

# EVALUATION OF THE PROTECTION AND PRESENTATION OF HISTORIC BUILDINGS IN THE VIMINACIUM ARCHAEOLOGICAL PARK IN RELATION TO THEIR SPATIAL CONTEXT

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**Viminacium was the capital of the Roman province of Moesia Superior and an important legionary fortress. Today it is an archaeological park with protected and presented historic buildings and contemporary facilities, situated by the thermo power plant and strip coal mine near Kostolac in Serbia, and it is identified as a cultural property of exceptional importance for the Republic of Serbia. The protection and presentation of the historic buildings in Viminacium to date can be divided into groups as follows: basic protection and presentation; integrated protection and presentation through interpretation; and integrated protection and presentation through reconstruction and revitalisation. All the processes can be discussed within the framework of the evergreen topic of heritage conservation - the quest for the proper protection and presentation of buildings, which is often connected with the spatial context.**

**Key words:** Viminacium Archaeological Park, protection, presentation, protective structure, spatial context.

## INTRODUCTION

Almost two millennia ago, *Viminacium* was the capital of the Roman province of *Moesia Superior* and an important legionary fortress. It was identified as a cultural property of exceptional importance in 1979, but the process of its institutional protection was only completed in 2009, with the adoption of the *Decision on the Determination of Viminacium Site in the Village of Stari Kostolac as an Archaeological Site*, with clearly defined boundaries and protection of the surrounding area (Decision, 2009). From 2006 it has been an archaeological park with protected and presented historic buildings and contemporary facilities, situated 3 km south of the Danube, in the arable fields near the Kostolac B thermo power plant and Drmno strip coal mine, not far from the town of Kostolac in Serbia (Figure 1). The exploitation of coal in the wider area of the Viminacium site that has lasted for almost 150 years, and the production of electricity in thermal power plants developed over more than seven decades, have resulted in the permanent disappearance of a large number of ancient buildings and their relocation from their original sites to the safe area of the archaeological park (Viminacium, 2018). Another specific of the park is its

large area, mostly unexcavated, and individually presented historic buildings scattered over it (Figure 2). The small number of *in situ* remains that have been discovered and protected and the relocated buildings are supplemented by various methods of narrative and physical interpretation. Dejan Radovanović (2015), an archaeologist from the Regional Institute for the Protection of Cultural Monuments of Smederevo writes about Viminacium Archaeological Park, telling us that “with its status, organisation and achievements, this unique centre in our country and the surroundings is moving many standards, but it also opens numerous questions and contrary opinions”. The existence of this situation is very important for society and for the development of cultural heritage sites, as a part of a quest to find a solution for their proper protection and presentation.

The first official excavations of *Viminacium* were conducted in 1882 by the National Museum and architect Mihailo Valtrović, when he investigated places where the villagers had dug out graves, and measured the Roman city and fortress. He also recorded ramparts and several buildings (Valtrović, 1884). The research was continued in 1902 and 1903 by archaeologist Miloje Vasić, who examined the buildings and a street in the city core (Vasić 1903). In 1973 and 1974, the Institute of Archaeology conducted

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Figure 1. Aerial view of the Viminacium Archaeological Park

(Source: Google Earth Pro 7.3.0.3832 (32-bit) image from July 2017, with protected and presented sites marked by the author of the paper)



Figure 2. Up: A view from the thermal power plant to a part of the Viminacium Archaeological Park (Source: author of the paper, July 2015). Down: A view to the Viminacium Archaeological Park with Domus Scientiarum Viminacium in the foreground

(Source: photo-documentation of the Institute of Archaeology Belgrade - Project Viminacium)

excavations<sup>2</sup>, when the city wall and certain city buildings were investigated (Zotović, 1973; Kondić and Zotović, 1974). In the period from 1977 to 1991, large-scale protective research was carried out on the territory designated for the construction of Kostolac B thermal power plant, when necropolises with more than 10,000 graves were excavated, including brick and pottery kilns (Zotović, 1986; Zotović and Jordović, 1990; Korać and Golubović, 2009; Korać and Mikić, 2014).<sup>3</sup> After a break during the 1990s, when illegal excavations at the site reached their peak (Blagojević *et al.*, 2002), the research was continued in 1997. In 2001, Miomir Korać became leader of the Institute project. Since then, research by the Institute of Archaeology and the Center for New Technologies Viminacium has taken place without interruption, in the form of modern scientific research (geophysical research, remote detection, photogrammetry), systematic excavations of the city and legionary fortress, and protective excavations in the peripheral areas that are endangered by the expansion of the strip coal mine and the thermal power plant complex. This continuous research has stopped the looting and made it possible to present the ancient buildings and construct modern facilities, thus forming the archaeological park for tourists. In addition to

<sup>2</sup> The research was led by the archaeologists Ljubica Zotović, Vladimir Kondić and Vladislav Popović.

<sup>3</sup> The research was organised by the Republic Institute for the Protection of Cultural Monuments (archaeologists Časlav Jordović and Mirjana Tomić), the Institute of Archaeology (archaeologist Ljubica Zotović), and the National Museum in Požarevac (archaeologists Milan Pindić and Dragana Spasić) (RZZZSK, 1998).

this, a legal boundary between the archaeological site and the progressive mine has been established. Since 2002, the northern gate of the legionary fortress, the city and fortress walls, urban communications, city baths, the amphitheatre, and several necropolises, villas, suburban settlements, aqueducts and other structures relating to the water supply system have been partially or completely excavated.

