

## GRAPHICAL DOCUMENTATION OF THE HISTORICAL CITY OF CAGLIARI (ITALY)

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### Abstract

The documentation of the urban historical heritage is the preliminary step to identify the correct strategies for its protection and enhancement. To achieve this aim it is necessary to acquire a graphic documentation at the different scales of detail required by a multi-layered system as the historical landscape; this complexity can now be explored integrating traditional and digital survey methods and representation methodologies. Traditional methods, in particular, are characterized by a direct contact with places; this condition guarantee a deepest perception and a total immersion in the landscape integrating and giving quality to the considerable amount of data offered by recent technologies; this approach has been applied in the survey of the historical city of Cagliari in which the medieval districts of *Marina*, *Stampace*, *Villanova* and *Castello* retain a great part of the modern walled system built since the fourteenth century until the first half of the nineteenth century and a lot of interesting buildings designed for civil, public and religious use.

Keywords: Life drawing; Graphical documentation; Historical city; Urban landscape; Cagliari; Sardinia.

### 1. GRAPHICAL DOCUMENTATION IN THE DIGITAL ERA

The representation of the landscape is a topic of great importance that currently can rely on different methodologies of survey and representation finalized to the construction of digital databases able to support the conservation and reuse of the historical heritage. The development of computer technologies and the refinement of survey and communication methodologies have increased the number of case studies and opportunities for comparison through international and interdisciplinary conferences and was encouraged, also thanks to the funds allocated by the European Union. The role of digital technologies has become

predominant for the documentation of large contexts but not only; the use of laser scanners and aerial and terrestrial photogrammetry supported by a growing use of the drone has allowed a systematic documentation of single architecture, urban context, and large areas, ensuring a high quality of data and a high scientific level of research [1]. However, the traditional instrument remains indispensable in all phases, from the survey to the communication of results. It remains indispensable when we operate on the urban scale.

The direct perception of the places requires a total immersion in the landscape; this condition requires a pedestrian role of the observer with a horizon at the human level, characteristic of who lives the city and is part of it [2]. Life drawing becomes the way of provid-

ing the tools suitable for careful observation and allows an individual and overall assessment of physical and anthropogenic objects of the urban landscape, follow the lines and forms, and recognize the relationships. The traditional approach remains indispensable in this historical phase, characterized by a “risky” wide accessibility to IT technologies that offer large amounts of data whose management and use also needs a great deal of attention [3]. The same representation of the results, also to reach a wider circle of users, can also be enriched by a traditional intervention capable of integrating the digital product that thus acquires expressive and communicative force [4, 5].

Cagliari, the capital of Sardinia and settlement of Phoenician origin preserves traces of its foundation, Roman architecture such as the amphitheatre and important monuments of different eras but above all it is a remarkable example of military architecture designed in the thirteenth century and developed in modern times through the bastioned front. Its medieval line, set on four districts in the form of an eagle and entirely protected by a bastion front until the end of the nineteenth century, still retains numerous noble palaces and religious architecture of value connected by the ancient paths, some of which deserve a rediscovery. Traditional drawing can make an important contribution to its protection and enhancement. Its documentation, carried out in approach, through a gradual path of attention becomes the instrument able to find the peculiar elements, a fifth or an urban scene, an element “dominant” and then arrives at synthetic drawings recognizable only at the end of the journey, as cornerstones of urban perception [2]. As a sort of lens able to observe with different levels of zoom, the landscape is analysed from selected points or according to a “vision in motion”, interpreted through reasoned synthesis to reach, with subsequent insights, direct measurement of objects. A path that through “careful and analytical observation of small details” allows you to “see everyday aspects that could go unnoticed”, as Carlos Montes [6] reminds us, citing the teachings of Gordon Cullen, and “understanding the city through the drawing means to set the goal of recording on paper with a great sensitivity some salient data to be able to identify it and to be able to grasp both the most evident external aspects and those underlying within the different architectural compositions” precise Emanuela Chiavoni [7].

