Between Geology and Architecture. The Representation of the Archaeological Landscape of Tiermes

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Abstract

In his paper The beholding eye. Ten versions of the same landscape, *Donald William Meinig explores an expanded definition of what landscape is, offering an analysis of the different forms of its observation, thus demonstrating the infinite potential of the concept, capable of adapting to the gaze of those who contemplate it [Meinig 1979]. The study highlights how the landscape is endowed with powerful physical, environmental, economic, cultural, psychological and aesthetic components.*
Among these, cultural heritage undoubtedly stands out, a powerful element by virtue of which human beings attribute value to a given place, especially if it is in the form of a ruin, the result of protracted interaction between human activity and nature.
This is particularly visible in the archaeological site of Tiermes, a man-made landscape characterised by a unique spatial condition, whose transformation by man has left us important archaeological remains, especially from the Roman era. In it, we find a convergence of morphological and topographical values that have captivated the viewer's attention to such an extent that it has been described as 'a gigantic architectural fossil'.
This paper briefly reviews the graphic and photographic documentation generated to represent the site under study, in a vision in which geology, architecture and archaeology overlap and intermingle, and then dwells on the most recent research that –through the use of new systems of analysis and representation of architecture– offers us a new interpretation and representation of the Tiermes landscape.

Keywords: topography, ruins, archaeological landscape, iconography.

Introduction

"The edges of your profile become the slopes of a hill, the crests of a mountain, inclines, and abyssal cliffs. Your cavities are caves, and from the cracks of the rosy rock, water flows silently. In the Part hides the Whole, and the Whole is the Part. You, stone, trace the diagram of a part. You are the landscape itself. Even more: you are the Temple that will crown the cliffs of your Acropolis" [1].
With these words, Dimitris Pikionis poetically measured the relationship between the natural material of construction –identified with stone– and the landscape generated by it, evoking a correspondence of meanings between the part and the whole. Through his topographic aesthetics, the Greek architect viewed architecture as the quintessential element of connection between geography and geometry, between art and nature, to the point of reading its artistic imprint in the very natural profile of the landscape [Centanni 2018]. This sentimental vision of the Acropolis landscape, in absolute coincidence between built architecture and the topography of the site, lends itself well to a contemporary reading of the archaeological site of Tiermes, an ancient Celtiberian-Roman city that rises majestically in a geographically

Fig. 1. Aerial view of the archaeological site of Tiermes, Soria, Spain (photo by LFA and LAB/PAP, University of Valladolid, 2014).

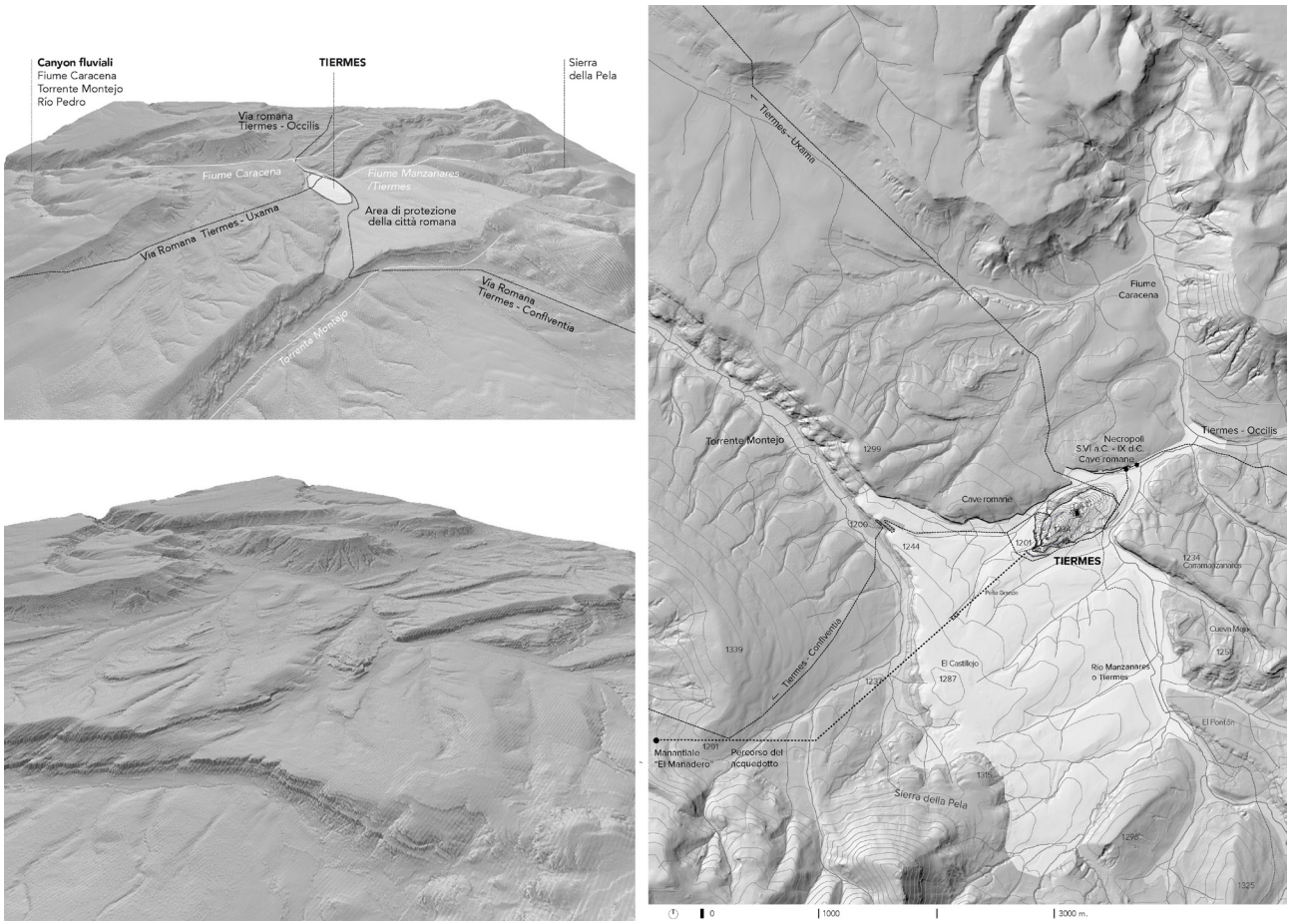
privileged setting, characterized by a natural topography of terraced hills in red sandstone (fig. 1).
It is a place inhabited and anthropized over the centuries, whose geological condition –inseparable from the architectural ruins present in it– is the basis of all the related iconography, since its rediscovery in modern times.
In it we can observe how, despite the passing of the centuries, the profile of the ancient city is immediately recognizable in all its representations, graphic and photographic. For its characteristic archaeological remains (we will see this later) but also for the presence of other elements, which form a *unicum* with the monumental emergencies, which belong to it and are reflected in them: the local stone walls, with its vast terraces; the vegetal elements, typical of the landscape of the Sorian hinterland and the light, imbued with the red color of the place.
The entire landscape and archaeological complex has been the subject of constant research and architectural experimentation since 2007 by the LAB/PAP Architectural and Heritage and Cultural Landscape Lab, a Recognized Research Group of the University of Valladolid [2]. This experience, which has continued for almost 15 years within the Tiermes Cultural Lab, created specifically with the Archaeology Unit of the IE University [3], is an opportunity to transform Tiermes into a true experimental laboratory, with a multidisciplinary vision, starting from architecture and archaeology, to create new systems of analysis and representation of the landscape that are configured as tools of great value for the definition of subsequent architectural intervention projects carried out on the site [4]. In this sense, starting from a study based on the plans and historical sources, appropriately combined with the new graphic works produced, it is possible to understand the landscape of Tiermes with a much broader and more complete perspective. In them, the classic tools of the most canonical drawing are combined with documents produced with new technologies, precious scientific tools for an extended study that includes the territory, geology and archaeology, all factors that have contributed to building the current vision of the landscape.

