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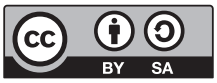

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Wydanie I

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SPIS TREŚCI – CONTENTS

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FILM ARCHITECTURE AS A MEDIUM OF COLLECTIVE MEMORY: THE POSSIBILITIES OF USING ARCHETYPES TO CREATE NARRATIVE ARCHITECTURE

The article reveals the role of film architecture in shaping collective memory, using archetypes. It shows how architecture can appeal to cultural archetypes, acting as a vehicle to convey deeper meanings and symbolism. The film spaces analyzed show how architecture and urban planning support the narrative, evoking emotional responses in the viewer.

The article briefly refers to the theory of Christopher Alexander, whose patterns can be used to create spaces in films, with the aim of influencing the viewer's emotional involvement, while building reflection on the social and cultural role of space. The potential of patterns as a tool for designing film spaces that appeal to universal values and experiences was pointed out.

Spatial patterns in films are tools that shape narratives and collective memory by appealing to universal archetypes present in the human psyche. The repetition of these patterns in many films, serving to portray similar emotions or relationships, points to the possibility of creating a catalog of film architecture archetype patterns or using, at least in part, an already existing one, such as Alexander's "Language of Patterns". In addition, the article emphasizes that film space, by referring to archetypes, can influence the construction of a common cultural identity and the reproduction of the memory of the past in modern visual narratives.

Keywords: psychology of architecture, archetypes, collective memory, cinematography, architecture in film

1. INTRODUCTION

Film architecture not only reflects the aesthetic choices of filmmakers, but also ingrained symbols and shared do-experiences.

The purpose of this article is to discuss the role of film space (architecture, urbanized space) as a carrier of collective memory and to explain how spatial patterns can refer to cultural archetypes. In this article I would like to find answers to the questions: Is it possible to analyze the relationship between film architecture and

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collective unconsciousness? Do references to architectural archetypes in films have a deeper meaning than just the visual aspect? How are symbolic and cultural archetypes represented in film architecture?

The study of the spatial patterns contained in films will allow for a clearer message to the viewer. Consciously applied architectural treatments can become an additional character of the film.

The wide audience of film images affects the strength of the rooting of a given architectural archetype and its message in the collective memory.

2. COLLECTIVE MEMORY IN ARCHITECTURE AND FILM

Collective memory is the shared social ideas and beliefs about the past that are shared by members of a social group. Unlike individual memory, collective memory is not just a collection of memories of individuals, but is shaped by social groups, such as family, nation, professional or religious group. The purpose of this memory may include the creation of social ties, the construction of group identity, or the legitimization of power.

Collective memory refers to the collective memory heritage of a society, which shapes its cultural and historical identity. It is a process of not only recording, but also interpreting events, which varies depending on the perspective of the participants and the passage of time [Gliwka 2020].

The first studies of collective memory were pioneered by sociologist Maurice Halbwachs, who emphasized that individual memory becomes comprehensible only within a broader social context. His concept assumes that it is social groups that shape memories and give them a certain meaning, by which the past acquires social significance. Halbwachs noted that ideas about the past are not static – they change according to the needs and contexts of social groups. Thus, collective memory is not just a collection of historical facts, but also the emotions and social functions it performs at a given time [Centrum Badań Historycznych Polskiej Akademii Nauk w Berlinie 2024a, 2024b].

Collective memory, although based on ideas about the past, is crucial in shaping group identity and society, as a tool for legitimizing power and perceptions of history. Research on it includes various aspects, such as relations with power (e.g., historical politics), mechanisms of intergenerational transmission of memory, the influence of media on remembering the past, and consideration of how collective memory affects perceptions of contemporary conflicts.

From a contemporary perspective, collective memory is analyzed in the context of dynamic social changes, cultural and political turns, which lead to reflections on the role of the past in the formation of the present and national or group identities. Thus, collective memory is a changing process, dependent on the social, political and cultural context [Wójcicka 2024].

One of the important interdisciplinary themes in contemporary culture is the change in the social perception of time, expressed in the reshaping of the relationship between the past, present and future, and the compression of time and space. Studies of this phenomenon show contemporary culture as focused on the "culture of the present", while recognizing the phenomenon of the "memory explosion", that is, the growing interest in the past. Looking at the structure of collective memory and the ways in which the past is defined in today's culture, we see that both the "culture of the present", the intensification of memory and the increased awareness of the past, are the result of similar factors, such as new media, communication technologies, consumption and popular culture [Tarkowska 2016].

Collective memory is a process in which social groups, through various forms of communication, cultivate shared ideas about the past that shape identity, integrate society and serve various social and political functions. In this process, historical experiences and narratives are reinterpreted according to the changing needs of social groups, making collective memory constantly negotiated and transformed.

Architecture and film, act as vehicles of collective memory, conveying and shaping social and cultural identities. Films are a valuable source of knowledge about urban culture, and their representation of urban space becomes part of socio-cultural processes in which the city and its architecture play a key role in creating collective memory – such as films from the late 1950s and early 1960s showing Gdansk [Copik 2022]. In the reconstruction of Polish cities after World War II, architecture recorded on other memory media (images, photographs, films) was an important element in reconstructing not only physical space, but also collective memory, referring to the past through the reconstruction of monuments and the use of historical methods in reconstruction. Urban space in the form of restored buildings and architectural elements in modern cities acts as "memory implants", introducing a new context for social interpretations of the past, which, especially in large cities, can be subject to political and ideological disputes. Such sites are not only a testimony to the past, but also a tool in the creation of contemporary identity and social memory [Kulig 2008; Skoczylas 2014].

3. CULTURAL ARCHETYPES IN ARCHITECTURE AND FILM

> Archetype is the tendency to create such representations of a motif – repetitions that can vary greatly in detail, but without losing their basic structure… They are devoid of a known origin and reproduce themselves at any time and in any part of the world [Jung 2012].

Carl Jung refers to Freud's concept of "archaic remnants" i.e., certain mental traces that are not the result of an individual's do-experience. However, Jung introduced his own term – "archetypes" – to describe these universal mental forms present in the human psyche. According to him, archetypes are even the foundation of

the collective unconscious, which encompasses knowledge and ideas shared by all of humanity (or a select group). This knowledge is usually not available at the level of consciousness, but emerges in the form of dreams, myths or symbols. Archetypes form the structure on which mythologies (or stories) are based, and these become the space for symbol expression [Jung 2012].

Symbols – archetypes in architecture are universal patterns that reflect deeply rooted ideas and meanings in the human psyche, finding expression in spatial forms, structures and details of buildings and landscapes, regardless of cultural or historical context.

Archetypes in urban space (such as those present in the design of Canary Wharf [Nuttall 2002]) have the power to create collective memory and cultural identity. Contemporary cities, too, can become a place for the expression of symbolic ideas and social processes that are expressed in architecture. The process of creating architectural spaces, can be linked to deeper, psychological mechanisms – including archetypes – that shape our collective consciousness.

Alexander's pattern theory is an attempt to create universal pro-design principles that appeal to archetypal human needs. These patterns, which are peculiar architectural archetypes, build emotional relations between man and space, creating environments that not only respond to the functional requirements of users, but also enhance a sense of belonging, identity and security.

Christopher Alexander has created a body of work that can be considered a collection of archetypes in architecture, linking universal spatial patterns to deep-seated human needs. His book The Timeless Way of Building [Alexander 1979] and the monumental A Pattern Language [Alexander et al. 1977] represent a systematic attempt to capture the recurring design motifs that emerge from diverse cultures and eras. His theory is based on the idea that certain universal architectural forms and structures, referred to as "patterns", appeal to fundamental needs and experiences shared by all people. Alexander sees these patterns as peculiar spatial archetypes that build deep, emotional relationships between users and the space around them. They can be viewed as architectural archetypes, appealing to the collective unconscious and responding to fundamental aspects of the human experience of space. Alexander shows that there are forms and layouts that have a universal character, transcending geographical and temporal boundaries. With this, he fits in with the Jungian concept of archetypes as symbolic and enduring structures present in different cultural contexts.

4. ARCHITECTURE IN FILM AS A CARRIER OF COLLECTIVE MEMORY

Film, being one of the carriers of collective memory, is also a reflection of reality or an expression of dreams, desires, fears. There are many examples in cinematography of films in which the architecture is very carefully chosen to emphasize what

the characters are experiencing, outline the historical background or place the action in a particular social, ethnic, economic group etc.

It is still worth distinguishing films where the architecture is created specifically for the film using advanced techniques and digital effects. Where the scenery is thoughtfully designed from the beginning. Often also realized mainly only virtually. In an era of very rapid technological development, such architecture will be created more and more often, and its impact on collective memory will grow.

Examples of films in which we can find references to archetypes are:

- Inception [Nolan 2010] – is a film that makes unique use of architecture as both a plot and symbolic medium. Some scenes in the film will show the audience Paris. The Pont de Bir-Hakeim, a bridge over the Seine River that is an iconic element of Parisian architecture, appears and alludes to the city's multi-layered history as a symbol of Europe's cultural heritage. We also see Paris, in a scene where the city in one of the dreams "folds" like origami, a sheet of paper, and the entire urban space, streets and buildings are inverted, bent. The dreams take the form of complex, multi-level structures, which the architects project according to the rules of logic, but also symbolism. Each dream is a labyrinth with a specific structure, which must be controlled so that it does not collapse under the influence of the dreamer's emotions or memories. Architecture thus becomes a metaphor of the human mind – orderly, but at the same time prone to chaos.
- The Shining [Kubrick 1980] – the hotel where the film is set was inspired by several real places with tragic events in the past. Although the film does not depict a specific historical building, the hotel in The Shining acts as a metaphor for these places. It stores traces of past events (murders, suffering) that affect the characters, especially Jack Torrance. His space becomes a living symbol of trauma. The characteristic architectural element of the film is the labyrinth – both the real one, in the garden, and the symbolic one, the hotel's corridor system. The labyrinth is a universal archetype, symbolizing loss, inner journey and confrontation with one's own darkness.
- Avatar [Cameron James 2009] – the filmmakers created the world of Pandora, full of detail and life in itself, which has become one of the most famous examples of digitally created film architecture. The constructions of the Na'vi people, such as the houses in the giant trees or the mystical "Tree of Souls", are based on harmony with nature and create a metaphor for coexistence with nature. In contrast, the people's infrastructure, including massive, brutal, in-industrial military bases, in stark contrast to the Na'vi architecture's adaptation to the planet, symbolizes expansion and colonization. Pandora's entire landscape is designed to highlight the dissonance between technocratic civilization and spiritual symbiosis with nature, creating a profound ecological and social context.

- Schindler's List [Spielberg 1993] – is a film that makes unusually powerful spoof use of architecture to commemorate real places of historical significance, mostly related to the Holocaust. The architecture in this film not only reflects authentic locations, but also acts as a vehicle for collective memory, symbolizing the tragedy and trauma of World War II. The film was shot in many real locations, including Krakow, Poland, as well as the Plaszow concentration camp. Spielberg took care to faithfully recreate the appearance of the Krakow ghetto and the labor camp. The buildings become witnesses to history, reflecting oppression and dehumanization and preserving the memory of the tragic events. Through authentic localizations and attention to detail, the film becomes a form of "architectural memory" that allows viewers to experience and understand the past.
- The architecture of "Dune" [Villeneuve 2021] was designed in a spoof way that reflects the atmosphere of the ancestral planets and the character of a particular family (collective memory). For example, the harshness of the desert planet Arrakis and its architecture refer to brutalism. They are dominated by simple, massive forms. Cold, geometric structures symbolize not only power, but also isolation from a hostile environment. The Fremen's abodes, on the other hand, inscribed very naturally and seamlessly into the rocks that provide natural shelter, show the desire to survive and adapt, to adapt to natural conditions, to seize opportunities without destroying the ecosystem. On the planet Caladan, where architecture is an expression of harmony with nature – living spaces are embedded in the landscape, and buildings merge with their surroundings as if they were part of the natural order. From a narrative perspective, Caladan provides a backdrop that emphasizes the theme of loss and transformation. The planet, full of life, is a symbol of stability and home, which the Atreides must abandon in order to take over the rule of Arrakis, which comes with many dangers and challenges. Villeneuve used thoughtful set design, combining practical effects with CGI to create a vision of the world full of political and environmental allegories.
- Blade Runner 2049 [Villeneuve 2017] – The world depicted is a futuristic version of Los Angeles. The set design combines elements of cyberpunk, brutalism and post-apocalyptic aesthetics, showing a city full of neon signs, advertising screens, monumental skyscrapers and vast, desolate spaces. Here, the architecture shows immense dehumanization and social stratification. Scenes in dilapidated Las Vegas, full of gigantic, empty buildings, underscore the theme of the collapse of civilization. The film's set design shows the city as a space full of traces of the past, distorted by technological and social degeneration. The set design, supported by advanced digital effects, creates a claustrophobic and dark atmosphere, which is an important element of the story about the identity and limits of humanity.

– Matrix [Wachowski, Wachowski 1999] – architecture plays a key role here in constructing two contrasting realities. The virtual world of The Matrix is a city inspired by modernism and brutalism, featuring austere buildings with cold interiors – symbolizing enslavement and uniformity. In contrast, the underground city of Zion, depicted in later parts of the series, is organic and chaotic, being a symbol of freedom and rebellion. Special effects and set design have created a space where architecture is integral to the narrative of illusion and reality, rather than just a backdrop to the events in the film.

Each of these films demonstrates how carefully designed architecture and set design can enrich the narrative, acting as a symbolic medium that reflects the key themes and values of the depicted worlds.

5. SELECTED PATTERNS IN THE CONTEXT OF COLLECTIVE MEMORY

Analyzing even such a narrow slice of cinematography, there are some recurring archetypes in which architecture has been used to depict the plot. Symbols seen here include:

– tower (the dwelling tree in Avatar, Dune – the palace on Arrakis, the towering skyscrapers in Blade Runner 2049);
– cooperation with nature (Dune – Fremen, Avatar – Na'Vi);
– brutality (Dune – city on Arrakis, human base in Avatar, Blade Runner 2049 and dehumanization, including of architecture);
– contrast (Dune and Avatar – architecture that disrespects the planet vs. architecture that is sustainable, natural, Matrix);
– labyrinth (The Shining, Inception – labyrinth as a metaphor for confusion and complex human psyche).

It is worth mentioning that Alexander cites High Places as one of the models. The towers in the aforementioned films perform different functions and convey different narratives. The tree is a place full of life, where the entire population lives in symbiosis with other beings on the planet. The palace on Arrakis is a symbol of might and power. And the abandoned skyscrapers symbolize a lack of hope, a certain longing for memories, dehumanization.

The tree can be combined with the pattern Tree Place. Alexander encourages the creation of social spaces with trees. Here we can see a very clear connection with the function the tree plays in the film.

For what it's worth, from the principle of the patterns themselves (they were created to build good social relations), you won't find a pattern that speaks of brutality or disrespect for nature.

The archetypes and the architecture used to outline them become part of a narrative in which the space reflects the current state of society, as well as the memory of past events, ideologies and beliefs.

6. SUMMARY

Analyzing the relationship between film architecture and the collective unconscious allows us to understand why certain spaces in films evoke deeper emotions and resonate with viewers on a symbolic level.

Spatial and architectural patterns in films appear to be more than just scenographic elements – they are tools that shape narrative, cultural identity and collective memory, appealing to universal archetypes present in the human psyche. The repetition of these patterns in many films to portray similar emotions or relationships, indicates the possibility of creating a catalog of archetype patterns of film architecture or using, at least in part, an already existing one, such as Alexander's "Language of Patterns".

Alexander's "Language of Patterns" provides some theoretical framework for analyzing how film space can act as a vehicle for collective memory and refer to cultural archetypes. However, it seems insufficient to describe all the archetypes used by film.

It is worth investigating whether at least some of the patterns written by Alexander can be found in the architecture of the film (one). One can also focus on the search for one particular pattern in many films. Another direction of research is the reception of the archetype by users from different groups (e.g., from different countries, continents, of different ages, professing different religions).

One can also deepen the topic by analyzing the impact of new technologies (such as CGI and virtual sets) on the creation of film spaces. Can these digital constructions also be linked to archetypes, even though they often have no physical counterpart in reality?

The proposals presented here do not completely exhaust the topic of archetypes and architecture in film. It remains of great interest, especially in the context of the growing awareness of how architecture influences film audiences. Further research can not only deepen the understanding of the relationship between film space and collective memory, but also contribute to improving the quality of architecture depicted in films.

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FILMOWA ARCHITEKTURA JAKO NOŚNIK PAMIĘCI ZBIOROWEJ: MOŻLIWOŚCI WYKORZYSTANIA ARCHETYPÓW DO TWORZENIA ARCHITEKTURY NARRACYJNEJ

Streszczenie

W artykule ukazano rolę architektury filmowej w kształtowaniu pamięci zbiorowej, wykorzystując archetypy. Przedstawiono, w jaki sposób architektura może odwoływać się do archetypów kulturowych, stanowiąc nośnik przekazujący głębsze znaczenia i symbolikę. Analizowane przestrzenie filmowe pokazują, jak architektura i urbanistyka wspierają narrację, wywołując emocjonalne reakcje u widza.

W pracy odniesiono się krótko do teorii Christophera Alexandra, którego wzorce mogą zostać użyte do kreowania przestrzeni w filmach w celu wywołania wpływu na emocjonalne zaangażowanie widza, budując jednocześnie refleksję nad społeczną i kulturową rolą przestrzeni. Wskazano na potencjał wzorców jako narzędzia do projektowania przestrzeni filmowych, które odwołują się do uniwersalnych wartości i doświadczeń.

Wzorce przestrzenne w filmach to narzędzia, które kształtują narrację i pamięć zbiorową, nawiązując do uniwersalnych archetypów obecnych w ludzkiej psychice. Powtarzalność tych wzorców w wielu filmach, służąca ukazaniu podobnych emocji czy relacji, wskazuje na możliwość stworzenia katalogu wzorców archetypów architektury filmowej lub wykorzystania, przynajmniej częściowo, już istniejącego „języka wzorców" Alexandra. Ponadto w artykule podkreślono, że przestrzeń filmowa, odwołując się do archetypów, może wpływać na budowanie wspólnej tożsamości kulturowej i odtwarzanie pamięci o przeszłości w nowoczesnych narracjach wizualnych.

Słowa kluczowe: psychologia architektury, archetypy, pamięć zbiorowa, kinematografia, architektura w filmie

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COMPOSITIONAL VALUES OF THE ZAMOŚĆ FORTRESS AS SEEN FROM THE RIVER BOULEVARDS

The Zamość fortress has been an object of careful study for a long time. Academics from different fields of knowledge and of various affiliations discussed the origins of the urban distribution of the Town and its architectural substance, invariably critically observing and interpreting the archeological and architectural findings. However, the problem of interrelation between the town and, generally, waterscape has not received its full attention. The context of water has impacted different aspects of city life. Zamość is not excluded from that general tendency. The authors of the Renaissance treaties such as Scamozzi, Cataneo, Filarete, Martini, to name a few, mentioned a very important connection of built environment with the surrounding landscape, even though the ideal, radial, orthogonal forms of *urbs* they proposed were sometimes merely utopian attempts to tame the vibrant, constantly changing "organism of *civitas*". The form of the fortress, however inspired and drawn from the famous Italian treaties, if planned for actual creation, had to conform to real physiographic conditions. The town started to open to the landscape by means of different architectural elements. Jan Zamoyski, together with his architect, Bernardo Morando, two ambitious men with vision took the challenge and started building the town which, became a symbol of Renaissance ideals of universality, harmonious proportion and "sincere bow" to natural landscape. The consecutive architects of the town, over the centuries, together with the next Zamoyski family members, continued to shape the town. Over the years, the town had evolved and altered its form, confronting challenges of militarization period of XIX c., then, after demilitarization of 1866, demolish of substantial amount of its architectural substance and gradual restoration of its compositional value. Local Revitalization Programme 2017-2023 and recently introduced Municipal Revitalization Programme 2023-2030 has been carrying on this torch of spatial and social progress. The paper aims to present historical value of the spaces surrounding the Zamość fortress from the south and their key importance in forging a town brand that would be recognised worldwide. Two fragments of the Łabuńka River Boulevards were compared, under physical, urban/compositional, social criteria in order to diagnose specific needs of the terrain and its users. The analysis has practical dimension as the two boulevards and their surrounding are situated within the boundaries of a degraded area of the Town, delimited in the Municipal Revitalization Programme 2023-2030. The Promyk district,

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situated to the south – east of the Old Town is, predominantly, a single – family residential area with its main recreational space being the boulevards.

Keywords: Zamość, fortress, boulevard, brand, composition, riverscape

1. INTRODUCTION

The beauty of urban landscape is manifested by harmonious composition of its different elements. Necessary for the understanding of that beauty is a certain perspective from which the city might be perceived and experienced. General image of the space relies on a series of visual impressions gathered along a continuous pathway within the space. Linear interiors usually have various levels of dynamism while being experienced on the way. There is a direct correlation between the perception of space and the quality and a variety of urban stimula present in an interior. The mode of arrangement of elements, proportion, curves or straight lines of pathway. The Old Town of Zamość, enclosed with XIX century fortification system (as such, it was included in The UNESCO World Heritage List of Monuments in 1992 and awarded The Historical Monument status) together with their immediate natural and built context form a unique, cultural landscape which deserves the highest standard preservation and thought – over promotion. The analysis of this papers, however, narrows down to the Łabuńka river area, namely, the south and south – east of the fortress most immediate context, which is, administration wise, a part of the Promyk district.

Two terms, in relation to the analysis of a given terrain, have to be presented and explained. Priority landscape and cultural landscape. By definition:

- priority landscape is a type of space which is particularly precious for the society due to its unique natural, cultural, historical, architectural, urban, rural, visual-compositional values which has to be preserved in its original form or specific rules of conditions have to be created to preserve it;
- cultural landscape – a space historically shaped by human interference, with visible outcomes of human civilization and the presence of natural elements. Dz.U. RP, 10.06.2015, poz. 774 [Myczkowski, Marcinek, Siwek 2017].

2. HISTORICAL OVERVIEW OF THE ZAMOŚĆ FORTIFICATION SYSTEM, FORTUNATE LOCATION

2.1. Renaissance demands for landscape

Humanistic approach to architecture in the Renaissance era instilled various comparisons of buildings and their elements to the proportions and fragments of human body. Though far-fetched it may appear, it was observed that, in Zamość, there had

been tight, meaningful spatial relations between the public buildings and the elements of fortifications. A vast degree of symbolism present both in the urban layout, architectural plans and ornamentation was supposed to elevate physical form to the highest quality and resistance to time. In the Middle Ages period human dwellings were built to the inside, "carved out" from the landscape, with the strategic aim to provide safety and stability. They were dependent on the terrain and natural features but did not enter into any relations with them. Renaissance opened the estate to the view. Younger Vasari postulated having three kinds of estates at their disposal: one within the urbs, another one on the suburbia, and the third being somewhere in the countryside landscape. The Zamość fortress was a pioneering structure of the XVI century Polish estates since it followed the Italian, demanding in their exact universality, urban order and rules of those times. An observable degree of universality facilitated the understanding of space. Jan Zamoyski aimed at creating an urban space which would facilitate municipal commune to execute their duties regarding work. He wanted them to be autonomous and self – governing. Moreover, he endowed them with a plot of land to carry out their duties as craftsmen and tradesmen as well as exempted them from paying rents for the twenty – five years. The urban municipality was planned to follow the provisions of the Magdeburg laws which means that the citizens were able to hold weekly markets and take part in fairs, established at exact times of a year (three times a year). Within the establishment of the town, Stephan Bathory excluded its territory from the jurisdiction of Polish law. The city was based on asymmetrical hexagonal plan, due to differentiated terrain conditions. The town had a very clear distribution of space with the key terrain of the castle, the "weapon ground" [Zarębska] or, "a place of concentration of spiritual and intellectual life" [Kowalczyk (ed.) 1980] and the merchants' domain – with a central, representational great piazza space. The first historical data of spatial plans for Zamość reveal the presence of three main market spaces situated alongside of the northern – south compositional axis. Citta Di fortezza, residence of the founder was interconnected with the *urbs.*

2.2. Natural elements that shaped the fortress

> In place of the Skokówka castle, on the hill between the rivers Wieprzec and Kalinowica […]. I have decided to build another new castle of stone and brick on the adjacent solid ground, opposite the old castle, around the pond causeway, and to build and equip a temple there for the glory of God [*Przywilej lokacyjny Zamościa*].

Two dominant functions were stated in the location act, namely, Zamość as a fortified Town, a shelter for the inhabitants of the local villages, settlements, estates circumscribed with a ground embankment and a moat. The second main function, which was strongly articulated in the act related to a strong, reasonable focus on commercial prosperity of the Town – an epitome of Jan Zamoyski's innovative, but at the same time selfishly driven ambition to put a stamp on his achievements as a prosperous

magnat and successful chancellor, whom he was at the time of Zamość plans for creation. Zamość was also meant to be a dynamically developing Town of craftsmanship and trade. The decision of such a location resulted from the presence of trade router. The founder, Jan Zamoyski, finally, encouraged people of various nationalities to come to the newly established urbs and settle there for the mutual purpose of development and augmentation of wealth. Therefore, he dealt with the King Stefan Bathory to introduce fixed time of fairs and markets as well as guarantee privileges with the aim of facilitating the newcomers a successful start in the Town. That clever entrepreneurship of Jan Zamoyski driven him to force ius empori in his Town in order to enhance the chances of settlement of those whose diligence in generating steady and solid profit was of highest levels. The smart investment in merchants, craftsmen, tradesmen, practical people of real work and creativity was Zamoyski's true, undoubted success and sheer ambition. A Noble man but, stepping out of sentimental, courseted canons of old nobility, educated outside the Crown (Padova, Paris), open, foreseeing, independent. He even wanted to give this independence to the settlers, regarding judicial matters. The first reports on the number of inhabitants, from 1590', showed 50% of people engaged in craftsmanship out of the total number settlers – 1375 [Feduszka 2021]

The fortress was built on a relatively even terrain adjacent to the river and the great water baisin, situated from the south – west. However, the north side differed, topographically, from the south part of the terrain, therefore, the fortification outline diverts from symmetrical, regular order in order to fit into the natural landscape. The form of the fortress is not idealistically rigorous as one might observe in ubiquitous Renaissance Italian treaties of Vasari, Cataneo, Martini, Scamozzi. In the letters of Jan Zamoyski to the lead architect Bernardo Morando, especially the one from 3rd of October [*Archiwum Jana Zamoyskiego* 1904: 367] where Jan Zamoyski asks Mernardo Morando to prepare for him the plans of Zamość. Some alterations to the natural landscape, such as dikes (the one leading to Żdanów, and the other to Poskie – "pod Zdanowem"; "ku Płoskiemu" [Kowalczyk (ed.) 1980] had to be introduced to control the natural water flow and create necessary communication knots. The dike "ku Płoskiemu" was built in 1582-1585, as a consequence, a "Great Lagoon" was formed to safeguard future fortress from the south [Noga, Szczygieł, Żygawski 2024]. Hydrographic conditions of the elevation constantly had to be taken care of, namely, drainage and restoration works introduced. Not until XIX c., after the "Great Lagoon" waters had lowered and the "Little Lagoon" had turned into marshy meadow, was the new channeling for the Łabuńka river created, which surrounded the fortress from the south. Originally, according to the plans prepared by Bernardo Morando, there were built two little bastions in the south – west part of the fortress, at the turn of XVI and XVII but due to marshy terrain of meadows, at the end of XVII, Jan Michał Link modernized it into one big bastion after introducing pole foundations to stabilize the ground underneath it. [Banasiewicz-Szykuła (ed.) 2017]. The end of XIX and the beginning of XX c. brought some changes in the channel of the Topornica river was moved to the west.