At the end of this experience, it is possible to define a documentation that goes beyond the graphic exercise, addressed to the critical analysis that enriches

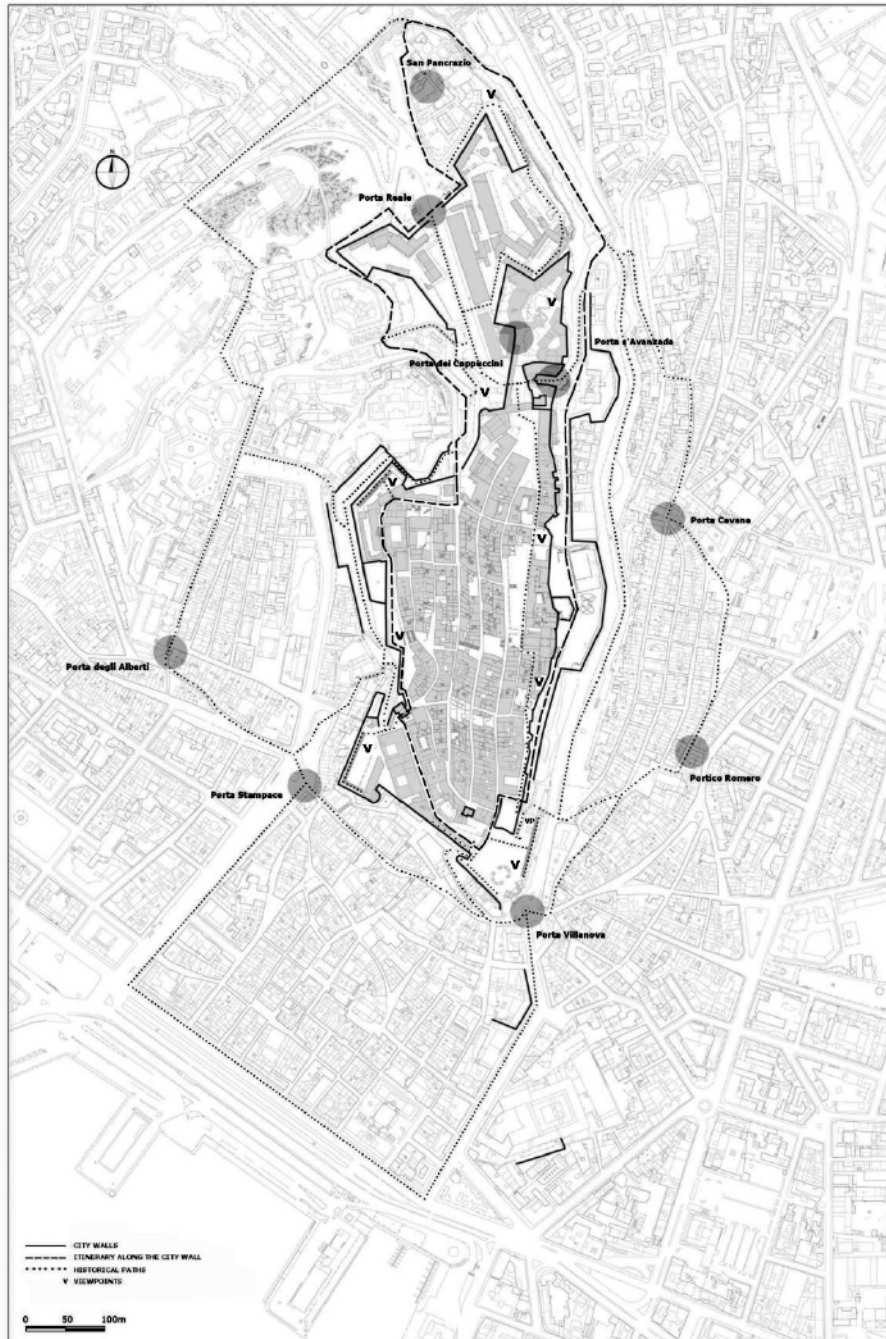
and completes -with a “subjective” component – the “cartographic” knowledge of the places or its precise recognition. A drawing that captures different facets, hidden, forgotten and rediscovered glimpses, architectures and paths that can be analysed, valued, and protected; in this way the action of drawing -as a data recording tool- becomes a means of planning forecasting and the drawings become the pieces of a cognitive mosaic aimed at the knowledge of the historic centre of Cagliari. This line of research has been applied for 10 years in the teaching proposed to the class of students of the faculty of architecture of Cagliari. The crossing of spaces and historical routes and sights of the city from viewpoints offer many elements for knowledge and invite architecture students to a critical reading; the class thus acquires a progressive capacity for understanding and synthesis of a multiform and stratified system as the urban landscape, rediscovering forgotten places and acquiring a new sensitivity, first steps for the protection of the characteristic values of the place and an indispensable contribution to preserving its memory.

