

HISTORICAL ASSETS ANALYSIS IN HERITAGE SITES FOR CULTURAL LANDSCAPE MANAGEMENT

Case Studies of Aristocratic Estates from Italy, France and Spain

Supervisor: Prof. Mauro VOLPIANO

Co-Supervisor: Prof. Claudia CASSATELLA

Student: Elif SEZER

S261286

Planning for the Global Urban Agenda - Territorial, Urban, Environmental and
Landscape Planning
Planning and Design
Politecnico di Torino

Academic Year: 2020/2021

Acknowledgement

I would first like to thank my supervisors Professor Mauro Volpiano and Professor Claudia Cassatella for their guidance and feedback throughout this research. I would like to extend my sincere thanks to my colleagues and tutors from the workshop who contributed highly in the specific parts of this research paper.

I am also grateful to my friends who have always supported me with their existence since the beginning of my master's education. Special thanks to my dear boyfriend Francesco Niosi my precious friend Buğrahan Çoban, who are my biggest supports in Italy.

Finally, I must express my very profound gratitude to my parents Nayim and Ayşen Sezer, my dear sister İpek Sezer and Niosi family for their unwavering support and patience that cannot be underestimated.

Table of Contents

Abstract

1. Introduction.....	5
2. Literature Review	8
3. Research Design and Methods.....	11
4. International Documents and Regulations on Cultural Landscape	26
5. Historical Landscape Studies.....	27
6. Reviews of Case Studies.....	29
7. General Comparisons Among The Case Studies.....	107
8. Conclusion.....	109
9. Biblioraphy.....	113

Abstract

Although heritage landscape is one of the main titles that make up the landscape assessment, broadly speaking it has been overshadowed by rural development policies due to economic concerns. In recent years, even if more emphasis has been placed on this subject, especially with the European Landscape Convention, it is still difficult to talk about a common language and approach which is usable and transferable among heritage landscape studies. In this study, heritage landscape practices were examined on 3 aristocratic estate samples selected from among European countries, and heritage landscape analyses prepared for these estates and their environment or estate networks were compared. Examples are Royal Residences of Savoy located in the north of Italy, Versailles Palace which is one of the most important royal estates in France and the surrounding urban and territories of the Palace, and finally Cultural Landscape of Aranjuez in the Madrid Region of Spain and the royal estate network to which it belongs. As each country has its own methods, there are also international criteria that it must comply with, such as Unesco and European Landscape Convention. Besides, all three-sample country has the Napoleonic institutional structure which makes them comparable in terms of their development policies and practices.

In this research, which were created as a result of these criteria and countries' own practices and experiences, it was examined which landscape elements were evaluated and how these elements were displayed, and then, without going too deeply, how these studies reflected in the planning practice of countries were discussed. The historical landscape studies of these heritage sites, which are largely surrounded by rural territories, are also closely or remotely related to agricultural activities. In the first part of the research, the results of the "Designing Resilient Heritage Estate Landscapes for Borgo Cornalese" study conducted by TU Delft and Politecnico di Torino were shared. This work includes the work on a small hamlet in the Piemonte region in the north of Italy, where the royal estate and rural activities are combined. Although the scale is different from the examples in the second part of the research, this study is mostly a case study in which heritage landscape assessment practice has been experienced from the beginning to the end. Thus, the practicality of the proposed categories had been experienced during this workshop. In the continuation of this study, there is the idea of creating development policies in the workshop territory.

1. INTRODUCTION

Landscape, hence historical landscape is handled in diverse ways in European countries. The approach of Northern countries as Germany, the Netherlands is more nature-based and ecology-weighted, while the approach of southern European countries as Italy and Spain is more interested in the traces of human transformations and culture. Still, there is a common vision on landscape management as integrating nature and culture, considering the whole territory instead of separated sites, develop sustainable management systems, and so on (Scazzosi L., 2004).

While the world is concerned with the sustainable management of landscape examples and the elements that make them unique, countries have developed their own approaches from Asia to Europe and America. But there are certain common difficulties as defining the right interpretative categories and analytical components of the landscape or grouping these items and making them transferrable to the other analyses which concern all these countries in this process.

Especially for conservation and management of European Heritage, the Council of Europe constituted the “European Landscape Convention” and organizes international co-operation on landscape issues. But still, these countries have different institutional models and practices from each other. The sample countries of this research are involved in the convention and share similar concerns as integrating landscape in their spatial planning systems or avoiding the boundaries for the benefit of continuity of cultural landscapes (Schröder et al.).

The development of cultural landscapes, conservation of natural and historical landscapes are issues that have been discussed and studied for a long time in Europe. Although common key terms and concepts are shared among the countries thanks to the convention, significant diversity occurs when it comes to the application, especially in the mapping/illustration and objective setting processes. Since a reason for this diversity could be the lack of consensus on the indicators, especially on historical landscape studies, this research is mostly concentrated on the questions of:

- Which are the analytical components and interpretive categories used in historical interpretation practices?
- Which are the relations between these analytical categories and intervention categories?
- How it is possible to group these items into analyses criteria and transfer to the other studies

Along with the issue of analytical components, another critical issue is the relationship of these studies with the planning practices. Mutually, the effects of planning studies with historical landscape studies were briefly examined. Consequently, the European Landscape Convention is not only helping coordinate collaboration in understanding and planning for valuable landscapes but also offers a valuable tool for comparing landscape planning approaches in Europe.

The landscape convention recommends two methods for the implementation process of its articles; joining landscape studies into existing spatial planning or setting up a new system called landscape planning. For the member countries, it was unclear how to follow these

recommendations and integrate landscape studies into their planning systems. For example, countries as the Netherlands and Germany have already had “landscape plans” on various levels which were inspiring for the planners in the UK (Schröder et al.). Apart from landscape planning practices, Anglo-Saxon countries have many guidelines for the assessment and implication such as agencies and ministerial methods.

Understanding historic landscape character is an increasingly important part of planning and countryside management (Rippon, 2013). Specially to preserve the cultural heritage, historical landscape assessment is a fundamental tool in the planning process (Foard G., Rippon S., 1998). Due to these reasons, the “European Framework”, in other words, the perspective of the member countries on “landscape studies” is a critical issue to analyse.

To make a review and research of the above-mentioned issues, this research paper is divided into two parts.

a. “Designing Resilient Heritage Estate Landscapes” workshop

The first part focuses on the “Designing Resilient Heritage Estate Landscapes” thesis atelier which was conducted together with the Polytechnic University of Turin and TU Delft. The primary aim of this workshop is to identify the challenges to the resilience of the hamlet Borgo Cornalese, which are related to its environmental features and landscape characteristics. In order to identify the challenges, a systematic analysis was made by the research group formed by master students and professors of the Polytechnic University of Turin.

b. Historical Analyses for Cultural Landscape Management Through Selected Aristocratic Estates

In the second part, three different aristocratic estates whose historical values and uses are similar and allow for comparison, are chosen to investigate the approaches of different European countries and their identification, interpretation, and assessment methods. While selecting these examples, it was taken into consideration that each of them is on the UNESCO world heritage list, the example countries have similar institutional models to each other and also all case studies are big royal estates located in rural sites which makes them technically similar to each other in terms of comparison.

The examples are Royal Residences of Savoy located in the north of Italy, Versailles Palace which is one of the most important royal estates in France and the surrounding urban and rural territories of the Palace, and finally Cultural Landscape of Aranjuez in the Madrid Region of Spain and the royal estate network to which it belongs.

Due to, the discussion on the definition of “landscape” has continued, this research paper mostly focuses on the practices and already existing studies and the methodologies that selected countries have used while preparing the plans and atlases for the case studies.

The desired outcomes from this research are a structured comparison of analytical keys related to the selected documents, a proposal of groups of categories and the usability and transferability of these groups of categories. In accordance with the purpose of the research, the method practiced in the first part is associated with the practices of the selected countries in the second part, and as a result, a general guideline including categories to use in heritage landscape analyses is created which is usable through the transition from regional to local scale.

c. Why Italy, France and Spain

History illustrates that Europe is a dynamic and evolving entity with many faces, multiple identities, multiple expressions, experiences and diversified cooperation forms (Dainotto, R., 2007). Europe is a two-thousand-year civilisation with a multiplicity of cultures; it is also a socio-economic model and a unique integration process. The whole European history is characterised by forms and attempts of economic, political, military, and cultural cooperation to search for equilibrium between integration and diversity within certain contours (Chandler, M., 2016). This common culture, formed by the combination of differences, has left many legacies until today. For example, there are different institutional models in Europe which influence the planning practise directly. According to the first ‘comparative study’ of spatial planning systems in Europe in the late 1980s, the typology of spatial planning systems of Italy, France and Spain are in the same category named “Napoleonic Codes” (Davies et al., 1989). This means they all have a complete set of abstract rules and principles in advance unlike the system of UK which is called common law. This difference on spatial planning systems of these countries also illustrates the difference on their historical interpretation practices such as their analysing process.

Like every value or assets, historical heritage values are evaluated in a classification and included in planning ideas. While this evaluation process is more systematic in other landscape elements such as agriculture, a common language has not yet been established in historical landscape elements. However, studies on bringing together European countries such as the European Landscape Convention on this issue are ongoing. This study concentrates on the European examples to investigate their practices in the heritage field and the relation among the planning decisions and heritage landscape analyses.

d. The Importance of European Policies Related to Economic Reasons on Landscape

Organizations that produce international policies, such as OECD¹, often put greater effort on agricultural landscapes and elements than on historical heritage landscapes due to economic concerns. For example, the rural policies (Understanding Rural Economies, Rural Policy 3.0) and agriculture-centred development policies. Regarding indicators, "agricultural landscape indicators" can be easily accessed as a policy development tool in OECD sources when searching about the theme landscape. But for the heritage landscape elements are included only by as “cultural features” of the landscapes and it is difficult to talk about certain indicators concerning heritage.

On the other hand, European Union is funding especially the rural and agricultural development policies and actions in terms of sustainable and local development. There are cooperation and organisations as LEADER² funding by ENRD³ or by other similar European organisations. With the idea that local and rural development policies are supporting the economical and sustainable development of the regions, many academic assessment studies have been done on rural and agricultural landscapes elements and their indicators. However, the assessment of heritage landscape and the related indicators are not systematic as rural landscapes. Based on this motivation, heritage landscape analyses and practices of certain countries are examined in this research paper.

¹ Organisation for Economic Co-operation and Development

² Liaison entre actions de développement de l'économie rurale

³ The European Network for Rural Development

2. LITERATURE REVIEW

The landscape covers a wide range of meanings and contexts as a term which after years of discussion, even today, there is no consensus as to the contents and meaning of it (Bastian et al. 2013). The understanding of landscape differs between languages, interest groups, and academic backgrounds (Palang et al. 2006). According to the European Landscape Convention, "landscape" means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.

Alike the term "landscape", also to the term "cultural landscape", various meanings and concepts are attributed. Although the formations described by "cultural landscape" date back to older times, the emergence of the term itself occurred in the early 20th century. Prof. Carl Sauer promoted the definition "The cultural landscape is fashioned from a natural landscape by a culture group. Culture is the agent, the natural area the medium, the cultural landscape the result" in 1925 but until the 1990s, it only came into accepted professional use in conservation circles (Fowler, 2003). Among different names used for cultural landscapes, the one "traditional landscapes" which is common in Europe, was described as "...landscapes which have evolved over the centuries until the fast and large-scale modern changes in the 'tabula rasa' style started... These changes deform the traditional structure which reflects clear relations between composing elements and has a significance for natural, cultural and aesthetic value" (Antrop 2000, p 21-22)

Due to, human interaction with the land is the fundamental element for cultural landscape, conservation of local cultures, and maintain sustainable development in these areas are the main objectives for the conservation of European Heritage. For this purpose, the Council of Europe introduced "The European Landscape Convention" which promotes the protection, management, and planning of the landscapes and organizes international co-operation on landscape issues. One of the main ideas of the Landscape Convention is to set a great store by identifying and assessing landscapes through field research by professionals working in conjunction with local inhabitants. However, the governing idea is to exchange experience and methodology of landscape identification and assessment between the countries and increase the knowledge (Council of Europe).

Studies, carried out to preserve common heritage and landscape according to the European Landscape Convention, have revealed different practices in this field. In the planning system of sample countries, the convention is a binding element for landscape planning but their approach to the topic varies.

In the Convention, not only "landscape" is clarified as a term but also the actions and policies are explained from a general perspective. For example, the landscape policies are defined as the taken specific measures to protect, manage and plan of landscapes. Besides, landscape planning in the convention is described as 'strong forward-looking actions to enhance, restore or create landscapes (Article 1f)'. But this definition does not cover all the wide range of activities done under planning titles. Most particularly, in Dutch tradition of landscape planning, there is always a bias towards the 'creation' of landscapes. So, the 'creation' in the definition of planning can be seen as 'development' of the space which is done almost every 20 year. Specifically, in the Dutch lands, these developments and investments are reconstruction of intensive agriculture, nature developments and ecosystem services.

(Haaren, Albert and Galler, 2016). Thus, it can be seen that the landscape planning approach differs from country to country. In the European Framework, landscape planning is sometimes used as a component of environmental planning or spatial planning. In this planning system, where environmental and nature titles are at the forefront and the objectives are set for rural planning and economic developments, it has been thrown the historical and cultural landscape studies out of focus. For this reason, in Europe, landscape studies and researches are mostly done on rural and natural related topics, where it is not prevalent to encounter a common developed understanding of historical landscape studies.

To state more clearly the common approach of Europe to landscape management, the report created at the end of the Landscape Character Network Workshop, which was held in Birmingham in 2008 and attended by academics involved in the convention, can be examined. For the management of landscape, there are 7 actions in that report which were underlined by Michael Dower, who was involved in the convention. They are;

- . to identify landscapes
- . to assess the landscapes
- . to define objectives for landscape quality
- . to protect
- . to manage
- . to plan
- . to monitor

Identification and assessment from the actions mentioned above is causally related to the common key term catalogue desired to be obtained as a result of this research. The explanation of these two actions are that;

- . to identify landscapes, that is to describe their character and the key elements in that character
- . to assess the landscapes, that is to analyse what contributes to, and what detracts from, their quality and distinctiveness.

Landscape assessment is a sectoral process as ecological, agricultural, cultural (historical), social and so on. For instance, global organizations as the United Nations and the OECD have their environmental reporting for sustainability which is related to agricultural and rural policies, so their evaluation system concerns the natural and environmental values and landscape elements. Concerning the economic return of these sectors, today there are various applicative experiences dated back to the 1960s.

ELC and the Legislative Decree 42/2004⁴ place landscape planning at the center of protection policies, extending its range of action not only to contexts of exceptional value, but also, for the first time, to the landscapes of life daily and degraded ones, to be redeveloped and enhanced.

⁴ Code of cultural heritage and landscape

In France, the studies, concerning landscape, have been done under the name of La Directive de protection de mise en Valeur des Paysages (DPMVP) “The Landscape Development Protection Directive”, which aims to protect and enhance areas remarkable for their landscape interest. DPMVP determines the guidelines and fundamental principles for the protection of landscape structures for territories of remarkable character:

- by their unity and coherence,
- by their particular wealth in terms of heritage
- or as witnesses to lifestyles and dwellings or to industrial, craft, agricultural, and forestry traditions and activities.

The development of this directive is the subject of consultation with all the local authorities concerned and is approved by decree in the Council of State.

In Italy, the regional landscape plan is an urban planning instrument provided for by the legislation drawn up by the Region jointly with the Ministry for Cultural Heritage and Activities. This act pursues the purpose of protecting, both in terms of conservation and preservation and use and enhancement, of specific categories of territorial assets such as mountain areas, lakes, volcanoes, rivers, coastal territories, parks and reserves, woods, and the like.

The landscape plans, with reference to the territory considered, recognize its peculiar aspects and characters, as well as the landscape characteristics, and delimit the relative areas. With reference to the hierarchical order of urban planning instruments, the landscape plan prevails over national and regional plans and programs and over other planning acts with territorial impact (Sentenza n. 180 del 2008 della Corte Costituzionale).

In Spain, The Ministry of Culture and Sports is the main administrative unit responsible for historical heritage. For the protection and management of the historical heritage sites, the ministry collaborates with the Ministry of Foreign Affairs, European Union and Cooperation.

Cultural Landscape is defined in the National Plan as the "result of the interaction in time of people and the natural environment, whose expression is a territory perceived and valued for its cultural qualities, product of a process and support of the identity of a community". The National Plan for Cultural Landscape was approved at the session of the Historical Heritage Council held in Madrid on October 4, 2012.

There are different regulations and public policies on cultural heritage landscapes in Spain. The international ones are UNESCO⁵ and Council of Europe (European Landscape Convention, Florence 2000). There are also national⁶ and a regional⁷ regulations. For the Spanish case study, there is no specific regional law on landscape management and protection, but the “Aranjuez” is a UNESCO World Heritage Site, as the other examples from France and Italy.

⁵ Convention on The Protection of The World Cultural and Natural Heritage Paris, 1972

⁶ Ley 16/1985. Patrimonio Histórico Español

⁷ Legislación Específica De Paisaje

3. RESEARCH DESIGN AND METHODS

a. Aim & Objective The reading and assessment of permanencies in urban areas and single architectural manufactures is quite well set up in Italy and in other countries. However, landscape reading still demands the clarification of concepts and methodologies, by further theoretical and experimental work (Scazzosi, 2004). This research aims to analyse the case studies to generate knowledge on the given topic. Instead of methodological comparison of the historical landscape analysis among these countries, the research will focus on the practices by comparing the interpretations, the legends were used to guide the analyses, and how these analyses could be shared.

This chapter will describe the research design and method used to understand the historical landscape practices of selected European Countries. The first part will provide an explanation and rationale for the use of the case studies and the comparative method approach in this research. The second part will focus on a workshop studied carried out by the author on a case study from Piedmont region, related to historical heritage landscape analysis.

b. Method & Approach This paper proposes a pragmatic approach for the cases chosen from four different European Countries; Italy, France and Spain which are from central and south of Europe. Case Study research method is mostly used in social and human sciences and can involve one or more than one case studies, as in this research.

In a research period based on case studies, it is proposed to have typology wherein first the purposes are named, then the approaches are delineated, and lastly the processes are decided upon (Thomas G., 2011). The purposes were given as the aim of the study, above. Secondly, the general approach of the study can be sum up as; analysing, comparing, and interpreting the obtained resources with a descriptive approach. Finally, the research process can simply be explained as follows; workshop studies with the cooperation of Politecnico di Torino and Delft University of Technology on Borgo Cornalese which is the starting point for historical landscape studies which is explained in the “Part I” of this research paper. Then, the indicators analyses, literature review on landscape topic, definition of the questions concerns the historical landscape studies, selection of the countries and the case studies, analyse of the case studies in themselves and comparison of the practices, interpretations and the conclusion which involve the catalogue of historical landscape indicators. These analyses and comparisons are examined in the “Part II”.

The reading and assessment of permanencies in urban areas and single architectural manufactures is quite well established in Italy and in other countries. However, landscape reading still demands the clarification of concepts and methodologies, by means of further theoretical and experimental work (Scazzosi, 2004)

c. Sources When selecting a case for a case study, researchers use information-oriented sampling, as opposed to random sampling (Flyvbjerg, 2007). Due to the robust comparisons, the depth of the information sources of the countries and the breadth of their studies on the historical landscape topic were considered when determining case studies. In this research, sources are classified in two-level as primary and secondary. Primary sources were used to generate the historical landscape atlas of Borgo Cornalese, which is the Italian example. These sources can be listed as historical maps, the documents related to the maps taken from the

archive of Turin, articles, and researches found by Google Scholar. Secondary sources are landscape studies from sample countries, regional landscape plans, analyses, and reports from online sources and GIS-based sources.

d. Practicalities and Potential Obstacles The main problem encountered in the data collection process was caused by the quarantine situation as lack of access to non-online data and libraries/archives. Apart from the pandemic-related access problems, there were also problems arising from the nature of the research topic. First of all, the landscape concept and studies have been conducted in different methodologies and so, the result products are not easily comparable. Also, these studies and reports are mostly in their own language of the selected countries. Thus, the definitions and terminology are changing from language to language.

4. PART I - DESIGNING RESILIENT HERITAGE ESTATE LANDSCAPES FOR BORGO CORNALESE

Borgo Cornalese is a hamlet located in northern Italy, in the Piedmont region. The reason to choose this hamlet is that it is located in the rural territory with ongoing rural production besides the aristocratic historical background of the site which plays a significant role in the characteristic of the landscape.

The atelier focuses on identifying the challenges to the resilience of the hamlet and the elements of its landscape in order to achieve a kind of a methodology or a framework which can be useful for the management of this site. The analyses are made on various categories such as heritage landscape, environment and risk, scenery and perception, land uses and activities and at different scales.

Related to the main purpose of this research paper, the studies on heritage landscape, one of the analysis titles made during the workshop, are examined below.

Professors: Prof. Claudia Cassatella, Prof. Mauro Volpiano, Prof. Emma Salizzoni

Research Assistant: Federica Bonavero

Students: Elif Sezer, Andrea Agnello, D  sir  e Bucchieri, Vanessa Pan, Emanuele Porcu
Mashid Tahmasbi

4.1 Methodology

The study on historical landscape elements of Borgo Cornalese is one of the sub-steps of a broader landscape study. There are different stages of the study which are identifying and obtaining resources to be utilized, classifying the obtained resources according to their use and in this case, this classification was chronological, determining the historical landscape elements to be worked on, analysis of historical landscape elements from the 18th century until today.

Due to their physical condition of the historical maps and sources, there was a need to put them in an order to make them readable and more useful for the studies. In order to make this organization, first ArcGIS software was used to georeferenced the maps with the current maps and then the sections were put together in order to create a whole drawing on Photoshop. After this process, according to the chronological order of the sources, the historical landscape elements were determined on each of them. From the oldest to most recent, the already decided elements were found and then how many of them still exist or what kind of transformation occurred during the centuries were shown as synthesis by using assorted colours, lines, and shapes.

a. Primary Sources Used for Analyses

The primary sources which were taken from “Archivio di Stato di Torino”⁸ used during the analyses of historical landscape elements of Borgo Cornalese are as listed below;

- French Cadastral, Municipality of VillaStellone, 1802-1814
- Sardinian State Map, 1852
- Cadastre Rabbini, Municipality of VillaStellone 1859-1860
- Military Geographical Institute, 1880
- Military Geographical Institute, 1968
- Regional Technical Map, 1991



Fig 1: 1802-1814 *Plan Linéaire de la Commune de Villastellone* s. d. s. or. Scala grafica 1/10000
Source: ASTo (The Turin State Archive)

4.2 Brief Information About Borgo Cornalese and Its Historical Background

Borgo Cornalese is a hamlet located in the Piedmont region which is in the north of Italy and the history of this hamlet dates back to A.D 1000. Since the Napoleonic period, Borgo Cornalese is part of the Villastellone municipality. Before feudo was composed by four different buildings, three of which fortified: Fortepasso Malpertusio (today Cascina Nuova), Castello di Borgo and Val di Cosso (today Cascina Valcorso).

Between the 1300s until 18th century, the Costa family, the treasurer of Prince Acaja settled there. By the 1500s, the village transformed into an agricultural settlement with Villa and the mill. “The church of Madonna dei Dolori e dei Santi Barnaba ed Eugenio” was commissioned from Duke Eugenio Laval di Montmorency to the important architect Benedetto Brunati in

⁸ The Turin State Archive is part of the network of Italian State Archives, peripheral bodies of the MiBACT (Ministry for Cultural Heritage and Activities and for Tourism), present in each provincial capital city for a total of over 100 locations. (<https://archiviodistatotorino.beniculturali.it/contatti/istituto/>)

1850. The duke De Montmerency transformed the villa (Villa de Maistre) into a large residence extending the building after 1830 and gifted it to his wife Anne Costance de Maistre.



Fig 2: Villa de Maistre from 1950
Source: <https://www.borgocornalese.it/>

Behind the villa, 16 hectares of the park extends where there were vineyards at the beginning of the 19th century. In this park, there are beeches, oaks, lime trees, poplars, and many other plants.



Fig 3: Villa de Maistre and the park behind the villa
Source: Google Maps, 2020

4.3 Heritage Landscape Analyses of Borgo Cornalese

In this part, there are the landscape elements which are categorized and in order to analyse the heritage landscape of the site.

a. Natural and Artificial Hydrographic Network

The analyses of the Po river are focusing on a proportion of the Po Valley which is located in the Torino Metropolitan Area and there is the territory of Carmagnola in the southeast, Carignano in the west, Moncalieri and the city of Turin in the north. This part of the river, today mostly characterized by meanders and large artificial lakes which are results of a mining activity starting in the second half of the last century, detected on cartography for the first time by the IGM (Geographic Military Institute) map of 1968. This kind of intervenes on the river represents a hydraulic risk factor linked to the possible erosion of the narrow embankments that separate lakes from the river course. Apart from these hydraulic risk factors, these artificial lakes are also a reason for the enrichment of the ecosystem in the territory.

Po is a river which is affluent in terms of meanders. Due to the hydrographical characteristics of the river such as the velocity of the water and the flood risk, there was no possibility to use a watermill downriver. Since the middle ages, canals have been used for irrigation and other agricultural activities by locals. Another important economic activity on the river is fishing which has a historical background. The meandering structure of Po River has caused the formation of the water stretches called "*lanche*" which led to the existence of many different fish species. This is one of the main reasons why fishing activities have been seen in the area for a long time.

The river has experienced many violent events that caused erosions, floods of vast areas. Historical hydraulic issues of the Po are reflected also in the literature and can be traced back to the XVI century. Especially the area between Casalgrasso and Carignano is subjected to the most changes due to the hydraulic issues. This 12 km long stretch of the water, the riverbed is particularly affected as a result of the natural deviation of the Po and the interferences of local people and administrative bodies in the territory.

On the other hand, this physical condition of the river also influences the administrative borders of the towns. For instance, the borders between Carignano and Carmagnola are in an irregular structure and there is a kind of interpenetration between these borders because of the "islands" of Carignano's municipality which are falling in the municipal territory of Carmagnola as seen from the figure below.

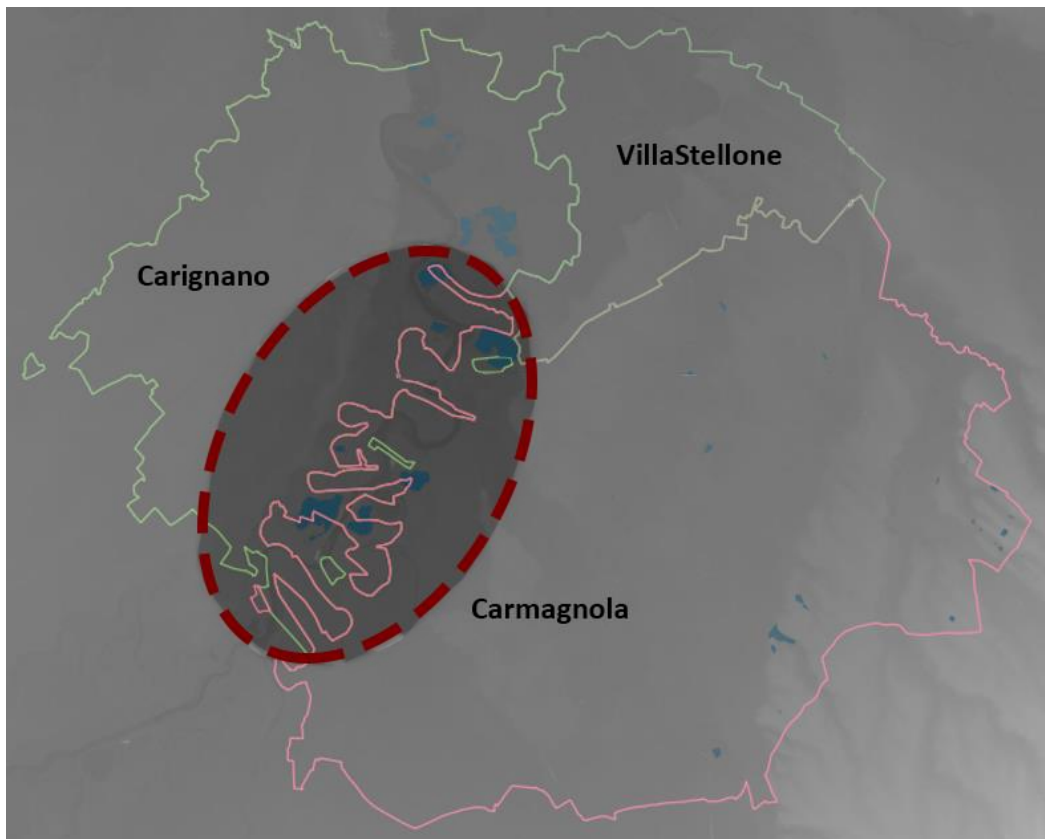


Fig 4: The administrative borders of Carignano, Carmagnola and VillaStellone

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas

The interventions on the riverbed to control the water flow velocity caused deeper problems by the time. Many of the projects as cutting of the river, deviation, and construction of embankments since the XVIII century has been insufficient to for the idea of the managing the river. In actual fact, these projects carried out in the last three centuries have intensified the flood events and enlarged the proportion of areas affected by the phenomena.

According to the Professor Giacomo Rodolfo⁹, born in Carignano, since Roman times the area was affected by flood events which were caused by the attempts to control the river course. These attempts are cited in the literature and on the other hand, the historical official state cartography and technical drawings demonstrate the meandering tendency of the river to follow the natural course, by ignoring human orientations.

⁹ Città di Carignano. "Città Di CARIGNANO - Sito Internet Istituzionale - Regione Piemonte - Città Metropolitana Di Torino." *Www.comune.Carignano.to.It*, www.comune.carignano.to.it/ita/gallery.asp?id_gallery=8.

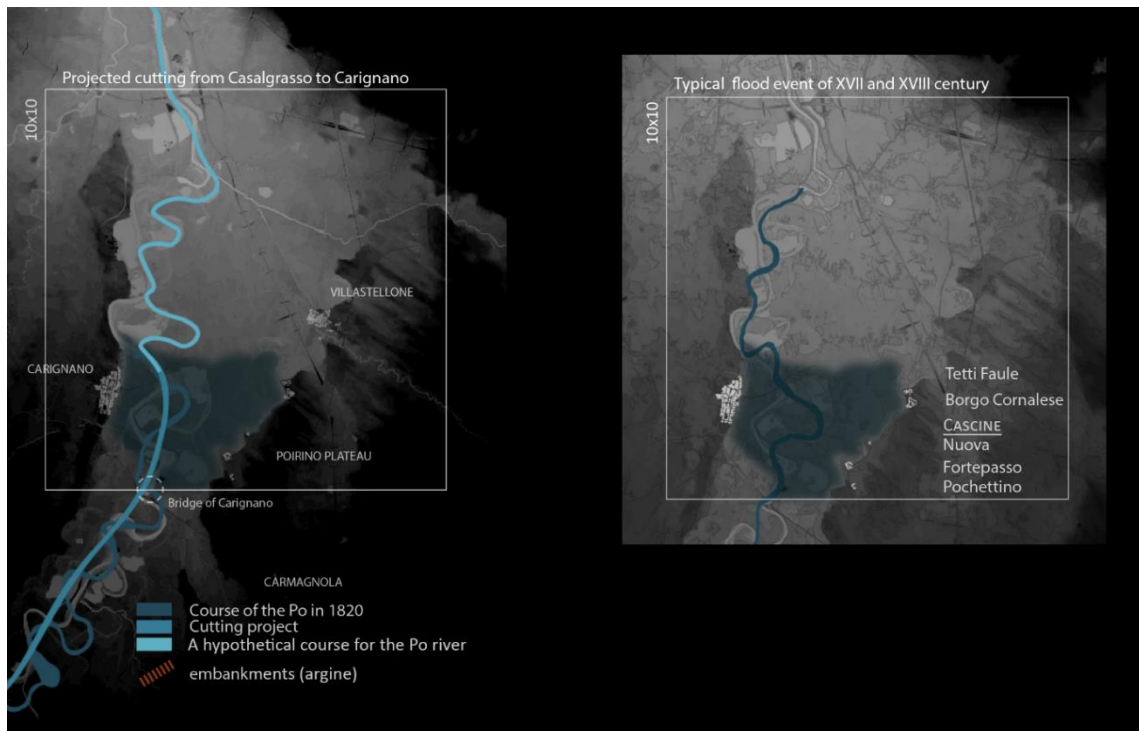


Fig 5: The projected interventions on Po and the typical flooding event of 17th and 18th centuries

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas (BDTR 2019 – DTM ICE 5 2020)

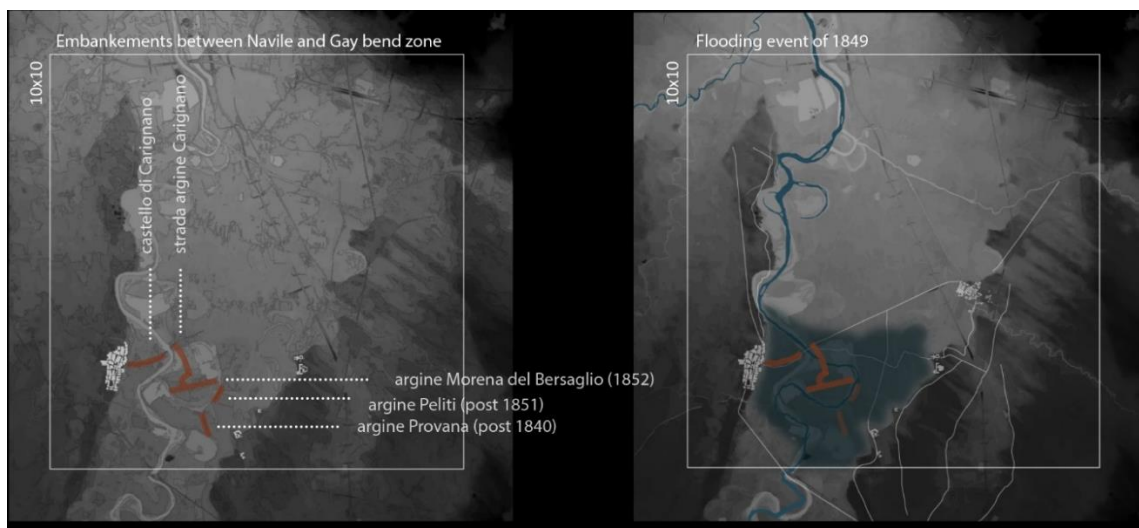


Fig 6: Embankments and flooding event of 1849

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas (BDTR 2019 – DTM ICE 5 2020)

As seen from the figure above, there are embankments and cuttings on the riverbed have been made in order to control the velocity of the water and facilitate economic concerns such as transportation and agricultural activities. Besides, the flooding events caused by these interventions can be seen above. The critical point here is that the building structures such as cascine and Borgo Cornalese are located in the higher points of the territory in order to avoid

the destructive results of the floods. The elevation differences are helping to create this environment as seen from the darker parts of the illustrations.

The previous courses of the river can be traced back not only with the historical maps and drawings but also with the photos of the current situation of the territory. The former courses left marks on the landscape with the presence of riparian vegetation and linear woods. However, these traces are not easily identifiable or either trustable. Since the historical cartographic sources date back to the 18th century, it is not correct to comment on the state of the river before this time.

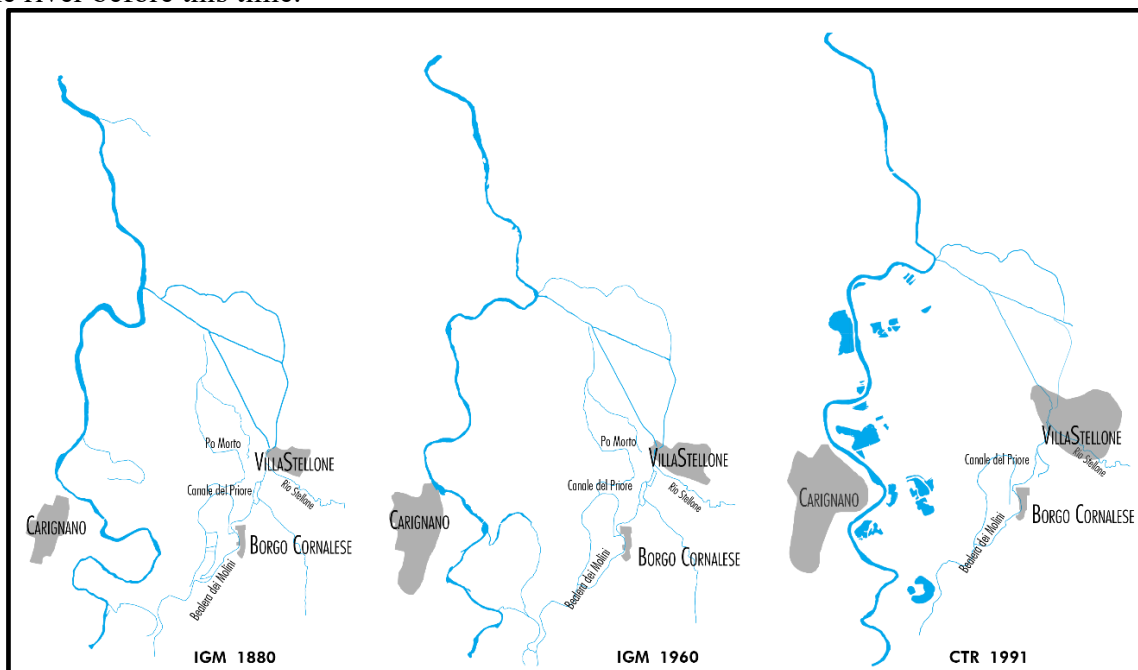


Fig 7: The changes on the river and channels from 1880 until 1991

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas

Overall, it is seen that the biggest hydrographic change is the lakes formed by mining activities in the territory. However, it is observed that some canals and waterways have disappeared or changed shape with the interventions made through the development process of the site.

b. Road Network and Settlement Structure

From a general point of view, it can be said that the road network and settlements in the region have developed with the idea of both protecting from the destructiveness of the Po river and positioning them in accordance with trade routes. To understand the general structure of the territory, it is also important to carefully read the administrative relationship between the settlements. For instance, even if Borgo Cornalese belongs to Villastellone municipality today, until 1797, Borgo Cornalese was independent agricultural hamlet and it was an important node of this agricultural settlements network. Thus, there was a strong relation with between the hamlet and the cascine around.

Sources show Borgo Cornalese was excluded by the main routes until the half of the XIX century, when the owner the duke Laval Montmorency gave to Borgo Cornalese a new position in the territorial context, starting from the route network. This inclusion of Borgo Cornalese into the road network was completed by the tree-lined boulevard so-called *Strada dei Prati*

(Lawn's road) and represents a monumental access of the Laval-Montmorency's estate with its renovated façade.

Another key point related with the road network and the settlements is the trade activities in the territory. The most remarkable example of these activities is the salt trade which had been going on at Cascina Fortepasso. This farmhouse was called as *casetta del sale* (little house for the salt) and it was a salt deposit for centuries. To transport the salt from Fortepasso to Turin, Po River was used and Carignano bridge was constructed. Today this bridge is called “Regiona Ponte Po” and it is a fraction of Carignano municipality. In 19th century, it was called as “*ponte di Carignano*” and it was connecting Fortepasso to the Port of Carignano. With the construction of railway and the station in Villastellone, the port turned into a bridge for Villastellone. First it was a wooden bridge but in 1889 it turned into a masonry one. Lastly, after WWII, in 1951, the damaged bridge rebuilt in reinforced concrete and a bearing arch. Today, the fraction of Municipality of Carignano, Regione Ponte Po is located on the same point with 25 habitants and its known for rowing club and sport tourism activities on Po river.

Considering the physical conditions of the roads from the cartographic sources, in early 19th century, the road network consisted of earth roads or paths mostly and the primary road in the hierarchy was the tree aligned road connecting Turin to Racconigi and passes from Carignano. Today this road is called “Regional Road 20 OF Colle di Tenda SR 20” which the variant of Carignano and was opened in 1992. Besides, in 19th century, the idea of road structure was mostly connecting the agricultural lands and cascine to each other with the paths. From 20th century, the road hierarchy changed particularly with the construction of highway which is the state highway A6 Torino-Savona and it was opened in 1960 to connects the southern parts of Piedmont with the Liguria Region. Until 1973 the highway did not have double tracks doubling works finished in 2001.

When the date was mid-19th century, the biggest change on the road network was the railway which passes from east of Villastellone. Trofarello-Cavallermaggiore-Savigliano railway was opened in 1848 and the first version of Villastellone station was built in 1860. After WWII, the demolished station was renewed in 1950s.