3. MUNICIPAL REVITALIZATION PROGRAMME 2023-2030. AIMS FOR BOULEVARD LANDSCAPE ADVANCEMENT

It has been observed that the central spaces of towns and cities have been undergoing some sort of crisis, therefore, revitalization practices are predominantly targeted at the centres of cities, especially those ones which has long history and represent culturally unique, and important urban developments [Jarczewski, Kułaczkowska (ed.) 2019].

> It is very important to build the institutional capacity of the municipality to perform revitalization actions based on expert knowledge of officials and local leaders in cooperation with external professionals / Ważne jest budowanie zdolności instytucjonalnej gminy do prowadzenia działań rewitalizacyjnych rozumiane jako bazowanie na wiedzy eksperckiej urzędników i lokalnych liderów przy wsparciu zewnętrznych ekspertów [Jarczewski, Kułaczkowska (ed.) 2019].

Aims:

- the spaces of boulevards, due to their location near the fortification systems, could play a crucial role in the promotion of Zamość urban landscape unique values;
- creation of functionally differentiated zones alongside the boulevards could attract more groups of people to visit that part of Zamość;
- changes in paving structure of sidewalks and bicycle routes could provide safe, more universal access to the boulevard;
- creation of shadowed spots on the way, distanced within a walking pace from each other.

3.1. Main characteristics of the Programme

The revitalization process of Zamość has been consequently continued since the beginnings of the XXI c. Though the formulated postulates for the introduction of changes were officially included within the Local Revitalization Programme 2017-2023. It encompasses various spheres of intervention: spatial, social, economic. The municipal program is equipped with the schematic map showing specific locations for spatial interventions. These are the projects for completion within an estimated time span. Within the content of The Municipal Programme there are the following points of interest: thorough diagnosis of the types of problems observed in a delimited area of revitalization, the scale and main characteristics of the revitalization needs, the aerial scopes of revitalization districts within the Town. In the mission of Zamość formulated for the Strategy for the development of Zamość for 2020-2030 there is information on the general directions of the arrangement of public spaces around the Old Town.

Within the content of The Municipal Programme there are the following points of interest:

- methodology of establishing degraded and revitalisation areas;
- thorough diagnosis of the types of problems observed in a delimited area of revitalization;
- the scale and main characteristics of the revitalization needs;
- the aerial scopes of revitalization terrains/districts within the Town;
- identification of the potential of the whole Zamość and delimited revitalization terrain;
- strategy for the development of Zamość for 2020-2030.

The Municipal Revitalization Programme 2023-2030 shares common goals with the Spatial Development Conditions and Directions for Zamość [Uchwała nr XXXVIII/565/2021 Rady Miasta Zamość z dnia 29 listopada 2021 r.] in relation to the preservation and further development of cultural heritage of the Renaissance structure of the Town.

> Identification and strengthening of the qualities which deliver cultural identity of the town – preserved monuments being examples of world heritage. The study also postulates clarification and rehabilitation of the urban structures which follow Renaissance building canons described in the location act. That aim is to be achieved by restructuring and ordering of urban disposition, shaping a characteristic image of the town and stressing the composition of the Zamość fortress landscape with special care of public and prestige spaces of the central part of the Town, namely, compositional axes, recreational and residential district areas [Gminny Program Rewitalizacji Miasta Zamość na lata 2023-2030].

The study lists three main cultural zones into which Zamość is divided. The revitalization Programme covers some parts of the two out of three zones. Within those three zones there are several structural units, including: The Old Town area and the post – fortification area. Both terrains are the candidates to fall under the protection of the cultural park requirements.

Worth noticing is the fact that Zamość has two types of revitalization programmes which for that region of Poland is very beneficial, especially for the lubelskie region, although the greatest number of cities with revitalization programmes are situated in the southern and south – western parts of Poland [Jarczewski, Kułaczkowska (ed.) 2019].

3.2. Guidelines for compositional, aesthetical characteristics of the overall surroundings of the fortress as stated in the Programme

The Programme describes the existing situation of the green areas located to the south of the fortress as well as the residential district of Promyk with Schwabisch

Hall Boulevard. The arrangement of the boulevard with recreational facilities is insufficient. The description of the existing situation, as provided in the Programme, is as follows:

> In the southern part of the revitalized area, The Łabuńka river floats through the area. It is the main river of Zamość. On both sides of the river, there are pavements where, within the edges of Lipska St. and H. Sienkiewicza St. Schwabisch Hall Boulevard (Schwabisch Hall is one of the Twin Cities of Zamość) was created. Some of the squared area of the Promyk district is covered with garden allotments as well as green areas which are connected to the fortress green areas [Gminny Program Rewitalizacji Miasta Zamość na lata 2023-2030].

One of the characteristics of that type of document is its substantially general statements. In order to formulate specific directions for the project or diagnose the problems occurring in the area, research studies related to specific terrain have to be executed. Therefore, research studies that tackle very concrete problems of public spaces providing carefully analysed and carried out research feedback could serve as a complementary amount of data to the Programme, the tool and specific guidelines for future public investments. The second strategic aim refers to the area of boosting the Town potential and the amount of resources. The Programme states that one of the examples of the potential is cultural heritage of the Old Town. However, the location of events provided in the Programme relates to the interior parts of the fortress, such as The Great Market Square or green spaces, next to the Town Park. Cultural institutions have their headquarters within the fortress walls. Moreover, there is a group of events which take place around the areas of the boulevard – historical reconstruction, dating back to XVII c., although recent years have shown that coordination and overall organisation of such events requires greater financial investment and more diligent, mutual participation of both non – governmental communities and local authorities. The map materials presented in the Programme, show the main recreational areas of the revitalized terrain where the Schwabisch Hall Boulevard has got the biggest squared area.

Zamość – a sustainable town with good – quality, modern infrastructure

Operational goal: 2.2. Increased protection and respectful maintenance of natural environment as well as reasonable usage of natural resources available within the area of Zamość. Indicator of effectiveness relates only to the amount of removed sevage tanks, coal – based heating systems or renewable resources facilities installed on public buildings.

2.5. Further thought – over organisation of public spaces in Zamość according to the demands of urban/spatial order and good – quality, optimally accessible infrastructure facilities. The Programme The advancement and implementation of the

Programme is to be monitored throughout the given time 2023-2030. Proposed indicator of implementation of the programme to the aforementioned operational goal seems inadequate as the basis for evaluation is only metric value, not the quality value: "Powierzchnia wyremontowanych/odnowionych przestrzeni publicznych na obszarze rewitalizacji (ha) – squared meters of renewed/modernized public spaces within the area of revitalization" [Gminny Program Rewitalizacji Miasta Zamość na lata 2023-2030]. The quality of space factor is omitted while such evaluation, in aspects of functionality and aesthetics is more important than quantifiable measures.

Strategic aim 3: Strengthening of an attractive, transregional image of Zamość; sustaining and development of tourist attractiveness of the Town.

A suitable method of preservation of the fortification system of Zamość might be the creation of a cultural park. The aims of the Municipal Revitalization Programme are congruent with the directions included in the Study.

One of the projects enlisted on the map covers the revitalization of green areas in the Promyk residential district – creation of a multifunctional pitch for team sports such as volleyball, football, basketball.

4. COMPOSITIONAL VALUES OF THE ZAMOŚĆ FORTRESS AS SEEN FROM THE RIVER BOULEVARDS – CASE STUDY

4.1. Theoretical description of the method and its levels of credibility

The comparative method is used to evaluate the compositional quality of space, landscape basing on the analysis of the following criteria and physical, urban, natural features, presented in the chart:

- degree of landscape diversity,
- degree of landscape degredation,
- saturation with infrastructure/sufficient presence of infrastructure,
- level of harmony/harmonious juxtaposition of all the landscape elements,
- individual impressions/feelings about the space.

It relies on data accumulated in particular spots on a planned causeway. For the purpose of the study, the area is partisioned into sectors, either by means of characteristic, linear elements/ edge elements situated in the analysed space (e. g. road, street, etc.) or theoretically marked. In the course of the experiment, each criteria is evaluated with the use of the same spectrum of points: 0-5.

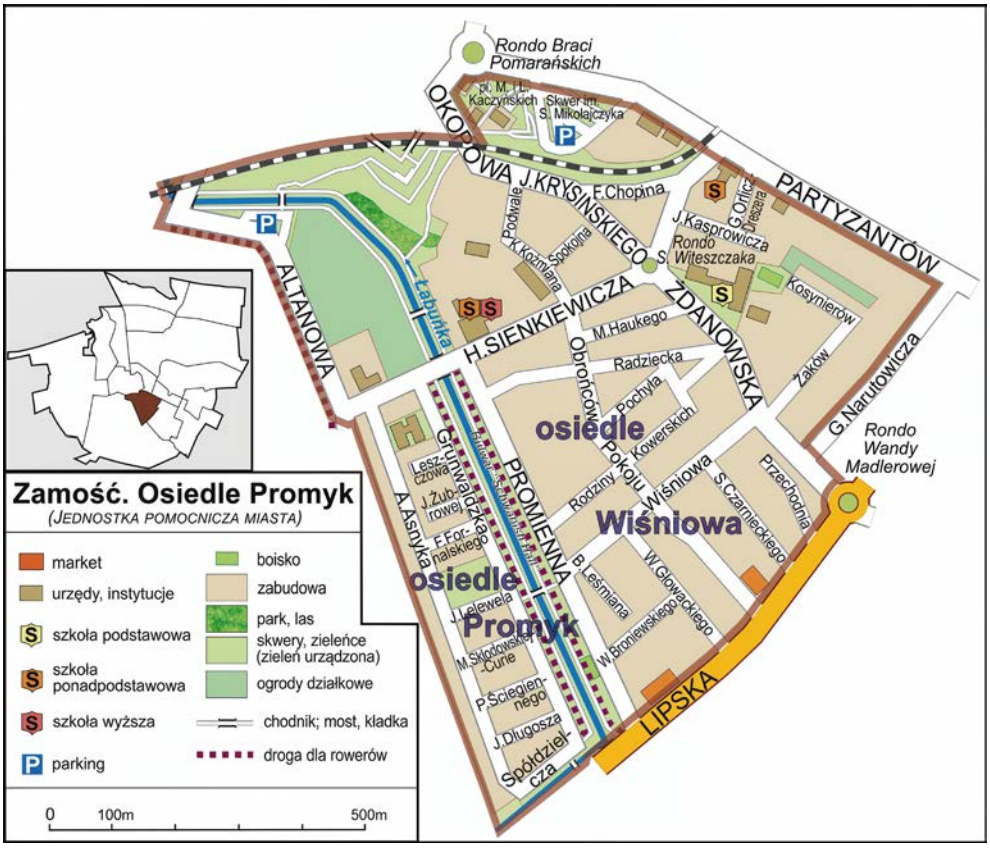

Fig. 1. Delimitation of the Promyk district with the outline of two analysed boulevards divided by H. Sienkiewicza St. [Wikipedia]

4.2. Case study

The two Boulevards are situated in the Promyk residential district with 2107 people living within its boundaries [Gminny Program Rewitalizacji Miasta Zamość na lata 2023-2030].

The boundary which divides two spaces, H. Sienkiewicza St., separates two functionally different parts. The disposition of the town skyline as seen from the river boulevard in the south results from carefully planned urban interior within the fortress walls. Hierarchical and yet democratic division of space with the strategic importance placed on vertical and horizontal dominants proved that the outline/arrangement of Zamość met the standards of the highest artistic quality. The function of the buildings is marked by their form. Tenement houses have two to four levels, including attic interiors, whereas public buildings, such as the town hall, churches, church towers have the proportions of vertical dominants. Picturesqueness of the

urban skyscape can be observed from various parts of the boulevards. The sidewalk pathway within the boulevards continues on both sides of the Łabuńka river. The terrain was divided into segments where the boundaries of each segment were linear, urban elements of the analysed terrain. The following schematic map shows the distribution of segments together with their lengths. The border points were given unique symbols. The segmented pathways were ranked according to the enlisted criteria. The analysis of separated points is a subject of the next paper, but the introduction of the two spaces of the boulevards together with the important historical and spatial context of the fortress is a subject of this paper.

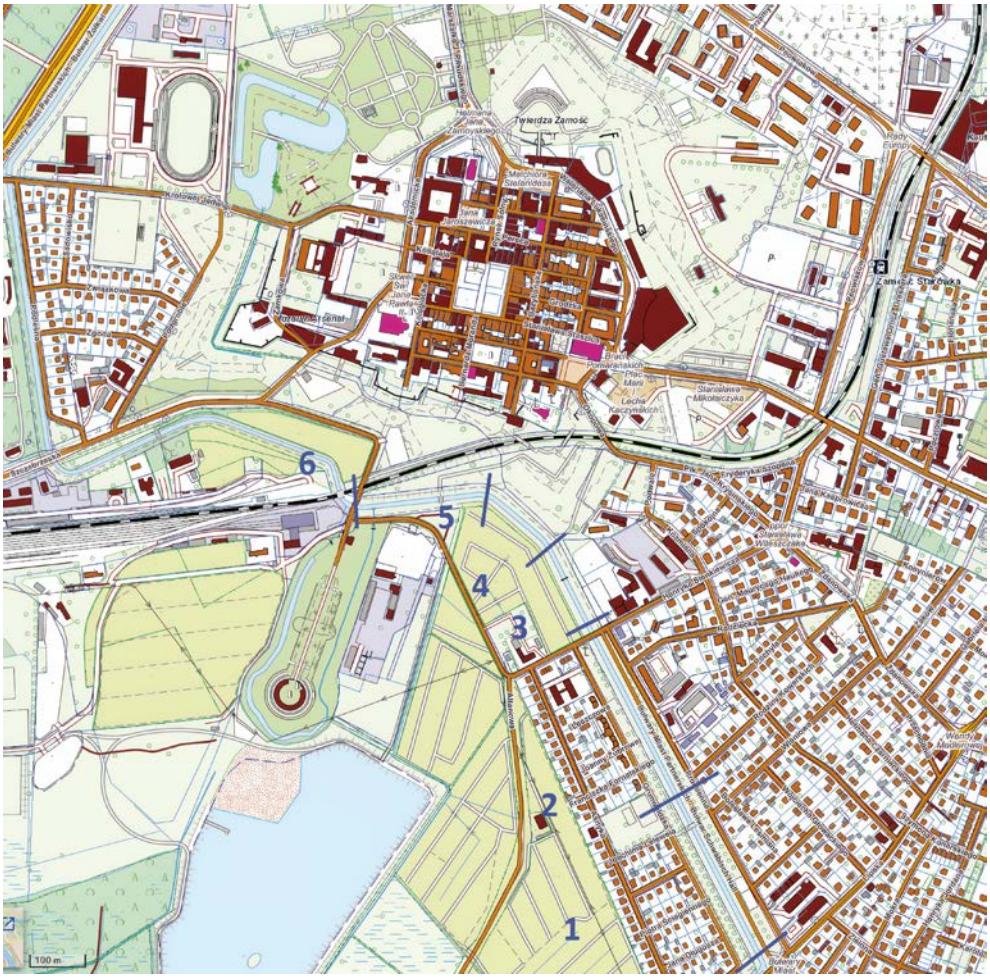

Fig. 2. Spatial representation of the two analysed boulevards [Geoportal]

	Boulevard no 1 – the immediate green area situated to the south of the fortress	Boulevard no 2 – Schwabisch Hall Boulevard
Physical features		
Approximate Length of each boulevard	550 m	670 m
Width (between two pavements)	33 m	33 m
Topography	Flat terrain	Flat terrain
Height of development	Varied, historical substance, public and residential buildings	Low – rise, max. Two – storey multiresidential buildings, single – family one to two levels – groundfloor + residential attic space
Urban features		
Functions (urban development plan)	Terrains of arranged low – rise greenery with the exposed fortification elements and; terrains of inland water channels; green allotment areas; a small fragment of the area – residential and services; full, A – marked zone, cultural heritage protection; B – marked zone; K – marked zone; parking spaces	Terrains of natural low – rise greenery with sports services; service, educational
Types of landmarks – external, visual references [K. Lynch]	Iconic public buildings – Town Hall tower, the towers of the churches	
Types of nodes [K. Lynch]	linear	linear
Types of development	Fortification elements, allotment furniture and housing; multi – family residential buildings	Single – family housing; low – rise, multi – residential buildings
Urban openings	Panoramic, architectural, landscape, wide	Architectural, medium narrow
Natural features		
Shape of the boulevard	curved	Straight – lined
Greenery	Low – rise greenery; single examples of preserved trees; garden greenery of allotment areas	Low – rise greenery (grass), rows of trees; densely grown rows of trees from Lipska St. to the first bridge over the Łabuńka river
Technical features		
Technical quality of pavements	Poor technical quality	Poor technical quality
Elements of landscaping, their quality		
Accessibility	Uneven surfaces of pavements	Uneven surfaces of pavements

5. CONCLUSION

The center of the city attracts the greatest number of cultural, recreational events while, at the same time, generating greatest measurable profits. However, the image of the city, as experienced and promoted only from within streets and piazzas, lacks showing its full potential. The boulevard spaces, located to the south of the fortress have the potential for being representative, ecological zones of the town which offer the most up-to-date water management and ecological solutions, best-quality pieces of street furniture design, broader, cultural offer. The counterbalance for the overload of the Great Market Square, as the central recreational and cultural space of Zamość, should be targeted at the green spaces around the fortress in order to promote the silhouette of the town. Zamość is a town of unique urban form and innovative ideas of its founder – Jan Zamoyski. The approach to strengthening the town residents' values and promoting learning on every stage of life were virtues that Jan Zamoyski propagated. The skyscape of Zamość, as seen from the south side of the boulevard, symbolically, reflects the founder's aspirations.

Fig. 3. Boulevard no 1, view to the south side of the Zamość fortress [author's photo]

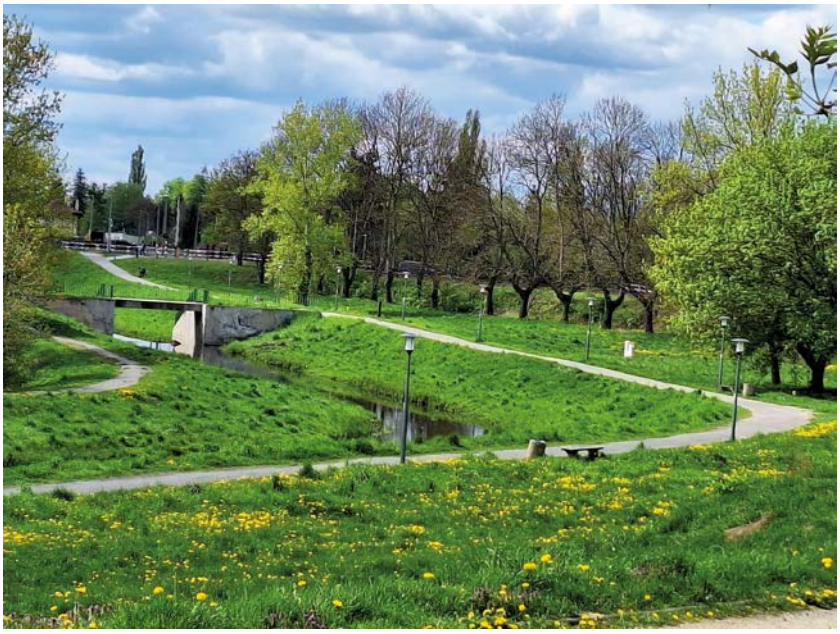

Fig. 4. Boulevard no 1, view to the green areas of the Zamość fortress [author's photo]

Fig. 5. Boulevard no 2, Schwabisch Hall Boulevard view towards the Zamość fortress [author's photo]

Fig. 6-7. Boulevard no 2, Schwabisch Hall Boulevard view of the multiresidential buildings, [author's photo]

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Przywilej lokacyjny Zamościa.

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WALORY KOMPOZYCYJNE TWIERDZY ZAMOŚĆ Z PERSPEKTYWY PRZESTRZENI PUBLICZNYCH BULWARÓW NADRZECZNYCH

Streszczenie

Twierdza Zamość była tematem wielu opracowań naukowych, aczkolwiek stosunkowo mało uwagi poświęcano do tej pory jej relacjom przestrzennym z terenami nadrzecznymi Łabuńki, a ten bardzo ważny kontekst przestrzenny wpływał zasadniczo na wiele aspektów życia miejskiego Zamościa. Autorzy renesansowych traktatów podkreślali nierozerwalny związek miasta z kontekstem naturalnym, mimo że owe radialne czy ortogonalne, często utopijne, formy miejskie – geometrycznie powściągliwe *urbs* – nie potrafiły wziąć w karby jaskrawo żywego „organizmu *civitas*". Zamość, choć inspirowany owymi traktatami, powstał, ponieważ jego wizjonerzy – fundator Jan Zamoyski oraz architekt Bernardo Morando – zdecydowali się wpisać formę w istniejący teren, umiejętnie korzystając z renesansowych kanonów tamtych czasów, ale i inteligentnie wykorzystując zasoby ówczesnego krajobrazu dla stworzenia miasta, idealnego w swej uniwersalności. Przez lata kolejni przedstawiciele rodu Zamoyskich oraz budowniczowie kontynuowali dzieło. Zamość ewoluował, aby w XIX w. stać się obszarem wojskowych aż do roku 1866, kiedy został zdemilitaryzowany i – w dużej mierze – zniszczony. Kolejne lata XX wieku przynosiły kolejne etapy odbudowywania i zabezpieczania zabytkowej substancji miasta. Ostatnie lata przyniosły bardzo ważne dokumenty dotyczące rewitalizacji miasta: Lokalny Program Rewitalizacji na lata 2017-2023 oraz Gminny Program Rewitalizacji Zamościa na lata 2023-2030. Artykuł ma na celu wskazanie walorów kompozycyjnych twierdzy z perspektywy terenów nadrzecznych Łabuńki, biorąc pod uwagę również zapisy Gminnego Programu Rewitalizacji Zamościa na lata 2023-2030. Niniejszy tekst jest zaledwie początkiem dyskusji na temat aspektów budowania marki Zamościa, prezentuje dane wyjściowe do dyskusji, zakładając tezę o budowaniu międzynarodowej marki Zamościa na podstawie przestrzeni nadrzecznych jako strategicznie ważnych dla wszechstronnego rozwoju miasta.

Słowa kluczowe: twierdza Zamość, bulwar, marka, kompozycja, rewitalizacja, tereny nadrzeczne

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ANALYSIS OF THE STATE OF PRESERVATION WHITE BARRACKS OF THE OWCZA GÓRA FORTRESS IN KLODZKO

This article discusses the state of preservation of one of the military facilities of the Klodzko Fortress. Fort Owcza Góra, was built in the 18th century on the opposite shore of the Nysa Klodzka River. The White Barracks, which are part of Owcza Góra Fort, were built at the turn of the 18th and 19th centuries. Over the years they changed their function and use. In the second half of the 20th century, the facility was abandoned and was subject to a process of degradation over the next few decades. In 2018, the barracks underwent a detailed inventory and technical condition assessment. The documentation allowed a precise estimation of the scale of damage and the location of the damage, making it possible to plan appropriate conservation and repair measures. In the next stage, a project was developed to revalue the White Barracks for service purposes, while preserving the historic form and character of the building. The project was carried out by the ARCHI-S design studio. The investment was completed and the building was put into use in 2023.

Keywords: fortress, fort, defensive structure, military heritage, state of preservation, technical assessment, degradation, research, change of use, revitalisation

1. INTRODUCTION – HISTORY

Klodzko played an important role in military activities due to its strategic location. It often became an arena for military action, which influenced the intensive development of its defence infrastructure. Throughout the centuries, Klodzko was ruled by several countries, including the Czech Republic, Prussia, Austria and Poland. After the end of World War II, the city was finally incorporated into the Polish borders.

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During its history, the fortification was repeatedly modernised and adapted to meet changing military needs and developments in warfare technology. Modernisation work most often involved adapting structures to new forms of weaponry and adjusting them to current defence strategies.

1.1. Wooden castle / 10th-12th century

The Klodzko Fortress was first mentioned in Kosmas's Chronicle of Bohemia in 981 [Podruczny 2023]. It was described as a wooden defence structure, surrounded by stone and earth ramparts with a wooden palisade. However, given the town's location, along the 'amber route', and the fact that Roman coins were found during archaeological work, it can be assumed that the beginnings of settlement in the area date back to an earlier period. Due to its location, the castle was the cause of numerous disputes between the Polish and Czech princes [Bednarek 2013]. As a result of armed conflicts, the castle was destroyed in 1114. It was rebuilt by Bohemian Duke Sobieslaus, and in an agreement with Boleslaus the Wrymouth in 1137, the area remained within the borders of the Bohemian state [Podruczny 2023].

Fig. 1. The oldest preserved view of Klodzko, Matthias Gerung
[A collection of Universitätsbibliothek Würzburg]

1.2. Walled castle / 13th-16th century

A chronicle dating from 1300 reveals that a walled castle was built on the hill at the end of the 13th century [Bednarek 2013]. In the following centuries the castle was the seat of royal officials, burgraves and castellans.

Fig. 2. Klodzko from 1532
[*Monographien deutscher Städte* 1928]

In 1557 the architect Lorenz Krischke designed the Lower Castle, surrounded by ramparts. By 1620 it had been extended to form the Upper Castle, Lower Castle, ramparts and bastions.

1.3. Fortress defence / 17th-19th century

In the years 1620-1622, due to the threat of siege by the Austrians, fortification work began, building the Small and Large Ramparts and converting the Upper Castle into military barracks, which marked the beginning of modern fortification [Kielar 2007: 97-104]. In 1622, during the Thirty Years' War, the castle was burnt down. Walenty Saebisch the Younger prepared an inventory of the losses, which initiated intensive expansion. After 1627, the fortifications were modernised due to the

Swedish threat, and by 1741 the bastions Bell Tower and New Ramparts with their curtains and the curtains of Tumska with the Eagle half-bastion had been built. The Prussians, who took over the fortress in 1742, played an important role in its development. General Gerhard Cornelius de Wallrave drew up a project to extend the ramparts and ticker fortifications.

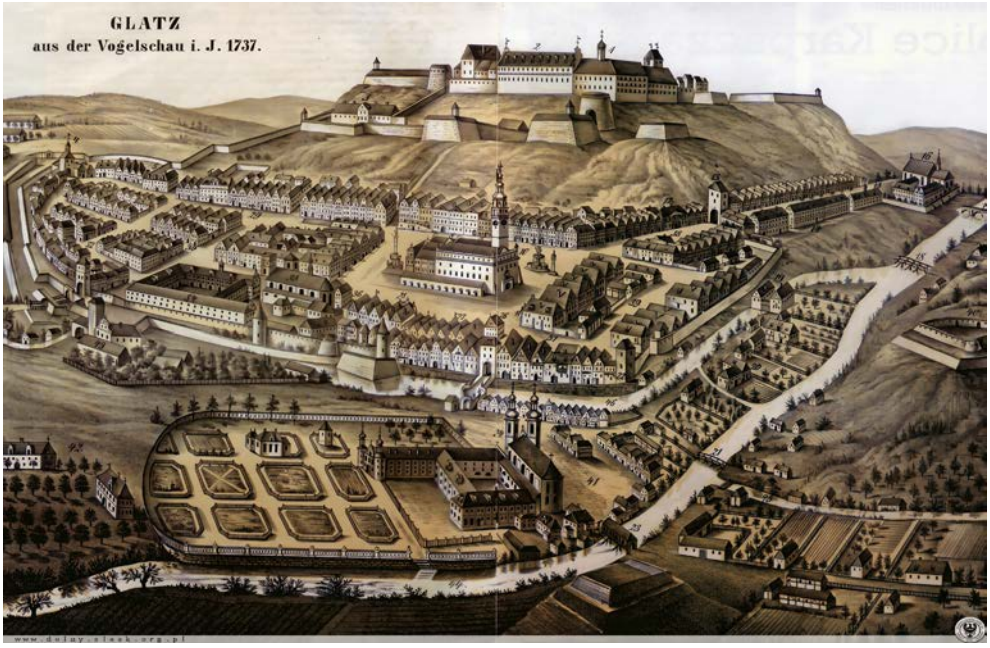

Fig. 3. View of the castle and bailey from 1737 [kresy.org 2023]

In 1743, construction began on the Owcza Góra auxiliary fort, located on the other side of the Nysa Kłodzka River. After Wallrave was ousted, the work was continued by Christian Friedrich von Wrede, with modifications. Fort Owcza Góra was connected to the Main Fortress by a rampart and deep passages.

