroshyno, Murovane, Chaplia, and Kolyndiany

were rebuilt into larger manor and park complexes of a residential nature. They had a water element included in the territory planning. Some of the defensive objects, after the stage of elimination of the walls and expansion of the living space, still decay over the years. The study found that the defence yards, being based on the defence doctrine and having strongly pronounced natural landscape features, were poorly suited for a new way of living and reconstruction into a residence. The reason for this was the limited territory of the former defence yard, particularly on river islands or hills, which were insufficient for the new type of residence. The same applied to areas that were regularly flooded. Additionally, the floodplain meadows were natural, changing the nature of the landscape situationally, and could not ensure the creation of regular park compositions and a straight access alley, which became a symbol of the new noble housing. The same applied to objects on the flooded peninsulas.

The toponyms of the villages of Ostriv, Richka, and Porichchia indicated that the fortifications on their lands were built using natural elements such as rivers, wetlands, and floodplains as means of defence. Accordingly, the defensive courtyards in the villages of Reklynet (Fig. 4), Vaniv, Ostriv in Chervonohrad district; Porichchia in Yavoriv district; Richka of the Rava-Ruska urban community, Lviv district, which were localised on the remains, did not have a long-standing origin after the elimination of the defensive walls and their remains were not preserved. Due to their defence function, ancient defensive dwellings were often located separately from the village buildings. Such courtyards, located far from the neighboring settlements, also did not often develop into a new type of residential housing. Summarising the second stage of the origin of defence courtyards, the study found that the functioning of objects not developed outside their borders was short-lived, as they were inconvenient as housing. The other two options for a new courtyard structure – adaptation or development – were more suitable for the new form of life and management. The third stage of genesis was marked by courtyards built on the territories adjacent to the old defensive courtyard and not just adapted within the old boundaries.



**Figure 4.** Reklynet village, Sheptytskyi district, Lviv region  
**Notes:** map sheet – 290  
**Source:** H. Petryshyn (2006)



The third stage of the study analysed the development of ancient family estates in the 19<sup>th</sup> century. The transition from the *czynsz* system to the manor-pastoral system in the late century prompted the development of family estates in rural areas. This forced many wealthy Galician burghers to move from cities to villages to run their farms. Their family nests were located in various types of defensive courtyards and castles, analogous to the Western European knightly *burgs* and castles.

From the end of the 18<sup>th</sup> century, some of these defence courtyards were transformed into manor and park complexes. The most striking examples of this transformation included the estate of Countess Borkowska in the village of Ponykva, the palace of Count Mnieszczek in the village of Krysovychi, Yavoriv district, the estate of Horetskyi, which until the 19<sup>th</sup> century belonged to the Pototsky in the village of Reklynets (Sulimierski *et al.*, 1880-1902), the palace and park complex of Sarnetskyi in the village of Turyнка, where Stanisław Żółkiewski was born (Stupnicki, 1864), the estate of Count Stadnitskyi, which later became the property of the Thornitski in the village of Nadyby (Sulimierski *et al.*, 1880-1902). Cadastral maps provide information that many estates with a park, which underwent the first stage of redevelopment from a defence yard to a residence in the mid-19<sup>th</sup> century, no longer evolved but did not exist at all, or developed with a purely industrial character, and the park is represented only in the form of some park elements (flowerbeds, fragments of the square planted with trees, remnants of linden or hornbeam alleys). Examples include the estates of the villages of Pidhorodtsi in Stryi district, Zhelekhiv Malyi (now Velykosilky), Pechikhvosty and Porichchia in Lviv district, Mlynyshe (now Mlynyska) and Honyatychi in Stryi district.

However, some defence courtyards transformed from a utilitarian defence function to a representative one and continued to develop as manor parks or palace complexes until 1939, e.g., the palace and park complex in the village of Peniaky. In the 19<sup>th</sup> century, the defensive castles of villages also underwent a long evolutionary path from being closed to being opened into the landscape and developed into a manor and park complex on the site (or near) of an ancient castle: Hriada, Zhovtantsi, Ruda Monastyrok (now Zamok), Zarudtsi, Romaniv, Turyнка in Lviv district; Krysovychi in Yavoriv district; Novosilky (Novosilky Zahalchyny in 19<sup>th</sup> century (Sulimierski *et al.*, 1880-1902), Liatske Male (after 1946 – Chervone), Lisok, Korsiv in Zolochiv district, Horozhana Velyka in Stryi district, Perespa in Chervonohrad district.