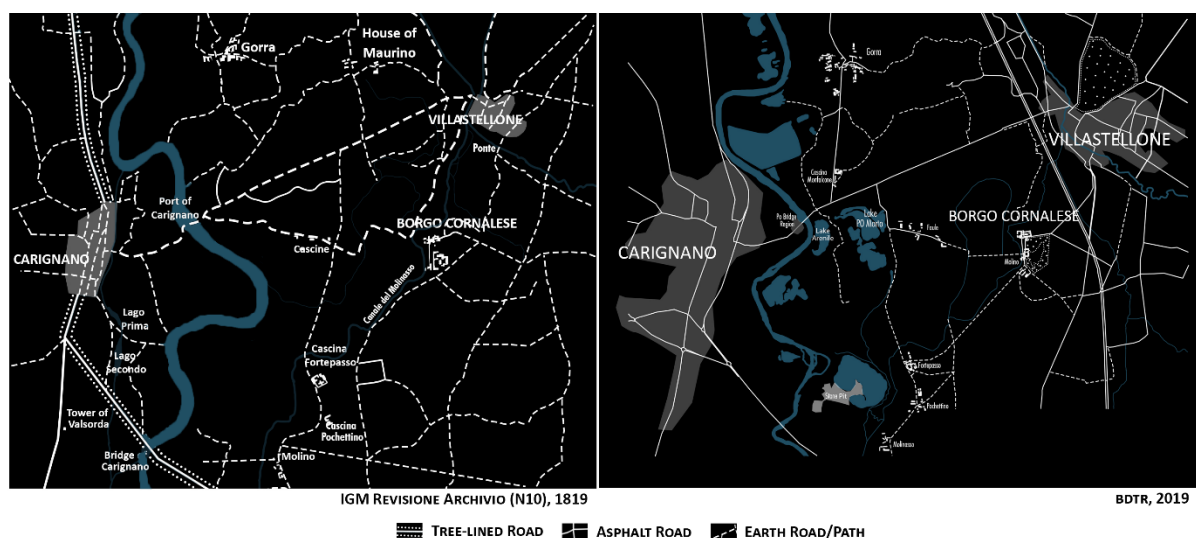


Fig 8: The changes on the physical condition of the roads in the territory from 1819 to today

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas

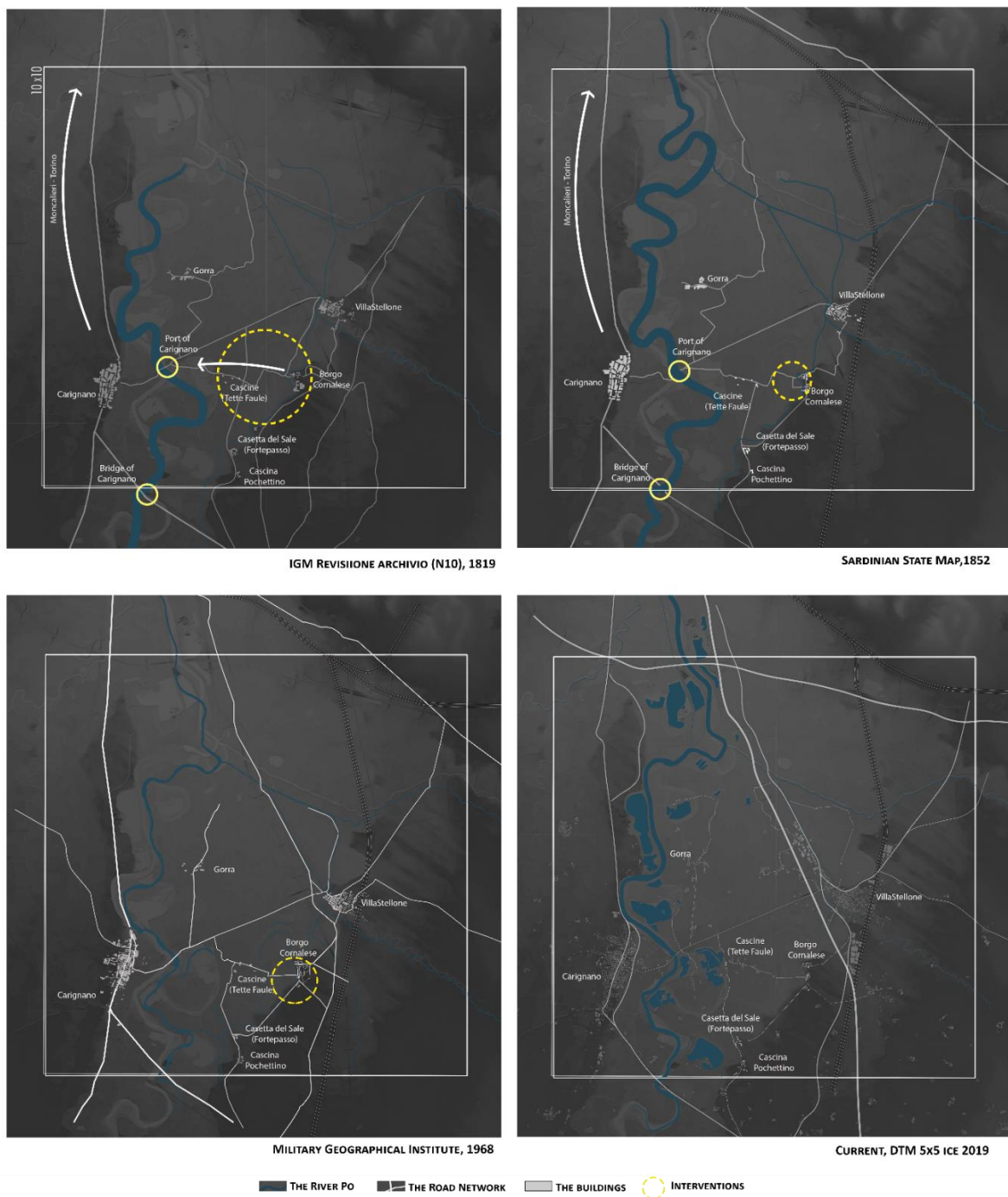


Fig 9: The change in the transportation network

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas (BDTR 2019 – DTM ICE 5 2020)

c. Settlement Configuration Between 19th and 21st Centuries (Villastellone – Borgo Cornalese)

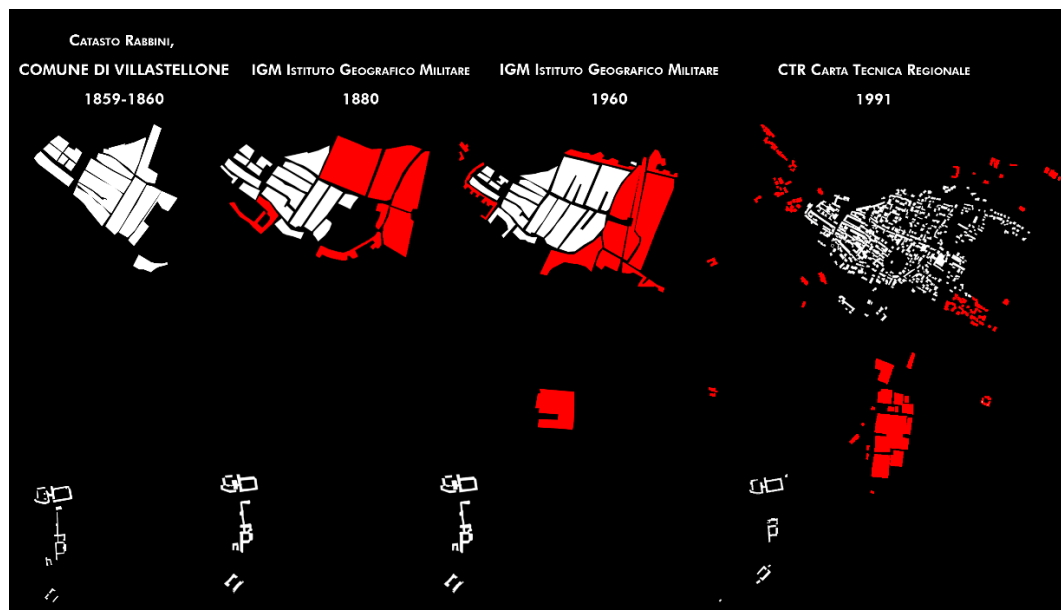


Fig 10: Figure showing the direction in which settlements have grown over time

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas

d. Typical Rural Built Structures from the Study Area

Cascina: A type of traditional rural building of the Po Valley especially in Lombardy and Piedmont regions for agricultural uses. These buildings had been used in the Po Valley at least since the 16th century, even though they became common in the 18th and 19th centuries. In particular, during the Napoleonic era, several religious buildings were transformed into cascine.

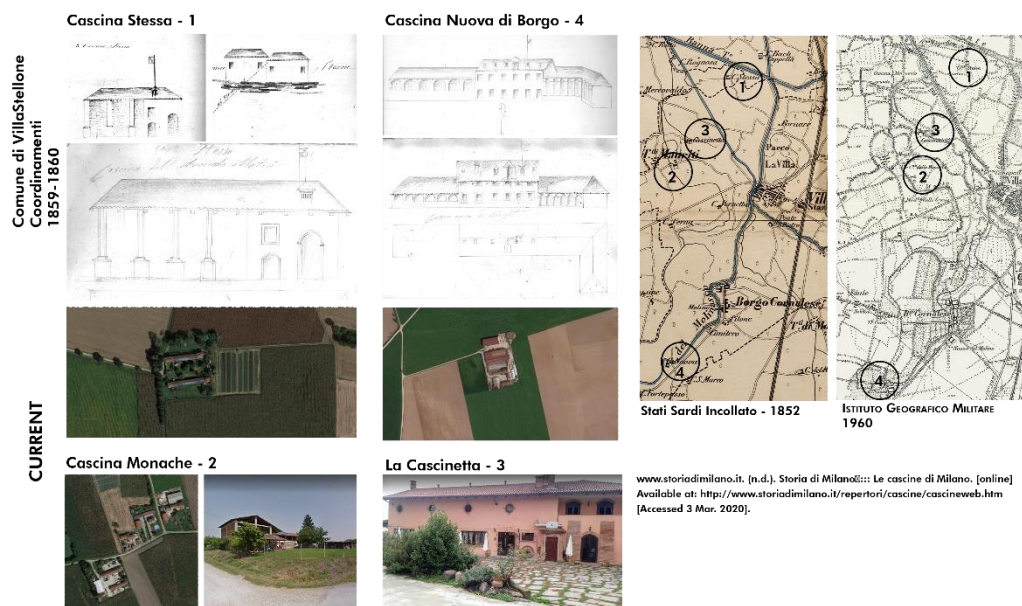


Fig 11: Typical Farmhouses from 19th century which are still exist on the territory

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas

e. Fragmentation on the Territory Through Centuries

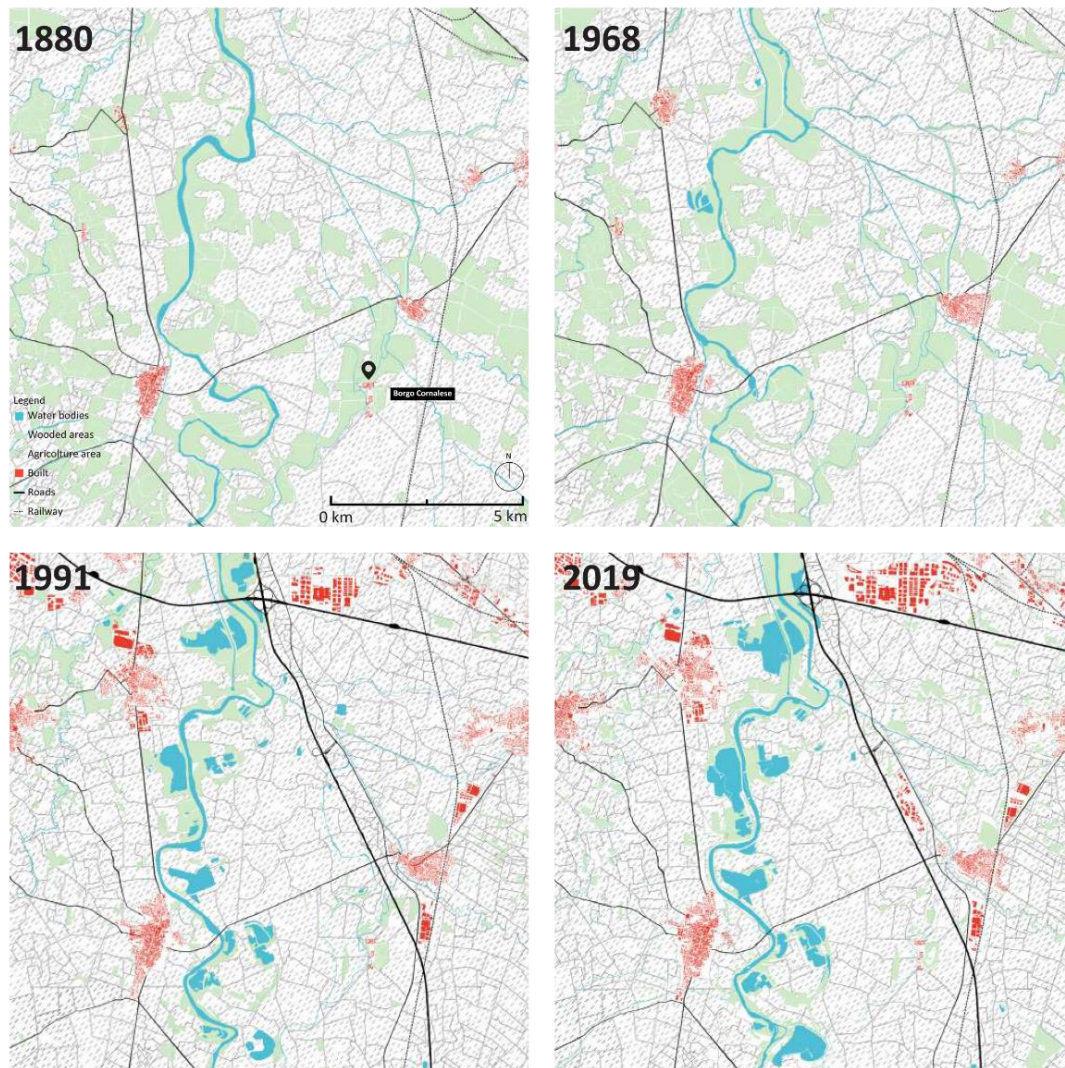


Fig 12: The changes on the fragmentation of agricultural parcels and water courses since 19th century due to urban development and industrial activities

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas (Ecology group)

The figure above shows four different period of the territory in terms of agricultural parcels and how they changed by the centuries. It can be seen how the river lost its meanders and the wooden areas began to be deformed in order to have more space for intensive and extensive agriculture. Besides, with the construction of the highway mentioned above, the ecological continuity of *Carmagnolese* plain was interrupted.

Below, there is the figure shows the processes the soil of territory. Especially with the industrial constructions and heavy infrastructures as highway passing through the plain, the ecological corridor had begun to disappear, the soil had become more fragmented and pressure on the soil had increased by the time.

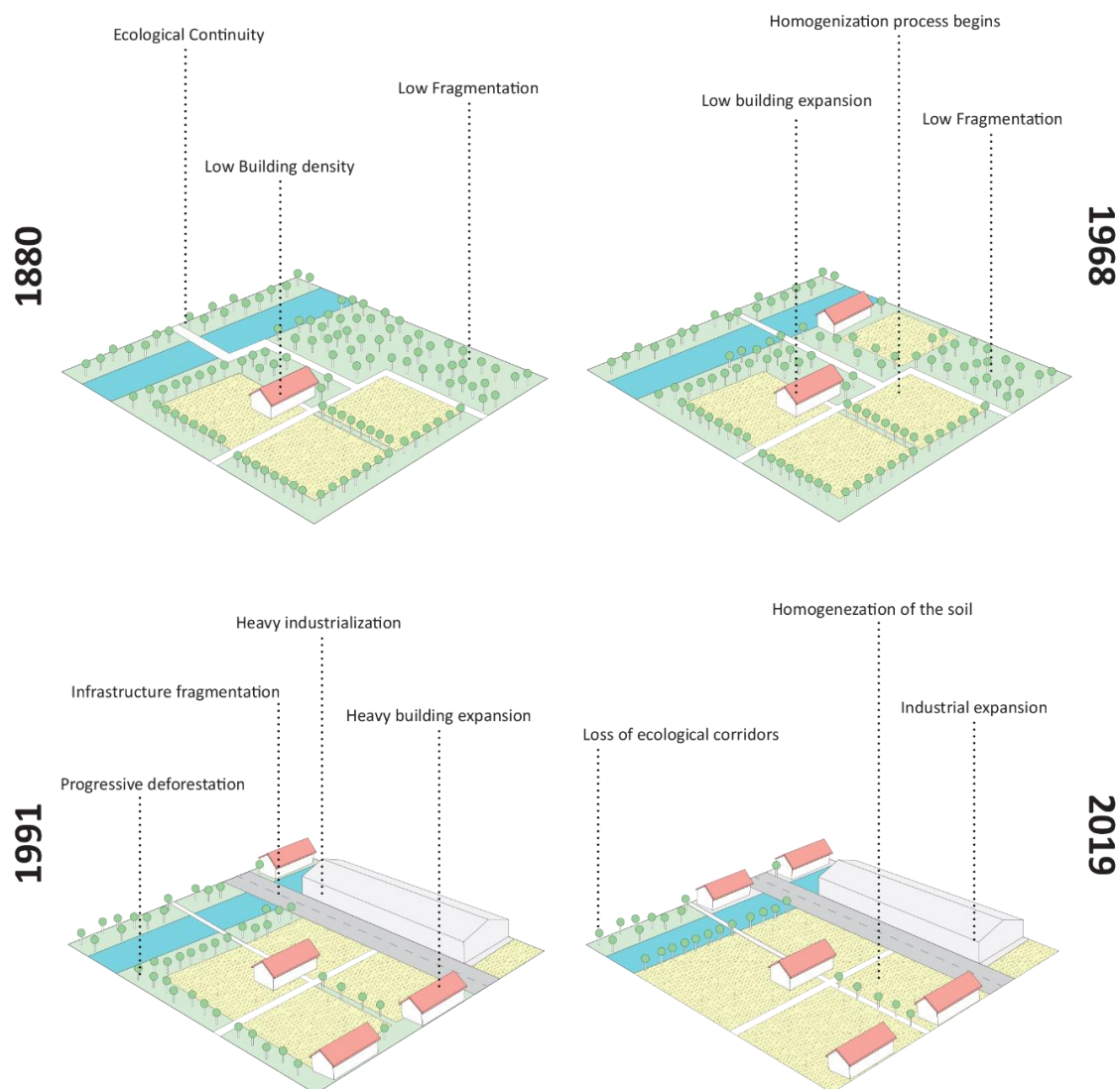


Fig 13: Homogenization process in the territory

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas (Ecology group)

With the increasing industrial and intensive agricultural activities, the general texture of the area has changed, and the resilience of the soil has decreased with the added urban sprawl pressure. At the end of the 80's the land was filled with artificial ponds, with the traces of the quarries mentioned above. In addition to afforestation works, these ponds, which were created by mines from the 80's, have now been strengthened to create new habitats and restore the natural richness of the area and transformed into natural areas used for leisure activities.

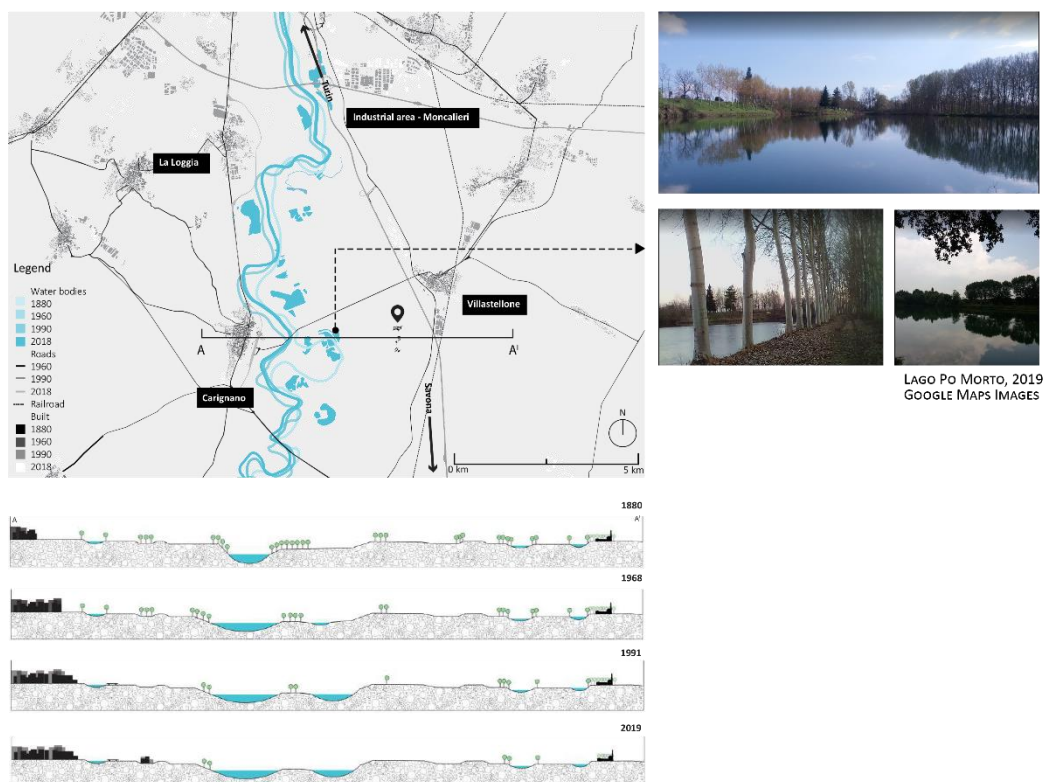


Fig 14: The changes on the land reasoned by urban pressure, quarries and transportation infrastructure & An example for the last situation of the man-made ponds (former quarry) today

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas (Ecology group)

f. Visual Perception and Perspective Features of Borgo Cornalese

Borgo Cornalese have several landscape identities which gives a character to the territory. First of all, the Po river has a landscape identity created in the region with its dominant character, and this deeply affects all ecological, historical and other identities of the landscape. Then, the rural and geomorphological characteristics of the region are also very influential on its landscape identity. Especially the presence of the Alpine Mountains in the background creates a very striking effect. Finally, the historical landscape character, which is causally related to this research paper, is deeply affected by the other identities of the territory mentioned above.



Fig 15: The scenic characteristics of the territory

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas (Scenery Group)

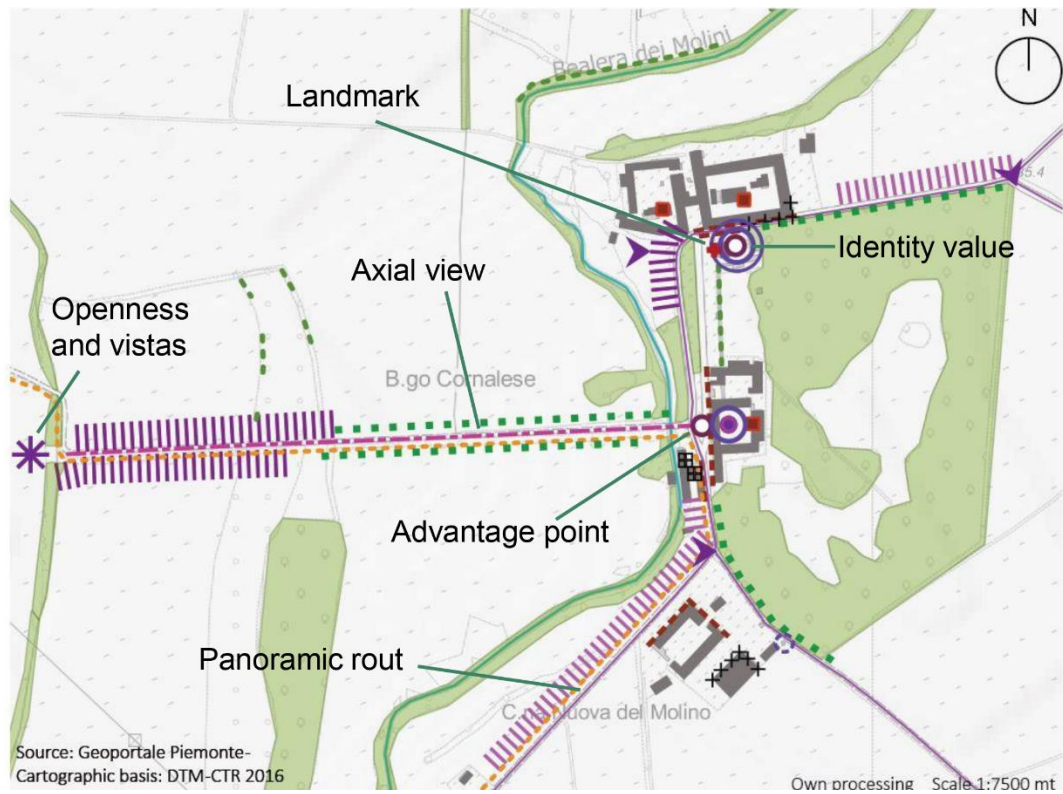


Fig 16: Scenic characteristics of Borgo Cornalese

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas (Scenery Group)

g. Identity Assets of Borgo Cornalese

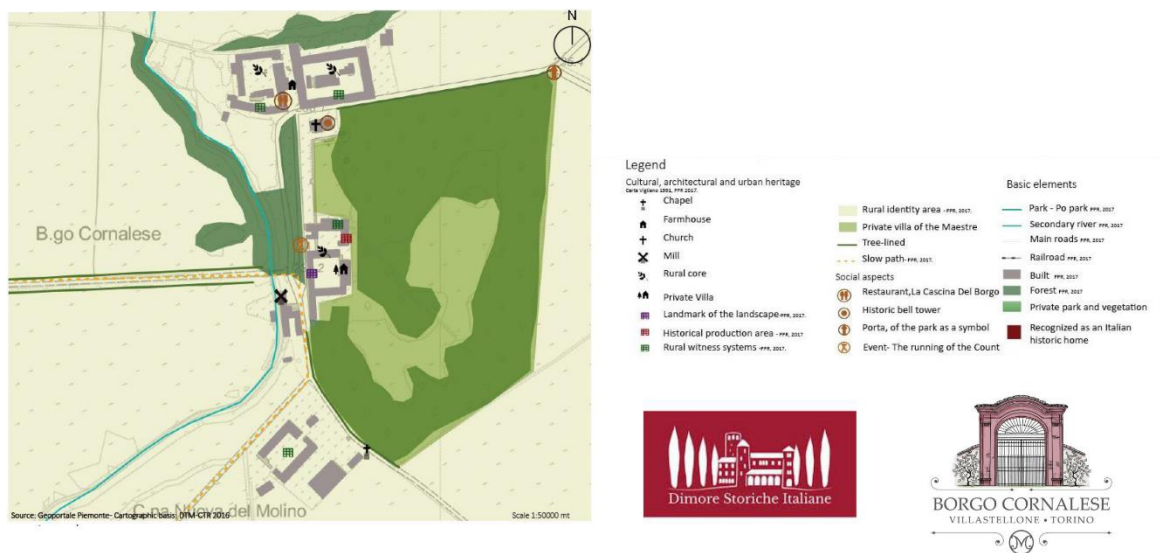


Fig 17: Identity assets of Borgo Cornalese

Source: Made by the research group of Designing Resilient Heritage Estate Landscapes Atlas (Scenery Group)

Above, there is the figure created by the Scenery group of Workshop underlined the assets which considered function as representing local identity of Borgo Cornalese.

4.4 Conclusion

At the end of this workshop, the landscape character of the area was analyzed in certain categories. Although the main categories are history, environment & risk, scenery & perception, land uses and activities, these categories are divided into subheadings and assessed. The visuals which were obtained as a result of this analysis and the selected interpretative categories are given above. Even though the main purpose is to determine the necessary steps to increase the resilience of the site, the required analyses for the management of the site were also taken into consideration. In this case, a landscape characterization study experienced from beginning to end was obtained and the experience gained from this study was associated with the compared operative frameworks in the second part of the study, and as a result, a categories proposal was proposed and discussed.

Although the scales of the samples studied in the second part of the research were quite different from the scales studied during the workshop, the analytical keys determined allowed a meaningful heritage landscape assessment on this scale.

Part II – Aristocratic Estate Case Study Analyses on Historical Landscape Management and Interpretation

5. INTERNATIONAL DOCUMENTS AND REGULATIONS ON CULTURAL LANDSCAPE

There are Landscape plans prepared by countries in accordance with their own methodologies and approaches, but there are international documents and regulations that guide or in other words, bind these plans as The UNESCO Convention, Cultural and Natural Heritage, The European Landscape Convention of the Council of Europe and the EU Territorial Strategy and Agenda. The recognition of the arguments on the cultural landscape and its preservation was adopted with the Charter of Athens (League of Nations, 1931). Then it continues with the Venice Charter on the conservation and restoration of monuments and sites (ICOMOS, 1964) and so on. Below, the main two of these international documents are explained briefly regarding their impact on national cultural landscape plans and other management tools of the countries. Since the above abstract information is given about the European Convention, it is not mentioned separately in this section. However, the convention is mentioned in the parts required for each case study.

5.1 Convention Concerning the Protection of the World Cultural and Natural Heritage, UNESCO (1972)

The primary aim and mission of this convention are to identify and protect the world's natural and cultural heritage considered to be of Outstanding Universal Value. It is an initiative of UNESCO itself and the IUCN. It has a visionary idea – that some places are so important that their protection is not only the responsibility of a single nation but is also the duty of the international community as a whole; and not only for this generation but for all those to come.

In this convention, the cultural landscape assets are divided into 3 categories as monuments, complexes, and places (sites).

Article 1

For the purposes of this Convention, the following shall be considered as "cultural heritage":

monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;

groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity, or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;

sites: works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.

5.2 European Spatial Development Perspective, European Union

It is a document approved by the Informal Council of Ministers of Spatial Planning of the European Commission in Potsdam in 1999. The aim is to achieve a balanced and sustainable spatial development in Europe and provide an integrated, multi-sectoral and indicative strategy. Fundamentally, it is a result of the process that was being carried out by the Council of Europe and that entailed the expansion of landscape spaces to more elements.

6. HISTORICAL LANDSCAPE STUDIES

As a branch of the landscape studies, historical landscape analyses, identification and assessment are also considerably important for current planning activities and development policies. Although the assessment indicators can differ from country to country, the importance of "historical landscape elements" mentioned below is common for these studies.

First of all, these elements represent the historical development of that area which involves the cultural, economic, and natural transformation made by society, and this transformation also includes technological developments by the time. Moreover, historical landscape elements contribute to their peculiarities and character of landscapes that make them unique. Sometimes this individuality also comes from special species of plants and animals, which the landscape can be the last sanctuary. Lastly, these particular landscape elements are inspiring and educating features as extracurricular learning places (Bastian et al, 2013).

In the European context of landscape studies, ELC and ESDP¹⁰ could be seen the main sources for the regulation which bring together the administrations (local & national) and the professionals. Apart from ELC, which explained above, ESPD includes cultural landscapes in the EU's cultural heritage, recognizes them as an economic factor of growing importance for sustainable development, which is an important binding factor for European countries, and

¹⁰ The European Spatial Development Perspective

establishes a series of political and regulatory options for the creative management of cultural landscapes.¹¹ In accordance with this purpose, the Principles for Sustainable Territorial Development of the European Continent of the Council of Europe (Hannover, 2000) also recognise cultural landscapes as a significant part of the European heritage, incorporate the objectives of the ELC and add the consideration of the landscape to the international programmes and to cross-border, transnational and interregional cooperation in matters of landscape (National Cultural Heritage Plans Catalogue, the Ministry of Culture and Sport of Spain).

6.1 An Overview of the Assessment of Historical Landscape Elements

Since HLE and traditional landscape elements disappear rapidly and are under threat, identification of these elements and ensuring their survival are of immense importance. Therefore, a detailed study should be conducted on the status of the cultural landscape and the stock of the historical elements. For the first step of these studies, it is necessary to identify historical elements, in other words, to distinguish traditional elements. According to Nowak and Schulz (2004), essential features of historical landscapes are; a convenient state of conservation, only minor changes in the landscape structure, the scenery since 1950, frequency of landscape formations of the past and the recent landscape features only integrated with the historical elements. Contrary to this situation, the features that cause landscapes to be excluded and lose their historical importance are as follows; the essential changes of the landscape character and the scenery of the whole area, land consolidation, dense urbanisation, loss of historical elements. For Schmidt, whose academic studies are frequently used in landscape, the criteria for HLE assessment can be; rareness, the state of preservation, age, regional importance, experience value.

6.2 Historical Landscape Indicators

Indicators, that form the main idea of this study, refer to a highly diversified concept of historical landscape in the evaluation processes. To set an example, the scale of the work is important to determine the logic of indicators. The greater the scale; policy-oriented indicators are involved for economic and social comparison. The reduced the scale; the more suitable the indicators are for directly monitoring the physical transformations of the territory (Volpiano, 2011).

Indicators concerning historical landscape features started to be mentioned in the documents with the sustainability studies of the United Nations towards the end of the 1990s. The document drawn up by the Global Urban Observatory of the United Nations¹² (UNCHS 1997) indicates that “The purpose of the Urban Indicators Programme is to build national and local capacity to collect and use policy-oriented indicators as part of a strategy for the development of sustainable human settlements” (Volpiano, 2011). Again, in 1990s, OECD developed a set of indicators including also the historical-cultural aspects briefly “...Thus, degradation of landscape entails both a loss of naturalness and historic cultural values. So far, no internationally agreed definition of landscape exists, and no attempt has been made to develop landscape indicators in this report” (OECD 1993). Yet another, Heritage Counts, the annual

¹¹ Political options for cultural landscapes: (1) Conservation and creative development of the cultural landscapes that have a particular cultural, historical, aesthetic and ecological significance. (2) Enhancement of the cultural landscapes as part of the integrated territorial development strategies. (3) Improvement of the coordination of measures affecting landscapes.

¹² Monitoring Indicators for the Assessment of Historic Landscape Features Human Settlements with Urban Indicators

survey of English Heritage, propounds a set of indicators which in 2009 they have highlighted the key changes or findings for 2008/09 as compared to previous years were divided in 3 main categories as; *Understanding the Assets* (Data on the extent of historic environment assets), *Caring & Sharing* (Data on the condition of assets and resources, including funding available to manage them), *Using & Benefitting* (Data on the social, economic and environmental benefits derived from active use of the historic environment (Heritage Counts, 2009).

7. REVIEWS OF CASE STUDIES

In the following part, the selected case studies are examined according to documentation prepared by their own countries which are all examples from Europe. In this way, the application of the European Landscape Convention and the approach of each country could be compared. The case studies are Royal Residences from Italy, France, and Spain which are all a node from different Royal Residence networks. First, the approach to the territory which includes the network and then to the single residence is studied. Although the size differences between residences are being aware of, since they are part of certain residential networks, the important characteristic in this study is not their scale.

7.1 Italian Case Study (Savoy Residences – Veneria Reale)

European Landscape Convention is a jointly accepted document but more importantly, it is common goals and policies shared by European countries for their future. Inherently, Italy is one of these countries that conforms to this convention and even shapes her landscape studies and applications accordingly.

The origin of landscape issues and studies in Italy is mostly based on the protection of cultural, historical, natural, and landscape phenomena from the laws of 1939. Basically, landscape analyses are the studies for assessment of landscapes and adjustment of landscape plans which state and regional authorities are responsible for (Voghera, 2011). The Italian approach can be named “attempts to integrate protection and development” which bears a striking similarity with French and Spanish approaches.

The practices of the landscape assessment of Piedmont and the categories of the examined components of the heritage landscape can be analyzed and compared with the other European examples in this research paper through the detailed studies named “Drafting of the Management Plan” made by DIST - Politecnico di Torino (assigned by the Regional Directorate for the cultural and landscape heritage of Piedmont (2012-2014)) and with the regional plan of Piedmont (PPR).

7.1.1 Regional Landscape Plan (PPR) and the Evolution of Historical Landscape Reading Methodology

The Regional Landscape plan is an instrument for the protection and promotion of the Piedmontese landscape to regulate its transformations and to support sustainable development in the territory (Governo Italiano - Regione Piemonte) . The last regional plan was adopted in 2015 and approved in 2017.

The approved PPR documents are available in PDF format and the relative cartography can also be consulted through a WebGis viewing service (webgis.arpa.piemonte.it) via interactive

maps. The data of the Tables can be downloaded in shapefile format from the Piedmont Geoportal, Catalog section. There is also the booklet that explains the path, the strategies, and objectives of the PPR.

Firstly, the PPR is kind of a tool for adaptation of the principles and policies derived from the European Landscape Convention and the Code of Cultural Heritage and Landscape. The structure of the Plan consists of the recognition of 76 landscape areas into which the regional territory is divided, in the definition of objectives for landscape quality and, at a regulatory level, in the definition of guidelines, directives, and prescriptions for other planning tools.

Secondly, the PPR constitutes an act of general regional planning based on the principles of sustainable development, conscious use of the territory, less consumption of the agronatural soil, protection of the landscape characteristics, and promotion of values landscape coherently inserted in the single environmental contexts. The purposes of the PPR and the Regional Territorial Plan (PTR) are therefore structured according to five main strategies and the first strategy includes the historical heritage landscape integration and protection. From these five main strategies derives 26 objectives again valid for both PPR and PTR. The particular purposes and strategies for landscape-environmental aspects are instead largely different from the territorial ones concerning the specific themes and diversified interests.

In the “Atlas of historical Piedmontese landscapes” in 2007, which was created by Vero Comoli, Mauro Volpiano, Claudia Cassatella, et al., the main methodological result was the proposal to overcome a conception of historical surveys on the landscape. Beyond the metaphor, it was then tried to make this approach operational by proposing the recognition of landscapes determined mainly by some specific and characterizing historical-territorial assets, then geo-referenced with GIS systems. The idea was to investigate not the “castle” but the settlement and road system around the castle, or not only the “farmhouses” but also the productive landscape of the plains with the irrigation systems, the built structures, the paths and so on (Volpiano, M., *Il Piano Paesaggistico Del Piemonte*, 2018 page 69). These studies let the historical values, for example disused roads, to be a potential for reuse or to revalue the territory today. This atlas and the historical studies of the first PTR (1997) are the turning points of today's landscape studies in which the landscape plan and historical cultural landscape elements are included in each other. For example, until a few years ago, large infrastructures of energy, such as dams and power plants, or the infrastructures for alpine tourism, or the 19th-20th century high-ground fortifications and mining sites were not included in the historical-cultural landscape assessments and the planning process. This operation was carried out in the awareness that an urban planning tool is always “temporary” and new technicians could consider some assets to be “outdated” and will focus on others.

There is another innovative side of the PPR that the studies support the historical part of the plan assessed not only the tangible but also the intangible values of the territory which as the perceived landscape with its components historically consolidated in terms of axiality, perspective system, historical viewpoints etc. These are important components of the landscape which describe it and give it an identity.

Lastly, the implementation processes of the plans can be called open process due to the inclusion of the local actors. The idea is that the categories of the analyses are reflected in general guidelines and regulations but local actors must become aware of the choices made by the planner, become aware of the evaluation and selection criteria adopted in the PPR, and then

proceed - according to their own rigorous scientific tools - to develop or not the hypotheses posed by the Plan, deepening them, specifying them or integrating them with new and more sophisticated analyses, which respond to requests posed by specific socio-economic contexts. To avoid misunderstandings and top down decisions, each community is be called to reflect deeply on its own memory and desire for the future of their territory (Volpiano, M., Il Piano Paesaggistico Del Piemonte, 2018 page 72).

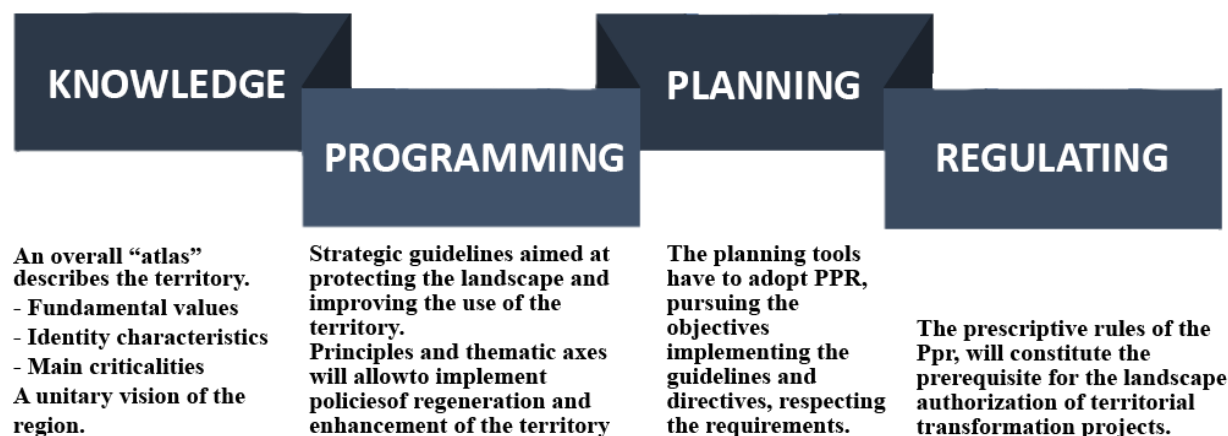


Fig 18: The aims of the Piedmont Landscape Plan

Source: Made by the Author based on “The Regional Landscape Plan Illustrative Booklet”

7.1.2 Historical-Cultural Landscape Components Interpreted on Landscape Plan of Piemonte

As stated above, the general frames for the investigations of the landscape elements have already been defined by the laws for all the regions in a generic way. For historical and cultural landscape which is included in the “Tavolo P4”, the components are as listed below (Direzione Ambiente Governo e Tutela - Regione Piemonte):

- Historical viability and railway heritage (Act 22)
- Archeological interest areas (Act 23)
- Historical centers (Act 24)
- Historical rural heritage areas (Act 25)
- Villages, gardens, parks and areas of leisure and tourism (Act 26)
- Industrial production and energy plants of historical interest (Act 27)
- Poles of religiosity (Act 28)
- Fortification systems (Act 29)

From the studies of Mauro Volpiano and Andrea Longhi from The Landscape Plan of Piedmont Region - December 2018, a table which shows the “Components of historical-cultural interest governed by the laws” and “List of Historical-Territorial Systems defined in historical analyses on PPR” was taken to investigate the indicators for Italian case study.

