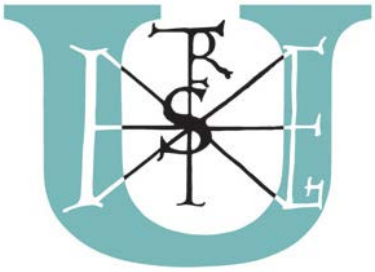

SZENT ISTVÁN UNIVERSITY

CONTEMPORARY WINE ARCHITECTURE IN VITICULTURAL LANDSCAPES

DOCTORAL DISSERTATION

HAREA OLGA

BUDAPEST

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The doctoral school of:

Name:	**SZENT ISTVÁN UNIVERSITY** **Landscape Architecture and Landscape Ecology**
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The applicant met the requirement of the PhD regulations of the Doctoral School of Szent István University and the thesis is accepted for the defence process.

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Approval of the Head of PhD School

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Approval of the Supervisor **Approval of the Supervisor**

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LIST OF ABBREVIATIONS

WH - World Heritage

OUV - Outstanding Universal Value

LCA - Landscape Character Assessment

HU - Hungary

AT - Austria

IT - Italy

DE - Germany

FR - France

PT - Portugal

CH - Switzerland

ES - Spain

SI - Slovenia

ha - hectares

m - meters

m^2 - square metres

mhl - million hectoliters

INTRODUCTION

Actuality and importance of the topic

> "*Architecture never exists in isolation. Every building has some connection to the buildings beside it, behind it, around the corner, or up the street, whether its architect intended it or not. And if there are no buildings near it, a building has a connection to its natural surroundings. […] The connection between architecture and surroundings is obvious and unshakeable.*"
>
> *(Goldberger 2009, 213)*

Communication between architecture and landscape has existed ever since humankind started to inhabit the land and began to live in caves using the nature's geological formations. With communication, I mean the symbiotic relationship, interaction, connection, dialogue between built forms and landscape/land/site - a mutually beneficial relationship where one informs the other and vice versa. The communication between built forms and its landscape has always been in progress and it has been developed over the years. The communication takes many forms: architecture associated with nature by using natural forms and motifs drawn from plants, minerals and crystals, referencing biology, enabling the environment, encouraging the space, minimizing the impact, embracing, enclosing, mimicking, engaging with, echoing the landscape, etc. The position uses arguments of the ethical, environmental, aesthetic, natural, evolutionary, minimal, and practical.

Only recently, due to an increased awareness of the planet's limited natural resources, the growth of tourism and the associated needs of regions to retain a sense of unique identity (Corner, 2006, p. 023), new technologies and with landscape architects exerting ever-greater influence on contemporary design (Betsky, 2002), emerged a new direction in contemporary architecture, where the landscape analogy gained a renewed attention. The architects, landscape architects, and artists around the world have been provoked to re-thinking the architecture's traditional relationship to the site/land/ground/landscape.

Thus, it has been developed an innovative design vocabulary that proposes an integration of architecture and landscape and blurring traditional distinctions between the built forms and their local environment. The designers designed architectural forms as a condition that match/blend with the surroundings, and which in some cases not only preserve the character of the site but treat it as a generative concept for the design. As Allen and McQuade summarizes the situation: "*Green roofs, artificial mountains, and geological forms; buildings that walk on or over; networks of ramps and warped surfaces; buildings that carve into the ground or landscape lifted high into the air: all these are commonplace in architecture today*" (Allen and McQuade, 2011, p.40).

Undoubtedly, the landscape became a constituting element of architecture, more than that, in some circumstances, they are considered as reciprocal entities. The landscape - uniquely capable of responding to temporal change, transformation, adaptation, and succession (Waldheim, 2006, p. 039) - not only affords a range of imaginative and metaphorical associations (Corner, 2006, p. 023) but as well transforms the concepts of form and space.

Generally, it is common that those interventions that seek to engage with existing landforms and or geology, topography, etc. do so in "*natural*" environmental conditions which appear to have been unaltered by human activity, and yet those are implemented as well as in the rural environment conditions characterized by the viticultural landscape (Fig. 1, 2). The landscape has been used as a metaphor or conceptual reference for an increasing number of wineries and extensions. This phenomenon seems to be a substantial innovation of wine architecture with an interesting potential for artistic, social and ecological gains.

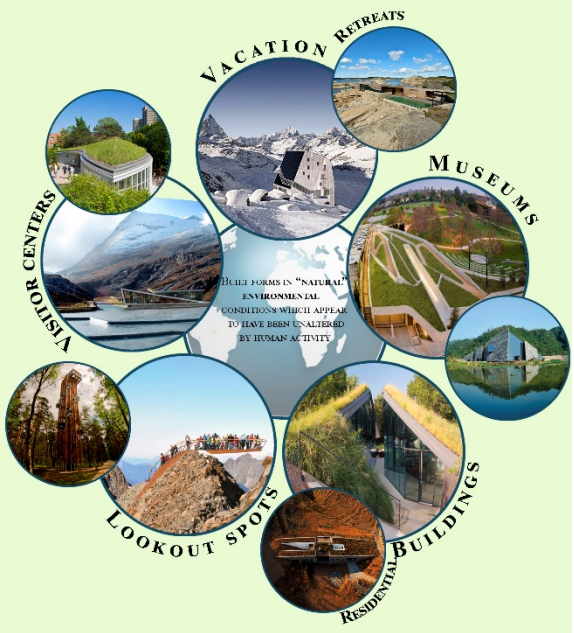

Fig. 1. Interventions in "natural" environmental conditions which appear to have been unaltered by human activity

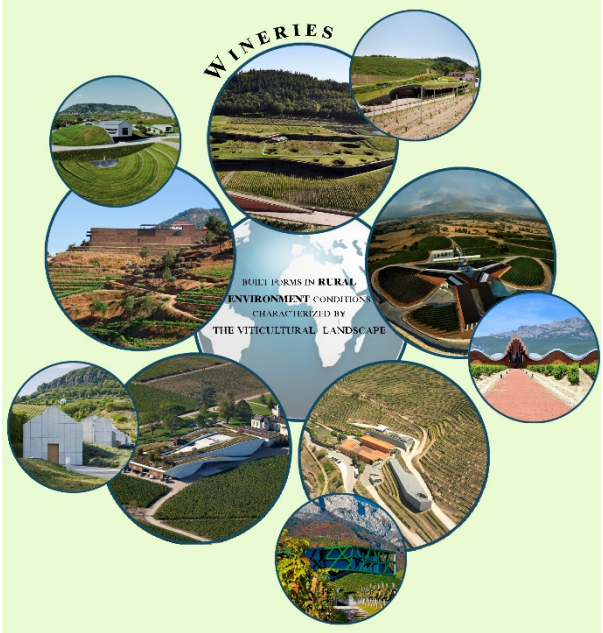

Fig.2. Interventions in rural environment conditions characterized by the viticultural landscape

In accordance with the above mentioned, this thesis proposes to reveal the unique European viticultural landscapes character in its communication to contemporary wine architecture. The reason that I chose this topic was twofold: firstly, the viticultural landscape is one of the most beautiful human-made landscape settings in the world. The vineyards have enriched the landscape since time immemorial giving countries their characteristics and order. Their geometric patterns and colorful varieties are a magical element of expressive landscapes (Bahna, 2013, p.20). In the Mediterranean and temperate climate regions, vineyards cover mountainous, hilly, coastal and floodplain areas. These unique landscapes, characterized by their history and

distinctive site characteristics, such as natural topography, soil quality, unique micro-climates, scenic vistas etc., represent one of the largest agro-ecosystem (Tonietto and Carbonneau, 2004), and they are the most important agricultural activity in terms of environmental impact and income (Raclot *et al.*, 2009). Wine production landscapes represent "*everyday landscapes*" (European Landscape Convention, art. 2) to which the collective imagery worldwide acknowledges such a high "*identity*" value (ELC, art. 5) that they have become emblematic of the culture of several European countries (Tassinari *et al.*, 2013, p. 230).