Some defensive courtyards stayed in their original location but were rebuilt so radically that nothing remained of the original foundation except for localisation. For example, a typical farmstead replaced a wooden hunting castle in the village of Zamochock. The example of the defensive fortification in the village of Liashky Murovani (from the second half of the 20<sup>th</sup> century – Murovane, Lviv district, Lviv region) demonstrated the owners' attempts to modernise the defensive castle into a modern type of

housing in the 19<sup>th</sup> century – a residence with a park at a low cost. Bastions of pentagonal configuration protected the residential building in the courtyard. From the north, east, and west, the ramparts and curtains were additionally surrounded by a moat. F. von Mieg's map (map sheet 262) shows the dismantled southern wall and the construction of three new buildings that formed a rectangular semi-open courtyard. A garden was planted downhill from the new buildings (Fig. 5).



**Figure 5.** The village of Liashky Murovani, late 18<sup>th</sup> century  
**Notes:** map sheet – 262  
**Source:** H. Petryshyn (2006)

The estate was rebuilt in the first half of the 19<sup>th</sup> century, as evidenced by the village's cadastral map. The house was dismantled inside the walls. In addition, the buildings of the previous stage of the castle's development, recorded in the cartography of 1782, were not preserved. Instead, a new palace was built, measuring 40.3 m on the longer side. The eastern side of the walls was handed over to a large farmyard with buildings. A natural park was planned for the southwest of the site (Fig. 6). At the same time, the pentagonal outlines of the defensive ramparts, curtains, and ditch were preserved, demonstrating a balanced adaptation of the terrain without unnecessary costs.



**Figure 6.** The village of Liashky Murovani, first half of the 19<sup>th</sup> century  
**Source:** Central State Historical Archives of Ukraine in Lviv (1853); graphic design by the authors

Theorists interpreted the pentagonal organisation of a defensive structure as a ray structure. Following the French construction school, the redesigned castle adapted this geometric form for an axial composition, with



representative dwellings along the axis. Preserving the fortification in the new residential complex can be associated with romantic trends in early 19<sup>th</sup>-century architecture, when deliberately constructed ruins became the decoration of parks (Petryshyn, 2006). The cartographic comparative analysis helped to compile a typology of defensive housing according to the type of its origin. Thus, the study found that the adaptation of an ancient defence courtyard could take place in several ways:

- to operate within previously established boundaries, such as in the village of Lyatske Male;
- to be included in a new estate's economic or park structure while staying uninhabited, e.g., in Mykulintsy, Tvirzha, Torky, and Zhovtantsy villages.
- build up a new farm and function as a single entity with it, e.g., in the villages of Vysotsko, Lisok, Malyi Zhelekhiv, Penyaki, Stankiv, Ushkovychi, Romaniv.
- to be entirely replaced by a new manor house built on the same site as the castle or nearby, e.g., in the villages of Vaniv, Reklynets, Koniushkiv, Chorny Ostriv, Hriada (Sosnova, 1998).

The long-established family estates that developed into representative complexes with a park in the 19<sup>th</sup> century could have been a factor in the transfer of the village where they were founded to the status of a small town. An example is the village of Romaniv, Lviv district. In the second half of the 15<sup>th</sup> century, the presence of fortifications in the village was twice noted in the records (Pshyk, 2008). F. von Mieg's map shows a quadrangular fortress with bastions. Even small lowland rivers flowing across a relative plain were sometimes challenging to cross, as their branching required crossing them several times through marshy terrain. This might explain the location of the defence yard in the northwestern part of the Romaniv village lands rather than on the top of nearby Kamula Mountain.

At the end of the 18<sup>th</sup> century, the castle lost its defensive function and began to be built up with new housing and outbuildings. Judging by the image on F. von Mieg's map, a farmyard was formed on the western side of the earthen rampart, and a new building with a tree-lined road was built 300 meters north of the castle. As of the mid-19<sup>th</sup> century, the earthen ramparts were probably partially preserved, as the cadastral map shows a narrow road that follows the route of the western side (Central State Historical Archives of Ukraine in Lviv, 1854b). In addition, judging by the cadastral data, the buildings of the first stage of the castle's redevelopment did not remain. There was no road connecting the old and new courtyards either. One element that allows identifying the object's location on the cadastral map is the characteristic bend of the entrance to the farmyard on the western side of the fortifications.

Considering the size of the main building and the absence of a park (there was a garden), it can be assumed that in the mid-19<sup>th</sup> century, there was a farmstead with a developed economy on the site of the defence yard. According to the Geographical Dictionary (Sulimierski *et al.*, 1880-1902), a farmstead and a distillery were located north of the

Romaniv village buildings. The so-called "bigger property" in the village – 516 morgans of arable land and 2,247 morgans of forest – belonged to Count Alfred Pototski. Identifying the defensive yard in Romaniv village is possible due to the surviving fragment of the earthen rampart with the geometry of the bastion (Fylypchuk *et al.*, 2014).