#### INTERNATIONAL DOCUMENTS FOR THE PROTECTION AND PRESENTATION OF ARCHAEOLOGICAL SITES

Many international charters, conventions, guidelines and recommendations relating to the research and conservation of cultural and natural heritage, resulting from the work of several international organizations, such as UNESCO, ICOMOS and the Council of Europe, deal with archaeological heritage. Consulting these documents is very important, but it is often very hard to fulfil the principles defined in them. The conservation of a monument is a cultural activity, and all cultural activities are controversial with no pre-defined recipes. There is no intervention that meets all the criteria of "an abstract idea of 'conservation correctness' that is irreproachable both from a theoretical and a technical point of view"; each site has a different story and requires a special approach, and each building can, in many ways, go through conservation processes (Rizzi, 2007). Although only some of the documents are legally binding for the states that signed them, it is a moral obligation for those who work in the area of the protecting and presenting cultural heritage to be acquainted with all of them. Sometimes, it seems that consulting the documents limits the processes. However, their purpose is to enhance the heritage protection, and this is the way in which these documents should be accepted.

Among the UNESCO documents, in addition to the *Convention on the Protection of World Cultural and Natural Heritage* adopted in Paris in 1972 (UNESCO, 1972), which is the basis for the protection of the world's cultural and natural heritage (Rukavina, Obad Šćitaroci and Petrić, 2013), it is important to mention the *Recommendation on International Principles Applicable to Archaeological Excavations* from New Delhi, adopted in 1956. This emphasised the need for public availability of the explored sites, with the establishment of educational institutions or museums in their vicinity (UNESCO, 1956). As for the documents adopted by ICOMOS, the most influential document to date is the *International Charter for the Conservation and Restoration of Monuments and Sites (Venice Charter)* adopted in 1964. According to the Charter, conservation measures include consolidation (which can be carried out with the help of contemporary techniques, if traditional ones are inadequate), restoration (which has to stop where the assumption begins and its goal must be respectful of the contribution of all building periods), and anastilosis (with a clear difference between the historical structure and the new binding materials), while they *a priori* exclude reconstruction. The historic building is related to the located area, so its relocation is allowed only if it is saved by doing so, or if the relocation is justified by national or international importance (ICOMOS, 1965). The *Charter for the Protection and Management of the Archaeological Heritage (Lausanne Charter)* adopted in 1990 emphasises archaeological heritage as a non-renewable

resource with the recommendation of its preservation *in situ*, and the importance of using non-destructive methods of research. This means avoiding complete archaeological excavation, leaving undisturbed parts for the future, and limiting excavations to endangered places, or those important for explaining scientific problems or more effective interpretation. Reconstructions must be distinguished from existing structures and wherever possible, they should not be carried out directly on archaeological remains (ICOMOS, 1990). The *Charter for the Interpretation and Presentation of Cultural Heritage Sites*, adopted in 2008 in Quebec, recognised the interpretation and presentation of heritage as part of its protection and management process, and emphasised the need to construct an easily recognizable interpretative infrastructure according to the character of the space, as well as the organization of cultural events in those areas (ICOMOS, 2008). The *Recommendations of the First International Conference of ICOMOS on Archaeological Parks and Sites (Salalah recommendations)*, adopted in 2015 in Salalah, Oman, define archaeological parks as a link between scientific research and the general public. The area should be designed to ensure the protection of archaeological remains, with controlled entrances, and sections that are accessible and have been interpreted and explored, and it should be surrounded by an appropriate buffer zone. Anastilosis (with high accuracy), consolidation (to ensure stability and security) and *interpretative stabilisation* (if reversible and does not damage original materials or context) are allowed. All additional elements must be clearly visible compared to the original ones, while reconstruction which is not science-based at the site is forbidden. It is also necessary to build interpretative centers and museums (ICOMOS, 2015). The Council of Europe adopted the *European Convention on the Protection of the Archaeological Heritage* in London, in 1969, as the first European charter dedicated to the protection of this heritage, aimed at preventing the illegal excavation and trafficking of artefacts. The Convention was revised in 1992 and adopted in Valletta, and has since been based on integral protection. It advocates the preservation of sites *in situ* and the formation of protected areas, even if there are no visible remains (COE, 1969; COE, 1992). The *Charter on the Use of Ancient Places of Performance (The Verona Charter)* from 1997 was created in order to promote the use of theatres, amphitheatres, circuses, etc. (COE, 1997).

#### THE PROTECTION AND PRESENTATION OF HISTORIC BUILDINGS IN VIMINACIUM

Following excavation, the remains of historic buildings buried for centuries must be physically protected because they are, in most cases, very sensitive to various environmental impacts. The first way to protect them is to re-cover them with earth. Another way is to leave them uncovered, conserve them and repeat this process on a regular basis with constant monitoring. The third way is to conserve them and cover the site with a protective structure with a less demanding monitoring process. The decision to build the protective structure must be made in accordance with many factors. In this process, location analysis and the perception of the value of the historic structure are very important. The final decision must enable interdependence between the conservation procedures and the protective

structure, and the management and monitoring of the site. In addition to this, the erection of protective structures needs to be a reversible process (Ivanović-Šekularac *et al.*, 2017).