## 2. FORM AND PROJECT OF THE HISTORICAL CITY OF CAGLIARI

The extension of the historic centre of Cagliari goes beyond the limits of the modern city walls that we can deduce from the analysis of historical cartography. The municipal administration of Cagliari, in agreement with the regional administration, has in fact redefined the area subject to historical-architectural and landscape constraints including the districts of Marina, Stampace, Villanova and Castello, recognizing also, within the PPR of Sardinia, the walled system of the historic city of Cagliari, as a system of exceptional cultural and landscape value. For this reason, our first task was to define a research path aimed at the enhancement of the historic site and an integration of its heritage with the contemporary city, contributing not only to a protection, also to a sustainable tourism development.

The structure can be summarized as follows:

- Historical research and analysis of sources;
- Definition of a map of the historical city functional to the operations of graphical field documentation;
- Graphic documentation of some routes through and on the edge of the historic city;
- Synthesis and design proposals aimed at enhancing the places crossed between which the defini-



**Figure 1.** City walls and historical paths of Cagliari on a geo-referenced map. Source: graphical elaboration by Andrea Pirinu

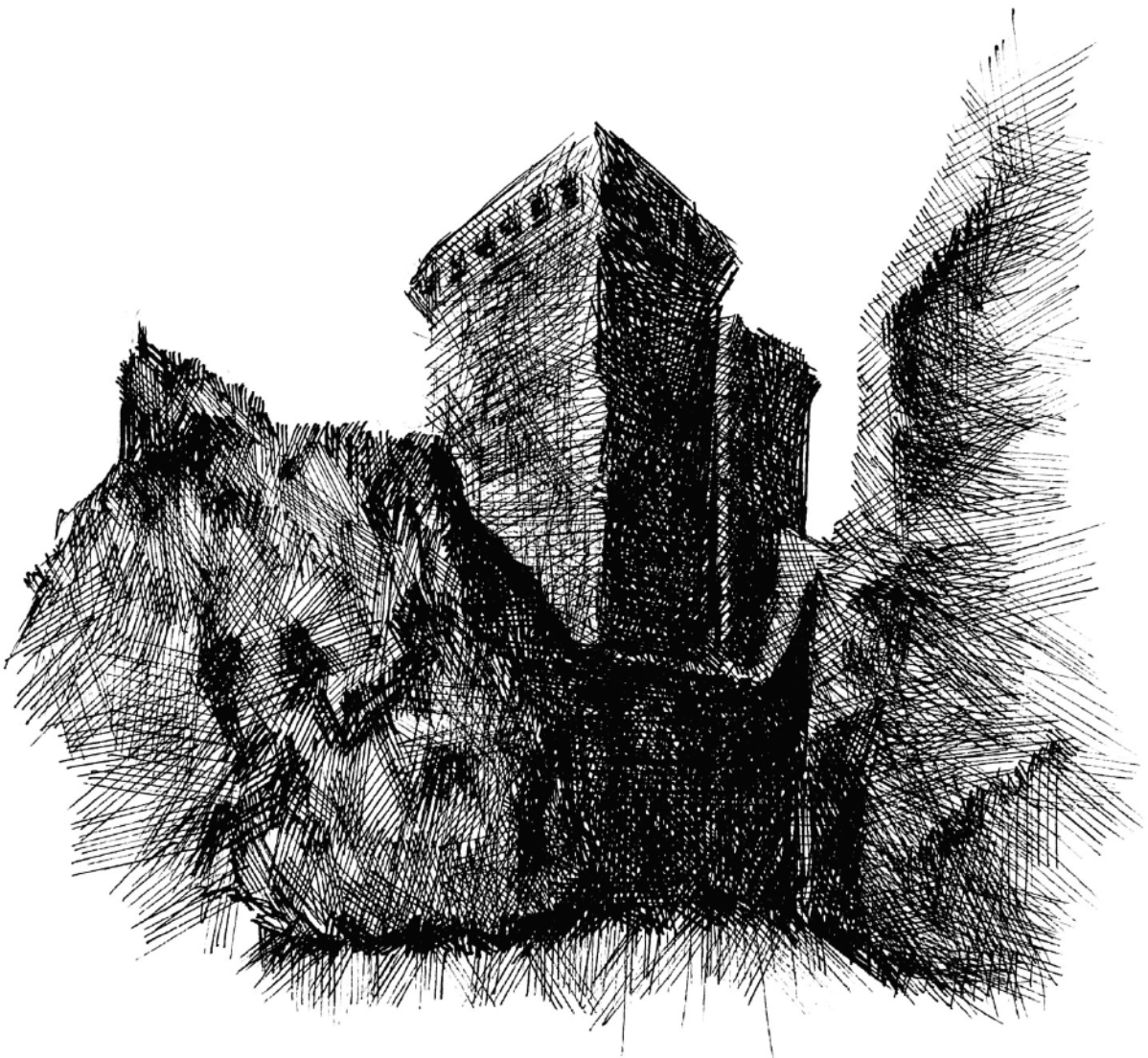
tion of paths that frame the architecture show some glimpses of them or of the city.