List of Historical-Territorial Systems defined in historical analyzes	Components of historical-cultural interest governed by the laws
	The Ppr recognizes the importance of the historical-cultural heritage and promotes its sustainable and integrated function, with particular attention to the components considered in <i>articles 22 to 29</i> of these regulations and represented by table P4. The Ppr also recognizes as elements of high historical and cultural interest all those identified in the local planes pursuant to Article 24 of the L.r. 56/1977
1. Road network and related infrastructures	Art. 22. Historical traffic and railway heritage
1.1 Road network and connected infrastructures of the Roman and medieval age. 1.2 Modern and contemporary road network and connected infrastructures. 1.3 Historic railway network	Art. 24. Historic centers and nuclei a. Turin and the centers of I, II and III rank
2. Historical settlement structure of centers with strong morphological identity	b. The historical settlement structure of centers with a strong morphological identity:
2.1 Archaeological remains of Roman foundations. 2.2 Isolated structures witnessing residential transfers and abandonment: - military structures (result of fortification); - religious structures (result of plebeian organization). 2.3 Newly founded or refounded settlements in medieval times (villenove, ricetti). 2.4 Settlements with stately and / or military structures that characterize their identity and morphology. 2.5 Settlements with religious structures characterizing identity and morphology. 2.6 Settlements mainly characterized by re-foundations or significant urban transformations of the modern age. Territorial design in the age of absolutism. 2.7 Settlements characterized by re-foundations or significant urban transformations of the contemporary age. Urban systems / complexes by architecture of the Modern and the late twentieth century.	I. Archaeological permanence of Roman and protohistoric foundations II. Medieval finds and isolated building complexes III. Newly founded medieval settlements (villenove, ricetti) IV. Settlements with noble and / or military structures that characterize their identity and morphology V. Settlements with religious structures characterizing identity and morphology VI. Re-foundations or urban transformations of the modern age (17th-18th centuries), including the Savoy residences regulated by Article 33, as Sites included in the UNESCO World Heritage list VII. Re-foundations or significant urban transformations of the contemporary age (19th-20th century) and historical-documentary architectural complexes of the 20th century
3. Systems of historical evidence of the rural territory	Art. 25. Historic rural heritage
3.1 Permanence of centuriation and productive organization of the Roman age. 3.2 Areas characterized by the permanence of medieval rural colonization. 3.3 Areas with rural nuclei resulting from modern age reorganization. 3.4 Areas characterized by crops and rural nuclei resulting from contemporary reorganization. 3.5 Areas characterized by villages and alpine nuclei connected to agro-silvopastoral exploitation. 3.6 Areas characterized by the stratified presence of irrigation systems of historical and documentary importance.	a. The historical evidence of the rural area based on the following aspects I. Permanence of centuriation and productive organization of the Roman age II. Permanency of medieval religious rural colonization or dispersed rural settlements with the presence of stately castles III. Areas characterized by rural nuclei resulting from modern age reorganization. IV. Crops and rural nuclei resulting from contemporary reorganization (19th-20th century) b. Alpine nuclei and villages connected to agro-forestry-pastoral uses c. The stratified presence of irrigation systems.
3.7 Villa and vineyard systems for production and leisure	Art. 26. Villas, gardens and parks, areas and facilities for leisure and tourism a. Systems of villas, gardens and parks
3.8 Landscapes of the vine of significant historical and territorial value.	Art. 32. Rural areas of specific landscape interest
3.9 Significant persistence of historical agricultural structures with crop varieties in geomorphological diversity.	
4. Systems and places of manufacturing and industrial production	Art. 27. Areas and plants of industrial and energy production of historical interest
4.1 Poles and systems of palcoindustry. 4.2 Industrial production systems of the nineteenth and twentieth centuries. 4.3 Mining areas of ancient and medieval times 4.4 Modern and contemporary mining areas. 4.5 Infrastructures for the production of hydroelectric energy of historical and documentary value.	a. The poles and systems of palcoindustry. b. The industrial production systems of the nineteenth and twentieth centuries. c. The mining areas of the ancient and medieval age and of the modern and contemporary age. d. The infrastructures for the production of hydroelectric energy of historical-documentary value
5. Poles of religiosity of territorial significance	Art. 28. Poles of religiosity
5.1 Sacred mountains and devotional paths. 5.2 Sanctuaries and "commissioned" works of territorial value.	a. The Sacred Mountains and devotional paths of historical and cultural significance [...] also regulated by Article 33 as Sites included in the Unesco World Heritage list b. The sanctuaries, which are located as recognizable fulcrums in the landscape context of the regional territory, and the isolated or emerging religious works, especially those resulting from historically relevant public commissions
6. Fortification systems	Art. 29. Fortification systems
6.1 "Modern-style" fortification systems. 6.2 Fortification lines of contemporary age.	a. Fortress b. Bastion walls c. Fortresses and citadels d. Lines of entrenchments, outposts and forts constituting linear Alpine structures; also of the XIX-XX centuries, of historical documentary value, to be considered as a whole e. Alpine military road system
7. Territorial contexts for holidays and tourist use	Art. 26. Villas, gardens and parks, areas and facilities for leisure and tourism
7.1 Vacation resorts and leisure centers. 7.2 Ski districts.	b. Holiday resorts and leisure centers, with particular attention to spas c. Infrastructures and artistic equipment for the mountains [...]

Fig 19: Analysed Components of Historical Cultural Landscape

Source: Volpiano, Mauro. Il Piano Paesaggistico Del Piemonte, Dec. 2018.

a. The Interactive 2017 Regional Landscape Plan

The official website of Arpa¹³ Piemonte, the PPR is served online with the interactive Gis-based maps which are able to be downloaded. The PPR is divided into 6 categories. After the introduction part which explains the other categories and how to utilize the online PPR, there is P2 – Landscape Assets, P3 – Landscape Units, P4 – Landscape Components, P5 - Sites included in the UNESCO World Heritage List, SIC and SPA, and lastly P6 – Macro Areas of Landscape.

Among all these categories, P4 is the one where is the heritage and cultural landscape assets are identified.

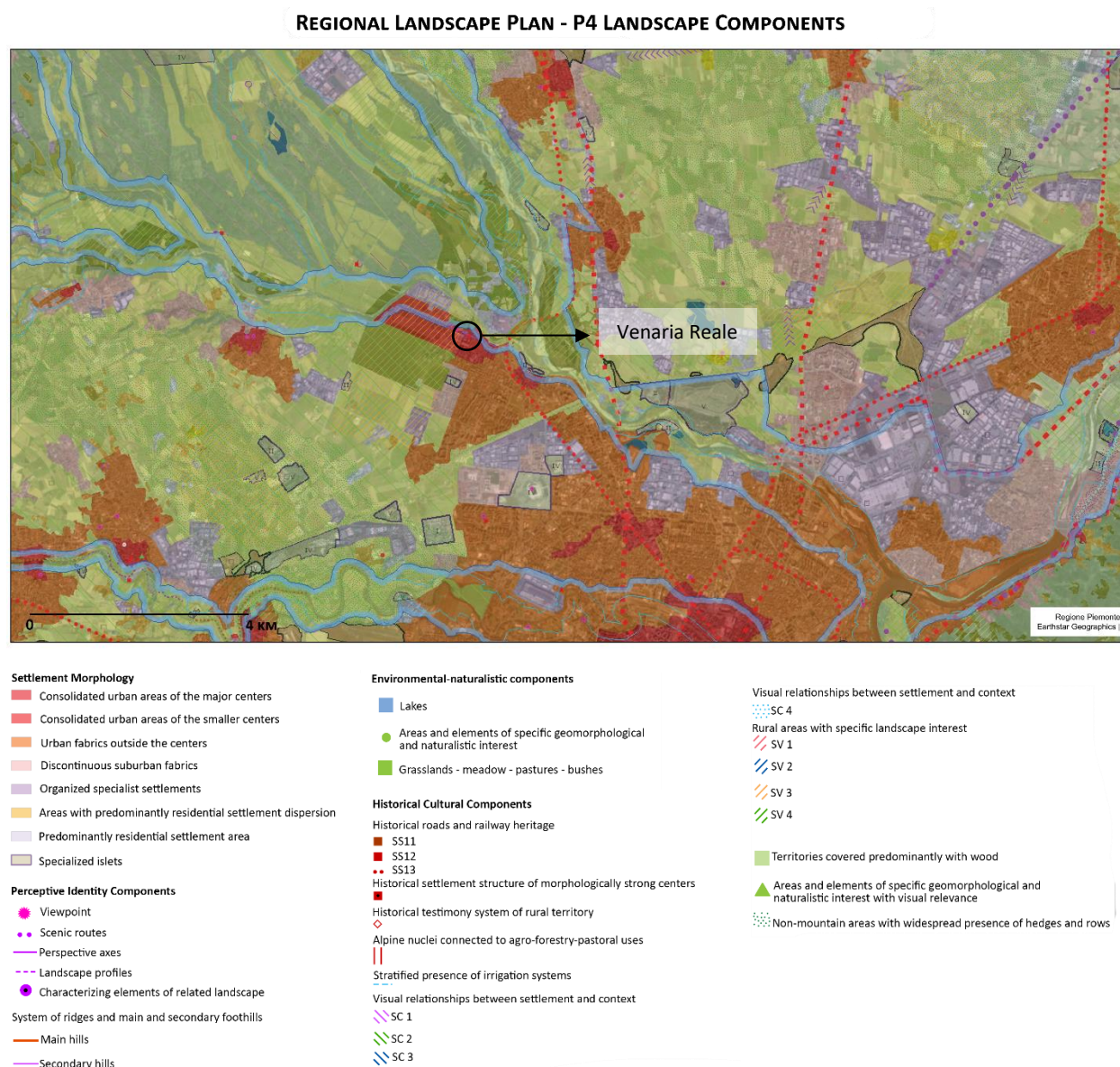


Fig 20: Tavola P4 – Landscape components of the study case territory

Source: Made by the author based on the materials from WebGIS ARPA

Above, there is the map created by the interactive PPR – Table P4. In this part of PPR, the components are divided into four main categories as; naturalistic-environmental, historical-

¹³ The Regional Agency for the Protection of the Environment

cultural, perceptive-identity and morphological-settlement which all these categories are based on articles of the plan mentioned above. Landscape components are shown in 1:50.000 scale.

Later on, at P2 – Landscape Assets category which the scale is 1:100.000, the region is divided into 6 sub-territories in according to their assets. On this map, Venaria Reale and the Park of La Mandria are illustrated as “public interest of the Castle and the areas of the Royal Gardens”.

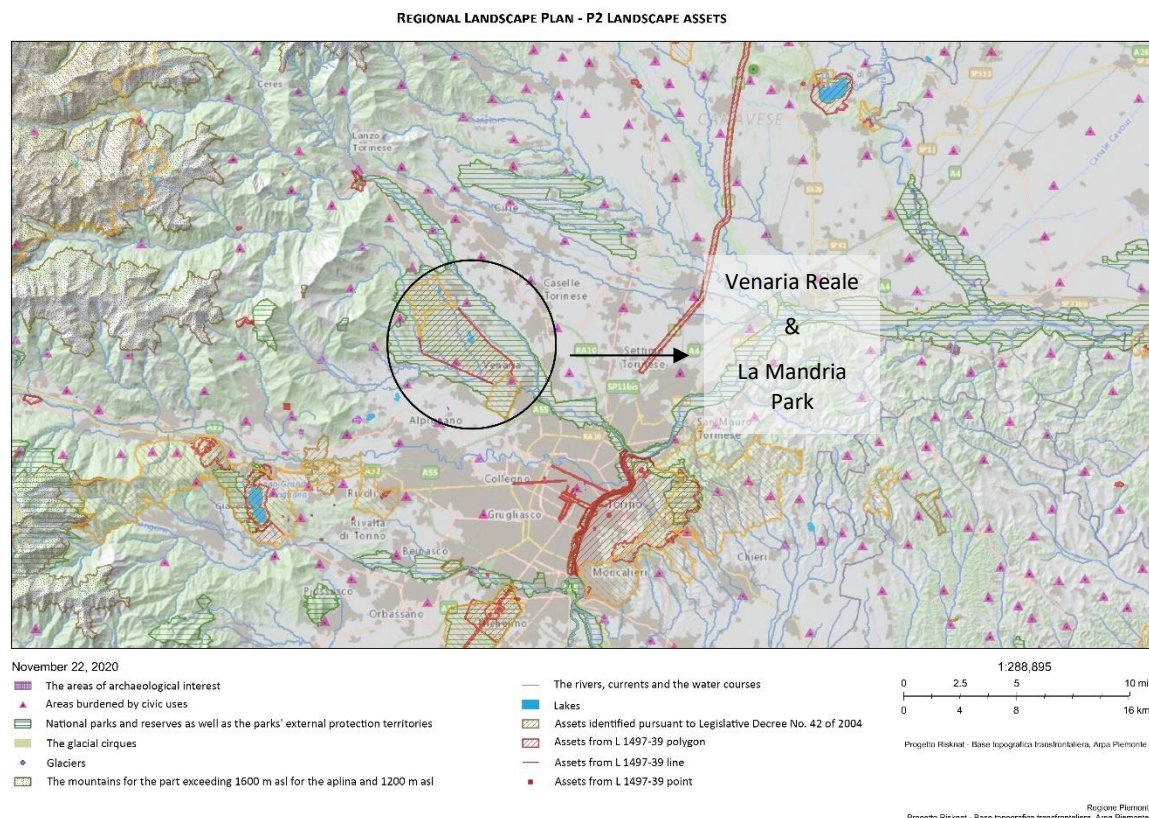


Fig 21: P2- Landscape Assets

Source: Made by the author based on the materials from WebGIS ARPA

On P3, Piedmont is divided into 76 landscape areas. These 76 landscape areas, in order to represent the map of the identity landscapes of Piedmont, were aggregated into 12 macro-areas, homogeneous both with respect to geographical characteristics and with respect to perceptual components, identified in Table P6. According to this categorization, Venaria Reale is the 36th unit and it is “urban relevant altered”. Even if its not directly considered in heritage landscape assessment, this categorization is also shown below to clear the landscape features of the territory according to planning practices of the region.

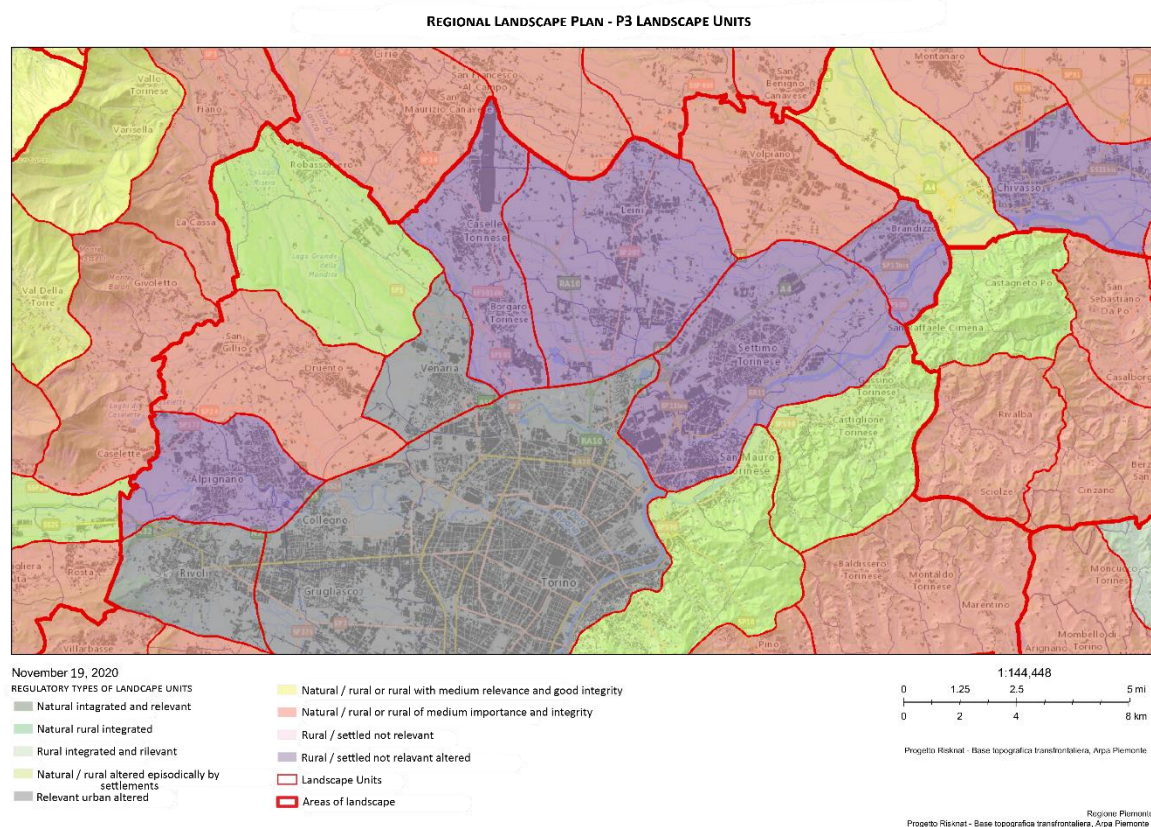


Fig 22: P3 Landscape Units

Source: Made by the author based on the materials from WebGIS ARPA

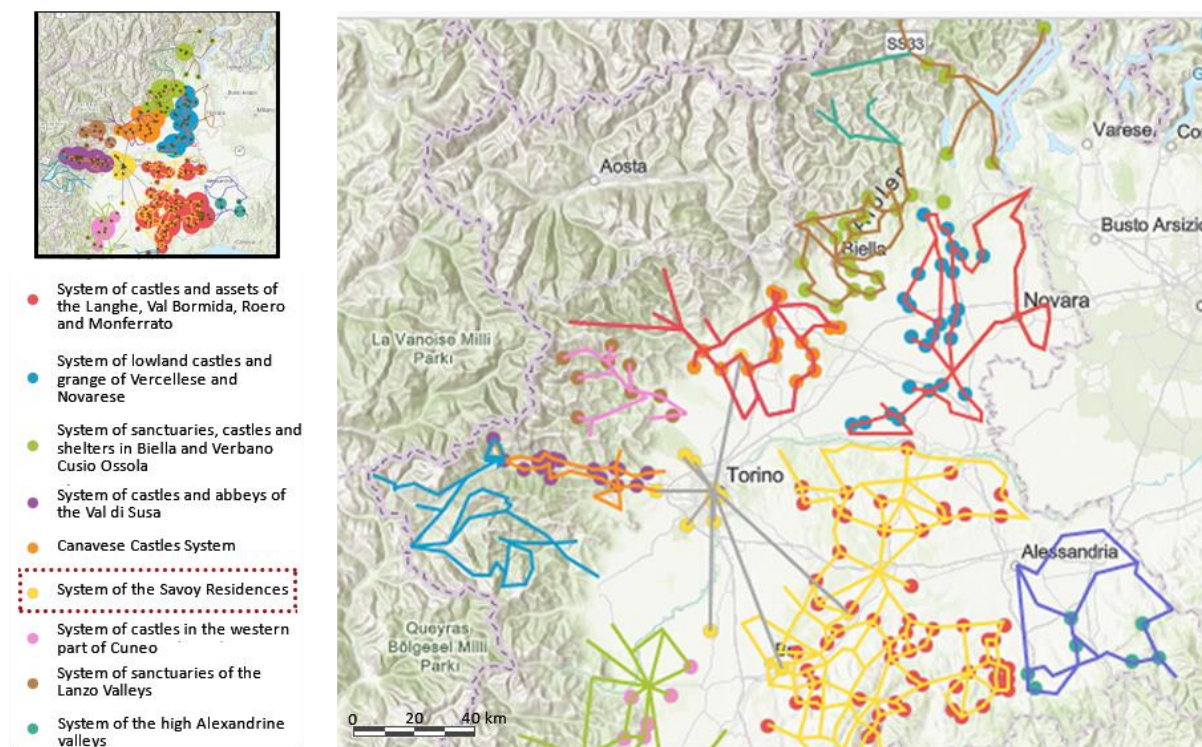


Fig 23: The scheme showing the cultural heritage systems of Piedmont Region

Source: Made by the author using P6 – PPR (Geoportale, 2020)

7.1.3 Drafting of the Management Plan “Critical investigations for the historical-territorial and landscape framework of the Savoy Residences system included in the UNESCO World Heritage List ” by PoliTo - Project and Territory Policies

The main aim of this research made by The Polytechnic University of Turin is to provide a strategic overview of the issues affecting the landscape of the Savoy Residences and to support the activity of the Regional Directorate for the cultural and landscape heritage of Piedmont. It is expected that this research study will provide the necessary analysis and identify potential problems in the management of Savoy Residences. To achieve this goal, the project is divided into the development of synthetic surveys on individual residences and in an overall picture dedicated to the serial site. The results, geo-referenced, converge in the cartography that will be made available through the new WebGIS of the Ministry for Cultural Heritage and Activities for the management of the Unesco serial site.

There are key issues or themes determined in the research which can help to strengthen the guidelines of the Management Plan and to identify, or rather specify and protect, the components that can be understood as real territorial resources of the Unesco site. These issues can be listed as

- the relationship with the environmental frameworks;
- the historical dimensions of the territory;
- the dialectic between residences and settlements that host them;
- the role of the historical rural and proto-industrial productive landscape;
- the aesthetic and visual appreciation of the residences as a long-term data;
- reflection on residences as places, scenes and activities in the collective memory today.

As a result of this study, the survey attempts to emphasize the strategic and priority issues for the management and enhancement of the sites, focusing on the historical-cultural components of the "landscapes of the Savoy Residences".

The scale of the survey is composed with different scales based on the landscape components.

• The territorial framework (up to the scale of 1: 30,000), reads the phenomena and relationships that characterize the serial site in a unitary position. The components at this level are:

- the landscape areas identified by the Regional Landscape Plan in which the Residences are included;
- the areas of the municipalities in which the buffer and core areas of the Residences fall, with reference to the Landscape Units on the municipal territory thus identified;
- the reference to the historical and cultural areas as identified in the scientific literature with particular reference to the PPR of 1997 and the current one;
- the historic road network (main axes and lines of communication);
- the political-institutional references and the state borders or the relationship with the capital city, such as references to the administrative structure of the ancient regime (capitals, provinces) and to the post-unification one (for capitals, districts etc.);
- the visual and scenic references of territorial importance: the residences as visual fulcrums in the landscape, the perspective axes designed along the main arteries

connecting with the capital city or hunting routes, the areas of visual influence up to around 1200 meters from the Residences.

- Contextualization area (up to a scale of 1: 10,000), in which the first level of historical-territorial analysis is defined, from which the relationships between sites and contexts emerge;
- Site (up to the scale of 1: 5,000) in-depth scale on a single site (core and buffer zone).

The discussion on the context and territory while analyzing a landscape bring other subjects forward. The landscape is an interpretative scheme of reality, which favors the perceptual relationship between man and the environment. Thus, the landscape assessment of the Residences does not simply mean considering them in their set of architectures, buildings, and gardens. The dimension of the landscape does not correspond only to a passage of "scale", but it means attention for the relationships between objects and phenomena of the territory, also from a dynamic point of view: it is, therefore, a question of observing the territory of the Savoy Residences including the relevant agricultural and forest contexts, the water systems and other natural resources, the communication paths, the land uses. The particular systems of relationships to read the landscape assets of territory are listed in the report of Politecnico for the management plan as;

- Environmental frameworks and nature
- The conditioning territorial and settlement network
- The projection of sovereign power on the territory
- The historical urban landscape, the dialectic with the settlements
- The historical production landscapes
- The aesthetic experience
- Places, scenes, and activities in the collective memory.

The other key point of the landscape assessment is the boundaries and the planning tools affecting the assessment. Many different protection and planning tools that over the decades have overlapped on the sites of the Residences. The landscape approach of this survey from PoliTo advises to carefully evaluate the analyzes of the historical-cultural heritage proposed by the Regional Landscape Plan adopted in 2009, both as regards the territorial systems on a regional scale, and as regards the "landscape areas".

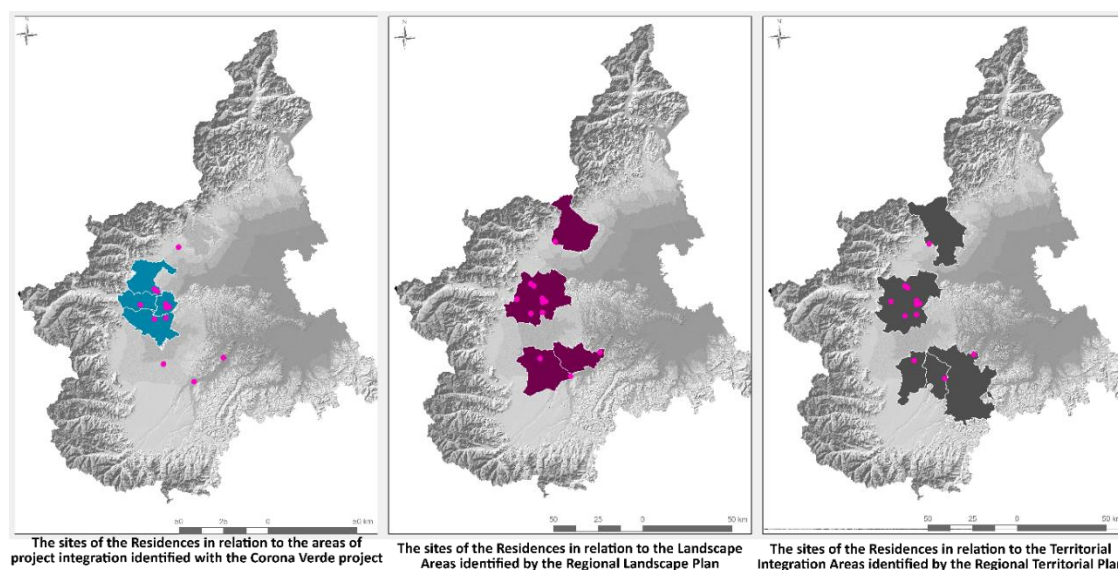


Fig 24: The location of Royal Residences in terms of the borders of the landscape units and planning tools

Source: Gruppo di ricerca del Politecnico di Torino, DIST. *Il Paesaggio Delle Residenze Sabaude a Cura Di Mauro Volpiano*. 30 Sept. 2014, page: 30

In brief, the historical, territorial and landscape framework of the system of Savoy Residences can be investigated in a systematic way that is compatible with UNESCO, the regulatory system of Italian urban Planning and the needs of European Landscape Convention. It is therefore necessary to read and therefore develop the system of Savoy Residences as a landscape around certain systems of relationships.

a. The system of the Residences of Savoy

The system of the residences is deeply linked to its territory which is mostly because of the system of the residences originated in 1563 when the Duke of Savoy, Emanuele Filiberto, made Turin the capital of the duchy and decided to start a project for the overall reorganization of the territory with the aim of celebrating the absolute power of the ruling house. His successors, between the seventeenth and eighteenth centuries, carried out the program with the organization of the "Command Zone" in the city center and the creation of a system of maisons de plaisance, the "Crown of Delights", through the re-functionalization of pre-existing residences and the construction of new buildings, intended for the hunting practice and leisure of the court.

The capital city is connected with its territory and suburban areas which are playing a key role in the territory in terms of design. Most of the documentary materials about Savoy residences are kept in the State Archives of Turin, which was the capital. Since the documentary materials are not satisfactory for the historical landscape studies, the great maps of the State offer an essential interpretative support by bring into the system the great road axialities, the relationships with the productive contexts, the dynamics of polarity and antipolarity between the capital city and the individual residences and reciprocally between the different complexes.

The unitary character of the complex of buildings, which represent a complete panorama of European monumental architecture of the 17th and 18th centuries, is given by the stylistic homogeneity due to the group of court architects and artists operating in a widespread manner

in the residences and government buildings (between these also Filippo Juvarra, Benedetto Alfieri, Claudio Francesco Beaumont). The complex consists of 22 buildings, 11 located in the center of Turin, the others distributed according to a radiocentric system around the city.

The main idea of the system is the suburban royal residences are for leisure activities as hunting lodges and parties spreading out in a radial pattern around Turin, underline the leading role of the capital.

For the comparison among the residences, the vision is to use similar materials belonging to each Residence from the reports of the State Testimonials to the graphic materials for the construction and maintenance of the gardens and from these comparisons to draws systemic indications mostly from the military cartography of the state or Topographic maps of hunting from 18th – 19th centuries. And this is primarily a conceptual innovation in the source treatment system, capable of using traditional sources, but also of integrating them with new landscape elements.

Savoy Residences are Unesco Sites which means that they share specific characteristics that make them part of a unique great historical-cultural complex. But at the same time, they are not spatially contiguous, nor are they all connected territorially by a recognizable unitary design of physical space. This variety of the landscape features of Savoy Residences and the territory can be an element of attraction and interest, as well as the belonging of the complexes to different moments in Savoy history which means they could be understood only by taking into account several dimensions as the institutional and political ones, the architectural and artistic ones, the functional ones and so on.

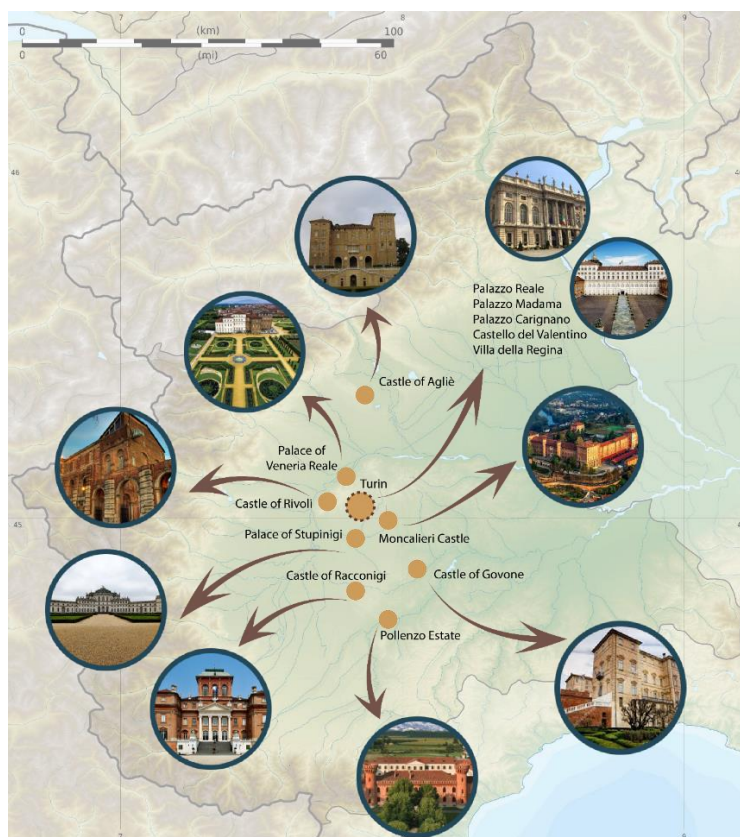


Fig 25: The complex of Savoy Royal Residences

Source: Made by the author

b. The relationship with environmental paintings and nature

The general idea about the relationship between Savoy Residences and the nature is mostly reduced to the themes of "designed green", such as gardens and historical parks which, together with the architectural-building components, combine to constitute that "perfect example of European monumental architecture. On the other hand, the environmental paintings allow to have a different perspective with respect to environmental systems from the traditional one. The large natural areas that belong to royal residences are usually large wooded plots, and their uses have changed since the construction of the residences. However, these large natural environments are an important component in terms of the correct reading of the landscape of the region, and today these areas have a key role in the development and planning of this region. For example, they are substantial areas for the green backbone of the Turin Metropolitan area which is called Corona Verde.

Additionally, most of the complexes belonging to the serial site are involved or are part of protected natural areas. To exemplify, Parco Naturale La Mandria is a component of a system where the primary interest is the protection of the balanced relationship between naturalistic, cultural and historical-artistic values as monumental trees and different types of habitats. Finally, the aesthetic and perceptive values, such as wooded backgrounds, the tree-lined avenues that mark the paths, constitute the characteristics of the natural landscapes of the Residences.

c. The territorial and Settlement Network

The Duchy of Savoy had administered the Turin foothills for at least four centuries and this time period left marks and settlement hierarchies on the territory. Thus, the character or identity of each residence is depending on the pre-existing settlements there. In the complex of the residences, in some cases, the new structure takes root on the pre existing medieval dynastic fortified poles such as Rivoli, Moncalieri, Palazzo Madama, or the opposite which the new structure is proposed as an alternative to the previous structure as Castelveccchio di Stupinigi and Venaria. To understand the morphogenesis of the site, it is essential to analyze the relationship between residence, settlement and territory.

d. The projection of sovereign power and the infrastructure of the territory

The design of the territory is emphasizing a physical projection of the absolute power of the sovereign with the realization first of the crown of delights, then of the wider system of residences in various capacities.

e. The historical urban landscape and the dialectic between settlements and residences

The intensive conservation and restoration policies of the architectural complexes of the Residences bring a dense flow of economic, technical, human, scientific and design resources to these areas which can overshadow the dialectic between the architecture and the settlement network that welcomes them. These circumstances cause difficulty in making decisions for both interventions on architectural complexes and urban redevelopment and restoration actions within the same cognitive, technical and operational framework together while mostly focusing

on the Savoyard structures. The most remarkable example of this situation is Venaria Reale where the construction of the residence is accompanied by a contemporary redesign of the urban fabric. Issues that can affect even the smallest elements of the facades or the succession, for example, of flooring and other material components that characterize the urban space. Therefore, there is a need for a synchronic reading of the urban composition, sometimes with its own system logic, in the relationship with the design of the Residences. This reading requires the investigation of the visual sources and narratives of space which can serve to offer a further key to understanding the perspectives of conservation and use of the Unesco site.

f. The historical production landscape

Production landscape or in other words, the agricultural landscape components commonly play an important role for the design of the Residences. Example in which the new structure reinterprets in somehow careful way the original agricultural assignment of the site are not uncommon. For instance, the case of the Palazzo del Valentino by Cristina di Francia, with attention to the vergers (orchards) that characterized the area outside the southern gate of the city and near the Po, served by a shrewd system of canalizations that made it an area of considerable fertility, but also of the relationship, not denied, if anything redefined, with the wooded areas, first to the Regio Barco, that is to say hunting enclosure, later known as Regio Parco, then of Altessano Superiore with its forests, revised and tamed in the Vénèrie Royale system, finally of Stupinigi compared to the forests around Castelvechio.

Especially the residences of the minor branches of the family show even more strong relations with the production landscape surrounding them. Such as, in Racconigi there are mills, fullers and water exploitation systems for both agriculture and proto-industrial production directly dependent on the Residence.

g. The aesthetic experience

The aesthetic experience of the landscape of the Residences lies on the scenery and perspective assets which are observation points, scenes, panoramas, significant glimpses. These visual assets help to read the residences complex and the environmental values together in the territory. This aesthetic experience are not simply comprise of singular object as architectural features of buildings but the perceptual sequences, therefore it is experiential.

h. Places, scenes and activities in the collective memory

Among the cultural and landscape values of the Site there is also the identity value that the Residences have for local communities and which is connected both to values of memory, and to still being a place and scene of collective life and special events. The individual residences present very different situations from this point of view, by tradition, by historical events, by current circumstances. The same categorisation of the identity values were made also for Borgo Cornalese (Part I). These identity values are simply monumental structures, unique characteristics of the landscape etc.

7.1.4 Royal Palace of Venaria (Reggia di Venaria)

It can be said magnificent quality of the architecture, and mainly the spectacular interior architectural arrangements have overshadowed the landscape value of the palace complex. The

palace has known for its isolated character and decay but today, it has been being more integrated into a living urban fabric with services and spaces for social use.

a. The Environmental Context and the Perspective

The Unesco Site is located on the north-western side of the Turin metropolitan area, presenting itself as an outlet to the open spaces coming from the city, presenting agricultural and more natural landscapes. The northern part of the palace, it looks towards the horizon of the first Alpine hills which is also an important characteristic of Piemonte region. Then, the scene turns to the forest enclosed by the Parco della Mandria and, finally, the mountain range.



Fig 26: Environmental context of the Palace

Source: C. Cassatella, 2012

b. Settlement Network

The settlement network of territory is richly characterized in the Middle Ages under the settlement profile - Pianezza, San Gillio, Druento. The seventeenth-century complex of Venaria Reale involves the construction of the palace but also the simultaneous reshaping of the medieval nucleus of upper medieval settlements.



Fig 27: 1682 - TOMMASO BORGONIO, Regiae Venationis Aedium in Theatrum Statuum Regiae Celsitudinis Sabaudiae Ducis, Pedemontii Principis, Cypri Regis

Source: Volpiano, Mauro. *Il Piano Paesaggistico Del Piemonte*. Page: 48, Società Degli Ingegneri E Degli Architetti in Torino, Dec. 2018 - Historical Archive of the Municipality of Turin

c. The Projection of Sovereign Power on the Territory

Fundamental piece of the design of the Crown of Delight, Venaria is connected to Turin through a direct path with the Borgo Dora which, is a strong organizational element of the succession of urban doors and accesses to the building as they are configured in the seventeenth century. In the eighteenth century, the large system of the garden and the park of the Quadrati, whose organization of the hydraulic system should not be underestimated, constituted a distinctive element, also dimensionally, for the Savoy state property around the capital city, and a certain reference today for the definition of the buffer areas of the site. A main reference of this territorial organization, starting from the early years of the eighteenth century, is also the Mandria complex, functional to the performance of the court's hunting activities.



Fig 28: ASTO, Corte, Secret Topographical Maps, Sardinian States, Gran Carta, RICHETTI (director), Royal Body of The Major State, Topographic Map of the Mainland States of S.M. the King of Sardinia (known as the Great Charter of the Sardinian States), 1852-1862 (B5 bis Nero 30)

Source: Volpiano, Mauro. *Il Piano Paesaggistico Del Piemonte*. Page: 48, Società Degli Ingegneri E Degli Architetti in Torino, Dec. 2018.

d. The Historical Urban Landscape, The Dialectic With The Settlements

The relationship between the Palace of Venaria and the urban core in front of the residence is perhaps the most emblematic one among the other sites outside the capital city.



Fig 29: Urban core causally linked to the residence

Source: M. Volpiano

e. The Historical Agricultural Production Landscapes

Venaria Reale has been a complex which is a core of great agricultural production, as well as a place of relaxation and exercise of government. Since 17th century, the agricultural activities and intervention characterized it: the system of waters, first of all, starting from the Druento canal divided into a comb with outflow into the Ceronda stream, which supports the productivity of the park and the gardens. La Mandria, architecturally growing in the years of the first architects Garove and Juvarra (first half of the eighteenth century) is a fundamental element of this productive landscape.



Fig 30: ASTo, Corte, Carte Topografiche Segrete, Carta Topografica della Caccia, 1761-66, 15 A VI rosso, Marks of agricultural activities next to the Palace which still today can be traced

Source: Volpiano, Mauro. *Il Piano Paesaggistico Del Piemonte*. Page: 48, Società Degli Ingegneri E Degli Architetti in Torino, Dec. 2018.

f. The Aesthetic Experience

Even from a distance, the castle is a powerful visual reference point of the territory by its dominant position which gives a viewpoint character. Thus, the stands are organized in panoramic terraces. And on the background, the rural areas with hilly skylines marked by the religious buildings enhance integrity. The Palace is the fulcrum of a planned landscape, a system composition with important attention to the scenographic effects and the projection of the design on the territory through concatenated perspective axialities. The visual relationship with the background of the Alps is important, while the relationship with the stream is more mediated.



Fig 31: *La Reggia di Venaria Reale* today

Source: Claudia Cassatella

g. Places, Scenes and Activities in the Collective Memory

The Palace and the surrounding structures have never known processes of appropriation by the local population after a lengthy period of military use and then abandonment and degradation. The recent and significant recovery from a tourist point of view (among the top destinations at national level) accentuates, in some respects, the isolation of the complex. Success reverberates on the axis of Via Mensa, which has gained a commercial centrality, even at the expense of other functions related to the daily life of the population (transfer of the library and probable transfer of the hospital). The congestion caused by tourist flows is a source of tension, even in the face of the not yet completed system of accessibility by train.

671.5 UNESCO Criteria and Management of the Residences of Savoy

In the UNESCO World Heritage List, the Royal House of Savoy comprise a large serial inscription of estates including 22 palaces and villas. These residences have a radial plan which underline the centrality of Turin, the former capital city. This plan was initially conceived by the Duke of Savoy when he transferred the capital of his Dutchy to Turin and then his successor Charles-Emanuel I and his wife developed and implemented the plan to reorganize the area during 17th and 18th centuries by giving the city and surrounding area a Baroque character. The villas Castello di Rivoli, Castello di Moncalieri and Castello di Veneria created a “Corona di Delizie” which means “Crown of Delights” around the capital and with the outlying residences which include Castle of Govone gave the form to the countryside.

The Residences of Savoy is an outstanding example of European monumental architecture and town planning from 17th and 18th centuries which shows the absolute monarchy in material terms.

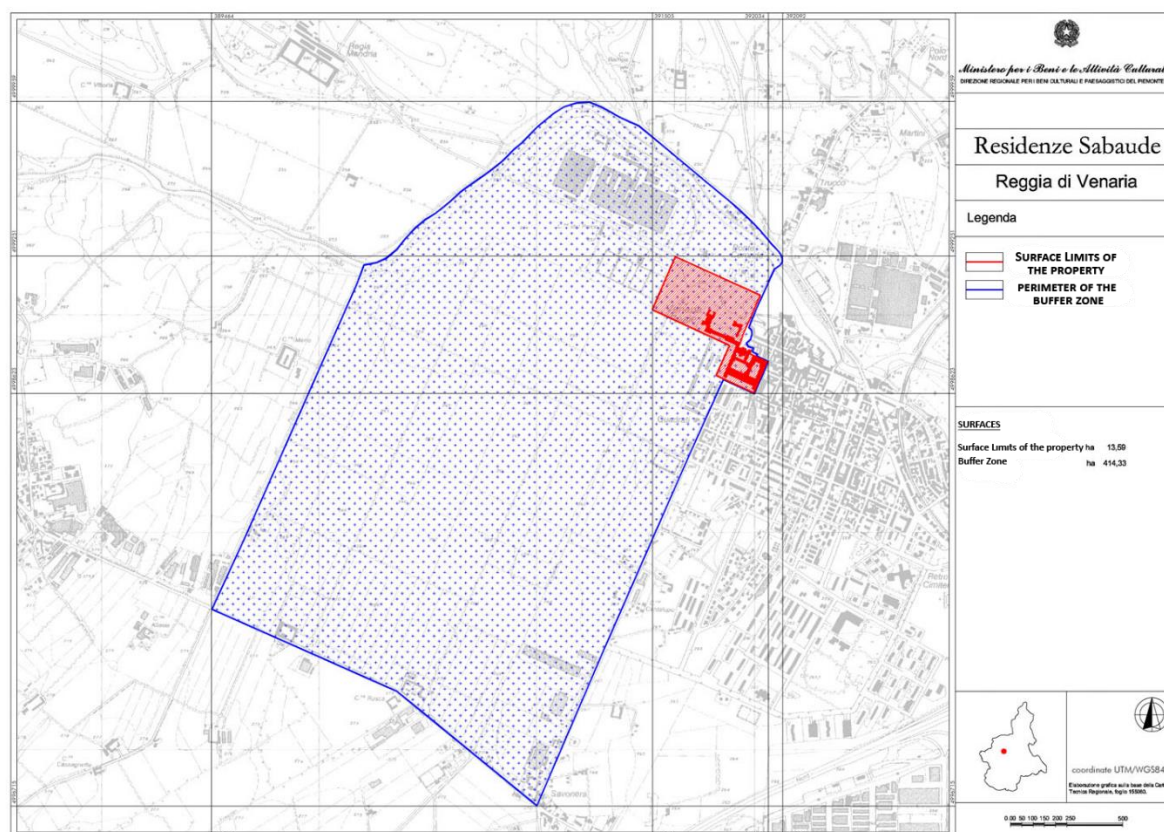


Fig 32: The buffer zone and the estates limits

Source: Unesco.org

Criterion I: The Residences of the Royal House of Savoy provides outstanding testimony to the exuberant genius of Baroque and Late Baroque art and architecture, constructed over many decades by outstanding architects, including Ascanio Vitozzi, Benedetto Alfieri, Amedeo di Castellamonte, Guarino Guarini and Filippo Juvarra.