Secondly, the vineyards are a popular commission among architects - they represent one of the typologically most interesting architectural objects, set in a cultivated environment (Volf, 2013, p.18). Previously of peripheral importance, architecture has become increasingly significant, even central, to winemaking. The heightened interest in what has come to be called "*Wine Architecture*" now extends far beyond the limits of the profession (Woschek *et al.*, 2012, p.7). It plays an important role in promoting and sustaining the public's fascination with all things connected with wine. The wine has always contained a subtle interior, invisible and complex architecture. But, nowadays, wine architecture forms communication (alliance) with its context/territory in a more meaningful way. The viticultural landscapes are treated more than the backdrops for the built forms, they are treated as sites which not only delineates the conditions under which architectural forms must operate but as well provides inspiration for them. Natural elements, such as sun, land, stone, soil - the forces that contribute to the ripening of the wine - are presented in wine architecture to evoke a communication to nature.

The research problem: aim, objectives and questions

Exploration of the Research Problem

Fact 1: It is well-known that a new trend emerged in wine architecture around the millennia. Wine and architecture are two phenomena that have been existentially linked since their inception in the early days of civilization (Bahna, 2013, p. 21). As societies changed, gradually, the culture of wine has been redefining itself and types of buildings and their architecture have undergone transformations that have been a consequence of this evolution. The need to update old structures in order to improve production but also considering the additional value that a remarkable building can have for marketing and promotional purposes has led to the establishment of a relationship between architecture and wine. Architects are being challenged to rethink the winery as a bold contemporary expression of tradition and innovation, agriculture and technology, production and hospitality (Webb and Pfeiffer, 2005, p.6).

As a result, over the past two decades, there has been an explosion of creativity. The formal industrial buildings (wine cellars) became public buildings located in or close to the vineyards.

They serve as hotels, restaurants, shops, wine tasting places; for leisure, entertainment and for enjoying nature, experiencing the exceptional ambience and viticultural landscape. As a consequence, the wine architecture has reshaped its face, losing the traditional historical and rural features, to add more agricultural, business and brand-making one. This change was enhanced by the introduction of a new category within the UNESCO WH Sites: Cultural Landscape.

Fact 2: A new approach appeared also in landscape architecture around the millennia. The landscape is considered as a place of both power and resistance, a key element in the heritage process, a site as a retrieval of memory and cultural enrichment of place and time: as history and continuation of history, a site as a place for a social program and scenery.

Why is it important?

This situation is challenging if the two tendencies enforce or weakens each other if the new wineries enrich or only exploit the surrounding landscape.

What Is already known?

Wine architecture became fashionable, often designed by professionally highly commended architects, consequently it has a rich literature.

What Is not known?

New wineries haven't been analysed from the point of their relationship to landscape: an approach which takes into consideration not only the architectural intentions but also the landscape impact on the building.

Research objectives and questions

Despite of the recent tendencies in the fields of landscape architecture and architecture to be closer and closer, the architects and architectural reviewers often concentrate on the building performance (materials, shape, lines, contours, roof form and historic antecedents) and the landscape appears only as a background, totally or partially being ignored the landscape assessments such as natural features, land use and structure, culture, emotions and traditions.

- The main objective of the research is to introduce a new approach to the analysis, namely to analyze the wineries through prism of landscape approach, based on landscape assessment methods.
- The second important purpose of this study is to contrast and compare the generalized results of analysis with particularly offered solutions of investigated wineries.
- More than that, through a comparative assertiveness, synthesis of academic literature, case studies, planning documents, and other structural, methodological, and interpretive guidelines were provided modified criteria for examining the ever-

changing meanings and context of harmonious communication between wine architecture and its landscape.

- The last but not the least objective of present work is to provide a richer understanding of current state of wine architecture and offer a summary of "best practice" solutions, methods, elements which result in a harmonious co-existence of landscape and winery.

Based on case studies the aim of this paper is to answer to the following questions:

a) What kind of techniques do the designers use to fit the building into the landscape?

b) How does the landscape character influence the building?

Terminologies of the Research

Landscape

The term landscape, influenced by Dutch "*landschap*", German "*iandschaft*", and Danish "*landskab*" (Spirn, 1998, p.17) has gained various meanings between cultures and over the centuries, its perceived qualities have consistently related to landform, aesthetics, history, regional identity, rules and customs (Selman, 2012, p. 27). Even until these days, the landscape has a multitude of meanings and connotations, their interaction demonstrating the complexity of the term. According to Mőcsényi (1968) "*Landscape is nothing else but the controversial and therefore the dialectic unit of natural and social interactions. On the one hand, the landscape is the material life condition of the society; on the other hand, it carries visual and aesthetic qualities of the highest order. It is the objectified history of the human-nature interactions manifested in the material world formed by man. The landscape is an anthroposociocentric concept. Nature and society are a dichotomy mutually permeating each other and forming an inseparable unit. That is to say, landscape is humanized nature, human environment transformed from biosphere into noosphere to meet the needs of the society*" (Kertész, 2013, p.11). More official but not less evocative definition can be find in the European Landscape Convention (Council of Europe, 2000) which has defined landscapes as "*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*." Synergetic effect of these interactions has led to the development of heterogeneous, multifunctional cultural landscapes, which among their many important values and functions, are appreciated for allowing sustainable use of natural resources; serving as wildlife habitats; providing economic benefits, scenery and open spaces; and possessing cultural heritage (Pretty, 2011). Therefore, the above mentioned illustrates the fact that the term landscape is a holistic concept in which many human and natural factors find their integration - it is an indivisible whole possessing intimately connected form, function and meaning.

Cultural Landscape

Although, the notion itself of landscape is highly cultural, however, to express the human interaction with the environment and the presence of tangible and intangible cultural values in the landscape, has been added the term "*cultural.*" The first who formally used "*cultural landscape*" as an academic term is the geographer Otto Schlüter. In 1908, he argued that by defining geography as a Landschaftskunde (landscape science) this would give to geography a logical subject matter shared by no other discipline. Thus, he defined two forms of landscape: the *Urlandschaft* (transl. original "landscape") or landscape that existed before major human-induced changes and the *Kulturlandschaft* (transl. "cultural landscape") a landscape created by human culture. The most influential in developing and promoting the concept of "*cultural landscape*" is considered the American geographer of German origin Carl O. Sauer. In 1920, Sauer established the Berkeley School of geography where the concept of "*cultural landscape*" was central in the work of the school (Martin and James, 1981, p.177; Sauer, 1925). According to him "*The cultural landscape is fashioned out of the natural landscape by a culture group. Culture is the agent, the natural area is the medium, the cultural landscape is the result*" (Carl Sauer, 1925, p. 46).