Tiermes as a *locus*

The archaeological site of Tiermes is located in the hinterland of Soria, in a particularly relevant environment, on a red sandstone hill, located near a large river area, whose shape is dictated by the presence of the Manzanares river at the head, the Sierra de la Pela ountains to the east and the Pedro river escarpment to the west, natural boundaries that allow for total defense of the urban area.
However, many resources were used in Roman times for the construction of large trenches necessary to overcome the abrupt changes in topography and thus connect Tiermes with nearby cities, giving continuity to the network of roads of the empire in a place a priori hostile to human settlement, as demonstrated by the fact that, currently, it is one of the least populated areas of Europe (fig. 2).
The largest part of the rest of the archaeological remains and conservations were those excavated directly in the rock, condition that render in some cases almost very difficult data and interpretation. If you deal with the rest of the buildings and urban infrastructure, foundations, indoor environments, scales, large tags and cavities that are visible without being able to see the excavated areas, we can recognize them at first glance and in these aerial images.
All of them built a magnificent anthropic landscape that dates back to the pre-Roman era in our days, in which the diverse era of occupation of the city and its period of construction and abandonment, like a huge palinsesto incised in its rock, modeling a 'gigantic architectural sculpture' [5] or 'a gigantic architectural fossil' [6], second to a fortunate expression by Blas Taracena that merge in an indissoluble way geology and architecture (fig. 3).The first trace relative to a human settlement in the area is from prehistoric times, with the occupation of the rock shelters at the foot of the Manzanares river, is part of the neolithic tribe. Proof of this

are the graffiti visible on the rock walls, which tell us about the spiritual life and the magical-religious symbolism of these populations. A first settlement in the valleys, due to agricultural development, was later replaced by the occupation of the highest part of the Tiermes hill, used as a defensive bastion against enemy invasions.
Roman dominion began in the 1st century A.D., when Appiano identifies Tiermes as one of the most important cities in the Celtiberian war (98-94 B.C.), during which the Roman consul Titus Didius subjugated the city and forced the Celtiberian tribe Arevacos who occupied it to abandon the fortified area and move to the plain [7].
In Roman times, the hill and the surrounding lands were largely urbanized, both on the higher and flatter levels, and on the slopes, where urban buildings were built on terraces, taking advantage of the steep slopes. It is in these

Fig. 2. Digital Elevation Model DEM05 (graphic elaboration by Carlos Rodríguez Fernández from the material of the Instituto Geografico Nacional de España IGN, 2018).