Criterion II: The monumental architecture and town-planning of the Residences of the Royal House of Savoy reflect the interchange of human values across Europe during the 'Baroque episode' of the 17th and 18th centuries which led to an immense work of creation and homogenization, ornamentation and improvement.

Criterion IV: The Residences of the Royal House of Savoy is an outstanding example of the strategies and styles of the Baroque, a monumental architectural ensemble illustrating the prevailing doctrine of absolute monarchy in material terms.

Criterion V: The Residences of the Royal House of Savoy constitute a dynastic heritage that is both complex and unitary being a true symbiosis between culture and nature through its mastery of urban space and its planning of vast tracts of countryside to create a concentric authoritarian organization with Turin at its centre.

a. Integrity

The Residence of Savoy comprise the most representative buildings constructed by Savoy dynasty from the 17th to the 19th century. The estates reflect the original radial plan include the “Command Center” and “Crown of Delights” prevailing doctrine of absolute monarchy. The buffer zones (also for Castle of Govone) were decided in 2010 which include parks, gardens and historic town centres, elements that still add to the original value of these Residences today.

b. Authenticity

Since 17th century, the aristocratic estates of the Royal House of Savoy have undergone many restorations procedures. These conservation and restoration works are based on stratigraphic research, archive studies, scientific analysis, and the analysis of structures. Repair and restoration work on the House of Savoy residences, conducted with the aim of opening them to the public, begun in the 1970s and is still underway.

c. Protection and Management Requirements

All the components of the Residences of Savoy family are protected by national, regional, and local regulations due course of Italian law. According to national regulations of the Codice dei Beni culturali e del Paesaggio¹⁴ these monuments are subject to specific conservation measures that affect single buildings and, in the case of Stupinigi, Rivoli, Govone, Racconigi, Pollenzo, Venaria, La Mandria and Agliè regional and EU landscape regulations protect the wider area where they are located.

Pursuant to national regulations, all restoration work is subject to prior approval by the competent Office of the Ministry of Cultural Heritage and Activities and Tourism. . On a local level, the Regional Territorial Plan (2009) covering the protection and enhancement of the Residences of the Royal House of Savoy and other urban planning rules identify further conservation regulations for palaces and villas located within their perimeter. Furthermore, the regional legislation on the conservation of natural areas and biodiversity includes a few of the areas located within the perimeter of the World Heritage property among those subject to special protection due to their natural features.

The properties are managed according to a Memorandum of Understanding signed by all stakeholders for the management plan and coordination of any work done on the complex. Responsibility for the management of each component is entrusted to the owner. The majority of the residences are owned by the State or local government authorities, and the Castle of Govone is one of them which belong to the local authorities.

¹⁴ The cultural and landscape heritage code

7.2 French Case Study (The Palace, Park and Plateau of Versailles)

In France, landscapes and sites are part of the nation's common heritage (art. L110-1 of the Environment Code). The oldest legislation text dealing with landscape (April 21, 1906) aims to ensure the protection of sites and natural monuments whose artistic, historical, scientific, legendary, or picturesque character is in the general interest. These sites are a national heritage. The regulations are the responsibility of the Ministry of Ecology. It is implemented locally by specialized agents, inspectors of DRIEE-IF¹⁵ sites and architects of French buildings (ABF) from the territorial architecture and heritage services under the authority of the Ministry of Culture. Public landscape policies are not just about protection. Thus, the law known as landscape of January 8, 1993 puts forward the development of all the types of landscapes that they are ordinary or remarkable. In addition, France ratified in 2007 the European Landscape Convention which commits it to integrate the landscape into all spatial planning policies (“Paysage Et Sites - DRIEE Ile-de-France”).

Due to the ecological fragmentation and sustainability agenda of countries, the general trend in landscape studies is more ecological approaches also in France. Emmanuelle Heaulmé (School of Architecture and Landscape, Bordeaux) distinguishes three main models of perception and action which, during the 20th century, ordered the heritage creation of landscapes. And the last one of these perceptions is the “cultural landscape paradigm” since the 1980s; attention to the landscape as a sensitive form of a dynamic interaction of the natural and the social.

7.2.1 The Principal Royal Residences of France

Over the centuries, the residences of French heads of state have been numerous. Sovereigns often had several residences and sometimes even several seats of power. The list which shows on the figure below considers the official residences. Likewise, many residences have experienced “power vacuums” in their existence, times when they were no longer royal or imperial residences before becoming so again.

¹⁵ Regional and Interdepartmental Directory of Environment and Energy

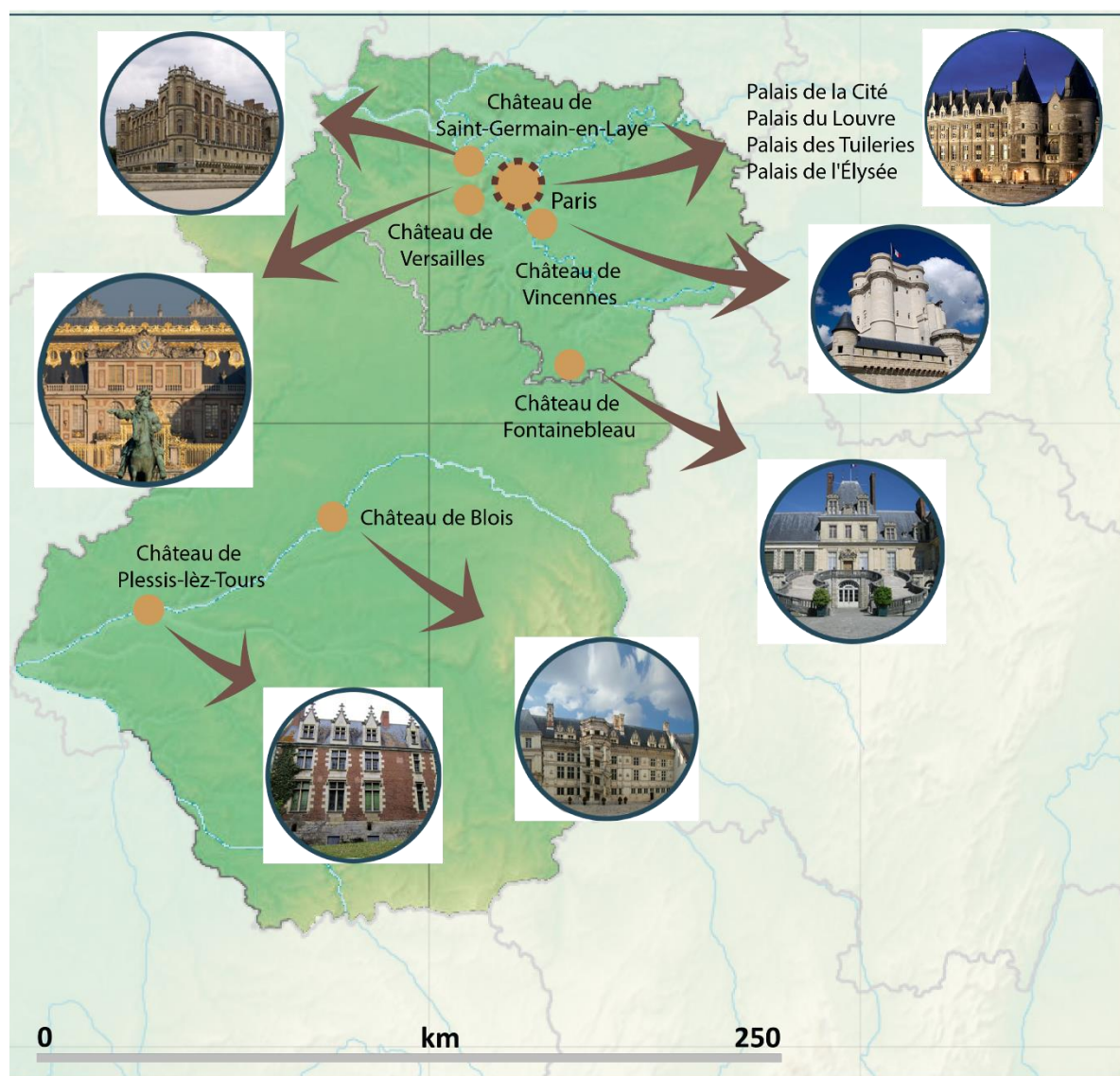


Fig 33: The principal royal residences of France

Source: Made by the author

The towns of Fontainebleau, Marly-le-Roi, Rambouillet, Saint-Denis, Saint-Germain-en-Laye, Versailles and Vincennes created in June 1997 the Network of royal towns of Île-de-France, in partnership with the Regional Tourism Committee, with which Dourdan and Étampes subsequently joined.

The region Île-de-France prepared a document named “Landscape units in the Île-de-France region; Methodology, User Guide for the database and Atlas” as the result of discussions initiated with a group of experts meeting in the context on heritage and landscape. In the document, the definition of landscape units is given as “The landscape units are defined as landscapes carried by spatial entities in which all the features of relief, hydrography, land use, forms of habitat and vegetation present a homogeneous aspect. They are distinguished from neighboring units by a difference in the presence, organization or form of these characters” (Luginbühl et al. 1994. p.47). According to this report, Île-de-France was divided into different landscape units which can be classified in 3 different size; small units, large units and the country units. Small units are fundamental to understand the richness of the territory, where

the large units are more regional level which corresponds to plateaus, valleys, agglomerations. Lastly the country units are the biggest units which are the traditional countries, overflowing the limits of the region, based on large structural platforms and / or large historical territories: Brie, Beauce, Vexin. It allows a regional reading of the different landscapes of Île-de-France.

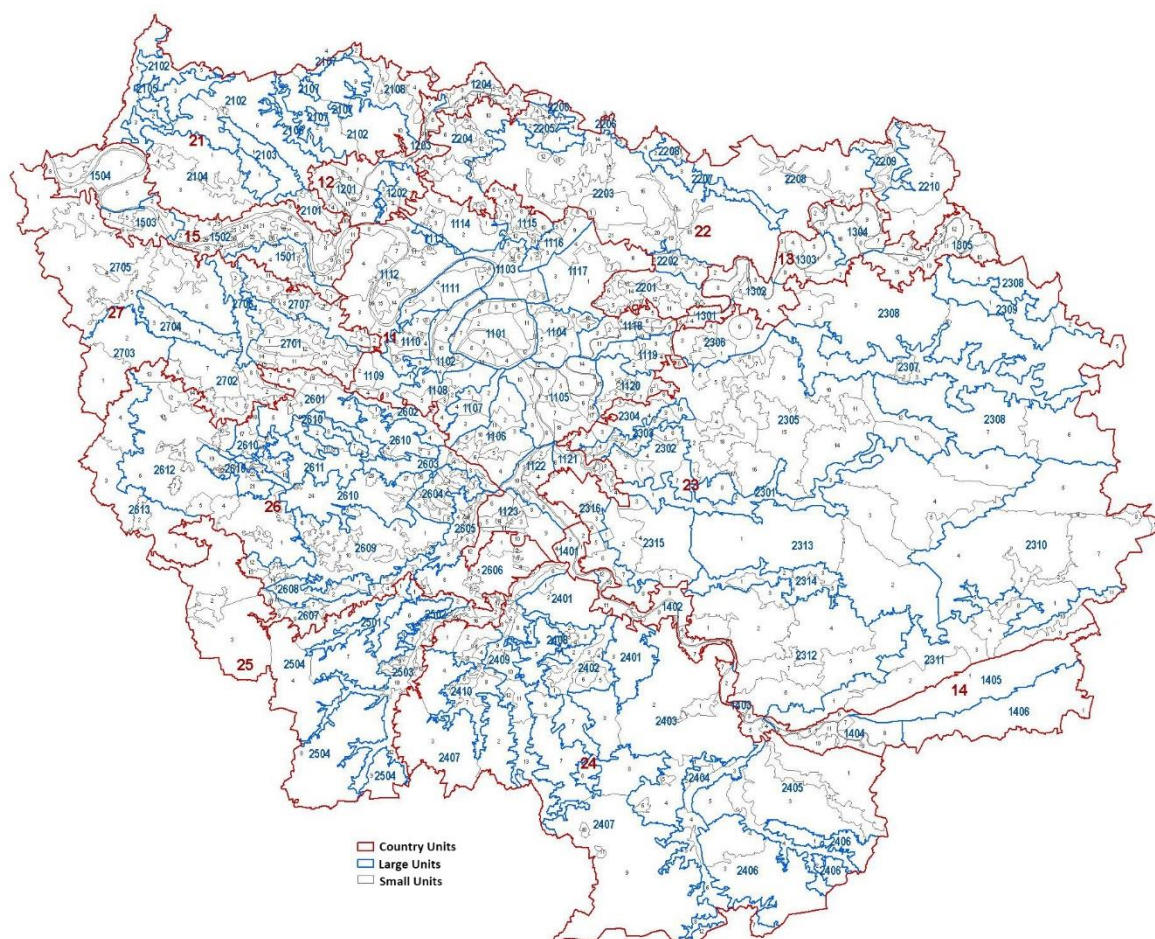


Fig 34: The boundaries between landscape units, places of stake

Source: Tricaud, Pierre-Marie. Unités Paysagères de La Région d'Île-de-France Méthodologie, Notice d'utilisation de La Base de Données et Atlas. 2010.

In the document, there is a part focusing on the definition of landscape itself and the criteria of the identification of landscapes. By the definition, landscapes are places of contact between spaces of different nature, which gives them their own character, sometimes different from the two spaces they separate. They can also correspond to linear spaces with particular characteristics (watercourse, communication route, etc.). The important point stands out here is that the borders which also give them their characteristics. Since, the landscape atlases are not a management tool, they free themselves from administrative boundaries. But they can recognize physical or symbolic limits which originate from administrative limits: these indeed generate landscape, since the differences in management that they entail can be reflected in the visible form of the territory. From this point of view, the network of royal residences within

the boundaries of Île-de-France is chosen as case study, specifically Versailles Palace which is located in Yvelines unit.

Since French Royal Residences do not form a network of residences as in the Italian or Spanish examples, or are not dealt with in the planning studies, the Versailles palace and gardens are considered alone in the further part of this work. However, considering the scale of the Palace of Versailles and its surroundings, it is seen that it is considerably larger than the single residences considered in Spanish and Italian examples.

7.2.2 Ile-de-France

There are two levels of protection established after a public inquiry by ministerial decree legislation in France; classified and registered (listed). In Ile de France region, classified sites represent 8% and the registered areas represent almost 13% of the regional area.

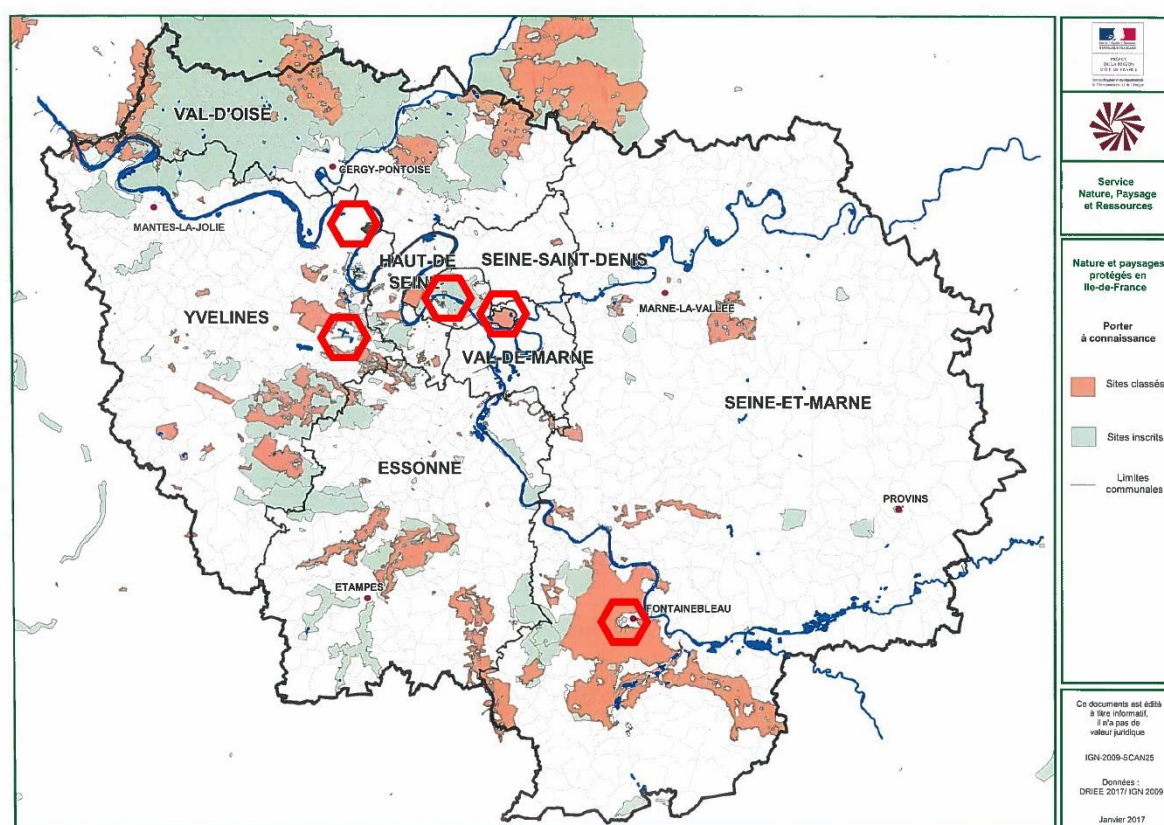


Fig 35: Map of sites registered and classified in Ile-de-France

Source: <http://www.driee.ile-de-france.developpement-durable.gouv.fr/cartographie-des-sites-inscrits-et-classes-r1454.html>

The region has one of the largest classified sites in France, the Fontainebleau forest, and the largest listed site in France, the French Vexin. This large protected area is explained both by the presence of an important remarkable landscape heritage (historic gardens, parks and chateaux, hunting forests, etc.) and by the need to preserve large natural areas facing the urbanization pressure whose relative scarcity makes it necessary to protect them (valleys, mounds, plains, etc.).

a. Definition of Classified Sites: It is the possibility of inventorying a place whose exceptional character justifies national level protection, by the power of law. It can be just as much isolated elements - rocks, waterfalls, fountains, springs, caves, trees, viewpoints - as heritage complexes such as castles and their parks - vast natural spaces such as massifs, gorges, valleys, capes, islands - or places attached to ancient events.

The classification does not entail expropriation. It establishes a servitude which consists in subjecting all work likely to modify the state or the aspect of the site to a special authorization of the State.

b. Definition of Listed (registered) Sites: Registration is proposed for sites that are less sensitive but that are of sufficient interest to be closely monitored. The works are subject to a declaration to the ABF (by the Architect of French Buildings (ABF) of the Departmental Service of Architecture and Heritage (SDAP)).

c. Interactive Map of Ile-de-France There are online interactive maps on the website of DRIEE (Ile-de-France) which are separated by their themes;

- Nature, landscapes, resources
- Water, aquatic environments, and subsoil
- Risks and nuisances
- Energy, climate
- Sustainable development

These maps were done for sustainable development and environmental assessment which also includes the heritage assets. But as their names signify, the main purpose of these assessments is to inventory natural assets mostly. They show similarities with the interactive Landscape Character Assessment¹⁶ of England which is a detailed work on landscape elements. Among these maps, the one named “*Paysages, Nature et Biodiversité*”¹⁷, as below (Fig x), has a legend based on;

- natural, agricultural and forestry protection areas
- ecological continuity and coherence scheme
- national geological heritage inventory
- ecological flora and fauna types

But apart from natural assets, the map also includes;

- UNESCO World Heritage site (Versailles)
- Remarkable Heritage Sites
- Classified & Listed sites which are all embraced by the study area Landscape Unit 10.

¹⁶ Landscape character assessment (LCA) is the process of identifying and describing variation in character of the landscape. LCA documents identify and explain the unique combination of elements and features that make landscapes distinctive by mapping and describing character types and areas.

¹⁷ Nature, landscapes, biodiversity

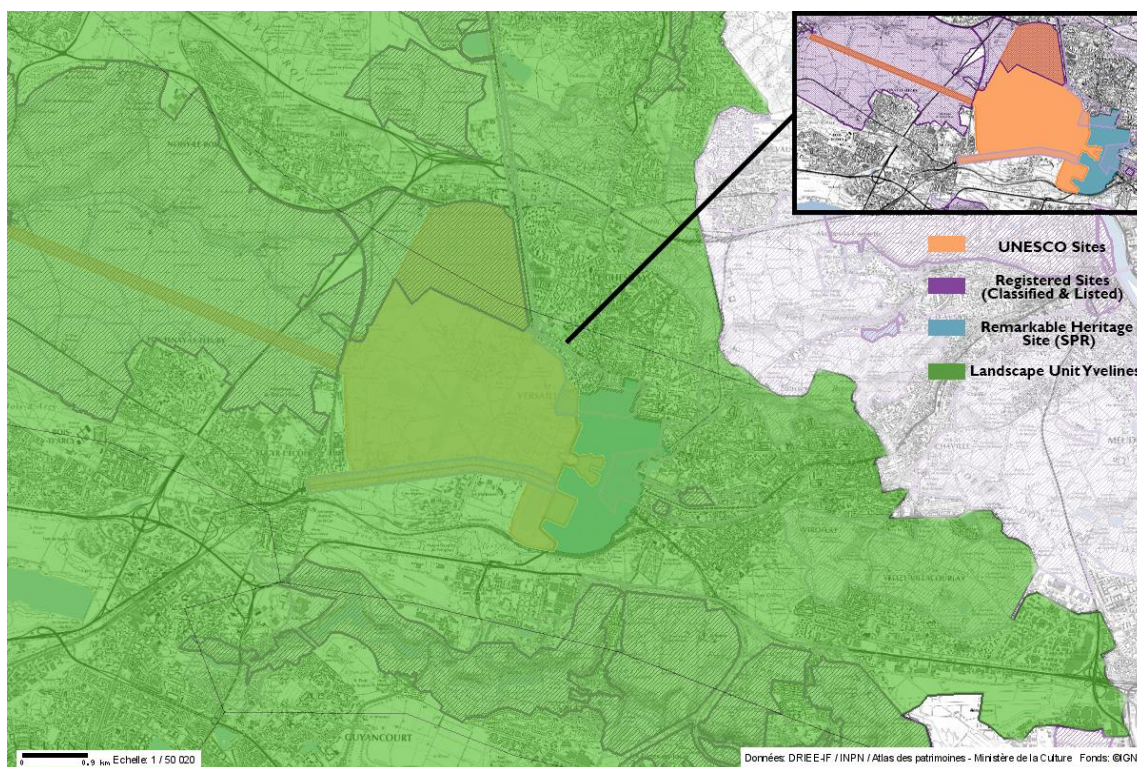


Fig 36: Thematic & Interactive map of Nature, landscapes, biodiversity and geodiversity

Source: Made by the author

The landscape units shown on the map are;

Landscape Unit of Yvelines: Le Pays de Gally & Le pays de Cruye

Registered sites: Royal routes of Versailles & Old district of Versailles

UNESCO World Heritage Surface Area: Versailles

Remarkable Heritage Site: Versailles (Sites patrimoniaux remarquables - SPR)¹⁸

7.2.3 Landscape Atlas, ELC

A landscape atlas makes it possible to identify and qualify landscapes. The European Landscape Convention invites European countries to:

- identify its own landscapes, throughout its territory;
- analyze their characteristics as well as the dynamics and pressures that modify them;
- follow its transformations;
- qualify the landscapes identified considering the particular values attributed to them by the actors and populations concerned.

¹⁸ **Sites Patrimoniaux Remarquables:** The remarkable heritage sites were created by law n ° 2016-925 of July 7, 2016. It is a city, a village, or a district whose conservation, restoration, rehabilitation, or enhancement presents, from an architectural, archaeological, artistic or landscape point of view, a public interest. The delimitation of a remarkable heritage site (SPR) must justify its architectural, archaeological, artistic or landscape interest. (Ministère de la Culture)

France, to implement these principles, encourages regions and departments to set up a systematic inventory of landscapes, through landscape atlases. This approach is coordinated by DRIEE and the atlases are produced by landscape design offices. The following points should be included in the atlases:

- Identification of landscape units;
- Identification of cultural representations of the landscape (painting, literature, postcards, etc.);
- Assessment of the dynamics and challenges of the landscape.

The atlases list and map landscape units, portions of territory offering a homogeneous landscape on the scale studied. These units are studied one by one by detailing the geomorphological, visual, ecological, cultural aspects.¹⁹

7.2.3.1 Landscape Atlas of Yvelines

The landscape atlas of Yvelines is an essential document for all spatial planning professionals, for taking landscape issues into account in their projects. It divides the department into 23 landscape units, each precisely described and analyzed, using nearly 1,000 photos, maps, diagrams, graphics, films.

By the new landscape atlas, the main idea was deepening and widening of the contents. It is also easy to read and understand, so it is very educational for anyone interested in the geography and the composition of landscapes in the Yvelines, of their link with nature and men.

The production of this new atlas of landscapes in Yvelines is a joint order from the State (departmental management of the Yvelines territories and regional and interdepartmental management of the environment and energy from Île-de-France) and the Yvelines Departmental Council, in partnership with the Yvelines Architecture, Urban Planning and Environment Council (CAUE). Also interviews, sociological testimonies of the feelings of the inhabitants, elected officials and specialists were produced by the Folléa-Gautier Agency and put into images by the CAUE des Yvelines for this atlas.

Accessibility of the atlas is conducted by a website which is also printable in whole or in part in PDF format. This new internet format atlas is easily updateable. The mapping is done using GIS, and the photos are georeferenced. The Atlas is thus conceived as a living tool, adapted to the very nature of the landscapes, evolving.

¹⁹ *The Yvelines landscape atlas, the first atlas produced in France, was published by CAUE 78 in 1992. It was updated and published online in 2014.



NATURE AND CULTURAL HERITAGE LANDSCAPE

Protection

- Wooded ridge and hillside
- Public forest, landscape, ecological enhancement
- Breathing space or urban break to protect
- Major historic trace (Perspective Axe...)
- Built heritage to preserve (château, park...)

Creation

- Other forests, management valuation
- Waterfront to enhance (Agricultural Plateau)
- Major historic trace to preserve & enhance
- Built heritage to preserve & enhance (château, park...)

Requalification

- Major opening or viewpoint to recover

Other Elements

- Large landscaped boundary
- Landscape unit boundary
- OIN (Operation of National Interest)

INHABITED LANDSCAPES

Protection

- Entry of the qualified village or town
- Historical town, village or district
- Qualified built site
- Border of qualified urban

Creation

- Entry of towns to be enhanced
- Town, village, district to be enhanced
- Built site to enhance
- Urban border to develop or enhance

Requalification

- Entry/crossing of degraded city
- Urban renewal sector (ANRU)
- Urban hillside / ridge, sensitive in the landscape
- Aggressive urban front (edge to be created)

MOBILITY LANDSCAPES

Protection

- Landscape Routes (Picturesque paths opening to a bigger landscapes)
- Tree lines routes (outside urban areas)

Creation

- Infrastructure Project
- LGV (Ligne à grande vitesse) speed train
- Road sequence or other route to enhance

AGRICULTURE LANDSCAPES

Protection

- Remarkable agricultural landscape (well perceptible & rich in structures and elements of landscapes)
- Agricultural landscape of field crops rich in structures and landscape elements
- Qualified agricultural building complex to preserve

Creation

- Qualified agricultural landscape (enrichment of landscape elements)
- Agricultural landscape of field crops to enhance
- Qualified agricultural building complex to enhance

Requalification

- Weakened agriculture landscape to reinforce (plateau, plain...)
- Degraded agricultural building complex to requalify

Fig 37: The landscape Challenges map 2014

Source: https://www.atlas-paysages-yvelines.fr/IMG/pdf/carte_enjeux-legende.pdf & Edited by the author

a. Organisation of the Atlas The atlas has 3 main parts as “landscape units, the natural and human foundations of landscapes, the challenges map. Besides, there are additional parts including 8 major landscape values of Yvelines, a search engine to facilitate access to precisely researched data and a dictionary to explain technical terms.

The main part is the landscape units which is the most precise descriptive part of the Atlas. The identification of the units is a means of knowledge which makes it possible to reveal the diversity and characteristics of each units. The other part, the critical analyses developed do not aim to be exhaustive: they are intended to introduce to the debate, to build a shared critical view on the state of each landscape, to take the measure of concrete actions that could be carried out.

The basis(foundations) of landscapes is the part explains the origin of the diversity of landscapes in Yvelines in terms of their geographic, historical, and cultural dimensions which allows to understand in more depth the origins and specificities of the landscapes of the department.

7.2.3.2 Landscape Unit 10 - Versailles and the Castle

Among 23 landscape units, the Versailles castle and park were examined in the 10th unit and the Versailles Plain, which was used together with Versailles as a hunting lodge in of Louis XIII time, in the 11th unit. The working limits of this research paper have been determined as the 10th unit where only the castle and the park are found in order to be compatible with other examples. In practice, one of the goals of the landscaping charter including Versailles is that “Recompose the landscape coherence between the estate and the plain of Versailles”.

This area has an easily readable and still strong landscape and urban composition with immense perspectives organized from the castle. The sub landscape units under the Versailles title are;

- **The historic heart of the city of Versailles:** castle and Place d'Armes, three large trident-shaped avenues, Notre-Dame district, Saint-Louis district.
- **The districts of Versailles, Viroflay, Chesnay:** the Prés and the Hermitage districts in Versailles; districts of Glatigny, Chantiers, Porchefontaine, Montreuil, Petits-Bois still in Versailles, district of Butte de Picardie; central, Haras, Louvre and Marquette districts in Viroflay; Plateau Saint-Antoine district and recent Chesnay / Rocquencourt districts: Gouée, Parly 2, New France, Grand Chesnay, Domaine; Parc (Rocquencourt), Petit Beauregard (Celle-Saint-Cloud) and Petit Parc (Le Chesnay) districts reclaimed from the hillside and the Marly forest.
- **The domain of Versailles and its parks:** flowerbeds, small park and groves, large park and large canal, park of the Grand Trianon, Marie-Antoinette domain, plain of the fountain with toads, orangery
- **The arboretum of Chèvreloup:** the southern margins of the Estate (south of the RD 10: pond of the Swiss, Camp des Matelots et des Mortemets...)



Fig 40: Comparison of powerful relationship between the park and the surrounding country sides of today and 18th century Carte de Cassini

Source: Géoportail, IGN

The atlas mentions the influence of the five royal alleys on the left (including that of Villepreux) in 18th century in terms of the strong relation between the park and surrounding areas.

- Perspective & Geographical Inscription

Perspective has a particularly key place in the design of this aristocratic estate. The first hunting castle, built by Louis XIII, was established on an isolated hill emerging from the plain of Ru de Gally in its eastern borders (today called "plain of Versailles", see landscape unit n° 11 in this Atlas). This elevation allows it to open in the axis of the plain, by the composition of its park around its main perspective highlighted by the Grand Canal, more than 3 km long.

On the wider scale, the two hillsides located on north (hillside of the Alluets-Marly plateau) and south (hillside of the Rambouillet plateau) are framing the plateau and emphasizing the perspective on an exceptional geographical scale which largely marks the Yvelines and part of the France: the *Armorican* direction. Below, there are the block diagrams from the atlas to show the context of Versailles among the hills and the main concept of the perspective;



Fig 41: View of the Palace of Versailles by Pierre Patel, 1668. The perspective of Versailles inscribed in the great landscape of the plain framed by its reliefs.

Source: <http://www.atlas-paysages-yvelines.fr>

Planning decisions;

- Recompose the landscape coherence between the estate and the plain of Versailles.
- Take inspiration from historical traces in a contemporary rereading with regard to current uses.
- Revalue the historical heritage of the plain of Versailles.

- Outstanding Urban Perspectives

Inside the wooded setting which serves as a backdrop for Versailles, Viroflay and Chesnay, the urbanism of historic Versailles was built up with proactive lines, today drawing wide and carefully composed perspectives, which make an essential contribution to the quality of its urban landscape.

The wide avenues of Saint-Cloud and Paris, exceed the footprints of the Champs-Élysées by 20 m with their 90 m width.



Fig 44: The Palace of Versailles as it is discovered at the end of the perspective of the avenue de Paris.

Source: 2014 Agence B. Folléa - C. Gautier paysagistes urbanistes / DRIEE-IF / Conseil Général des Yvelines

From an original trident, the Notre-Dame districts in the north and Saint-Louis in the south offer perspectives that highlight the wooded limits of the city, legible from the interior of the built fabrics, and contributing to its clear identity. They are also organized into real urban and mineral pieces, in theatrical compositions characteristic of Baroque Versailles.



Fig 45: A characteristic perspective of Baroque Versailles, with rue Hoche framing the Notre-Dame church in a theatrical staging of an “urban piece”

Source: 2014 Agence B. Folléa - C. Gautier paysagistes urbanistes / DRIEE-IF / Conseil Général des Yvelines

Planning Decisions:

- Establish a typology of urban and landscape perspectives on Versailles, Le Chesnay and Viroflay.

- A Privileged Living Environment



Fig 46: Le Potager du Roi, bordered by the Saint-Louis district which offers a remarkable urban silhouette.

Source: 2014 Agence B. Folléa - C. Gautier paysagistes urbanistes / DRIEE-IF / Conseil Général des Yvelines

Created by La Quintinie to supply Louis XIV's table with fruit and vegetables, it is carefully floored, compartmentalized and structured by trellised walls which facilitate the ripening of the fruits by capturing the heat. Today the headquarters of the National School of Landscape, its 9 ha are open to visitors. It is a historic case of urban agriculture that is still active, since it annually produces 50 tonnes of fruit and 20 tonnes of vegetables, some of which are sold at the welcome shop.

The very strong landscape, urban and architectural identity of Versailles, make it "the provincial city closest to Paris" instead of a suburb area near the capital. There is a scheme shows "The Green Fabric and Reservoirs of Biodiversity" which is complemented in the city by the preservation of some large public green areas of historic character: the Domaine de la Solitude, on 3.5ha; the Domaine de Montreuil (18th century), former residence of Madame Elisabeth, now owned by the General Council, on 8.9ha; the King's vegetable garden and its sixty different fruit forms, seat of the National School of Landscape; the adjoining Balbi Park. Finally, private gardens contribute to this green network in two opposite forms: either discreetly hidden in the hearts of islets in the Saint-Louis district, or the Prés district for example, or conversely around individual villas in the middle of their plots, for example in the 19th and early 20th century residential areas of Chesnay and Viroflay.

Planning Decisions;

- Reinforce the interdepartmental green network around Versailles / Le Chesnay / Viroflay.
- Facilitate continuity and connections between all of the great natural spaces.
- Refine the mesh of the green network between Versailles, Chesnay and Viroflay, by developing a network of gentle, landscaped circulation.

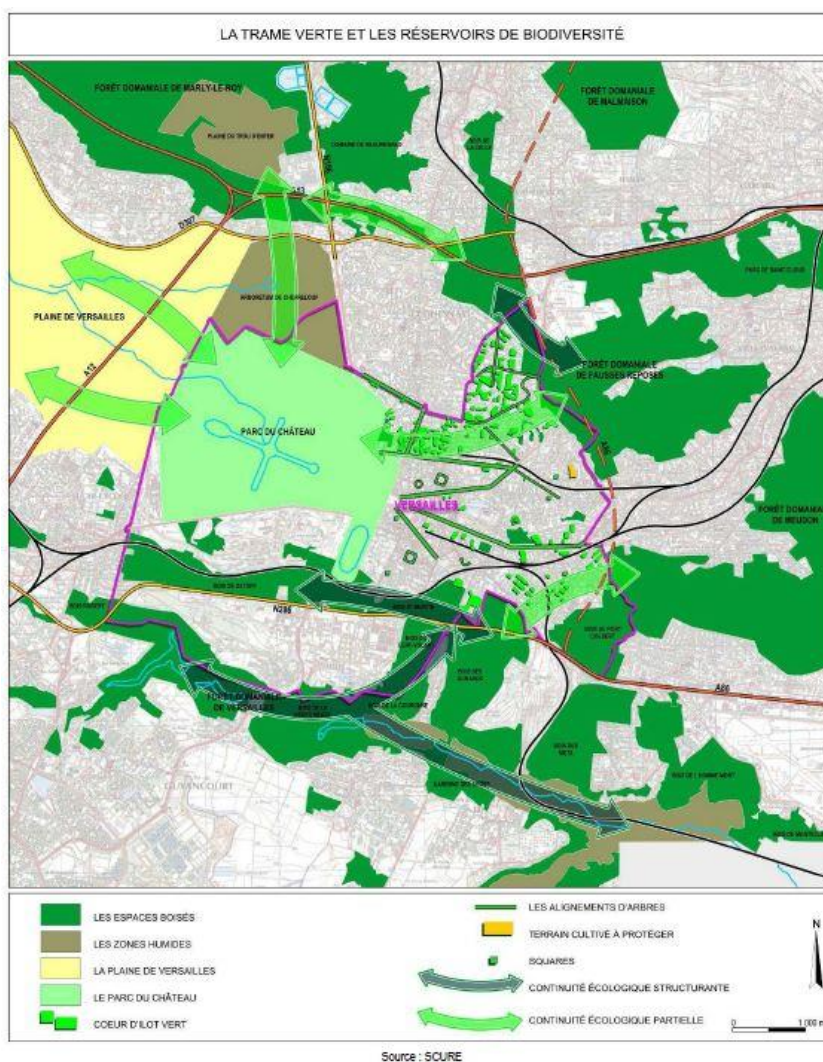


Fig 47: The green fabric of Versailles, as identified at the PLU in 2011

Source: SCURE

- Diversity and Urban, Architectural and Landscape Unity

The urban composition of Versailles / Le Chesnay / Viroflay are held in one unit by "regulating" lines and a pseudo "Versailles style" architecture made of dressed stone facing and so-called mansart roofs. However, it presents a diversity which reflects successive eras of urbanization and which clearly distinguishes the districts between them, well individualized. The urban landscape is made up, organized in successive districts with strong personalities;



Fig 48: Shaded facade of plane trees in the Versailles of the historic heart, rue des Réservoirs

Source: 2014 Agence B. Folléa - C. Gautier
paysagistes urbanistes / DRIEE-IF / Conseil
Général des Yvelines



Fig 49: The old center of Viroflay, rue Jean Rey with the Saint-Eustache church

Source: 2014 Agence B. Folléa - C. Gautier paysagistes urbanistes / DRIEE-IF / Conseil Général des Yvelines



Fig 50: House on the Saint-Antoine plateau (Chesnay), built at the end of the 19th - early 20th century.

Source: 2014 Agence B. Folléa - C. Gautier paysagistes urbanistes / DRIEE-IF / Conseil Général des Yvelines



Fig 51: New France residential area in Chesnay, built in the 1970s

Source: 2014 Agence B. Folléa - C. Gautier paysagistes urbanistes / DRIEE-IF / Conseil Général des Yvelines

This unity-diversity in the city is matched by the same unity-diversity in the park of the castle. Also, in the park, the regulatory routes of the main alleys and perspectives, combined with the water everywhere in ponds and fountains, make up the main part of the park in the same composition. But a great diversity of gardens and atmospheres are accommodated in this overall framework:

Planning Decisions;

- Reinforce polycentrism within Versailles / Le Chesnay / Viroflay.
- Perpetuate the landscape, urban and architectural characteristics of each district.

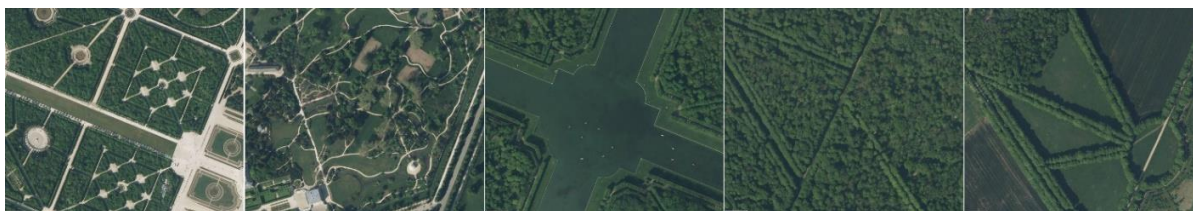


Fig 52: Different landscape compositions of the Versailles park on the same scale: regular layout of the Petit Parc, irregular layout of the Domaine de Marie-Antoinette with the Petit Trianon, aquatic geometry with the Grand Canal, forest with the Grand Parc, agricultural with the Etoile des Hahas

- Opportunities for Landscape Reconstruction and Urban Intensification

The Grand Park was sold in plots during the French Revolution and particularly it was reduced to its southern limits when RD10 (route de Saint-Cyr) was constructed.



Fig: 53: The changes on the south of the Palace through centuries in terms of landuses

Source: Géoportail, IGN

The outskirts of the RD 10 were won by large facilities which no longer enter either the composition and life of the city, or that of the park: INRA (National Research Institute Agronomic), the Military Camp for Sailors and Mortemets and the Pion Barracks sector. The transformation of part of the military land would make it possible to envisage a landscape and urban reconstruction of the sector.

Planning Decision;

- Recompose the urban approaches to the south of the estate from the historical and landscape framework.

7.2.3.3 Landscape Unit 11 - The plain of Versailles

The plain of Versailles offers an unusual large-scale landscape composition, both natural and cultural, thanks to the conjunction of the perspective of the Palace of Versailles with the axis of its syncline. Today it forms one of the most imposing agricultural penetrants in the Paris conurbation, just 20 minutes from Paris. Draw a landscape within the landscape, more intimate, more varied and richer in heritage. The historic villages, mainly located discreetly at the foot of the hills on the edge of the plain, have now become cities; in some places, they betray the enormous pressure of the Paris conurbation, contained in the provisions on the protection, conservation and management. Even if the historical traces of the installations linked to the Grand Parc des Chasses de Versailles have largely disappeared, agriculture remains very dynamic and a social demand linked to leisure and tourism emerges for this campaign, which today has become urban and peri-urban while preserving a prestigious name known all over the world.