In 1988, two tombs excavated during the large-scale research of *Viminacium* necropolises, known as “memorias”, were covered with a joint protective structure. It was not until 2003-2004 that the next protective structure was built, when the northern gate of the legionary fortress and the city baths were covered. In 2003 and 2008, the aqueducts and other water supply facilities threatened by the progression of the strip mine were relocated, and since then, they have been waiting for their first public presentation (Mrđić, 2007; Blagojević and Stojković-Pavelka, 2004; Nikolić, 2016). During 2005, part of the necropolis with the Mausoleum was covered, and Viminacium Archaeological Park, with its ancient buildings, service functions and constant supervision, was officially opened in 2006 (Andelković Grašar *et al.*, 2013; Golubović and Korać, 2013; Mrđić, 2012). Soon after, the Archaeological and Scientific Research Center *Domus Scientiarum Viminacium* was built near the Mausoleum, in the immediate vicinity of the Drmno strip mine (Figure 2 and Figure 3). It was designed as a house with a peristyle, with the interweaving of traditional and modern materials.<sup>4</sup> Although it is considered to be a kind of reconstruction, it can be said that it is actually a type of association with a Roman house. It fits to the image of a flat area with unexplored ancient architecture, and it has already become an inseparable part of the archaeological park as one of its motifs, and thus one of the factors of its integrity (Nikolić, 2014a).



Figure 3. *Domus Scientiarum Viminacium*

(Source: photo-documentation of the Institute of Archaeology Belgrade - Project Viminacium)

Contemporary processes of scientific research and the sustainable development of archaeological sites require their inclusion in contemporary life. One of the methods for

<sup>4</sup> The authors of the architectural project for *Domus Scientiarum Viminacium* are architects Emilija Nikolić, Brana Stojković-Pavelka and Božana Lukić, and archaeologist Miomir Korać, while the construction project was developed by civil engineer Zoran Cekić.

their inclusion is the erection of new buildings for education and public use on archaeological sites. One such building is *Domus Scientiarum Viminacium*, which hosts scientific conferences, workshops and summer schools, and also many other events. In 2011, an international summit of the state presidents of south-eastern Europe under the auspices of UNESCO took place here. Its exhibition space hosted a national archaeological exhibition in 2013, celebrating 1,700 years of the Edict of Milan (Nikolić, 2014a; Ilić and Nikolić, 2015). Today the collection of *Viminacium* wall paintings and sarcophagi is exhibited here, as well as contemporary works of art – a model of *Viminacium* and the bronze heads of Roman emperors, supplemented with virtual archaeology. Another method is the activation and revitalisation of historic buildings, which was achieved in the Mausoleum in 2008, when a concert by French soprano Emma Shapplin was organised in its space, as well as in 2013, when the partially reconstructed Roman amphitheatre hosted the opera “Aida” (Ilić and Nikolić, 2015).

The planning and regulatory solutions for the Viminacium site, with rules for the design, construction and use of the space, are determined by the *Spatial Plan of the Special Purpose Area of the Viminacium Archaeological Site*, adopted in 2015. The area of the Plan is divided into three entities: public use and the entrance (parking zone with entrances and communications zone), purpose built constructions (scientific and research zone, and scientific and touristic presentation zone), and the archaeological sites (archaeological research zone and conservation, restoration, reconstruction, revitalisation and presentation zone, with contemporary constructions to aid the function of the archaeological site) (Spatial Plan, 2015; Nikolić, 2017). The protected ancient buildings that will be presented in this paper are: the northern gate of the legionary fortress, city baths and the amphitheatre (in the conservation, restoration, reconstruction, revitalisation and presentation zone, with contemporary constructions to aid the function of the archaeological site), the Mausoleum (in the scientific and research zone), the craftsmen’s centre (in the scientific and touristic presentation zone) and the memorial buildings with triconchal memorial building B (situated outside the area defined by the Spatial Plan). These historic buildings are protected and presented in a variety of ways, which can be divided into groups as follows: basic protection and presentation; integrated protection and presentation through interpretation; and integrated protection and presentation through reconstruction and revitalisation. Although accepted as a kind of exhibition space and connected to paleontological remains, the Mammoth Park (in the scientific and touristic presentation zone) will be described in brief here, as an integral part of the Viminacium Archaeological Park.<sup>5</sup>

<sup>5</sup> The *Spatial Plan of the Special Purpose Area of the Viminacium Archaeological Site* was developed by the team of JUGINUS, Belgrade, led by the architect Marin Krešić and spatial planner Dubravka Pavlović. The authors of the protective structures over the northern gate of the legionary fortress, city baths and Mausoleum in Viminacium are members of the team gathered around the architect and professor from the Faculty of Architecture, University of Belgrade, in retirement – Dr. Vojislav Kujundžić. The project for the protective structure over the memorial buildings was completed by architect Dragoljub Todorović and civil engineer Jaša Preger. The architect Slobodan Barišić was in charge

### Basic protection and presentation of historic buildings

The basic protection of historic buildings in Viminacium includes the partial restoration and physical protection of the buildings with protective structures. The buildings protected in this way are the northern gate of the legionary fortress and the city baths. The protective structures were made using constructions that enable the wood to bridge spans exceeding the limitations of its natural growth. These structures are the first of this kind formed in Serbia, while the use of a PVC membrane as a cover is one of the first uses of this material in our country. To date, protective structures over archaeological sites of this type in Serbia, in addition to Viminacium, have been made at Mediana, and Drenovac near Paraćin (Vasić-Petrović and Momčilović-Petronijević, 2015).

