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*Architecture, archaeology and landscape, an interdisciplinary  
educational experience in archaeological sites*

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**Abstract**

ARCHITECTURE, ARCHAEOLOGY AND LANDSCAPE is an educational experience born with the aim of making a design approach to the vision, understanding and interpretation of archaeological remains, in its cultural, social and landscape context. This educational program comes from the discovery of a common spirit and the birth of an open discussion between several european university research teams. These teams belong to the Universidad de Valladolid (Spain), the Roma Tre University (Italy) and the Universidade do Porto (Portugal), and have a wide and extensive experience in studies and proposals for the implementation in value and dissemination of the patrimonial legacy inherited.

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## 1. Introduction

In the past few years many Schools of Architecture and others are setting up their own areas of research on the concept of an architectural project in the archaeological field. A specialization in the discipline which investigates the relationship between the archaeological project and urban environment is being witnessed. The subject in itself requires collaboration between various figures and knowledge from disciplines differing in both teachings and research just as in professional practice. The latter aspect is very important although it has hardly been investigated. The success has not been reached in applying convincing and efficient strategies for the promotion of heritage and therefore in giving a contribution for the sustainable development of the economy of the region of interest.

Attention to this theme is increasing widely, in professional and practical fields as well as in academic research, and questions on how to possibly resolve tensions between preservation, heritage management, renewal and urban expansion have not yet been resolved.

In recent years many university initiatives have concentrated on this theme (conferences, seminars, call for papers) and this research would like to be totally involved in this debate. Despite the fact that developments in academic research have concentrated on this area, professional practice does not seem ready to change its dynamics, this is why we think that this theme has rarely been investigated in a constructive manner thus causing problems for the future growth of cities. Research in this field could be very relevant because it poses important questions in an architectural field, which is only now being defined as such. The international comparison of various interdisciplinary approaches through workshop, in direct experience to archaeological site, with student and professionals from different countries and cultures could offer an important contribution to the debate.

In this way grows the studies of the three university researching groups from University of Valladolid, University of Porto and University of Roma Tre.

The educational program *Architecture, Archaeology and Landscape* is an opportunity to share international experiences related to intervention in great archaeological sites. It also aims to create a contemporary and plural debate on western cultural landscape from an integrated perspective including the different disciplines that should work together and actively in the memory of these recovery of these places: archaeology, architecture, and landscape.

Three are the International Workshop carried out in different archaeological areas of Spain, Portugal and Italy: *Tiermes 2010*, *Tongóbriga 2011* and *Cavallino 2012*.

For 10 days, students from different knowledge backgrounds (architecture, art, landscape and archaeology) of the three universities developed projects that approached the study of relations between already existing heritage elements, the new equipment of the site management and the own landscape morphology within the archaeological areas. Through the distribution in different working groups, mixed by nationality and studies of its members, the work was enriched in each area proposed, ranging from each particular archaeological unit to the more general point of view, as its connection with the landscape [1].

### *1.1. Laboratory for Research and Intervention in the Architectural Landscape and Cultural Heritage. University of Valladolid.*

Research Group, led by Darío Álvarez and Miguel Ángel de la Iglesia, belonging to the Department of Theory of Architecture and Architectural Design at the University of Valladolid, with the participation of other teachers in the fields of architecture, landscape, art and archeology. As main research we highlight the study, intervention and recovery of cultural landscapes and archaeological heritage, most notably the work on archaeological sites like Tiermes (Soria) and Clunia (Burgos) and territorial cultural systems Camino de Santiago, Camino del Cid or

Via de la Plata in Castilla y León [2] [3]. Arises in all cases the development of a methodology for the integration of sustainable and accessible architecture in the historical and contemporary cultural landscape. It could be possible by the method of generating theoretical and practical models of coexistence of current architectural systems in landscapes of the past. The ancient architecture is well understood in its landscape context, from its conception to its materiality constructive. These relationships allow us to understand the heritage and its geographical and historical links, as a complex organism defined by the Cultural Landscape global concept.