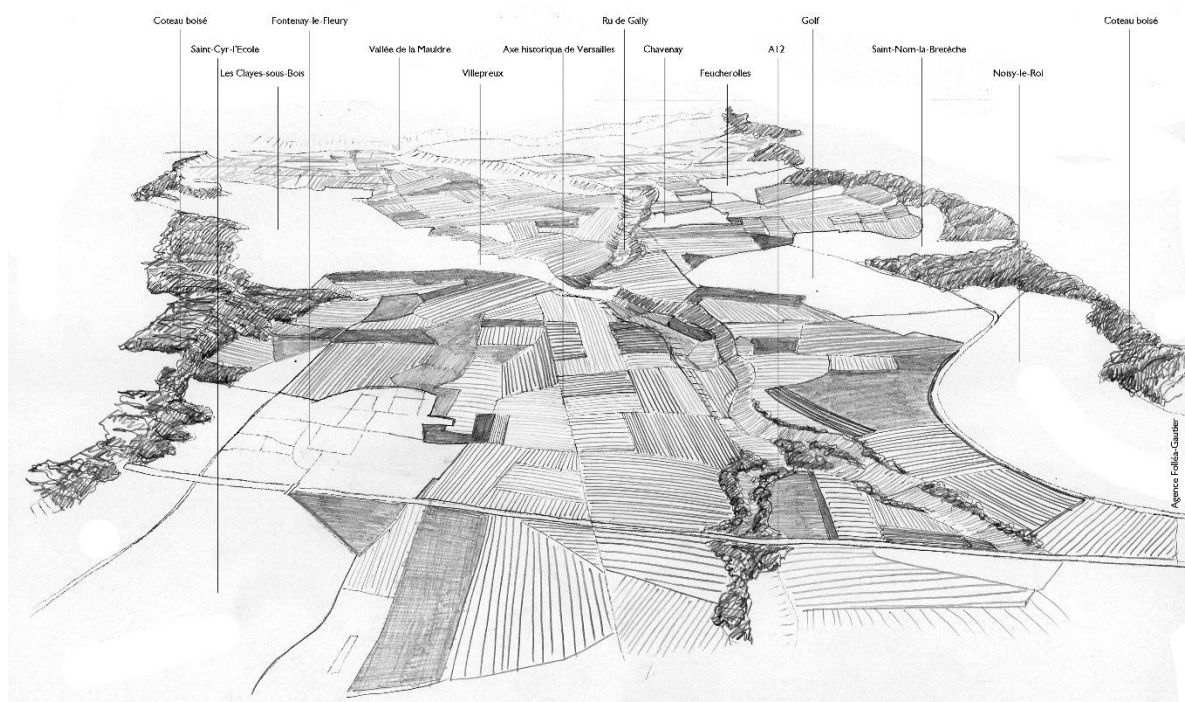


Fig 54: Aerial view of the plain of Versailles in continuity with the grand perspective of the castle.

Source: 2014 Agence B. Folléa - C. Gautier paysagistes urbanistes / DRIEE-IF / Conseil Général des Yvelines

The plain of Versailles marks the combination, grand by its scale, of a landscape organization that is both historical and geographic. It is indeed a natural extension of the perspective of the Palace of Versailles to the west, desired by Louis XIV. In his "Perspective view of the castle and the park of Versailles", painted in 1668, Pierre Patel synthesized this meeting of geography and history, perfectly orchestrated by Le Nôtre (Fig x -up).

The plain of Versailles is located in between the urbanization and agricultural landscapes and this proximity between town and agriculture generates urbanization pressure on the plain which resulted in the classification of part of the plain, that is 2,650 ha in 2000. To manage this pressure and create a sustainable development environment for both local producers and the heritage assets, DRIEE generated a document named "Guide for Heritage and Landscape Enhancement of the Classified Site of the Plaine De Versailles". This document has been examined in detail later in the report.

a. The Tenuous Traces of a Historic Landscape Linked to Versailles

The plain is not just a natural setting which extends the visual perspective of the castle and the park of Versailles, but it was a part of the old Grand Parc of hunting. Four types of development have helped shape its landscapes; they have largely disappeared today, but there are still tenuous and fragile traces:

- The perspectives of the aisles: five aisles extended across the plain, radiating from *l'Etoile Royale* located at the end of the Grand Canal. Of the Royal Alley of Villepreux, only a modest agricultural road remains; the others have disappeared or have become fragments of RD 7;
- The surrounding wall: closed the Grand Parc to contain the game; of the 40 km long, only three small sections remain, one of which is a retaining wall in the middle of the plowing, as well as a few doors;

- The sheds: these groves of trees, isolated in agricultural land, favored the presence of game; today they have almost disappeared;
- Royal farms and castles: they have also largely disappeared like the castles of Moulineaux, Val Joyeux and Pontaly, for example, but some elements have survived the centuries:
- The seven royal farms of Voluceau, Grand-Maisons, Val Joyeux, Trou Moreau, Gravier, Rennemoulin, Gally and two small later farms (Pontaly, Maison Blanche);
- The three castles, castles of Villepreux, Grand-Maisons and Ternay;
- Some traces of mills including the Rennemoulin mill and the Mézu mill;
- Two deeply altered pheasantries (de Villepreux and de Bailly / Fontenay).

Planning decisions;

- Recompose the landscape coherence between the domain and the plain of Versailles,
- Take inspiration from historical traces in a contemporary rereading with regard to current uses.
- Revalue the historical heritage of the plain of Versailles.
- Raise awareness on site of the history of the plain.
- Encourage the recovery of old buildings or sites (farms, mills, pheasantries) for contemporary agricultural, agritourism or cultural activities.

7.2.4 How Urban Planning Benefit from Landscape Atlas

As mentioned above, in 2000, DRIEE created a document named “Heritage and Landscaped Guide to The Classified Site” to manage the 2,600-ha extension of the plain for the benefit of palace and the park. The main idea is to sustain and protect the sense of infinity perspective of the palace. It also has the originality of classifying a site whose heritage has disappeared or is in danger (structuring elements of the large hunting park: surrounding wall, entrance doors, royal alleys, sheds, pheasantries, royal farms ...). With this guide, the idea of considering the valued and restored historic heritage of the site as the resource for the development of agritourism developed.

a. Heritage and Landscape Guide for Management from The Plain of Versailles Class Site – 2011

Basically, the approach of the guide is not to freeze the heritage and the landscape, but to measure the assets in order to act in full knowledge of the facts, to highlight the identity of the Plain de Versailles and to develop the region with the correct evaluation of the heritage assets. Because merely the protection of the area means that agricultural activities would stop, and this is not a possible scenario for local people of the territory.

A diagnosis, carried out from 2004 to 2006, took stock of the heritage and landscape riches which are the basis of the site's classification, as well as the evolutionary pressures which distort local wealth or which, on the contrary, try to preserve it.

b. Brief Summary of The Diagnosis: Indicators of Heritage Landscape

From the catalogue prepared for helping the usage of the atlas, the indicators which are briefly summarized are explained below (DRIIE).

1. The large built heritage structures are East-West oriented due to the geomorphology of the site

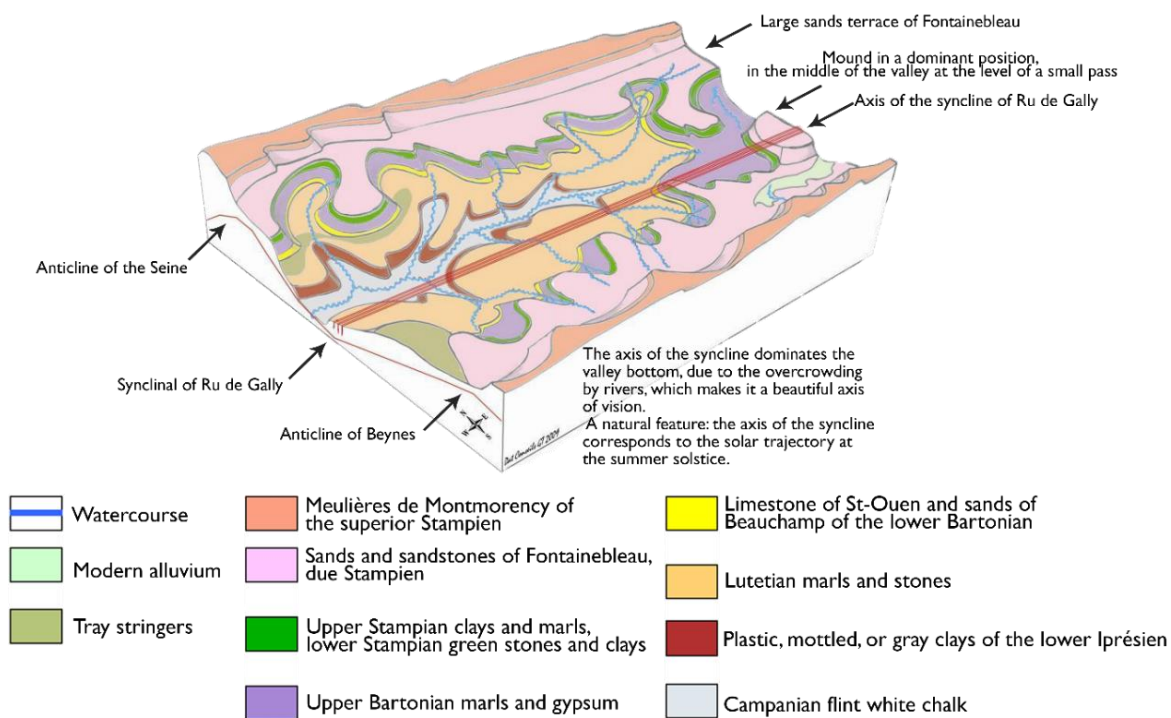


Fig 55: Plunging viewpoints towards the Plain from the slopes.

Source:

https://www.plainedeversailles.fr/upload/modules/media_manager/guide_patrimoniale.pdf



Fig 56: Limestones and millstone from the bedrock have been used in architecture.

Source:

https://www.plainedeversailles.fr/upload/modules/media_manager/guide_patrimoniale.pdf

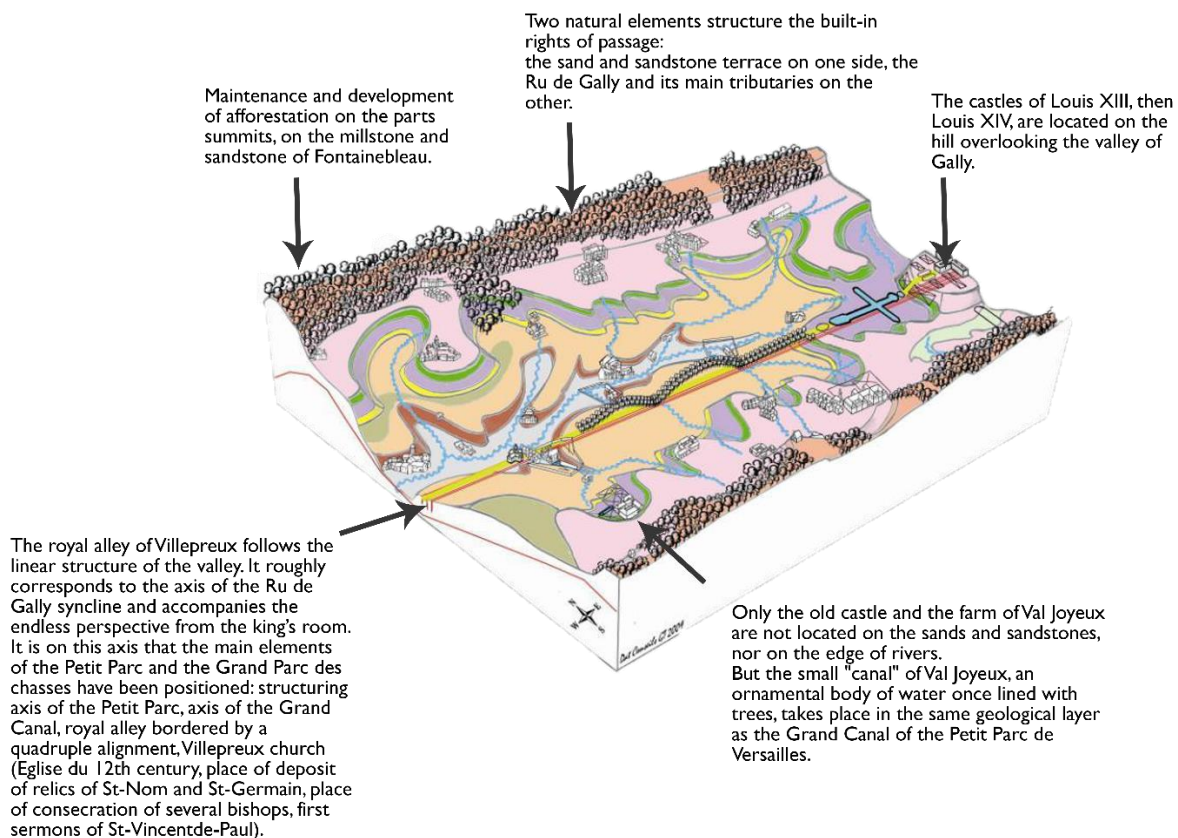


Fig 57: The bedrock gave rise to a wide variety of soils, more or less suitable for plowing: clay, marl, pebble and sandy soils

Source:

https://www.plainedeversailles.fr/upload/modules/media_manager/guide_patrimoniale.pdf

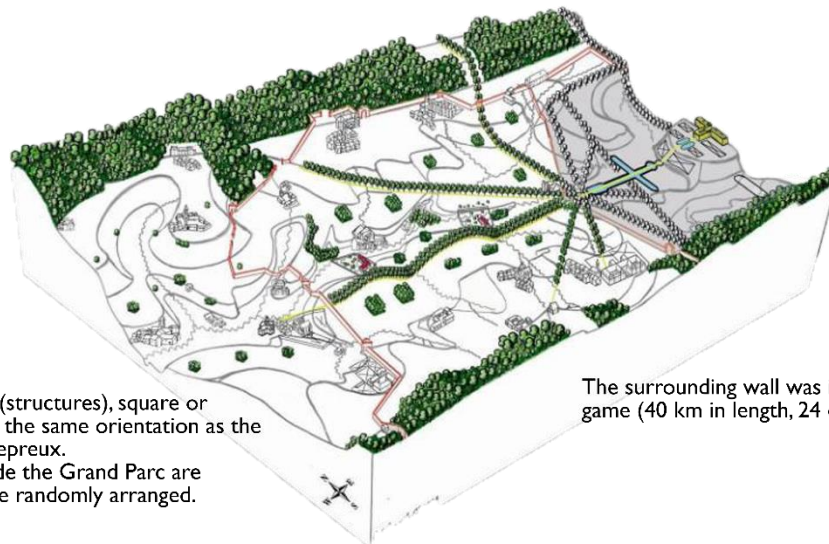
2. The humanization of spaces is modeled on the linear structure of the valley



3. The originality of Louis XIV was to set up a radiant landscape structure in an initially linear landscape structure & Paths, sheds and surrounding wall are the identity landscape of the Plain.

5 paths radiated from the royal star to the Plain. They are dedicated to hunting, a major leisure activity for the king and the court. It is customary to see there the "king's hand" on its territory:

- the royal alley of Villepreux (major alley 5km long, 90m wide, bordered by 4 rows of elms)
- the alleys of Bailly, Bretèche (also known as Noisy or La Tuilerie), Fontenay and St-Cyr (alleys half the width of the Villepreux alley, bordered by 2 alignments partially replaced by sheds in the 18th century century).



The large sheds (structures), square or rectangular, have the same orientation as the royal alley of Villepreux. The sheds outside the Grand Parc are smaller and more randomly arranged.

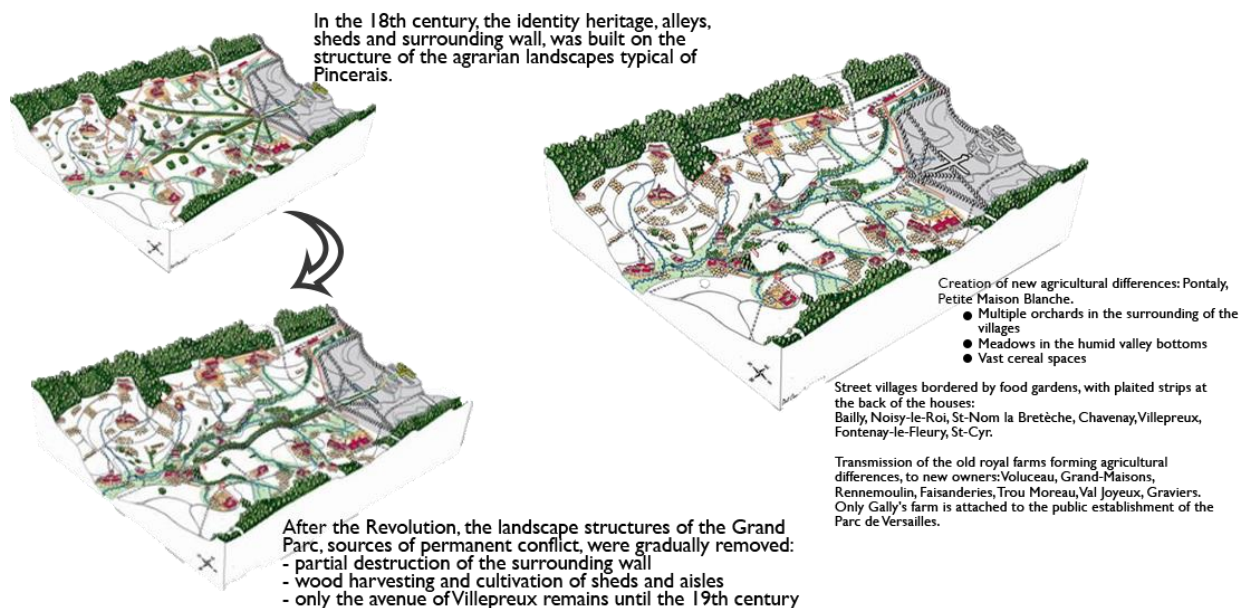
The surrounding wall was intended to contain game (40 km in length, 24 doors).

4. The specific landscape identity of the Plaine de Versailles is based on the typical rural landscapes of Pincerais, the only ones to survive after the disappearance of the identity heritage of the Plaine

At the beginning of the 20th century, the large landscape structures which bear the identity heritage of the Plain, alleys, sheds and surrounding wall, almost disappeared. The identity of the Plain is greatly diminished.

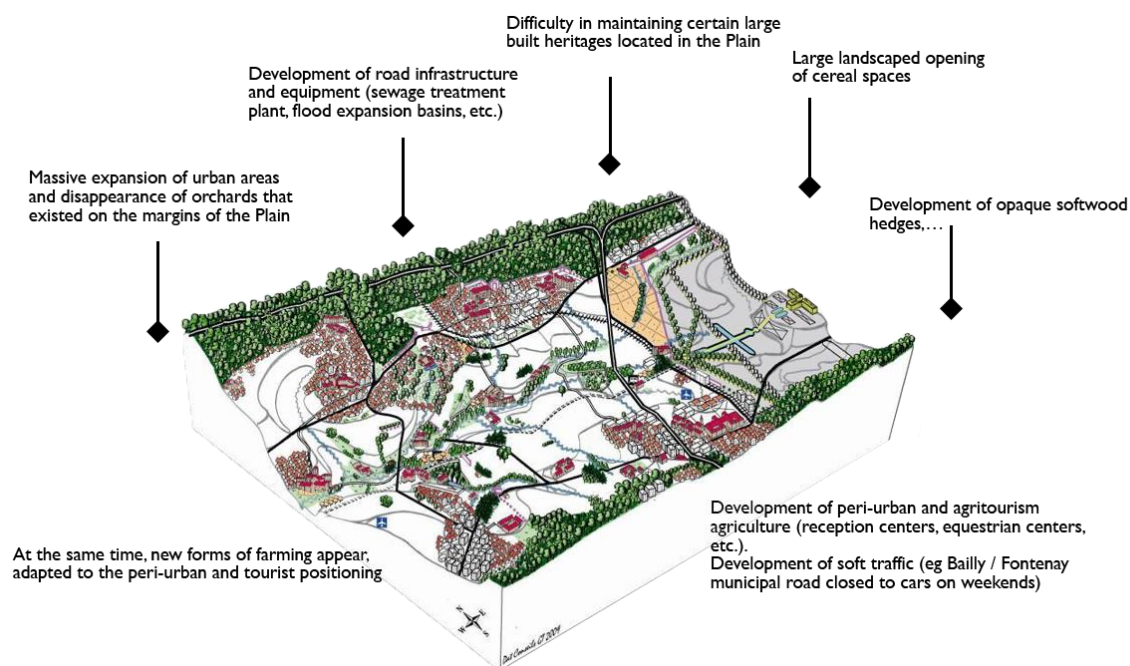
Only the elements of the typical rural landscape of Pincerais remain:

- a beautiful agricultural landscape, rich in beautiful heritage farms, picturesque villages bordered by gardens and orchards, crossed by rivers bordered by wet meadows and riparian forest;
- a territory which has shown great capacity for innovation for several centuries (breeding of merino sheep under Louis XV, model farms and dairies, and more recently educational agricultural activities, horticultural production in direct picking since the 1950s).



5. Urban, road and infrastructure pressures, agricultural intensification, appeared from the 1950s

From the 1950s a new phase of transformation of landscape structures appeared, which led to a circular agricultural space, almost landlocked in urban areas.



7.2.5 Heritage Landscap Indicators Scheme From “Atlas des Paysages des Yvelines”

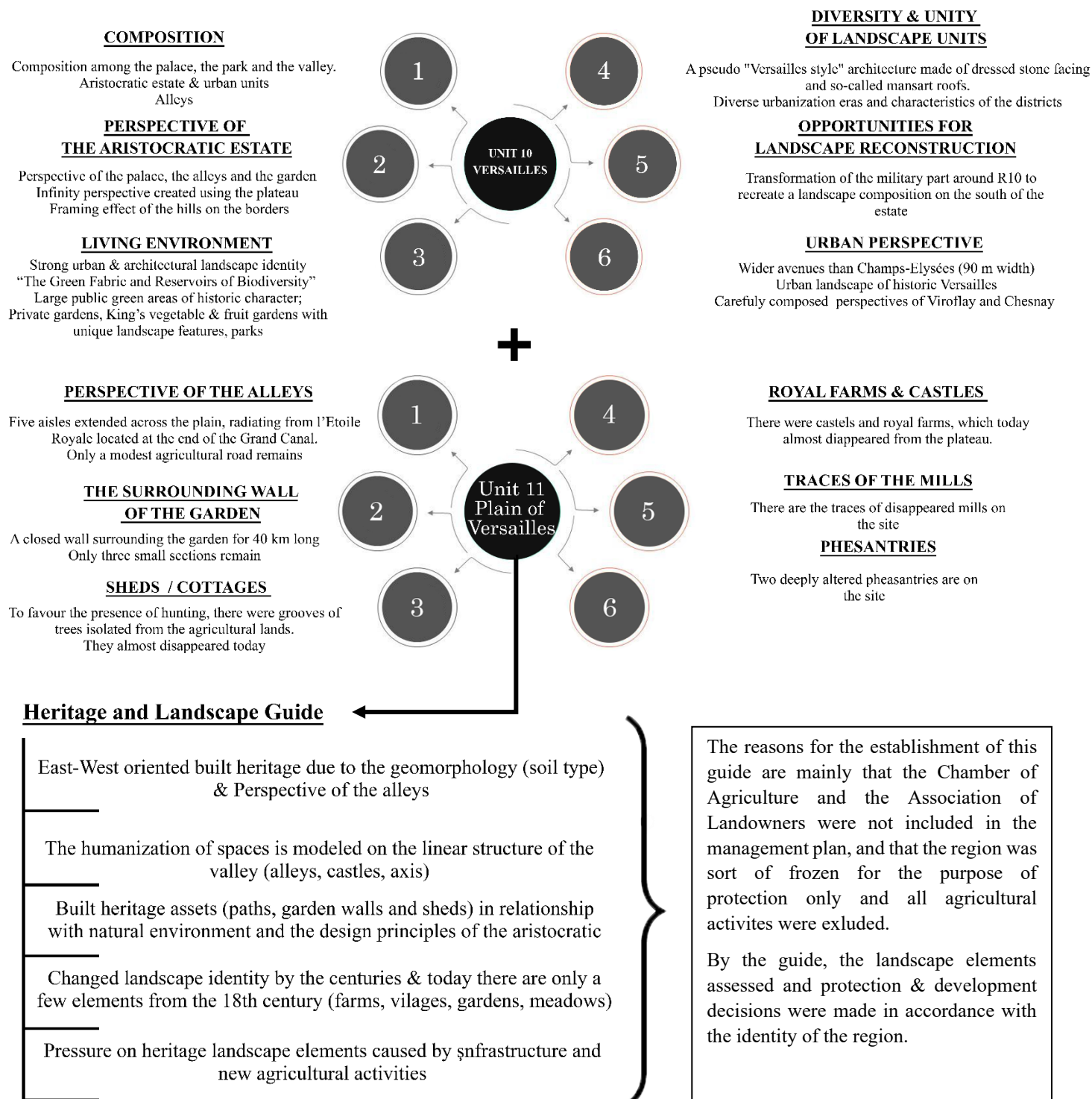


Fig 58: The summary of the indicators shown in the atlas of the Palace of Versailles and the Plateau of Versailles

Source: Made by the author

7.2.6 UNESCO Criteria and Management of the Palace and the Park

In 1979, Palace and Park of Versailles were registered on the UNESCO World Heritage List due to the unique architectural, historical features of the complex. The property is 1,070 ha itself, but the perimeter of the buffer zone is 9,467 ha.

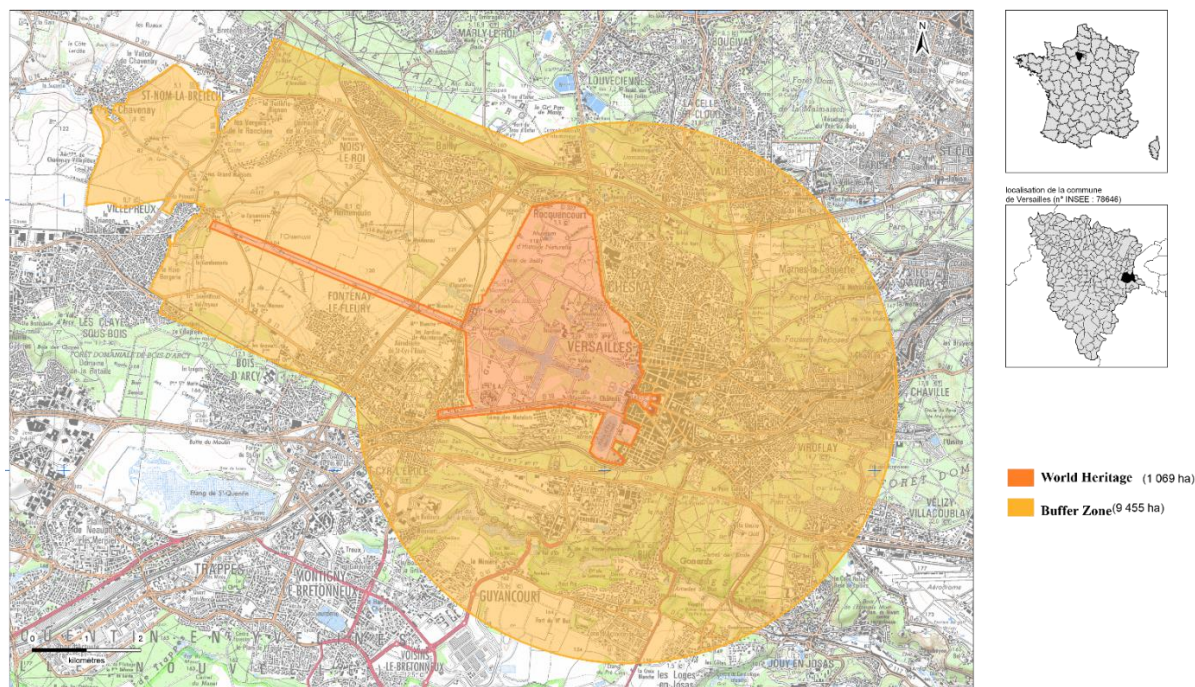


Fig 59: The buffer zone of the estate limits

Source: Unesco.org

There are 3 main criterion for inclusion of the Palace and the Park in the world heritage list;

Criterion I: The ensemble of the Palace and Park of Versailles constitutes a unique artistic realisation, by virtue not only of its size but also of its quality and originality.

Criterion II: Versailles exercised great influence throughout Europe from the end of the 17th century to the end of the 18th century. Wren incorporated reminiscences of Versailles into Hampton Court, Schlüter into Berlin, in designing the façades of the Palais Royal. “Little Versailles” have sprung up: Nymphenburg, Schleissheim, Karlsruhe, Würzburg, Potsdam, Stockholm, etc. Le Nôtre’s gardens, designed by the architect himself, or by his imitators are innumerable: from Windsor to Cassel, to the Granja, Sweden, Denmark and Russia.

Criterion VI: The absolute seat of power of the monarch, Versailles was the best formulated and best adapted crucible for French court life for a century and a half (Louis XIV perfected “etiquette”) and artistic creation in the domain of music, theatre and the decorative arts. Numerous scientific discoveries were presented there, encouraged by the kings, founders of royal academies. It was at Versailles that, on 6 October 1789, the people came to carry off Louis XVI and Marie-Antoinette, once again shifting the centre of power back to Paris.

a. Integrity

Despite that the Palace and the park lost their function with the French Revolution, the ensemble was conserved by the State and transformed into a museum at the beginning of the 19th century. Even if the furniture and the decorations were partly destroyed, the integrity of Versailles must however be considered as good. Besides, by endowing the domain to a public body in 1996, the transfer of buildings and land has enabled the partial restitution of the coherence of the Palace and Park of Versailles: the most important being the Grand Commun, Grande Écurie (Stables) and the Mortemets, the Midi Wing and the Place d'Armes.

b. Authenticity

Although the revolution and its consequences caused destruction at Versailles and by the transformation of the Palace into a museum brought new decorations and spaces, the authenticity of the Palace is preserved through the policy undertaken over many years since the 19th century.

c. Protection and management requirements

The palace and the Park are fully listed under Historic Monuments and there are several regulative bodies for the management and protection of the site. First of all conservation and restoration operations are done under the control of the State who ensures its funding. Since the creation of the public body, the work is programmed in the framework of **the master plan** which concerns the restoration of the buildings and the plans of the site besides several technical safety regulations. The protection plan surrounding the monument was especially enlarged in the case of Versailles to adapt the plan to buffer zone for the World Heritage property.

Apart from the Palace and the Park itself, the protection status of the "Plaine de Versailles" is also listed under the Environment Code.

7.3 Spanish Case Study (Reales Sitios - Aranjuez)

The Royal Residences of Spain are generally palaces and mansions located in the capital of the country and in other cities, which the Royal House has obtained or had built throughout its history and they are mostly open to public use today. According to the National Heritage website, there are seven Royal Palaces that the public body places at the service of citizens. Other palaces (such as La Zarzuela, the habitual residence of the Kings), Royal Residences (such as La Mareta, Lanzarote) and Royal Monasteries and Convents (such as El Escorial, Yuste or Las Huelgas) are out of this relationship (Euro Press). These palaces are Royal Palace of Madrid which is the official residence of the royal family currently, Royal Palace of Aranjuez which is another official residence of Royal family of Spain, Palacio Real De La Granja De San Ildefonso, Royal Palace of El Pardo, Royal Palace of Riofrío, Royal Palace of La Almudaina and High Room Of The Real Alcázares of Seville as can be seen from the figure below.



Fig 60: The Royal Residences of Royal House in Spain

Source: Made by the author

The main Royal Palace which is the Palace of Madrid, is the largest palace in Europe with an area of 135,000 square meters and a total of 3,418 rooms. The construction was done according to the design of Filippo Juvara.

7.3.1 The Territorial Management of Madrid and Royal Residences During 18th Century

To understand the network of Royal Residences of Spain, the decisions of Carlos III the King of Spain²⁰ (1759–1788) should be examined, especially his theme in the territory of Madrid. This system of the royal residences and the transformation of Madrid have a logic behind similar to what is called territorial design today. Due to King and the court were moving each season among these residences, coordination, and mobility through infrastructures, with the organization of the distribution and operation of activities, were starting points of the design of the territory. The biggest difference between the approach of today and the approach of 18th century is that the main motivation today is the economical activities which makes the 18th century condition and location of the territorial arrangements result from the prior

²⁰ Charles III of Spain ruled Spain (1759–1788), after ruling Naples as Charles of Bourbon (1734–1759) and Sicily, where he was known simply as Charles III, (1735–1759). Historian Stanley Payne writes that Charles III "was probably the most successful European ruler of his generation. He had provided firm, consistent, intelligent leadership. He had chosen capable ministers....[his] personal life had won the respect of the people." (Stanley G. Payne, *History of Spain and Portugal* (1973) 2:371)

programming of activities promoting economic development. But this does not mean that in 18th century there was no economical concern during the territorial planning of Madrid and the royal residences. For example the canals as Manzanares and Guadarrama which were 'unsuccesful' projects also according to the reports of French engineer Charles Lemaire in 1785. The principle idea of this canals were increasing the flow of the channel and make its navigation feasible. An additional function of the Guadarrama canal was its navigation to be able to transport stone from the Sierra Lasta the numerous 76outh that were being built in the time of Carlos III in Madrid and Aranjuez. The channel later joined with the Jarama until it reached Aranjuez (Madrid) and the Tagus River . It then went to Tembleque (Toledo) and, without leaving Toledo province , connected with a new dam, which had been planned to be built on the Riansares channel , near Corral de Almaguer . According to the planned plan, it was necessary 76outh7676s river to provide all of its flow, to facilitate the rise of the Tagus depression. But the work was paralyzed when the monarch died. The excavation and canal boxes can still be seen on the ground for some twenty kilometers, from near Torrelodones to near Las Rozas. A similar interventions to the water sources are seen also in Borgo Cornalese (Part B)²¹ in order to agricultural purposes.

If another example should be given to elements that belongs to the network of royal residences, the road network Project of Carlos III can be examined. At the beginn,ng of the reign, the decision to undertake the great network of radial national highways, in accordance with Ward's²² proposal, had not yet been taken. Bernard Warn prepared a detailed document which is called "Economical Project – *Proyecto económico*"²³ (in which several measures are proposed, aimed at promoting the interests of Spain with the means and funds necessary for its planning).

Within the reign of Carlos III which is the greatest period of construction intensity, corresponds to the management of the Secretary of State Marqués de la Ensenada, who left a memorial full of interesting data to see the evolution of the construction of these national roads around Madrid, where they all started from. There are also certain road guides, itineraries and various maps that despite their inaccuracies (and even contradictions), allow us to roughly follow this evolution and the territorial organisation of Madrid and surrounding with the radial network of current national highways.

Aranjuez is a city located in center of Spain which is a part of the Community of Madrid. The urban area lies on the left bank of the river Tagus which passes from Spain and Portugal, and empties into the Atlantic Ocean near Lisbon. During the reign of Philip II in 1560, Aranjuez became one of the Royal Estates of the Crown of Spain. Until 1752, only the royalty and nobility were allowed to dwell in the town. And in 2001, The Cultural Landscape of Aranjuez was declared a World Heritage Site by Unesco.

The Aranjuez Cultural Landscape is a particular and a singular entity of complex and historic relationships between landscape and human activity, the sinuous watercourses of the rivers and the geometrical design of the landscape, urban and rural life, and between the forest wildlife and the refined architecture. The surrounding buffer zone is located within the municipal boundaries of Aranjuez (16,604.56 ha).

²¹ Part B of this research paper – The Metamorphosis of Po River

²² Bernardo Ward (Ireland, ¿? - 1776) was an economist of Irish nationalized Spanish origin, in the service of Fernando VI (The father of Carlos III) (In 1779 he had already died, because in the prologue, probably written by Campomanes, of his Economic Project ... , it is cited as a posthumous work.).

²³ Ward, Bernardo. Proyecto Económico: En Que Se Proponen Varias Providencias, Dirigidas a Promover Los Intereses de España Con Los Medios y Fondos Necesarios Para Su Planificación. Google Books, por D. Joachin Ibarra, 1779, books.google.it/books/about/Proyecto_econ%C3%B3mico.html?id=S4wEmgG-ys4C&redir_esc=y. Accessed 20 Oct. 2020.

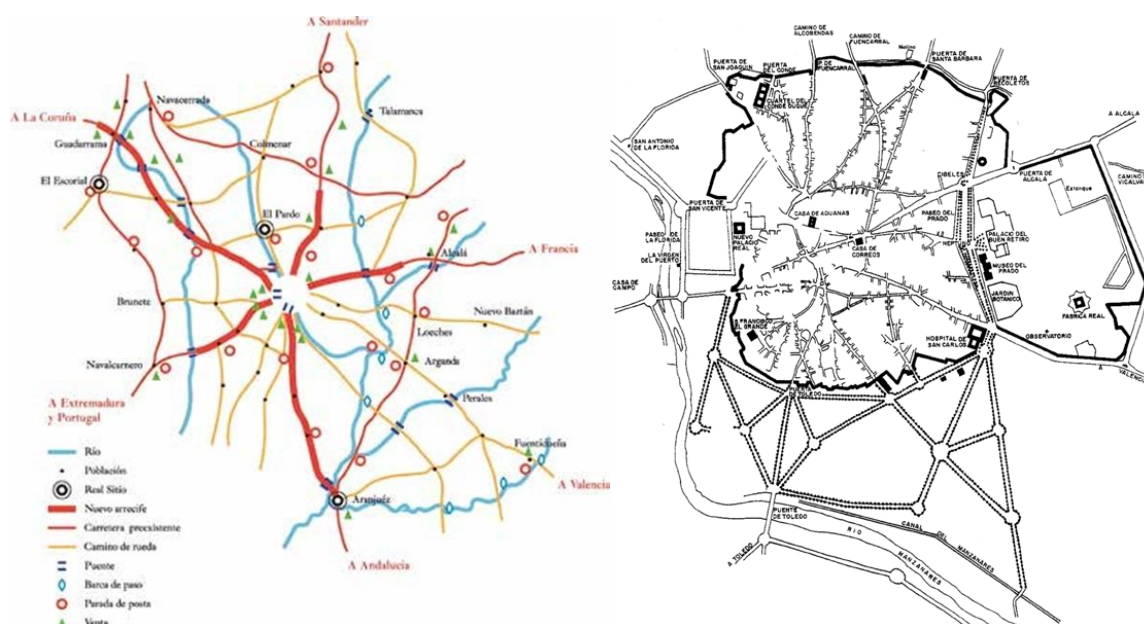


Fig 61: Approximate interpretation of the situation of the territory of Madrid at the end of the reign of Carlos III (A) and general layout of the urbanization of the territory between the 77th of the city and the river (B) from Fernando de Terán.

Source: Patrimonio Nacional. UNA CORTE PARA EL REY Carlos III y Los Sitios Reales. 2017.

In terms of agriuctural infrastructure of the territory, the most important interventions during the reign of Carlos III, are the Long Bridge of Aranjuez and the Bridge of Viveros, both on the Jarama. In this period, a large number of minor road repair and improvement works were undertaken, as well as the expansion of irrigation ditches, some with works (and instructions for use and maintenance) as important as those of the Jarama.

On the other hand, as seen from the figures above (B), there was a great architectural and urban development in the capital, and notably in some of its edges and adjacent spaces, which deserve special consideration for their own value. Madrid continued to be a city closed by the fence of Felipe IV and beyond it, the incorporation of an adjacent land was proposed through its geometric arrangement. But not in the whole environment. As the contemporary cartography of the city shows, it remains 'reckless' to what surrounds it to the north and east. It is fundamentally the space that separates the city from the river in the South and in the West, which it is going to incorporate now unlikely to 18th century. And, although very minority, some unique buildings of a new type appeared there: factories. Therefore, the true and forceful contribution of that reign to the transformation of the territory, beyond those architectural-urban conditioning of both the city and the Royal Sites, must be found in the introduction of the great radial road network that has not only configured the territory of Madrid but also the entire country.

7.3.2 Five towns for a cosmopolitan court '*Cinco poblaciones para una corte cosmopolita*'

To understand the spatial design and historical context of Madrid, the Royal Residences around the city and the King Carlos III must be examined well. Madrid, as "court of the Catholic king" is not only the city what constitutes the theater of majesty but, with all the residences, is a space as the product of a cumulative historical process since the middle ages in which Felipe II and of course Carlos III are decisive.

The relationship among the Spanish Royal Residences was almost opposite of the French Residences. In French sovereignty, Paris had an indisputable weight and power of its own. The official residence was in Versailles except the court only traveled for the autumn hunting season in Fontainebleau every year and Compiègne or for every short stays in Marly which is a satellite of Versailles. But in Spanish example, the court was staying in Madrid for only about 8 weeks of a year (Seco Serrano 1988: 425). The reason of importance of Madrid was because of its character as an official residence. The main paradox of Madrid and surrounding is that the king lived in his capital for such a short time while spending so much expense in order to the territory and urban centers. For the life of the court and the family of Carlos III, “*de monte en monte*” which means ‘hill to hill’ was used because that they were spending the most time of the year in residences surrounding Madrid which were mostly on hills (Patrimonio Nacional, 2017).

The towns where the royal residences are located around Madrid were populated only by decent population or in other word, by noble families. In short, the court had its seat not in just one place but in five different towns through the year more or less large or complex, but all in accordance with their adaptation to certain parameter of decency and aesthetic requirements. Therefore, Aranjuez, el Escorial or La Granja constituted reductions of what should be the capital of an enlightened sovereign, and even today the aspirations and realities of that urban ideal of the enlightened Spanish court can be glimpsed in the Sites, better than in Madrid, whose representative space of power was not reduced to the Villa, but extended to the whole of the territory that is studied here, with its four populations. These five pieces, consistent in their operation and image, formed the basic machinery for the representation of majesty and for the practical development of royal life. That’s why, studying them separately undermines their reality and reduces the correct perception of their entity and their meaning. The interest of the urban operation of Carlos III, on the scale of all that territory, lies precisely in the application of similar ideals and forms for the resolution of a functional question: how to house the court with dignity in these various sites throughout the year, so that not only the sovereign felt comfortable, but also his servants, who at each station were housed in a small capital.