The temporary protective structure over the *in situ* remains of the northern gate of the legionary fortress (Figure 4 - left) was completed in 2003. Here, the LKV system (lightweight roof trusses) made it possible for short beams made of solid wood with steel plate connectors to form constructions that could bridge the required spans. However, the large number of short beams and trusses placed at a relatively small distances from each other play a dominant role in the space, and the relatively low height of the overall construction makes the remains of an ancient monumental building like the entrance gate look like a pile of building material, without offering the possibility of imagining the entity that they were once part of. The remains can be viewed from only one position at the entrance to the space and, apart from the narrative provided by the guide, there is no other interpretation, which would be very difficult to achieve anyway. The structure made above the *in situ* partially restored remains of the city baths (Figure 4 - right)

of the conservation of triconchal memorial building B. The project of the protective structure over the craftsmen centre was completed by the civil engineer Krstan Laketić. The authors of the projects for the reconstruction of the amphitheatre are architect Emilija Nikolić and civil engineer Krstan Laketić, while the projects for the consolidation of its ancient remains were completed by the civil engineer Zoran Cekić. The authors of the projects for the Mammoth Park are architect Emilija Nikolić, archaeologist Miomir Korać and civil engineer Krstan Laketić.

was completed in 2004. The temporary protective structure consisting of nine carriers is made of glued laminated timber. Here, the principle of the minimum number of necessary elements for the stiffening of the structure was used, which allows a much taller construction, almost cancelling its presence in the space in relation to the ancient remains, thus allowing them to dominate. However, the protective structure does not lose its own monumentality. Further, apart from the guide's narrative and the partly presented floor heating of the baths within its remains, there are no other types of interpretation in the space, and the ancient building is viewed by means of a tour around it.

In archaeological sites, protective structures that have lightness and flexibility, and which use a minimum amount of material are mainly preferred. Such structures are often completely prefabricated, i.e. mounted at the site itself, and the disassembly is, in most cases, simple (Hebbelinck *et al.*, 2001). The intended purpose of such structures can be permanent, or sometimes temporary in situations where they serve as an interim solution until another construction is achieved that was, at that particular moment, unavailable (Mollaert *et al.*, 2011). The protective structures over the northern gate of the legionary fortress and the city baths were intended to be temporary. However, as long as they still stand there, they affect the overall impression of the Viminacium Archaeological Park. They fulfil the basic function of physically protecting the ancient remains and provide a basic level of presentation, but they negatively affect the preservation of the authenticity of the context because they emphasise themselves and act independently in an area which belongs to the city and legionary fortress of *Viminacium*. This method of protection is unsustainable in the future, when more buildings are excavated that will also require some form of physical protection. *Viminacium* was a city with all the functions typical of a Roman city - paved streets, temples, theatres, baths and residential buildings. An important question exists here, that of how to incorporate buildings that used to form the live urban fabric of an ancient city, but that are in ruins today, into one unified site presentation (Nikolić, 2015). There is a similar dilemma in Herculaneum and Pompeii. Since excavations

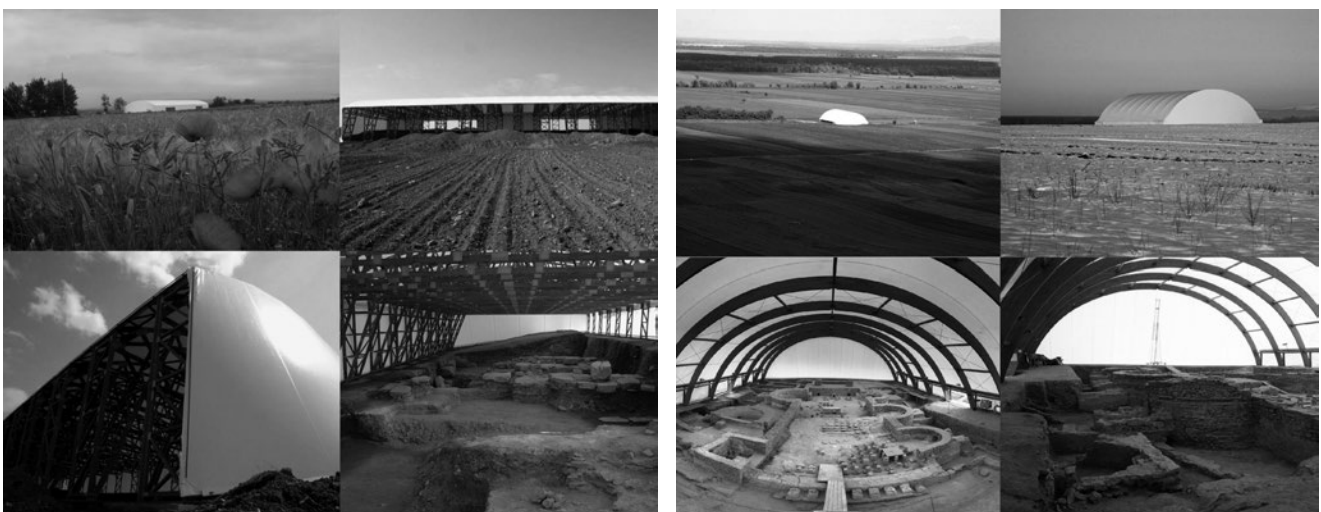


Figure 4. Northern gate of the Viminacium legionary fortress (left) and Viminacium city baths (right)  
(Source: photo-documentation of the Institute of Archaeology Belgrade - Project Viminacium)