The numerous cartographic representations and studies, even recent, on the historical city [8, 9, 10] encourage a reconstruction of historical structures and knowledge of architectural and urban events that have modified the shape and landscape of the historic

city until the end of the nineteenth century. Among these maps, an eighteenth-century map kept at the ASTO (State Archive of Turin) allows us to understand and represent the maximum extent reached by the city walls and the numerous surveys and plans drawn up for the construction (and later demolition) of the bastions allow to reconstruct some of the ancient paths (Fig. 1).

Among these paths, some have been lost with the changes of the late nineteenth century but can still be rediscovered and valued, as those that cross the historical fabric and connect the ancient doors, or those who run along the roads that were once moats or along the outer limit of the fortress of the Castello district. These axes of connection between urban poles lap valuable buildings for civil, public, and religious use and offer “looks” on the contemporary city and its landscape. The analysis of cartography allows the construction of some possible itineraries of use of the historical city that we can document and represent through the drawing. The first path entrusted to the drawing traces the limit of the eighteenth-century walls, almost to simulate a round along the walls.

During our work we decide steps and strategic observation points of great cultural value that allow to appreciate the architecture and the landscape of the walled city but not only. The views towards the walls are flanked by those towards the urban context that sweep over the contemporary city enhancing the privileged position of the hill on which the Castello walls was built. Further glimpses of great interest are possible along the path that crosses the historic districts. Urban voids, breaches in the fabric due to an uneven construction deliver possible many visual incursions on historical architectures that complete a mosaic of knowledge enriched by the architectural survey of some interesting architecture.



**Figure 2.**  
S'Avanzada gate (Porta s'Avanzada). Source: Drawing by Giancarlo Sanna

### 3. TOWARDS A GRAPHICAL DOCUMENTATION OF A CULTURAL HERITAGE. WALKING ALONG THE CITY WALL OF CASTELLO

The first route identified begins at the tower of San Pancrazio near the gate, no longer existing, called s'Avanzada (Fig. 2). The view allows to appreciate the fortified landscape designed in support of the fortress. Continuing the path, leaving the Castello district, we walk along the Viale Regina Elena (once occupied by the moat of the eighteenth-century fortifications) and we stop to portray the eastern profile of the ancient district with the cathedral and the historic walls (Fig. 3). A third step is carried out in correspondence to the bastion of Saint Remy, a work realized at the end of the 19<sup>th</sup> century in the Art Nouveau style, which incorporates and regulates a sector until then occupied by the combination of three bastions, the bastion of the Sperone, the bas-

tion of Villanova and the bastion of Santa Caterina (Fig. 4). Once reached the height of the land of Saint Remy, the view frames the noble palaces of the Castello district and the Tower of the Lion (torre del Leone), the latter still visible although incorporated by the current building fabric (Fig. 5). From this position we can observe the landscape of the contemporary city consisting of a dense stratification (Fig. 6). The route, which crosses the district of Castello, continues along the line of historic walls to reach -at the end of this first route- near at the bastion of Santa Croce (Fig. 7), a sixteenth-century work on which the Jesuit complex has developed and now is occupied by the Institute of Drawing and Architecture of the University of Cagliari. The monumental complex is rich of planning episodes of remarkable quality and between these the "portico of the columns" planned from the engineer Felice de Vincenti in the first half of the XVIII century (Fig. 8).