The decent population of these five towns were actually the idea of Felipe II²⁴. He imposed also to preserve the forest in El Escorial with his hunting area. The policies also which Carlos III was applying were also following his great-grandfather Felipe II but because of the increase on days which the court and the noble family stays in these royal estates, as well as the abundance of servants motivated by the breadth of the royal family, forced him to expand the existing "trade houses" in El Pardo and Aranjuez, to build new stables and garages in both places, as well as the barracks of the Corps Guards in El Pardo and El Escorial. While, in Valsain he simply chose to create a new Site entirely in the same forest, just three kilometers from the old one: La Granja de San Ildefonso, where however he also reduced the building to a relative minimum of blocks to the direct servants. Thus, it would not be wrong to make a deduction that the spatial design of the royal sites of Spain are deeply related with the characteristics of the kings.

7.3.2.1 Aranjuez in the Royal Sites Context of Spain

The landscaping of Aranjuez through tree-lined streets constitutes one of the great monuments of Felipe II, and the Bourbons, very sensitive to its beauty, cultivated and increased it from Felipe V to Carlos IV. Although the avenues added to the 16th century complex during the first half of the 18th century have an eminently sumptuous and playful character (Patrimonio Nacional, 2017). During the time of Carlos III, Aranjuez was configured as a kind

²⁴ Philip II (Spanish: Felipe II; 21 May 1527 – 13 September 1598) was King of Spain (1556–1598), King of Portugal (1580–1598, as Philip I, Portuguese: Filipe I), King of Naples and Sicily (both from 1554), and jure uxoris King of England and Ireland (during his marriage to Queen Mary I from 1554 to 1558). He was also Duke of Milan. From 1555 he was also lord of the Seventeen Provinces of the Netherlands.

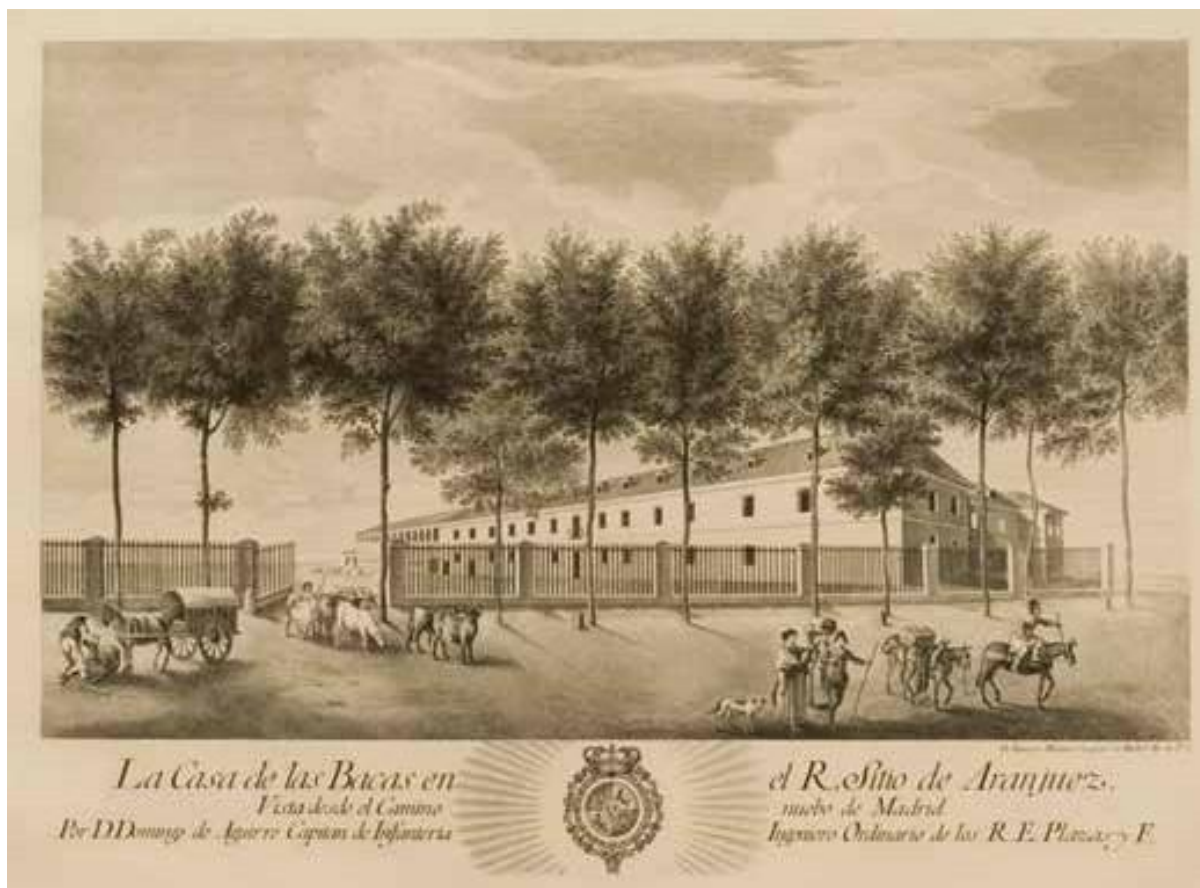


Fig 63: La Casa de vacas en Aranjuez. Domingo de Aguirre (dib.), Francisco Muntaner (grab.), 1775
Source: Patrimonio Nacional. UNA CORTE PARA EL REY Carlos III y Los Sitios Reales. 2017.

Three of the Aranjuez prints drawn, as seen below, in 1775 by Domingo de Aguirre form a vast frieze that covers more than one hundred and eighty degrees, as a half “panorama”, an invention that would not appear in England until fifteen years later. It was not by chance that they illustrate the entrance to the new town of the Real Site by the Puente de Barcas, with the Royal Palace and the garden on the right, the square and chapel of San Antonio in front the center of the place looming behind the House of Infants, and to the left the trident formed by the streets of the Infants, the Prince and the Queen which was the view that most eloquently summarized the magnificent result of the urban planning carried out in Aranjuez by Fernando VI and Carlos III.



Fig 64: Aranjuez from a balcony of the royal palace on the Parterre. Domingo de Aguirre (dib.), Fernando Selma (engra.), 1775. (detail)

Source: Patrimonio Nacional. UNA CORTE PARA EL REY Carlos III y Los Sitios Reales. 2017.

a. The urban planning of Aranjuez under Fernando VI

The father of Carlos III, Felipe V developed the Royal Site with a special care. Although, the consolidation of the courtly urbanism of Aranjuez is due to Carlos III, the merit of its

creation corresponds to his half-brother Fernando VI, who entrusted the layout of the town to the titular architect of the Site, Santiago Bonavia, in 1750. In this Project, drinking water pipeline and the trident was clearly designed.

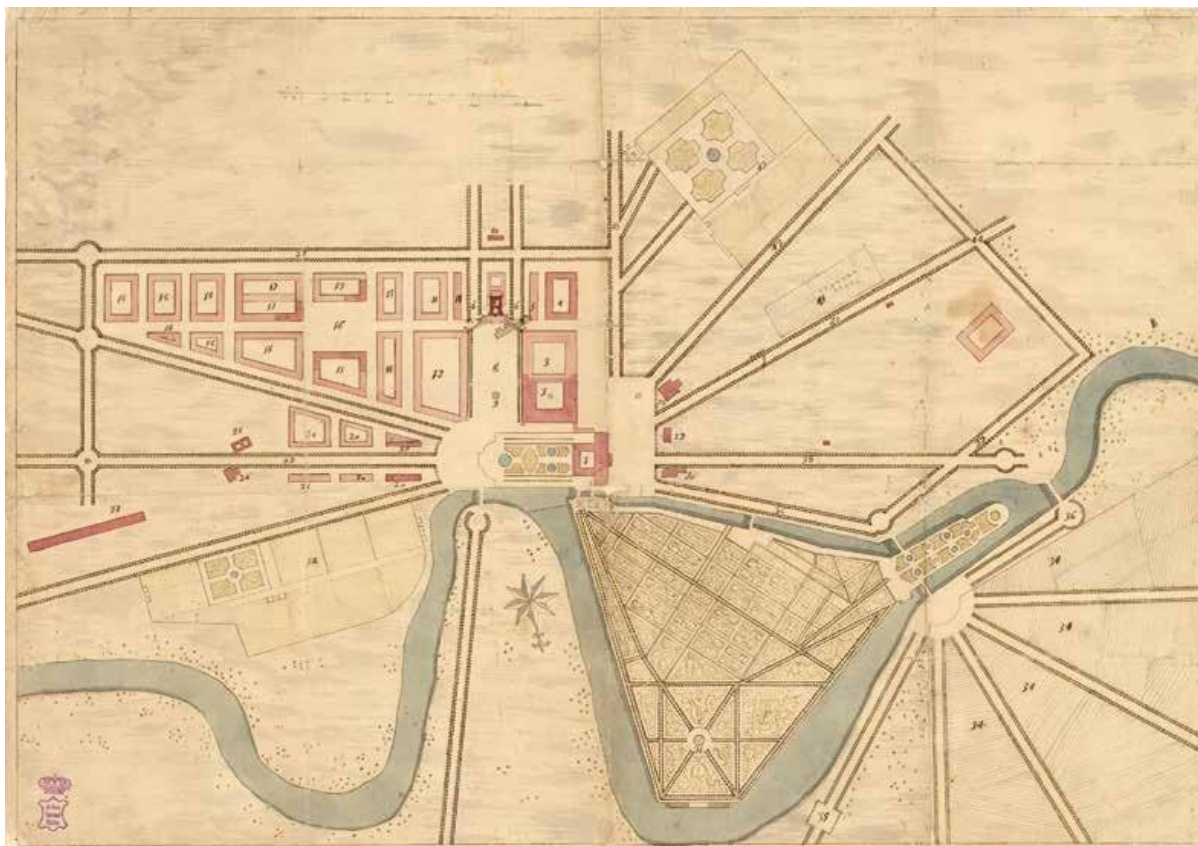


Fig 65: Project for the urbanization of Aranjuez. Santiago Bonavia, 1750

Source: Patrimonio Nacional. UNA CORTE PARA EL REY Carlos III y Los Sitios Reales. 2017.

7.3.3 National Plan for Cultural Landscape: Spanish Observatory of the Landscape Convention of the Council of Europe

The conservation of cultural heritage is an aspect of reference in the general sustainability policies of all administrations due to European sustainable development policies. And this is precisely the role of conservation with regard to cultural heritage: promoting public access to cultural assets without, thereby, compromising their preservation for future generations. That is why research on the conservation of cultural heritage is the objective chosen for this National Research Plan.

The legal basis for the national plans lies in Spanish Historical Heritage Act 16/1985 which declares that “the State Government shall adopt the measures necessary to facilitate collaboration with other public authorities.” The National Cultural Heritage Plans are the results of the merger of these two concepts; The National Information Plans provided for in the Historical Heritage Act, which are the responsibility of the Heritage Council, and the Plans for

Conservation and Restoration provided for among the functions of the Cultural Heritage Institute of Spain.²⁵

The current National Plans may be divided into three separate categories. Firstly there are the initial plans that were drawn up and which address traditional units of heritage: Cathedrals, Monasteries, Defensive Architecture, Industrial Heritage. The first versions of all these Plans were drawn up between 1987 and 2006. New types of heritage were added from 2006 onwards: Cultural Landscapes, Underwater Heritage, Intangible Heritage, Traditional Architecture, 20th Century Architecture, Photographic Heritage. Lastly, from 2010 onwards new horizontal plans were also drawn up, addressing not a set of cultural assets, but the system for understanding, conserving and disseminating them: Preventive Conservation, Research into Conservation, Education and Heritage, Emergencies and Risk Management in Heritage.

The National Plan for Cultural Landscape has its general objective as safeguarding of landscapes of cultural interest which means the measures aimed at guaranteeing the viability of the cultural landscape, actions for identification and characterization, documentation, research, protection, improvement, revitalization.

Given the particular characteristics of the cultural landscape as a heritage asset, derived from its complexity, the high vulnerability of its values and the scant and scattered legal support for its safeguarding, the implementation of the Plan should contribute to achieving, among others, the following specific objectives:

Identification, characterization and safeguarding:

- Establish an agreed basis for the identification and characterization of landscapes of special cultural interest.
- Prepare a proposal for landscapes of special cultural interest, including, in addition to their identification and characterization, their assessment.
- Establish objectives, guidelines and specific lines of action for the safeguarding of landscapes of special cultural interest, which enhance their character and values, compatible with their evolution and development, and favor their interpretation and public enjoyment.

Social awareness and political recognition:

- Promote social recognition and awareness of public administrations and citizens about the dimension and cultural values of the landscape.
- Contribute to the incorporation of criteria for the safeguarding of the cultural values of the landscape in policies, plans and sectoral actions with an impact on the territory.

International, national and regional cooperation:

- Promote cooperation with policies and networks of cultural landscapes on a European scale, specifically in the study and safeguarding of transboundary landscapes, in accordance with the provisions of the European Landscape Convention.
- Promote cooperation between the different ministerial departments that have powers in this regard.

²⁵ The Spanish Historical Heritage Institute, previously known as the Cultural Assets Conservation and Restoration Institute, was created in 1985 for two fundamental reasons: Spain's joining with other countries through treaties, conventions and other administrative mechanisms related to Cultural Heritage and the need to combine all of the Bodies operating at that time into a single National Centre.

- Also promote cooperation between Autonomous Communities, and between them and the General State Administration in matters of criteria and objectives for action, especially in cultural landscapes shared by more than one Autonomous Community.
- Generate documentation, knowledge and assessment bases for the inclusion of Cultural Landscapes in the UNESCO World Heritage List.

From the methodological aspect of the National Plan for Cultural Landscape, its important to consider the progressive complexity and dispersion in the territory of all the entities that are currently considered cultural property, whether material or immaterial, and their spatial, functional and historical conncections.

Thereby, first of all, its necessary to analyze the cultural values of the landscape as a whole, not only those considered singular or of cultural interest. And contextualize them within the framework of complex territorial heritage systems that proive the necessary heritage coherence framework. It is then the identification and selection of landscape of cultural interest which will focus on those territories that best represent and transmit mentioned values.

The integration of the identification and selection of the landscapes to the plan must be balanced. They should be chosen not so much for their exceptionality or rarity, but precisely for being a good model for fort he landscape to which they belong or represent.

Below, there is the schematized descipion of the methodological approach of Spain to the National Plan for Cultural Landscape, which is prepared by the author of this research;

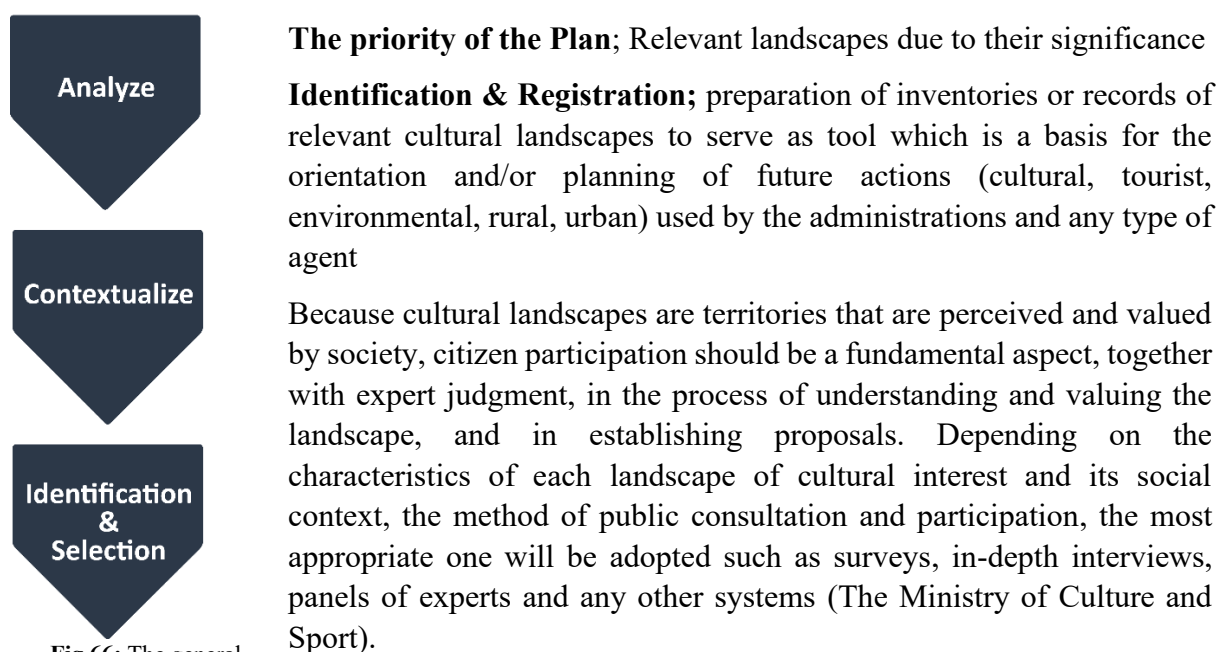


Fig 66: The general methodology scheme
Source: Made by the author

Lastly, the reference documents fort he National Landscape Plan of Spain are as listed below

- Carta Iberoamericana del Paisaje Cultural (Ibero-American Charter of the Cultural Landscape)
- European Landscape Convention. Florence, October 20, 2000
- Normativa en materia de paisaje (Landscape Regulations)
- Organismos e Instituciones relacionados con el Paisaje Cultural (Organizations and Institutions related to the Cultural Landscape)

According to the catalogue named “National Cultural Heritage Plans” prepared by Ministry of Education Culture and Sports, three international organisations have dealt with landscape and, specifically, its cultural dimension, with different approaches and scopes: UNESCO, IUCN and the Council of Europe. Furthermore, the European Spatial Development Perspective adopted by the ministers responsible for spatial planning in the EU (Potsdam, 1999) sets out the “creative management of cultural landscapes” as one of the foundations of the planning and management of the Union’s territory.

In the catalogue, the definition taken from IUCN²⁶ about the “Protected Landscapes” and “World Heritage Cultural Landscapes” are highlighted. The conservation of biodiversity and the integrity of the ecosystem constitute the principal emphases in the definition of Protected Landscapes, while the accent is on human history, on the continuity of cultural traditions and on social aspirations and value in the definition of World Heritage Cultural Landscape (Phillips, A. 2002) These subtle differences contribute to the identification and interpretation process of the landscape elements (The Ministry of Culture and Sport of Spain).

•Instruments of the National Plan:

Identification of Landscapes of Cultural Interest and Inventory/Register which is a documentary of landscapes of cultural interests. Registers can be selective, according to geographical, typological and other criteria, or integral which including the entire national territory. In any event, it must be taken into account that a cultural landscape does not necessarily fall within a single political-administrative constituency or division, as it frequently transcends municipal, regional and even national limits.

•Resources:

- Place names. Old and current place names.
- Cartography. Where possible, all existing editions of the following maps should be consulted to allow for an evolutionary approximation and for the most appropriate scales for the dimension and characteristics of the landscape of cultural interest:
- Topographic
- Geological and geo-morphological

7.3.3.1 “One hundred cultural landscapes in Spain” ²⁷

This is a publication includes a work proposed as an exercise in reflection on the concept of cultural landscape and the identification of those landscapes that, due to their particular characteristics, are representative of the activities that have generated it.

The landscapes have been divided into four typology as - Agricultural, livestock and forestry; - Industrial, infrastructures and commercial activities; - Urban, historical and defensive; and - Symbolic. On the documents, each cultural landscape includes its location, description, photographs, bibliography, and authorship.

As the goals of this document, first of all, it is intended to make a first approach to the Documentary Registry of Landscapes of Cultural Interest with order and precisio, and followşng a previously established methodology which allows identification and

²⁶ International Union for Conservation of Nature and Natural Resources

²⁷ “One hundred cultural landscapes in Spain” Denomination: One hundred cultural landscapes in Spain.- Madrid:

Ministry of Education, Culture and Sports, 2015. 478 pages

Project date: Year 2015

Classification: Cultural Landscape

documentation. Thus, an initial indicative list of cultural landscapes is formed that become part of the National Plan for Cultural Landscape.

Second goal is generating the publication of a selection of one hundred landscapes, which constitute a representative sample of landscapes of Spanish cultural interest, according to criteria of typological representativeness and geographical diversity. The objective of this publication is to obtain an approximate panorama of Spanish cultural landscapes, which does not pretend to be exhaustive, but rather representative of a complex and diverse reality.

a. Aranjuez – One Hundred Cultural Landscapes in Spain

This is an example of a “clearly defined landscape” registered on the List in 2001. The fertile valley of the river Tagus, in a basically dry territorial environment, gives the appropriate context for a palace complex whose gardens resulted from varying cultural influences that have impinged on it over three centuries and have constituted a standard in the development of landscaping.

The administrative body involved in the management and planning process of Aranjuez is “Fundación Aranjuez Paisaje Cultural”²⁸ is a private and not-for-profit foundation. It will essentially undertake promotion activities involving the protection and defense of the environment, agriculture, and the historical and cultural heritage of Aranjuez. It emerged from the need to deal with the program inherent to the listing of the Aranjuez Cultural Landscape as a World Heritage Site by UNESCO in December 2001. The FACP is the Management Body accommodating the different bodies of the Local, Regional and State Administrations directly involved with the ownership of Assets and through it coordinates all the initiatives undertaken by the different administrations, working jointly to recondition and improve all the elements contained within the space defined as the proposed zone through a Strategic Plan that schedules and optimizes any future investments made in it and in its protection zone.

Associated values of Aranjuez, as mentioned above, are;

- Agricultural, livestock and forestry activities
- Industrial activities
- Large infrastructures
- Urban systems or historic settlements.

In the article written for Aranjuez in “100 Cultural Landscapes of Spain”, the historical process of the cultural heritage is explained detailly.

As mentioned, Felipe II made Aranjuez a Royal Site and inserted it into the Royal Residences around the capital. The territory of Aranjuez had drawn a lot of attention since middle ages due to the fertile lands and abundance of water thanks to the confluence of the Tagus and Jarama rivers. Later, Aranjuez passed through Fernando el Católico to the Royal house and was used since then as a country residence for the kings until the beginning of the 20th century. The construction of the Royal Site, in a successive process until reaching its peak period at the beginning of 19th century, have made it an example of a ‘designed landscape’ recognized by UNESCO as a World Heritage Cultural Landscape, the first of Spanish in 2001.

b. Architectural Details of Aranjuez from 100 Cultural Landscapes in Spain

The palace was priented to the West due to the roads coming from the two main cities Madrid and Toledo. These tree-lined paths converged before the palace symmetrically with respect to its axis, defining an area called Raso de la Estrella. The edge of the Raso was defined by the Ría, crossed by two bridges, one on the Madrid road and the other next to the palace.

²⁸ Aranjuez Cultural Landscape Foundation

The edge of the Raso was defined by the Ría, crossed by two bridges, one on the Madrid road and the other next to the palace. In the resulting island the main garden was organized, whose axis is parallel to the estuary.

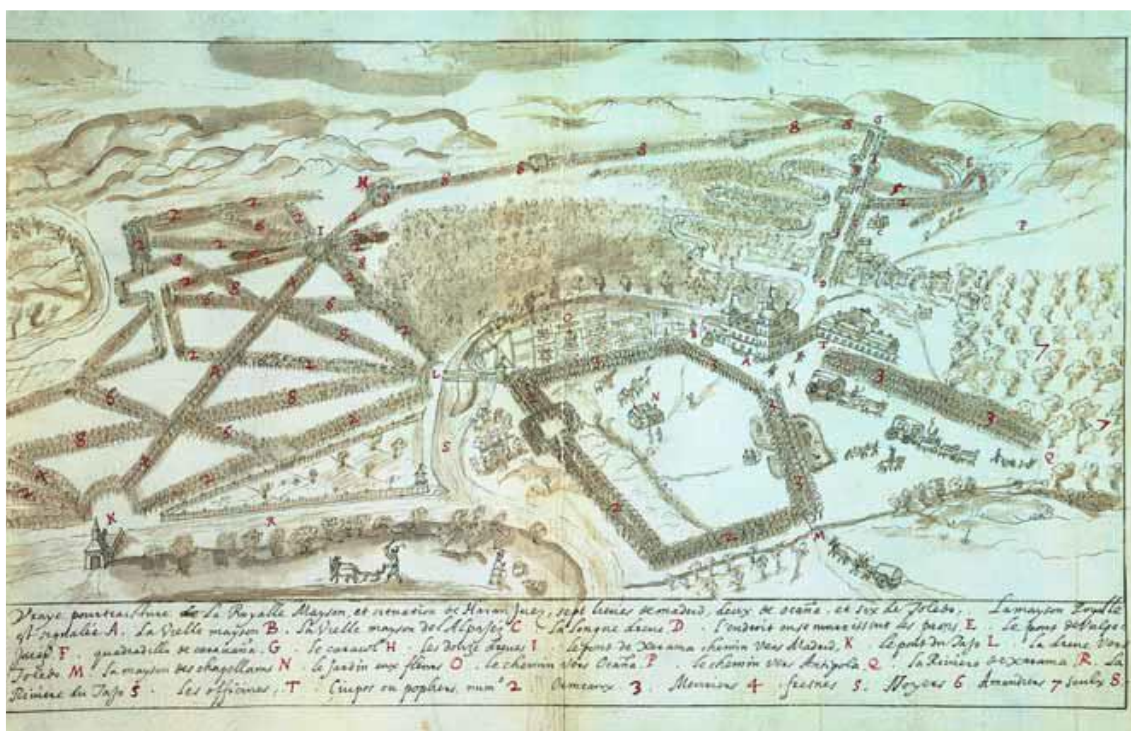


Fig 67: Jean L'Hermite, Bird's-eye view of Aranjuez, h. 1590. Ink drawing on paper. Brussels, Royal Albert I Library

Source: Cuadernos De Restauración De Iberdrola VII El Palacio Real De Aranjuez. Sept. 2003

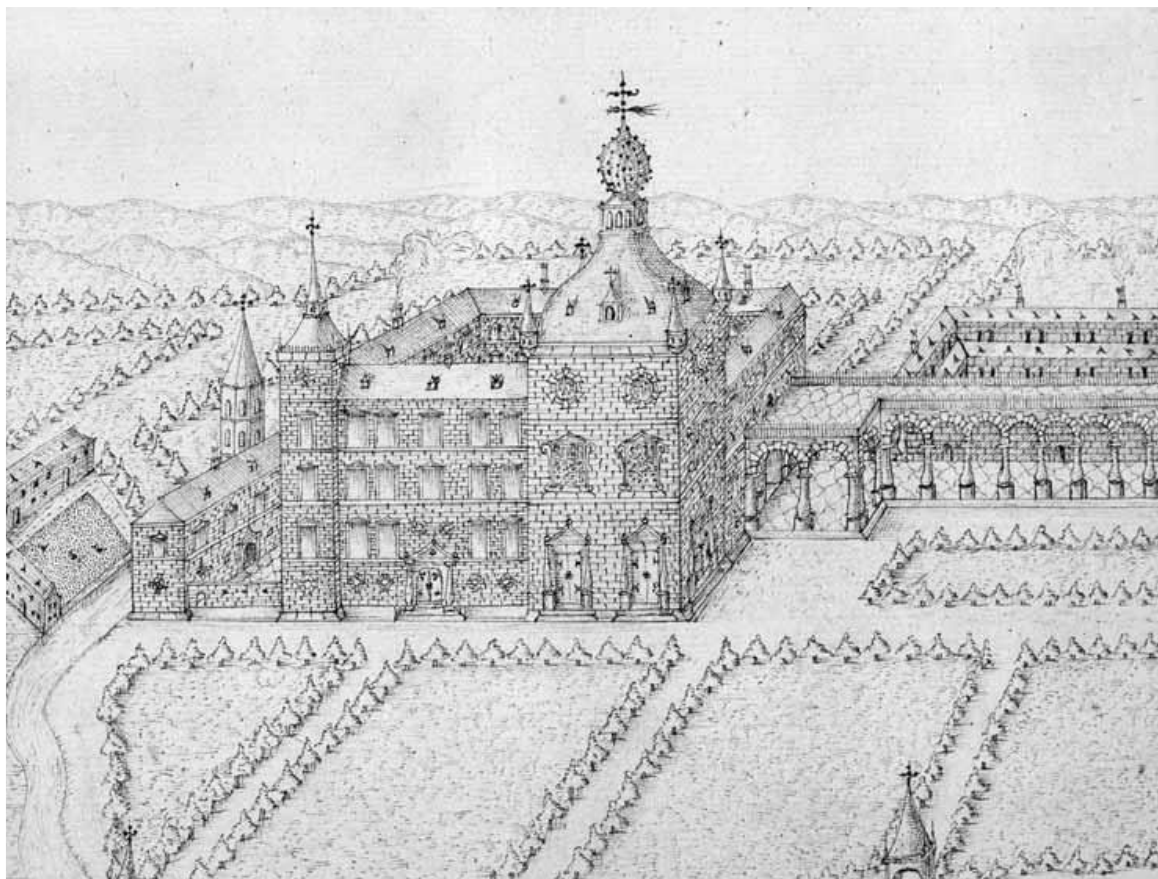


Fig 68: The palace of Aranjuez, in H. Gundlach, *Nova Hispaniae Regnorum Descriptio*, 1606. Ink drawing on paper. Vienna, Österreichische Nationalbibliothek

Source: Cuadernos De Restauración De Iberdrola VII El Palacio Real De Aranjuez. Sept. 2003

The articulation with the access from the palace was produced by means of a trident focused on the Apollo fountain and a turn marked by the Hercules fountain towards the bridge. At the opposite site, another trident focused on the Bacchus fountain allowed the turn indicated by the Neptune fountain in the direction of the Madrid road. The result is a flat-type garden, with its main elements linked by an axis and its focused ends: both were novelties compared to its Italian contemporaries. A layout like this would not reappear until 100 years later when Le Nôtre used “focussing to layout” the outdoor parks of Vaux and Versailles. The Palace was completed in 18th century and it reformed and extended with two wings in a West direction. Then three lined paths added.



Fig 69: The Fountains in the garden of the Royal Palace

Source: Instituto del Patrimonio Cultural de España. Ministerio de Educación, Cultura y Deporte



Fig 70: Antonio Joli, View of the Royal Site, palace and gardens of Aranjuez, around 1759. Oil on canvas.
Naples, Palazzo Reale

Source: Cuadernos De Restauración De Iberdrola VII El Palacio Real De Aranjuez. Sept. 2003

Around 17th century, Santiago Bonavía²⁹ planned the new town, with a trident to the east supported by the existing Calle de la Reina, and an orthogonal layout to the south. For this reason, the Barcas bridge was built, which little by little replaced that of the estuary as the main access to the site. Reason why the rear façade of the palace was dignified by planting a French flower bed.

During the middle decades of the 20th century it industrialized, locating the industrial area to the west of Raso in continuity in the direction of the Toledo highway. At the end of the century, the orchards lost their economic profitability and were largely abandoned. Today the population reaches 42,000 people. The city's heritage values are managed by a Heritage Commission in which three of the institutions that own and manage its territory are present.

7.3.3.2 Aranjuez Cultural Landscape Management Plan

The management plan of Aranjuez is a requirement established by the Practical Guidelines for the Application of the World Heritage Convention, in order to ensure the protection and conservation of the inscribed properties. The management plan of heritage sites are harmonizing elements of the different management procedures applied to the sites, all within a complex regulatory framework. The Cultural Landscape of Aranjuez has already a complexity as its characteristics with the diversity of its spatial circumstances and landscape elements. Thus, the management of the site requires different readings from its natural and cultural aspects, both environmental or ecological as well as historical, artistic, , productive, etc. Only a deep understanding of the property, based on a rigorous knowledge of its history and its values, allows coherent management with what is intended to protect. In this part of the research, this deep reading that sheds light on the management plan of Aranjuez will be analyzed and compared with other case studies of the research.

²⁹ Santiago Bonavía (Italian: Giacomo Bonavia) (1695–1759) was an Italian architect and painter who was active in Spain during the 18th century.

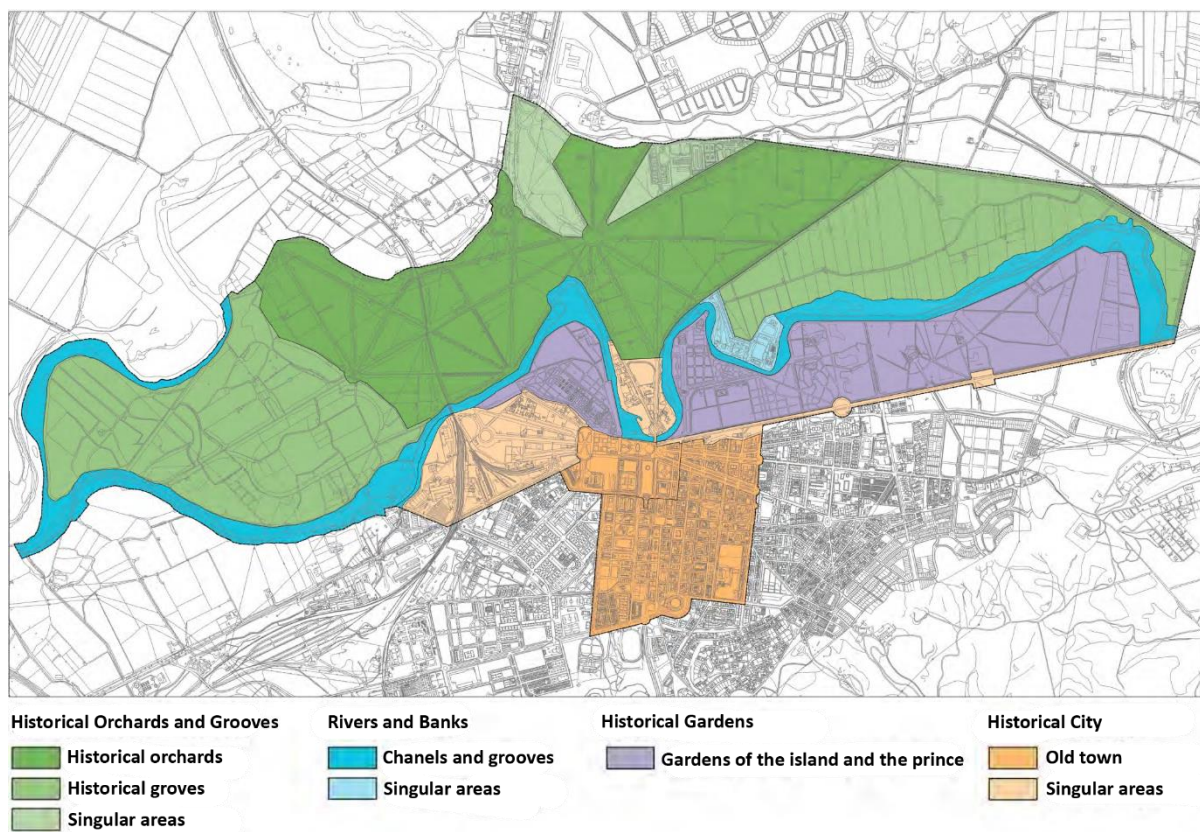


Fig 71: Delimitation of study units

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

a. The most important themes of cultural landscape of Aranjuez

- **Tagus River:** The geographical, historical, environmental, cultural and economic importance of the Tagus River for Aranjuez is so obvious. It is evident that the site and its exceptional universal value originate from the river and its flow of water, original configurators of the territory, and basic tools for its transformation into a cultural landscape.
- **Biodiversity:** The cultural value of Aranjuez is inseparable from its natural value and from the complex interaction between the cultural heritage and the biodiversity in the landscape. Orchard agriculture, in itself, has historically been the promoter of extraordinary biological diversity, today greatly diminished but still possible for recovery through research and replanting.
- **Cultural Landscape and quality of life:** One of the keys to any heritage asset, and especially a cultural landscape, resides in harmonizing the demands of its preservation with the generation of economic activity for the community where it is inserted. In the case of Aranjuez, the area not only includes enclosures with “pure” cultural content such as historic palaces and gardens, but also a set of orchards with excellent agronomic conditions or an urban center that houses a fundamental part of the institutional and tertiary activity of the region.

b. The Culturalization Elements of The Territory

This part of the master plan is about the identification of the elements which contribute to the formation of the cultural landscape. These elements are classified in 5 different titles as the water, the geometry, the woodland, the green fabric and the built fabric.

- The Water system

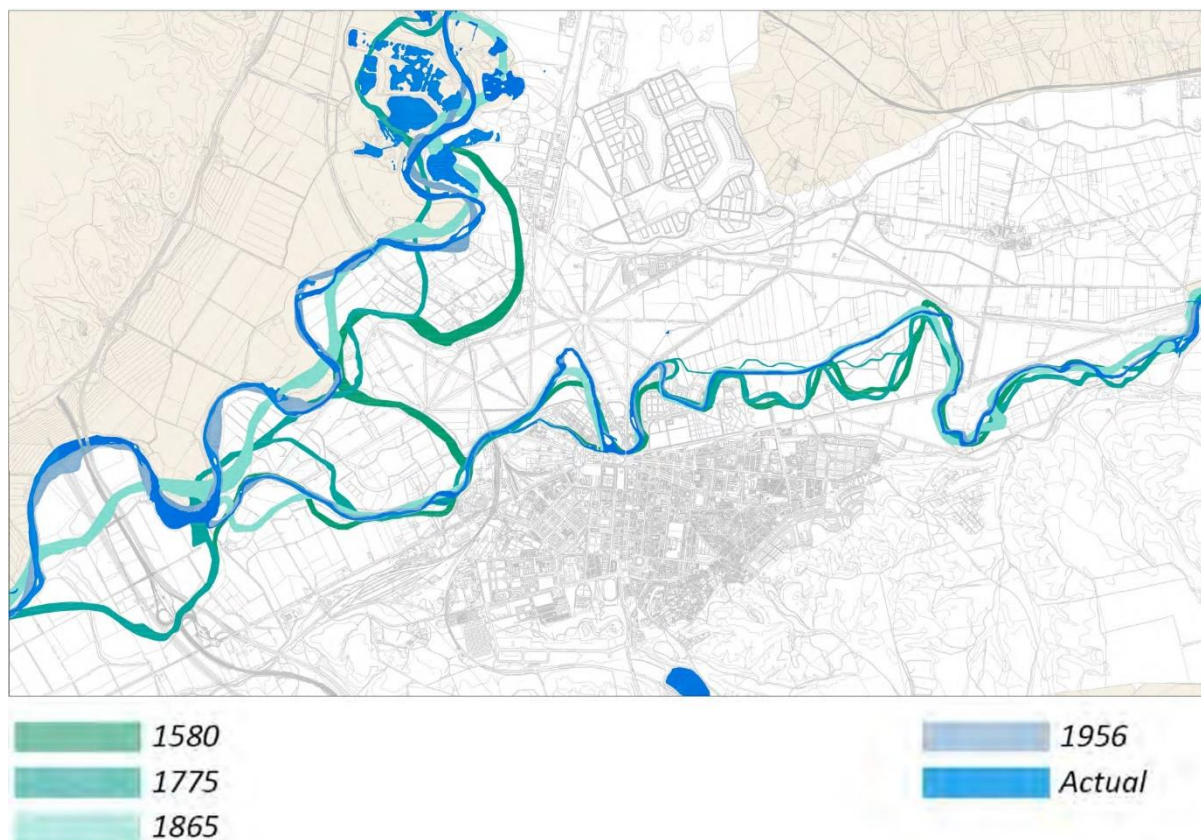


Fig 72: Ancient routes of the Tagus and Jarama rivers

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

River beds and their historical evolution determine not only the basic components of the orography (flood plains or river terraces) but also the conditions of action of human intervention, in a dialectic extended over time and only finally resolved. with the damming of both rivers, upstream, in recent times.

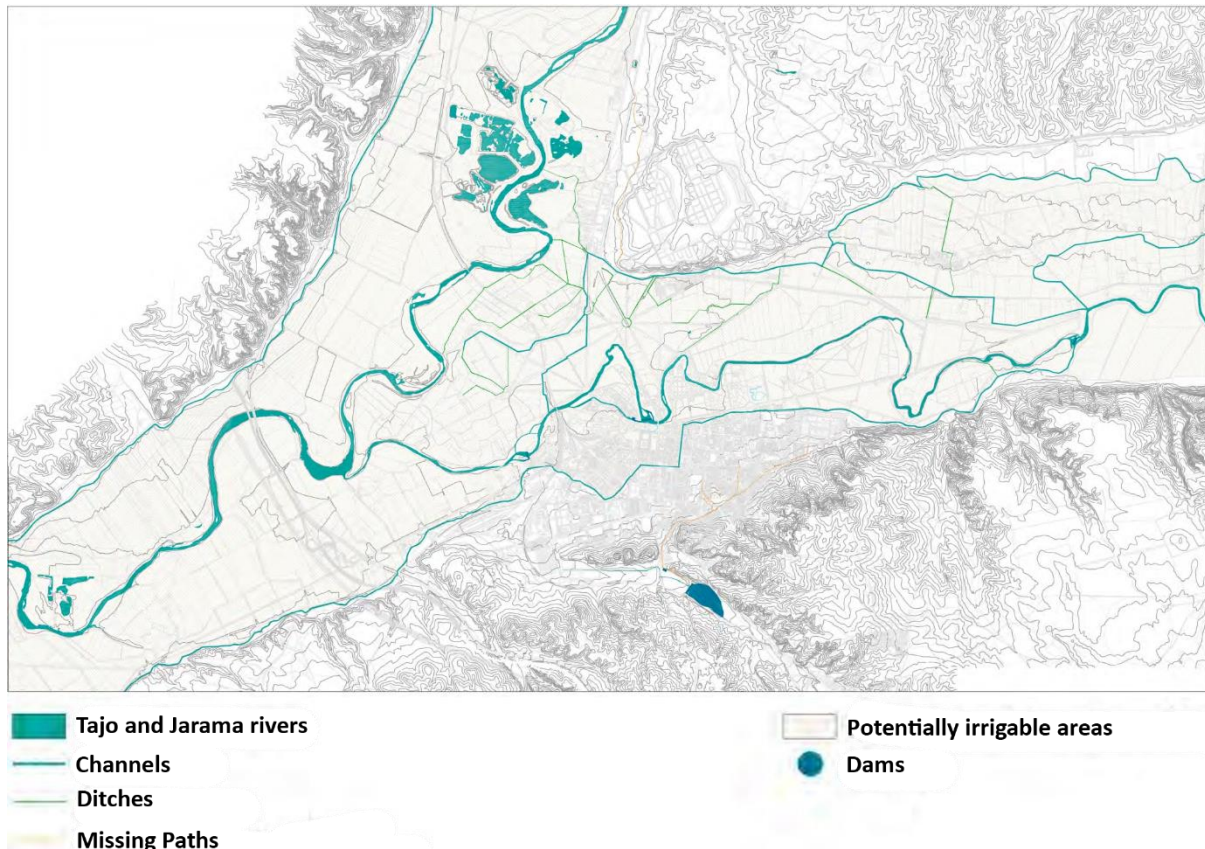


Fig 73: Water and river valleys

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

The network of channels determines the basic distinction of the territory between irrigated and dry land, which coincides with the separation between plain and escarpment. The network branches into ponds, ditches or drains, flooding (literally and figuratively) the territory with a system of routes and mills, landscape elements in themselves.