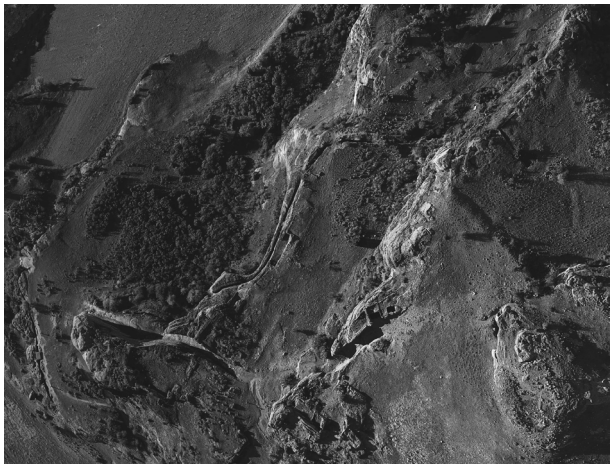


Fig. 3. Aerial photography of the West Gate Area of Tiermes (photo by LAB/PAP, 2017).

places, especially on the southern front of the city, where the anthropized landscape becomes most intense.
Furthermore, after the sudden abandonment of the Roman city, subsequent occupations were somewhat sporadic, making it difficult to perceive changes in the landscape over time. In fact, if we exclude a new moment of occupation in the Middle Ages –which corresponded to the construction of the Visigothic necropolis, the hermitage and the disappeared Monastery of Santa Maria di Termes–, the territory will remain almost uninhabited from the 16th century onwards, as Ambrosio de Morales tells us in his General Chronicle of Spain [De Morales 1574].

Tiermes, landscape of ruins

The rediscovery of Tiermes, at least in the chronicles, occurred in the second half of the 18th century, coinciding with the development of archeology as a discipline. This is how it is mentioned in the writings of Lafuente, Flórez and, above all, De Loperráez, who in 1788 created a chronicle of the city listing its most visible finds and remains [Casa Martínez 2013].
True archaeological interest, however, materialized only between the end of the 19th century and the beginning of the 20th century, a period in which the publications of researchers such as Nicolás Rabal (1888), Adolph Schulten (1911 and 1913) and the Count of Romanones (1910), who, through extensive documentation that brings together travel stories, prints and photographs, describes in detail the existing vestiges.
It is evident, from these first interpretations, how the emphasis is placed on the description of the ruins excavated in the rock [Dohijo, Arribas 2019], which become the main object of the texts (especially in relation to the fact that there are no excavations were carried out).
In Nicolás Rabal's travel memoirs, the ruins are presented to the reader with an iconographic apparatus created by Isidro Gil, clearly influenced by romantic painting, which will quickly become the referential image of the place.
In the engravings, in fact, the remains appear isolated and imposing, contemplated in their grandeur by tiny men, with special interest in the passage of time and the transience of matter, evident in the representation of the stones, with degraded wall systems and already invaded by weeds, a symbol of nature reclaiming the place.
The study published by Schulten, almost a quarter of a century later, also offers us a reading of the city in monumental terms, but is characterized by the inclusion in the documentary corpus of a plan (on a metric scale) of the upper part of the hill: before concentrating on the ruins, he feels the need to understand the environment of the place where the ancient city is located, making a detailed description of it. The representation places special emphasis on highlighting the geomorphological conformation of the relief as a natural defense, responsible for the inaccessibility of Tiermes.
A little earlier, the work published by Count of Romanones, the result of the archaeological excavations begun in 1909, focuses on the transmission of the heroic aspects of the population of Tiermes and the 'treasures' discovered, but it is presented a photographic report of enormous value for the purposes of our debate. In fact, the photographs taken this last time refer mainly to the most topographically relevant places, such as the large trench of the West Gate and the meridional canal of the aqueduct, and are accompanied by a planimetric diagram of the complex, which is not very precise, but it perfectly illustrates the same theme (fig. 4).
The plan highlights the terraces where the city was built and the intensive use of the edge of the hill, a natural wall

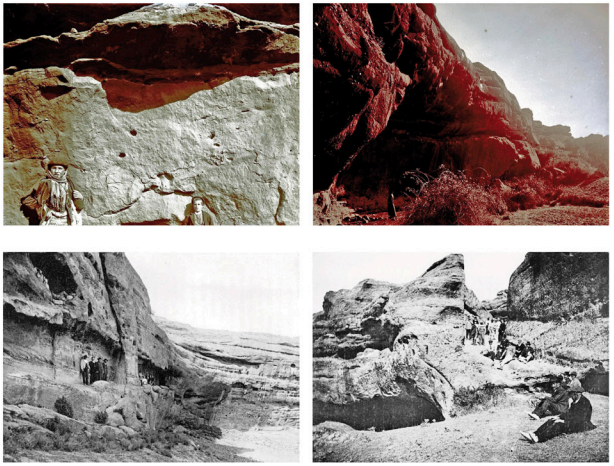


Fig. 4. Top: photographs by Juan Cabré of the rock shelters near the area (1910),Cabré archive, Institute of Cultural Heritage of Spain IPCE. Bottom: photographs by the Count of Romanones, of the aqueduct and western gate of the city [De Figueroa y Torres 1910].