As modern researchers described, the defensive castle system "consisted of a central sub-square area with maximum parameters of 40×40 m (oriented almost to the cardinal points). It was surrounded by defensive structures in the form of four bastions and ramparts; the total length of one of the sides of the bastion in its lower part reached 90 m" (Fylypchuk *et al.*, 2014). Based on the above data, the approximate coordinates of the reference to the center of the former castle according to the satellite image (data attribution on September 17, 2018) are as follows – 49°42'40 "N 24°19'54 "E.

Another example of the origin of a defence yard in a village that briefly had the status of a town is the site in the village of Ferleivka (from 2021 the village of Andriivka, Zolochiv district). In 1638, Ferleivka received the Magdeburg right, which briefly granted it the status of a town, but this was not reflected in the planning structure. On F. von Mieg's map, a large pond with an island in the middle is located between two sacred buildings in the center of the village of Ferleivka (Fig. 7). The island is surrounded by an earthen rampart and connected to the shore by only one bridge. Within this "defensive land", brick buildings had a "U-shaped" plan configuration, with their courtyard opening towards the entrance gate. There was also a garden with a four-division structure on the island. The part of the island that was farthest from the housing was planted with trees.

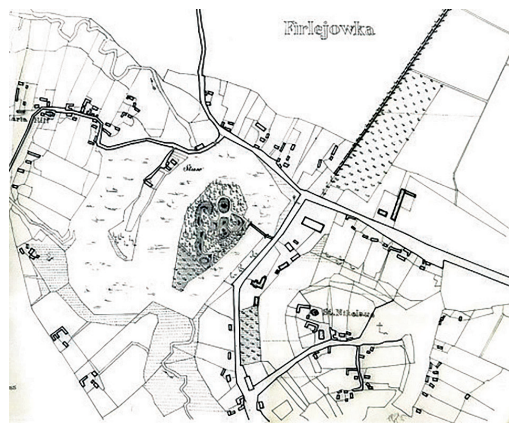


**Figure 7.** Village of Ferleivka, late 18<sup>th</sup> century  
**Source:** H. Petryshyn (2006)

The cadastral map of the mid-19<sup>th</sup> century records dramatic changes in the layout of the defence yard (Fig. 8). Since the defence was no longer required and it was impossible to develop the previous dwelling into a significant residence within the island, the buildings and ramparts were dismantled, and a naturalistic garden was planned throughout the island, corresponding to the character of the natural environment. The layout of a large park at

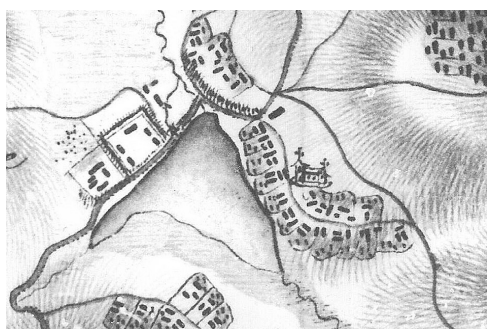


the pond on the site of the former defence yard was not uncommon. For example, in the village of Ponykva in the Brody community of the Zolochiv district (Lviv region), a high-quality landscape object, a park of about 30 hectares emerged on the site of a defensive castle. The possibility of such a park might be explained by the specific features of the natural landscape. In the floodplains of the tributaries of the Styr River, near the hilly ridge of the Podilska Upland, there is fertile black soil, enabling the creation of a high-quality park.



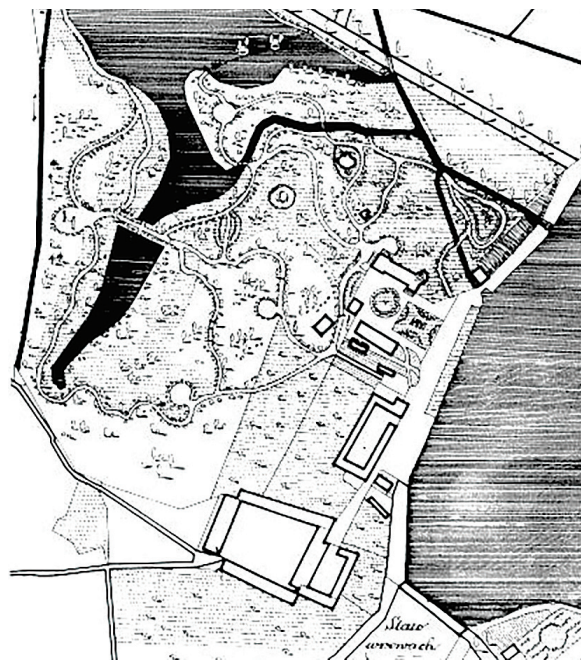
**Figure 8.** Village of Ferleivka, first half of the 19<sup>th</sup> century  
**Source:** Central State Historical Archives of Ukraine in Lviv (1845); graphic design by the authors

The large reservoir in the village covered about 50 hectares. Cartography recorded a defensive type of dwelling on its northwestern bank in the late 18<sup>th</sup> century – a rectangular courtyard with five buildings. A rampart and a ditch with water from a stream flowing from the north of the estate were used as defensive fortifications on three sides (Fig. 9). Approximately half a century later, the cadastral map shows a new residence with a large-scale park and a water element involved in its planning – ponds and canals that were previously outside the courtyard. The park was laid out at the palace, designed in the English landscape style (Fig. 10).