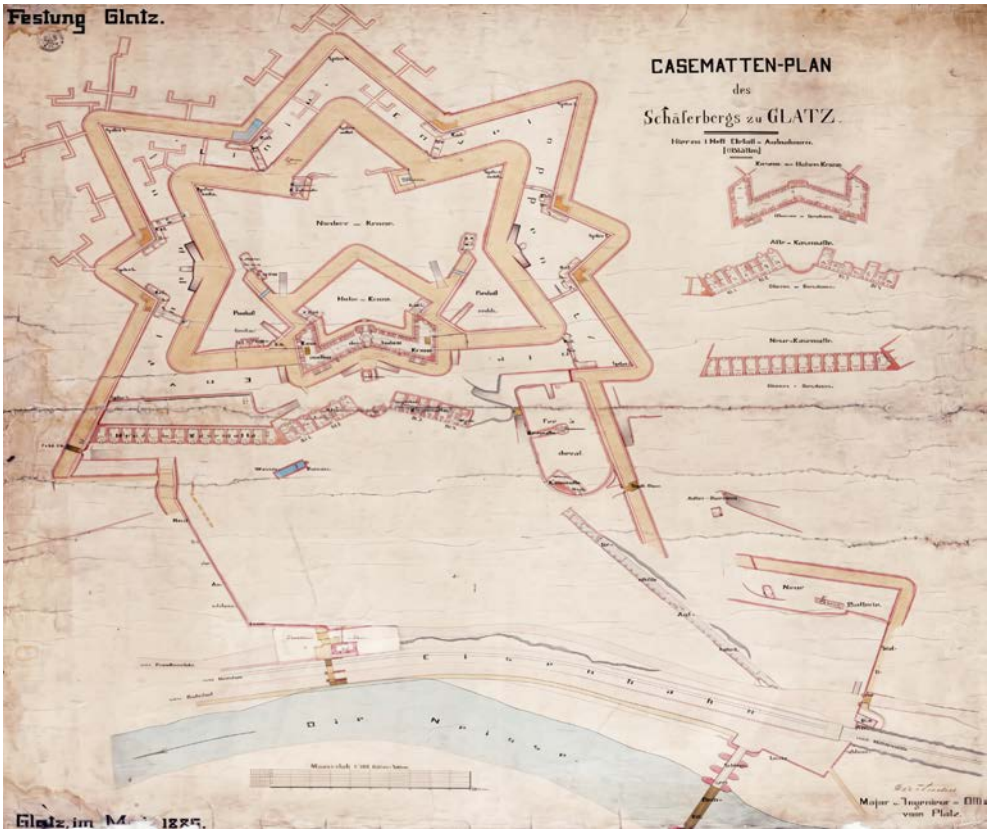

Fig. 4. Original plan of the Owcza Góra Fort [Berlin Archives]

During the Second Silesian War of 1760, the fortress came under Austrian rule, but was returned to Prussia in 1763. Under the direction of Colonel Ludwig von Regeler, a reconstruction was carried out that gave the fortress its present-day form. The Gothic castle was replaced by the polygonal Middle-Donjon, the View and High bastions were built and Fort Owcza Góra was upgraded with the addition of barracks, moats and lunettes. The Prussian-French War of 1806-1807 highlighted the importance of the fortress, which, together with the Fortress of Silver Mountain, remained unconquered. At that time, a system of mine pavements was developed and a fortified camp was established. The French only succeeded in capturing the camp, but the Fortress was never taken. The last modernisations were carried out between 1808 and 1811, building a ring of ramparts around the fort. In 1874, a ramp with poterns was built to heavy equipment. Three years later, by cabinet order, the Fortress lost its status. By gradually converting the premises into warehouses and a prison, the Fortress changed its function to economic use [Bednarek 2013].

1.4. Prison and factory / 20th century

The Klodzko fortification system was not modernised in the 20th century, but construction activity within the fortifications was not completely halted. A particular intensification of activities took place within the Owcza Góra Fort, where the casemates served as barracks facilities. Therefore, regular repair and maintenance work was carried out, the existing infrastructure was modernised and new utility buildings were constructed to meet the needs of the functioning garrison [Podruczny 2023].

Fig. 5. Panorama of Klodzko from 1930 [polska.org 2014]

The fortress held prisoners of war, deserters from the German army and those suspected of acting against the Reich from 1940 to 1943. There was a heavy prison for political prisoners, a place of execution and a labour camp. Russians, French, Italians, Belgians, Czechs, Finns and English were imprisoned here. At the end of the Second World War, between 1944 and 1945, the AEG factories evacuated from Lodz were set up within the fortress, producing parts for V-1 missiles and electrical apparatus for submarines and aviation.

In 1957, the Klodzko City Council took over the Fortress from the army, planning to use it for economic purposes. It was decided to locate a prefabricated reinforced concrete plant and a cheap wine factory.

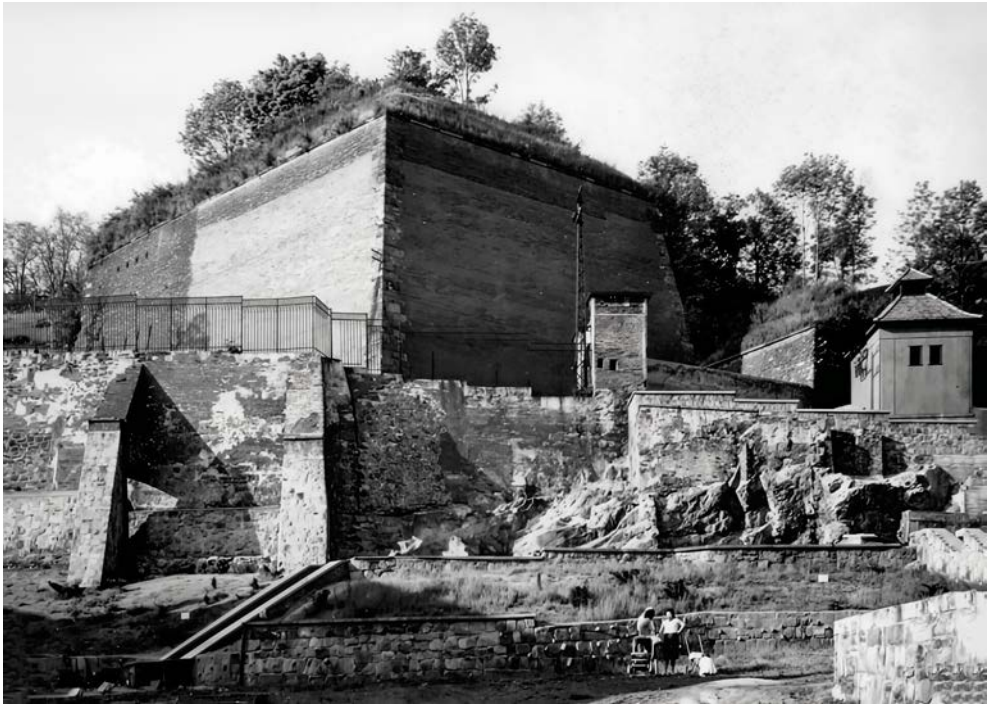

Fig. 6. Photograph from 1960-1970 [Bednarek 2013]

For a short time, the barracks of Fort Owcza Góra were used as warehouses by the horticultural cooperative [Kielar 2007: 97-104].

1.5. Present day / Second half of the 20th century – 21st century

In 1960 the Klodzko Fortress was officially recognised as a monument and partially opened to tourists. However, the industrial production going on there limited the tour to a small part of the southern part of the fortress. In the following years, the condition of both the Main Fortress and the Owcza Góra Fortress deteriorated significantly due to neglect and lack of conservation activities. Unused parts of the fortress became overgrown with wild vegetation, and the central part of the Main Fortress was used by the 'Rosvin Wine Cellars', adapting the building without regard to conservation requirements.

In 2000, a concept for a Fortress Cultural Park, integrating the protection of the monument with its development, was presented by academics from the Warsaw University of Technology. Very soon afterwards, the industrial plant operating in the Main Fortress declared bankruptcy, which created an opportunity to take over its premises. In addition, the Nature Academy association organised reconstruction activities, including work on the historic drawbridge. In the following years,

important steps were taken to protect the fortress, including the inclusion of Fort Owcza Góra in the register of historical monuments and an update of the Main Fortress entry. The Klodzko Branch of the Society of Friends of Fortifications was established, which supported efforts to take over the post-industrial parts of the fortress. In 2005, the Town Council passed a resolution establishing a Fortress Cultural Park, defining its boundaries and method of protection. The resolution was amended later that year, being implemented in 2006. Activities included the conservation and restoration of the monument, the establishment of a Consultative and Scientific Council and the development of a protection plan. Revitalisation of the Klodzko Fortress and Fort Owcza Góra continues to this day, restoring their historical significance and attractiveness [Kielar 2007: 97-104].

Currently, the fortress is open for tourism and museum purposes. Renovation work is still underway to restore the fortress to its former form and splendour, thus contributing to the development of tourism in the Klodzko area.

Fig. 7. View of the Main Fortress (A); view of Fort Owcza Góra (B)
[Archives of the Department of Conservation of Monuments]

2. OWCZA GÓRA FORT

Fort Owcza Góra was built between 1745 and 1750, designed by Major General Gerhard Cornelius Walrave, head of the Prussian army's engineer corps, while the work was led by Lieutenant Colonel von Wrede. It has been rebuilt and extended several times over the centuries.

2.1. Location

The defensive complex of Twierdza Klodzko is located in south-western Poland, in the Lower Silesian province, in the town of Klodzko. Fort Owcza Góra is situated on the opposite shore of the Nysa Klodzka River, distant in a straight line from the Main Fortress by approximately 600 m. It is situated on a hill above the town buildings.

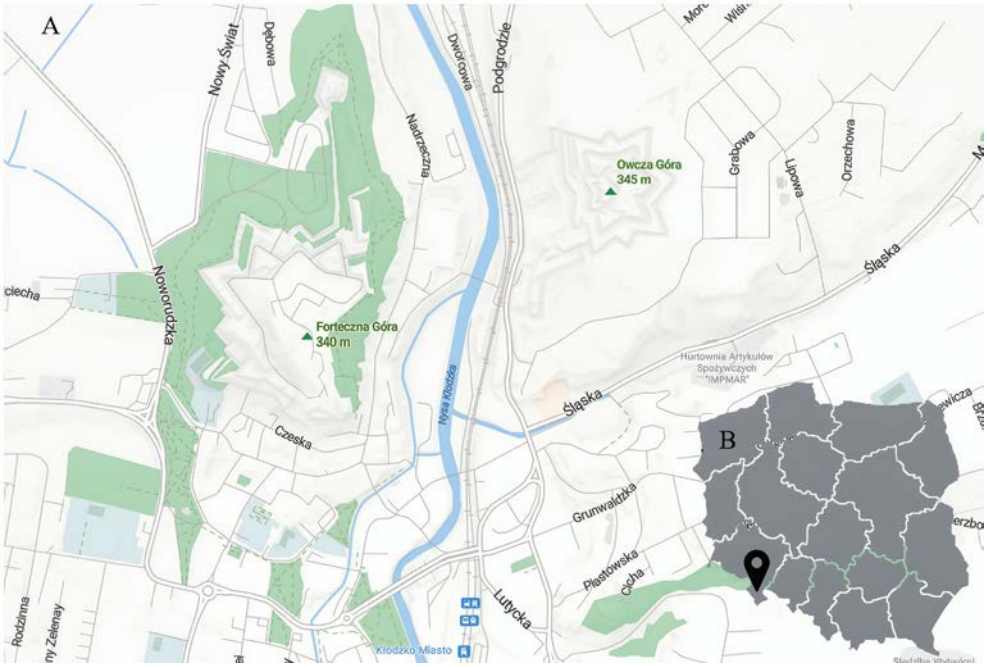

Fig. 8. Location of the fortification: on a map of Klodzko (A); on a national scale (B)

2.2. Elements of the Fortification Owcza Góra

The focal point of Sheep Mountain Fort is the High Crown (1), a small defensive work that includes a residential and defensive casemate and an earthen rampart. The High Crown is surrounded on three sides by the Low Crown (2), which has a tick-bastion shape. It consists of a bastion and four corners (Right Redoubt: 5, Left Redoubt: 27), equipped with artillery positions and casemated traverses. The entire fortification is surrounded by a dry moat (3), in front of which an enwelp (4) extends. In front of it is another moat that encircles the entire defensive complex. From this moat there are counter-mine corridors, connecting it with rifle pens (28, 30), allowing defensive fire. To the north and south-east are the remnants of the Goszycka Moat (29) and the Wojciechowska Moat (33). To the east of the High Crown are located the barracks (Red Barracks: 6, White Barracks: 22), and to the south of these is the defensive Horseshoe (8). Still further south is a rampart with two gates, behind which is located a defensive structure known as the New Battery (13). The furthest and surviving defensive feature is the Theresian Bastion (21) [Podruczny 2023].

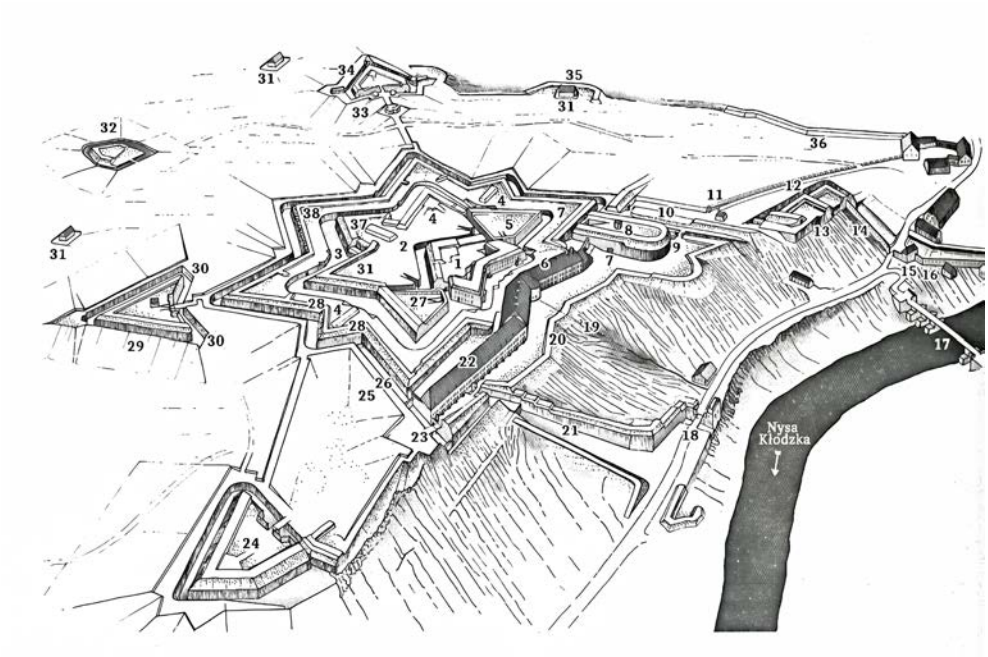

Fig. 9. Fort Owcza Góra in the early 19th century [Podruczny 2023]

2.3. Barracks

The most well preserved elements of Fort Owcza Góra, surviving to the present day, are the barracks, which consist of two separate parts. These structures are the Red Barracks and the White Barracks, which owe their names to the original colour of the facade. They were built at different times. The Red Barracks were built between 1744 and 1750, while the White Barracks were erected in 1800.

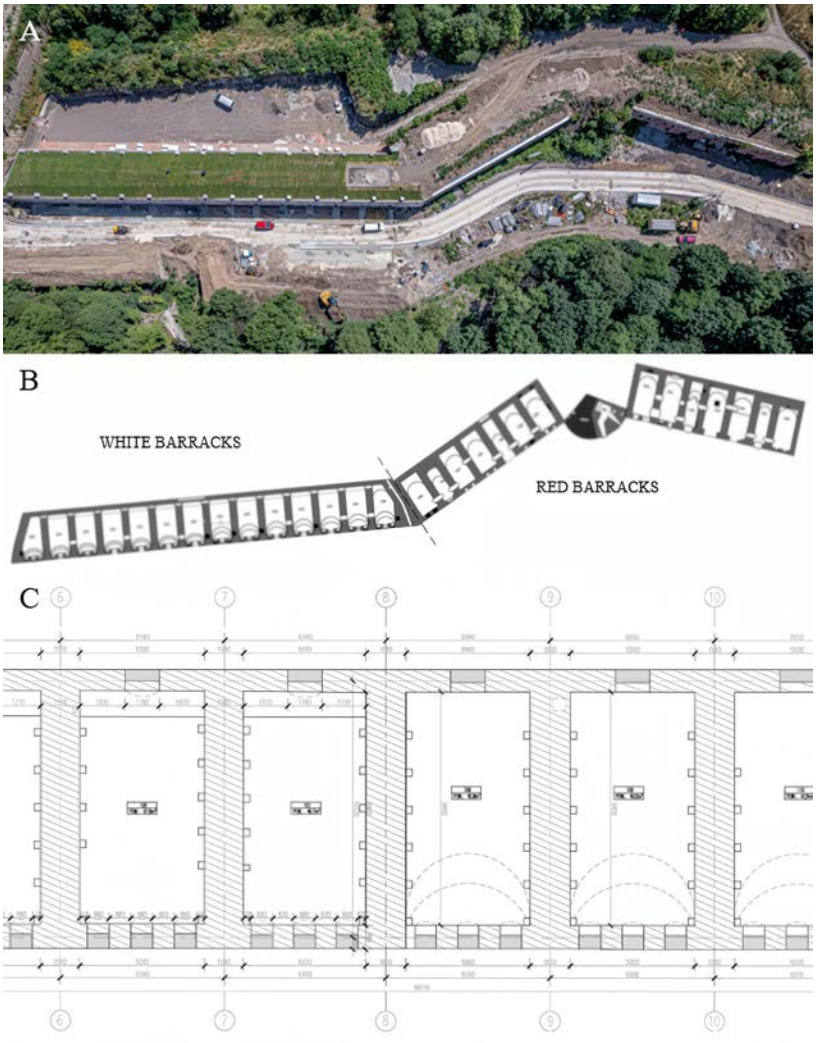

Fig. 10. Overhead view of the Barracks (A); Plan of the Barracks (B); Fragment of the plan of the White Barracks (C) [Archives of the Department of Conservation of Monuments]

Over the centuries, the Barracks has changed its function. The initial accommodation for soldiers was transformed into military depots and warehouses, a prison, a back office and headquarters for wholesalers, and eventually the building became disused. Of the original architectural elements of the White Barracks, the form of the building, consisting of 14 rooms – casemates, the rhythmic arrangement of the window axes, the stone frames of the window and door openings and the crowning cornice have been preserved. The site was entered in the register of monuments on the basis of decision No. 143/A/02/1-17 of 2 January 2003.

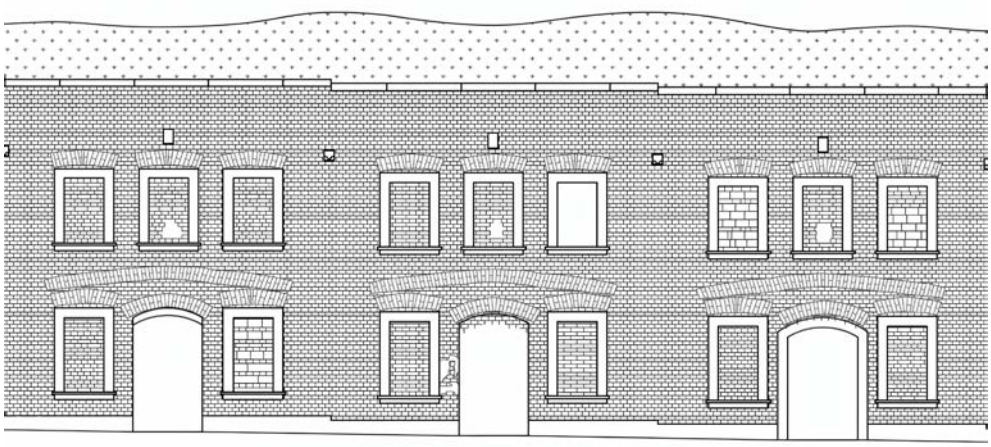

Fig. 11. Fragment of the facade inventory of the White Barracks
[Archives of the Department of Conservation of Monuments]

Fig. 12. Fragment of the inventory of the longitudinal section of the White Barracks
[Archives of the Department of Conservation of Monuments]

3. STATE OF PRESERVATION OF THE WHITE BARRACKS

In the mid-20th century, the building was abandoned and was subject to processes of degradation over the next few decades. In 2018, the barracks underwent a detailed inventory and technical condition assessment. The assessment of the technical condition was carried out based on the criteria developed in the 'Universal Chart for the Assessment of the Technical Condition of Traditional and Historic Buildings'. The photographic documentation is from the Archives of the Department of Conservation of Monuments, Lublin University of Technology, 2018.

3.1. Assessment of the state of preservation of the White Barracks facade

The technical condition assessment work was preceded by field measurements and the preparation of drawing documentation. The next stage was to carry out an on-site visit to the site, including an assessment of the technical condition of the structural and finishing elements. At the same time, in situ tests were carried out and samples were taken for laboratory tests.

Table 1 provides a description of the technical condition of the various elements and photographic documentation.

Tab. 1. Technical condition assessment of facade wall elements

EXTERNAL WALLS – SATISFACTORY CONDITION External masonry walls of solid clay brick in lime mortar, with cross bond. The exterior of the building is significantly degraded. There are numerous cracks and defects in the masonry structure and areas of severe biological corrosion. There are white efflorescences on the face of the bricks, caused by salt crystallisation. The mortar is discontinuous and washed out in many places. Plaster remains in small areas.	 Fig. 13. Exterior wall in ground level strip

BACKGROUND – SATISFACTORY CONDITION Stone plinth to a height of 35cm above ground level Ground zone of facade with numerous outbreaks of biological corrosion. There are cavities and cracks along the whole length of the plinth. No band at the object.	 Fig. 14. The plinth of broken stone
LINTELS – GOOD / SATISFACTORY / FAILING CONDITION Arched brick lintels. Lintels over window openings mostly in good condition. Some window lintels in satisfactory condition with numerous superficial losses of material. Lintels over doorways leading to rooms 1-7 and 14 in good condition. Lintels over doorways leading to rooms 8, 9, 12 and 13 in satisfactory condition with visible losses. In casemates 10 and 11, the lintels in an failing condition.	 Fig. 15. Ceramic brick lintel
WINDOWS AND DOORS – INADEQUATE CONDITION Complete absence of windows and doors. Window and door framing in hewn stone, sandstone. Window frames with numerous cracks and loss of texture. Window bands mostly retained, external door bands 40% retained. Partially replaced by brick repointing.	 Fig. 16. Window framing

DEHYDRATION SYSTEM – INADEQUATE CONDITION System made of stone. System obstructed and incomplete. It is likely that none of the pukes are performing their function of draining water away from the perimeter of the building due to their inflow being backfilled with earth masses. In 4 out of 15 locations the element is missing.	 Fig. 17. A stone system
CHIMNEYS – INADEQUATE CONDITION Solid clay brick chimneys. Chimney flues probably obstructed, having been backfilled with earth embankment. Part of chimney extending above the earth embankment with numerous cavities in the structure, overgrown with vegetation.	 Fig. 18. Remains of the chimney

3.2. Assessment of the state of preservation of the interior of the White Barracks casemates

Assessment was carried out on all 14 rooms, the condition of the masonry, vaults, plaster remains, paint coatings and floors was assessed. The overall technical condition of all rooms was similar to each other. The collected results of the visual inspection have been summarised in table 3, which allows a precise estimation of the scale of damage and the location of individual damages. The table allows a detailed analysis of the distribution and nature of the damage. This makes it easier to identify areas in need of repair and take appropriate steps.

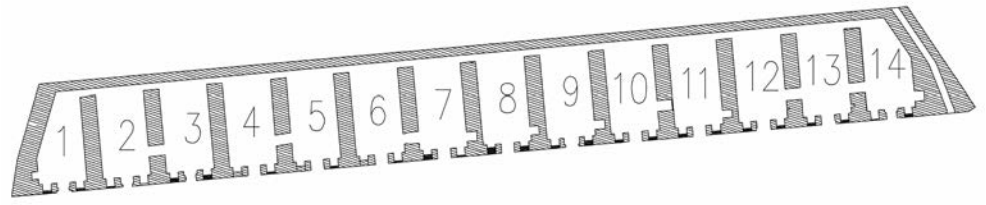

Fig. 19. Ground plan of the White Barracks with marked rooms
[Archives of the Department of Conservation of Monuments]

Tab. 2. Assessment of the technical condition of the interior of the casemates

INTERNAL WALLS – INADEQUATE CONDITION Internal masonry walls of solid clay brick in lime mortar with cross bond, above 2.5 m from p.p. made of stone. External walls on the inside and internal walls heavily degraded. There are numerous cavities in the masonry of considerable size, particularly in the corners of the walls. There are focuses of biological corrosion, increased levels of dampness.	 Fig. 20. Construction wall, casemate no. 3
LINTELS – SATISFACTORY / FAILING CONDITION Arched brick lintels. Lintels over most openings in satisfactory condition, only in room 4 in a failing condition. There are numerous cavities and structural cracks, threatening the safety of use. Surfaces of lintels in sufficient condition with shallow loss of material, without scratches. The lintel between room 6 and room 7 is bricked up and reinforced from below with a steel beam element.	 Fig. 21. Lintel, casemate no. 4  Fig. 22. Lintel, casemate no. 1
VAULTS – SATISFACTORY CONDITION Brick, cradle vaults, finished with lime plaster. There are no scratches on the surfaces of the vaults. Numerous superficial material losses and severe dampness with developing biological corrosion are evident in many areas.	 Fig. 23. Vault, casemate no. 14

PLASTERS – INADEQUATE CONDITION Lime plaster. There are numerous cracks, scratches and build-ups on the surface of all plastered elements. Deep cavities in many places, exposing structural material. Plaster within walls in contact with the ground soggy with foci of biological corrosion and salt efflorescence. Due to bonfires, wall and vault surfaces smoky and sooty.	 Fig. 24. Plaster, casemate no. 3  Fig. 25. Plaster, casemate no. 12
MALATURES – INADEQUATE CONDITION Numerous layers, cracks and spalling are visible on all paint surfaces. In many rooms, as in the case of the plasterwork, the paintwork is stained with smoke and graffiti.	 Fig. 26. Paintings, casemate no. 3
FLOORINGS – UNSATISFACTORY CONDITION Concrete floors, in some rooms in the form of threshing floor. Floor surfaces uneven, with numerous cracks and losses of material.	 Fig. 27. Floor, casemate no. 1

Tab. 3. Summary of damage occurring in the White Barracks rooms

Casemate no.:	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Defects in masonry	x	x	x	x	–	x	x	x	x	x	x	x	–	x
Repeated openings in masonry	x	–	–	x	–	–	–	–	–	–	–	x	–	–
Defects in lintels	x	–	–	x	x	–	x	–	–	x	–	–	–	x
Spalling plaster	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Damages paintings	x	x	x	x	x	x	x	x	x	x	x	x	x	x

3.3. Laboratory and *in situ* tests

During the site visit, large sections of masonry were found to be degraded due to salt crystallisation. As moisture is responsible for the distribution of salt in the masonry structure, it was decided to carry out a comprehensive moisture and salinity survey of the barracks' internal and external masonry. In the case of salinity testing, samples were taken for laboratory testing. Moisture testing was carried out using two methods: the dielectric method and the laboratory method.