Since Schlüter's first formal use of the term and Sauer's effective furthering of the idea, the concept of "*cultural landscape*" has been variously used, applied, argued, developed, refined within academia and adopted by various international bodies as a conservation category. The World Heritage Convention became the first international legal instrument to recognize and protect "*cultural landscapes*" at a global scale, taking in consideration the various expressions of the cultural interaction of people with their natural environment in every geo-cultural context.

Viticultural Landscape (or vineyard landscape or winescape or wine landscape)

The *viticultural landscape* is an area in which the dominant land use or indigenous vegetation consists of extensive grapevine crops, that are, vineyards; where specific wine culture has evolved, or where grapes constitute an important part of the local diet (Myga-Piątekurszula and Rahmonov, 2018, p. 69). It is a *cultural landscape* that responds to the definition given by the World Heritage Convention: "*a work by man and nature. May be either a garden or a park (aesthetic dimension) or a landscape relict (whose process of evolution has stopped) or live landscape marked by its history, or by an associative cultural landscape, a landscape that is associated with an element, a fact religious, cultural or artistic*" (Mănilă, 2012, p.56).

Wine Architecture or Architecture of Wine

The term "*Wine Architecture*" refers to the architecture of the wineries and buildings related to wine, either historical or contemporary ones. However, the term is widely used in the 21st-century, presenting the phenomenon of recent years in the world of winemaking - linking

contemporary architecture with new technologies. It refers to great works of art, “wine temples,” that go far beyond the classic work of storage and ageing of the wine, implementing state-of-the-art technology in their construction and production processes.

Research Structure: Theoretical overview of the proposed topic

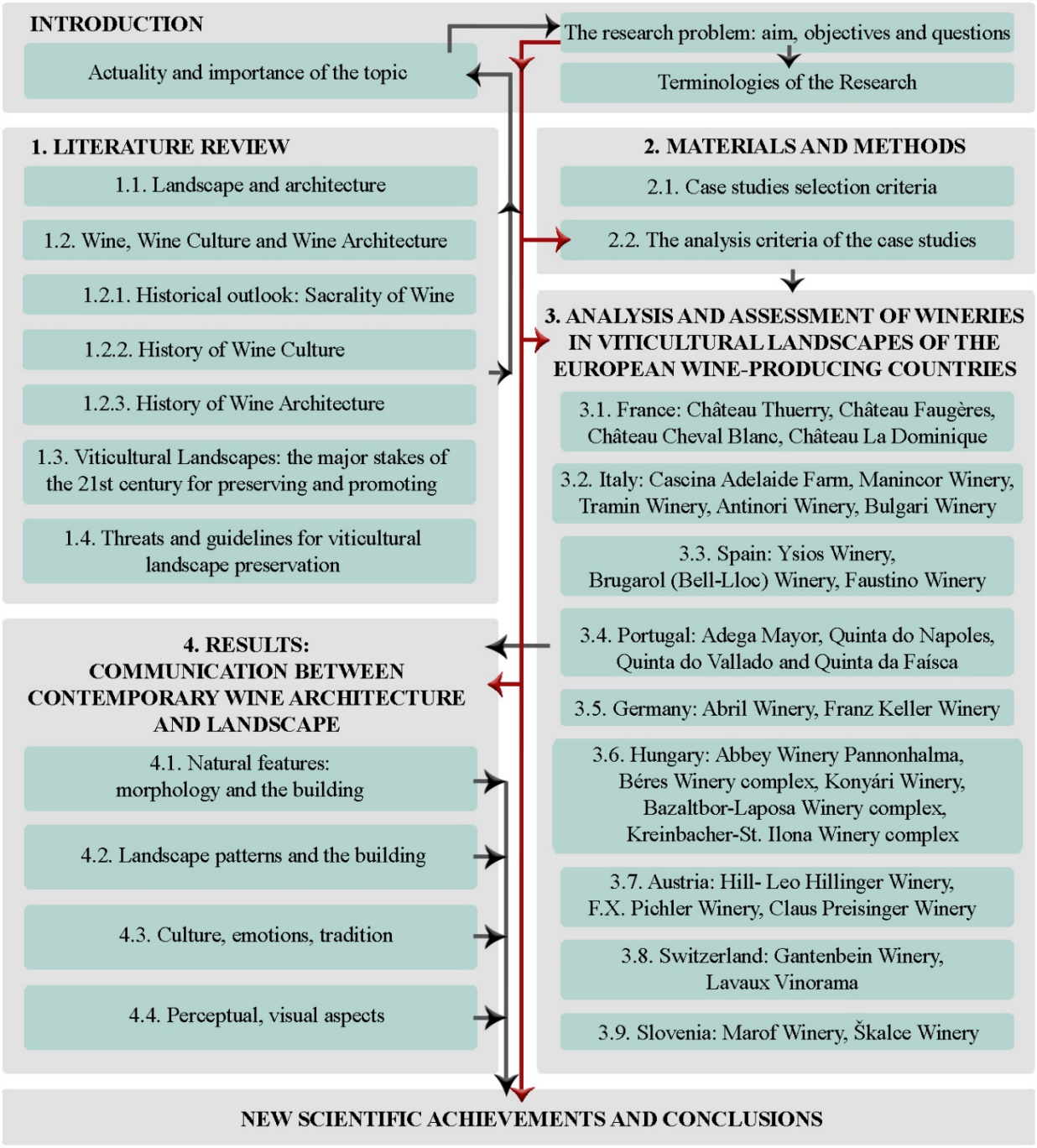

Fig. 3. Research Structure and connections between the chapters

The thesis encompasses Introduction, four Chapters, Results and Conclusions (Fig. 1). The introduction presents the actuality and importance of the thesis, set the research problem, notify objectives and questions. Following the introductory chapter, Chapter I is a literature review which describes the state - of - art of announced topic, provide the general relations between

architecture and landscape character assessment. Chapter II focus on the methodological framework directing the analyses and strategies described in the study. Chapter III outlines the definitions, development, and methodological and theoretical guidelines behind existing viticultural landscape character assessment. Historic mining of sites leaves extensive impacts on the landscape, both dramatic and subtle, that embody the multiple modes of preservation. Accepting this background is essential for understanding the values and criteria associated with harmonious incorporation of contemporary wine architecture into the landscape. Chapter IV is fully dedicated to analysis and assessment of wineries in viticultural landscapes illustrating how the concepts discussed in Chapter III apply to particular building forms in existing landscape. Realizing where building forms ultimately fit the surrounding landscape, in Results is suggested how to incorporate cultural landscape values into present preservation practices. The potential outcome of this investigation will help to establish new criteria for evaluating of wineries and viticultural landscapes. Finally, general deductions are summarized in Conclusions. Here is settled that in order to categorize or design the communication between wine architecture and landscape the architects, must understand the cultural meanings of the landscape. This chapter concludes that they need to identify individual people’s pre-existing landscape values and the nature of their landscape.