Figure 5. Viminacium memorial buildings (left) and Viminacium craftsmen centre (right)

(Source: up left: Todorović, 1991; other photos: photo-documentation of the Institute of Archaeology Belgrade, Project Viminacium)

of the centuries-buried ancient cities began in the 18<sup>th</sup> century, the buildings and decorations have decayed due to atmospheric influences and a large number of visitors. This begs the question of whether the stucco decoration and wall paintings should be moved to the museum, with non-decorated walls left behind, thereby losing the special value of the place and renouncing what lava naturally conserved, or whether it is better to cover the whole space with a protective structure, convert it to a museum, and thus lose its extraordinary urban value (Rizzi, 2007). Both approaches put the authenticity and integrity of the sites into question.

Many tombs were discovered during the extensive archaeological research of *Viminacium* southern necropolises that was conducted during the 1870s and 1980s, before the construction of Kostolac B thermal power plant. In the tombs of G-4815 and G-4816, called “memorial buildings” or “memorias”, during 1986 and 1987, partial restoration works were carried out, and in 1988 the tombs were covered with a protective structure (Figure 5 - left). The structure is made of concrete and wood and the roof is covered with metal sheets (RZZZSK, 1998; Todorović, 1991). The space below the protective structure is illuminated through the roof, receiving mild daylight. The tombs are not able to be interpreted in any way. Access to the structure is problematic because it is isolated from the rest of the Viminacium Archaeological Park. It is a part of the thermal power plant complex, and it is difficult to include a visit to it. The protective structure provides the basic protection and presentation for the site, but its construction and appearance, which resembles that of a building, makes it different from the protective structures seen in the previous two examples. It physically protects the remains and provides a basic level of presentation, but also acts as an independent building in the space. However, after the physical destruction of its original context, that of a Roman necropolis, which occurred as a result of the construction of the thermal power plant, the protected tombs can no longer belong to it, nor can the presentation of the context be accomplished. In that respect, the protection of the ancient remains here is appropriate. Since they are still *in situ*, they are in their original relationship to the Roman city and, with their preservation, the relationship between the

destroyed southern necropolis and the city is maintained. During the previously mentioned extensive archaeological research in the area of the thermal power plant, the so-called “triconchal memorial building B” was also preserved and partially restored in 1985 (RZZZSK, 1998). This building is not covered by a protective structure and is unavailable to visitors, since it is an individual building without any chance of presentation as long as the industrial facilities are active.

After relocating from the thermal power plant zone to the archaeological park in 2015, the complex of three Roman brick kilns, called the “craftsmen’s centre” was temporarily covered by a protective structure of an eaves type (Figure 5 - right). The construction is made of glued laminated timber and covered with ceramic tiles. Access to the space below the construction is from its longitudinal side, and the space is viewed via a tour around the kilns. Any interpretation of the space other than by the narrative does not currently exist. However, the kilns are covered with the eaves as a temporary solution, with the aim to include the craftsmen’s centre in the Limes Park of Viminacium – a replica of a typical Roman city street with surrounding houses, planned to be built in this zone in the future. In this way, the kilns will become a part of a newly refurbished ambient unit that will depict ancient life and, thus, receive a more fitting interpretation. The protective structure today physically protects the ancient remains and provides a basic level of presentation, but acts as an independent structure in the space. The kilns are separated from their original context, which was destroyed by the construction of an industrial facility which forced their relocation. The role of this protective structure is only to physically protect the historical remains of the kilns, since today there is no context to which they should be connected. In this way, the design of the structure, which is dominant in the space today, is justified. With it, a part of the archaeological park that was empty until the kilns were relocated, was given a new character – the introduction of a human building intervention. When the space develops into the intentionally created context of Limes Park, this protective structure will no longer be an adequate physical element in it and its domination will not be justified. Then, a new protective structure for the kilns will be needed, whose design will be conditioned by the new context.

### Integrated protection and presentation of historic buildings through interpretation

The only site at Viminacium Archaeological Park in which integrated protection and presentation was carried out using interpretation is the Mausoleum (Figure 6). This is an *in situ* presented part of the eastern *Viminacium* necropolis, with a restored and partially reconstructed central grave that belonged to a high-ranking individual in the Roman hierarchy (Golubović and Korać, 2013). It is the starting point for visitors and the first site that is presented to them in the archaeological park. The protective structure over the remains of the central grave and part of the necropolis was constructed in the period from 2004 to 2005. The structure, covered with a PVC membrane, is made of glued laminated timber in the shape of a truncated square based pyramid.

