THE VALORISATION OF HISTORICAL SITES THROUGH ARCHITECTURAL INTERVENTIONS

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ABSTRACT
The issue of preserving the historical and natural heritage is usually sealed with the interdiction to do any sort of intervention that might compromise its values. Nevertheless, intrinsic threats and risk factors like weather phenomena, carelessness or unsustainable tourism have caused and will continue to cause damage when only conservation and renovation interventions are permitted. Such cases require a different protection strategy that should result from a close study based on the evolution of the present historical area and of other similar ones. As architects and engineers we continuously ask ourselves what should we do to protect them and how to revitalize and emphasize the cultural values of our heritage.

Keywords: heritage, historical site, architectural intervention, cultural background

INTRODUCTION
Imbued with a message from the past, the historic monuments of generations of people remain to the present day as living witnesses of their age-old traditions [1].

Nowadays, Romania is taking small steps towards the valorisation of its rich cultural heritage. However, the future of the romanian historical and natural sites remains uncertain due to the lack of interest and education of its citizens and due to financial and political matters. In most cases, buildings now classified as monuments that were not integrated in an urban landscape became ruins because they had been abandoned and robbed afterwards.

The law does not provide enough protection for historic buildings and sites and as a consequence, interest in their preservation and revitalisation disappeared. For example, the ancient capital of the Dacian Kingdom, Sarmizegetusa is not valued as it should be although it became part of the World International Heritage in 1999 on the basis of the following criteria:

- The Dacian Fortresses represent the fusion of techniques and concepts of military architecture from inside and outside the classical world to create a unique style.
- The Geto-Dacian Kingdoms of the late 1st millennium BC attained an exceptionally high cultural and socio-economic level, and this is symbolized by this group of fortresses.
- The hill-fort and its evolved successor, the oppidum, were characteristic of the Late Iron Age in Europe, and the Dacian Fortresses are outstanding examples of this type of defended site [2].

Currently, the archaeological area is facing interventions that have caused damage: in 2011, the local authorities have permitted the construction of a asphalt roadway that crossed the site destroying the ancient walls [3]. And most recently, we are confronted with the possibility of losing the protection offered by UNESCO and the right to be registered on the World Heritage List [4]. The questions raised are: how to prevent the factors that threaten Romania’s cultural heritage and what kind of interventions should be enforced in order to promote and highlight the importance of our country’s archaeological sites.
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MATERIALS AND METHODS

According to the Venice Charter of 1964 the concept of historic monument embraces not only the single architectural work but also the urban or rural setting in which is found the evidence of a particular civilisation, a significant development or a historic event [1].

Today, many such areas are being threatened, physically degraded, damaged and even destroyed by the impact of the urban development. As a consequence, ICOMOS (The International Council of Monuments and Sites) drew up in 1987 an international charter for historic towns and urban areas: the Washington Charter that defines the principles, objectives and methods necessary for the conservation of historic towns and urban areas.

1. ICOMOS guidelines

As specified in the Washington Charter, Section Principles and objectives:

- "Qualities to be preserved include the historic character of the town or urban area and all those material and spiritual elements that express this character, especially:
  a) urban patterns as defined by lots and streets;
  b) bonds established between the urban patterns and the green and open spaces surrounding them;
  c) the formal appearance, interior and exterior, of buildings as defined by scale, size, construction, style, materials, colour and decoration;
  d) the relationship between the town or urban area and its surrounding setting, both natural and man-made; and
  e) the various functions that the town or urban area has acquired over time.

- Planning for the conservation of historic towns and urban areas should be preceded by multidisciplinary studies. Conservation plans must address all relevant factors including archaeology, history, architecture, techniques, sociology and economics and should also aim at ensuring a harmonious relationship between the historic urban areas and the town as a whole.

- New functions and activities should be compatible with the character of the historic town or urban area; adaptation of these areas to contemporary life requires the careful installation or improvement of public service facilities.