1. LITERATURE REVIEW

1.1. Landscape and architecture

> *"Architecture today cannot concern itself only with that one set of structures that happen to stand upright and be hollow "buildings" in the conventional sense. It must concern itself with all man-made elements that form our environments: with roads and highways, with signs and posters, with outdoor spaces as created by structures, and with cityscape and landscape.*"
>
> *Gruen (Cityscape-Landscape, 1955, p.18)*

In the opening years of the 21st century, the seemingly old-fashioned term "*landscape*" has curiously come back into vogue (Corner, 2006, p. 23), occupying a prominent place in each specialized area of physical design, such as architecture, landscape architecture, and urban design and planning.

Generally, in the field of architecture, the landscape is largely regarded as a natural backdrop for the built forms. This trend was set down during the so-called Modernism period - an era of abundant and cheap fossil fuels. In this period, many buildings were built far from the concept of "an alliance with nature", the main attention was paid to the semantic aspects of architecture. Much of contemporary architecture still follows this trend. However, recently an entirely opposite trend has been adopted; landscape became an indispensable part of the architectural design system. Landscape theory has given to the architecture new frameworks to select and edit attributes of its site or region, and to create a *more meaningful dialogue with the broader cultural construct of the landscape* - as an evolving idealized space. This change was the result of the emergence in the late nineteenth century of a new disciplinary autonomy for landscape theory. This discourse in landscape completely changed the idea of the landscape itself from what Elizabeth Meyer described as a passive setting (or ground) for architecture - and James Corner characterized as a passive product of culture - into an active and strategic agent of culture (Swaffield, 2002). Furthermore, it was the engagement of landscape theory with the field of ecology and the "*aesthetics of sustainability*," that resulted in an evolution of the concept of landscape from its origins in painting into a field of dynamic systems (Laboy, 2016, p.74).

More and more often, the architects refer to specific formal and spatial aspects of landscapes to describe their designs and summarize them under the term "*landscape*" (Jauslin, 2010, p.162). Their works signal a shift of emphasis from the design of enclosed objects to the design and manipulation of larger surfaces. These also indicate a renewed interest in the concepts and techniques that were (though to be) proper to landscape design such as phenomena of process or temporal unfolding, "*registration*" promoting articulation, "*mapping*" as a survey technique (Leatherbarrow, 2004, p.5). The aims of these projects are to preserve, enhance and recover the

landscape resources. The potential benefits from the preservation of the landscapes are enormous. Landscapes provide economic, ecological, social, recreational, educational and scenic opportunities that help us understand ourselves as individuals, communities and as a nation.

Obviously, integrating architecture and landscape architecture is an important trend nowadays. However, it is important to mention, although more visible in the discourse now, the communication between landscape and architecture is not a recent development, buts in fact has been a part of the architectural practice for a long time. The landscape has provided a conceptual space for architecture for over a century. In this conceptual space, the discipline of architecture has engaged with theories of place, regional identity, nature and lately the ecological. (Laboy, 2016, p. 75). The book *Site Matters* (edited by Andrea Kahn and Carol Burns, 2005), is considered as the first significant effort at formalizing a theory for "*site*" as a conceptual structure in architecture. It provides a convincing array of historical documentation, representations, and persuasive argumentation in support of a complex and multivalent understanding of the topic of the "site" - a topic that design disciplines share and one that differentiates them from other fields. The theory of landscape urbanism, *The Landscape Urbanism Reader* (edited by the architect Charles Waldheim, 2006) brings together multiple disciplines in conceptualizing urbanism as landscape, and describing new forms of collaboration, what James Corner (2006) has referred to as hybrid forms of practice.

The communication between architecture and landscape as a phenomenon of contemporary architecture have been approached and illustrated in the books as *Landscrapers: Building with the Land* (edited by the architect Aaron Betsky, 2002), *Topographical Stories: Studies in Landscape and Architecture* (edited by the architect David Leatherbarrow, 2004), *Landform Building: Architecture's New Terrain* (edited by the architects Stan Allen and Marc McQuade, 2011). The titles of these books are sufficient to make their approach visible: *Landscapers: building with the land* (Betsky, 2002) gives a wide range of the most exciting, sensitive, and innovative buildings that seek to restore the land and architects that see their work as unfolding the land rather than hiding it. It does not concentrate only and therefore not deeply enough on the complete immersion of landscapes into buildings; rather, is concentrated on contextual dialectics and explores the different ways in which built forms *respond to*, *interact with*, become a *part of* and are *integrated into* the natural landscape. The most thoughtful piece, *Topographical Stories: Studies in Landscape and Architecture* (Leatherbarrow, 2004) circulates around many essential concepts in essayistic eloquence, but without the drawn out evidence of a compositional scheme, the text - however brilliant - is to be seen more as art criticism than a substantial analysis of architectural designs. David Leatherbarrow offers a new approach of thinking of landscape and architecture: "*landscape is important to architecture because attention to the materiality,*

spatiality, and temporality of terrain shows how alternatives to the pictorial approach can increase architecture's cultural content"; "*landscape provides a framework for architectural thought because it is inescapably ambient*" (Leatherbarrow, 2004, p.12). In his view, landscape and architecture are quite simply similar to each other - topography (theme, framework, place) is the topic that they hold in common. Considering both as mimetic arts, he redefines them as "*topographic arts*" which are "ways, or can be ways of constructing culture, of giving the patterns of our lives durable dimension and expression" (Leatherbarrow, 2004, p. 10). As well, he determines the relationship between a building and its site which can be understood in three ways: the buildings as an *elaboration* of the terrain, an *insertion* into it, or something that works in *collaboration* with it. *Landform Building: Architecture's New Terrain* (Allen and McQuade, 2011), part manifesto, part conference publication, part compendium of projects and essays by contemporary practitioners, the book examines many manifestations of landscape and ecology in contemporary architectural practice: not as a cross-disciplinary phenomenon (architects working in the landscape) but as new design techniques, new formal strategies and technical problems within architecture. As Stan Allen points, now a parallel trend looks not to the biology of individual species but to the collective behavior of ecological systems as a model for cities, buildings and landscapes: "*Architecture is situated between the biological and the geological - slower than living but faster than the underlying geology*."

To sum up, expanded to the scale of the territory, architecture finds new programmatic potentials, a new relationship to site, and new technical challenges. The designers have introduced new and exciting compositions as well as environmentally sensitive construction techniques and tools for establishing a more appropriate relationship between landscape and architecture and for preserving the natural land and landscape character on which new built forms are built. All these books examine and illustrate the communication between landscape and architecture and ways that certain works of architecture addressed site and context issues. These sources explore the conceptual spatial design potential of the landscape in a more general sense, are missing the evidence of a compositional scheme and a substantial analysis of architectural designs.

1.2. Wine, Wine Culture and Wine Architecture

`1.2.1. Historical outlook: Sacrality of Wine

"After all, two will remain, God and the wine."