The philosophy of the laboratory as an active multidisciplinary group aims to create a framework for training of new researchers and professionals. On one side is driven approach to student research through collaboration grants or contracts related to projects, which are given a continuity of training framework with support for conducting research in doctoral postgraduate national and international. Studies crystallize in many cases contracts involve projects in different administrations, institutions and companies related to the integration of heritage in the landscape: Junta de Castilla y León, Heritage Foundation, Provincial Councils, etc. With all this, it is a network of groups and research centers (Tiermes Cultural Laboratory, ICADA Group, Research Group R & D, etc.), collaborating in interrelated jobs, courses, meetings and Congresses [4].

### *1.2. Culture of Project in Archaeological environmental, Roma Tre University.*

Roma Tre University has got different guideline of search about the relationship between Archaeology and Architecture. The Master “Architettura | Storia | Progetto” [5] was founded and directed since 2003 by Mario Manieri Elia, until his death in July 2011, to collect and deliver objective of attaining the fruits of a cultural invention that condenses an assortment of research and different experiences - but all of great scientific and professional - related to architecture, understood in its fundamental cultural and anthropological value in its fields multidisciplinary critical and operational. The actual director is the Professor Francesco Cellini. The Master ASP includes also one Advanced Course “Culture del Progetto in Ambito Archeologico” [6] direct by the Professor Maria Margarita Segarra Lagunes. This Course involved organically to the broader educational program of the International Master's Degree Architecture | History | Project, establishing itself as one of the modules of it. However, the specialization course has its own autonomy, by achieving a certificate of attendance to the participants in the Culture Project in the field of archaeology.

This specialization is to train professionals prepared to work collectively transdisciplinary and have the knowledge necessary to act with competence in archaeological contexts. Its program addresses issues related to the relationship between archaeology and architecture, covering the following aspects:

- Direct and indirect knowledge aimed at understanding the artifacts in themselves and in their contextuality.
- The design of the new, understood as 'plug' into the existing archaeological.
- Interventions for actual restoration.

### *1.3. Study Center of Architecture and Urbanism (CEAU) of the Architecture Faculty of Oporto's University (FAUP)*

The Study Center, CEAU, was created in 1994, and it integrates a Research & Development Unit (EAT-North-145) funded and evaluated by the Foundation for Science and Technology (FCT).

The CEAU is organized in six research groups, one of them is called: *Architecture, City and Territory Heritage* (PACT), and is coordinated by the Professor Francisco Barata. The goal of this work group is to develop the group's research strives within the vast area of Built Heritage, including very diverse areas, from

rehabilitation projects in specific architectonic works to studies geared towards the analysis and definition of intervention methodologies in historical centers, expending urban areas, and territorial and landscape units of patrimonial value [7].

In 2010, the *Atlas of routes and ancient towns of Portugal*, belonging to the research group PACT, participated in the 1st International Workshop - "Architecture, Landscape and Archaeology - Designing the archaeological landscape" - held in *Tiermes* (Soria). This experience allowed us in 2011 to be with the Intensive Program's home institution, for the second edition - "Architecture, Landscape and Archaeology - Tongobriga 2011" - involving the same institutions (FAUP-ETSAV-RomaTre). Pedro Alarcao, architect, and Lino Tavares, archeologist, have been the responsible professors involved in this educational program. Their experience in landscape archaeology and ancient architecture has enriched very much the program [8].

## 2. Architecture, archaeology and landscape.

Architecture, archeology and landscape is an educational experience result of the collaboration of the University of Valladolid (Spain), Universidade do Porto (Portugal) and Roma Tre University (Italy), under the sub-program Erasmus Intensive Projects (IP), funded by the European Union. The University of Valladolid is the IP Coordinator Institution, through the Autonomous Agency for European Educational Programmes (OAPEE) responsible for the management of the Lifelong Learning Programme (LLP) of the European Union, under the Ministerio de Educación Cultura y Deporte (Government of Spain). The educational project is developed as an Intensive Program (IP), a short-term of studies involving students and staff from the coordinating and partner institutions. Its aim is to encourage efficient and multinational teaching topics, allowing students and teachers to work together in multinational groups and adopting new perspectives on the study topic.