- When it is necessary to construct new buildings or adapt existing ones, the existing spatial layout should be respected, especially in terms of scale and lot size. The insertion of new and contemporary interventions compatible to the surroundings should be encouraged since such features can contribute to the enrichment of an area.

- Knowledge of the history of a historic town or urban area should be expanded through archeological investigation and appropriate preservation of archeological findings.

- Historic towns should be protected against natural disasters and nuisances such as pollution and vibrations in order to safeguard the heritage and for the security and well-being of the residents. Preventative and repair measures must be adapted to their specific character.

- The participation and the involvement of the residents are essential for the success of the conservation programme and should be encouraged. In order to do so, a general information programme should be set up for them, beginning with children of school age.

- Traffic inside a historic town or urban area must be controlled and parking areas must be planned so that they do not damage the historic fabric or its environment.

- When urban or regional planning provides for the construction of major motorways, they must not penetrate a historic town or area, but they should improve access to them” [5].
2. Current examples of architectural interventions on historic sites

The last decades have been characterized by the growth of a cultural debate on the issue of archeological site preservation and valorisation. As time went by, different solutions were adopted according to the needs of active or passive conservation. Therefore, in some cases, objects have been removed from the original place they were found, and placed in museums or galleries.

Nowadays we try to apply methods of in situ preservation so that archaeological information could be kept intact and undivided in its original context. In order to do so, engineers and architects turned to innovative technologies and materials so that needs of protection, preservation, improvement of ruins and public use could be satisfied.

2.1. The use of transparent covers in the in situ conservation process

The choice of using a transparent cover should be determined after carefully considering aspects from different points of view. From an architectural point of view, the cover needs to be required and realised according to criteria of restoration. At the same time, from a structural point of view, it has to ensure safety conditions minimizing physical contact between the designed components and ancient constructions. And physically, it needs to exclude the technical solutions that might develop a microclimate condition which could generate harmful conditions to the finds.

In this field, coverings are classified by type of protected area:
- by shelter (without vertical closure) - the case of Juval Castle;
- confined (with vertical closure) - the case of the ruins of the Roman Limes Gate in Dalkingen;
- underground (under public spaces or basements) – the cover of the ruins at Placa de l’Almoina from Valencia.

At Juval, the cover formally takes the characteristics of the ancient roof, but made of glass, ensuring the recognition of the intervention. The cover is protecting the old walls from collapsing and makes the covered space inside useful for an exhibition of sculptures. Here, the specialists chose a laminated glass cover equipped with an inner sheet with slight color to control the solar radiations. The cover does not completely close the inside space, providing a natural ventilation and an appropriate microclimate (Fig.1a).

At Dalkingen (Fig.1b), the cover consists of a laminated glass box that ensures a permanent transverse ventilation inside. This is achieved by a circumferential ventilation shaft at the bottom of the glass box and by glass ventilation dampers along the gable edge of the south facade. The inclination of the roof helps dissipate the hot air at its highest point so that no heat is accumulated inside. The indoor temperature at a 2 meter height is always lower than the outdoor temperature with approximately 3 degrees.

![Fig.1. Transparent covers](source: http://www.bergmeister.eu/, viewed at 23/07/2012); b. The Roman Limes Gate in Dalkingen (source: http://wikigogo.org/ru/9873/, viewed at 23/07/2012)
At Valencia the archeological material from the underground is protected by a laminated glass coverage that minimizes the UV radiation and offers support for a slim water surface. In order to avoid condensation problems under the glass coverage, the temperature of the water coating is maintained higher than the outdoor temperature [6].

### 2.2. Architectural intervention in the ancient roman center of the city Merida

The project retrieves the environment of the Temple of Diana which was the forum or the city center in Roman times (Fig.2). The challenge of acting in a place with such historical and archaeological relevance has meant to work with the existing trace since the beginning, so that the finished work would recover this space from Roman times through modern language.