Bela Hamvas (The Philosophy of Wine, 2003, p.5)

Wine, besides its nutritional value, has also cultural and symbolic meanings, such as sacrality, joy, and sharing. Wine, as a representative of the divine, sacred spirituality also determined by traditions, has been present in the mind of humanity for several millennia. The references to the symbolic and cultural significance of the wine and viticulture can be found in literary works as epics, histories and geographies, specific agricultural treatises, and miscellaneous poems and religious, which generally date from the period after about 500 BC. For instance, in the great epic poems, such as the Sumerian *Epic of Gilgamesh* and Homer's *Odyssey*, dealing with tales of heroes, and the relationships between the gods and humanity, tell us much about the religious significance of wine. The Historical and geographical works, such as *The Histories* of Herodotus dating from the 5th-century BC, and Strabo's *Geography* dating mostly from the early 1st-century AD, also provide a wealth of material concerning the production, consumption, and redistribution of wine. The Roman agricultural treatises, such as the *De Agricultura* of Cato (234–149 BC), and Columella's *Res Rusticae* written in 65 AD, provide a wealth of information concerning all aspects of the cultivation of vines and the production of wine. To these must also be added the vast corpus of religious writings, including perhaps most importantly the *Bible*, which provides a major source for our understanding of the Jewish and Christian symbolism of wine and the vine (Unwin, 1996, p. 47-51). For Jewish, the wine is a symbol of blessing, joy, and wealth, and it's a crucial part of key Shabbat rituals while to Christians, it is not only a symbol, but it is a part of God. Drinking wine during the Eucharist conveys a message of universal love and provides access to eternal life. By commanding, "*Do this in remembrance of me*," Jesus ensured that wine will always be at the heart of the mystery of his presence. The Holy Grail further emphasizes to Christians that wine is the symbol of the blood shed for them. From all religions, Christianity most firmly positions wine as an essential embodiment of its message. In Hippocrates of Cos's (460–370 BC) *Regimen in Acute Diseases*, Hippocrates identifies how to treat ailing patients, describing many healing uses of wine, including its use as a wound dressing, as a nourishing dietary drink, as a cooling agent for fevers and as a diuretic. As well the significance of wine is charted in the philosophical musings of many great classical philosophers such as Plato, Virgil and Horace (Morgan and Tresidder, 2016). These literary sources provide a wealth of evidence concerning the emergence of viticulture and winemaking for thousands of years ago, and their symbolic and cultural role in the ideology of the peoples. The wine has been a sign of wealth, power, and happiness. It was cherished and used

widely in sacred (religious) and secular (non-spiritual) contexts to mark events, occasions, rituals, celebrations and in the treatment of patients through the ages. As well, it was used as a marker of history, tradition, local identity and spirituality. According to the two of the world's leading wine writers say: "*There is no other product on earth, agricultural or industrial, where the value is as directly and precisely linked to where it grows and is made. Only wine goes to market with the name of a field, a farm, or at least a county*" (Johnson and Robinson, 2013, p.6).

1.2.2. History of Wine Culture

"*We have to know from where we are coming from to know where we are going.*"

Charles Correa (Pearson, 1994, p.121)

The history of viticulture is closely related to the history of wine, with evidence that humans cultivated wild grapes to make wine as far back as the Neolithic period. According to McGovern (the world's foremost archaeologist on ancient fermented beverages) the wine was almost certainly developed first further to the north at the foot of the Caucasus mountains (around modern-day Georgia or Armenia or towards Kurdistan) and dating of grape pips suggest this occurred at least back to 6000 BC (McGovern, 2003). The cultivation of the vine and knowledge of winemaking was spread from the Caucasus towards the civilizations of Mesopotamia and Egypt and later from Phoenicia (modern-day Syria and Lebanon) to the western Mediterranean (Unwin, 1996; Phillips, 2000; McGovern, 2003).

Ancient Egyptian artwork and sculptures provide a great deal of information about the winemaking practices of the time. The vineyards were established in the Nile Delta around 3000 BC. During the third millennium and the first half of the second millennium, the vineyards were mainly owned by kings, priests and some great officials. Vines were grown both in gardens adjacent to houses - supported on trellises, which not only provided grapes for eating and turning into wine but also made pleasant shady walkways for their owners - and also in separate vineyards. Typical of such vineyards was probably that belonging to Methen, a state official during the Third Dynasty c. 2600 BC who had a house together with a walled vineyard (Murray, 1963). Generally, vineyards were walled, with the vines being cultivated among other fruit trees, plants, and small lakes and were also planted on an artificially raised plot whenever the district lacked hills or mountains (Unwin, 1996, p.56). In Greece and Crete vines were cultivated around 2500 BC. Vines were grown alongside other crops including olives, and figs, and these trees provided support for the climbing vines. In 800 BC the Greek author, Hesiod, wrote a poem entitled "*Works and Days*" in which he discussed agricultural matters such as vine pruning, harvesting and pressing of grapes. Around this time further viticultural advances included the growing of vines in rows, trellised on stakes. Wine was an important part of Greek culture and

spirituality, for them civilization and wine were synonymous (Unwin, 1996, p.83). Besides planting in their own country, they pushed wines and vines to the western Mediterranean. They were responsible for the first vineyards in southern Italy, where vines even now may be low trained in the Greek style as a result of the advent of the Greeks over 2500 years ago - and some southern Italian grape names, such as Greco and Aglianico, are a testament to the variety's origin. They also took wine, and later grapes, to their outpost at Massilia - modern-day Marseilles (Johnson, 1989) - and so bear responsibility for the origins of wine in France (Charters, 2006, p.19). The Roman Empire overtook the Greeks as the dominant force in the Mediterranean in the 2nd-century BC and adopted many of their ways: their alphabet, clothing fashions and wine culture. The Romans transplanted vines from Greece to the Italian peninsula - a place with a climate equally suited to the production of wine, and by 146 BC Italy became the world's largest wine-producing region. Wine was an integral part of the Roman diet and winemaking became a precise business. As well as it was widely distributed through what is now Spain and France, and even into parts of Germany and England (Unwin, 1996). During the Roman Empire were developed many grape varieties and cultivation techniques, the screw to improve the wine press, glass bottles and wooden barrels to impart flavours into maturing wine and even a rudimentary appellation system (McGovern, 2003). Virtually all of the major wine-producing regions of Western Europe today were established during the Roman Imperial era (i.e. the Spanish Rioja, the German Mosel, and the French Bordeaux, Burgundy and Rhône, etc.). Roman viticulturists were among the first to identify steep hillsides as one of the better locations to plant vines because cool air runs downhill and gathers at the bottom of valleys (Johnson, 1989).

In the Middle Ages, the practice of agricultural activity in a huge part of Europe fell to the Catholic Church. Monks continued the study of viticulture and winemaking begun by their Roman predecessors. Matching grape varieties to soil conditions and climate, propagation and planting, trellising, crushing, fermenting, fining, and storage were all meticulously studied and improved. The wine started to be present in every aspect of medieval society. It accompanied meals and was used in parties and leisure time, as well as it was an essential part of the servings in monasteries and nunneries, a part of the salary paid to workers and labourers, and also of those serving in the military. It was also part of the meals shared with poor people in the cathedrals and, of course, of the big feasts of kings and noblemen. Some of the monasteries became great centres of study and commerce. The Benedictine monks, for example, became one of Europe's largest wine producers with vineyards in France's Champagne, Burgundy, and Bordeaux regions, as well as in the Rheingau and Franconia regions of Germany.