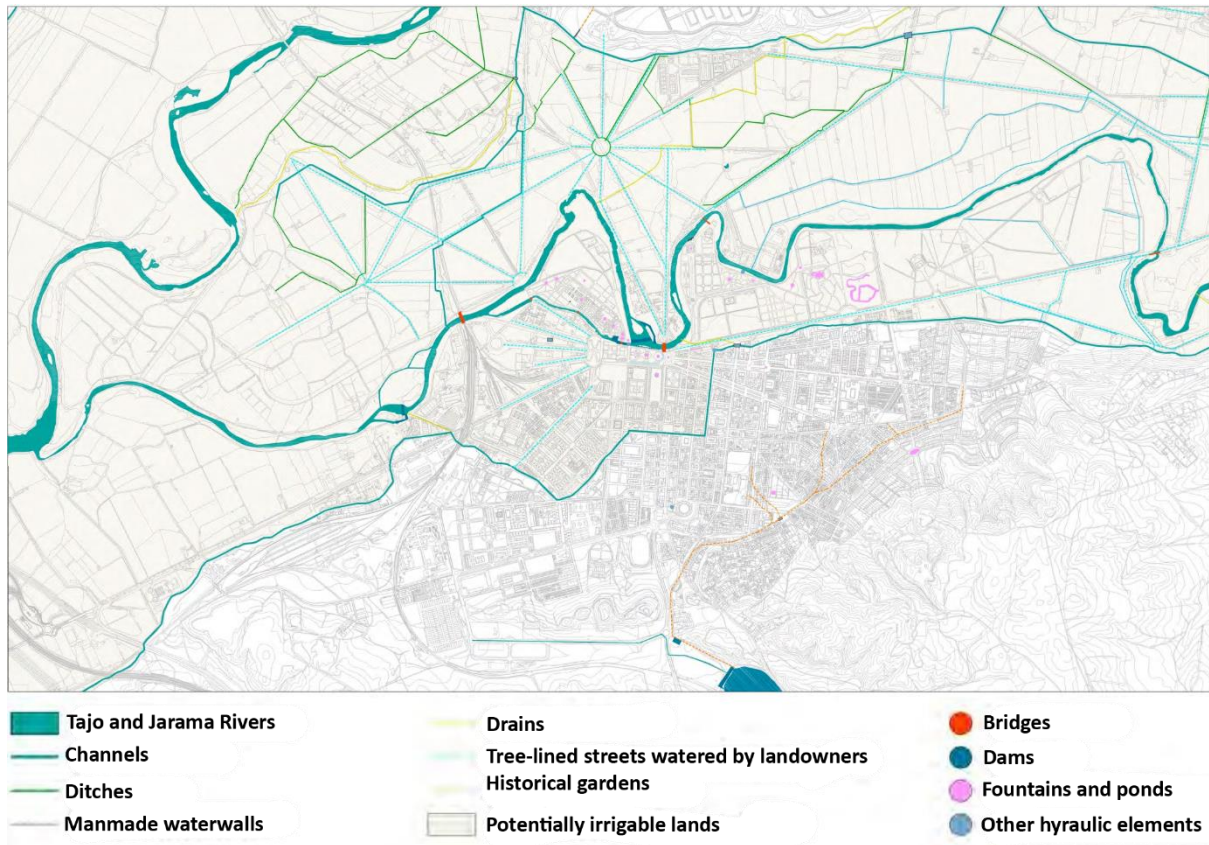


Fig 74: Water elements shaping the cultural landscape of the territory

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

- Geometry of the territory

If through water a functional appropriation of the landscape is achieved, the use of geometric lines in the territory allows its intellectual and symbolic appropriation. The complex geometries of the primitive Renaissance Aranjuez and its load of contents, difficult to interpret but enormous physical imprint, are superimposed on the routes of the rivers and canals. In turn, they constitute an expansive and open system that, over the centuries, extends and orders the rustic and urban environment.

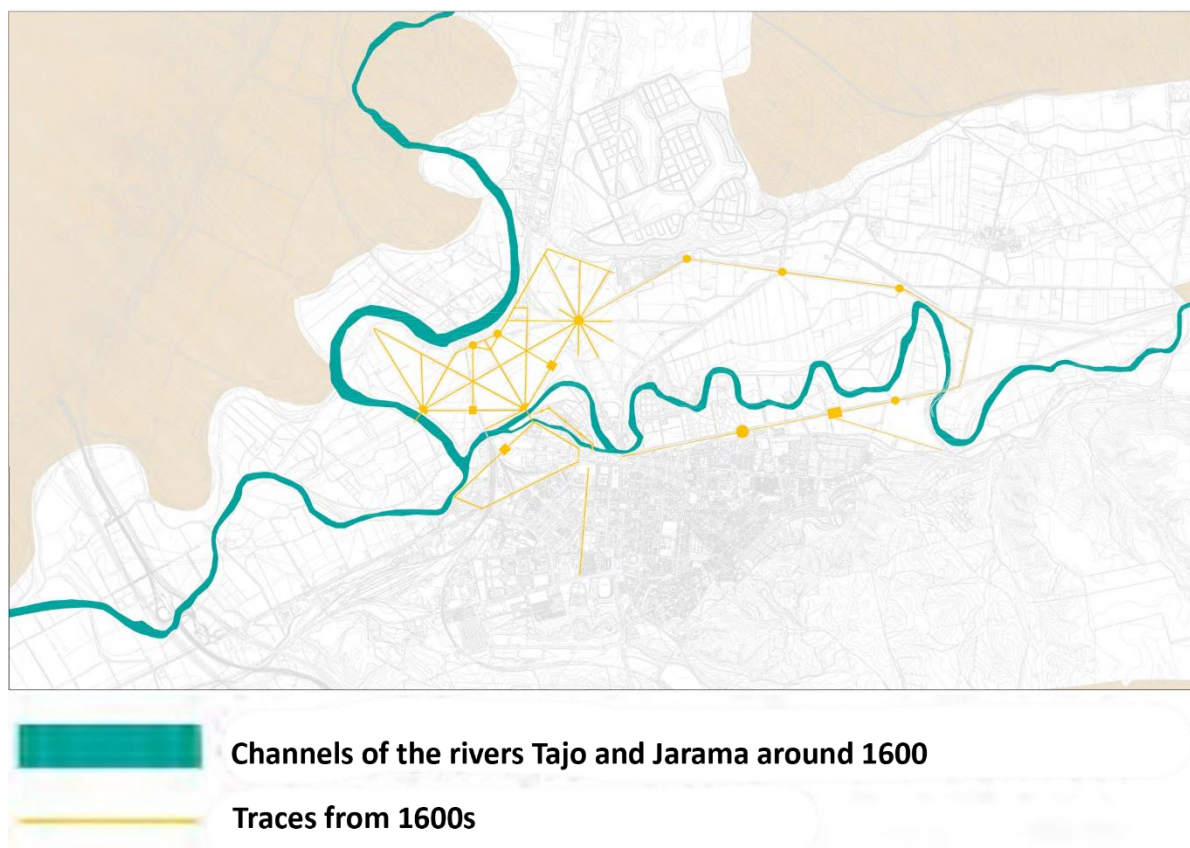


Fig 75: Geometry in the landscape Around 1600

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

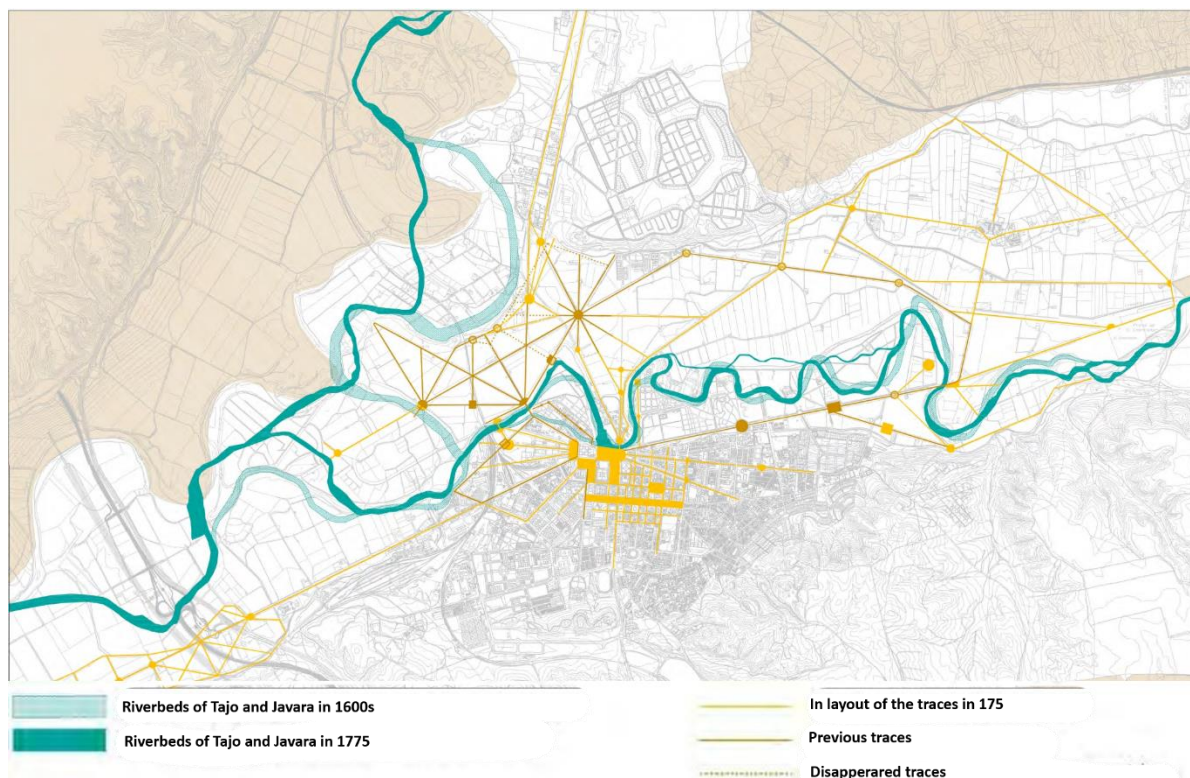


Fig 76: Geometry of the landscape Until 1775

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

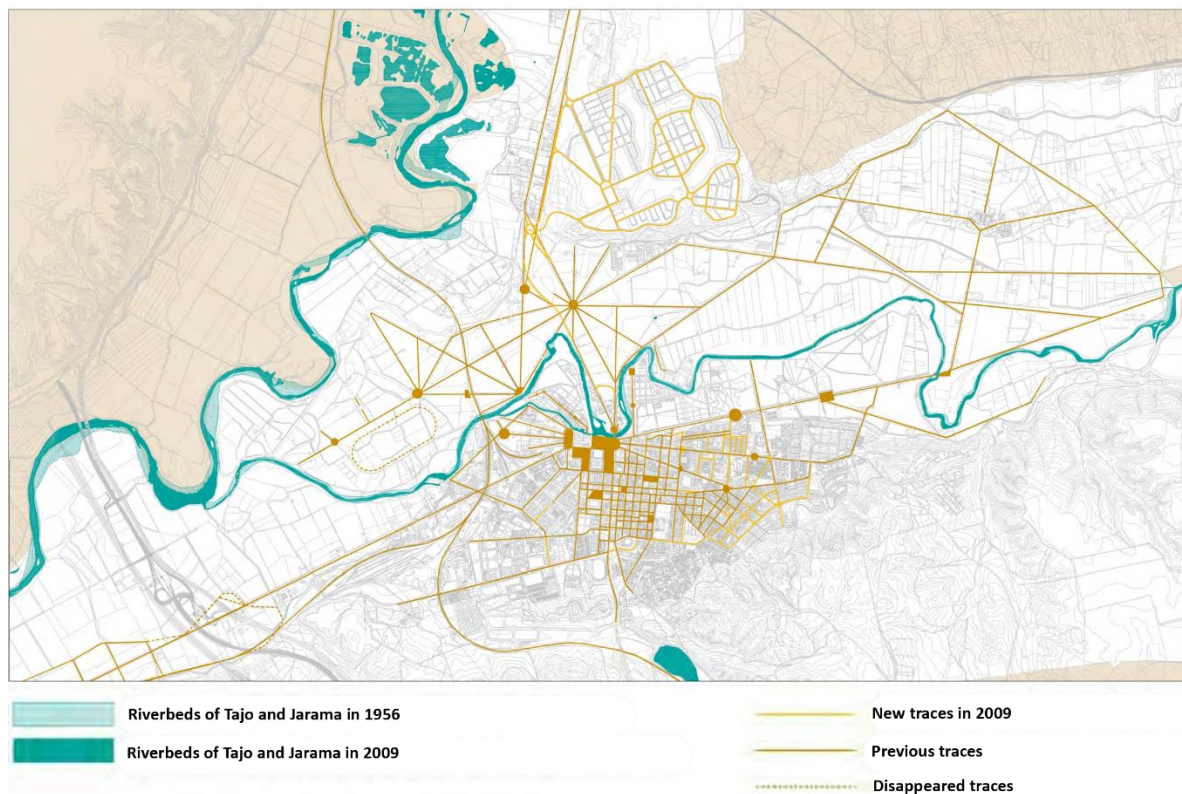


Fig 77: Current situation of the geometry of the territory

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

- The woodland

In the flat space of Aranjuez, the volumetric presence of the trees is key for any landscape reading.

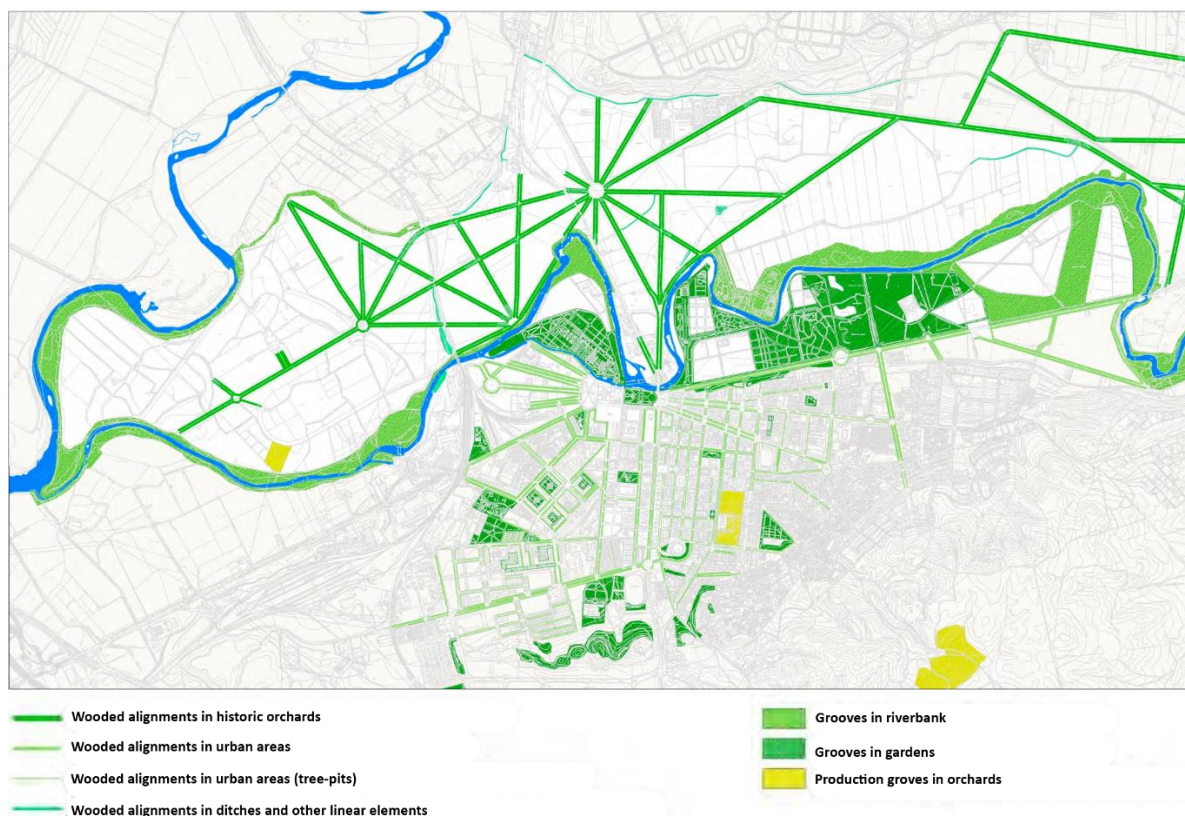


Fig 78: The trees as a characterizer of the landscape

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

The avenues or tree-lined streets of the Historic Gardens are home to a good part of the most valuable trees with the greatest landscape and cultural interest. These historic gardens constitute one of the episodes of greatest scientific, cultural and aesthetic interest in the Cultural Landscape of Aranjuez.

Apart from the historic gardens, also the historic town center of Aranjuez have been containing abundant trees. These rich tree texture of the city introduce a smooth transition from the rural to urban and create a natural environment since Felipe II.

- Landscape, orchard and gardens

The highly qualified network of hydraulic courses and geometric traces, materialized and made visible by the trees and define the places as lived and used by man.

The island's garden probably represents the most valuable jewel of the Aranjuez landscape. Created at the beginning of the second half of the 16th century by Felipe II, it wanted and managed to be a version of the earthly paradise. The description of the island's garden has come until today through the travelers who visited it, through some drawings, through archival information.

Since the location of Aranjuez is on the junction of Tajo and Jarama Rivers, this area was a large hunting ground and a swampy forest before the cultivation activities. With the extraordinary hydraulic engineering efforts, the water was being tamed, and tillage was made possible through artificial regulations. These efforts were not only for economic purposes and agricultural activities. The gardens or orchards, undifferentiated, also served to produce fruits and vegetables; but these vegetables, in addition to feeding the king's pantry, had the virtue and interest of beautifying the watered and wooded plain.

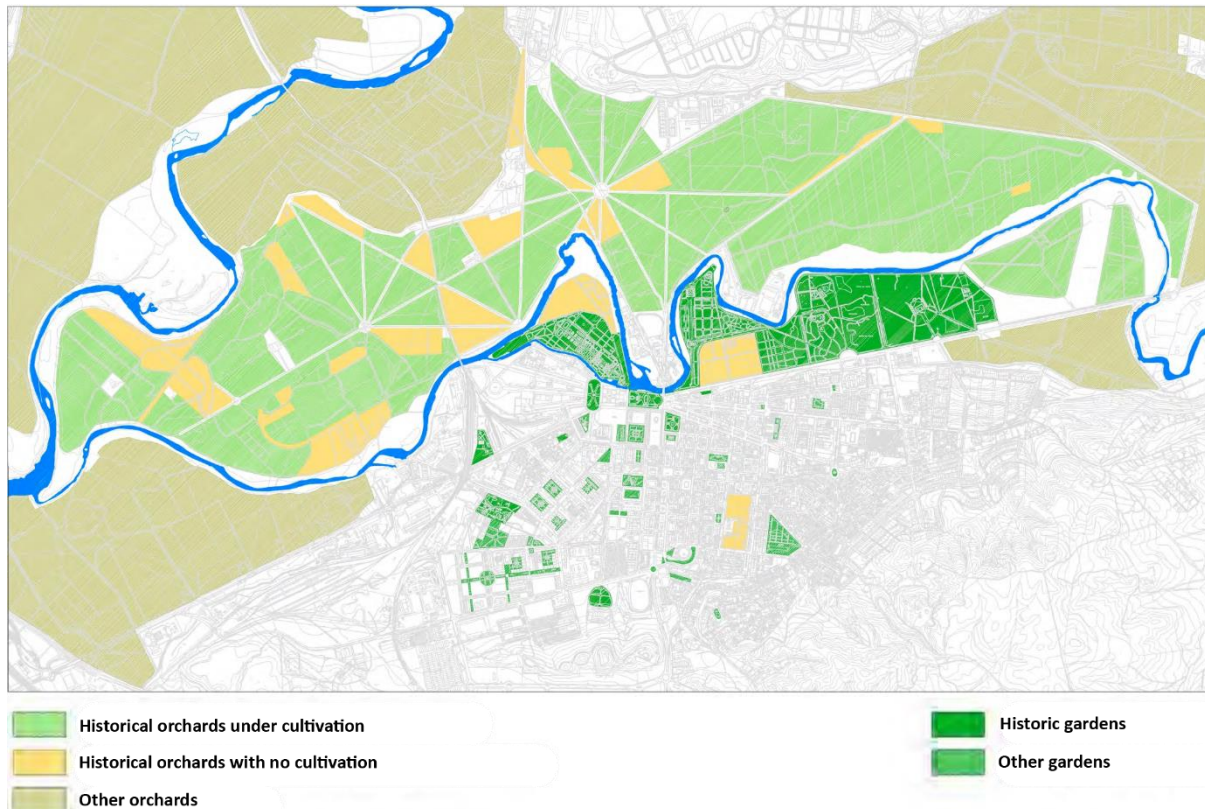


Fig 79: Spatial distribution of orchards and gardens

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

- Built fabric

The last constituent factor of cultural landscape is the built fabric and urban texture of Aranjuez. Urban texture comprises both for monumental singular built heritage and public spaces and urban use.

For cultural landscape analyses, the important thing is the context created by these built fabric and their relationship with the geometry of the territory.

The residential fabric is defined by the regularity that the plot gives it and the homogeneity and rationality of its typological constants as well as by the continuity demonstrated in its application since the 18th century.

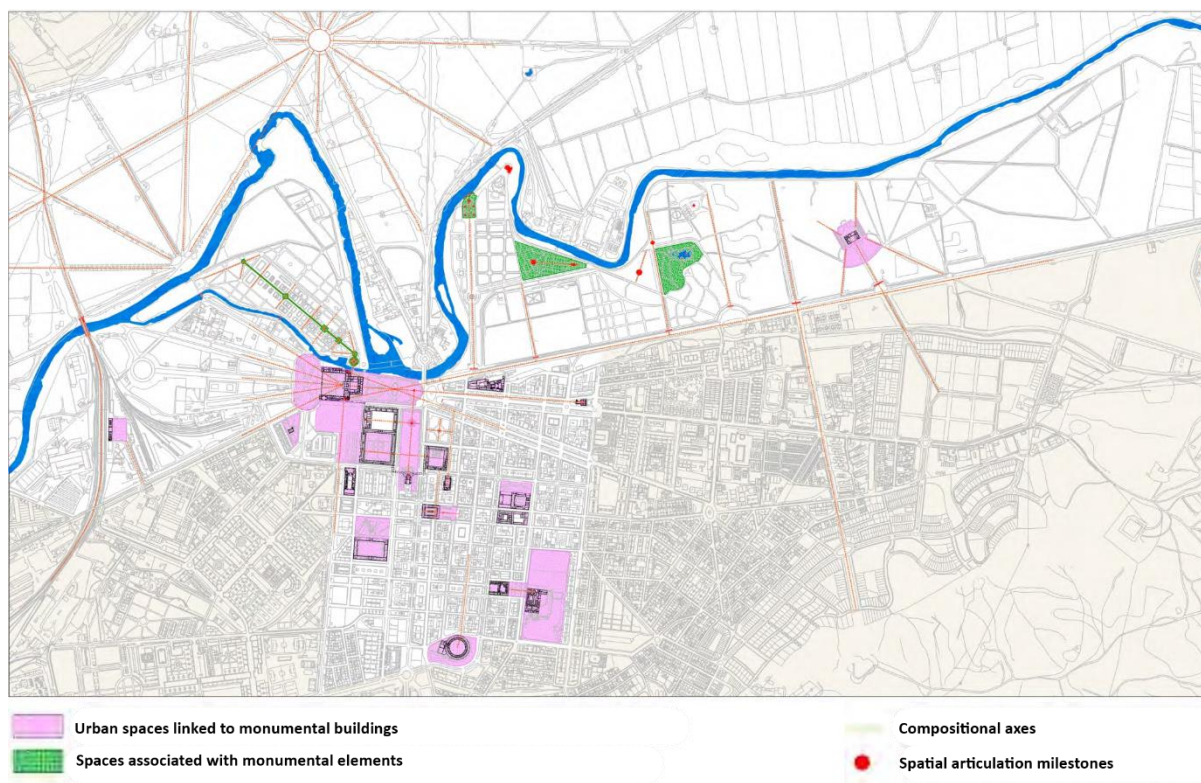


Fig 80: Monuments, Spatial articulation (urban area detail)

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

The historic city of Aranjuez was the result, fundamentally, of two design and construction campaigns: that of the 16th century, mainly due to Felipe II; and that of the 18th century, around the reigns of Fernando VI and Carlos III. The first establishes the territorial bases and the character of the site and its architecture, marked by the unfinished palace and the House of Offices; the second corresponds to the vast majority of urban and rural buildings.

The 19th century shows a striking absence of new buildings in the urban area, limiting itself to an intense transformation of the existing farmhouse. In the 20th century, there is a third construction campaign, with the first half marked by the completion of the southern areas and a second that contemplates the great expansion of the city to the east and west of the historic city.

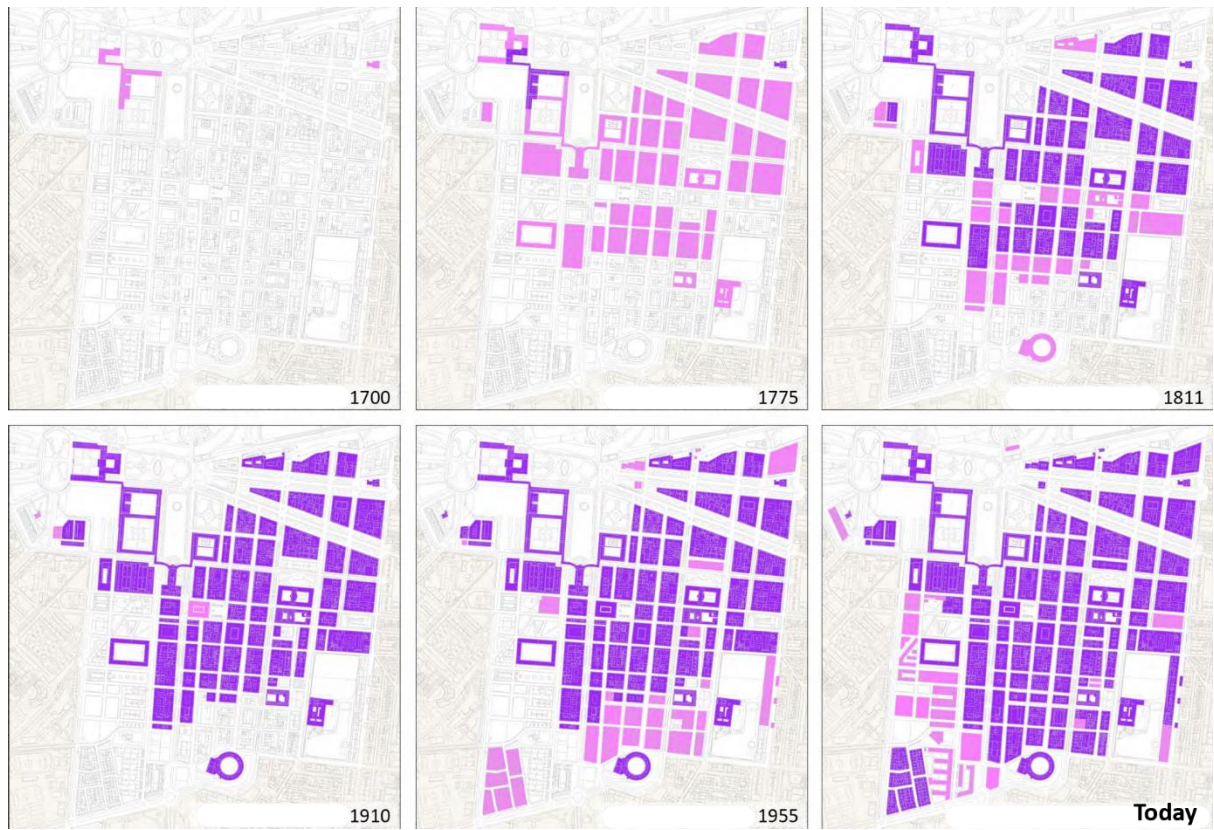


Fig 81: Configuration of the historic city of Aranjuez

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

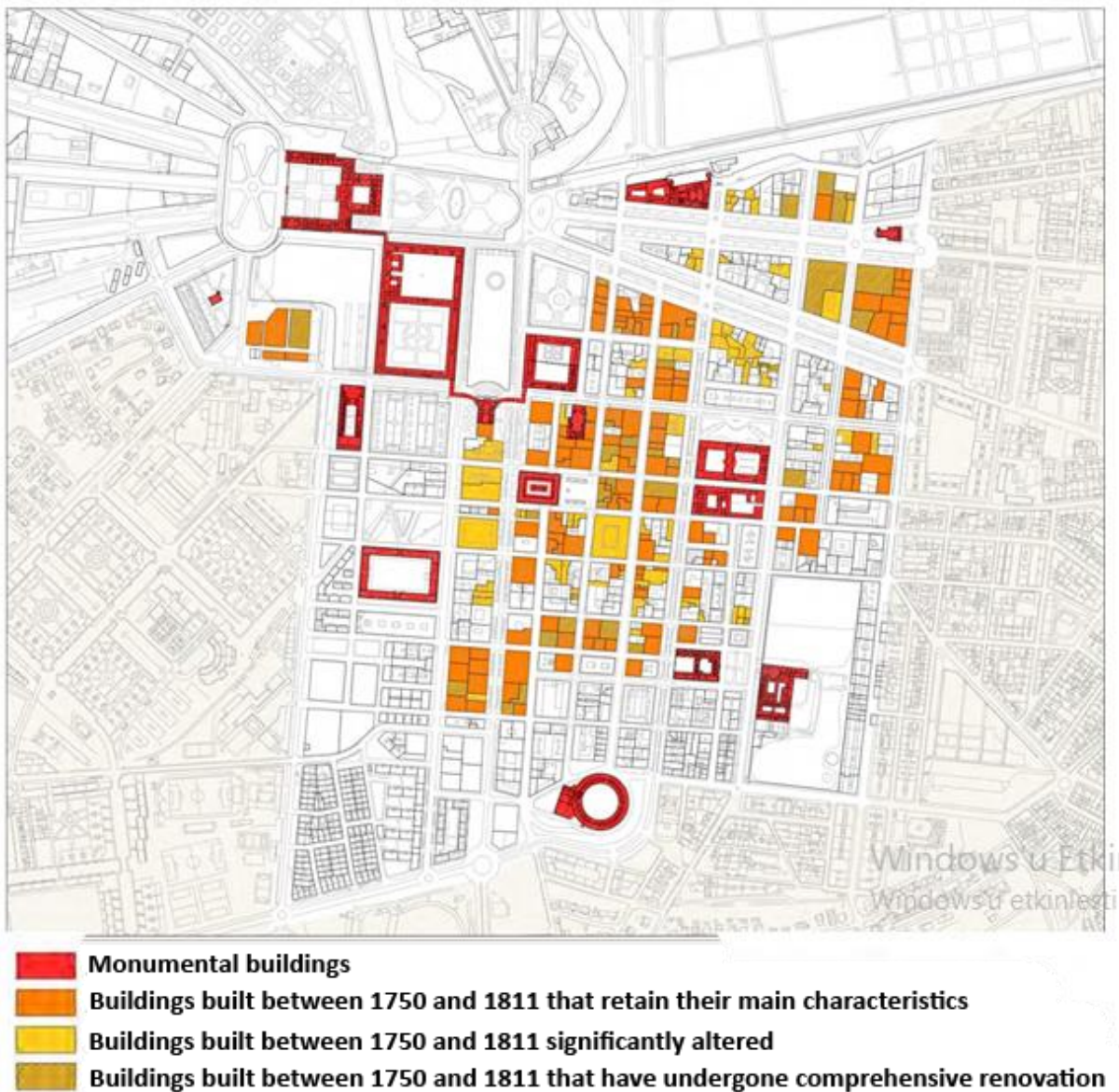


Fig 82: Historical buildings

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

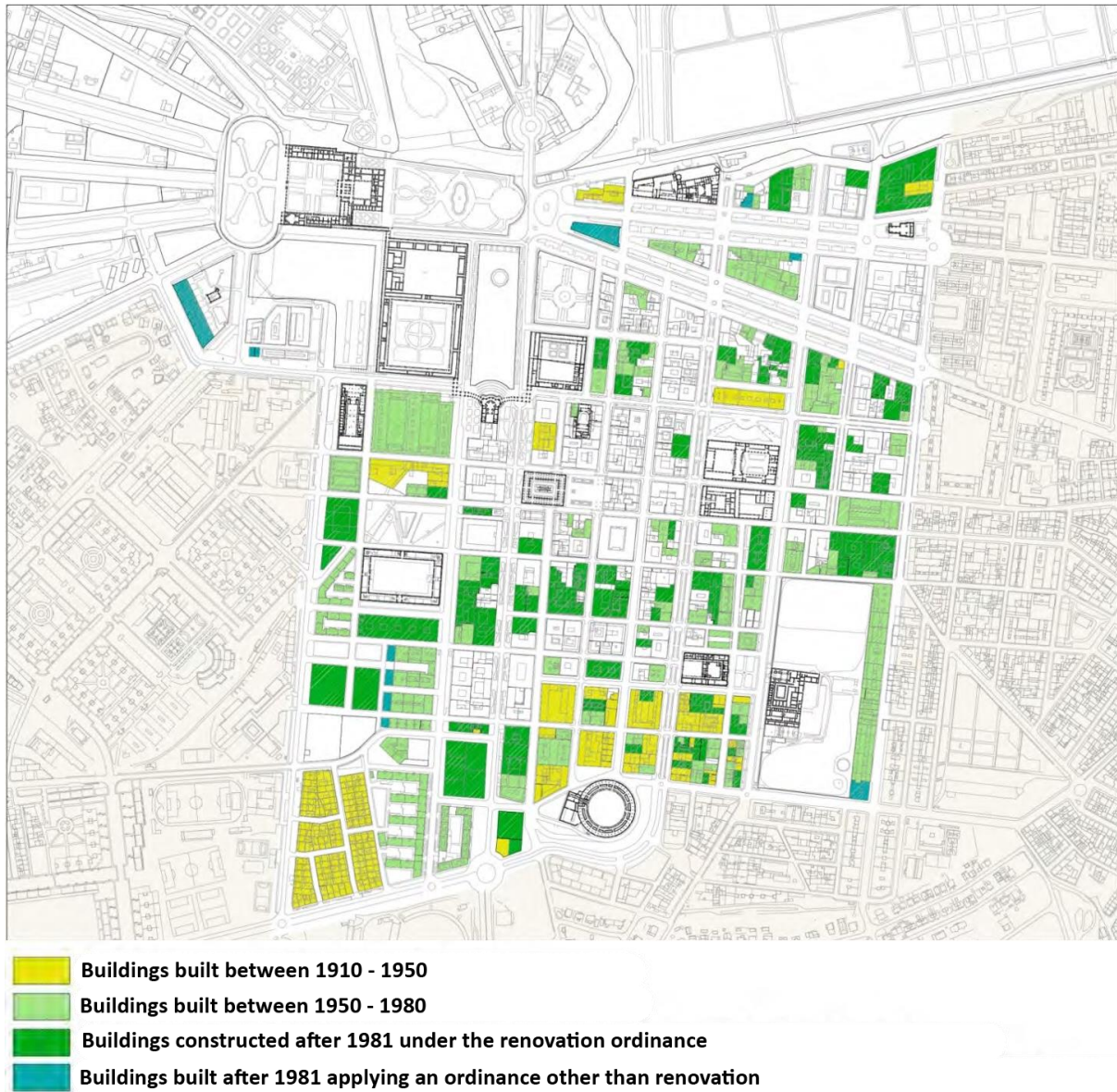


Fig 83: Buildings after 1910

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

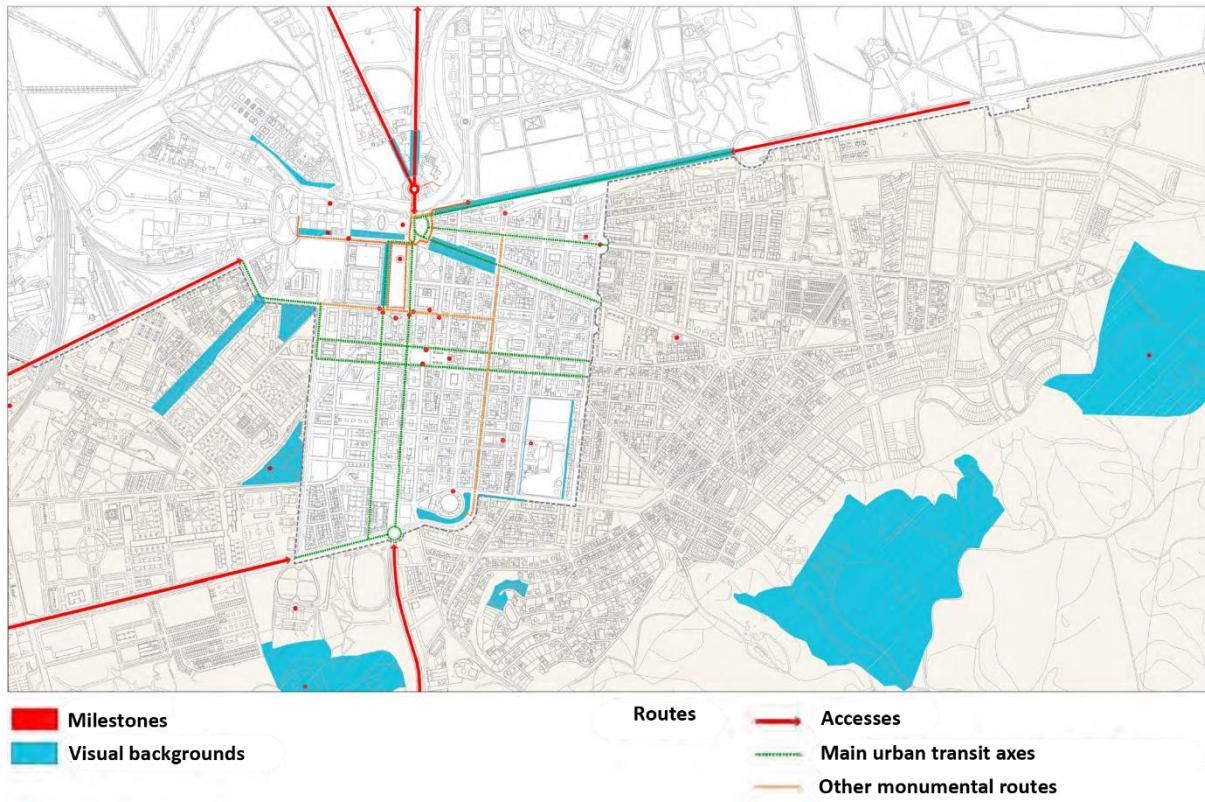


Fig 84: Historic City Perceptual characterization

Source: Gomez and Atienza architects. Aranjuez Cultural Landscape Management Plan. Fundación Aranjuez Paisaje Cultural, 2016

In consequence, the analysis of the cultural landscape for the management plan, as shown above, have been made by considering similar classifications as in the other case studies of this research. At the end of this research, these indications of the cultural heritage elements are compared in order to understand the difference or similarities among the approaches of three different European examples.

7.3.4 Archive Documents of Aranjuez and Its Surrounding

There are the historical maps and archived documents shared online by Government of Spain - Ministry of Transport, Mobility and Urban Agenda which were also used for the National Plans for Cultural Landscapes during the documentation processes. To see the changes of the Palace and surrounding urban area through the last centuries, some examples are given below.