The project is solved with a perimeter piece L-shaped, with its own syntax, sewing its edge with the city and creating a large square around the temple. This L is the union of the platform or high walk (which at the same level of the podium liberates the archaeological level at ground floor, allowing visitors to have a new relationship with the temple) and the structural wall (which puts in Temple value by framing and abstracting it from adjacent buildings). Between the perimeter L piece and the city, a volume in the form of hanging boxes occupy interstitial spaces accommodating commercial and cultural uses.

The original sacred area is recovered, respecting the Roman archaeological features that are part of the sacred space: the temple, two side ponds, the cryptoportico and the Roman wall, which are now incorporated into the plaza [7].

![Fig.2. The Roman forum of Merida](source: http://www.archdaily.com/201918/temple-of-diana-jose-maria-sanchez-garcia/,viewed at 13/07/2012)

### 3. Case study

The idea for a Cultural and Archaeological Research Centre at Paestum, Italy came up after studying the Archeological Site of the ancient grecian city and its surroundings (Fig.3a). The site is located at about 100 km from Naples, in a vast agricultural region and is part of a large UNESCO heritage together with The National Park of Cilento and the Archeological Site from Velia. (Fig.3b)

#### 3.1. Short history of Paestum

According to archaeological research, Paestum was founded around the year 625 b.C. and was one of Magna Grecia’s collonies from southern Italy. The development of commercial exchanges accelerated the urbanisation process, and so, between 550 and 450 b.C. they build the three famous temples (the Basilica, the Temple of Cerere and the Temple of Neptune) that can be seen today.
The city of Paestum was conquered in 273 B.C. by the Romans and became Paestum Romana. During the next two centuries, the Romans organised the city according to Cardo and Decumanus and built the foro, the Capitolium, the anfiteater and other public buildings as well as private residences.

Unfortunately for the city, the decline followed. The need for building sailing ships led to massive deforestation and progressive sedimentation in the plain. New commercial routes were established and as a consequence, Paestum had been isolated and abandoned by the citizens during the VIIth and IXth centuries and at the same time covered in sedimentary rocks. The city was robbed and the construction materials found have been used for the construction of other buildings, for example the Dome of Salerno.

The rediscovery of Paestum happened in 1752, when Carlo the IIIrd of Bourbony built the street that crosses Paestum on the direction north-south. In the XXth century the limestone layer was removed but the process of excavation and restoration had irreparable negative effects on the previous grecian layers of the site [8].

3.2. The architectural project

Despite its cultural values, there are fewer tourists visiting Paestum than tourists who come to enjoy the seaside. There are no periodic activities related to cultural aspects except for six festivals that happen once a year. The local inhabitants work either in agriculture, either in tourist services, transforming the pheriphery of the residential area in a commercial one. As a result, outside the summer season, the shops, restaurants and camping areas are all closed and the archeological site remains empty.

The need for permanent cultural activities persists and is supported by the new archeological research that according to the PUC of town Capaccio should start after 2010. Space for research, deposits and exposition is required.

Paestum’s link to the seaside is realised through the 7 meter wide street Via Nettuno, enclosed on both sides by camping or parking areas where people must pay a fee. Pedestrian or byking trails do not exist, and the whole street looks like a corridor that does not encourage the relationship between the ancient city and the sea.

According to the same PUC, camping places found in the protection area shall be moved outside its boundaries, leaving Via Nettuno with a deserted camping place on the northern side. In order to resolve the inconveniences caused by bad management and unsustainable tourism, a revitalisation project is needed. The project should not only accomodate necessary spaces for research or cultural activities, but also offer public places that can be used by all people, including

Fig. 3. Street Via Nettuno: a. Map of Paestum; b. Road map
tourists and inhabitants that are not participating at the events. In order to do so, a public plaza is created between the building and Via Nettuno. At the same time, the plaza offers people the possibility to enjoy and admire panoramic views over the archeological site and the natural landscape that surrounds it.