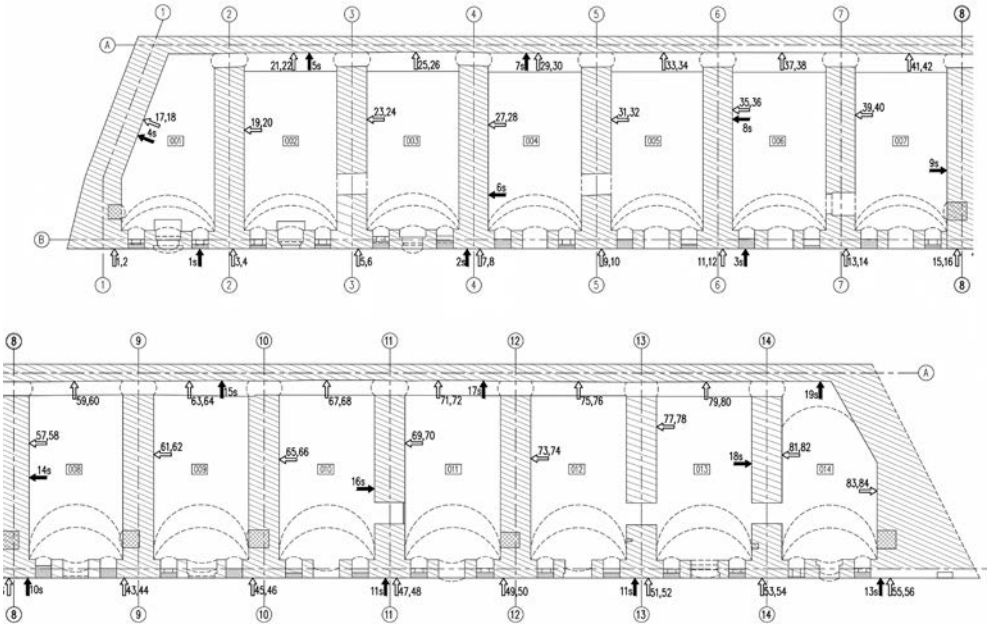

Fig. 28. Ground plan of the White Barracks with marked sampling locations, white arrows – moisture testing, black arrows – salinity testing [Archives of the Department of Conservation of Monuments]

3.3.1. Moisture-moisture test by the oven-dry method

Samples for moisture analysis using the laboratory method were taken using a slow-speed drill from a depth of approximately 15 cm in the masonry structure. Each sampling point comprised two holes: the first located a few centimetres above ground level and the second at a height of approximately 1 metre. This method of collection ensured that the samples were representative for the analysis of differences in moisture content at different levels of the facade.

Tab. 4. Degrees of moisture in brick masonry

I	0-3%	walls with permissible moisture content
II	3-5%	masonry of higher moisture content
III	5-8%	walls with average moisture content
IV	8-12%	walls with high humidity
V	> 12%	wet walls

The table below highlights measurements that exceed the permissible moisture level – above 3%.

Tab. 5. Selected moisture results

Place of sampling	Humidity [%] 0,1 m / 1,0 m	Place of sampling	Humidity [%] 0,1 m / 1,0 m
facade	1,58 / 1,42	facade	1,60 / **3,94**
facade	1,10 / 1,50	facade	**3,67** / 2,14
casemate no. 1	1,38 / **3,11**	casemate no. 8	1,77 / 2,00
casemate no. 2	2,25 / **13,91**	casemate no. 9	1,66 / 1,51
casemate no. 3	**6,46** / 2,50	casemate no. 10	1,84 / 1,14
casemate no. 4	**3,07** / 1,22	casemate no. 11	1,38 / **3,94**
casemate no. 5	2,47 / 1,24	casemate no. 12	**4,62** / 0,88
casemate no. 6	**8,73** / 2,12	casemate no. 13	1,28 / 1,70
casemate no. 7	**6,20 / 3,05**	casemate no. 14	**5,85 / 6,08**

The study found that of the 30 analyses carried out on the facade, in 23 cases the moisture content was within the permissible values, in 4 cases there was elevated moisture content and in 2 cases there was medium moisture content. For the 54 moisture measurements taken indoors, 32 samples were found to have acceptable moisture, 8 had elevated moisture, 10 had medium moisture, 2 had high moisture and 2 had walls identified as wet.

These results indicate varying levels of dampness depending on local environmental and technical conditions.

3.3.2. Salinity test

Samples for salinity testing were taken from a height of approximately 0,5 m above floor or ground level, from a depth of approximately 5-6 cm. Salt loading tests were performed using Merck laboratory tests. The salt ions to be determined were sulphate, chloride and nitrate. In addition, samples were prepared from the obtained borehole to determine the pH of the material.

Tab. 6. Degrees of salinity

%	Sulphates	Nitrates	Chlorides
Low	< 0,5	< 0,1	< 0,2
Medium	0,5-1,5	0,1-0,3	0,2-0,5
High	> 0,5	> 0,3	> 0,5

Tab. 7. pH degrees

pH	Acidic	Neutral	Alkaline
	0-6,5	6,5-7,5	7,5-14

Tab. 8. Summary of salinity test results

Place of sampling	Sulphates [%]	Nitrates [%]	Chlorides [%]	pH [%]
elevation	0,30	0,00	0,02	7,0
elevation	**0,55**	0,00	0,02	11,0
casemate no. 1	**0,53**	0,00	0,02	6,0
casemate no. 2	0,35	0,00	0,02	8,5
casemate no. 4	0,24	0,00	0,02	7,0
casemate no. 6	0,26	0,00	0,03	6,5
casemate no. 7	0,16	0,00	0,02	7,5
casemate no. 8	0,29	0,00	0,04	6,5
casemate no. 9	0,41	0,00	0,03	8,0
casemate no. 10	0,49	0,00	0,09	6,0
casemate no. 11	**0,60**	0,00	0,02	8,0
casemate no. 13	0,20	0,00	0,02	7,5
casemate no. 14	0,36	0,00	0,02	7,5

Based on the analysis of the 19 test results, a low level of masonry salinity was determined. Sulphate salinity was in the low range in 12 cases, while 7 cases were reported to exceed the medium salinity level. Nitrates were not detected in any of the masonry samples tested. All 19 chloride salinity measurements also indicate low levels of these compounds.

The pH analysis showed varying values, with neutral pH recorded in 7 measurements, acidic pH in 3 and alkaline pH in 9. The results indicate a variety of chemical conditions in the structure of the studied masonry.

3.3.3. Dielectric humidity test of the facade

The test was made using a moisture meter LB-796 with a capacitive probe. The capacitive method consists in measuring the dielectric constant of a material, which depends on the water content in a given material. Measurements were taken along the entire length of the building's front elevation, at five heights of a given section (at the ground/floor, at 0,5 m, 1,0 m, 1,5 m and 2,0 m).

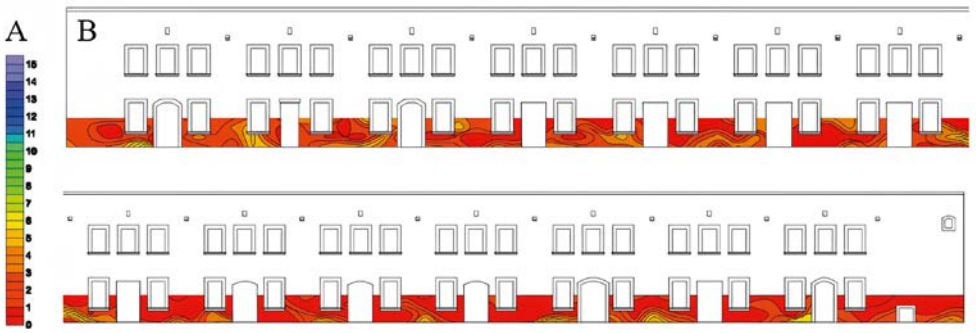

Fig. 29. Humidity scale (A); moisture maps of the facade wall (B)
[Archives of the Department of Conservation of Monuments]

Based on the surveys carried out, the moisture level of the masonry of the west elevation was found to be at a low level. The moisture content of the masonry for the most part remains within the value range of 0-3%, which characterises masonry with acceptable moisture content. Locally, elevated moisture levels in the range of 3-5% and average moisture content of 5-8% were noted. The increased dampness of the masonry is found primarily in the ground zone, indicating the influence of soil and water conditions.

4. PRESENT STATE OF THE WHITE BARRACKS

The restoration of historic buildings is a challenge for contemporary architecture and construction. The aim of such activities is to preserve cultural heritage and transform former buildings into functional spaces that meet contemporary needs.

The project: 'Conversion and change of use, revalorisation of the White Barracks for service purposes together with the construction of the necessary technical infrastructure', carried out by the design studio ARCHI-S in the Owcza Góra Fortress in Klodzko, focused on the adaptation of the building for service purposes, while respecting its historical form and character.

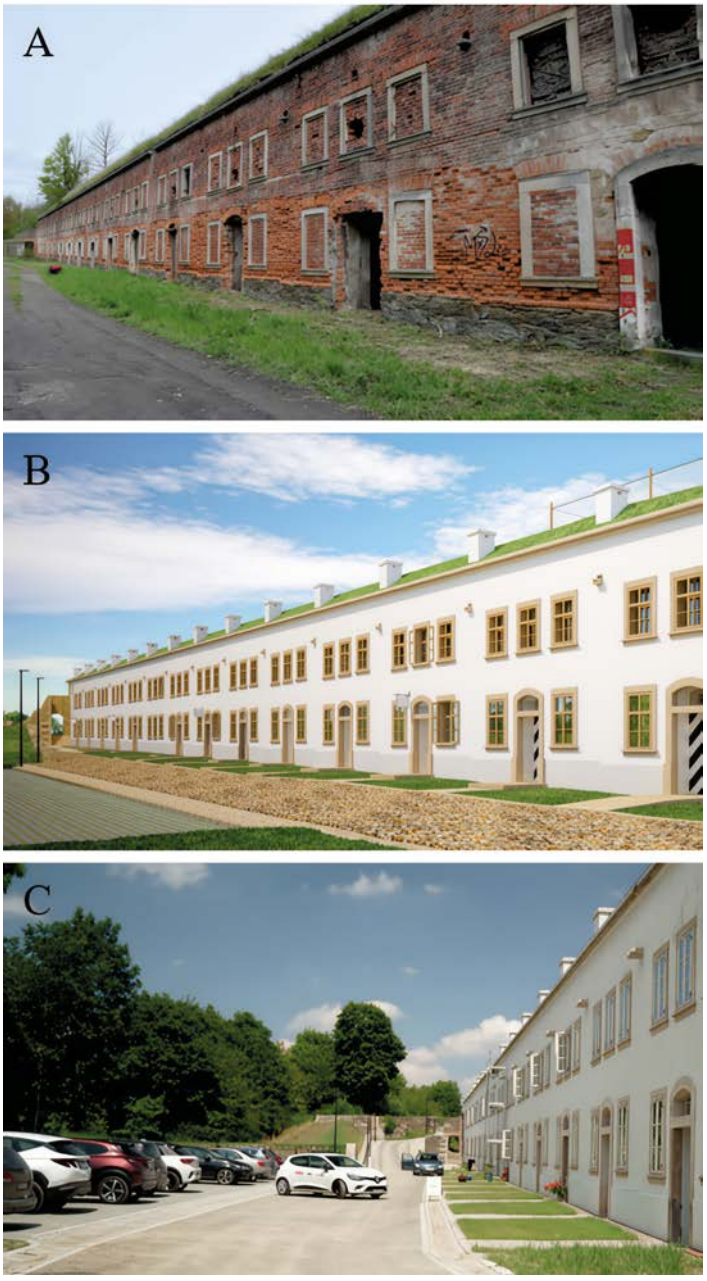

Fig. 30. View of the White Barracks: facade in 2018 (A)
[Archives of the Department of Conservation of Monuments];
visualisation of the revitalisation (B) [design studio ARCHI-S 2021];
facade in 2024 (C) [Archives of the Department of Conservation of Monuments]

The works included the restoration of historic structural elements such as the wooden ceilings and the cradle vaults of the casemates. Damp-proofing was carried out by undercutting the masonry and introducing an HDPE membrane diaphragm, thus eliminating moisture problems in the masonry [project documentation, design studio ARCHI-S 2021].

Fig. 31. Interior view of the casemate: 2018 (A); 2024 (B)
[Archives of the Department of Conservation of Monuments]

On the exterior of the building, the original colours of the facade were restored, using lime plaster and sol-silicate paint in accordance with the historical documents. The bands of the window and door openings were restored in grey sandstone. of grey sandstone, and secondary brickwork was removed. Damaged elements such as cornices, drainage channels and chimneys were also reconstructed, in accordance with archival plans and photographs [project documentation, design studio ARCHI-S 2021].

Fig. 32. Reconstruction of windows and doors and restoration of façade: 2018 (A);
2024 (B) [Archives of the Department of Conservation of Monuments]

The interiors of the building were adapted to the new functions, while historical fragments were preserved. The surfaces of the interior walls and vaults were cleaned, and plasterwork in an insufficient state of repair was removed. They were renovated, which allowed the walls to better absorb moisture. The technical installations – electrical, water and sewage, heating with heat pumps and ventilation – were modernised [project documentation, design studio ARCHI-S 2021].

The accessibility of the building has been improved through the installation of a lift for people with disabilities and adapting the toilets to their needs. The works also included the renovation of the historic access road, the construction of car parks and paths and the landscaping of the area with park greenery. The earth embankments on the crown of the barracks were restored, while protecting the moat and its surroundings from further degradation [project documentation, design studio ARCHI-S 2021].

Fig. 33. Down view of the Barracks and technical infrastructure
[Archives of the Department of Conservation of Monuments]

All the work was carried out in close cooperation with the Provincial Conservator of Monuments to ensure that the activities were in line with the requirements of cultural heritage protection

5. SUMMARY

The article describes in detail the history, state of preservation and the process of revalorisation of the White Barracks that are part of the Owcza Góra Fortress, which is part of the Klodzko Fortress. The fortress, located in south-western Poland, has a rich history dating back to the 10th century, when it functioned as a wooden fortification. In the 18th century, during Prussian rule, Fort Owcza Góra was built, designed by Gerhard Cornelius Walrave. This complex included the White

Barracks, which from the 19th century onwards served as warehouses, prison and storage for military supplies.

In the mid-20th century, the White Barracks was abandoned, which initiated its gradual deterioration. A detailed inventory was carried out in 2018-2019, including field surveys, drawing documentation and laboratory tests. On the basis of these, a compelling assessment of the Barracks' technical condition was carried out. The documentation allowed for a precise estimation of the scale of damage and the location of damage, enabling the planning of appropriate conservation and repair activities

The project: 'Reconstruction and change of use, revitalisation of the White Barracks for service purposes together with the construction of the necessary technical infrastructure' was carried out by the ARCHI-S design studio. The revitalisation works, completed in 2023, allowed the White Barracks to be brought back to life as a service facility, accessible to residents and tourists. The historical authenticity of the building was successfully preserved, contributing to its value as a cultural monument and tourist attraction. The building became part of a larger concept for the revitalisation of the Klodzko Fortress, emphasising the importance of protecting historical heritage in modern adaptation projects.

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ANALIZA STANU ZACHOWANIA KOSZAR BIAŁYCH FORTU OWCZA GÓRA TWIERDZY KŁODZKO

Streszczenie

W niniejszym artykule omówiona została problematyka stanu zachowania jednego z obiektów militarnych Twierdzy Kłodzko. Fort Owcza Góra został wzniesiony w XVIII w. na przeciwległym brzegu Nysy Kłodzkiej. Koszary Białe, będące częścią Fortu Owcza Góra, zostały wybudowane na przełomie XVIII i XIX w. Na przestrzeni lat zmieniały swoją funkcję i sposób użytkowania, pierwotne zakwaterowanie dla żołnierzy przekształcono kolejno w składy i magazyny wojskowe, więzienie, zaplecze techniczne oraz siedziby hurtowni. W II poł. XX w. obiekt został opuszczony i przez kolejne kilkadziesiąt lat podlegał procesom degradacji. W 2018 r. koszary poddano szczegółowej inwentaryzacji i ocenie stanu technicznego. Dokumentacja pozwoliła na precyzyjne oszacowanie skali zniszczeń oraz lokalizację uszkodzeń, umożliwiając planowanie odpowiednich działań konserwatorskich i naprawczych. Na kolejnym etapie opracowano projekt rewaloryzacji Koszar Białych na cele usługowe, przy zachowaniu historycznej formy, i przywrócenia pierwotnego charakteru budynku. Projekt został wykonany przez pracownię ARCHI-S. Inwestycję zrealizowano i w 2023 r. obiekt oddano do użytku.

Słowa kluczowe: twierdza, fort, założenie obronne, dziedzictwo militarne, stan zachowania, ocena stanu technicznego, degradacja, badania, zmiana przeznaczenia obiektu, rewaloryzacja

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Karol KOWALSKI[1]

ARTIFICIAL INTELLIGENCE AND ITS IMPACT ON THE TRANSFORMATION OF DESIGN PRACTICE ON THE EXAMPLE OF PARAMETRIC MODELLED ARCHITECTURE. RESEARCH USING MIDJOURNEY GENERATORS

Artificial intelligence (AI) has fundamentally changed the possibilities for architecture. Parametric design is at the forefront of this unprecedented evolution, which is a graphical description of a design problem, in a network of geometric connections that can be processed in various spatial contexts. More than three decades have passed since the first advanced 3D parametric modeling and BIM programs were added to the interdisciplinary communication interface. During this time, digital modeling replacing the analogue process of searching for form was established in architecture theory with thousands of publications and scientific conferences devoted to CAD/CAM/CAE. Currently, such a historic change in the approach to design can be seen in artificial intelligence, which is a way for architects to quickly generate visually attractive ideas, especially for objects with free-form features.

Keywords: artificial intelligence, machine learning, parametric design, digital design, free form

1. INTRODUCTION

The sudden development of artificial intelligence systems introduced a new paradigm in parametric design, where architects gained powerful tools to search for and model forms of complex geometry in the three-dimensional synthetic space. Generative algorithms, based on the machine learning and neural networks, can discover and explore unknown possible solutions, including combinations of large data sets of design constraints and preferences. This is a way to create and improve the most appropriate architectural solutions in iterative relationships, which can be further developed through a process of transformations and matching. At the moment,

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the schemes of artificial intelligence allow the creation of 2D images inspired by exactly what a given author is doing with modern technology.

This article presents one of the first projects in Poland realized as part of the master's thesis at the Faculty of Architecture, West Pomeranian University of Technology with the use of artificial intelligence tools in the Midjourney generator. The analyzed work entitled Oceanarium in Szczecin Jacek Czudak received in 2024 the main prize awarded within the Academic Awards of the President of the City of Szczecin in the category of engineering and technical sciences.

2. THE HISTORY OF ARTIFICIAL INTELLIGENCE DEVELOPMENT

Alan Turing (1912-1954) is considered a pioneer of artificial intelligence, who in 1936 developed the concept of a general-purpose computing device called the Turing machine. This simple model of a logic machine naturally led to the consideration of the ultimate possibilities of what were soon to be called thinking machines. Turing himself contributed to the development of modern mathematics, i.e. to the reinterpretation of the theory of computational complexity as a matter of logic, rather than classical arithmetic. The Turing machine became a crucial formal tool for solving various real-world problems of computer science and the practical implementation of algorithms, i.e. an effective method of calculating values. Computers were not tools in themselves, but could also enable a new way of thinking about acquiring knowledge and doing science. In this context, no less important were the Turing tests of the 1950s illustrating the human interaction with artificial intelligence. At an abstract level, the test suggested that if a human interacts with an artificial machine and identifies it as a human, then that artificial machine is considered sufficiently similar to a human.

These achievements provided a reference point for a new field of academic research, artificial intelligence (AI), a technology that was defined in 1956 at a scientific conference at Dartmouth College. By definition, artificial intelligence is "the branch of computer science that enables computers to simulate aspects of human intelligence such as speech recognition, deduction, inference, creative response, the ability to learn from experience, and the ability to draw conclusions from incomplete information. Two common areas of artificial intelligence research are expert systems and natural language processing" [Blanton, Haynes (ed.) 2002: 35-36]. While artificial intelligence (AI), machine learning (ML), deep learning and neural networks are related technologies, the terms are often used interchangeably.

As in the first era of artificial intelligence in the 1950s and 1960s, the second era in the late 1980s and 1990s was built around new and exciting technologies combined with the promise that computers would soon solve all our problems. In the 1980s and 1990s, numerous basic ideas based on artificial intelligence concepts

proved useful in developing decision-support environments and design processes in its various aspects. This change was further driven by the socio-economic change from Ford's multi-series mass production to a post-fordism, in which it is easy to obtain product differentiation, which found its special place in architecture. The development and achievements in the digitization of design integrated with digital fabrication, caused an epochal paradigm shift. The range of designer competences was expanded to model in virtual spaces with the ability of exploring production technologies and the built environment, which with the increasingly complex form of realized objects, became rich in information. In the realization of the art of construction, graphos, rapidographs, and technical scales gave way to digital records of the physical and functional properties of the construction object.

In the 1980s, after many years of research, expert systems such as DENDRAL for the analysis of chemical organic compounds and XCON for the configuration of DEC's VAX computer systems were developed. These systems achieved commercial success and demonstrated the practical application of AI, achieving performance comparable to or even superior to that of humans. In addition to expert systems, machine learning techniques were introduced in the 1980s, which allowed computers to analyze their own results and improve their performance over time. The development of machine learning laid the foundation for a large number of advances in artificial intelligence and neuroscience that were to follow in the following decades. Scientists such as John Hopfield and David Rumelhart developed neural networks that could recognize patterns and formulate decision-making rules based on training data.

At the turn of the 80s and 90s of the XX for architectural designers, the implementation of text-based programming languages into some CAD software packages was certainly important. It is worth mentioning the introduction of the text-based scripting language AutoLISP to AutoCAD 2.1 in 1986, which was based on the LISP programming language, which was originally intended for use in artificial intelligence applications. The LIPS project was created in 1958 by John McCarthy and was a high-level programming language still in use today. At the time, the view was formed that scripting was a tool by which a designer could more effectively express and explore his creativity [Mcculbugh 2006: 12-15].

In the history of the development of artificial intelligence, it is worth noting that the Emergent Design Group (EDG) was founded at MIT in 1997, which included computer scientists and architects. The team explored the potential for synergies between architecture, artificial intelligence, artificial life, engineering and materials science to develop a prototype program that would provide new modeling tools in CAD systems. In 2001, Una-May O'Reilly and Martin Hemberg presented the Genr8 program. This was to prove that the concept of generating surfaces by combining L-Systems and evolutionary algorithms were useful in architecture modeling [Q'Reilly, Hemberg, Menges 2004: 48-53].

In the 1990s, it was realized that the second era of artificial intelligence did not meet the expectations equal to its ambitions, which led to a period of extreme disappointment, often referred to as the "second AI winter". It is only in the third era of artificial intelligence, in which we live today, that we can say that computer intelligence has approached human-level capabilities and is able to perform or even surpass human tasks. This has implications for numerous aspects of architectural design and digital fabrication processes, primarily in terms of rapidly generating ideas, but also eliminating errors and improving quality. The hard-earned experience of CAD/CAM/CAE designers and developers can now be used to inform design, testing, validation, and AI-related policy as well as regulation.

3. AUTOMATION OF DESIGN PROCESSES AND REINVENTING CREATIVITY FOR PARAMETRICALLY MODELED ARCHITECTURE

The development of generative models such as GAN (Generative Adversarial Networks), VAE (Variational Autoencoders) and Transformers revolutionized artificial intelligence, implying changes in the form of generating realistic images, films and text. These models have applications in a variety of fields, from art and entertainment to scientific research and data analysis. This was particularly noticed by architects known for their predilection for parametric modeling and free forms, which in their studio teams initiated a reorganization of the approach to design tasks.

Parametric design is understood as "a process based on algorithmic thinking that enables the expression of parameters and principles by which the relationships between intention and design response are defined, coded and explained" [Woodbury 2013: 27]. Until now, in digital parametric modelling, architects relied on a graphical description of the design problem, which could be based on:

- the text method by programming or writing code using a specific programming language Textual Programming Language (TPL) [Janssen 2015: 157-158],
- visual programming consisting of manual manipulation of graphic elements,
- a declarative method using the Visual Programming Language (VPL) [Zhang, Zhang, Cao 2001: 186-200].

This meant that from the mathematical point of view, the programming language had to be at least complete in the Turing sense, but it could also be used to describe more limited languages. In any case, in order for a program written in a given language to be executed, it is necessary to properly process its source code.

Currently, a digital model of an object can be prepared on the basis of initial concepts generated in a 2D image from artificial intelligence-based systems. AI-based automation is used to create various types of materials and works from scratch based on so-called described prompts, which requires providing detailed parameters of

the generated images. While traditional AI is designed to analyze and predict based on existing data, generative AI goes a step further, giving the designer the ability to express and explore their creativity more effectively by creating new data that did not exist before.

As Patrick Schumacher, an architect at Zaha Hadid's office, points out, generative AI is particularly useful in the early stages of a project, greatly increasing creativity as well as productivity. The Zaha Hadid's team also uses AI-based image generators such as DALL-E 2 and Midjourney. Nonetheless, these are not generators that create a digital 3D model. Despite this obstacle, the experience with the use of artificial intelligence gathered during the research on the development of the Oceanarium concept in Szczecin shows that there is no problem in obtaining such a 3D model directly from the image in the non-linear dynamic processes of the Maya program. Consequently, it can be assumed that over time, the integration of AI with digital parametric modeling will increasingly become the next area of experimentation, but also of increasing design creativity, automating repetitive tasks and optimizing the entire design process, pushing the boundaries of what is possible.

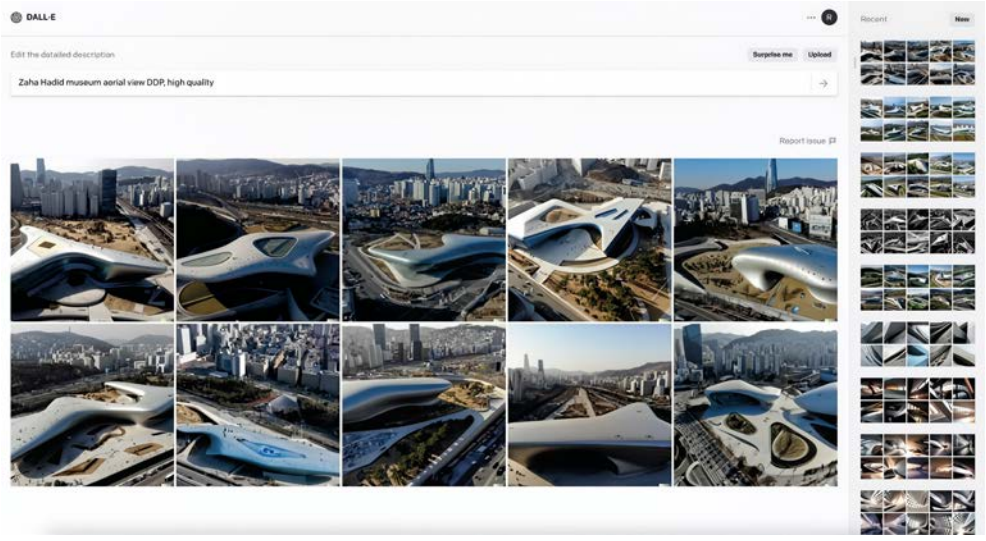

Fig. 1. Images generated on the basis of clues entered into the DALL-E 2 data generator [Schumacher 2023]

The creation of generative AI would not have been possible without generative competitive networks GAN, which were introduced by Ian Goodfellow in 2014. They consist of two neural networks, i.e. a generator and a discriminator that compete with each other to create realistic data by creating fake samples and recognizing the difference between real and digitally fabricated data. "The researchers

started training the network on low-resolution images and gradually increased it by adding successive layers. This incremental method allowed the learning process to first discover the large-scale structure of the image distribution, and then to pay attention to increasingly precise details in the image, instead of learning everything at once" [Mazurek 2019]. This allows you to obtain spectacular results and generate very realistic images.