Figure 3.  
The cathedral and the east sector of city walls of Cagliari. Source: Drawing by Giancarlo Sanna

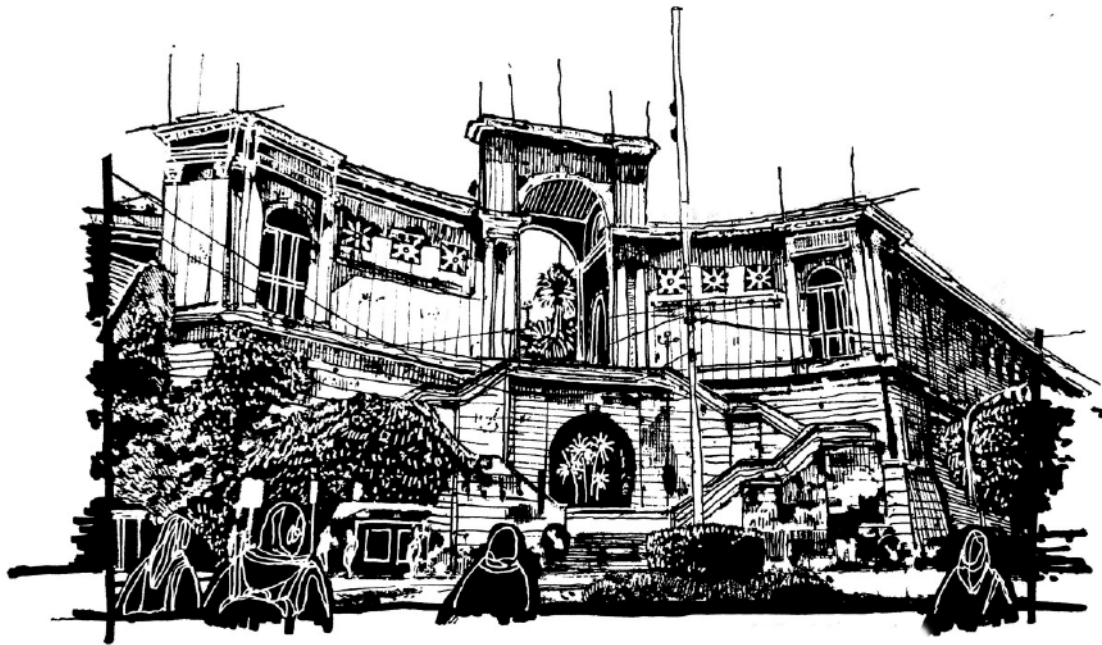


Figure 4.  
A view of the bastion of saint Remy taken by Costituzione square (piazza Costituzione). Source: Drawing by Giancarlo Sanna

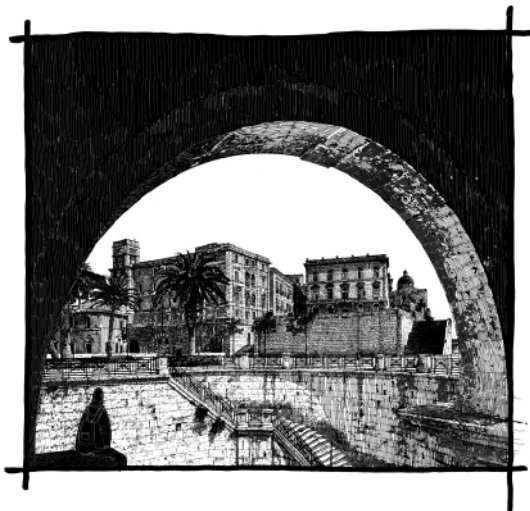


Figure 5.  
Tower of Lion inserted in the urban fabric of Castello district. Source: Drawing by Giancarlo Sanna



Figure 6.  
The landscape context of Cagliari taken from the bastion of saint Remy. Source: Drawing by Giancarlo Sanna



**Figure 7.**  
The bastion of Santa Croce. A detailed drawing of the west sector of the ancient military architecture that shows the condition of decay.  
Source: Drawing by Marco Melis