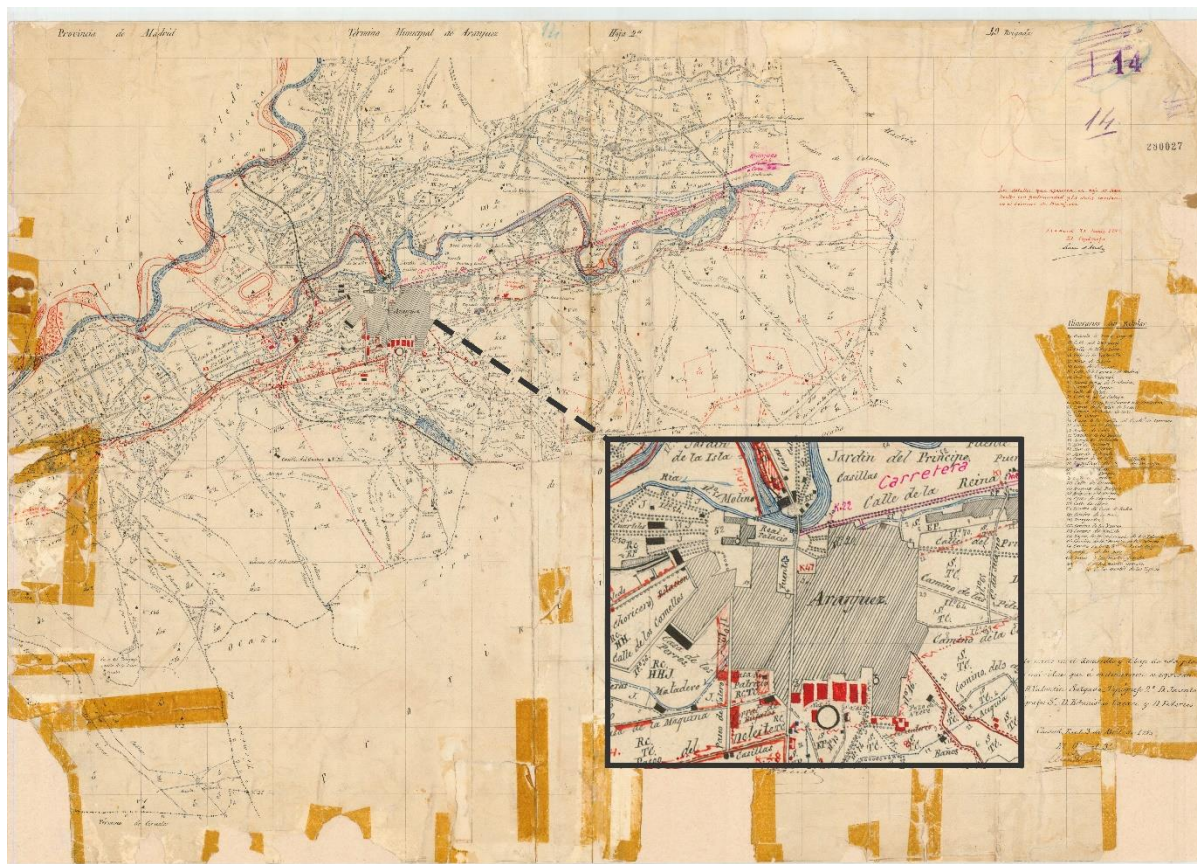
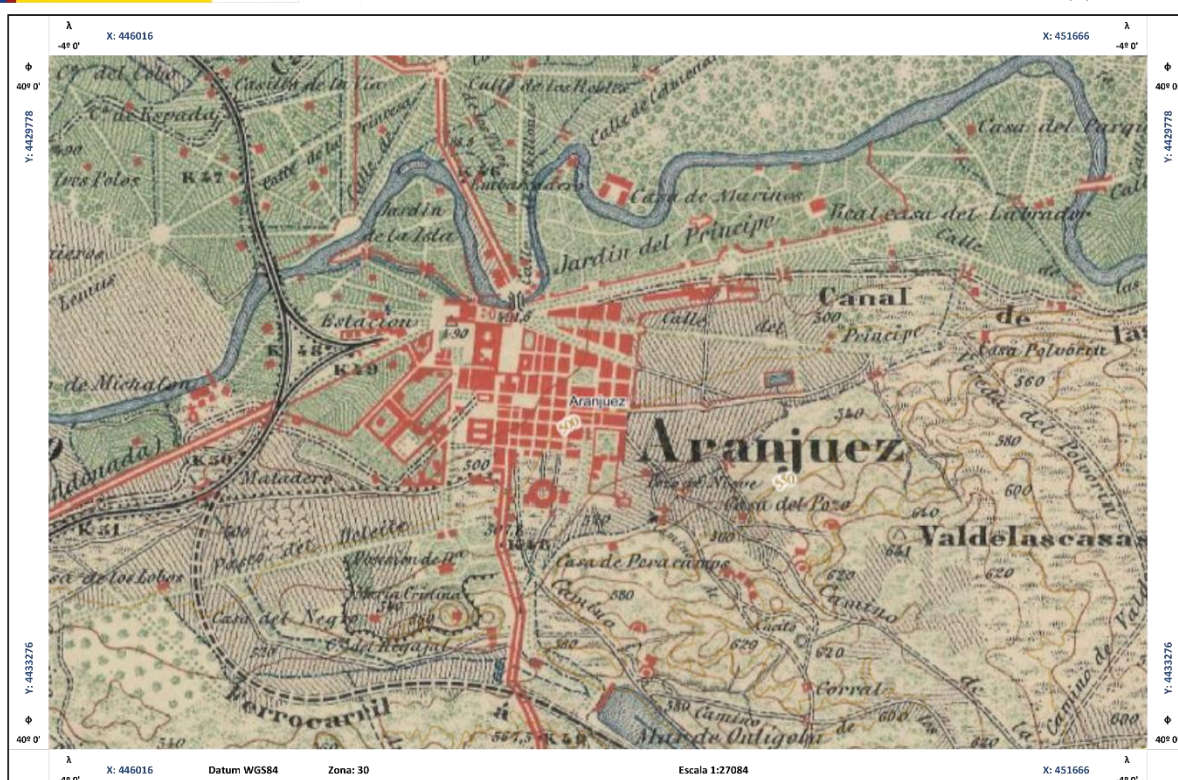


Fig 85: Topographic Archive - Planimetry

Source: Nacional, Instituto Geográfico. “Comparador Mapas Del IGN CNIG.” Comparador de Mapas Del IGN CNIG, www.ign.es/web/mapasantiguos/index.html#ayuda.

Planimetries are handwritten documents made between 1870 and 1950, at a scale of 1:25,000, which contain planimetric information and are the works prior to the realization of the National Topographic Map (MTN).

Fig 86: MTN50 1st edition

Source: Nacional, Instituto Geográfico. “Comparador Mapas Del IGN CNIG.” Comparador de Mapas Del IGN CNIG, www.ign.es/web/mapasantiguos/index.html#ayuda.

MTN minutas 1: 50,000: were made between 1915 and 1960, at a scale of 1: 25,000, but with the extension of a 50,000 sheet. They are National Topographic Maps. On the online sources, there is an opportunity to make comparison among the MTN from different periods and scales as given below. This method is making easier to see the changes through the different periods instantly on landscapes and architectural features of the Palace.

Fig 87: Comparison among different MTN³⁰ and Current Ortographic Aerial Photo /Scale: 1/17 000

Source: Nacional, Instituto Geográfico. “Comparador Mapas Del IGN CNIG.” Comparador de Mapas Del IGN CNIG, www.ign.es/web/mapasantiguos/index.html#ayuda

³⁰ MTN50 1st Edition – MTN25 1st Edition – PNOA Actual (Plan Nacional de Ortografía Aérea) – MTN Actual

Except for the sources of government, there are studies held by universities to enlighten the historical changes on Aranjuez through the centuries. One of them is “Urban and landscape changes through historical maps: The Real Sitio of Aranjuez (1775–2005), A Case Study” from the Polytechnic University of Madrid and the University of Almería which granted as a result of the Call for Proposals for Research Grants under the National Scientific Research, Development and Technological Innovation Plan, financed by the Spanish Ministry of Education and Science.

To determine the evolution of the territory over time, they compared the historical maps and contemporary maps. The method used was “georectification” to compare historical maps with current orthophotos. During the studies, the main historical sources were the 1775 Domingo de Aguirre map, which shows the full extent of the royal site for the first time, and the 1835 General Town Plan, which is the most characteristic of available 19th-century maps, as it displays the consolidated historical town.



Fig 88: Raster of Topografía del Real Sitio de Aranjuez por D. Domingo de Aguirre 1775 (sheet 10 and part of sheet 14)

Source: San-Antonio-Gómez, C., et al. “Urban and Landscape Changes through Historical Maps: The Real Sitio of Aranjuez (1775–2005), a Case Study.” Page: 48

Moreover, the above-mentioned "comparison of historical and current maps" and revealing the changes that have taken place over the centuries are similar to the workshop described in the second part of this research paper and conducted by Politecnico di Torino – DIST and Delft University of Technology. The comparison of historical sources with today's situation and the representation of the changes determined as a result of color and linear coding is also a method frequently used in Borgo Cornalese study. For example, the changes occurred on the historical landscape especially with the railway construction and wood industry surrounding the Royal Palace of Aranjuez were illustrated as below in the study;

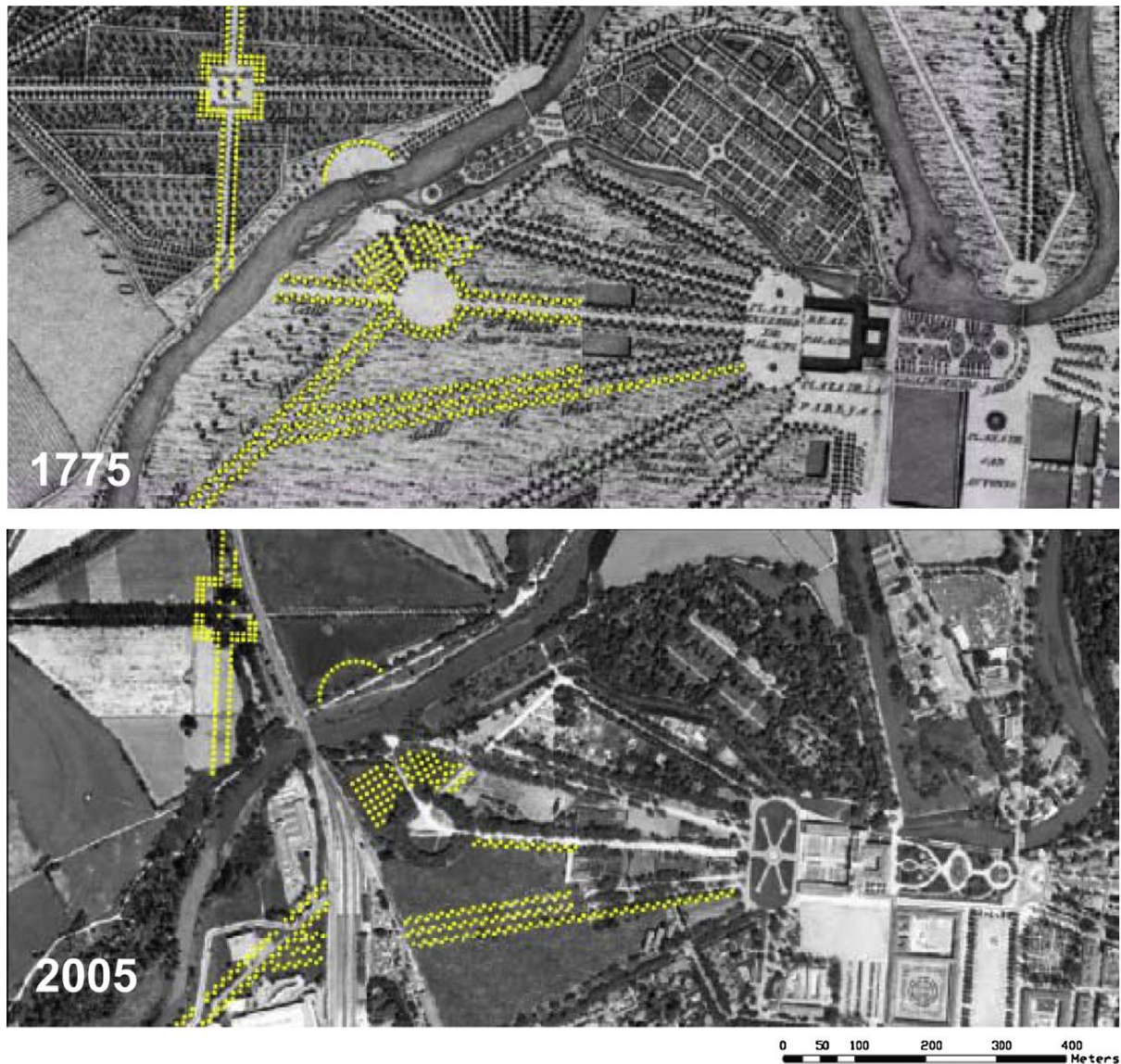


Fig 89: The changes on the landscape lay out by the infrastructural activities and wood industry

Source: C.San-Antonio-GómezC.VelillaF.Manzano-Agugliaro, 2014

As a result of this comprehensive study, the changes that occurred in the historical landscape of the area were determined together with their reasons and the steps to be taken in order to restore the old texture of the area were specified one by one. The methodology used in the study, will aid in the development of long-range management strategies and facilitate the

assessment of threats posed by anthropogenic activities and environmental change to preserve the landscape heritage of Aranjuez.

7.3.5 UNESCO Criteria and Management of Aranjuez Cultural Landscape

Aranjuez Cultural Landscape is a complex entity of historic relationships between nature and human activity which witnesses to various cultural exchanges over a span of time. This complex contains human interaction with nature, royal history of Spain, forest landscape, the delicately modulated architecture of its palatial buildings, 18th-century French-style Baroque garden and so.

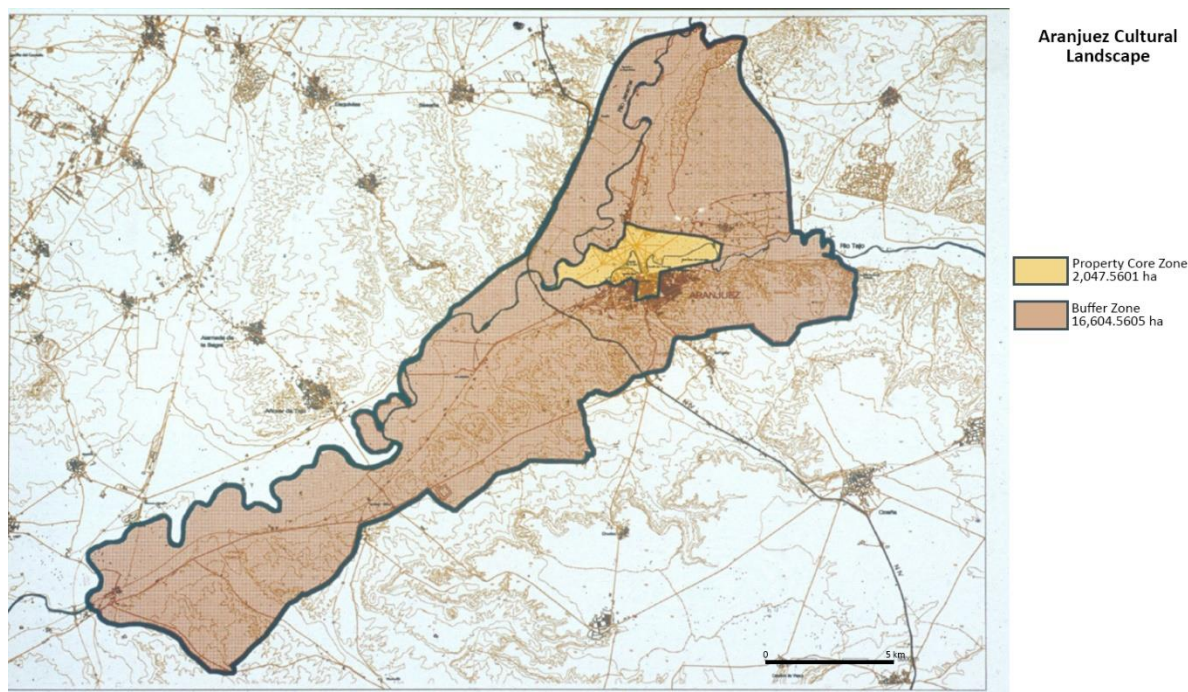


Fig 90: The buffer zone of the estate limits

Source: Unesco.org

There are 2 criteria that Aranjuez Cultural Landscape fulfills;

Criterion (ii): Aranjuez represents the coming together of diverse cultural influences to create a cultural landscape that had a formative influence on further developments in this field.

Criterion (iv): The complex designed cultural landscape of Aranjuez, derived from a variety of sources, marks a seminal stage in the development of landscape design.

i. Integrity

The elements constitutes the Aranjuez Cultural Landscape have survived remarkably well. This complex contains the irrigation and hydraulic systems, the vegetable and ornamental gardens, the tree-lined streets and squares, the Royal Palace, and the historic centre.

All the measures for the conservation the elements and attributes guarantee the ntegrity of the property which most of them are still used for their original purpose. For example the hydraulic and irrigation system are still in use, while also the tree-lined streets, gardens and the Palace itself are open to public use with necessary restrictions.

The conservation the complex dated back to the patronage of the Spanish Crown. Lastly, the property is not under any remarkable threat or natural risk.

ii. Authenticity

From its origins in the 16th century, the Aranjuez Cultural Landscape is a significant example from historical, aesthetic and spatial point of view. It has been a unique convergence of ideas, aesthetics, and science at different times throughout history. Even if the property lost its role of royal residence, it has retained its authenticity to a considerable degree in terms of place and design.

iii. Protection and management requirements

The Aranjuez Cultural Landscape has a sufficient arrangement of preservation and management with a strong regulation base that secures its singular components. The first time Aranjuez was declared to be of Historic Value was in 1983. The 1996 Town Planning Act ensure guidelines and regulations for future developments that need to be coherent and respectful to the conservation of the site.

After the loss of the Crown's influence, some of the elements of the property are regulated by Patrimonio Nacional (Spanish National Heritage Board). The management plan prescribes different management levels for the implementation of the technical part of the plan: regulations, ownership and the responsibilities of each of the institutions that manage the conservation of the site (Aranjuez town council, Autonomous Community of Madrid, and central government).

8. General Comparisons Among The Case Studies

Primarily, all the examples chosen for this research are located in Western European countries as Italy, France and Spain. Therefore, they have many features in common in terms of their architectural designs, common legal regulations that must be followed in the management and protection of these areas although there are different approaches on their landscape assessments and analyses,

Although countries have their own national regulations and methods in landscape studies and management plans, there are international binding regulations that bring these three European countries together and they must comply. One of these international regulators is UNESCO. Since, all three examples are listed on Unesco World Heritage Sites, their conservation and management plans must conform with Unesco criteria. The other binding document on the landscape management plans and the conservation of these sites is the European Landscape Convention. Mostly, these documents are guiding tools for the management processes of these heritage sites.

Second, all the examples can be classified as aristocratic estates which are located among rural sites with big royal structures. Even though there are urban peripheries surrounding them, still the design of these estates is principally in relation to their rural environments such as their perspectives and panoramic sites. Besides, their management plans are concerned about these rural sites and agricultural production. For example, the northern part of the Palace of Aranjuez

which were potager gardens is now agricultural lands, where the same transformation of the lands can be found in Govone and Versailles. Another direct example of the management of agricultural production related to the royal estate is the one in the Plateau of Versailles. The Patrimonial Association of the Plaine de Versailles et du Plateau des Alluets (APPVPA) has participated in rural development since its creation in 2004. And since 2009, it is a part of LEADER which is a European Fund for rural development and production.

Third, the architectural affinity of the estates are making them comparable in such sense. Their large-scale gardens designed with fine details made them the most prominent examples in this area. These gardens have harmonizing relation with the natural landscape also in terms of perspectives of the palaces. When evaluated in terms of building materials, common materials stand out. For example; the palace of Aranjuez which was built as a spring and summer residence for the royal family were constructed mainly with Colmenar limestone, which is a local material, and red brick. On the other hand, the Palace of Versailles which the first idea was a hunting lodge, was built with Parisian limestone, marble and slate. Lastly, the Castle of Govone which was firstly a medieval castle with a fortress, was constructed with brick and marble.

Besides, the gardens of the Royal Palace of Aranjuez are among the most important in Spain. The fountains which are making the gardens famous as “The fountain of Hercules and the Hydra” or “Venus” are coming from Italy. On the other hand, the town of Aranjuez was only habited by only those belonging to the royal household. Therefore, a town adjacent to the palace was laid out on a perfectly regular plan designed and executed by Bonavia. A triple avenue extends the axis of the gardens in a design resembling the trident at Versailles as seen from the figure below.

7.A Common UNESCO Criteria of the Case Studies

To clarify the common features of case studies, it is better to understand how they are classified according to the UNESCO World Heritage Criteria. The table below shows the common and different criteria among examples.

	1	2	3	4	5	6	7	8	9	10
Castle of Govone	●	●		●	●					
Palace and Park of Versailles	●	●				●				
Aranjuez Cultural Landscape		●		●						

Fig 91: UNESCO Criteria Table

Source: Made by the author

Criteria I: To represent a masterpiece of human creative genius;

Criteria II: To exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning, or landscape design;

Criteria III: To bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living, or which has disappeared;

Criteria IV: To be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

Criteria V: To be an outstanding example of a traditional settlements, land use, sea use represents a culture), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;

Criteria VI: To be directly or tangibly associated with events, living traditions, ideas, beliefs, artistic and literary works of outstanding universal significance;

Criteria VII: 1. To contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;

Criteria VIII: To be outstanding examples representing major stages of earth's history including the record of life, on-going geological processes in the development of landforms or significant geomorphic features;

Criteria IX: To be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;

Criteria X: To contain the most important and significant natural habitats for in-situ conservation of biological diversity.

The criteria of UNESCO are listed above. The first 6 criteria are mostly focused on cultural and historical assets while the last 4 criteria are basically focused on natural-ecological and environmental heritages. The 2nd criteria, which is about to exhibit an important interchange of human values as architecture, technology, town planning or landscape design, is shared by all the chosen case studies.

Considering the Palace of Versailles and the Castle of Govone, the 1st criteria is the common one while The Residences of Savoy are examples of vibrant Baroque and Late Baroque art and architecture, and the Palace of Versailles constitutes a unique artistic realisation by virtue of its quality, originality and size. On the other hand, The Royal Palace of Aranjuez has a complex design of cultural landscape which was derived from a variety of sources and contribute to the development of the landscape design which also Castle of Govone is sharing the same features. But above all of other architectural features of the Royal Palace of Aranjuez, the property is inscribed in the category of Cultural Landscape as a place where nature and the intervention of man are combined, adjusting to the UNESCO definition by which the result of the action of the development of human activities is considered cultural landscape in a specific territory and whose identifying components are the natural substrate (orography, soil, vegetation, water), human action (modification and / or alteration of natural elements and buildings for a specific purpose) and the activity carried out (component functional in relation to the economy, ways of life, beliefs, culture, etc.). It can be said that, the landscape and culture aspects of the property predominate the other aspects.

9. CONCLUSION

Interpretation is communication which is specifically designed to expose the principal meaning to readers through first-hand involvement with an object, a landscape, a natural feature, or a site. It is based on facts, but reveals what an object, place, feature or event means and why it matters or why it is relevant (Chesapeake Bay Office, 2010). Especially the issue of transferring landscape studies is the main focus of this research. This is not only about sharing the components of a landscape, but also creating a meaningful whole and presenting the analyzes to different users and transferring the methodology used while doing these analyzes to other studies. For this purpose, a certain category of analytical keys should be established, and these categories should represent a common language as in the Anglo-Saxon examples. The lack of a methodology that can be transferred between different researches and brings together historical landscape studies at a common point draws attention. As a result of this research, an answer to the question of "how to interpret historical landscape assets in a heritage sites" was sought and a proposal for a group of categories as stated below with the usability and transferability of these categories were discussed.

First, planning tools and resource documents selected for comparison from case study countries and analytical components used in these resources are shown below. Documents selected from each country have similarities with each other in terms of scale and application logic. Among these documents, the analytical components used in research on heritage landscape are more or less overlapping with each other. Although they are often expressed in different words, mostly the analysis of the interrelated landscape elements has been emphasized.

It can be seen from the figure shows the components that there are exact common analytical keys used in all three case studies such as perspective & panoramic views, urban systems and historical settlements, historical production areas and rural sites, general composition of the sites. The point of emphasis on perspective in all of the selected samples is due to the similarity of the dates and usage of these residences. Since they are royal residences each surrounded by rural areas and built in close historical periods, they have the similar architectural language and are in relation to the environmental assets around them. Most of the time, this method was preferred as an indicator of the eternity of royal families' power and to show their dominance over the large settlements and agricultural lands around the residences. Another critical point is that, these residences were leisure places in the beginning of their construction as an idea. Some of them were hunting lodge and some other were leisure residence to stay for a specific period of a year. Therefore, their relationship with the rurality and environment had been underlined in their design process.

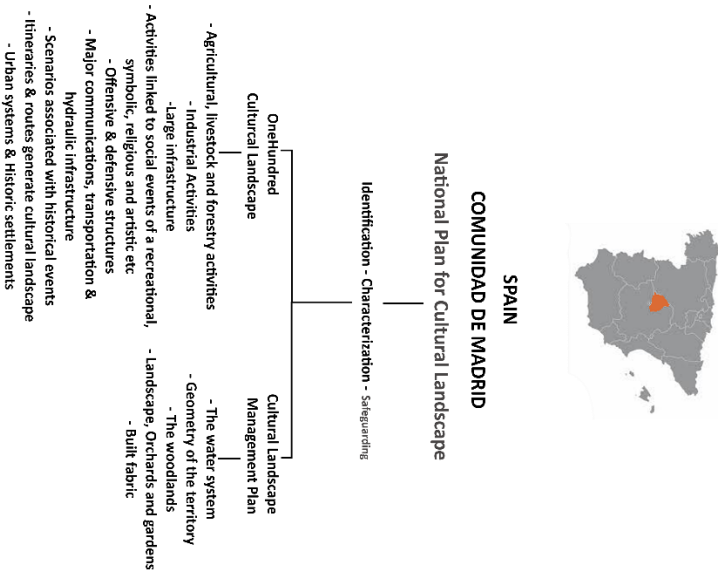
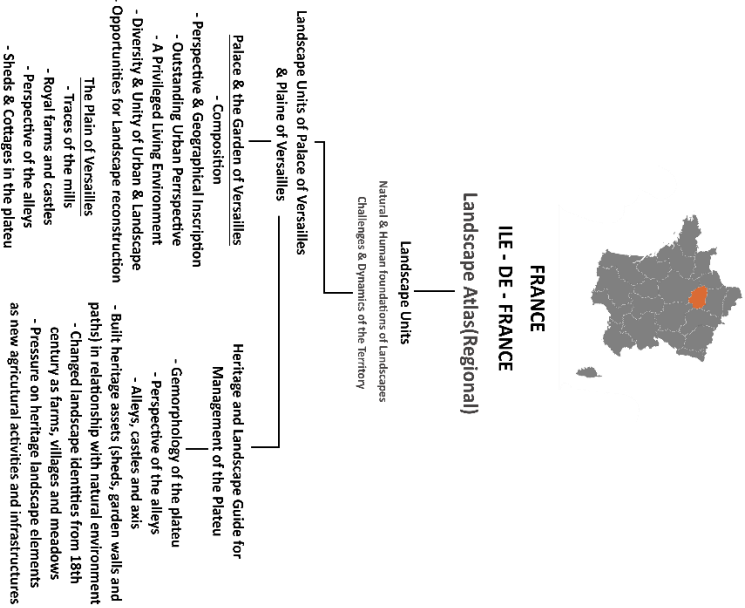
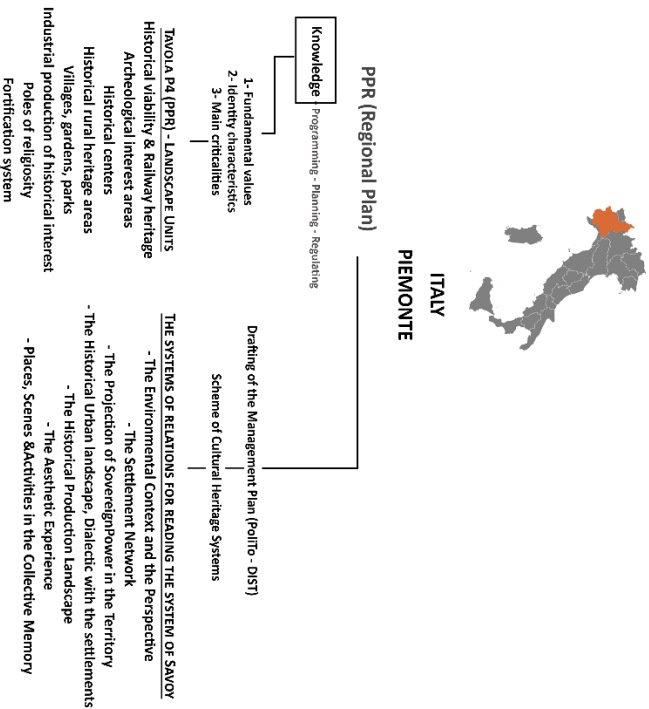


Fig 92: The cartographic sources and planning tools chosen from the sample countries and the interpretive categories shown in these documents in terms of landscape analyses
Source: Made by the author

As the result of this research, the historical values on heritage landscape categories produced as a result of this study are given below and their usability and transferability to other studies are discussed. The main logic in the creation of these categories is to generate a method or approach that could be used to analyze the historical landscape areas and the obtained analysis to help the management of these sites in order to increase their resilience and to ensure their sustainable development while protecting them. To increase the resilience of the sites, the priority is to analyze the heritage values owned and to identify all natural or unnatural factors that threaten these values. To enhance these categories, each component should be divided into lower classes in accordance with the concerned interests and the character of the site.

First of all, historical landscape analyses or in other word characterisation as in Anglo-Saxon countries, is mostly dealing with the present-day landscape but it requires to understand and representation of a place's history. Therefore, the time-depth of the landscape and the assessment of the changes on the in the present situation is important. These changes are considered as continuous so they cannot be assessed by comparing limited time frames of the landscape in question. Characterization esteems that landscape has always been dynamic, and the human intervene on the site is non-negligible, especially for heritage landscapes. Thus, the assessment should be interested in the area but not the point data which means the relationship among the categories and the analytical keys should be observed meaningfully. All this inferences brought the topic to create a significant body of relationships based on the history of the landscape which connects the natural or semi-natural (woodlands, pastures etc), archaeological (historical settlements, mounds etc), ecological, cultural and historical features of the site.

Another key point of the interpretation of the historical values on heritage landscapes should be understandable by users and the aim must be design a spatial framework that involves people's views alongside more expert views. In this context, the language used in the resulting product should be so simple and understandable that users in different fields can benefit from the required scenarios without confusion.

The final product should be GIS-supported which means the analysis could be shared on an open source that contains the details of each analytical key. GIS based cartographic sources give opportunities to work on different study fields and scenarios by using the same data which the data could be classified differently based on studies. This is why that the proposed categories below sometimes contain similar analytical keys under different titles because these keys could have different meanings for several scenarios. Also, these keys can be used by different scale studies which again the data they contain could be useful for different decision-making processes, by reason that one of the main purposes of these assessments are to be used in management and decision-making processes of heritage landscapes.

To benefit from these analyses and interpretations, first its necessary to define the field of attention which does not mean considering single elements as palaces, royal residences or archaeological elements as set of built architectures, gardens etc. The decided dimension of the scale corresponds to the assumption of attention for the relationships between the objects and phenomena of the territory from a dynamic view.

<u>SETTLEMENT MORPHOLOGY</u> HISTORICAL SETTLEMENT NETWORK RELATION AMONG THE HISTORICAL SETTLEMENTS HISTORIC URBAN CORES THE PERIODS OF THE SETTLEMENTS BORDER RELATIONS OF THE HISTORICAL SETTLEMENTS VISUAL RELATIONSHIP BETWEEN SETTLEMENTS AND THE LANDSCAPE PROPERTY BORDERS URBAN CONFIGURATIONS OF THE HISTORIC SETTLEMENTS <u>RURAL SETTLEMENT</u> HUNTING LODGE FARMSTEAD COUNTRYSIDE HOUSING FARMHOUSES VILLAGE	<u>HISTORICAL - CULTURAL COMPONENTS</u> RELIGIOUS USES & STRUCTURES PLACE OF WORSHIP CATHEDRAL CHAPEL CHURCH MOSQUE SYNAGOGUE ANY RELIGIOUS STRUCTURE VILLAS ROMAN VILLAS (RUSTICA-URBANA) 18TH-19TH CENTURY VILLAS GARDENS & ORCHARDS VINEYARDS CHARACTERIZING COMPONENTS OF LANDSCAPE	<u>WATER SYSTEM MORPHOLOGY</u> RIVERS LAKES CANALS CHANNELS BRIDGES DAMS MERES CREEKS MILL WATER SYSTEM ANY OTHER HISTORICAL IRRIGATION SYSTEM & HYDRAULIC ELEMENTS
<u>PERCEPTIVE COMPONENTS</u> VIEW POINTS - BELVEDERE SCENIC ROUTES MAJOR OPENINGS FOR VISUAL ASSETS PERSPECTIVE VIEWS CHARACTERIZING ELEMENTS OF THE LANDSCAPE	<u>ENVIRONMENTAL CONTEXT</u> WOODEN AREAS MEADOW AREAS & ELEMENTS OF SPECIFIC GEOMORPHOLOGICAL INTEREST WITH VISUAL RELEVANCE MOUNTAINS & HILLS PASTURES	<u>RURAL HERITAGE</u> AGRICULTURAL PRODUCTION LANDS VINEYARDS ARABLE LANDS MEADOWS RURAL BUILT STRUCTURES MILLS BARNs FARMHOUSES HISTORICAL IRRIGATION SYSTEM ELEMENTS RURAL AREAS WITH SPECIFIC LANDSCAPE INTERESTS PARCELLATION OF THE AGRICULTURAL LANDS TRACES OF FORMER AGRICULTURAL ACTIVITIES ON THE LAND
<u>COMMUNICATION & TRANSPORTATION INFRASTRUCTURE</u> ROAD NETWORK EARTH ROADS & PATHS MOTORWAYS TREE ALIGNED ALLEYS AIR TRANSPORT RAILWAYS RAILWAY STATION RAILWAY BRIDGE WATER TRANSPORT CANAL ANCHORAGE	<u>MILITARY COMPONENTS</u> DEFENSIVE CITY WALLS CASTLES FORTIFIED TOWERS ANY HISTORICAL MILITARY USES (CASEMATES, TUNNELS, COUNTER SCARPS...) BATTLEFIELDS HILLFORT	<u>COLLECTIVE MEMORY</u> HISTORICAL CARTOGRAPHY HISTORICAL DRAWINGS & SKETCHES LITERARY WORKS INTERVIEWS & COMMENTS OF LOCAL PEOPLE
<u>HISTORICAL INDUSTRIAL PRODUCTION COMPONENTS</u> MINES BRICK YARDS QUARRIES MILLS OIL REFINERIES STEEL WORKS SHIP BUILDING AREAS	<u>GEOMETRY OF LANDSCAPE</u> FRAGMENTATION OF LANDSCAPE DESIGN PRINCIPALS OF FORMER LANDSCAPE GENERAL CONCEPT OF RELATION BETWEEN LANDSCAPE ELEMENTS SIZE & SHAPE IN TERMS OF; BIODIVERSITY ECOLOGICAL FUNCTIONS ARCHITECTURAL CONTEXT	<u>LAND USES</u> URBAN CORE URBAN GROWTH BOUNDARIES RURAL USES PRODUCTION AREAS COMMERCIAL NATURAL SOURCES LEISURE AREAS TRANSPORT

Fig 93: The proposed and open the improvement list of categories

Source: Made by the author

10. REFERENCES

- Bastian, O., Walz, U. and Decker, A. (2013) ‘Historical landscape elements: Part of our cultural heritage—a methodological study from Saxony’, *Environmental Science and Engineering (Subseries: Environmental Science)*, (9783642127243), pp. 441–459. doi: 10.1007/978-3-642-12725-0_31.
- Cassatella, C. (2018) ‘The interpretation of landscape structure and the plan as a knowledge resource’, *The interpretation of landscape structure and the plan as a knowledge resource*.
- Cassatella, C. and Peano, A. (eds) (2013) *Landscape Indicators Assessing and Monitoring Landscape Quality, Journal of Chemical Information and Modeling*. Springer.
- Chamussy, Y. and Villedieu, J. P. (1984) *Le Plan De Paysage, Revue Hospitaliere de France*. Île-de-France.
- Cosme, A. M. *et al.* (no date) ‘El Plan Nacional de Paisaje Cultural y el Convenio Europeo del Paisaje Maguelonne’.
- Council of Europe (2000) *Explanatory Report to the European Landscape Convention, European Landscape Convention*.
- Court, A. (2008) ‘Landscape Character Network Workshop The European Landscape Convention and its relevance to land use and landscape planning’, (January).
- Crowther, S. and Clarke, V. (2007) ‘Worcestershire {Historic} {Landscape} {Characterisation} ({HLC})’, *Archaeology Data Service*, (August). Available at: http://archaeologydataservice.ac.uk/archives/view/worcestershire_hlc_2014/.
- D’Île-de-France, P. de la R. (2014) *Les sites classés en Île-de-France Direction régionale et interdépartementale de l’environnement et de l’énergie d’Île-de-France*.
- DRIEE (2011) *Guide Patrimonial Et Paysager Pour La Gestion Du Site Classe De La Plaine De Versailles*.
- Dyson-Bruce, L. (2003) ‘Historic Landscape Assessment: The East of England Experience Paper Product to GIS Delivery’, *Journal of GIS in Archaeology*, I, pp. 61–72.
- English Heritage (2010) *Heritage Counts 2009, Structural Survey*. doi: 10.1108/ss.2004.11022aae.002.
- Foard, G. and Rippon, S. (1998) ‘Managing the historic landscape: The register of landscapes of outstanding historic interest in wales’, *Landscape History*, 20(1), pp. 99–103. doi: 10.1080/01433768.1998.10594505.
- Fowler, P. and Centre, W. H. (2002) ‘World heritage cultural landscapes, 1992–2002: A review and prospect’, *Cultural landscapes: The challenges of conservation*, (November), p. 16.
- Gomez and Arquitectos, A. (2016) ‘Paisaje Cultural de Aranjuez 2001’, *Plan de Gestion del*

Paisaje Cultural de Aranjuez.

- Gray, R. (2016) 'Landscape Character Assessment', *Heritage*, (March), p. 90.
- Hafstein, V. T. (2012) 'Cultural Heritage', *A Companion to Folklore*, pp. 500–519. doi: 10.1002/9781118379936.ch26.
- Hanušín, J., Cebecauerová, M. and Huba, M. (2014) 'HISTORICAL CULTURAL LANDSCAPES – PROBLEMS AND REFLECTION (Sub- Little-Carpathian region, Slovakia)', *Vital Landscapes*, (January), p. 18.
- Institut d'Aménagement et d'Urbanisme de la Région d'Île-de-France (2010) *Unités paysagères de la région d'Île-de-France*. Île-de-France, France.
- Lewis, J. M. (1962) 'Medieval Landscapes and Estates'.
- López, D. J. (2019) *Análisis del Plan Nacional de Paisaje Cultural - Instrumento de gestión y debate*. Universidad Complutense de Madrid y Universidad Politécnica de Madrid.
- M. Volpiano et al. (2014a) *Il paesaggio delle Residenze Sabaude Volume I. Allegato Prospettive di valorizzazione del paesaggio delle Residenze. I siti*.
- M. Volpiano et al. (2014b) *Il paesaggio delle Residenze Sabaude Volume I*.
- M. Volpiano et al. (2014c) *Il paesaggio delle Residenze Sabaude Volume II*.
- Magdalena Merlos (2011) 'Aranjuez Cultural Landscape and World Heritage: seduction, statement and commitment', *Aranjuez Cultural Landscape and World Heritage: seduction, statement and commitment*. Available at: <https://www.researchgate.net/publication/283624887>.
- Mauro Volpiano and Longhi, A. (no date) 'Historical Research as a tool for planning: perspectives and issues about the assessment of the cultural landscapes', in Bandecchi & Vivaldi (ed.) *The European Landscape Convention in research perspective*, pp. 124–129.
- Patrimonio Nacional (2003) *EL PALACIO REAL DE ARANJUEZ, CUADERNOS DE RESTAURACIÓN DE IBERDROLA VII*.
- Piano, I. et al. (2005) 'Piano Paesaggistico Regionale'.
- Plan, N. and Cultural, F. O. R. (no date) 'National plan for cultural landscape 1. 2.', pp. 1–77.
- Plan, T. L. (2018) 'Il Piano paesaggistico', (April).
- Politecnico Torino (2018) 'POLITECNICO DI TORINO Repository ISTITUZIONALE Inclusive / exclusive cities', (August), pp. 8–472.
- Regione Piemonte (2012) *Piano Paesaggistico Regionale, Piano Paesaggistico Regionale*.
- Rippon, S. (2007) 'Historic Landscape Characterisation: Its Role in Contemporary British Archaeology and Landscape History', *Landscapes*, 8(2), pp. 1–14. doi: 10.1179/lan.2007.8.2.1.

Rippon, S. J. (2004) 'Historic Landscape Analysis: Deciphering the countryside [bibliography]', *Historic Landscape Analysis: Deciphering the countryside*, (16), pp. 1–13. Available at: [https://eric.exeter.ac.uk/repository/handle/10036/32872%5Cnhttp://www.britarch.ac.uk/pubs/%5Cnhttp://www.historic-cornwall.org.uk/%5Cnhttps://eric.exeter.ac.uk/repository/bitstream/handle/10036/32872/CBA Hbk BIBLIOGRAPHY.pdf?sequence=4](https://eric.exeter.ac.uk/repository/handle/10036/32872%5Cnhttp://www.britarch.ac.uk/pubs/%5Cnhttp://www.historic-cornwall.org.uk/%5Cnhttps://eric.exeter.ac.uk/repository/bitstream/handle/10036/32872/CBA%5CnHbk%5CnBIBLIOGRAPHY.pdf?sequence=4).

Roggero, C., Longhi, A. and Lusso, E. (2006) 'Analyzing landscape structures through historical processes : experiences in northern Italy'.

San-Antonio-Gómez, C., Velilla, C. and Manzano-Agugliaro, F. (2014) 'Urban and landscape changes through historical maps: The Real Sitio of Aranjuez (1775-2005), a case study', *Computers, Environment and Urban Systems*, 44, pp. 47–58. doi: 10.1016/j.compenvurbsys.2013.12.001.

Scazzosi, L. (2004) 'Reading and assessing the landscape as cultural and historical heritage', *Landscape Research*, 29(4), pp. 335–355. doi: 10.1080/0142639042000288993.

Sergio Conti (2018) 'Landscape assets and economic valorization', *Landscape assets and economic valorization*.

Sowińska-Świerkosz, B. (2017) 'Review of cultural heritage indicators related to landscape: Types, categorisation schemes and their usefulness in quality assessment', *Ecological Indicators*, 81(December 2016), pp. 526–542. doi: 10.1016/j.ecolind.2017.06.029.

Schröder, Rob, et al. *Comparing Landscape Planning in England, Germany and the Netherlands*. Wageningen Environmental Research (Alterra), 2010.

Stephen Miles (2013) 'ROYAL AND ARISTOCRATIC LANDSCAPES OF PLEASURE', in C. Gerrard and Gutierrez, A. (eds) *Oxford Handbook of Medieval Archaeology*. Oxford University Press, pp. 1689–1699.

Turner, S. (2018) 'Historic landscape characterisation', *Routledge Handbook of Landscape Character Assessment*, pp. 37–50. doi: 10.4324/9781315753423-3.

UNESCO (2019) 'UNESCO Thematic Indicators for Culture in the 2030 Agenda for Sustainable Development Analytical Report of the Consultation with the Member States, 2019', pp. 1–98.

Wascher, D. M. (2005) 'European Landscape Character Areas - Typologies, Cartography and Indicators for the Assessment of Sustainable Landscapes.', *European Landscape Character Assessment Initiative (ELCAI)*, p. 160. Available at: <http://edepot.wur.nl/1778>.

Wascher, D., Odell, S. and Smith, C. (no date) 'Comparing landscape planning in England , Germany and the Netherlands Policy contexts and three case study plans.'