**Figure 9.** Planning of defence yards the village of Ponykva of the 18<sup>th</sup> century

**Notes:** map sheet – 359  
**Source:** H. Petryshyn (2006)



**Figure 10.** Planning of defence yards the village of Ponykva of the 18<sup>th</sup> century end Cadastral map  
**Source:** Central State Historical Archives of Ukraine in Lviv (1854a); graphic design by the authors

The old courtyard's moat and fence were removed, and the new residential and representative complex increased in size by 2.5 times compared to the previous one. Despite the complex's evident representativeness, the farmyard stayed in its original location and was expanded in terms of area and new buildings. In the history of Galician courtyards at all stages of their existence, both during the time of the defence function and the period of the representational housing, the economic part was always a significant part of the estate. Together with the dwelling, a complex of outbuildings was built: "barns, stables, breweries for wine production, and other buildings, united compositionally with the residence. Such a complex is an example of integrating housing and farming with the landscape of those times in Europe" (Zarebska, 1971). The problematic nature of modern use of such territories complicated the fate of degraded historic landscapes. On the one hand, they are not recognised as monuments of architecture or archeology, but they are essential as objects of the development of region's natural landscape, which was characteristic of past centuries. Examples include objects in villages: Richky, Stankiv, Lisok, and Konyushkiv.

Richky (Riczky, Pziczky) village is located 4.5 km north of Rava-Ruska. The defensive courtyard of the village of Richky, according to the cartographic representation on F. von Mieg's map, was a quadrangular fortress with bastions surrounding two buildings in the courtyard at the end of the 18<sup>th</sup> century. The site was located on the northeastern outskirts of the village, about 100 meters from the houses. The natural means of defence was a pond adjacent to the western wall of the fortress. However, there was a small hill



on the eastern side of the castle, which made the location of the defence yard questionable from the standpoint of military tactics. Later cadastral maps of the late 19<sup>th</sup> century show that the old defence yard was not developed into a residence, but it existed. According to the Geographical Dictionary (Sulimierski *et al.*, 1880-1902), the village had a farmstead called “Chorny” at the time, which included 755 morgas of arable land, 237 morgas of meadows and vegetable gardens, 112 morgas of pastures, and 942 morgas of forest. Notably, in the 19<sup>th</sup> century, Count Kajetan Kicki donated this property for public purposes. The satellite image (data attribution 28.03.2022) shows the contours of the earthen fortification – ramparts and bastions. The eastern rampart was 75 meters long, the southern rampart was 65 meters long, and the defensive structure’s parameters were 55 meters along the axis of the southern bastions.

As of 2020, there were vegetable gardens and arable land in the castle yard in the middle of the ramparts. The castle’s northeastern bastion coordinates are 50°16’52 “N 23°38’43 “E. The object that allows clarifying the location of the defensive object is a wooden sacral building that existed from 1716 to the 1880s, and now in its place is a wooden church built in 1920 (Slobodian, 1998). Interestingly, the existing church has two stone buttresses, typical of defensive structures. An example of the evolution of defensive housing, which was based on a reservoir, into a residence with a park is the object in the village of *Lisok*. The village of *Lisok* (Lisko) is in the Buska urban community of the Zolochiv district of the Lviv region. According to the map by F. von Mieg, in the late 18<sup>th</sup> century, there was a castle-fort between the villages of Lisok and Novosilky with quadrangular walls with bastions surrounding a residential building and three buildings in the courtyard.

The facility was on the western edge of the villages, 150 meters from the village houses. The natural means of defence was a small pond (no longer exists today) on the eastern wall of the fortress. The small river Dumnytsia flowed on the castle’s south side, and there were mochars on the west side. The fort’s inner courtyard entrance was through the eastern gate, via the bridge over the pond. F. von Mieg’s map shows that at the end of the 18<sup>th</sup> century, the defensive courtyard was extended on the south side with a new courtyard of six buildings without dismantling the walls. The area of the newly built estate and the one within the walls was approximately the same – about 4,600 square meters (Fig. 11).