that surprisingly did not serve as the edge of the city but was supported by houses and passages excavated in the upper part. Likewise, other archaeological remains have been identified on the plain that are not visible today, but that surely in times of peace extend the limit of the Roman city beyond its acropolis.
The photographic report, although more focused on the archaeological remains, offers us first of all a global vision of the city, represented from this side, which connects the rocky plateau with the medieval hermitage and the incipient vegetation. The environmental context is also the object of the photographs of Juan Cabré (1915), where the natural enclave is presented, in a representation of the place in which the man actively participates.
Before the Civil War, which has a clear background in archaeological studies, we must mention the work of Blas Tarracena (1932-1935), which presents us one of the most complete studies on the remains of Tiermes, focused mainly on the southern side. These texts are accompanied by the discussions of the architect José María Barbero, in which the technique is used to highlight the relationship of coexistence between the topography and the built environment, with indication of the level curves and the volumetry of the voids.
In the second half of the 20th century, a series of general plans of the place and aerial photographs were made that bear witness to the current landscape. From this moment, the planimetric drawings and interpretations of the city of Tiermes will constitute an important source of urban analysis.
The aerial photograph of the American Flight of 1956-1957 is a historical testimony of the agricultural plots and divisions for livestock farming arranged on several levels, following the natural terraces. These lines are also represented in the topographic plan drawn by Luis Argente (1979), which reflects with great topographic precision the relationship between these anthropic levels and the archaeological remains known at the time.
The subsequent excavation work and the declaration of the site as an Asset of Cultural Interest in 1999 caused the abandonment of these livestock structures. The topographic plan by José Luis Argente Oliver, as well as the one published by Teógenes Ortego [Ortego 1975], highlight the importance of the geological cuts of Tiermes and their relationship with the so-called rock architecture, as identifying elements of the archaeological landscape (fig. 5).

Systems of interpretation and representation of artificial topography

The layout and architecture of the Roman city are recognizable in the actual plan of the archaeological site, where the most ancient remains coexist with the medieval architecture, such as the hermitage and its necropolis, and with the contemporary infrastructures of the site, such as the entrance street y parking.
The investigation carried out by the LAB/PAP group is centered on the representation of the Tiermes landscape in its entirety, with a series of plans that consider factors of different nature. Each of them studied the aspects relating to the morphology of the hill and its topography. Considering the topographical aspects and their greater or lesser metric precision, in reality there is a great difficulty in representing the topography on general drawings, due to different problems.
First of all, the well-known coincidence between the terrain and the excavated archeology, which in many places invalidates the topographical elevation carried out, which does not adequately reflect the archaeological remains.

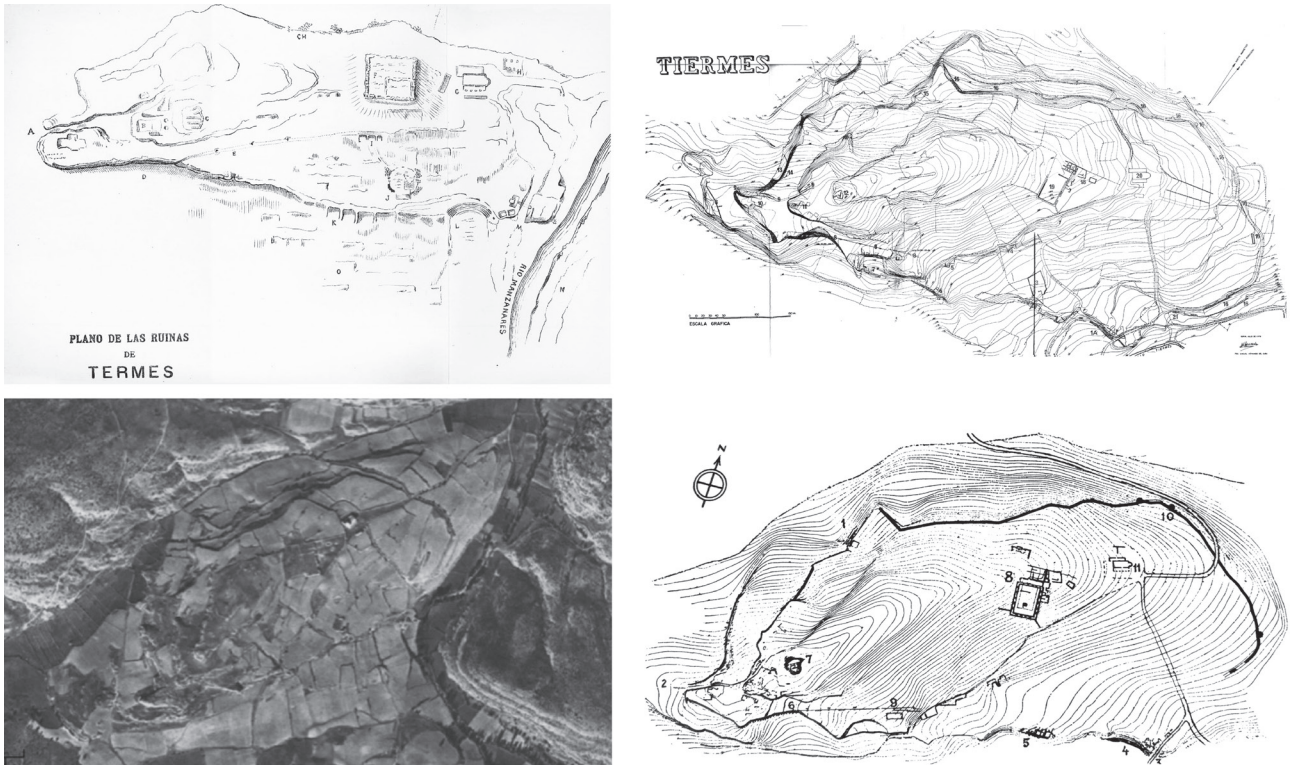


Fig. 5. Planimetry and orthophotography of Tiermes, made by the following authors: a. Count of Romanones [De Figueroa y Torres 1910], b. Argente Oliver [Argente 1980], c. American Flight Series B 1956-1957 (photo by United States Army Map Service. National Geographic Institute. Information granted by the Ministry of Defense CEGET), d. Teógenes Ortego [Ortego 1980].