The link between institutions was born before that this new educational experience, with exchanges of students and teachers between the International Master Architettura | Storia | Progetto (Roma Tre University), IP partner with the University Master Restauración Arquitectónica (Universidad de Valladolid), IP coordinator. Also, both organizers and partners conduct regular meetings, where the best results are shown and new knowledge is acquired, and that are widely reported in Heritage Restoration scientific domain: *Aree archeologiche e Progetto di Architettura* and *Archeologia Urbana e Progetto di Architettura* (Roma Tre University, 2000) [9]; *Progetto Archeologico Progetto Architettonico* (Roma Tre University, 2002) [10]; *Archeologia e Progetto* (Roma Tre University, 2007-2008); *Interpretar a ruína, contribuições entre campos disciplinares* (Porto, 2008); *Actitudes Contemporáneas en torno a los restos arqueológicos* (Tiermes, 2009); *Fragmentos de la Memoria, Actitudes Contemporáneas* (Valladolid, 2010).

Tiermes 2010 is the first International Workshop experience. It shows an innovative character, more practical and directly oriented projects, compared to previous scientific meetings. Scientific research is open to the participation of students and teachers of the participating universities. Thanks to the good results achieved with this experience, the organizers request the inclusion of the program Architecture, archeology and landscape in OAPEE as an Erasmus Intensive Programme to develop between 2011 and 2013. Since the acceptance of the project, an IP is celebrated per year in each of the participating countries: Portugal 2011, Italy 2012, Spain 2013.

### 2.1 Tiermes 2010.

Tiermes is a Roman and Celtiberian interesting archaeological site located south-west of the province of Soria (Spain). It was the site chosen to develop the first educational experience because of the presence of the Laboratory for Research and Intervention in the Architectural Landscape and Cultural Heritage in the site since 2007. Tiermes sits on a hill, the architectural remains distributed in three terraces and a southern plain (Fig. 1).

Among the elements of landscape value systems and cultural environment, it is possible to highlight the path of the aqueduct, the different historical paths, the Camino del Cid, cannons, water elements, trees, etc. Therefore it is a place of great cultural ideal theme for a project that combines a research in architecture, landscape and archeology. [11] [12]



Fig 1. Partial view of Tiermes archaeological site. Landscape and architectural remains in a perfect dialog.

There were established three working groups, formed by students of different backgrounds each one (architecture, humanities, art ...) and by the three nationalities. The views of each university were present in each group. During the workshop, students, coordinators and teachers lived together in a unique setting, away from the civilization distractions. It provided an excellent working environment and suitable for group communication with other groups, the coordinators and teachers. It was counted as workplace, with a research-enabled building located on the site itself and belonging to Tiermes Monographic Museum. Thanks to the strategic location of the site, we could combine visits to take data with working days. To complete the training, several lectures were held both by teachers and by one of the archaeologists in charge of the site, Pablo Arribas Lobo, which was available for the students throughout the Workshop. Likewise pooled were made every two days so that all groups participate in the progress of their peers and with teachers and coordinators could discuss the most interesting topics. Field facilities are completed with a hospitality area as a center of relaxation and connection with the people of the environment, helping to enrich the proposals.

The three areas of intervention were selected one after the other so that each group would receive and bring influences to others. Therefore common strategies of action were established between different groups in order to make a global project (Fig. 2). The first team is responsible for the adequacy of the reception area and information site, of the enhancement of the Roman quarries within their environment and their incorporation to visit the site. The equipment has to broach the subject of the proposed work from the study of the place, being aware of his strong character material but without losing sight of the close relationship with the rest of the site. It works from the visual to the metaphorical, addressing issues of presence and absence of matter, as visible in the archaeological site of Tiermes.

Once the reception area is passed, the second team designs the main access to the site, responsible for the enhancement of the wall tardoimperial, enhancing its character imprint on arrival to the site. It was proposed a solution through a pedestrian walkway that leads gorge sight of the visitor. At the same time it was decided to enhance the perception of interior-external boundary of the site through subtle volumetric recoveries of the wall demarcating the city in a given period.

The third team is responsible of the identification of the caved bleachers southern edge of the site, as well as the treatment of the river to the Necropolis. It leads students to understand the project as a gap between the natural river and the Roman city. A physical boundary that marks the entrance to the city from the lower level and at the same time holds the remains of buildings if you look from the top level. The intention is to restore the understanding of the functioning of the southern front and built a great city limit, establishing guidelines for understanding the access by the Puerta del Sol, currently unused.

The proposals were implemented in a number of panels, which were exhibited at the participating universities in Rome, Porto and Valladolid.