From the 17th-century onwards substantial changes occur in production, consumption and also in vineyards. It was improved production techniques: the distillation of grape spirit and

fortified wines, developed sparkling wines which come from Champagne, harder glass, the use of corks as bottle stoppers became widespread. Cork revolutionized the storing and ageing of wines, making it possible to age them for long periods and to ship them in bottles to distant markets. The “new French Clarets” (Unwin, 1996), appeared - led by Haut-Brion which Pepys recorded drinking in his diary and followed by the new wines of the Médoc. These were also the ages in which Champagne, Port and Madeira became popular; new wines offered novelty value. During the 18th-century, the growing of the middle class allowed them to drink more wine so that in due course the accoutrements of aesthetic consumption - books about wine, auctions and later the careful matching of food and wine - became more common. More than that, in this period it was developed a consumer market for premium wine, even if in much of southern Europe wine remained a drink consumed where it was made, by rich and poor alike. The 18th-century became the great age of political revolution - crucially in France but also, in the wake of Napoleon, through much of central Europe as well. The ownership of vineyards was changed dramatically; the church lost most of its wealth and its land was taken from it. The Napoleonic code, a comprehensive legal system, provided that inheritance should be split equally between sons on the death of a parent. In many parts of the continent, such as Burgundy and Alsace, the Rhine and Austria, this meant that land ownership fractured, often into economically unviable units. Production of grapes and the economic resources to make, and even more to market, wine became more separated than they had been. (Charters, 2006)

In the 19th-century - the period of industrialization and urbanization - wine enjoyed its greatest advances and suffered one of its most devastating blows. The advent of modern studies of chemistry and microbiology brought a deeper understanding of the winemaking process, and the laboratory soon began to play a major role in winemaking. Vineyards which had regularly been polycultural, with competing crops, were turned into monocultures so that growers could give to vines their undivided attention. In areas where planting had been “en foule” (haphazard, at often an extremely high density of up to 40 000 vines/ha) trellising and ordered training were introduced, and systematic pruning methods adopted (Charters, 2006, p.25). This better understanding of technology, combined with the knowledge gained by centuries of trial and error in European vineyards, resulted in huge advances in the quality of wine. As the science and calibre of wine took a leap forward, wine appreciation in the modern sense was born. The Frenchs established a system to classify their wine - to highlight those which were especially good so that they could be even more sought after (i.e. in 1855 the merchants of Bordeaux classified the wine of two areas around their city – the Médoc and Sauternes - grading them according to their price on the market) (Charters, 2006, p.36). Attracted to the glamour of winemaking, the wealthy soon began buying up vineyards throughout Europe labelling their

products with both their family and estate names. In the middle of the 19th-century, the wine culture suffered significantly. Firstly, the vineyards were substantially harmed by the Oïdium, a form of mildew which affects quality and yield, which arrived in Europe at the end of the 1840s. Much more devastating was the arrival of Phylloxera, a barely visible North American insect which arrived in Europe having been brought in by ship on the roots of a vine from the United States (Campbell, 2004). By 1868, Phylloxera had been identified in southern France which spread throughout the country, destroying most of the vineyards. By 1874, it had also infected Germany, and soon all the vineyards of Europe were infected. Besides these the wine culture suffered due to the war between France and Prussia (1870), the general agricultural depression throughout Europe (1873-1896), the Great War (1914-1918) and the Second World War (1939-1945).

During years several of experiments were involved to find a solution to treat the vines. The turning point in the fight against Phylloxera came in 1881 at the "International Phylloxera Congress" held in Bordeaux, when it was eventually accepted that the best solution was the grafting of French vine scions onto American rootstocks. By the early years of the 20th-century nearly all European vineyards had been uprooted and replanted with grafted vines, and most other wine producing areas of the world which had previously escaped infestation had begun to report the presence of Phylloxera. Generally, following the Second World War, in most European wine-growing countries saw a resurgence as reconstruction. Was formed the European Economic Community (EEC) in 1957 - later to become the European Union (EU) - with the aim of harmonizing markets and production processes across the member nations (Unwin, 1996). As France was considered to be the leading wine nation in the world the EEC broadly adopted a form of the French appellation system across all of its wine-producing member states. Moreover, it settled a comprehensive and substantial support mechanism for agriculture - including viticulture. This resulted in policies designed to encourage and bolster production throughout what is now the EU, particularly in less economically thriving rural areas in the south of the continent. The other issue that was crucial in the post-war period was the rapid acceleration of technological advance. This could be seen in viticulture - with the growth of vine crossings, sprays and fertilizers, and later the development of scientific canopy management systems - and also in wine production. The development of hygienic winery practice, temperature control, cultured yeast to control fermentation and very effective methods of stabilizing wine, including filtration, became widespread (Charters, 2006).

The wine culture has helped to shape countries, politics, and religions and has survived wars, natural disasters, and economic collapses. Nowadays, the wine culture is undergoing a deep transformation. This change is provoked by the spread of new winemaking technics, the

globalization of viniculture and of the international wine market, and the division of this market into luxury and mass-market segments, etc. The wine business climate today is similar to one that existed during the early 1980s when excess production of grapes and wine led to reasonably priced, high-quality wines that brought in many new consumers. In the European countries with a long wine tradition like France, Spain, Italy, Germany, Portugal, Hungary, Austria or even Switzerland and Slovenia, etc., wine has turned into an emblem of quality of life, social standing and even a high culture level.

1.2.3. History of Wine Architecture

> *"Winemaking has archaic references and an immediate attachment to the earth - it is a basic process with many subtle variations". "It is a perfect program for architecture, like religion - an opportunity to create something that lifts the spirits as well as serving practical needs."*
>
> *Scott Johnson, architect (Webb and Pfeiffer, 2005, p. 7)*

The wine has many forms and the architecture in which it is produced, consumed and sold is diverse. The wine architecture, like many good wines, has been a long time in development. Ever since humans first discovered how to turn grapes into a delicious, intoxicating beverage, there have been special buildings for wine production. Although the ancient Greeks are considered to be the founders of viniculture in the Mediterranean, it was the Romans who, as well as fostering the extensive expansion of vineyards in their empire, erected purpose-built, free-standing buildings for viniculture from the 1st-century AD onwards (Woschek *et al.*, 2012). During the last decades, the culture of wine has been redefining itself and wineries architecture has undergone transformations that have been a consequence of this evolution. Firstly, there were Roman farming estates - villa rustica and villa urbana (Woschek *et al.*, 2012, p.10), various underground areas and cellars to provide a stable temperature for the production and storage of wine. Later, fortresses, castles, monasteries, church institutions and hospitals, palaces, residences and chateaux were built above or near wine cellars, where the wine was not only stored but also consumed. These places for wine production were almost always concealed from sight, protected in the underground foundations and storage areas, covered by gardens and lawns; being blended perfectly into the architecture and the landscape. These are images of history, age, tradition and as well as the images of social importance and status (Kernohan, 2014, p. 140).