Secondly, due to the hill topographic shape, with slopes that exceed the verticality at various points, it is not possible to create the usual representation with level curves, since these would cross each other. Likewise, it is difficult to superpose on plan drawings human, agricultural and foliage structures: walls, valleys, slopes, as well as the own vegetation and trees. And although these elements can bring valuable information about the urban landscape of Tiermes, when dealing with temporal structures that respond to different criteria of use, it is not possible to guarantee superposition with ancient structures, as occurs in other archaeological landscapes.

In this context, this information has been included and considered in the study carried out in recent years, summarized in a final interpretation with the representation of the landscape of Tiermes, in which the topography and the rocky edges as the main layer on which are superimposed the archaeological remains, risk being assumed by others visible in historical photographs.

The generated plan also shows the lines that structure the routes and points of interest of the actual landscape, which do not differ excessively from the ancient paths, governed in both cases by the same topographical logic. The document is oriented with respect to the geometry of the Roman forum (not much different from the cardinal

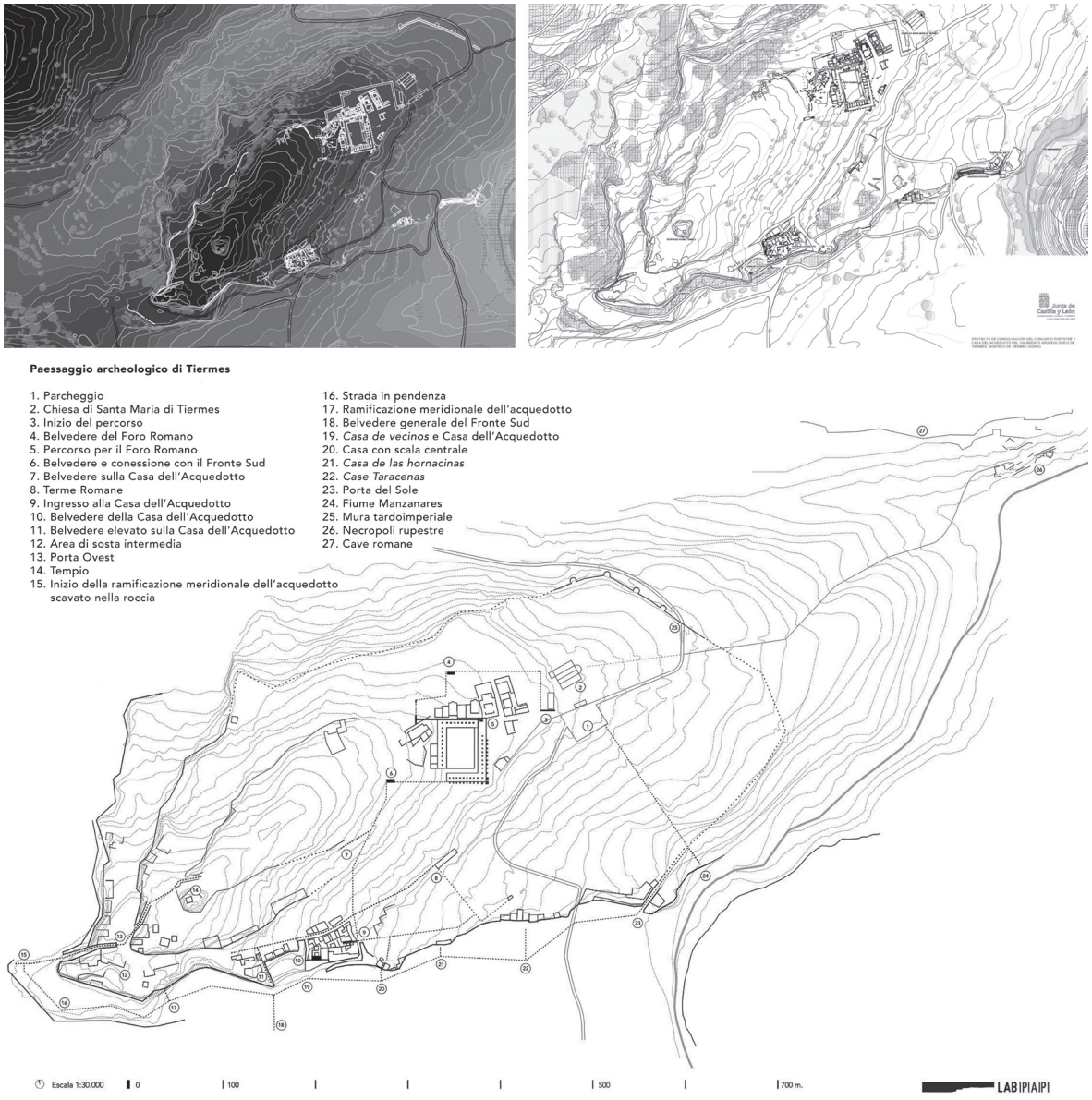
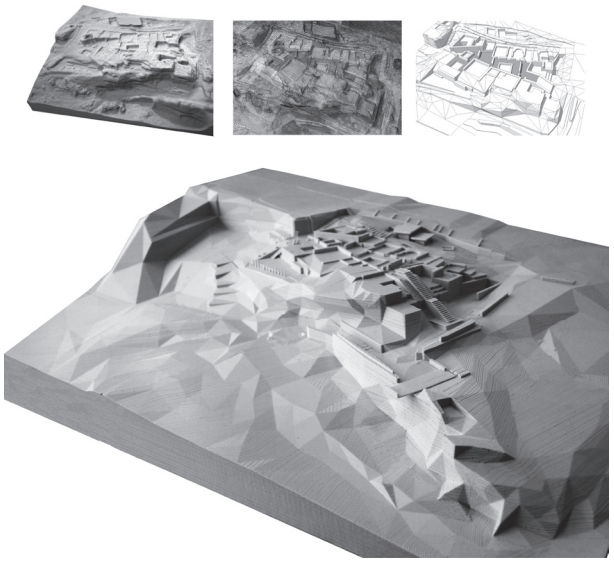