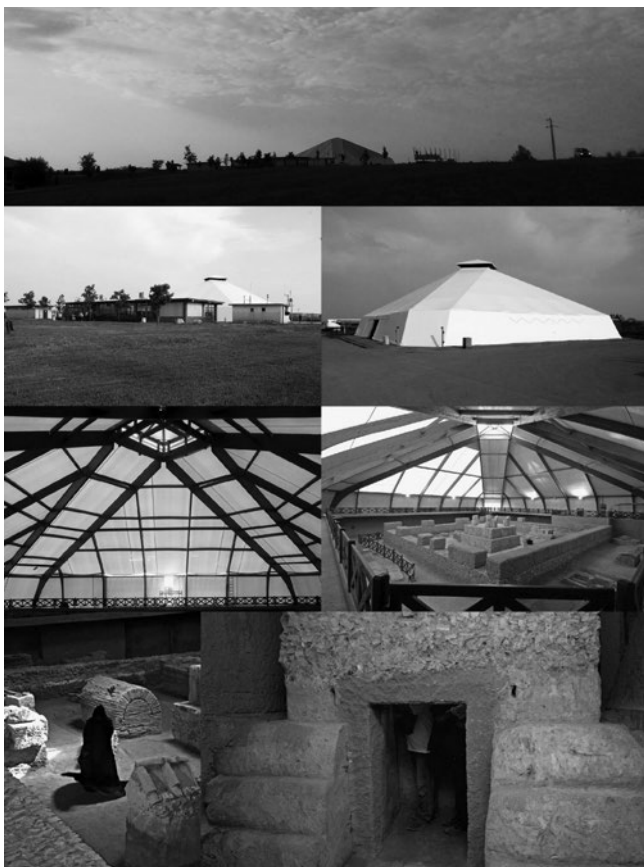


Figure 6. Viminacium Mausoleum

(Source: photo-documentation of the Institute of Archaeology Belgrade - Project Viminacium)

The remains below the protective structure are presented in three forms. The first is an overview of the site from a contemporary level, the second is an entry to the space where a closer look at the graves is obtained, and the third provides visitors with the story of the “underworld”, leading them through newly built, semi dark underground corridors with painted antique graves, giving them the ability to observe *in situ* art from the imaginary level of the deceased, with an additional narrative interpretation provided by the guide (Nikolić and Roter-Blagojević, 2017). In this part of the archaeological park, an interpretive approach to funerary wall painting was applied (Anđelković Grašar *et al.*, 2013; Golubović and Korać, 2013). Salvador Munoz Vinas (2005),

a contemporary theorist of conservation, instead of insisting on the truth as a result of an uncompromising pursuit of authenticity, supports “legibility” as “the ability of an object to be correctly comprehended or ‘read’ by the observer”. The presentation of the Mausoleum in Viminacium provokes the existence of the authenticity of the place, with a new structure embedded within the ancient building, but on the other hand, it provides a deeper understanding of it. According to a survey carried out in 2012, among the Mausoleum visitors coming from English speaking areas, 74% based their impressions on the explanations provided by guides, reconstructions and costumed people, while only 26% based their impressions on the archaeological remains (Anđelković Grašar and Tapavički-Ilić, 2013).

We can say that the protective structure over the Mausoleum fulfils the basic function of physically protecting the ancient remains, and provides a basic level of presentation, as well as an extended level of presentation, which includes interpretation due to the new physical structures embedded in the ancient space. Although it was planned to be a temporary structure, its position, which represents a natural elevation in the area, has given it additional domination over a large part of the Viminacium site. However, the Mausoleum was situated outside the *Viminacium* city fabric, and, thus, the protective structure does not endanger it. Moreover, viewed from its inner space, the pyramidal shape of the structure accentuates the ancient remains, especially the central grave (Golubović and Korać, 2013). For these reasons, this protective structure has greater value, and its temporary character can be changed to become permanent in the future. Today, it is the most recognisable physical symbol of the Viminacium Archaeological Park.

In Serbia, examples of protective structures that have brought integrated protection and presentation through interpretation to archaeological sites can be found in Sirmium, above the Imperial Palace (Škorić, 2014) and in Lepenski Vir, above the relocated prehistoric settlement (Jovin and Temerinski, 2003). According to the concept of construction and the use of materials, they are close to the structure over the memorial buildings in Viminacium. However, although the intention for both structures was to cover sites, they have also brought new museum and service facilities, which is not the case either for the structure over the memorial buildings, or the one over the Mausoleum. Thus, from initially being simply protective structures, they have become presentation buildings that also have an integrated protective function.

The presentation within the Mammoth Park was developed with the assistance of a protective construction and in the form of interpretation. The construction itself, raised above the relocated mammoth skeletons, has become a kind of exhibition building, surrounded by the outdoor park arrangement. Therefore, it can also be called integrated protection and presentation through the formation of an exhibition space (Figure 7). The construction was erected in 2014 above the relocated mammoth skeletons found in the mine in 2009 and 2012. It is located within the border of the protected area of Viminacium, which is the final edge of the development of the strip mine. The intensive passable green roof with natural light, above the construction of

glued laminated timber, follows the slope of the surrounding terrain and thus forms an underground exhibition space. The creation of space below the level of the present-day soil is an association with the time context in which the mammoths lived, which is very distant from the present. The entrance to the space is accessed by an earth road that relates to the passage through the natural canyon. The central skeleton, preserved in its entirety, is oriented as it was in the mine. The attempt to partially restore the authenticity of the context in which the animals once lived has been partially achieved using traditional natural materials in the space and layers of sand brought from the spot where they were found. The Mammoth Park has become an attractive ambience, but it has not become an independent museum building. Since it is directly related to the site where the exhibited skeletons were found, it is an integral part of the archaeological park, and it does not dominate over the ancient remains (Nikolić, 2017).