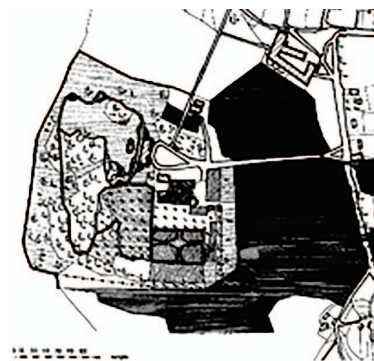
The cadastral map of the village records the changes that occurred to the defensive courtyard as of the mid-19<sup>th</sup> century (Fig. 12). The defensive structures and buildings were eliminated, and a brick palace was built, oriented towards the entrance via the bridge over the pond. A new road was laid to the palace from the north, connecting it to the village. The old bridge was probably preserved not only for its utilitarian function but also as a decoration of the estate. In the mid-19<sup>th</sup> century, the construction of bridges over water bodies as an element of a landscape park became widespread.



**Figure 11.** Defensive castle between the villages of Lisok and Novosilky, Zolochiv district, 18<sup>th</sup> century

**Notes:** map sheet – 232

**Source:** H. Petryshyn (2006)



**Figure 12.** Fragment of a cadastral map the village of Lisko, first half of the 19<sup>th</sup> century

**Source:** graphic design by the authors

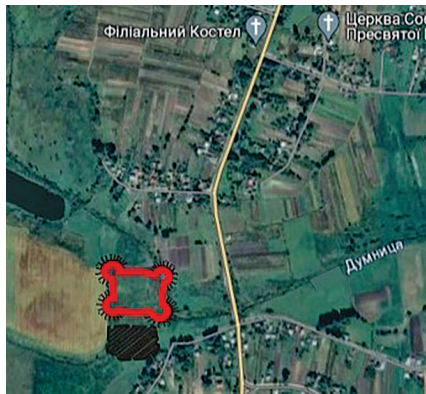
The former defence yard’s territory doubled. On the western side, a naturalistic park was established on the once swampy defence grounds, and a reclamation canal was laid along its border. According to the Geographical Dictionary (Sulimierski *et al.*, 1880-1902), 55 people lived in the “estate” in 1880. On the satellite image (data attribution 14.09.2020), the contours of the ancient earthen fortification are very faintly visible, only due to the change in vegetation type. The northern rampart was 110 meters long, and the western rampart was 70 meters long. As of 2020, the territory of both the old defence yard and the residence built in its place was an overgrown marshy meadow. The flooding of the area can be assumed to be the reason the site was not preserved and is not used today. The coordinates of the former northeastern bastion of the castle are 49°42’50 “N 24°19’39 “E (Fig. 13).

The present study contributed to the existing body of knowledge on Galician defensive structures by exploring their origin within the rural landscape. Defensive courtyards and their remnants serve as artifacts that reflect the longstanding experience of Ukrainians in protecting their lands. The outcome of this study is the increased visibility and popularisation of the region’s defensive architecture. Studying defensive architecture across various regions





of Ukraine provides a foundation for comparative analysis and helps to identify unique features of local building cultures. In this context, studies of the Volyn region (Mykhailyshyn, 2000) and the Ivano-Frankivsk region (Lukomska, 2015) serve as valuable references for establishing the specific characteristics of defensive housing in the Lviv region.



**Figure 13.** Satellite imagery of the territory of Novosilky, 2024

**Notes:** coordinates 49°55'39.5"N 24°26'45.6"E

**Source:** Google Maps (n.d.)

For the first time, researchers of the topography of the town of Kamianky in Podillia are introducing a unique source from the historical map – a map of the Podillia province of 1841-1847. Using the found map source, the authors managed to locate the castle and the fortified town centre, and characterise the type of fortifications (Riazanova *et al.*, 2021). This study also uncovered new information about previously little-known, small but once numerous defensive courtyards in Galician villages. The joint result of work with other researchers of defence construction, particularly with M. Bezv (2020) and O. Okonchenko and I. Okonchenko (2022), is the systematisation of scientific knowledge about the principles of defence architecture. However, the studies of these researchers were aimed at a detailed investigation of architecture, while the current study aimed to explore the transformations of the objects in the landscape. In-depth studies of only certain preserved objects of defence architecture, such as the long-term study by O. Remeshylo-Rybchynska (1994) of the castle in the village of Pidhirtsi, left out the context of the historical period, which is crucial for defence architecture. Namely, the researchers did not cover the entire set of objects that would indicate the density of localisation of defence housing on the lands of the western region of Ukraine.