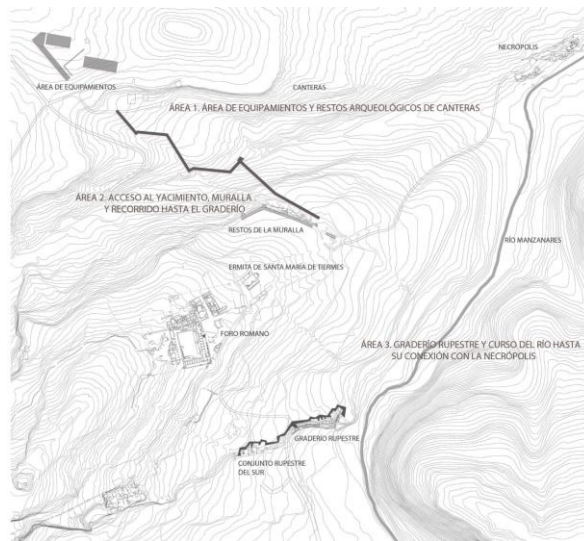


Fig 2. Workshop results. General plan of the archaeological site of Tiermes including the proposals.

## 2.2 Tongobriga 2011.

*Tongobriga*, built as a city on the outskirts of the Roman Empire, in the late 1st century AD, is today interpreted as a Roman geostrategic structure and also as a centrality and focus of citizenship [13] [14]. This city had its peak, in the second half of the 2nd century, with the construction of the Forum and other public buildings, which imposed *Tongobriga* in the territory. Despite being located on the Empire's outskirts, the buildings in *Tongobriga* demonstrate a great respect for Vitruvius's views, not only in metrics terms (*passus* and *actus quadractus*), but also in a urban planning and organization level [15]. After its subsequent abandonment and decay, this area was inhabited in medieval times, and today, partly occupied by the small village of Freixo. This small village, that belongs to the municipality of Marco de Canaveses, in Porto District, is included in an area that was classified as a National Monument in 1986. This way, the village is currently part of an area known as Freixo Archaeological Site, which has been excavated progressively since then (Fig.3) [16].

Here, was held the second edition of the international workshop - "Architecture, Landscape and Archaeology - Tongobriga 2011". The Workshop was organized under the Erasmus IP program and with the support of Dolmen, an identity that promotes the cultural tourism of this region.

The Workshop aims to promote a project-oriented approach to perception, comprehension and interpretation of archaeological remains from the territory of *Tongobriga* (Freixo, Marco de Canaveses) in its cultural, social and landscape context. It is also the aim of this Workshop to promote a contemporary debate about the cultural occidental landscape, from an integrative perspective, produce drawn records and plausible solutions about the archaeological site of *Tongobriga*. For twelve days the students were organized into four groups. To each one there was assigned an area for their intervention, areas pre-determined by the teachers, regarding Freixo's Archaeological Site. Each group had the support of two monitors and developed a specific intervention project, concerning different themes, linked to architecture, landscape and the interpretation of the archaeological site.



Fig 3. Aerial view of Freixo archaeological site.

During the workshop, the resident teachers held critical sections about the work development and the exhibition, as well as the final presentation. Each teacher also made presentations, which were related to the topics discussed in the Workshop. Our function, as monitors, was the coordination and monitoring of the groups in the development of their projects/interventions. Besides all the logistical support that a workshop of this nature requires. In the end of it, there was an exhibition with each group panels and a summary plan with all proposals together (Fig.4).