Figure 7. Mammoth Park

(Source: photo-documentation of the Institute of Archaeology Belgrade - Project Viminacium)

### Integrated protection and presentation of historic buildings through reconstruction and revitalisation

Viminacium's amphitheatre went through another form of protection, by way of a partial reconstruction (Figure 8). This is the only Roman amphitheatre that is currently being explored in the territory of today's Serbia. During 2013, extensive conservation works were carried out on the building, which led to its successful revitalisation, and today a quarter of the auditorium can again receive spectators (Nikolić, 2014b).

During the protection of historic buildings, problems with their construction occur in two basic forms. One form occurs in those buildings whose assembly, as merely a constructive feature, is seriously disrupted. Then, a construction of contemporary materials is made that relieves the original constructive elements. The other form occurs when an assembly, as an inner feature of the building that influences the function and layout of the building space in history, is disrupted. The solution to the first form of the problem

appears as a technical measure which ensures the safety and durability of a building, assuming that we take care not to compromise the monumental properties of the building. However, the solution to the second problem form is much more complex, because then the constructive assembly represents a feature of the building as a monument (Đorđević, 1978). Both cases have occurred with the Viminacium amphitheatre, where it was necessary to strengthen the basic stone walls using contemporary materials, but also where the main characteristic of its ancient structure – the wooden construction – was interpreted as an important part of the reconstruction.



Figure 8. Viminacium amphitheatre

(Source: photo-documentation of the Institute of Archaeology Belgrade - Project Viminacium)

The walls of the ancient amphitheatre were made of wood and stone, depending on its historical phase, while the auditorium was always wooden (Nikolić and Bogdanović, 2015). The conservation works were based on information obtained by excavations, geometry and comparisons to other Roman amphitheatres, but also on interpretation. In the reconstructed wooden structure, traditional timber joints were replaced by modern ones, and because of the exposure to atmospheric influences, larch laminated timber was used instead of solid oak timber. One part of the arched arena wall was preserved and restored in its original stone material and was not covered by a protective structure, while a quarter of the auditorium, the other part of the arched arena wall, an entrance to the building, and a part of the city rampart were restored and reconstructed using glued laminated timber. Reconstruction of the building parts



made of stone using glued laminated timber provides a clear separation of the old parts from the new ones, while at the same time their easy installation and disassembly enables reversibility and shows the transparency of the entire intervention (Nikolić, 2014b). Similar interventions in the wood were carried out during the protection of the Roman amphitheatre in the French village named Grand (Bertaux *et al.*, 2000), and also during the coverage of the part of the Villa of Trajan in the territory of the ancient Afilae (today Arcinazzo Romano, province of Rome) and “Basilica” in the Villa Romana del Casale (today Piazza Armerina, Sicily) (Germanà, 2013) (Figure 9).

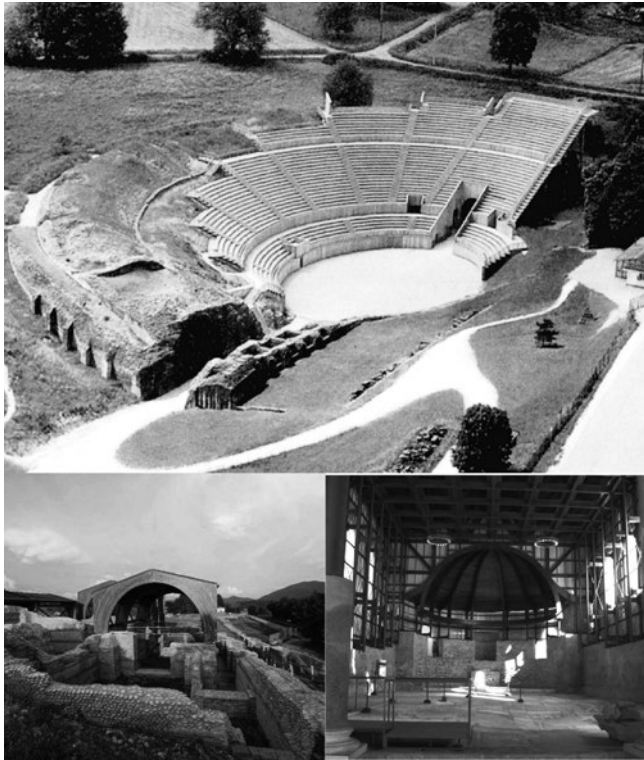


Figure 9. Interventions in wood executed during the protection of Roman buildings. Up: Roman amphitheatre in the French village named Grand (Source: Bertaux *et al.* 2000)

Down left: Villa of Trajan in the territory of the ancient Afilae, Italy (Source: Cinti, Castro 2011)

Down right: “Basilica” in the Villa Romana del Casale, Sicily (Source: Vivio 2015)

Every reconstruction process can always be discussed in terms of it being a “slippery path”, because we can choose between the roads of “excessive reconstruction” and “insufficient protection” (Rizzi, 2007). The preservation of the authenticity of the Viminacium amphitheatre through various interventions can be discussed in terms of an evaluation of the mix of the traditional and contemporary materials and construction methods applied. The reconstruction of the Roman amphitheatre *in situ* has revitalised a part of the ancient city and has positively responded to the preservation of the authenticity of the context. Moreover, the reconstruction has become the protective structure over the ancient building and added a physical interpretation to it, without jeopardising the historical remains.