In contrast, variational autoencoders VAE provide a probabilistic approach to data generation, enabling the creation of new data instances that did not exist before. Such a model is based on the principles of statistical inference, where the probability element of the data in the coding process. Transformers, such as those used in GPT-3 or GPT-4 models, have transformed natural language processing, enabling the generation of coherent and contextually relevant text from input data, which may include stories, articles, or other data expressed in writing.

Fig. 2. Images generated in cooperation with Stable Diffusion [Schumacher 2023]

Architects are also developing their own AI tools. Zaha Hadid's studio is going a step further and from 2023 has been developing its own versions of AI tools, with a specialized team of researchers working on the development of a system based on Stable Diffusion, an open-source system [Kietzmann 2023: 115-117]. This means that when individual versions or fragments of the project are created, screenshots are taken and in the iteration process developed in detail by AI and rendered. This approach generates satisfying results, and the longer you cooperate with a particular AI engine, the more tailored the results can be obtained.

4. BETWEEN AI IMAGE AESTHETICS, PARAMETRIC DESIGN AND STRUCTURAL-MATERIAL ASPECT. CASE STUDY

Virtual free surfaces that are created using parametric design supported by 2D images from artificial intelligence generators impose structural and material solutions that have not previously existed in architecture and construction. Exploring these relationships is a problem rarely undertaken by architects in Poland due to the complexity and difficulty of the issue, which requires excellent engineering preparation in terms of operating advanced computer programs.

The year-long cooperation with Midjourney, among others, to create the Oceanarium project as part of Jacek Czudak's master's thesis from 2024 allowed us to specify the style that corresponded to the author's perception of beauty and order. The synthesis of this style is inspired by organic forms, shapes present in nature, but above all by our own renders and print screens of free-form parametric models.

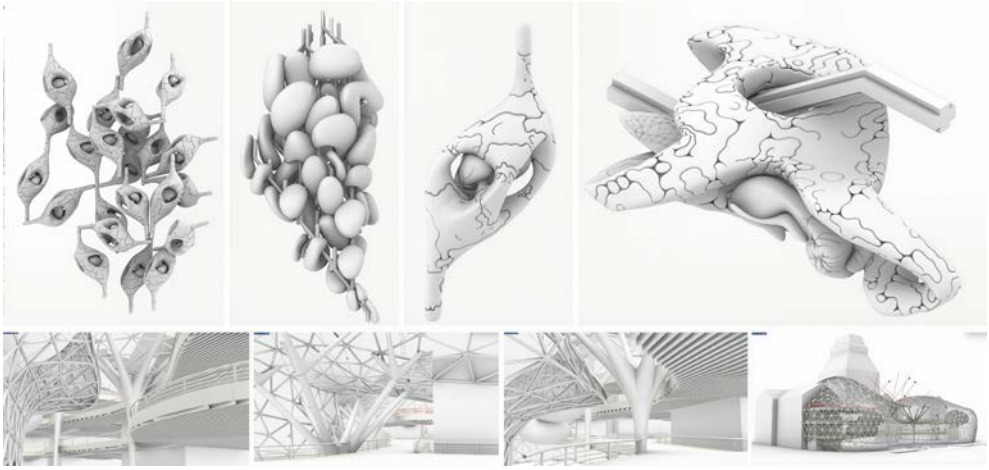

Fig. 3. Selected models made in Grasshopper, which were used as input data to obtain 2D images in the Midjourney generator [Czudak 2022]

There was a need for the sculptural envelope of the Oceanarium to be adapted to the needs resulting from the complex functional program of the object. A space with an internal landscape of free shapes and an external form of the facility were obtained, which are inextricably intertwined as in the baroque Leibnizian philosophy of monads popularized by the French philosopher Gilles Deleuze (1925-1995). Deleuze, in creating his own concept of being, claimed that architecture can be understood as a "skin of matter", stretched on the immaterial organism of internal program events and through "windows to the outside" (understood as contact with the outside), responsive to the environment. This means continuity, and even Jeffrey

Krausse's transition from the concept of "costume architecture" to the concept of "skin architecture" with all the consequences of this procedure.

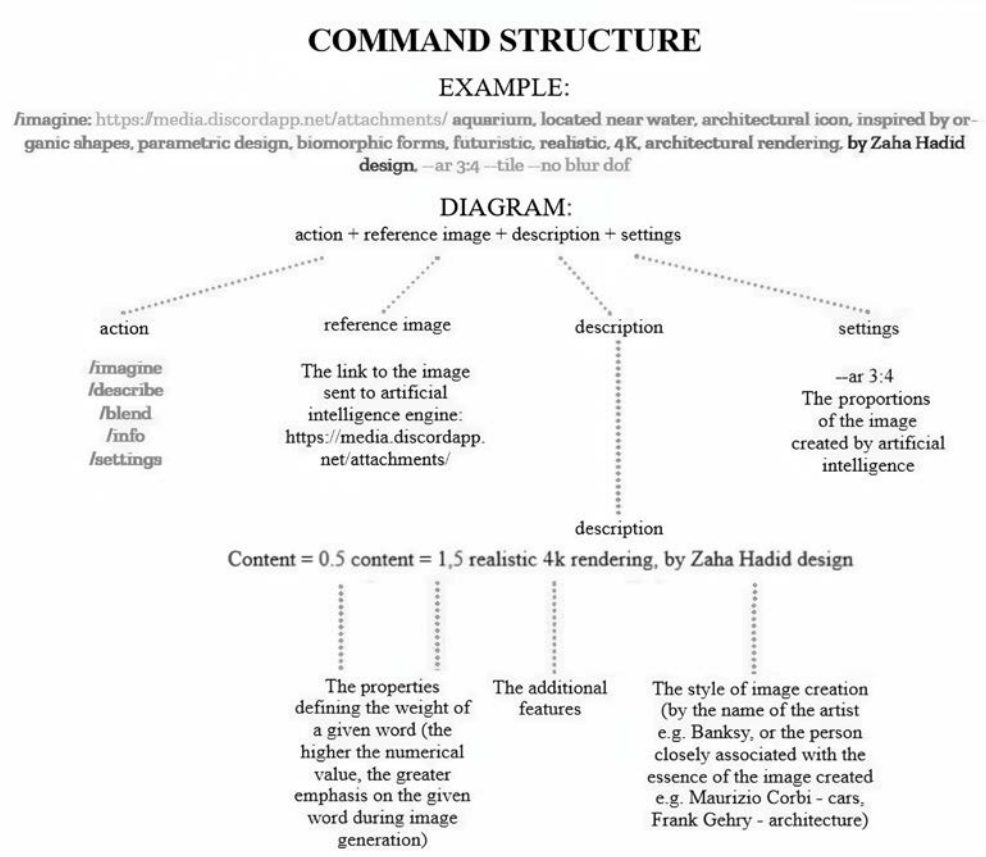

Fig. 4. Command structure in the Midjourney generator, developed as part of the diploma thesis prepared under the supervision of the promoter Karol Kowalski [Czudak 2023]

The main inspiration for the potential form was, therefore, the fluidity and this element referred directly to the law of continuity, the concept of folding, or curvature of Gottfried Leibnitz (1646-1716), the German mathematician and philosopher. The attempt to capture the movement and freedom that characterize non-linear liquid substances and transformation such a static frame into an architectural form is a process of understanding space that often goes beyond the bounds of imagination, and thus it is an extremely difficult element to define and present in a way that is understandable to artificial intelligence. Such a process requires a lot of time and numerous corrections in the structure of commands and other units of information, as well as countless

reiterations of results proposed by artificial intelligence containing numerous errors. Finally, after a trial period, the system assimilates the data, and on the basis of the analyses, it begins to understand what shapes and forms are involved. Thanks to this process of training the system, it was possible to generate fifty images of attractive architectural forms, which were used in the design process like classic sketches. The system was primarily trained on the basis of proprietary models, where renderings and screenshots of objects made by Jacek Czudak as the part of semester assignments at WA ZUT served as the "source" of inspiration for the Midjourney generator.

Fig. 5. Images created in the Midjourney generator, developed as part of the implementation of the diploma thesis prepared under the supervision of the promoter Karol Kowalski [Czudak 2023]

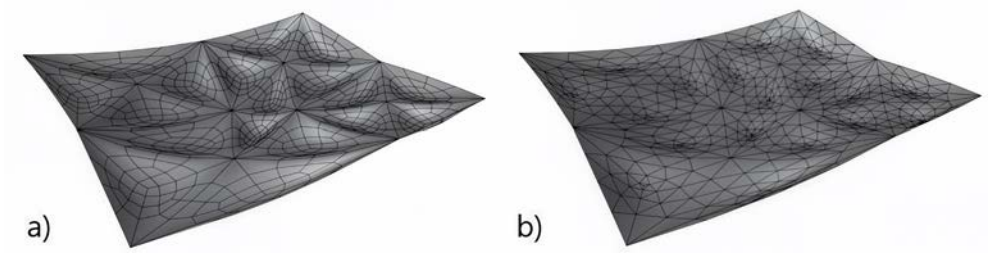

Fig. 6. Subsurface modeling in Weaverbird: a) surface liquefaction based on the Catmull-Clark algorithm, b) surface liquefaction based on the Loop algorithm [author's work]

The generated AI images were transferred to the 3D modeling phase, but it was noted that the simple freeform modeling strategies available in the basic Rhinoceros package could not be used to build the curved parametric surfaces. Therefore, tools such as Subdivision Surface Modeling (SubD), developed in 1978 by Edwin Catmull and Jim Clark for motion picture animation, and polygonal modelling were used for modelling. The shape of the surface is not defined here by mathematical curves, as is the case in NURBS surface modeling, but is the result of the density of the polygon. Polygonal elements per se do not store any geometrical information about the general shape of the object other than the information about the position of the vertices in the global XYZ coordinate system, which affect the shape of its geometry.

Fig. 7. Modelling method in nonlinear dynamic processes of the Maya program, developed as part of the diploma thesis prepared under the supervision of the promoter Karol Kowalski [Czudak 2023]

In the early phases of the Oceanarium project, where the definition of the shape was one of the main assumptions, the modeling methods were used in the nonlinear dynamic processes of the Maya program. The decision to import the image geometry files into Maya was made due to the program's ability for 3D blending. The Quad Draw tool created the shape of this object in sequences of the same series of modifications, where individual elements of the shape were gradually developed. "The Quad Draw tool offers an enhanced, single-tool workflow for grid retopology. The manual retopology process allows you to create clean grids while maintaining the shape of the reference surface" [Autodesk Maya… 2024]. A precise model was obtained, which was then already prepared in the Rhinoceros environment and the parametric Grasshopper script. By using the Grasshopper plug-in called Weaverbird and Catmull Clark's command, the surface of a polygonal mesh was more fluid. The geometric properties of such a mesh remain unchanged under transformation and flexible topological deformation. The mesh topology is defined by a set of sequentially connected vertices that define the shape of a polygonal facet. The basic mesh is a single quadrangular or triangular facet with edges.

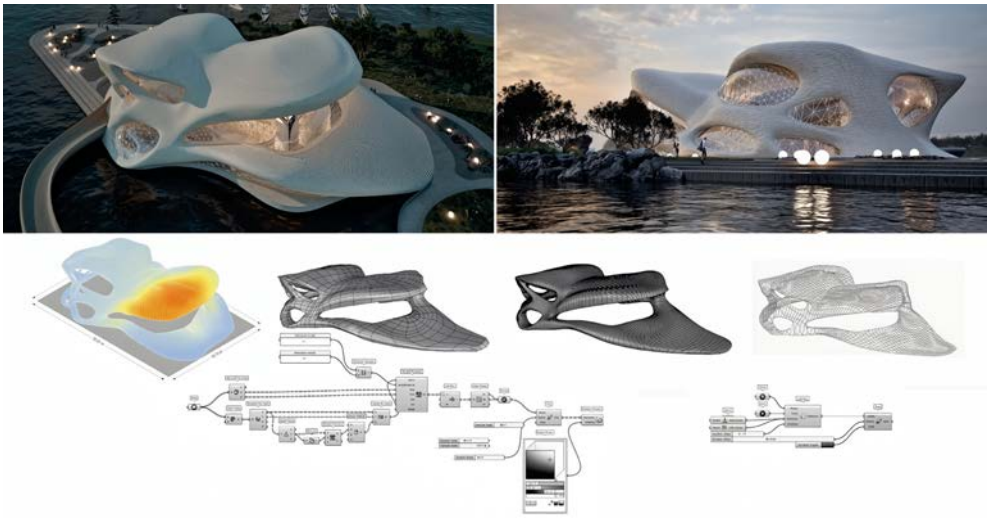

Fig. 8. Structural analysis of FEM in the Karamba overlay, liquefaction of the Oceanarium envelope surface in the Grasshopper program, developed as part of the diploma thesis prepared under the supervision of the promoter Karol Kowalski
[Czudak 2024]

A similar approach was used in all aspects of the design in the Guangzhou Opera House (2005-2011), a project by Zaha Hadid's Architects. The external form was worked in Rhinoceros 3D software, while the interiors, with more complex and fluid surfaces, were developed in Maya software, while 2D drawings were done in AutoCAD software. Rhinoceros 3D software was used to model the NURBS surfaces of the opera house and the multi-functional performance hall. These surfaces were divided into triangular and quadrangular units, which facilitated the structural analysis of FEM, which is usually dependent on the discretization of the area into polygons.

The modeling in Rhinoceros 3D began with the general free-form modelling of the "stones", which were later translated into a combination of flat surfaces connected together using one of the digital tools to seamlessly round the two surfaces. Sap2000 Computers and Structures, Inc. (CSI) and the Ansys software were used to solve the opera's structural problems. A simple static system was used in the design of the structure, where the designers aimed to ensure that the steel joints between the curtain walls and the roof not only served a structural function, but also a static one, so that each steel section of the walls and the roof supported each other. Achieving this stability was possible only in a completely closed static system. In addition, modal analyses and seismic, wind and thermal simulations were performed using Sap2000 [Taiyun, Jiang 2010: 89-96].

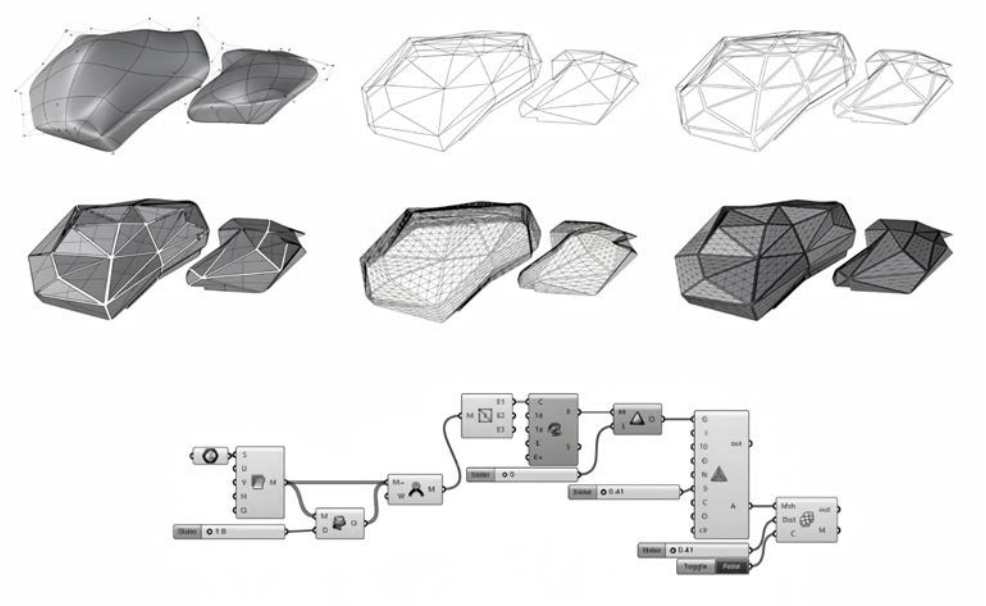

Fig. 9. Case study for Guangzhou Opera House (2005-2011), designed by Zaha Hadid Architects, Grasshopper program [author's work]

A different approach to construction was presented in Jacek Czudak's Oceanarium project. Here, the external envelope of the object is a reflection of the internal configuration of fluid functional zones. The external flexibility of the building skin gives the possibility for various combinations in the internal spatial layout of the building, which is legible and leads the visitor from the ticket offices to the points organized around the exhibitions. The organization of internal spaces develops along fluid paths and is based on the analogy to the city with streets and squares.

The challenge in an object with such spatial potential was to test the optimal solutions in an open iterative design system based on AutoCAD, Maya, Rhinoceros/Grasshopper, and above all on the Karamba software, which provided information for the modelling of the structure and helped in the complex processes related to the evaluation of the reliability and equilibrium analysis of the structural system and material technology. The Karamba plugin was used to revise the free form for the required calculations, but also due to its excellent performance in combination with the Rhinoceros/Grasshopper software. Karamba facilitates the connection of parameterized geometric models, which contributes to the improvement of automation processes in the creation of digital model variants in the early design stages. In addition, different optimization algorithms can be used in conjunction with Karamba in the iteration process, such as Galapagos, Octopus, Wallacei and many others [Preisinger 2024].

Using this plugin, the Oceanarium's envelope was discretized using a flat panel mesh, which helped to solve complex structural dependencies – the finite element method. It should be emphasized that the mesh geometry was to reflect the visual quality of the form, where each steel element of the object's envelope had a unique combination of forces. The flow of such information in traditional documentation would require tens of thousands of drawings and at least as many pages of calculations. The MES calculations provided gave the answer in the form of designing two independent structures. The internal skeleton of the object was made, designed in a traditional structure of concrete ceiling slabs supported by HEB beams and reinforced concrete columns. On the other hand, the complex structure of the envelope was made in a steel structure. The spatial truss skeleton model was optimized, where, instead of a triangulated mesh, a double orthogonal mesh was chosen, where their cross elements of circular cross-sections are provided for welding. In this way, the structural capabilities of the two mesh layers were combined so that they work as one spatial structure with locally diverse behaviors.

One of the key areas where AI will have an increasing impact is the precise execution of manufacturing tasks. Digital manufacturing, also known as digital fabrication, is "a subcategory of computer-aided design and manufacturing (CAD/CAM) because it uses computer-controlled machines as tools to cut or create parts" [Ford 2016: 1].

Analysing the Oceanarium project in Szczecin also in terms of the manufacturing aspect of the construction envelope, it can be seen how complex, time-consuming and error-prone the digital fabrication stage could be, if it were based exclusively on digital parametric design techniques, which will not replace information-rich feedback in the workflows between factory, construction and interdisciplinary design processes.

The final stage of the Oceanarium's freeform modelling had to be developed in Rhinocers/Grasshopper, where an accurate geometry of constant internal surfaces was generated. To verify the validity of the two-curved reference surface, Zebra analyses were performed to determine whether the roof curvature met G2 continuity. The data obtained made it possible to proceed to the phase of the facade design, which was to be solved by the use of bendable wood, whose trace follows spirally, emphasizing the form of the building. Based on a computationally efficient iterative rules system, each curved element of the wood cladding was modelled approximately to the surface geometry. The process by which high-quality façade cladding panels are obtained is based on algorithmic panelisation and optimization incorporated into a global script. As manufacturing processes become increasingly complex, such a process can now also be supported by artificial intelligence, which has the potential to revolutionise the manufacturing industry by increasing efficiency, reducing errors and developing innovations. In this way, by automating routine tasks, both production time and production costs are reduced. In addition, AI can analyze operational performance data in the production hall to identify potential problems before they change into costly processes.

5. CONCLUSIONS

At the current stage of development of artificial intelligence, identifying and interpreting its role in the architectural design process requires systematizing knowledge because; on the one hand, we have a fairly simple experience of changing the way of searching for architectural form in its early initiation stage. On the other hand, artificial intelligence in the third era of its development is implemented in CAD/CAM/CAE software programming languages, efficiently supporting users in specific decisions of the design process. The above experience is a description of the search for a form and all the consequences resulting from it. This practice is not conditioned by providing a large amount of information beyond defining inspiring patterns, images, forms, shapes, colors, textures. It is therefore a simple action, covering much less input data than the information that must be provided in the similar selection process of emerging a form modeled by digital parametric tools. Furthermore, to the geometric and spatial aspects, those related to structural and material activities, fabrication and assembly, and all the dependencies between them are also significant.

Despite the lack of a wide range of objective factors provided to AI generators, the assessment of the potential of artificial intelligence is promising. It provides us with output information in the form of an architectural concept obtained in real time, and is additionally distinguished by the multi-variant interpretation of text into an image. Nonetheless, it should be emphasized that in this multitude of obtained 2D images, we are dealing with a graphic declaration of the shape of a given object, which is not the parametric design, but it also does not exclude the use of digital parametric tools at later stages of the project, as long as the 2D image is converted into a 3D model. In the information space popularizing artificial intelligence, it is often mistakenly assumed that AI is currently able to autonomously design entire buildings in relation to forms with complex shapes. As can be seen from the current development of AI, this thesis is based only on the initial stage of emerging the architectural concept of the object, as already explained. The shape and features of such an object are subject to the need for constant validation based on a computationally efficient, iterative system of rules thanks to which multi-criteria analyses can be performed.

An additional conclusion that results from the use of AI illustrates that in freeform modelling, the use of basic strategies and methods available in Rhinoceros/Grasshopper based only on mathematically accurate NURBS geometry (Non-Uniform Rational B-spline) will be a constraint for designers (apart from the ease of use of simple tools of the aforementioned 3D modelers) in the initial phase of projects. Freeform surface modelers described by analytical functions that rationalize geometric elements will at certain initial stages of the project give way to subsurface modelers that are more capable of reflecting complex and intricate shapes. This is possible because objects generated by AI are forms with a strong effect that stand out from their surroundings in order to arouse strong aesthetic emotions. This is

about the ability of an object to evoke aesthetic experiences in the recipient, under appropriate conditions [Wallis 1968: 9]. This corresponds to the concept of the so-called aesthetic situation, in which the creator, the work and the recipient are united by aesthetic value [Gołaszewska 1970: 34].

In a short time, global trends of the future, which, among other things, shape society, the built environment and the profession of the designer, may lead to a more radical change in the architects' approach to computer-aided design processes. Looking at the development of AI in architectural design processes, a crucial role will be played here by machine learning algorithms, which also enable CAD systems to learn from user behavior, predict design preferences and offer intelligent suggestions, which is already happening in various industries such as medicine, chemistry and architecture, where artificial intelligence is slowly being implemented in BIM programming. The impact of AI-based automation and its practical implementation methods imply promising changes in the organization of design practice, but they may also lead to the trap of narrowly understood technological determinism at a rate that was not considered possible just a few years ago. As Antoine Picon notes, "technology is rarely the only explanation, especially in architecture, where so much depends on economic, social and cultural factors" [Picon 2010: 9].

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SZTUCZNA INTELIGENCJA I JEJ WPŁYW NA TRANSFORMACJĘ PRAKTYKI PROJEKTOWEJ NA PRZYKŁADZIE ARCHITEKTURY MODELOWANEJ PARAMETRYCZNIE. BADANIA Z WYKORZYSTANIEM GENERATORÓW MIDJOURNEY

Streszczenie

Sztuczna inteligencja (ang. *artificial intelligence* – AI) fundamentalnie zmieniła możliwości architektury. Technologia AI w swoich licznych przejawach jest uważana za oszczędzającą czas i zasoby, a ponadto zmienia sposób, w jaki robimy projekty. Na czele tej bezprecedensowej ewolucji stoi projektowanie parametryczne, które jest graficznym opisem problemu projektowego w sieci powiązań geometrycznych, które mogą być przetwarzane w różnych kontekstach przestrzennych. Od momentu, gdy międzybranżowy interfejs komunikacji został poszerzony o pierwsze zaawansowane programy modelowania parametrycznego 3D oraz BIM, minęły ponad trzy dekady. W tym czasie modelowanie cyfrowe zastępujące analogowy proces poszukiwania formy zostało ugruntowane w teorii architektury tysiącami publikacji i konferencji naukowych poświęconych tematyce CAD/CAM/CAE. Obecnie taką dziejotwórczą zmianę w podejściu do projektowania dostrzega się w sztucznej inteligencji, która jest dla architektów sposobem na szybkie generowanie atrakcyjnych wizualnie pomysłów, przede wszystkim dla obiektów o cechach formy swobodnej. W artykule przedstawiono badania zrealizowane z użyciem generatorów sztucznej inteligencji dla geometrycznie zaawansowanych form swobodnych uzyskiwanych w modelowaniu parametrycznym.

Słowa kluczowe: sztuczna inteligencja, uczenie maszynowe, projektowanie parametryczne, projektowanie cyfrowe, forma swobodna

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Przemysław KONOPSKI[1], Roman PILCH[2]

DO LEGAL REGULATIONS SUPPORT THE PROTECTION OF OBJECTS LISTED THE REGISTER OF MONUMENTS FROM NATURAL DEGRADATION?

The protection of registered monuments constitutes a crucial element of national heritage preservation policy, with appropriate legal frameworks playing a fundamental role. This article analyzes the current legal status of monument protection in Poland, highlighting the need for systemic legislative changes to enable more effective protection of properties with historical and cultural value. The research reveals significant shortcomings in existing regulations, leading to the marginalization of less prominent objects and ambiguity in their classification and conservation status. Furthermore, the article addresses the pressure from investors and developers to adapt buildings to current needs through changes in usage, often resulting in compromises that jeopardize the authenticity of monuments. The study emphasizes the need for a comprehensive system of financing and support for private owners of monuments, as well as the importance of an integrated approach to dilapidated objects losing their authenticity due to a lack of government support. Consequently, the proposed changes aim to improve the management and protection of these objects from degradation, ensuring that this valuable element of cultural heritage is preserved for future generations.

Keywords: monument protection, cultural heritage preservation, Polish law, legal framework, conservation, historical buildings, legislation, funding, private owners

1. INTRODUCTION

The preservation of cultural heritage and physical historical artifacts constitutes one of the significant challenges currently faced by public administration and society. The primary objective of activities aimed at protecting cultural goods, including the care for preserving the original historical fabric in buildings as well as the elements surrounding protected sites, is to ensure effective legal protection

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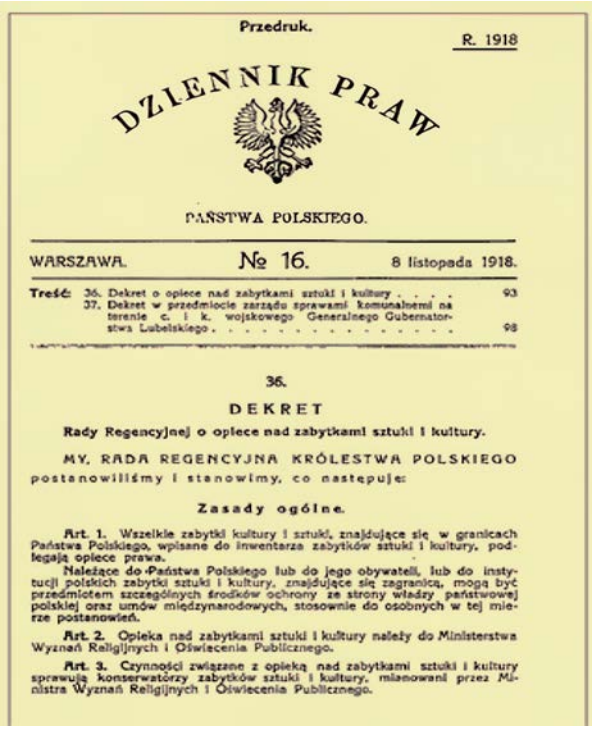
of monuments using appropriate legal instruments available to the administration in this domain. It is crucial to recognize that legal protection should not be conflated solely with conservation efforts; rather, it complements them in the context of decisions regarding planned initiatives aimed at the continued functionality of monuments within their environments. The broadly defined protection of monuments is a complex and multifaceted process that involves both administrative actions such as entries into the register of monuments, the issuance of permits for conservation works, and monitoring their implementation through specific conservation-related activities. Caring for monuments necessitates collaboration among various institutions and local communities, rendering this process dynamic and often complicated. In K. Zeidler's study, "The Law of Cultural Heritage Protection", three main instruments for the protection of cultural heritage are identified: legislation, funding for protection, and fostering public awareness of the necessity and obligation to preserve cultural heritage for current and future generations [Zeidler 2007]. Evaluating which of the aforementioned measures for the protection of monuments are effective and which require greater attention is crucial for preventing the irreversible destruction of national heritage, particularly in relation to historic artifacts in Poland. The subject of legal protection of monuments, especially in the context of challenges associated with maintaining buildings that are unfit for use, merits the attention of both the public and specialists, including experts not only in the fields of construction and architecture. It appears that the current involvement of experts from various scientific disciplines, such as history, archaeology, art, law, policy, architecture, management, and economics, is insufficient. By engaging a broader range of specialists, it is possible to develop more comprehensive and effective protection strategies. Such an integrated approach would allow for the consideration of various aspects and perspectives related to cultural heritage, which could, in turn, contribute to better management of these sites and their preservation for future generations.