A new chapter in the culture and architecture of wine began in the 19th-century. Firstly, in France, at the beginning of the century, the wine-growers of Bordeaux turned the aristocratic-sounding term "*Chateau*" into a trademark. They created the subliminal association that the wine always be fitted the magnificent architecture of a chateau (Meyhöfer and Gollnek, 2000). Thus,

the chateaux, devoted solely and exclusively to winemaking, often classic in style, were grand and flashy symbolizing class, status and superiority.

Secondly, in the wine sector, it was introduced the tourism phenomenon, which played an important role not only in increasing the value of viniculture but also in the development of wine architecture. Although, the visits to the vineyards have been a part of organized travel at least since the time of the Grand Tour, and likely even since the times of ancient Greece and Rome, the vineyards as a specific travel interest began to appear in the middle-nineteenth. This, in fact, was firstly due to the new infrastructures in the transport sector, mainly the development of the railways. Secondly, and most importantly, due to the publication of the 1855 "*Classification of the Wines of Gironde*," which the first time explicitly and officially gave wine, and wine growing regions, a destination identity. This classification served as the basis for the system of appellation control which exists to this day in France, as well as it reinforces the quality and regional characteristics of Bordeaux wine, and also served to provide a marketing tool for a region and identified specific chateaux as classified growths which in themselves became visitor attractions (Hall *et al.*, 2000).

Thirdly, in the wake of the Industrial Revolution, due to the wave of worldwide export success of the champagne and sparkling wine cellars (in France), Sherry bodegas (in Andalusia) and port wine lodges (in the Douro Valley in Portugal), the business activities in the wine sector stepped up. This increase in production and as well as new technologies created a need for new buildings of unprecedented dimensions. The structural redesign in wine estates and cellars were undergoing from the end of the 19th-century onwards, and parallel with this the winemaking process and the rural character of wine-growing slowly began to change. Most of the buildings from this period, with a broad variety of architectural styles (e.g. Renaissance, Gothic, Classical, Art Nouveau etc.), are, however, exclusively functional industrial structures – "*and regrettably forgettable*" (Woschek *et al.*, 2012, p.16).

A revolutionary change in the wine architecture and as well as in wine culture occurred in the second half of the 20th-century. The winery as a general typology has evolved beyond its role of serving only as a storehouse and producing facility. The 20th-century brought more than just advanced technology to winemaking. It brought wider recognition of the interconnections between wine and tourism and stimulated the integration of the visitor facilities in wine buildings. The countries that brought new ideas for a revolution in wine architecture and, moreover, that played a leading and multifaceted role in the evolution of this architecture in the 21st-century are the United States, namely California, Napa Valley and France, Bordeaux. The first vineyard that took this revolutionary step was from Napa Valley. More specifically, the idea of social space emerges as an integral part in the Winery of Robert Mondavi (Fig. 1.1, 1.2),

Fig. 1.1, 1.2. Robert Mondavi Winery (1966)

Fig. 1.3, 1.4. Sterling Vineyards Winery (1972)

built in 1966. His winery, a mixture of event space and factory (Meyhöfer and Frahm, 2015, p. 14), became the area's biggest attraction - for tours, concerts, and art exhibitions (Webb and Pfeiffer, 2005, p. 6). Six years later (1972), it was followed by the Sterling Vineyards Winery (Fig. 1.3, 1.4) that stands out as the second flagship example of the wine tourism development in the region. Allowing the visitors to experience all the stages of wine-making in a self-guided tour, this was the first "wine museum" in the world with an incredibly high number of visitors (Meyhöfer and Gollnek, 2000, p. 19). The success of these wineries marks the awareness of the importance of complementary programs in the offer of wine-making experience. But not all the wineries were able to evolve in such a manner. After the Second World War, the progressive abandonment of the countryside and the transformation of agriculture from a cottage industry to an industrial activity took place. With the exception of *Sterling* and *Mondavi* wineries, wine architecture in the most of wine-growing countries saw little in the way of revival. The idea of creating the reception spaces for visitors and renovation work was largely restricted, the interventions were focused on conversions, extensions and modernization of production facilities for which mainly builders, not architects, were called upon (Woschek *et al.*, 2012, p. 17-18).

The wine production has generally been concentrated in banal buildings with artificial air conditioning, thanks to the widespread availability of electrical energy and relatively easy

transport of goods and products. The farmers brought their grape harvest to these places, where they were processed in an anonymous and indifferent manner (Casamonti, 2014). As a result, most of the places in which the wine was made, stored and aged - conceived to meet, as economically as possible, the productive requirements - have been built with no specific attention to the architectural quality in relation to the surrounding landscape and with no proper consideration of the implications of this poor attention, which no doubt strongly contribute to the identity's places loss.

A pivotal turning point for the wine industry in Napa Valley and as well in Europe, especially in Bordeaux, took place after the official recognition of the quality of Californian wine in "*the 1976 Paris Wine Tasting*" event (Slinkard, 2018). The creed of the Napa wine-growers: "*Wine and culture belong together, wine is not like whiskey, wine is not an alcoholic drink. Wine is art. Wine is life!*" (Meyhöfer and Gollnek, 2000, p. 19), has spread from California to the rest of the world. This fundamentally changed the relationship with wine and initiated unprecedented changes in production buildings and in wine culture. Accordingly, the architecture of wine progressed rapidly and stridently, at the same time undergoing some dramatic transformations. Architecture emerged as agent in the reinterpretation and reinvention of the industry and is recognized as an important factor in the creation and communication of values to consumers. As a consequence of this organizational and conceptual shift, winery architects find themselves exploring notions of tradition and innovation, artifact and user, place and technology. The most architecturally ambitious examples being created in the 1980 and 1990. The buildings were "loud", large and massive (Meyhöfer and Frahm, 2015, p.14).

Fig. 1.5. Clos Pegase Winery (1987)

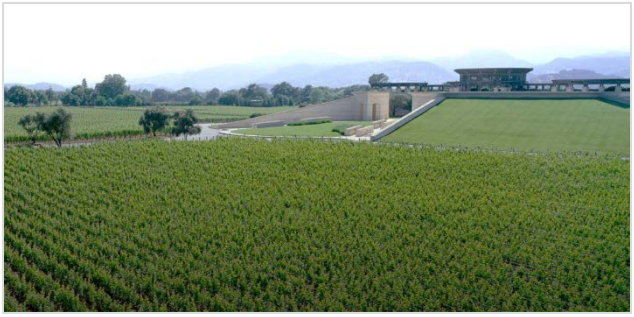

Fig. 1.6. Opus One (1989)

Napa Valley, played a pioneering role in the development of new wine architecture, and built the most meaningful, and also varied, prototypes of a new era. Napa's style is called "*the best pluralism!*" (Meyhöfer and Gollnek, p. 23). Such featured wineries are, *Clos Pegase* (Fig. 1.5), *Opus One* (Fig. 1.6), *Hess Collection* (Fig. 1.7), *Dominus* (Fig. 1.8), *Artesa* (Fig. 1.9), etc. These wineries and vineyards have an open, light-filled architecture which incorporates a design philosophy that welcomes visitors and encourages the sharing of information about

Fig. 1.7. Hess Collection Winery (1989)

Fig. 1.8. Dominus Winery (1995-1997)

Fig. 1.9. Artesa Winery (1990)

Fig. 1.10. Chateau Lafite Rothschild (1987)

Fig. 1.11. Chateau Pichon Longueville (1988)

Fig. 1.12. Chateau de Bachen (1991)

the winemaking process. A prominent example is the *Dominus Winery*, which was an exception of the rule at that time, is considered an almost ephemeral gem: "*Dominus is everything: the past, present and future. A stone wall becomes the shell of an "archaic container" in which all the important aspects of a winery are housed*" (Meyhöfer and Gollnek, 2000, p.2). While the new wineries from the region were designed to be a landmark, *Dominus* was designed to blend into the landscape. This building enabled the architects, Herzog and de Meuron, to add their names to the list of the best-ever architects of the 20th century; they have created a new "*chateau prototype*".