Fig. 6. General plans of Tiermes (graphic elaboration by LAB/PAP, 2010, 2010 y 2016).

orientation), clearly reinforcing an architectural order of reference in urban layouts of the Roman city (fig. 6).
Once defined both the location and the topographical transformation tools used in the territory, it is possible to carry out an analysis of the urban layout of Tiermes, where the starting point is the balance between the natural and the artificial landscape, therefore between the use of the existing topography and architectural building [Rodríguez Fernández 2019].
These two main questions derive from other physical or spatial characteristics, such as the organization and distribution of infrastructures and urban streets or the orientation of the sun and the wind, or economic aspects, such as the relationship between the use of the land and the coasts of construction or organization of the city and its political or even symbolic center, with a reading of the location of the most representative buildings.
The topography/construction combination allows us to understand and explain the urban layout of Tiermes starting from its geomorphological characteristics, in a discussion that is linked to a study of the territory as a modified topographic landscape, through a series of approximation levels that emerge from there the territorial scale properly says as long as the architectural scale of the buildings, and finally, starting from the main or vital conditions of the city as far as the secondary ones.

Fig. 7. Steps in the graphic coding process of the House of Aqueduct. Upper, from left to right: 3D printout of the photogrammetric survey, 3D Sketchup model and final architectural model. Bottom: 3D model of the final architectural model (graphic elaboration by Carlos Rodríguez Fernández 2015).



Photogrammetric surveys and architectural models

The drone flights carried out in recent years have allowed the acquisition of numerous aerial photographs, whose oblique point of view has offered us a series of largely unpublished data, which constitute a new approach to understanding the anthropic landscape of Tiermes and human interventions in relation to the territory. Another of the products associated with these photographs is the creation of precise photogrammetric surveys of some architectural complexes and with them the generation of three-dimensional models, which open up a new challenge in our research and a new approach.
The topographic information provided by these three-dimensional models requires, like the two-dimensional drawing, a process of interpretation and simplification, of which the research conducted in the House of Aqueduct before the architectural intervention of 2014 are a clear example. The photographic survey carried out shows the topography of the bare rock, at the foundation level: the beginning of the walls, the drainage pipes, the staggered levels between the different rooms, as well as some stairs and warehouses completely dug into the rock, present in the steepest areas. Equally relevant is the legible information on the interaction between the private house and the adjacent public roads, structures also dug into the rock, as well as the drainages and sidewalks. We are talking about a topography that has been completely remodeled by architecture in its favor. Furthermore, the process of natural erosion of the stone has led to a degradation of the structures that in many cases makes the topography practically unrecognizable in the photogrammetric model (fig. 7).
On the other hand, the drawings produced provide significant information on a structure governed by the laws of architectural composition, especially with regard to the construction of the plan: in fact, it is about regular walls and rooms (determined by the different known intended uses) as well as the paths and accesses and their relationship with the public space.

These two pieces of information are complementary: on the one hand, the metric precision and the different altimetric layers provided by photogrammetry; on the other, the geometric precision constituted by the plan already drawn and studied. Through both, a final three-dimensional model is built that exposes the architectural object in a recognizable state, restoring to the wor'n topography the geometry and regularity that are typical of architecture. In the 3D printing of these three-dimensional models, made on a small scale, the differences between the two are noted and it is recognized how the problem of representation is transferred to the world of three dimensions. The original model is closer to the real perception of the object, while the architectural topography represents an idealized situation. Halfway between the two positions, we find the process of representation and, consequently, the process of the architectural project.

Three-dimensional models, a global representation of the landscape

Recently, several more general photogrammetric models have been elaborated, covering wider areas of the archaeological site. The results obtained at present do not provide any relevant information for archaeological research, but they show a certain interest in relation to the contemporary view of Tiermes, seen as a topographically manipulated object with a marked character of plasticity. These spatial scale models give us a general idea of the whole and interpose the necessary distance between the spectator and the landscape to recognize the different elements and establish relationships between them, something that is not possible in a closer and more realistic view.
This collection of models and drawings includes those which, once again, combine morphology with architecture. The topographical relief of the site is superimposed on the most important and largest architectural structures of the archaeological site, such as the late imperial walls, the roman forum and the baths, as well as the main roads and aqueducts, all buildings or infrastructures adapted to the topography, which can be seen underneath them.
The relevance of these general models lies both in this way of explaining the configuration of the landscape as a combination of both factors –artificial topography and construction– and in explaining the constitution of the city from its own topographical condition, on a high hill occupied in its entirety, with the public buildings, forum and baths located in a central position, fortified naturally on the western side and without the need for it in times of tranquility on the eastern side. However, this condition of a defended acropolis was reinforced in the late imperial period, with the construction of a wall that enclosed part of the city on the eastern side, retracting and considerably reducing its size. This issue, which is difficult to understand in a visit that begins with the walls, is reflected in the general patterns (fig. 8).