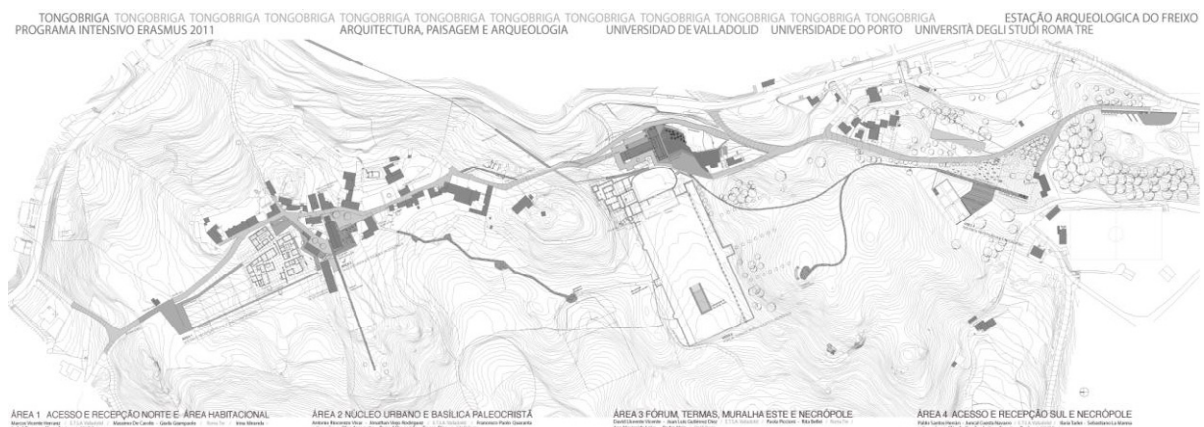


Fig 4. Workshop results. General plan of the site including the proposals.

### 2.3 Cavallino 2012.

The third workshop is on a greater scale, examining landscapes and regions, where there is collaboration between different disciplines, where an archaeological fragment takes its environment into account, and archaeology invades on a territorial scale. The archaeological site is in Cavallino, a few kilometers from Lecce in Puglia. The Museo Diffuso of Cavallino dates from 2003 and is part of SESA (Salento Ecomuseum System). This project was set up with the intent of joining the urban and outer urban areas of the city through the interaction of archaeological data targeted at creating contemporary landscapes. This system is historically multi-layered, the archaeological traces (Neolithic, Messapic, Roman, Byzantine, Medieval etc.) are numerous, at times not particularly relevant in themselves but spread throughout a region rich in ulterior potential economic and environmental resources, often under-utilized and inactive at times [17] [18]. A system therefore, which allows one of the central research project hypotheses to be verified with precision, for which the enhancement of cultural assets should not be confined to singular cases (often with results as costly as they are sterile), but in their inter-relationship with bigger projects: whether they be for natural and landscape recovery, or re-activation of alternative trails, promotion of economic activities, accommodation, progressive tourism etc. Projects that aim at a more rational use of our region, which is less destructive, more pragmatic, better adapted to real resources and more truly humanistic (Fig. 5).



Fig 5 (a,b). View of the archaeological site of Cavallino, Lecce (Italy)

### 3. Conclusion

The latter proposes to investigate the role assumed by architectural projects in the archaeological field and to therefore point out the possible co-habitation of contemporary customs in archaeological areas. The university research aims at investigating different strategies adapted for the promotion of architectural heritage in and outside Europe, in a comparative perspective.

Today the areas officially recognized as being of world heritage interest only apparently seem to be invulnerable to change. The many archaeological fragments scattered around a region emerge as areas of wreckage and abandon following legislative norms which do not do other than create contemporary “non-places”



closed in by fences creating an void around them and a lack of purpose rendering them absent; investigating the potential of these areas today, on a big and small scale, is fundamental in recognizing their role as urban spaces and cultural landscapes. It's important to understand that it's possible to keep prolonging the life of a cultural asset in both its conception and physical dimension. The exceptional quality of these places is the perception of the survival of the inter-reaction between nature and architecture, past and the present which can only be highlighted by an architectural project. Today we believe we are looking at the same landscape but we are faced with a different one.

The collaboration between the three universities (Valladolid, Roma Tre and Porto) aims at establishing an autonomous inter-university center *ICADA-International Center for Architectural Design and Archaeology*, located in Rome, to support scientific and documentary whose, through experience in the field, want to analyze, study and test, competitors two aspects:

- Investigate the forms of innovation in the management, development and promotion of cultural heritage, and more specifically those archaeological, what are the necessary and innovative forms of collaboration and interaction between the different skills that today operate in field of archaeological heritage.

More specifically, the project aims:

- The testing of a coordinated management between universities, ministries and local authorities in the management, planning and reorganization of physical sites.
- The subsequent testing of coordination the roles of architects, archaeologists, historians, officials, conservatives, of the maintenance, promotion and management, etc.
- To search for compatible strategies for a re-evaluation of the economic and tourist sites.
- The testing of innovative forms of teaching, with the involvement of young researchers unstructured, providing a significant interaction between the theoretical and the application size and design, in exchange between different methodologies and operational and cultural traditions of international partners.

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