The Legal Foundations of the Protection of Immovable Monuments in Poland

According to the definition provided in the statute, "An immovable monument is: a property, its part, or a collection of properties that are a work of human creation or associated with human activity and serve as a testament to a past era or event, the preservation of which is in the public interest due to its historical, artistic, or scientific value" [Art. 3, points 1 and 2 of the Act on the Protection of Monuments and the Preservation of Monuments]. "Immovable monuments are subject to protection and care, regardless of their state of preservation. This includes, in particular, cultural landscapes, urban and rural layouts, complex building structures, architectural and construction works, defensive structures, technical monuments, especially mines, foundries, power plants, and other industrial facilities,

cemeteries, parks, gardens, and other forms of designed greenery, as well as sites commemorating historical events or the activities of notable individuals or institutions" [Art. 6, paragraph 1, point 1 of the Act on the Protection of Monuments and the Preservation of Monuments] (Dz. U. 2003 Nr 162 poz. 1568, z późń. zm.).



Przedruk. R. 1918

DZIENNIK PRAW

PAŃSTWA POLSKIEGO.

WARSZAWA. № 16. 8 listopada 1918.

Treść: 36. Dekret o opiece nad zabytkami sztuki i kultury 93
37. Dekret w przedmiocie zarządu sprawami komunalnemi na terenie c. i k. wojskowego Generalnego Gubernatorstwa Lubelskiego 98

36.

DEKRET

Rady Regencyjnej o opiece nad zabytkami sztuki i kultury.

MY, RADA REGENCYJNA KRÓLESTWA POLSKIEGO postanowiliśmy i stanowimy, co następuje:

Zasady ogólne.

Art. 1. Wszelkie zabytki kultury i sztuki, znajdujące się w granicach Państwa Polskiego, wpisane do inwentarza zabytków sztuki i kultury, podlegają opiece prawa.

Należące do Państwa Polskiego lub do jego obywateli, lub do instytucji polskich zabytki sztuki i kultury, znajdujące się zagranicą, mogą być przedmiotem szczególnych środków ochrony ze strony władzy państwowej polskiej oraz umów międzynarodowych, stosownie do osobnych w tej mierze postanowień.

Art. 2. Opieka nad zabytkami sztuki i kultury należy do Ministerstwa Wyznań Religijnych i Oświecenia Publicznego.

Art. 3. Czynności związane z opieką nad zabytkami sztuki i kultury sprawują konserwatorzy zabytków sztuki i kultury, mianowani przez Ministra Wyznań Religijnych i Oświecenia Publicznego.

The research conducted by the authors of this publication has shown that the origins of legal protection of immovable monuments date back to the 19th century when it was understood how crucial it was to secure cultural heritage from destruction and degradation, particularly after the third partition in 1795, which resulted in the disappearance of the Polish-Lithuanian Commonwealth from the map of Europe. The magnates, landowners, and nobility, as key social groups in Poland, undertook various efforts to maintain the remnants of Polishness in their possession. They sought to safeguard national identity, cultural heritage, and traditions that were threatened in the face of various crises, both political and military. They organized cultural events, supported local artistic and educational initiatives, and aimed to protect monuments and sites of national memory. Their actions were intended not only to preserve history but also to inspire communities to nurture Polish values and customs. In their pursuit of maintaining a connection with their homeland, they also sought to support independence and patriotic movements that aimed to restore the Polish state. In this way, efforts were made to preserve national

consciousness and care for the national heritage. In the historical context of the history of the Polish State, we observe that in various geographically distributed territories under partitions, cooperation aimed at preserving Polish cultural heritage took place differently.

In the Prussian partition, authorities sought to implement systematic regulations aimed at the protection of monuments; however, these efforts were often dominated by Prussian ideology. The focus was on adapting sites to administrative and military needs, which led to their transformation into functions other than those originally intended. The system of care for the protection of monuments that had operated for years in Prussia was also established in the partitioned territories. Thus, by virtue of the decree of Frederick William II from 1815 and the decree of July 1, 1843, introduced by William IV, the Office of the General Conservator of Monuments was established, headed by Ferdinand von Quast (1807-1877), who held this position until his death. He was one of the most distinguished figures in the emerging discipline of conservation, effectively serving as the first Conservator Monument in Polish territories [Jasieńko, Kuśnierz 2008].

In the Austrian partition, conservation policy focused on the protection of cultural goods, which was associated with a certain respect for local traditions. Austrian authorities often invested in the restoration of monuments and supported initiatives aimed at their documentation. Many of these actions sought to garner social approval and win favor among the Polish population. In contrast, in the Russian partition, the policy towards Polish monuments was significantly more repressive. Russia aimed for national assimilation, which resulted in the neglect or even devastation of Polish historical sites. The Tsarist authorities not only neglected monument protection but often implemented changes to subordinate these sites to Russian ideology. Consequently, these differing approaches to monument policy adversely affected the condition of Polish cultural heritage and the perception of the role of these sites in shaping national identity during the partition era.

For many years during the partitions, when historical sites were often neglected or destroyed, the dreams of restoring them to their original state and once again enjoying the wealth of Polish culture were strong and widespread within society. After regaining independence in 1918, hopes for the restitution of lost cultural treasures became a priority, and many individuals engaged in efforts aimed at protecting and renewing these sites, which were an integral part of national identity. Consequently, one of the first legal acts of independent Poland was the decree issued by the Regency Council of the Kingdom of Poland on October 31, 1918, concerning the protection of monuments of art and culture, published in the Journal of Laws of the Polish State on November 8, 1918 (Gaczoł A. No. 16, Item 36.), is regarded as the first volume of the Journal of Laws RP (Online Legal Acts System, 1918).

Thanks to the decisions made under this decree, the protection of monuments became part of national policy. The “Journal of Laws” laid the foundation for the

legal framework that continues to be a key element of the state structure for monument protection, ensuring further development and adaptation of regulations in the context of changing social and cultural conditions.

Characteristics of Administrative Acts Establishing Conservation Protection for Monuments Listed in the Register at the Turn of the Centuries and in Contemporary Times

The current legal status stipulates that the entry in the register of monuments constitutes a key legal tool for the protection of heritage sites in Poland. The register was established based on the regulation of the President of the Republic dated March 6, 1928, concerning the protection of monuments. The introduction of a given site into the appropriate book of the monuments register concludes the administrative process, which ends with the issuance of the entry decision. The resources of the register are continuously updated as a result of both the addition of new sites that meet the definition of a monument and the removal of those that, for various reasons, no longer qualify for further conservation protection.

According to the authors of this publication, the currently understood and implemented set of practices regarding the formulation of conservation requirements is not sufficiently precise and is ineffective for the owners, managers, or users of historic buildings or their surroundings concerning the future fate of historic fabric. The authors' extensive experiences over more than 35 years in both designing and overseeing construction works on historic sites point to a number of situations encountered in the administrative procedures carried out by provincial heritage protection authorities. These procedures, when concluding with a set of imposed requirements for implementation, often rely on the subjective perspectives and evaluations of the architectural or urban structure rather than on universally applicable principles based on previously conducted thorough evidentiary and explanatory proceedings.

In light of the imposed requirements for the protection of specific historic factory, the authors identify the failure of heritage protection authorities to account for ambiguities in determining the actual historical value of these specific sites or their elements and parts. This oversight is often due to changes made to the property, sometimes without consultation with heritage protection services, during renovations or repairs carried out over time, and even significant reconstructions. Numerous subjective conservation decisions issued by heritage protection authorities often contain irrational justifications for the continued maintenance of these sites, disregarding real, logical, and relevant factors under various important aspects and criteria. These factors include the actual state of danger to people and property due to the poor technical condition of the site or structural elements as a result of aggressive biological corrosion affecting those elements, technical obsolescence of the property, loss of original historic values, and a lack of economic capacity, leading to an inability to provide further care for them.

The lack of sufficiently conducted, precise, and irrefutable effective research procedures that consistently determine the future fate of the former historical fabric of architectural and urban sites does not allow for a thorough assessment of the actual historical and technical values of the building or its immediate surroundings. Consequently, owners, managers, or users of such properties are obligated to continue using buildings that are subject to legal conservation protection, even though such safe usage is not feasible. Partial or complete failures or structural disasters affecting historic buildings, as observed in numerous cases, do not result in their removal from the register or conservation protection. In some instances, despite significantly advanced damage to the structures, mandates for repairs and the reconstruction of destroyed portions, including collapsed walls, ceilings, and roofs, are enforced, thereby reducing the quantitative proportion of the original historical fabric in the site to even a majority percentage relative to the remaining materials. As a result of such administrative practices, the actual historical value diminishes and fades, yet the site continues to be referred to as a monument.

According to the authors of this publication, the lack of a precise and objective system for adjudicating the fate of historic sites, in contrast to many current situations where subjective administrative decisions impose various mandates, leads to an "artificial" formulation of requirements by conservation authorities regarding the maintenance of positions on the continued protection of substances that lose their value for further protection after repairs or major renovations are carried out by owners, managers, or users. Instead of removing such repaired (no longer historical) substances from conservation documentation such as the register of monuments, these mandates perpetuate their status, despite the diminished historical integrity.

In many cases, this approach by heritage conservation authorities hinders the ability to take action to eliminate threats to people or property. Mandating the reconstruction while retaining partially old, technically worn, or biologically damaged elements due to corrosion in many instances will not meet the required standards set forth by building regulations for continued safe use. Furthermore, in such cases, a majority percentage of the replaced structural elements, which are old, are exchanged for contemporary ones made from modern materials or constructed using contemporary building technologies. This often results in a phenomenon known as "cladding" (covering or plastering), leading to a distorted perception of the actual remaining historical fabric after these interventions due to significant contemporary modifications.

The primary goal of the authors' research and the evidence presented in this publication is to improve existing practices in the dialogue with conservation authorities throughout the country. The authors believe this should lead to the establishment of proposed criteria and actions to clearly, albeit often subjectively, delineate the boundary separating potential continued maintenance of a historic site. By determining a set of recommendations or requirements for a specific site, which will

include improving the technical condition along with establishing criteria to guide the qualification of such a level of historical substance, as well as potential actions for its continued possible exploitation or a determination of such possibilities, a cycle of documenting the degree of damage to former structural elements will be initiated. This will involve conducting thorough expert assessments to decide on the removal or retention of the remaining structure in the register of monuments and the necessity for strict protection in accordance with applicable legal frameworks. This approach will help avoid protracted and complex disputes regarding the future of the building substance and the land it occupies while simultaneously contributing to more dynamic physical activities aimed at partially salvaging collapsing buildings and often devastated surroundings.

It is worth noting that over the years, the legal regulations governing matters related to entries in the register of monuments have undergone changes. Depending on the time when the entry was made, various legal acts could serve as the basis, such as the regulation of the President of the Republic from March 6, 1928, concerning "Protection of Monuments", the Act of February 15, 1962, "On the Protection of Cultural Goods and Museums", or the Act "On the Protection of Monuments and the Care for Monuments" u.o.z.o.z. which, together with the relevant executive acts, constituted and continue to constitute the legal basis for the registration of historic sites. Subsequent laws have shaped the development of Polish legislation concerning the protection of cultural heritage and the adaptation of regulations to changing social needs and realities. It should be emphasized that decisions regarding entries in the register of monuments made based on outdated regulations still hold legal power and consequences. This diversity of laws and regulations at the time of making entries, as analyzed by the National Heritage Institute, has revealed numerous flaws and shortcomings in the register of sites listed as monuments. Due to the variety of legal acts, the term "monument" has been understood in many different ways.

The authors of the research have undertaken an analysis of the causes of neglect of historic buildings, placing significant emphasis on identifying existing flaws in the legal system that affect the state of protection of these sites. The existing legal regulations, which should support the conservation and protection of monuments, often prove to be inadequate or even contradictory, leading to serious consequences such as buildings in poor technical condition. This analysis will encompass several key areas. The authors intend to examine the existing regulations governing the processes related to entries in the register of monuments, as well as those concerning conservation efforts. They will analyze how these regulations impact the application of measures aimed at protecting monuments. It is important to understand the extent to which gaps in legislation contribute to irregularities in the maintenance and management of historic buildings. Another objective of the research is to highlight specific examples of the inability to initiate conservation work due to a lack of funding resulting from ambiguities in the allocation of grants for the protection of

historic sites. Understanding these issues will allow for a better comprehension of the complexity of the problem and an assessment of the impact of regulations on the actual state of preservation of monuments.

The ultimate goal of this work is to propose specific recommendations that could improve the situation regarding the protection of monuments in Poland. These recommendations will include, among other things, changes in legislation that should consider more effective support mechanisms for monument owners. Through a comprehensive analysis and the involvement of specialists from various fields, the authors aim to create an integrated approach to monument protection that embraces both legal and technical aspects, while primarily addressing the needs of local communities and their relationship with cultural heritage. Such a process, undertaken in new realities, is crucial for ensuring the sustainability and integrity of Poland's cultural heritage for future generations.

2. MATERIALS AND METHODOLOGY

The researchers will focus on analyzing buildings listed in the register of monuments that are in very poor technical condition. They will identify the relationships between the legal status of ownership and the degree of degradation of unused sites, the distance of historic buildings from city centers and the extent of their destruction, as well as pinpointing sites that are deteriorating due to a lack of an ongoing functional plan, including the potential for changes in usage. It may be possible, through the conducted research, to identify a legal gap between the actions of the heritage conservation office and the state, as well as the legal issues faced by individuals wishing to donate a registered monument to the State Treasury.

The research was conducted on seven sites in very poor technical condition. They were divided according to their original functions, with two examples from each type: sacral buildings, manor houses that were subsequently transformed into residential estates, multifamily residential buildings ("tenement houses"), and single-family houses with a commercial component. Despite their very poor condition, none of these buildings have been removed from the register of monuments. The last of the studied sites is a typical "Polish Cottage", which, as the only one among the analyzed examples, was successfully removed from the register of monuments due to its poor technical state. The historic buildings under study are located in southern Greater Poland, specifically in the districts of Ostrów, Kalisz, Pleszew, and the city of Kalisz.

The research was conducted over the past few years and is based on the authors' own analyses supported by several years of studies. The scope of the analyses covers the years 2017 to 2024.

The buildings are owned both by the State Treasury and private owners. The research was conducted during site visits by the authors of the study and data obtained

from the Provincial Conservator of Monuments in Poznań, Delegatura in Kalisz. Initially, an analysis of the state of preservation was carried out, and the technical condition of the sites was examined, starting from sacral buildings, through manor residential buildings functionally linked with farmstead structures, and concluding with residential properties.

2.1. Sacral buildings

Evangelical chapel located in Koźmin

The first site under examination is an Evangelical chapel located in Koźmin, in Kalisz County, built in the early 20th century, around 1908, in the neo-Gothic style. The site served a sacred function for many years, and after World War II, until the end of the 1980s, it also served educational purposes (the building housed a pre-school). In the early 1990s, due to ownership issues, the site was returned to its rightful owner. Since the buildings are owned both by the State Treasury and private owners. The research was conducted during site visits by the authors of the study and data obtained from the Provincial Conservator of Monuments in Poznań, Delegatura in Kalisz. Initially, an analysis of the state of preservation was carried out, and the technical condition of the sites was examined, starting from sacral buildings, through manor residential buildings functionally linked with farmstead structures, and concluding with residential properties that time, due to a lack of regular maintenance and disuse, the site has experienced gradual degradation and vandalism.

Fig. 1. Evangelic chapel in Koźmin, photography from the year 2018
[arch. WKZ Delegation in Kalisz]

Fig. 2. Evangelic chapel in Koźmin, photography from the year 1910
[arch. WKZ Delegation in Kalisz]

Fig. 3. Evangelic chapel in Koźmin, photography from the year 2018
[arch. WKZ Delegation in Kalisz]

Fig. 4. Evangelic chapel in Koźmin, photography from the year 2018
[arch. WKZ Delegation in Kalisz]

Assessment of the degree of wear of individual elements of the site

The structure of the building is masonry with a traditional wooden roof truss covered with shingles. The ceiling above the usable and residential areas is constructed from wooden beams with a rectangular cross-section that are hinged on the load-bearing wall. It is double-sided boarded, filled with mortar, and plastered beneath the ceiling with reed.

The technical opinion prepared by the authors in 2018 regarding the existing technical condition revealed a significant degree of destruction of various parts of the building. The causes of degradation include unprotected areas of the roof covering and damaged gutters and downpipes. A high level of moisture present in the building, along with a lack of effective air circulation and heating, has gradually led to the development of mold and fungi, contributing to the loss of load-bearing capacity in the wooden structural elements and, consequently, to the collapse of the roof over practically the entire site.

Property building status

The site is listed in the register of monuments under number 485/Wlkp/A (*National Heritage Institute, Register of Monuments*, b.d.) as of April 17, 2007. The owner of the site is the State Treasury, and it belongs to the local government unit of the Commune Koźminek.

The second sacred site under examination is the Evangelical church located in Stawiszyn, in Kalisz County. It was built in 1874 and was maintained in very good condition until 1985. After this period, it underwent gradual degradation due to the loss of roof covering. In 2014, the site was desacralized and transferred to the Laera Foundation for the purpose of renovation and repurposing for cultural activities. Unfortunately, the renovation work never took place, and in 2022, the site was put up for sale. Inside, the church retains 18th-century organs and uniquely crafted wooden galleries.

Location of the site

The site is located in the center of the town of Koźminek at 13 Marii Konopnickiej Street, situated within a densely built urban area.

Post-Evangelical church located in Stawiszyn

Fig. 5. Post-Evangelical church in Stawiszyn, photography from the year 2024 [arch. WKZ Delegation in Kalisz]

Fig. 6. Post-Evangelical church in Stawiszyn, photography from the year 2024 [arch. WKZ Delegation in Kalisz]

Fig. 7. Post-Evangelical church in Stawiszyn, photography from the year 2024 [arch. WKZ Delegation in Kalisz]

Assessment of the degree of wear of individual elements of the site

The structure of the building is masonry with a traditional wooden roof truss covered with ceramic "turtle" roofing tiles. The church tower is constructed entirely of brick. As with the previous analyzed site, the degree of degradation has significantly progressed, leading to a gradual loss of load-bearing capacity of the roof structure. The lack of effective ventilation, heating of the building, and advancing mold have resulted in reduced static load capacity of the wooden beams used in the roof truss and roof rafters, ultimately leading to exceeded deflections and load-bearing and usage conditions of the individual structural elements of the roof.

At the connection of the roof truss with the tower, significant damage has occurred in the form of moisture-decayed bricks, resulting in a multi-degree lean of the tall masonry tower away from vertical. The instability of the structural system, characterized by the failure of the tower located in close proximity to a public road, led to the issuance of an immediate protective order by the Provincial Conservator of Monuments, Delegation in Kalisz, to secure the building against an impending structural disaster by implementing appropriate safeguards without the need for conservation work. As of today, these measures have not been executed.

Property building status

The site is listed in the register of monuments under number 622/Wlkp/A (*National Heritage Institute, Register of Monuments*, b.d) as of February 5, 2000. The owner of the site is the Laera Foundation, an independent entity.

Location of the site

The site is located in the center of the town of Stawiszyn at 2 Garbarska Street, situated within a densely built urban area.

2.2. Manor complexes

Manor and farm complex in Żydów

The first site under analysis is the palace in Żydów, located in the Gmina Godziesze Wielkie, Kalisz County. The origin of the site dates back, likely, to the 1790s, having been remodeled and transformed over the years into a residence through the addition of risalits on the southern, eastern, and western sides of the building. In 1912, after being purchased by a new owner, it underwent a series of changes, particularly in the interiors. After the end of World War II, the site remained in the hands of individuals. Over time, it became neglected and vandalized.

The building is located in a park listed in the register of monuments under number 534/A (National Heritage Institute, Register of Monuments, b.d.) as of July 25, 1990.

Fig. 8. Manor and farm complex, photography from year 1941
[arch. WKZ Delegation in Kalisz]

Fig. 9. Manor and farm complex, photography from year 2020
[arch. WKZ Delegation in Kalisz]

Fig. 10. Manor and farm complex, photography from year 2020
[arch. WKZ Delegation in Kalisz]

Assessment of the degree of wear of individual elements of the site

The building is a single-story structure with a usable attic and a basement. It is constructed in a masonry framework of solid bricks. The roof is supported by a traditional wooden roof truss covered with ceramic tiles. The ceiling above the basement is designed as a brick arch vault made of half-bricks. Above the ground floor, the ceiling structure is a mix of wood and brick.

Fig. 11. Manor and farm complex, photography from year 2020 [arch. WKZ Delegation in Kalisz]

Fig. 12. Manor and farm complex, photography rom year 2020 [arch. WKZ Delegation in Kalisz]

The authors' own analysis revealed a lack of a roof covering, which significantly contributed to the progressive destruction of individual structural elements of the building. The authors' own analysis revealed a lack of a roof covering, which significantly contributed to the progressive destruction of Significant dampness, the lack of an adequately secured roof, and window openings left without fillings, along with the lack of heating in the building, have contributed to the degradation of the site. In the interior, the brick ceilings of the basement have been 100% destroyed. In some areas, only a few steel beam remnants remain, which previously supported the brick ceiling. On the ground floor of the building, there are no wooden ceiling beams. In the wall at the height of the nonexistent ceiling, remnants of nesting

areas for beam supports can be observed. In the residential part, essentially only the framework of the building remains. individual structural elements of the building.

Property building status

The site is listed in the register of monuments under number 503/A as of August 26, 1988 (*National Heritage Institute, Register of Monuments*, b.d.). The owner of the site is a private individual.

Location of the site

The site is located in the village of Żydów in the Commune Godziesze Wielkie, Kalisz County.

Palace in Szkudły

The second analyzed object is the palace in the village of Szkudła, located in the Gołuchów commune, Pleszew County, near the tributary of the Trzemna River. The manor in Szkudła was constructed in the 1880s for Antoni Szkudelski, the owner of the village and the estate, who moved into it in 1789. In 1843, it came under Prussian control, and subsequently, the estate comprising 777 hectares was acquired by the German Edgar von Langendorff in 1930.

Fig. 13. Palace in Szkudły, photography from year 2021
[Przemysław Konopski]

After 1945, the building housed a kindergarten until the end of the 1980s. Following the political transformation in Poland in the early 1990s, the historic

manor was abandoned due to the lack of regulated ownership, leading to gradual degradation. Within just a few years of disuse, the structure suffered significant damage, leaving only the skeleton of the building. The ongoing degradation of the property was notable after World War II when it was transferred to state ownership, and a kindergarten was established within the building. The degradation worsened after the systemic changes in Poland in the early 1990s, leading to its abandonment.

Assessment of the degree of wear of individual elements of the site

The subject building is a single-story edifice with a habitable attic and a basement. It is highly probable that the roof was constructed using timber framing. The specific roofing material remains indeterminate. Evidence of the ceilings situated above the basement suggests that they were executed as vaulted brick constructions. The remnants of the building include well-preserved brick walls, stucco work, and cornices. Such rapid degradation of the property is likely attributable to the gradual illegal dismantling of elements, including roofing materials, wooden beams from the roof truss, and ceilings. The building's isolated location, distant from surrounding rural structures, as well as the lack of security measures to prevent unauthorized access, undoubtedly contributed to this situation.

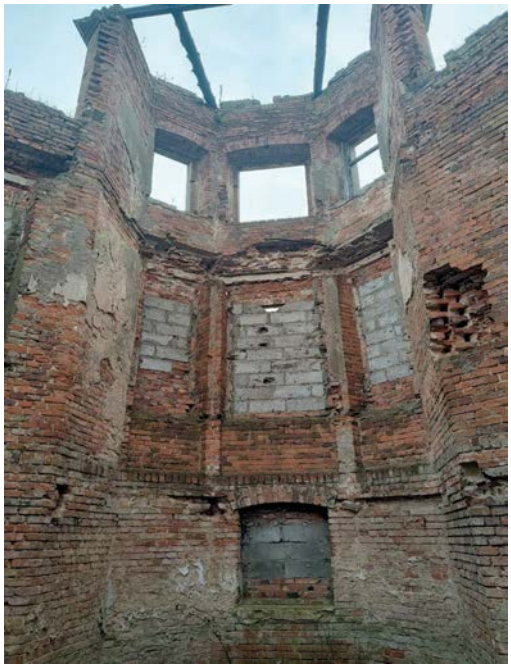


Fig. 14. Palace in Szkudły, photography from year 2021 [Przemysław Konopski]

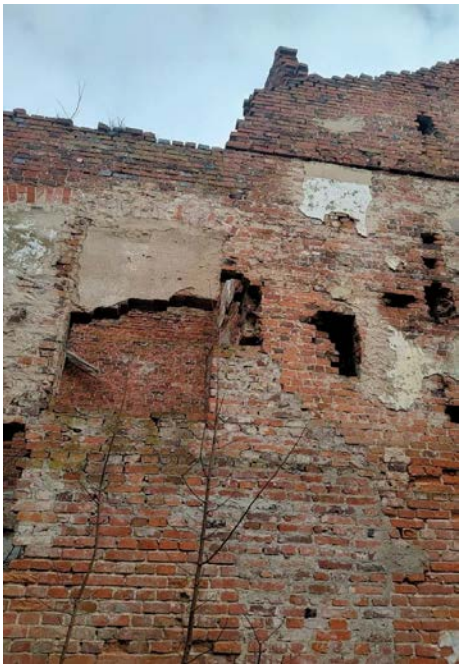


Fig. 15. Palace in Szkudły, photography from year 2021 [Przemysław Konopski]

Property building status

The property is listed in the registry of historic sites under the number 1513/A, dated April 11, 1974 (National Heritage Institute, Register of Monuments, b.d.). The ownership of the property is currently undetermined.

Location of the site

The property is situated in the village of Szkudła, within the Gołuchów commune, Pleszew County. It is located at a considerable distance from rural buildings and is not fenced, which facilitates access for unauthorized individuals.

2.3. Residential complexes

Residential building located at 17 Stawiszyńska Street in Kalisz

The first object analyzed within this category is the building located at 17 Stawiszyńska Street in Kalisz. The construction of the building is estimated to have occurred in the 1880s. This two-story structure, featuring a basement, came under municipal ownership after 1945 and became a communal residence inhabited by families on a temporary basis. The deteriorating technical condition of the building, compounded by the lack of maintenance from the municipal authorities, led to its gradual degradation. Additionally, successive tenants of the rental property, due to their lack of financial attachment to the building, progressively vandalized the site. The absence of sewage facilities and the reluctance of the city authorities to invest in the tenement ultimately resulted in an eviction order. From 2001 onwards, the inadequately secured building faced further deterioration. In 2021, the city authorities submitted a request to remove the historic designation from the registry; however, after an assessment by the National Heritage Institute, a negative decision regarding the delisting of the property was reached. In May 2024, the building was acquired by a private investor.