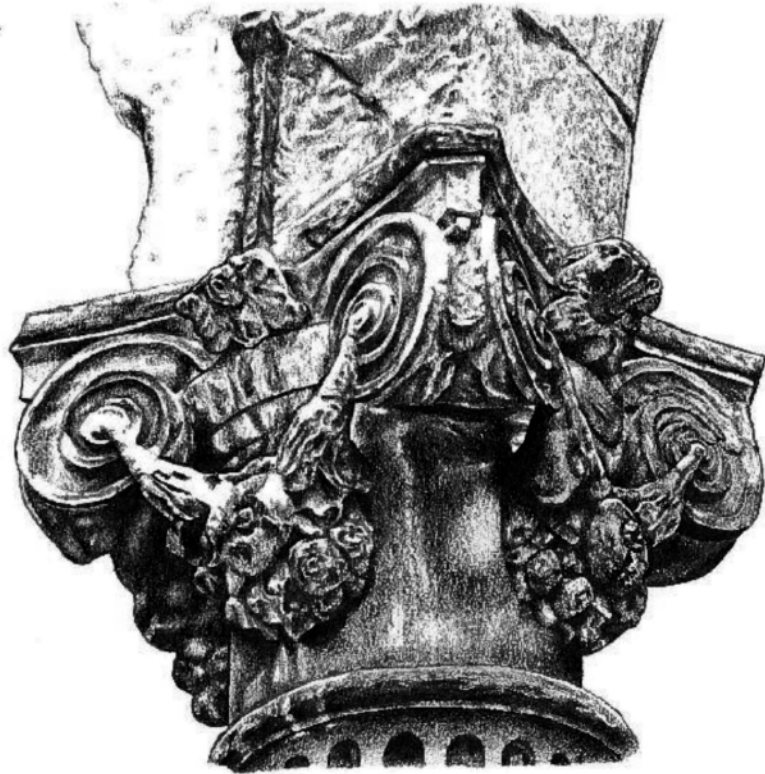


Figure 8.  
Jesuit complex of Santa Croce. Detail of a portico column designed by Felice De Vincenti. Source: Drawing by Leonardo Scalas

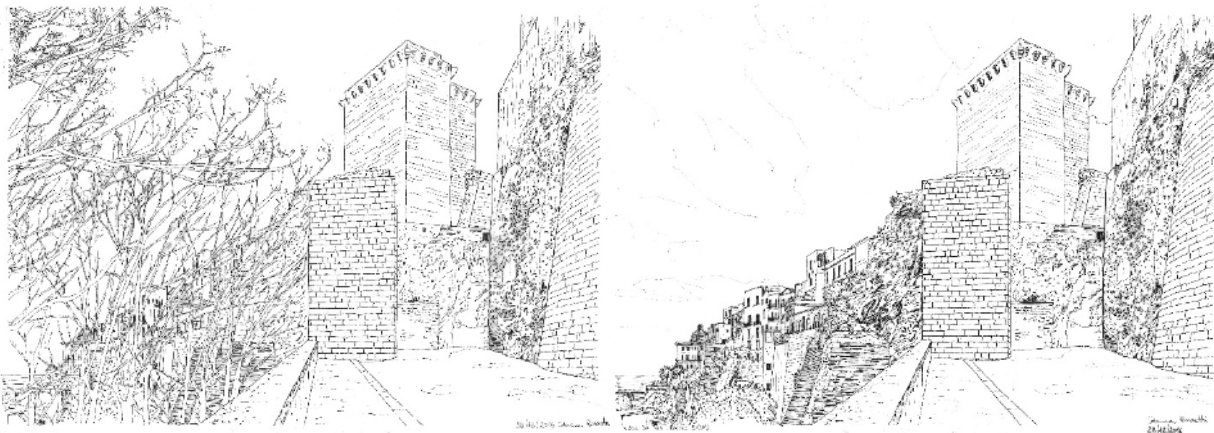


Figure 9.  
Redesign of the historical urban landscape along one of the ancient city gates in the north sector of Castello district. Source: Drawing by Caterina Passaretti



## 4. CONCLUSION

The synthesis shown is representative of a survey that has produced an important number of drawings of the historical landscape of Cagliari and identified some interesting cultural routes along the city walls. This database, composed of several hundred life drawings (re-elaboration of photographic images and synthesis on a cartographic basis) that documents and follows the transformations of the urban landscape, above all becomes an historical document of great use for the knowledge, enhancement, and protection of the cultural heritage of the city.

The information derived from careful observation, resulting from a total immersion in the historical urban environment, adds to a valorisation project a value that cannot be obtained through an exclusive use of digital technologies, although they have now reached a very high precision. The life drawing, implemented along paths crossing places, from privileged observation points or inside historical monumental complexes, contributes to the reading of urban diversity [11] at different level of detail and determines a qualitative leap in the project of knowledge, valorisation and protection that must necessarily contain, also for a greater sharing of choices, the human dimension of those who live and is part of this landscape.

Therefore, the rediscovery of ancient paths and the enhancement of the panoramic terraces on the landscape must necessarily be part of a project to enhance the historical urban landscape by directing the interventions through one or more proposals for the restoration of the paths and the views or prohibition of new works that may restrict or totally prevent their use and enjoyment.

The practice of redrawing the forms of the places, even if only partially, becomes in this way, the tool of design prediction; for example, excluding the vegetation from the image shown in figure 9, shows the consequences of a reduction of the visual barrier and the possibility of observing the medieval walls that characterize and embellish the eastern profile of the Castello district.

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