Fig. 8. Upper: 3D model of the central Tiermes area created from the 2x2 km LiDAR laser survey (graphic elaboration by Carlos Rodríguez Fernández from IGN). Botton: Section and plan of the central area of the Forum and the Roman Baths of Tiermes (graphic elaboration by Carlos Rodríguez Fernández).

Fig. 9. Moralization project and visitor routes in the West Gate area. Plan and aerial photo (graphic elaboration by LAB/PAP).

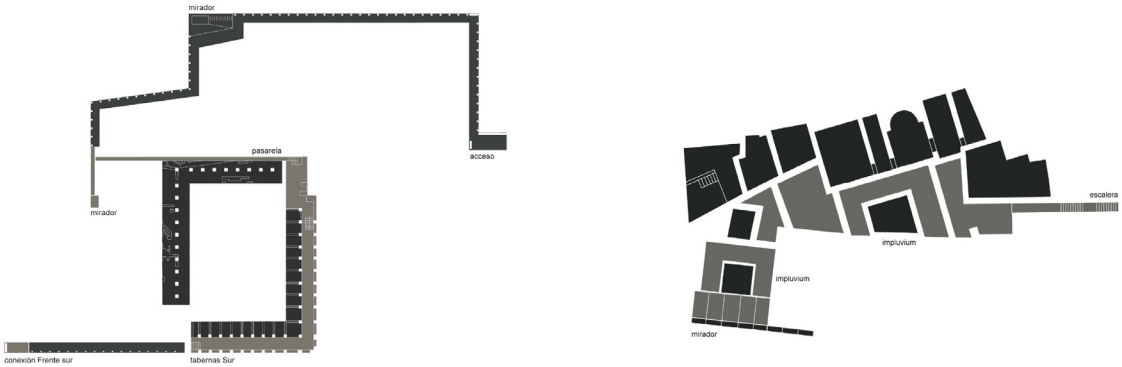
Representation systems and architectural design strategies

The study of the urban layout was fundamental in defining the system of routes for the enhancement of the south side of the archaeological site, carrying out a detailed analysis of the area from the largest scales to the detailed plans of the different areas, which then guided the choice of the architectural intervention mechanisms.

The design of these intermediate scale plans is based on the existing topographic plan, as well as on previous plans, which are reinterpreted using aerial orthophotos and on-site verifications. This is of decisive importance in the interpretation of a largely unexcavated and undocumented archaeological landscape. The aerial photographs, from different survey campaigns and taken at different times of the day, provide essential information for the identification of architectural structures that would be difficult to discover and interpret on the ground.

Photography in itself constitutes a representation of the territory on a much smaller scale than reality and

Fig. 10. Roman Forum and House of Aqueduct: project (graphic elaboration by LAB/PAP, 2014) and intervention carried out (photo by LAB/PAP, 2016 and photo of House of Aqueduct by Paulo Paiva Fonseca, 2017).



interposes a distance between the spectator and the landscape that contributes significantly to eliminating what obstructs the view, suppressing the most superficial aspects and revealing the true geometry of the remains of the city. The graphic method, using tools as important as geometry and measurement, acquires a predictive capacity in the analysis of the layout and functioning of the city, which yields surprising results that would be difficult to achieve without an archaeological excavation or the use of other documentary sources.

Proof of this is the discovery of a series of urban routes which, even without clear archaeological evidence, can be identified by measuring the depth of the platforms and the position of the buildings on the perimeter, the layout of which corresponds to the remains visible in the photographs and to the logic of the functioning of a Roman public road. By measuring these distances and applying architectural logic, these hypotheses can be easily argued (fig. 9).

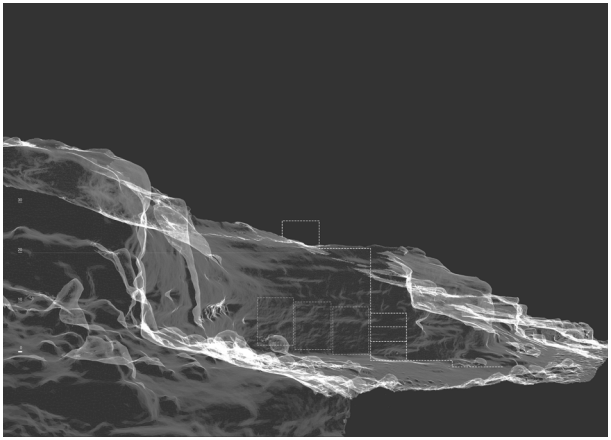
Drawing is therefore an intuitive, agile and easily applicable method in archaeological landscapes such as Tiermes, which almost always lack other archaeological sources or results. In this context, we could say that the architectural project is also halfway between suggestion or prediction and real verification; consequently, it shares with the survey an equally simple system of representation: it brings together lines, knots and more or less intense volumes that complete the graphic survey carried out, trying to make comprehensible what is not seen or has disappeared: a worn platform, a broken profile or an interrupted path, and which the eye and the drawing recompose in logic.