Fig. 16. Residential building located at 17 Stawiszyńska Street in Kalisz, photography from year 2024 [Przemysław Konopski]

Fig. 17. Residential building located at 17 Stawiszyńska Street in Kalisz, photography from year 2024 [Przemysław Konopski]

Fig. 18. Residential building located at 17 Stawiszyńska Street in Kalisz, photography from year 2024 [Przemysław Konopski]

Assessment of the degree of wear of individual elements of the site

The subject building is a two-story structure with a basement. The construction is masonry, featuring a traditional wooden roof truss covered with roofing felt. Above the basement, the ceiling is composed of brick laid on steel beams. The inter-story ceiling is constructed from wooden beams with a rectangular cross-section, supported at the joints on the load-bearing walls. The ceiling is double-sided boarded, filled with plaster, and finished with a reed-based render. An expert technical report prepared in 2024 regarding the existing technical condition revealed a significant degree of deterioration in various components of the building. Unprotected sections of the roof covering, along with damaged gutters and downspouts, led to substantial moisture infiltration within the structure. The lack of effective air circulation and heating gradually resulted in the development of mold and fungi, contributing to the loss of load-bearing capacity in the wooden structural elements. Consequently, this deterioration led to the collapse of parts of the roof and nearly all inter-story ceilings.

Property building status

The property is listed in the registry of historic sites under the number 503/A, dated August 26, 1988 (National Heritage Institute, Register of Monuments, b.d.). The owner of the property is a private individual

Location of the site

The property is located in Kalisz, in the city center, at 17 Stawiszyńska Street, in close proximity to the historic Bernardine Monastery complex, formerly belonging to the Jesuits, registered as number 59 on September 22, 1930 (National Heritage Institute, Register of Monuments, b.d.).

The building of the water mill on the Bystrzyca River

The second analyzed building serving a residential function with a service component is located in the village of Ołobok, within the Sieroszewice commune, Ostrowski County. Until the end of World War II, the building fulfilled its designated function. Following the war, it became inhabited by a private individual who was resettled from the eastern borderlands. Since then, it has not performed its original function. In 1982, a change of ownership occurred. After this period, the building remained unused and uninhabited, gradually falling into disrepair. In 2005, the owners submitted request to the Provincial Conservator of Monuments in Poznań to remove the building from the registry of historic sites. Following an assessment conducted by the National Heritage Institute, the relevant minister did not approve the delisting of the property.

Fig. 19. Water mill, photography from year 2023
[arch. WKZ Delegation in Kalisz]

Fig. 20. Water mill,
photography from year 2023
[arch. WKZ Delegation in Kalisz]

Fig. 21. Water mill,
photography from year 2023
[arch. WKZ Delegation in Kalisz]

Assessment of the degree of wear of individual elements of the site

The two-story building is constructed in a rectangular plan and covered with ceramic tiles. It consists of residential rooms on the ground floor and in the western part of the upper floor, as well as production chambers in the eastern section. The ground floor, designated for residential use, is masonry, while the production area is timber-framed; the entire upper floor is also timber-framed. Inside, a wooden staircase with a balustrade featuring turned spindles has been preserved. An ornamental inscription in an oval shape, which contains the initials of the first owner, is carved into one of the boards. The condition of the building is based on a site inspection conducted by employees of the Wojewódzki Conservator of Movements branch in Kalisz in March 2024. The analysis revealed a partial absence of roofing, which significantly contributed to the ongoing destruction of various structural elements. Moisture infiltration, inadequately secured roofing, and open window openings, along with the lack of heating within the building, have contributed to the deterioration of its technical condition. Wood rot has caused biodegradation of the wooden structural elements, leading to a weakening of the structure. The timber-framed configuration of the building has lost its stability, resulting in the warping of structural components.

Property building status

The property is listed in the registry of historic sites under the number 911/A, dated February 20, 1970 (National Heritage Institute, Register of Monuments, b.d.). The owner of the property is a private individual.

Location of the site

The property is located in Ołobok at 1 Brylińskiego Street, within the Sieroszewice commune, Ostrowski County. The building is situated on private land among other structures belonging to the same owner.

The wooden cottage building in Nowa Kaźmierka

The wooden building located in the village of Nowa Kaźmierka is specifically highlighted as it is the only analyzed structure in this study that has been removed from the registry of historic sites due to its poor technical condition. This property exemplifies the unique folk architecture of wooden buildings constructed in Poland over several centuries. The residential cottage was established in 1727, as evidenced by an inscribed date on a wooden ceiling beam, and is situated at number 29 in the village of Nowa Kaźmierka. The building was inhabited by a single family for generations. Despite intentions for restoration and implementation of various protective measures, it succumbed to deterioration.

Fig. 22. The old “Polish Cottage”, photography from year 2021
[Przemysław Konopski]

Fig. 23. The old “Polish Cottage”, photography from year 2021
[Przemysław Konopski]

Fig. 24. The old “Polish Cottage”, photography from year 2021 [Przemysław Konopski]

Fig. 25. The old “Polish Cottage”, photography from year 2021 [Przemysław Konopski]

Assessment of the degree of wear of individual elements of the site

The single-story building was entirely constructed in the 1930s of the 18th century from wood in a rectangular shape. The walls are made of logs arranged in a notched construction, with the ends chamfered. The infill between the logs consists of hemp rope and moss mixed with clay. The gabled roof is supported by a rafter-and-purlin system and is thatched. The ceiling that ties the walls together is made of wooden beams placed directly on the connecting walls.

Property building status

The property is listed in the registry of historic sites under the number 11/A (National Heritage Institute, Register of Monuments, b.d.). The owner of the property is a private individual.

Location of the site

The property is located in the village of Nowa Kaźmierka, within the Chocz commune, Pleszew County. The building is situated on private land among other structures belonging to the same owner.

3. PRESENTATION OF RESEARCH AREAS

The studied objects belong to a research group from the 1830s and early 20th century and are listed in the registry of historic sites. The analysis focused on buildings, categorizing them based on their original functions, the materials from which they were constructed, ownership status, and location. This categorization was intentionally selected to assess the damage to the objects in relation to their grouping. Additionally, the examined properties were evaluated regarding the degree of wear of individual components, original function versus ownership status, the legal status of the owners of historic buildings, and the procedures for dealing with properties deemed unfit for use. The removal of a monument that has been listed in the registry may occur if specific conditions are met, which effectively means that it loses the conservation protection granted to it. The grounds for delisting a monument from the registry are outlined in Article 13 of the Act on the Protection of Monuments and the Preservation of Monuments u.o.z.o.z (Dz. U. 2003 Nr 162 poz. 1292, as amended.)

Grounds for delisting include the destruction of the property to an extent that leads to the loss of its historical, artistic, or scientific value. Delisting may also occur if new scientific findings challenge the previously established values that were the basis for its listing. Moreover, if the monument is included on the Heritage Treasures List, registered in a museum inventory, or incorporated into the national library resources, this too will result in its removal from the registry. The table below shows the number of objects delisted from the registry of historic sites from 1954 to 2016.

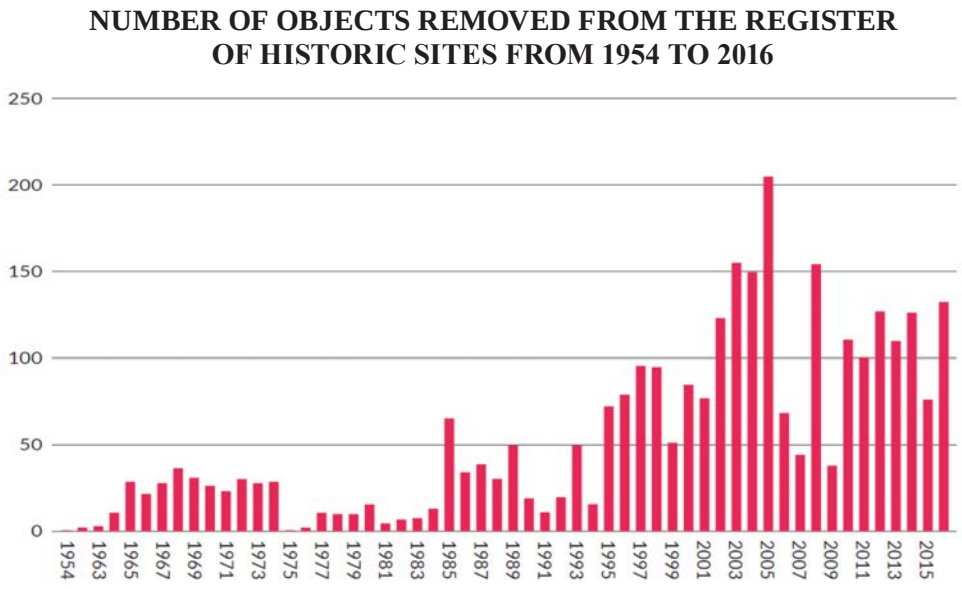


Fig. 26. Number of objects removed from the register of historic sitest from 1954 to 2016 [Rozbicka et al. 2017]

The subsequent diagram presented below illustrates the percentage share of delisted historic objects based on their original function. It indicates that residential buildings constitute the largest group among those removed from the registry. This may be related to their everyday use, which leads to natural wear and tear, but primarily due to the lack of adequate funding for their conservation. The fact that this category of buildings most frequently loses its historic status underscores the need for a detailed examination of conservation policies and support for owners in maintaining and protecting cultural heritage. Residential buildings account for over 30% of all delisting cases.

This may suggest that objects with such functions are more prone to changes or degradation, leading to their removal from the registry. Often, various factors related to the need for modernization or changes in usage may contradict conservation requirements. Data from the report concerning the delisting of residential buildings clearly indicate that a key challenge in the context of protecting historic properties is ensuring adequate funding for their conservation and maintenance. This is particularly significant, as many of these properties are owned by private individuals who may not have sufficient resources to meet the costs associated with their renovation and preservation in good condition. The lack of appropriate financial support can result in the deterioration of these buildings, which in turn threatens their historical and cultural value. Therefore, it is crucial that the financial support system be well-designed, providing owners with necessary funds and guidance, which could assist in effectively protecting these valuable properties.

SHARE OF OBJECTS REMOVED FROM THE REGISTER OF HISTORIC SITES FROM 2005 TO 2016 BASED ON ORIGINAL FUNCTION

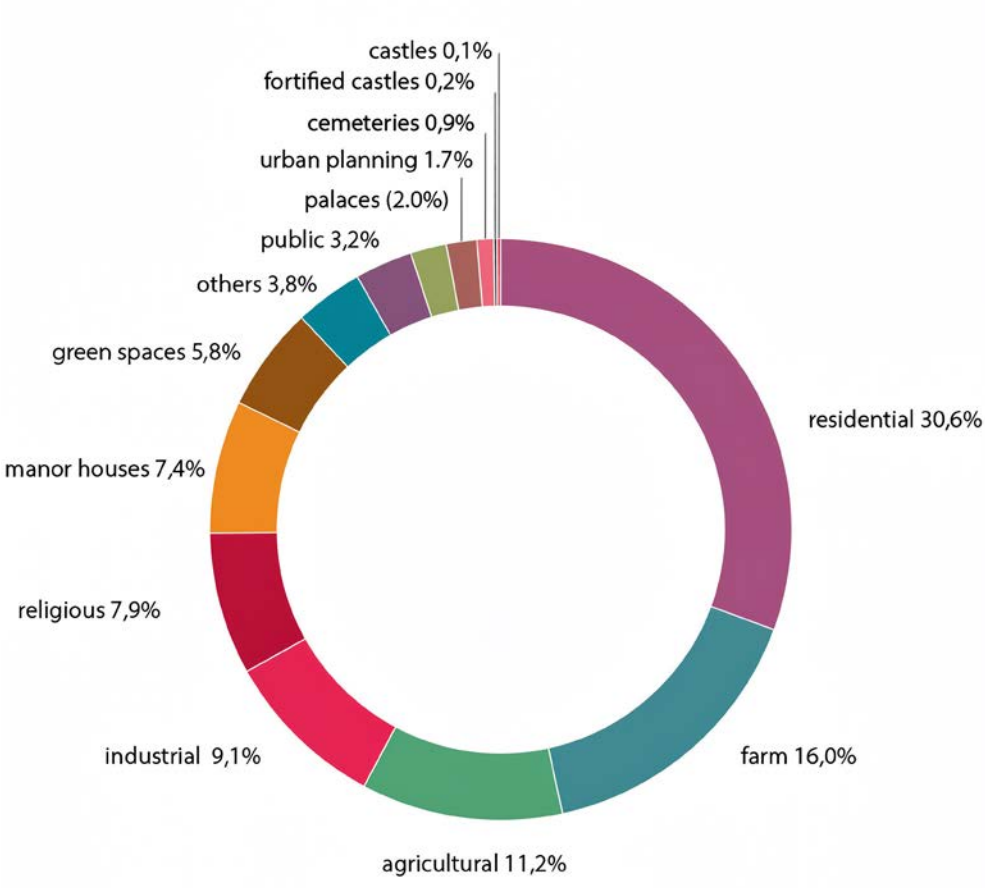


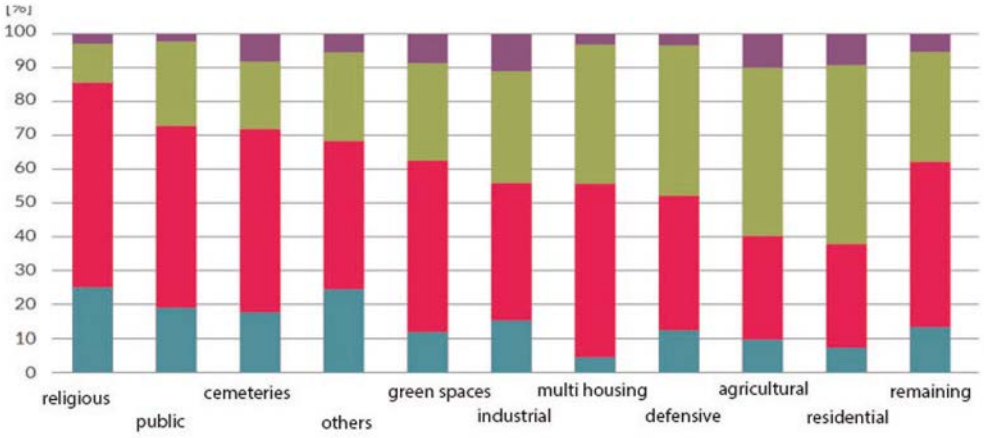
Fig. 27. Share of objects removed from the register of historic sites from 2005 to 2016 based on original function [Rozbicka et al. 2017]

ORIGINAL FUNCTION VS. OWNERSHIP STATUS

The diagrams presented in the report regarding the relationship between original function and ownership status provide clear evidence of the correlations arising from the form of ownership in relation to the function and degree of deterioration of individual objects. In the analyzed group of historic sites, they were organized according to their original functions, which included religious, defensive, residential, agricultural, industrial, residential, public utility, cemeteries, green spaces, and others. The assessment of the overall state of preservation of these objects in the context of their original functions revealed significant differences among the various groups.

The classification based on the overall state of preservation of the objects is divided into four groups:
0 – very good condition,
1 – good condition,
2 – average condition,
3 – poor condition.

OVERALL CONDITION OF BUILDINGS IN RELATION TO THEIR ORIGINAL FUNCTION



3	2,0%	2,4%	8,1%	5,8%	8,8%	11,1%	3,6%	4,0%	10,4%	9,4%	5,4%
2	12,9%	24,7%	20,3%	26,1%	29,1%	33,3%	41,0%	44,0%	49,6%	52,9%	32,4%
1	60,0%	54,1%	54,0%	43,5%	50,7%	40,7%	51,1%	40,0%	30,4%	30,6%	49,0%
0	25,1%	18,8%	17,6%	24,6%	11,4%	14,9%	4,3%	12,0%	9,6%	7,1%	13,2%

Fig. 28. Overall condition of buildings in relations to their original function [Rozbicka et al. 2017]

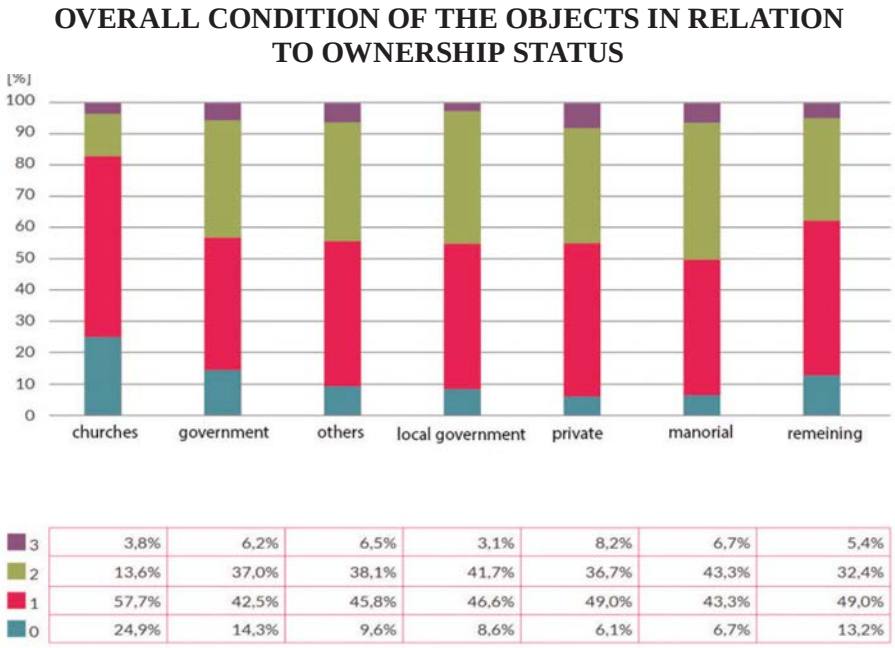


Fig. 29. Overall condition of the objects in relation to ownership status [Rozbicka et al. 2017]

LEGAL STATUS OF THE OWNERS OF HISTORIC PROPERTIES

The legal situation after November 17, 2003, when the Act of July 23, 2003, on the Protection of Monuments and Care for Monuments came into force, underwent significant changes in terms of administration. This Act significantly contributed to the operational capabilities of legal institutions that functioned based on the previous legislation regarding monuments, namely the 1962 Act on the Protection of Cultural Goods. The introduced changes aimed to adapt regulations to contemporary challenges associated with the protection of cultural heritage and align them with current social and market needs. The new regulations included changes to the organizational structures responsible for monument protection, which seemed to enable more efficient management and oversight of conservation and restoration processes for historic objects. The importance of collaboration among various institutions, both state and local, in protecting and promoting cultural heritage was also recognized. As a result, the modernized Act on the Protection of Cultural Goods revised existing norms and created new legal frameworks that are more appropriate for contemporary realities. Following the implementation of the new law, the rights and responsibilities of owners of historic buildings were clearly defined. These issues have a significant practical dimension, as owners of heritage sites bear a range of important obligations. Failure to fulfill these can lead to serious consequences,

such as fines or even expropriation. The legislator emphasizes the crucial role of actions taken by public administration, and the status of conservation offices has been markedly strengthened. A notable increase in the supervisory powers of institutions dealing with monument protection can be observed. Additionally, the legislator initiated the strengthening of the procedural position of the conservator. According to Article 95^{17}u.o.z.o.z. The conservator has the right to act in various roles; they can be a party in civil and administrative proceedings, as well as a prosecutor in criminal cases and a public prosecutor in cases related to offenses. Key legal elements of the Act that significantly impact the legal status of owners of historic properties include conservation recommendations and conservation supervision. These mechanisms ensure proper protection and conservation of historic objects, which is crucial for preserving their historical and cultural value. Furthermore, criminal provisions form an important component of the cultural heritage protection system, introducing preventive measures that encompass actions that may lead to the vandalism of monuments or their illegal trade. Owners of historic properties are also required to obtain numerous permits, which are associated with various formalities that must be fulfilled to legally manage their properties. A new requirement in the regulations is the obligation to obtain a permit from the Provincial Conservator of Monuments for conducting searches for movable monuments, including archaeological finds, using metal detectors. This regulation aims to enhance control over such searches to prevent unauthorized extraction and degradation of valuable historical artifacts. The Act also includes limitations regarding property rights. According to Article 26 of the Act on the Protection of Monuments and Care for Monuments (u.o.z.o.z. in the case of entering into a sale, exchange, donation, or lease agreement for an immovable historic property, the Provincial Conservator of Monuments has the right to impose the obligation to carry out necessary conservation work within a specified timeframe. As a result, this modifies the legal relationship between the parties, whereby the conservator has the duty to oversee the conservation efforts. The Act also imposes obligations on the owner or holder of a property listed in the registry. Chapter 11 of the Act contains provisions regarding criminal law. Failure to fulfill responsibilities related to the protection of monuments, such as failing to inform the Provincial Conservator of Monuments about damage, destruction, or theft of a historic item, is treated as an offense that carries a penalty of a fine.

Furthermore, the failure to inform the appropriate conservator about any threats to historic sites is also subject to an offense or crime. This provision has significant preventive importance, as it encourages owners and managers of heritage sites to adopt a more responsible approach to their obligations, allowing for quicker responses in crisis situations. It is also important to note Article 110 of the Act. This provision clearly states that failing to secure a historic property against damage, destruction, or theft is treated as an offense, subject to severe sanctions – potentially resulting in imprisonment, restriction of liberty, or fines. Such regulations aim not only to penalize improper conduct but also to motivate owners and managers

to undertake protective measures and responsibly manage conservation efforts, which, in the long term, contributes to better protection of cultural heritage. The Act also introduced the institution of conservation oversight. The control of compliance with and application of regulations concerning the protection and care of historic sites plays a crucial role by enabling monitoring of actions in this area. The concept of oversight can be defined as the process of examining and evaluating the activities of other entities according to established criteria. Conservation oversight has the potential to become a significant tool in the hands of the conservator.

The scope of authority for those responsible for oversight is quite broad. Inspectors have the right to request the presentation of documents and any information related to the subject of the inspection, as well as to require oral and written explanations essential for accurate assessment of the situation. Additionally, inspectors have the right to enter the property, based on reasonable suspicion of damage or destruction of a historic site. In the context of inspection activities, they also have the ability to make entries in the construction log as specified by building law provisions. The conservator issues post-inspection recommendations or may choose not to issue such recommendations and instead take other actions, such as deciding to suspend construction work taking place at the monument. The recipients of these recommendations are both the managers of the inspected entities and individuals. The law, in accordance with the applicable statute, also grants rights to the owner or possessor of the property. They can submit a request for the issuance of conservation recommendations. This document, according to the Act on the Protection of Monuments and Care for Monuments, is an official document issued by the appropriate conservation authorities, containing guidelines regarding actions necessary for the preservation, protection, and conservation of the historic property, including detailed recommendations for conservation work specifying techniques and materials to be used, guidelines for managing the property to ensure proper usage, and information on formal requirements concerning the necessity of obtaining the appropriate permits before commencing any work, as well as timelines and schedules for implementing these actions, aimed at ensuring the durability of the monument for future generations. Recommendations must be issued in writing, and their issuance can be a manifestation of goodwill and cooperation with heritage protection authorities. These materials are provided free of charge along with a copy of the iconographic and documentary evidence. This is detailed in Article 25 of the Act on the Protection of Monuments and Care for Monuments u.o.z.o.z. The owner or manager of a construction facility is also subject to periodic inspections of the technical condition of the building, installations, and conduits in accordance with Article 62 of the Building Law. This article refers to the mandatory, periodic inspection of the technical condition of buildings and their installations and conduits. According to this provision, both owners and managers are required to conduct regular inspections aimed at assessing the safety and functionality of these structures. Conducting such inspections at set intervals enables early identification of potential defects and

irregularities that could pose risks to users of the building or to the structure itself. Maintaining an appropriate technical condition of the facilities is crucial for ensuring public safety and the health of individuals. Owners and managers may also seek the advice of specialists, such as structural engineers, who can provide detailed technical assessments and recommend necessary maintenance or modernization work. The incorporation of this provision into Polish legislation underscores the importance of owner responsibility in maintaining the proper quality of construction infrastructure, which is essential for the protection of heritage and the long-term durability of buildings.

PROCEDURES FOR HANDLING PROPERTIES NOT FIT FOR USE

In situations where the technical condition of a building shows signs of imminent failure or has already experienced a failure, it is crucial to conduct an objective analysis to determine the causes of this unfavorable condition. Such assessments aim not only to identify the sources of the problem but also to formulate specific recommendations regarding how the property can be permitted for continued use. To ensure the reliability and impartiality of these findings, the participation of an expert who is independent of all entities responsible for the construction, management, or use of the property is essential. This specialist, possessing the necessary knowledge and experience, can conduct a thorough evaluation of the technical condition and identify both the causes of potential failures and recommend necessary repair or protective measures. To secure a building that is unfit for use, specific actions must be taken to protect the structure and ensure the safety of the surrounding area. Initially, a detailed assessment of the building's technical condition should be conducted with the involvement of a qualified specialist to identify key structural issues, allowing for the safeguarding of the property against further degradation. Next, access to the building must be restricted by installing appropriate fencing and informational signs to prevent unauthorized entry and to deter break-ins or other hazardous incidents. As part of the security measures, any dangerous elements, such as loose structural fragments that could pose a threat to the surroundings, should be removed. Additionally, it is important to protect the building from adverse weather conditions. This may involve repairing the roof and covering windows and doors with materials that effectively guard against water, moisture, and wind. Regular inspections of the building's technical condition, even after implementing protective measures, will allow for early detection of potential problems and their immediate resolution. It is also essential to document all protective works meticulously, as this may aid in future decisions regarding further use or renovation of the property. Before undertaking any actions, it is necessary to inform the relevant conservation authorities of the intention to conduct an analysis regarding further proceedings related to the protection and conservation of historic properties. Such notification is crucial to ensure that all actions taken in this regard comply with legal regulations and principles of cultural heritage protection. Highlighting

the need to collaborate with the conservator will enable the acquisition of necessary guidance and recommendations for subsequent steps, aiming to ensure proper management of the property and its safety.