The concept of the architectural project itself is inspired from the state of ruin in which we find Paestum today. The idea is materialised through five massive volumes that seem to have fallen on the ground in an apparent disorder (Fig. 4). The orientation of the volumes is taken either parallel to the seashore and the streets of the residential area, either parallel to Cardo and Decumanus characteristic to the Archeological Site of Paestum.

Functions are mainly organised on two floors: the first floor hosts the cultural functions: exposition areas, conference rooms, a library and a multifunctional space (Fig. 5a), whereas the groundfloor contains the archeology department with deposits, workshops for students and children, a restaurant and the sleeping area (Fig. 5b). For this reason, there are two main accesses in the building. One serves the first floor and is meant to be used for the participants and visitors at expositions and conferences, and the other serves for the archeology research department.

The height of the volumes measures about 12 m above the ground level and does not exceed neither the height of the entire archaeological park situated 4m above, neither the height of the military tower that overcomes them with 40 cm. The total developed area of the Cultural Centre is 5940 sqm and covers up 9.35% of the site’s surface. This percentage is visually diminished to 5.94% because the sleeping areas are covered with green roofs.
The building is integrated in the surroundings by means of landscape design. Ramps of earth and vegetation go up and down between and in front of the volumes in order to obtain new and interesting relations between the interior of the building and the exterior. One of the ramps is transformed into an open air amphitheatre and links the public space in front of the building to the place that offers panoramic views towards the Archeological Site of Paestum (Fig.6). Sitting on its steps, people may admire the sea and the military tower situated in Piazza del Torre di Mare.

![Fig6. Transversal section](image)

The contemporary aesthetic of the facades is inspired from the roman style in architecture with massive walls and small openings (Fig.7). The dimensions and arrangement of the openings relate to the ancient belief of grecian people in the mythological gods from the heaven.

![Fig.7. External view of the project with the archaeological area in the background](image)

### 3.3. Structural characteristics

The resisting structure of the buildings was established in accordance with the message transmitted by the architect and the intervention rules in historical sites. In this purpose, to avoid building often foundations, which can affect historical sites, it was chosen a structure with large openings and reduced number of foundation. With this solution it is necessary to study in depth only a few zones from the historical sites. It relieves us from studying large areas. The areas with high seismic accelerations have led to a structure of monolithic reinforced concrete, poured between the stone finishes. The concrete walls have transmitted the loads to the foundation ground through elastic isolated foundations. In order to satisfy the functional and aesthetic needs of the building, the structure is made out of 25 cm reinforced concrete walls that sustain a 17 m opening covered with a waffle slab. The intermediary floor is a 28 cm Bubbledeck slab. The external walls are covered both on the inner side and on the outer side with 25 cm light tuffo stone that is the local material used in construction. Their thickness ensures a low heat transfer from the exterior, providing cool temperatures in the hot summer days. In this way the structure has rigidity, bearing capacity,
ductility and the stability of a structure with such openings in a seismic zone, respecting the historical values of the site. Lighting on the first floor is brought through openings in the boxed ceiling. Tubes of mat plexiglass descend from the openings and penetrate the intermediary slab providing a natural ventilation in the workshop rooms.

CONCLUSIONS

The diploma project had been created based on the knowledge gained during the years of study at the Faculty of Architecture and therefore in accordance with the guidelines of the Washington Charter.

The strategy developed respecting the ICOMOS requirements proposes an urban regeneration that manages to increase the involvement of the local community and young people through activities that are inspired from the cultural background. The final result consists in an intervention that does not contrast with the surroundings, but emphasizes them.

People will be encouraged to investigate not only ancient objects and techniques, but also the events and the political and social factors that led to the crystallization of today’s society. As a consequence, their own pride and esteem rises together with the desire for respecting and protecting their cultural heritage.

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