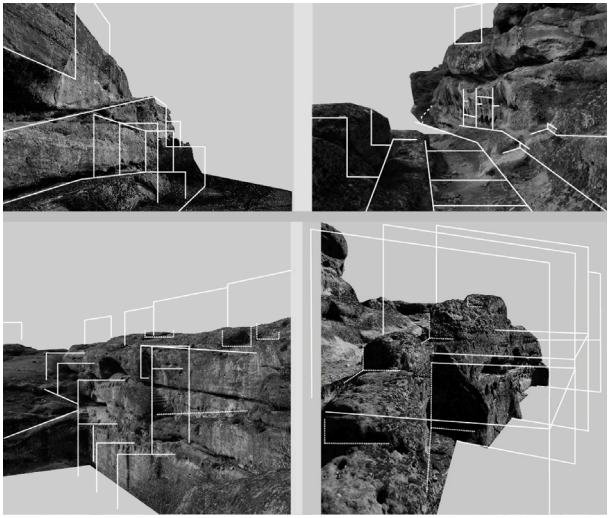
The architectural tools used in the architectural design are therefore largely derived from this same system of representation: the broken lines are transformed into small uprights that delimit the route or are inserted into a system of stone slabs that suggest the path; the intersections are recognized by large milestones, visible from afar, and the continuous lines are transformed into steel platforms that guarantee accessibility to the site.

This essential architectural language is the clear result of the graphic code used and is materialized with stone (the same stone as on the site, but in the form of gabions, a new format that allows it to be identified as a contemporary intervention); Corten steel (intended for the mobile elements, clearly superimposed or cut out in the rock) and concrete (which is configured in prefabricated slabs in colors close to those of the rock). These materials, in permanent dialogue with the sandstone of which the site

Fig. 11. Photogrammetric survey of the south side of Tiermes from a drone flight (graphic elaboration by Carlos Rodríguez Fernández, 2017).

Fig. 12. Graphic reconstructions on the traces of the excavated architecture of Tiermes. (graphic elaboration by Carlos Rodríguez Fernández, 2016).





is composed, ensure that the interventions along the route are perfectly integrated into the landscape, like representation codes on a map (fig. 10).

Conclusions: drawing and the architecture of the void

In such a difficult context, where the artificial topography of the rock is modified as much by ancient constructions and natural erosion as by architecture, contemporary interventions take on the difficult task of preserving the balance between scientific knowledge –that is capable of making the archaeological remains of the ancient city understandable– and, at the same time, enhancing the plastic value of the landscape of the ruins (fig. 11).
The rock and the archaeological remains, in their inseparable condition, find points of particular intensity, voids and trenches that increase the curiosity of the spectator, attracted by the excavated areas and the large incisions in the rock, in a landscape that "thus tends towards the sublime" [Argullol 1983, p. 32]. The viewer's gaze slides through the empty spaces of the Roman city, traversing its trenches, stopping in the rocky cavities, which unexpectedly become frames from which to observe the landscape.
The aqueducts of Tiermes are now trenches to be traversed, entering the telluric world of the rock, generating a new interaction between matter and void, between landscape and archaeology, of great intensity.
These platforms, modeled in the rock and seen from the highest point of view –where the ancient temple once stood– create a perspective that could have perfectly illustrated Jorn Utzon's famous essay *Piattaforme e altipiani: idee di un architetto danese* [Utzon, 1961]: the remains of roads and buildings, footprints in the rock that occupy all three dimensions, like the footprints of buildings that have disappeared, evidence of man's presence in the landscape and at the same time of abandonment and the inevitable passage of time.
In this precarious balance between archaeology and landscape, between the interpretation of the remains and the enormous presence of the rock and its traces, drawing is often the best way to combine both conditions, that of a city that has disappeared and that of the city that existed at a particular historical moment.
The graphic representations, like the same architecture used in Tiermes, suggest and complete the hollows of the rock, without altering its permanence or concealing its powerful presence (fig. 12).
Architecture and drawing have the capacity to transform the visitor into an active spectator, capable of interpreting what is still preserved and at the same time discovering in the traces of the rock and in the drawings the passage of time and memory, to the point of constructing with the imagination a personal Tiermes, like a new Calvino at the sight of Argia [Cianci, Calisi 2014]: "What makes Argia completely different from other cities is that instead of having air, it has earth. Earth completely covers the streets, the rooms are filled to the brim with mud, on the stairs rest other stairs in negative, on the roofs of the houses rest layers of rocky soil like skies with their own clouds. Whether its inhabitants can walk through the city, expanding tunnels of worms and cracks through which roots crawl, is something we do not know: the humidity exhausts the bodies and leaves them without strength; it is better to stay still and lie down, everything is so dark anyway" [Calvino 1972, p. 60].

Notes

[1] Pikionis D. (1935). Topografía sentimental. In *Tó 3o Máti*. Cited in Ferlenga 1999 and Álvarez 2011.

[2] Recognised Research Group of the University of Valladolid (Spain). Directed by Darío Álvarez Álvarez and Miguel Ángel de la Iglesia Santamaría with the following researchers : Nieves Fernández Villalobos, Sagrario Fernández Raga, Carlos Rodríguez Fernández, Flavia Zelli, Laura Lázaro San José, Ana Muñoz López and Lara Redondo González.

[3] Working team created by Dirección General de Patrimonio Cultural of the Junta de Castilla y León, in collaboration with the Archaeology Unit of the IE University of Segovia.

[4] Architectural interventions were carried out in the Roman Forum complex (2010), the House of the Aqueduct (2014), the southern branch of the Aqueduct (2018) and the Late Imperial Walls (2022).

[5] Darío Álvarez, paraphrasing the title of Geoffrey and Susan Jellicoe's most significant work, identifies Tiermes as a true 'Landscape of Man' [Álvarez 2015].

[6] Teógenes Ortego mentions this interesting statement by Blas Taracena in his guide to the archaeological site [Ortego 1975].

[7] Irene Nieto Ruiz realises a historical contextualisation of Tiermes in her Trabajo Final de Máster [Nieto Ruiz 2022, pp. 60-61].

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