GRANTS FOR IMMOVABLE MONUMENTS IN 2016 BASED ON THE ORIGINAL FUNCTION OF THE MONUMENT WITH THE PARTICIPATION OF STATE ORGANIZATIONAL UNITS

The characteristics of the funding level for immovable monuments listed in the registry are limited to issues related to the amount of funding allocated for conservation, restoration, and construction works, taking into account the eligible entities receiving grants. Tabular data indicates the percentage share of financial resources allocated by individual state units

GRANTS AWARDED IN 2016 BY THE MINISTER OF CULTURE AND NATIONAL HERITAGE, PROVINCIAL CONSERVATORS OF MONUMENTS, LOCAL GOVERNMENT UNITS, AS WELL AS THE NATIONAL FUND FOR THE REVALUATION OF MONUMENTS IN KRAKÓW AND THE CHURCH FUND FOR IMMOVABLE MONUMENTS, INCLUDING CATEGORIZATION BASED ON THE FUNCTIONS OF MONUMENTS

Function of the building	Minister		WKZ		Commune		County	
	grants	%	grants	%	grants	%	grants	%
Religious	50 299 420	64,6	9 365 483	56,6	20 189 613	39,4	3 464 556	84,8
Defensive	2 821 300	3,6	219 216	1,3	1 223 700	2,4	0	0
Castles	5 724 207	7,4	432 000	2,6	45 000	0,1	86 500	2,1
Public utility	485 772	0,6	473 941	2,9	1 771 905	3,5	133 000	3,3
Residentional	4 292 773	5,5	1 065 055	6,4	153 000	0,3	13 000	0,3
Green space	128 630	0,2	0	0	28 500	0,1	50 000	1,2
Manor	0	0	40 000	0,2	0	0	0	0
Agricultural	940 000	1,2	248 155	1,5	180 000	0,3	0	0
Residential	11 579 095	14,9	3 810 444	23,0	24 352 617	47,5	201 792	5,0
Industrial	0	0	225 958	1,4	274 000	0,5	30 000	0,7
Cemeteries	180 000	0,2	188 000	1,1	666 000	1,3	20 000	0,5
Archaeology	0	0	0	0	0	0	0	0
Others	1 390 000	1,8	493 882	3,0	2 345 583	4,6	85 000	2,1
In summary	77 841 197	100	16 562 134	100	51 229 918	100	4 083 848	100

Fig. 30. Grands awarded in 2016 by Minister of Culture and National Heritage, Provincial Conservators of Monuments [Rozbicka et al. 2017]

Regional Government		NFRZK		FK		in summary	
grants	%	grants	%	grants	%	grants	%
0	0	-	-	1 022 000	14,7	24 928 966	13,2
1 035 925	11,8	-	-	527 500	7,6	8 246 256	4,4
0	0	-	-	35 000	0,5	2 351 332	1,3
790 867	9,0	-	-	153 500	2,2	6 520 548	3,5
1 582 955	18,1	-	-	440 000	6,3	9 619 432	5,1
680 000	7,7	22 700 352	100	135 000	1,9	36 098 517	19,2
0	0	-	-	1 513 800	21,7	27 428 332	14,6
0	0	-	-	0	0	6 639 711	3,5
2 194 000	25,0	-	-	649 100	9,3	11 609 834	6,2
0	0	-	-	50 000	0,7	3 092 057	1,6
628 011	7,2	-	-	390 250	5,6	12 341 243	6,6
365 000	4,2	-	-	158 500	2,3	6 551 096	3,5
43 000	0,5	-	-	45 300	0,6	2 149 192	1,1
33 000	0,4	-	-	235 500	3,4	10 097 795	5,4
493 000	5,6	-	-	823 800	11,8	9 854 578	5,2
919 000	10,5	-	-	793 700	11,4	10 626 268	5,6
8 764 758	100	22 700 352	100	6 972 950	100	188 155 157	100

Fig. 31. Grands awarded in 2016 by Provincial Conservators of Monuments, Local Government Units, as well as The National Fund for the Revaluation of Monuments in Krakow and The Church Found [Rozbicka et al. 2017]

The diagram below illustrates the implementation of substitute renovations to be carried out by the Voivodeship Conservators of Monuments. Substitute renovations at historic sites are actions undertaken in situations where the owner or user of the monument fails to fulfill the obligation to maintain the site in an adequate condition. In such cases, the Voivodeship Conservators may commission the necessary conservation, renovation, or protective works on behalf of and at the expense of the owner. The aim of these renovations is to protect the monument from further deterioration, to preserve its historical, artistic, or scientific value, and to safeguard it against destruction. The costs of these renovations may subsequently be recovered from the owner through administrative or legal procedures.

Voivodeship	2010		2011		2012		2013		2014		2015		2016		2008–2016	
	costs	%	costs	%	costs	%	costs	%	costs	%	costs	%	costs	%	costs	%
Dolnośląskie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kujawsko-pomorskie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lubelskie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lubuskie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Łódzkie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Małopolskie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mazowieckie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Opolskie	78 787	96,0	0	0	0	0	62 743	47,0	131 715	99,0	0	0	58 018	100	331 263	52,0
Podkarpackie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Podlaskie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pomorskie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Śląskie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Świętokrzyskie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Warmińsko-mazurskie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wielkopolskie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Zachodniopomorskie	2 900	4,0	6 769	100	71 229	100	70 100	53,0	1 722	1,0	153 381	100	0	0	306 101	48,0

Fig. 32. Grands awarded in 2016 by the Voivodeship Conservators of Monuments [Rozbicka et al. 2017]

4. CONCLUSIONS AND RESULTS

The analyzed cases of the condition of immovable monuments demonstrate a significant relationship between their state and various characteristics, such as spatial form, utility values related to their original purpose, the form of ownership in relation to the intended function of the monument, and location. This is indicated by both the authors' own research and the data presented in the NID report. The degree of deterioration of the examined objects is dependent on many factors. The relationships presented in the graphs illustrate certain correlations, which are also confirmed by the authors' own studies. Each of the presented correlations results in a degree of destruction and indicates which objects have a chance of survival and which are subject to degradation. The quality of a historic site is influenced not only by characteristics related to its form and substance but also by the attitudes of owners, users, and others engaging with its attributes, as well as conservation practices concerning its assessment. An important element affecting the condition of immovable monuments is also their form of ownership and the associated mode of use. The analyses conducted regarding removals from the register of immovable monuments, which significantly increased at the beginning of the 21st century, reveal a substantial rise in removals compared to previous years. The increase in the number of removals not only negatively impacts phenomena associated with the loss of cultural heritage but also indicates insufficient actions in the field of monument protection and non-compliance with existing norms and regulations. This may be a result of inadequate management of these properties, as well as a lack of public awareness regarding the cultural and historical value of the buildings and areas that have been registered. The removal procedure is typically initiated by the owner or user of the

property; however, it can also be initiated by the appropriate heritage protection authorities based on field verifications. The registration of a monument is executed by the Voivodeship Conservators, while the actual decision to remove a property from the register is made by the Chief Conservator, often after obtaining the opinion of the National Heritage Institute (NID). The decision-making process involves the necessity of interpreting legally undefined concepts. A key consideration is whether the technical condition or new scientific discoveries justify the decision to remove the object from the register. Although decisions regarding removals are generally exceptional – since the vast majority of applications receive negative responses – there remains significant administrative discretion in this area, and the jurisprudence can be inconsistent. Despite the general principle of protecting monuments regardless of their physical condition, the actual state of the property often determines its retention in the register. Furthermore, this decision has irreversible consequences, as objects removed from the register typically undergo rapid demolition or significant renovation. The phenomenon of intentional destruction of historic objects to facilitate their removal from the register is a challenging and controversial issue in the field of cultural heritage protection. Owners may engage in such actions with the intent to free up land for new investments that would not be burdened by conservation restrictions. This practice not only undermines the principles of monument protection but can also lead to the irreversible loss of cultural heritage, which constitutes a significant part of history and social identity. The inadequacy of legal procedures and their potential gaps can unfortunately facilitate such actions. It is crucial for the relevant legislative bodies and conservation institutions to implement effective preventive measures, reinforcing legal regulations and educating owners about the value of the heritage they possess.

The following diagram illustrates the percentage of removals of historic objects based on their original function. It indicates that residential buildings constitute the largest group among those removed from the register. This may be related to their everyday usage, which leads to natural wear and tear, but primarily stems from a lack of adequate resources for their conservation. The fact that this category of buildings most frequently loses its historic status underscores the need for a detailed examination of conservation policies and support for owners in maintaining and protecting cultural heritage. Residential buildings account for over 30% of all removal cases. This may suggest that objects with such a function are more susceptible to changes or degradation, leading to their withdrawal from the register. Often, such decisions may stem from factors associated with the need for modernization or changes in usage that may contradict conservation requirements. Data from the report regarding removals of residential buildings clearly demonstrate that a key challenge in the protection of historic properties is ensuring adequate funding for their conservation and maintenance. This is particularly important, as many of these properties belong to private owners, who often may not have sufficient resources to cover the costs associated with their renovation and upkeep. A lack of proper financial support can

lead to the deterioration of the technical condition of these buildings, which in turn threatens their historical and cultural value. Therefore, it is essential that the financial support system is well-designed, providing owners with necessary funds and guidance, which could help in the effective preservation of these valuable objects.

Analyzing the diagram related to the correlation between damages and original function confirms the authors' own research. Through a broad spectrum of analysis, it can be stated that among the group of objects most susceptible to damages are those in the hands of private individuals, local governments, and properties managed by these mixed groups. In particular, the highest degree of degradation pertains to objects used for residential, economic, and estate purposes. Residential objects often suffer damage due to insufficient financial support for their conservation, which is problematic in cases where owners lack the ability to invest in necessary renovation work. On the other hand, economic buildings, which may receive less protection, also suffer from a lack of appropriate regulations, and their loss of historical value is often a result of the absence of protection plans and management strategies. Moreover, residential objects, predominantly owned by private individuals who may have significant historical importance, are exposed to destruction related to modernization and changes in purpose, leading to partial or complete loss of their value. In such scenarios, it becomes urgent to undertake actions aimed at protecting these valuable resources, both by increasing owners' awareness and by supporting conservation institutions in their efforts to protect cultural heritage. The research has shown a crucial correlation confirming the degree of damages to historic objects in relation to the financial investments allocated to individual objects analyzed based on their functional division. Grants provided in 2016 by the Minister of Culture and National Heritage, Voivodeship Conservators of Monuments, Local Government Units, and the National Fund for the Revaluation of Monuments in Krakow demonstrated the funding levels for each object according to its functional purpose. The correlations between the properties in the best technical condition and the percentage of funds allocated for their protection indicate that 84.8% of the best-funded objects are sacred buildings. Data presented in the NID Report align with the authors' own research, as exemplified by two sacred objects mentioned in the research method. The building of an evangelical chapel in Koźminek received funding for renovation and reconstruction in 2022. As of today, the facade has been completed and restored, along with the installation of a new roof structure and covering. Meanwhile, the other sacred object, the Evangelical church in Stawiszyn, received approval for the repair of the church tower and replacement of the damaged roof structure and covering as part of general construction repairs, so the tower does not collapse and destroy the remaining part of the building. Local government units also became financially involved in the reconstruction. The location of the analyzed sacred buildings is also important. They are situated in city centers, which significantly influences the willingness to make repairs to buildings at risk of destruction. Public awareness has played a key role

in shaping behaviors related to sacred objects, affecting not only their perception but also the way in which they are utilized and respected in the community. Shared values, norms, and social beliefs determine how people relate to places and objects of religious significance, ultimately leading to the protection and nurturing of sacred cultural heritage.

Conversely, the remainder of the buildings received only 15.2% of funding, indicating that financial support for their protection and conservation was significantly limited, negatively affecting their technical condition. Both the authors' analyses and studies by other experts (NID Report) show how low the financial support is for buildings in the categories of estate, economic, and residential objects, which received 0% funding from the Ministry of National Heritage and Culture, Voivodeship Conservators of Monuments, and local governments. This represents the most neglected and endangered functional group of monuments. A common denominator for many of them is the loss of original functions, resulting from systemic, economic, and social transformations. Residential, economic, and estate objects are gradually undergoing degradation, losing not only their functions but also their historical and architectural values.

The execution of substitute renovations for historic objects at risk of destruction shows even worse results. Substitute renovations, as conservation actions aimed at securing and maintaining monuments, especially in cases where the owner or possessor of the object is unable or unwilling to carry out the necessary renovation work, are not being conducted at all. Such renovations should be undertaken by appropriate institutions, such as the Voivodeship Conservators of Monuments, which in crisis situations can perform conservation work at public expense. The purpose of substitute renovations is to protect monuments from further degradation and to preserve their historical and cultural values. These actions may include basic protective works, such as sealing roofs, securing facades, or repairing structural elements that are crucial for maintaining the stability of the object and can prevent the loss of load-bearing capacity of individual structural components, which could ultimately lead to the destruction of the object. Conducting substitute renovations is a significant tool in the protection of cultural heritage, especially when objects are in poor technical condition and their owners lack sufficient resources to carry out appropriate conservation work. Through such actions, it is possible not only to halt the process of destruction but also to provide an opportunity for future restoration and adaptation of the objects for social or tourist purposes. Data analysis reveals a complete lack of execution of such procedures by the Voivodeship Conservators of Monuments that could save monuments from total destruction. Data from the years 2010-2016 shows that Voivodeship Conservators did not allocate any funds for ongoing repairs that would allow for the preservation of the historic fabric of the objects throughout the analyzed period. Only two voivodeships, Opole and West Pomerania, allocated part of their funds for this purpose, while the remaining 14 voivodeships recorded zero funding for ongoing repairs.

5. CONCLUSIONS – DISCUSSION

The analysis of the condition of immovable monuments conducted within this study clearly indicates the urgent need for systemic changes, particularly regarding the necessity to adapt legislation concerning the protection and care of monuments. The research results highlight the need for specific legal amendments in the monument protection system. The study particularly emphasizes key issues that require attention, underscoring the general directions in which future changes should progress. These concerns encompass not only the area of funding and the process of removals from the register but also the support of experts in various fields such as history, archaeology, art, law, policy, architecture, management, and economics, whose efforts would contribute to the preservation of historic objects.

In recent years, there has been a noticeable trend reflecting a shift in focus from the traditional notion of "monument" to the much broader concept of "heritage". The increasing significance of protecting cultural landscapes is becoming more evident in the context of safeguarding historical and aesthetic values. In the diagnosed situation described in this study, special attention must be paid to the necessity of enhancing cooperation between regulations governing the protection and care of monuments and other legislative acts. Key in this context is the connection of heritage law with regulations regarding construction activities, spatial planning, and development, which could significantly strengthen the effectiveness of protective measures.

Among the numerous negative factors that may contribute to the deterioration of the condition of immovable monuments over the long term, the lack of clearly defined areas of responsibility for both governmental and local administration regarding certain tasks related to the protection and care of monuments is paramount. Furthermore, it is essential to develop a uniform approach to the interpretation of existing legal regulations. This harmonization would contribute to the consistency of policies implemented by individual Voivodeship Conservators of Monuments. Moreover, the continuous development of professional competencies among conservation staff is crucial for ensuring high-quality services in the area of cultural heritage protection. In light of these challenges, it is necessary to strengthen the institutional position and consolidate the services responsible for heritage protection in Poland, which should be accompanied by a significant increase in their funding levels.

The conducted research has also revealed a significant lack of information regarding various funding opportunities for historic properties owned by private individuals. The studies indicate that the primary reason for the neglect of the protection of buildings from destruction, which are owned by individual monument owners, is the absence of specific information about different forms of financial support. The lack of clear and reliable guidance on this matter limits the potential of individual owners and prospective investors concerning financing conservation,

restoration, and maintenance of historic properties, which may lead to further degradation and loss of historical value. This highlights the necessity for creating an information system that can help interested parties access funding and financial support from both public and private sources, such as associations or foundations. Such a system could include informational platforms, workshops, or guides that provide essential data on available support programs and best practices for financing protective and adaptive measures for monuments. Furthermore, it is appropriate to establish mechanisms that facilitate cooperation between monument owners and institutions involved in cultural heritage protection. Additionally, the lack of widely disseminated information about the possibility of tax exemption for owners of registered historic properties, as mentioned in the law on "Local Taxes and Fees" in Article 7, Paragraph 1, Point 6, which exempts the owner from tax payments for that part of the property not used for business activities, results in potential investors or owners of such properties often being unaware of available reliefs and rights entitled to them. Consequently, they may be reluctant to undertake investment actions in buildings that are in poor technical condition, which in turn hinders their renovation and protection processes, leading to further degradation of these invaluable cultural resources. Such a system could significantly contribute to improving the condition of monuments as well as increasing their accessibility and tourist value. Restored buildings indeed have the potential to become attractive places that draw tourists. They can significantly impact tourism development not only at the local level but also on a broader scale within the national tourism offering. Efficiently conducted renovation and preservation processes can foster greater interest in the history and cultural heritage of the region, ultimately increasing tourist traffic and yielding economic benefits for local communities.

Another significant issue related to financing is the distribution of public funds allocated for subsidized sacred objects and religious associations. Allocating nearly 85% of the total funding pool for this group of objects in 2016, leaving only 15% for other buildings, raises concerns and opens up a discussion about the balance in fund allocation. This situation certainly results from the large number of high-value monuments within the studied group of objects, but it likely also relates to greater accessibility of grants for churches and religious associations, which have more capacity for co-funding and easier access to information about the application procedures for grants. Owners of historic properties in this group also have easier access to information and support from tax and legal advisors, allowing them to more effectively secure funding for the conservation and renovation of these objects. Through collaboration with experienced specialists, they can receive advice on improving the quality of grant applications, which increases their chances of obtaining the necessary funding. Lawyers can help not only in understanding complex regulations and formal requirements but also in developing strategies that can effectively lead to securing state funds. Such professionalism in preparing and submitting applications is crucial, especially in the competitive landscape of securing funds alongside

other researched groups of owners. The diagrams and tables indicate significant disparities in this regard. The allocation of financial resources occurs at the expense of marginalizing historic objects with fewer opportunities and limited activity in obtaining external funding. The funding system favors objects with the highest historical values, resulting in the sidelining of those less valuable, which are often in much poorer condition. This arrangement means that more valuable objects receive disproportionately greater support, while others, deserving of attention and protection, remain underfunded and neglected. To prevent this unfavorable situation, thorough research should be conducted on the existing systems of financing monuments from public funds. These changes should focus on creating special funds designated exclusively for securing historic properties against destruction and degradation. Such actions would allow for more effective protection of valuable properties that lack both financial resources and legal support, leaving them with little chance of survival.

Creating a separate funding pool specifically for substitute renovations could direct resources towards ongoing conservation work, which is crucial for maintaining these objects in good condition, as well as towards preventive measures aimed at preventing damage from adverse weather conditions, human activities, or other threats. This funding arrangement would ensure that objects of lesser historical value, but equally important from the cultural and historical perspective, receive the necessary support, ultimately contributing to the comprehensive protection of the country's cultural heritage. Heritage protection services should be equipped with broader tools that allow them to decide on the flow of financial resources allocated for the protection and conservation of monuments, as well as to independently select objects that will qualify for grants. This would enable a more flexible and effective prioritization of support. One step towards resolving this situation could involve establishing an organizational unit within the structures of Voivodeship Conservators of Monuments, with funds planned to be sourced from fines imposed for violations against monuments, primarily allocated for securing and rescuing objects that require the most urgent protection. Such funds would allow for a financial focus on the most threatened monuments that cannot secure their protection for various reasons. It is also important to link income from the tourism sector with the funding system for monument protection, which could benefit both historic objects and local communities. This integrated funding model would support not only the protection of cultural heritage but also the development of tourism, potentially leading to economic and social growth in regions where these valuable objects are located.

It is essential to take a broader perspective on the possibility of implementing substitute execution for objects listed in the register of monuments. In cases where decisions mandating conservation work or construction activities do not effectively eliminate the risk of destruction or serious damage to an immovable monument, and where such actions are not carried out within a specified timeframe or do not provoke a response from the owner of the monument, it should become

necessary to implement administrative enforcement in the form of substitute execution. Undoubtedly, delays in initiating conservation or construction work lead to a further deterioration of the condition of the historic object, which is why substitute execution serves such an important protective function. It is applicable when enforcement relates to the obligation to carry out actions that can be commissioned to other parties to perform on behalf of and at the expense of the obligated individual. In cases where the owner of the monument fails to fulfill their responsibilities regarding the care of the object, the conservation oversight authority should secure funding for the necessary conservation or construction work. Actions related to substitute execution are a crucial step in preventing the destruction of the monument.

The goal of substitute execution is to protect the current state of the substance from further degradation that could lead to the complete destruction of the object. Whenever a monument has a chance of being saved, and the execution of the work proposed by the conservation oversight authority can secure it against further damage, this can serve as a starting point for future actions aimed at restoring its former glory. Substitute execution is temporary in nature and is justified only in the context of the necessity to carry out basic work to protect the monument from destruction or significant damage. However, this does not exempt the owner of the monument from the obligation to finance conservation, restoration, and construction work (according to Article 71, Paragraph 1 of the Monument Protection Act). It can be said that substitute execution involves the execution of such work on behalf of the owner or manager, but the costs are borne by the public administration authority, as this is the only way to secure and protect the monument from ongoing degradation. In the case of substitute execution, the Voivodeship Conservator of Monuments covers the costs of conservation or construction work and then directs a claim for reimbursement of incurred expenses to the obligated party. However, if the amounts of expenditures exceed the budgetary capabilities of the heritage protection authority, it is necessary to submit a request to the appropriate voivode for an increase in funds to fulfill its statutory obligations. In practice, Voivodeship Offices for the Protection of Monuments often face insufficient funding, which significantly hampers the conduct of enforcement proceedings, including the implementation of substitute executions. Therefore, it is crucial to examine this issue of financial assistance in a broader context. Although the Voivodeship Conservator of Monuments could undertake substitute execution, in reality, due to budgetary constraints, this solution becomes difficult to implement in practice. It can be said that substitute execution involves carrying out the necessary work on behalf of the owner or manager, but the costs are borne by the public administration authority, as this is the only way to secure and protect the monument from ongoing degradation. In cases of substitute execution, the Voivodeship Conservator of Monuments covers the costs of conservation or construction work and then submits a claim for reimbursement of incurred expenses to the obligated party. However, if the expenditure amounts exceed the budgetary capabilities of the heritage protection authority, it becomes necessary

to request an increase in funds from the appropriate voivode to fulfill its statutory responsibilities. In practice, Voivodeship Offices for the Protection of Monuments often face insufficient funding, which significantly hampers the conduct of enforcement proceedings, including the realization of substitute executions. Therefore, it is essential to examine the issue of financial assistance in a broader context. Although the Voivodeship Conservator of Monuments could undertake substitute execution, in reality, due to budgetary constraints, this solution becomes difficult to implement in practice (Dz. U. 2003 Nr 162 poz. 1292, as amended).

Another negative aspect revealed by the research is the significant lack of uniform procedures defining at what point a damaged historic building is still classified as a monument. This improper inconsistency in defining when a historic object no longer meets the criteria for being recognized as a monument can lead to chaos in the protection of cultural heritage. In practice, this means that different institutions and local authorities may have differing opinions on the technical condition of buildings, which fosters an inconsistent approach to their protection and conservation. The varying conservation policies implemented by individual Voivodeship Conservators of Monuments largely stem from the lack of coherent standards and operational principles related to the conservation of different groups of registered monuments. Such a lack of standardized procedures at the national level results in significant differences in the approach to similar groups of objects, often influenced by local conditions and changing interpretations of regulations in different regions. These differences may be more pronounced in certain voivodeships or even within individual branches of Provincial Offices for the Protection of Monuments, where the lack of a unified approach further highlights existing discrepancies. This situation exacerbates the chaos in conservation rulings, leading to erroneous decisions and directly impacting the condition of monuments during conservation activities. Consequently, the lack of consistency in practices undermines the value of the objects, particularly regarding their integrity and authenticity, both structurally and aesthetically. To improve this situation, it is essential to develop coherent standards and principles for conservation that specifically take into account the groups of monuments distinguished by their cultural and historical values. This process should consider individual and complex principles, as well as a doctrinal approach to conducting research, design, construction, and conservation activities. A crucial element of this initiative is the creation of a reliable methodology for assessing resources that would allow for a better understanding of the condition of monuments and the establishment of appropriate directions for further actions.

It is also important to establish clear requirements regarding scientific and project documentation, as well as principles for conducting renovation and conservation work, which will undoubtedly contribute to improving the quality of monument protection. Such a comprehensive approach could significantly enhance the effectiveness of cultural heritage protection in Poland, as well as increase the engagement of local communities in protective processes. The location of historic objects

is also crucial in this regard, as they often find themselves in areas exposed to various threats, such as urban development or investment activities. Monuments situated in regions with high building density frequently fall victim to economic pressures associated with the desire to utilize space for new infrastructure, which can lead to their deliberate degradation or even total destruction by owners or managers. In such circumstances, the lack of appropriate regulations and ineffective protection systems can result in intentional neglect of their condition and significantly impact decisions regarding their future.

Heritage protection offices also operate under significant pressure from developers and investors, which greatly influences their decision-making processes and strategies for cultural heritage protection. This situation arises from the increasing interest in real estate markets and the desire of investors to maximize profits, often leading them to advocate for changes to historic properties in order to transform them for modern uses. This pressure can create scenarios where conservators must balance the necessity of protecting the historical values of monuments against the demands of developers, resulting in compromises that may threaten the authenticity of these objects. As a consequence, there is a risk that valuable architectural features may be lost due to hasty investment actions. Additionally, pressure from developers can affect the speed of decision-making within conservation offices, sometimes leading to rushed resolutions that do not take into account the long-term implications for the preservation of cultural heritage. Therefore, it is essential to introduce more effective regulations and protection mechanisms that enable heritage conservators to respond adequately to the demands of the real estate market, while also safeguarding the integrity and authenticity of monuments, which are key elements of the history and culture of a place. Intentional destruction of historic buildings by developers in pursuit of financial gain is a serious issue that threatens cultural and historical heritage. Developers, often driven by the desire to maximize profits, may make decisions regarding the demolition or significant remodeling of these properties, which can appear unprofitable in their original form within the real estate market. Such actions are frequently justified with arguments about the necessity of modernization, compliance with contemporary building standards, or enhancing spatial efficiency. However, in reality, the destruction of monuments may stem from a lack of respect for their cultural values and ill-considered decisions aimed at quick financial gains. As a result of this process, many valuable objects that could serve as testaments to local history and architecture are permanently lost. Developers may also employ various manipulative techniques, such as deliberately neglecting properties, to justify their demolition. When a building is not properly conserved or maintained, it becomes easier to argue that it is no longer suitable for further use. Unfortunately, such practices are commonly observed, supported by numerous cases and evidence of criminal proceedings in courts.

In summary, the analysis of the condition of immovable monuments reveals an urgent need for systemic changes in the protection and conservation of cultural

heritage, including the adaptation of appropriate legislation concerning registered monuments. There is also a significant need for greater cooperation among regulations governing the protection of monuments and other supporting laws. The research has shown that insufficient funding leads to the marginalization of monuments of lesser value that require support. Therefore, it is crucial to create an information system that facilitates monument owners in securing funds from various sources, as well as to undertake actions aimed at improving monument protection through the allocation of special funds. Attention should be focused on financial issues that encompass not only assistance from experts but also the modification and systematization of problems related to buildings with significant damage. Another critical issue is the intentional destruction of monuments by developers or investors in pursuit of financial gains. These actions lead to the loss of valuable cultural resources and a lack of respect for historical values. In light of the growing economic pressure and complexity of the challenges, it is essential to introduce effective regulations and protection mechanisms that ensure valuable elements of cultural heritage are preserved for future generations.

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CZY OBOWIĄZUJĄCE REGULACJE PRAWNE WSPIERAJĄ BUDYNKI WPISANE DO REJESTRU ZABYTKÓW?

Streszczenie

Ochrona zabytków wpisanych do rejestru stanowi kluczowy element polityki zachowania dziedzictwa narodowego, a odpowiednie regulacje prawne odgrywają fundamentalną rolę w tym procesie. W artykule zanalizowano aktualny stan prawny dotyczący ochrony zabytków w Polsce, wskazując na konieczność wprowadzenia systemowych zmian w zakresie

legislacji, które umożliwią skuteczniejszą ochronę nieruchomości o wartości historycznej i kulturowej. Przeprowadzone badania ujawniają istotne braki w istniejących przepisach, które prowadzą do marginalizacji mniej wartościowych obiektów oraz do wprowadzania niejednoznaczności w kwestii ich klasyfikacji zachowania jako zabytek. Ponadto zwrócono uwagę na presję zmian mających na celu dostosowanie budynków do aktualnych potrzeb poprzez zmiany sposobu użytkowania ze strony inwestorów i deweloperów, co często skutkuje kompromisami zagrażającymi autentyczności zabytków. W opracowaniu wskazano na potrzebę stworzenia kompleksowego systemu finansowania oraz wsparcia dla prywatnych właścicieli zabytków, a także na znaczenie zintegrowanego podejścia do zniszczonych obiektów tracących swój autentyzm w związku z brakiem wsparcia przez instytucje rządowe. W rezultacie proponowane zmiany mają na celu lepsze zarządzanie i ochronę obiektów przed ich degradacją, tak aby wartościowy element dziedzictwa kulturowego pozostał zachowany dla przyszłych pokoleń.

Słowa kluczowe: ochrona zabytków, przepisy prawne, dziedzictwo kulturowe, konserwacja, autentyzm, degradacja, inwestycje, finansowanie, wpis do rejestru zabytku