## CONCLUSIONS

Covering part of a historic building or a ruin protects it from atmospheric influences, and it can also contribute to an increase in its value and, thus, encourage future conservation (Hebbelinck *et al.*, 2001). The protective structure is a new addition which should be distinguished from the original remains, but also enhance “the architectural continuity of a historic place” (Aslan 2007). It must not dominate, whether it is classified as temporary or permanent (Šekularac and Šekularac, 2006).

It is of the utmost importance to determine the priorities during the design of any building intervention at a historic site. In this context, the architecture of protective structures must bear the subordinate role of a structure that emphasises something else, and not itself. Otherwise, it does not fulfil the protection function, because when we protect something, we do so by protecting its physical characteristics, but also its significance and influence. How should architects deal with the architecture of protective structures, when they know that it cannot dominate and emphasise itself, even if it is of a temporary character? The reconstructed amphitheatre, as a kind of the protective structure, can be an example in which the attempts to fulfil the previously mentioned recommendations for the order of priorities are visible. The partial restoration and reconstruction of the amphitheatre set up the building to the level between associative reconstruction and partial interpretation, with the goal of necessary protection and appropriate revitalisation.

The last two generations of students from the master academic studies, in the module “Structural Engineering”, at the Faculty of Architecture, University of Belgrade, had the archaeological site of Viminacium as a given design location. The students of professor Nenad Šekularac offered a whole range of solutions for protective constructions over the ancient buildings. In 2015/2016, they worked on designs for the protective structures over the city baths and a brick kiln, while in 2016/2017 they designed the structures over the city baths and aqueducts. The structures were made of wood and steel and the most successful ones were those integrated into the surroundings with their shapes. An important contribution of these works is the emphasis on the design of protective structures which needs to be a part of the architecture as well as part of the construction, which is often not the case in practice. They should be, as described by one of the students when talking about her solution, “an inspiration and a challenge”.<sup>7</sup>

In 2015, Viminacium was placed on the UNESCO Tentative List, under the title “Frontiers of the Roman Empire WHS – FRE”, as a part of an international monument consisting of other Roman cities, towns, camps and fortresses along the former Roman limes (Korać *et al.*, 2014; UNESCO, 2015). The presentation of the remains still under the earth, but whose traces can be recognised using different detection techniques and instruments is well known in the world. One of the forts of the former Upper German – Raetian Limes in

<sup>7</sup> The student’s name is Milica Petrović, and her design of the protective structure over the Viminacium city baths was chosen by the jury for the The Timișoara architecture biennial (BETA 2016) in the category of graduation projects (Betacity, 2016).

the area of Ruffenhofen, Germany, a part of the "Frontiers of the Roman Empire" already inscribed on the World Heritage List (UNESCO, 2005), is presented by planting different sorts of low non-destructive vegetation which form and outline the interior areas and buildings of the former fort and accentuate its walls and ditches, enabling visitors to visualise their dimensions, especially looking from a nearby hill (Deutsche Limeskommission, 2010) (Figure 10). Should we present the ancient city of *Viminacium* by excavations and different ways of protection using protective structures, integrate the excavated ruins into the environment leaving them uncovered, or leave most of the city unexcavated, but marked for future generations? Each of these decisions can be justified by international documents in the area of cultural heritage, and can bring successful results in the area of protection and presentation.



Figure 10. Roman fort in the area of Ruffenhofen, Germany  
(Source: Römerpark Ruffenhofen 2018)

With the relocations mentioned here and industrial development, different forms of authenticity of the craftsmen's centre, the aqueduct, memorial buildings and triconchal memorial building in Viminacium were diminished. At the same time the authenticity of the historical unity of the Roman city and its surroundings was decreased. For example, the spatial relationship between the *in situ* city baths and the relocated aqueduct is one of those that was disturbed, which also happened with the relationship between the craftsmen's centre and the memorial buildings in the necropolis. Thus, one of the upcoming challenges in the conservation processes in Viminacium will be the permanent protection of the aqueducts and craftsmen's centre and the formation of their new spatial context - Limes Park. Furthermore, the way to permanently protect the previously mentioned *in situ* buildings of Viminacium in the future, which are today covered with temporary structures,

and also those that will be excavated in the future, will be one of the most important decisions that managers of the site and designers will face. Probably, the only undisputed principle that should be followed in the future presentation of Viminacium is *emphasizing the whole over its parts*, no matter what interventions we decide to use. It can give important and very much needed spatial value to Viminacium Archaeological Park, where excavations will last for decades.

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