The available studies of defensive housing mostly concern buildings and defensive structures, for example, the study by A. Cholovsky (1892). The principles of transformation of defence housing have been most thoroughly explored by Ukrainian scientists for the largest or surviving objects. Instead, this researcher's study identified the specific features of their localisation in the landscape and subsequent

redevelopment of the territory. A researcher of castles and fortresses in Western Ukraine is the historian O. Matsiuk (1997), who compiled a register of defensive structures in Galicia, described their history and current state, and created tourist routes to the monuments of defensive construction in Western Ukraine. In addition, the study by V. Pshyk (2008) covered a set of defence construction objects of the 13<sup>th</sup>-18<sup>th</sup> centuries on the territory of the modern Lviv region, which included about three hundred settlements.

However, in the years since the studies of O. Matsiuk (1997) and V. Pshyk (2008), the condition of the facilities has deteriorated. A threat to the surviving elements, particularly to the earthen ramparts and the underground part of the defence yards, is the failure to include them in urban planning documentation, specifically in the scheme of the village's General Plan. This study outlined the possibilities of identifying the location of the former defence yard as an archaeological site by signs of changes in the shape and type of image on satellite maps. The study demonstrated an example of identifying a historical object by changes in relief readable on Google Maps.

Of the analysed modern studies in the field of architectural inventory, the study by L. Barazzetti *et al.* (2023) opens new possibilities. Recent studies in the field of architectural history have focused on the development of non-contact digital methods for data collection regarding the object of study. One of the practical applications of theoretical research is the digital recording of historical defensive structures in mountainous areas. Drones were used to gather information for reconstructing the appearance of the external surfaces of fortified structures. Drone images and photogrammetric techniques for 3D modeling play a fundamental role in the digital documentation of fortified constructions using non-contact methods. The digital model provides an overall 2D graphic layout for describing a ruined building from geometric, technological, and conservation perspectives. Advanced digital surveying techniques can drive the definition of more reliable 3D geometrical models of built heritage, which is a fundamental step in elaborating analyses that characterise the conservation process.

For Ukraine, this method is relevant because there are specialists familiar with drone control. The ability to identify an object on the territory in real time by comparing maps of different periods and linking them to geodata is essential in the task of planning village development. When developing urban planning documentation for a settlement, it is recommended that the boundaries of the territory of former defence yards, even if they are not monuments, be marked on the plan. Historical sites and even references to them can contribute to the development of a settlement or community.

K. Boguszewska & K. Drobek (2023) explored strategies for adapting the inner courtyards of defensive castles to contemporary functions. Considering that, in most cases, rural fortified yards in Ukraine lost their masonry structures, leaving only earthworks delineating the outline



of the castle, including its courtyard, the study proposed the adaptation of these areas – particularly the inner courtyards – for theatrical use. The activation of historical sites with a minimal degree of physical preservation is intended to attract public attention to their significance and to promote the conservation of these areas as archaeological and historical monuments. The courtyard, as the fortress's focal point, should embody the fortified site's key space. In this context, the defensive courtyard, or even the marking of its location on the site if it has not been preserved, represents a potential for community development. In conclusion, studies on defensive housing predominantly focus on buildings and structures. However, the specific aspects of the localisation of these objects within the landscape and subsequent territorial reconstructions are rarely generalised.

### CONCLUSIONS

Since the end of the 18<sup>th</sup> century, Eastern Galicia has been characterised by the archaic use of regular fortifications and their housing adaptation. By the middle of the 19<sup>th</sup> century, various types of adaptations of the defensive castle and courtyard were in place, ranging from dismantling only the flank wall to radical reconstruction into a residence with a cultural landscape in the form of a park. The rationality of the way of life led to the long-standing origin of the defensive type of housing, even after the need for defensive structures disappeared. With the elimination of the defensive walls, this type of dwelling was redesigned, and opening into the landscape, it acquired a new utilitarian quality of a manor house with a farm and a cultural landscape. The area's hydrography is also a unique feature in transforming defence courtyards into residences. Fortifications exploited natural elements, such as a river and a marshland, as means of defence, which became elements of the cultural landscape in the reconstructed housing centuries later. The placement of defensive housing in the rural landscape, under the natural structure formed by the lower axes (river, ravine, hollow), upper axes (top of a ridge

of hills), and planes (foot of a ledge), captured the regional differences in the cultural and historical landscape that was superimposed on the natural framework of the region. The defence housing study confirmed Eastern Galicia's intensive urban development.

The study of defensive housing confirmed the intensive urban development of Eastern Galicia. Preserving the memory of the region's culture and architecture by marking the sites of former defensive structures is particularly relevant when designing tourist and educational routes through historical settlement centers. One such tourist cluster is being developed in the Zolochiv district, which forms part of the rich cultural landscape of the Lviv region. This district is recognised as a historical settlement hub, rich in archaeological and historical monuments (such as ancient Rus' settlements in Plisnesk, Sasiv, and Olesko, surrounded by satellite villages), architectural landmarks (castles, churches, and monasteries in Pidhirtsi, Olesko, and Zolochiv), and urban planning heritage (many cities and towns preserved the rectangular layout of their centers established in the 15<sup>th</sup>-17<sup>th</sup> centuries under Magdeburg Law). The district also features unique ethnographic settlements where regional folk crafts have flourished – e.g., Havarechchyna. Enhancing the area by identifying sites of defensive housing, along with those that later evolved into palace and park complexes in the late 18<sup>th</sup> to early 20<sup>th</sup> centuries, will enrich tourist destinations with educational value. Prospects for further research on defence-type housing lie in substantiating its potential for regional tourism development.

### ACKNOWLEDGEMENTS

None.

### FUNDING

None.

### CONFLICT OF INTEREST

None.

### REFERENCES

- [1] Barazzetti, L., Previtali, M., Cantini, L., & Oteri, A.M. (2023). Digital recording of historical defensive structures in mountainous areas using drones: Considerations and comparisons. *Drones*, 7(8), article number 512. [doi: 10.3390/drones7080512](https://doi.org/10.3390/drones7080512).
- [2] Bevz, M. (2020). [Fortifications of western Ukrainian cities on the base of analysis of 1772 Rudolf D'otto's map](#). *Fortifications*, 12, 10-35.
- [3] Bevz, M., & Pinyazhko, T. (2022). Fortification architecture of Galicia in the middle of the 19<sup>th</sup> century: General European context, objectives of preservation, and museum. *Fortifications*, 16, 122-134. [doi: 10.23939/fortifications2022.16.122](https://doi.org/10.23939/fortifications2022.16.122).
- [4] Boguszewska, K., & Drobek, K. (2023). Courtyards of castles partially reconstructed in historic towns. *Protection of Cultural Heritage*, 16, 87-109. [doi: 10.35784/odk.5616](https://doi.org/10.35784/odk.5616).
- [5] Central State Historical Archives of Ukraine in Lviv. (1845). *Fund No. 186. Description 6. Folder 1355. Cadastral map of Firliyivka village, Zolochiv district*. Lviv: Central State Historical Archives of Ukraine.
- [6] Central State Historical Archives of Ukraine in Lviv. (1854a). *Fund No. 186. Description 6. Folder 985. Cadastral map of the village of Ponikva*. Lviv: Central State Historical Archives of Ukraine.
- [7] Central State Historical Archives of Ukraine in Lviv. (1854b). *Fund No. 186. Description 4. Folder 409. Cadastral map of the village of Romaniv*. Lviv: Central State Historical Archives of Ukraine.
- [8] Cholovsky, A. (1892). [Ancient castles and fortresses in Galicia Rus'](#). Lviv.





- [9] Fylypchuk, A., Fylypchuk, G., & Telishchevskiy, V. (2014). [The results of surveys of archaeological sites on the territory and in the vicinity of the villages of Romaniv and Pidhorodyshe \(Peremyshlyany district, Lviv region\) in 2014](#). *Proceeding of the Institute of Archaeology Lviv University*, 9, 251-265.
- [10] Google Maps. (n.d.). Retrieved from <https://www.google.com/maps>.
- [11] Lisovska, E. (2000). [Cadastral maps as a source for the history of 19<sup>th</sup>-century Galicia](#). In *Cartography and history of Ukraine: Collection of scientific papers* (pp. 245-251). Lviv, Kyiv, New York: M.P. Kotz Publishing House.
- [12] Lukomska, Z. (2015). Objects of urban heritage of the 17<sup>th</sup>-18<sup>th</sup> centuries on the territory of Ivano-Frankivsk region. In *Problems of research, preservation and restoration of historical fortifications* (Vol. 7; pp. 189-202). Lviv: Rastr.
- [13] Marynych, O. (1989-1993). [Geographical encyclopedia of Ukraine](#) (Vol. 1-3). Kyiv: Ukrainian Encyclopaedia named after M.P. Bazhana.
- [14] Matsiuk, O. (1997). *Castles and fortresses of western Ukraine. Historical travels*. Lviv: Centre of Europe.
- [15] Mykhailyshyn, O. (2000). [Palace and park ensembles of Volyn in the 2<sup>nd</sup> half of the 18<sup>th</sup>-19<sup>th</sup> centuries](#). Kyiv: National State Institute of Theory and History of Architecture and Urban Planning.
- [16] Okonchenko, O., & Okonchenko, I. (2022). Issues on differentiation of military architecture monuments of the 15<sup>th</sup>-17<sup>th</sup> century by type (turret, tower, round bastion). *Humanities Science Current Issues*, 2(55), 103-110. [doi: 10.24919/2308-4863/55-2-16](#).
- [17] Okonchenko, O., Kramarchuk, K., & Milchevych, S. (2020). Architecture of defensive gates of western Ukraine castles in the 16<sup>th</sup>-17<sup>th</sup> centuries. *IOP Conference Series: Materials Science and Engineering*, 960, article number 022104. [doi: 10.1088/1757-899X/960/2/022104](#).
- [18] Petryshyn, H. (2006). [F. Von Mieg's map \(1779-1782\) as a source for the study of Galicia](#). Lviv: Lviv Polytechnic National University.
- [19] Petryshyn, H. (1990). *Natural and landscape foundations of the urban development process (on the example of the western Ukrainian region)*. (PhD thesis, Moscow Architectural Institute, Moscow, Russia).
- [20] Pshyk, V. (2008). *Fortified towns, castles, defensive courtyards and incastellated sacred buildings of the Lviv region in the 13<sup>th</sup>-18<sup>th</sup> centuries*. Lviv: Gerdan Graphics Design Studio.
- [21] Remeshylo-Rybychynska, O. (1994). On the need for a holistic analysis of historical architectural and artistic complexes. In *Problems of urban planning in western Ukraine*. Lviv: Lviv Polytechnic National University.
- [22] Remya, S.K. (2024). [Fortifications through time: Exploring Kerala's defensive heritage](#). *Heritage: Journal of Multidisciplinary Studies in Archaeology*, 11(1), 957-964.
- [23] Riazanova, N., Lytvynchuk, L., & Rybychynskyy, O. (2021). Studies of the fortifications of the town of Kamianka (Dnistrova) according to the lesser-known map of the Podilis province of 1844 by A. Fitingoff. *Fortifications*, 15, 85-94. [doi: 10.23939/fortifications2021.15.085](#).
- [24] Rocha, M., Faria, P., & Gago, A.S. (2024). Conservation of defensive military structures built with rammed earth. *Buildings*, 14(1), article number 238. [doi: 10.3390/buildings14010238](#).
- [25] Slobodian, V. (1998). [Churches of Ukraine. Peremyshi eparchy](#). Lviv.
- [26] Sosnova, N. (1998). The temporal development of the planning structure of the defensive courtyard of the village of Zamok, Zhovkva district. In *Historical, artistic and architectural heritage of Zhovkva: Problems of protection, restoration and use* (pp. 92-96). Zhovkva-Lviv: Prostir M.
- [27] Stupnicki, H. (1864). *Geographical and statistical description Kingdoms of Galicia and Lodomeria*. Lviv: Piller.
- [28] Sulimierski, F., Chlebowski, B., & Walewski, W. (1880-1902). *Geographical dictionary of the Kingdom of Poland and other Slavic countries*. Warsaw: Wieku.
- [29] Zarebska, T. (1971). *Theory of Italian urbanism in the 15<sup>th</sup> and 16<sup>th</sup> centuries*. Warsaw: PWN.

**Надія Соснова**

Доктор архітектури, доцент

Національний університет «Львівська політехніка»

79000, вул. Степана Бандери, 12, м. Львів, Україна

<https://orcid.org/0000-0003-2570-1236>**Оборонне житло у XVIII ст. та його генеза  
в культурному ландшафті українського села**

**Анотація.** В Україні реєстр пам'яток, що характеризують культурний ландшафт передмістя, включає лише кілька об'єктів. Однак залишки стін або валів оборонних споруд та їх території офіційно не реєструються, і в більшості випадків їх історичні межі не враховуються при розподілі сільських земель. Метою цього дослідження було охарактеризувати планування та просторове рішення, а також генезис оборонних споруд XVIII століття в культурному ландшафті українського села. Дослідження проводилося у Львівській області. Дослідження базувалося на порівняльному аналізі функціонування оборонних споруд на трьох етапах їхнього існування. Було проаналізовано близько 40 об'єктів за їхнім розташуванням у структурі села. Детально вивчено планування та походження трьох оборонних споруд. Станом на 2025 рік у Львівській області не існує невеликих сільських оборонних дворів. Однак земля в межах оборонних стін і на місці колишніх садів, створених під час перетворення оборонного двору на житловий масток, часто залишається незабудованою. Оборонні двори, які пройшли довгий еволюційний шлях, є особливим типом житла в ландшафтній архітектурі, яке еволюціонувало в повну протилежність – від обнесеного стіною житла до житла з садом і парком. Дослідження оборонного житла підтвердило інтенсивний розвиток міст Східної Галичини. Закріплення пам'яті про культуру та архітектуру регіону шляхом позначення територій колишніх оборонних споруд є доцільним при створенні туристичних та освітніх маршрутів в історичних центрах населених пунктів

**Ключові слова:** оборонні споруди; укріплення; сільська місцевість; територіальне планування; замок