In Bordeaux, things have not been taken to such extremes. The most valuable interventions are considered the underground wine cave of Chateau Lafite Rothschild (Fig. 1.10), the new winery of Chateau Pichon Longueville (Fig. 1.11) and also the new cellar of Chateau de Bachen (Fig. 1.12), located south of Bordeaux in the wine region of Tursan. These extensions not only welcome the visitors but as well as make a symbiotic relationship with its context. In other cases, the renewal process was focused on a comprehensive modernization of production facilities and buildings, while the visitor facilities were largely left as they were (Woschek *et al.*, 2012, p.18). These new structures have a symbolic and commercial expression of the winemaking phenomenon.

Undoubtedly, Californian vintners were ahead of Europe. While the architects of the Napa Valley have chosen a reductionist path, as in the case Herzog & de Meuron's design (Fig. 1.8), the architects of the Bordeaux region distinguish themselves in the continuity of tradition. Similar architectural developments as in California occurred later, at the end of the 20th and more fully in the first decade of the 21st-century. Diverse, even exceptional, wine architecture creations were designed by luminaries such as Mario Botta, Renzo Piano, Zaha Hadid, Steven Holl, Frank O. Gehry, Christian Potzampark, etc. In fact, as well as in the case of Californian wineries were involved professionally highly commended architects.

It should be noted that the architecture of vineyards has been largely ignored. The event that led, if not to the discovery, then most definitely to the rediscovery of this forgotten subject was an exhibition on the "*Chateaux of Bordeaux,*" organized in 1988 by the Centre Georges Pompidou. Focused on the "*Architecture of Wine,*" the exhibition documented the reciprocal, often symbiotic relationship between viticulture and architecture in the region (Woschek *et al.*, 2012, p.18). This event brought a dramatic new level of awareness of the wine architecture and became the catalyst for a stimulating international discussion of wine and wine culture (Meyhöfer and Gollnek, 2000).

1.3. Viticultural Landscapes: the major stakes of the 21st century for preserving and promoting

Agriculture is the "*main land user*" and is recognized as a crucial factor that has created a rich diversity of landscape patterns, including a mosaic of woodlands, wetlands, and extensive tracts of open countryside. The organization of the agricultural patterns is the result of a functional evolution, which must respond as efficiently as possible to the natural conditions (climate, landforms, soil characteristics, the presence of water, etc.) and in relation to the particular needs of agricultural productivity (European Commission, 2017). A prototype of an agricultural landscape, acting as an element of social cohesion, is the landscape structured by the culture of wine, which has crossed historical frontiers and territorial divisions. Throughout history, wine production and grape growing have played fundamental economic, social, political and ideological role in different parts of the world (Unwin, 1996, p.1) and have had a profound impact on culture and the resulting landscapes (Dougherty, 2012, p.3). The viticultural landscapes provide an outstanding backdrop, bearing witness to the importance of the winemaking, which has advanced according to a balanced coexistence between development and tradition. These landscapes are unique, structurally rich rural landscapes. These are moulded by the presence of vineyards, sculpted by the natural elements such as soil, landforms, bodies of water, natural vegetation and vegetation corridors, shaped and embellished by human elements such as forms of land use, structures (e.g. drainage and road systems; terraces; platforms; stone walls; stone hedges; concrete, metal or wood poles, aimed at supporting the wires to which vines are connected; fences, orchards, gardens, etc.) and architecture. The built environment, specifically the architecture of the supporting structures (such as stone walls), cellars, grape-pressing houses, wineries, monasteries, castles, ruins, etc., and the urban architecture of the towns and villages - visible witnesses of historical developments and changes over time - are striking elements of the viticultural landscapes and therefore accounts for their high cultural value. These human-made landscape settings create the image of the regions and contribute to their uniqueness and identity; they represent cultural heritage, function as trademarks for their areas, attract visitors, inspire art, serve as places for spiritual activities, etc.

The viticultural landscapes have always been appreciated, but since the end of the past century, these attracted increasingly distinguished attention with their value being recognized on an international level. The interest in their wise management and broader understanding emerged, to a great extent, due to the introduction of a new category within the UNESCO World Heritage Sites, namely "*Cultural Landscapes*" which was adopted by the World Heritage Committee in December 1992, at its 16th-session (Santa Fe, USA). The Committee recognized that cultural landscapes represent the "*combined works of nature and of man*" nominated in Article 1 of the Convention. "*They are illustrative of the evolution of human society and*

settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal" (Mitchell *et al.*, 2009, p.19). Later, at an expert meeting convened in La Petite Pierre in France in October 1992 to review the criteria in the Operational Guidelines, the experts redrafted the cultural criteria and determined three categories of cultural landscapes (see Table 1.1), (Rössler, 2001). After the 1992 Earth Summit in Rio and the widespread propagation of Agenda 21 - the action plan with regard to sustainable development that emerged from the United Nations Conference on Environment and Development - landscape diversity was acknowledged as a resource, which should be preserved against economic, social, cultural and technological globalization. As a result, have been adopted many other UNESCO conventions that are relevant to cultural landscapes (i.e. Convention on the Biological Diversity (1992), Treaty on Plant Genetic Resources for Food and Agriculture (2001), Safeguarding of the Intangible Cultural Heritage (2003) Protection and Promotion of the Diversity of Cultural Expressions (2005), etc. (Mitchell *et al.*, 2009; Biagioli *et al.*, 2012)

Viticultural landscapes were recognized as a specific type of agricultural landscape represented by its entire production and land-use system: (1) vineyard cultures are the result of human work and the interaction between people and their environment, (2) vineyards are often located in areas with a long human presence, and illustrate the exchange between different cultural traditions, (3) these landscapes depend on a number of natural conditions, including geology, geomorphology, geographical location, relief, soil, and (micro)climate, (4) these illustrate considerable human intervention (construction of terraces, drainage etc.), (5) the great variety of vineyard types being dependent upon natural conditions, techniques of vine cultivation and winemaking, and geographical conditions (Mediterranean, central European, new producing countries etc.), means that there are many types as wine regions and wines, (6) vineyard landscape are linked with tangible heritage (vernacular architecture, settlement systems, cellars etc), as well as with intangible elements, including cultural traditions and harvest rituals, (7) wine production is subject to social, economic, and global market development and consumer demands, (8) vineyard landscapes require long-term planning and investment (Mitchell *et al.*, 2009, p.91).

World Heritage cultural landscapes are "*selected on the basis both of their outstanding universal value (OUV) and of their representativity in terms of a clearly defined geo-cultural region and also for their capacity to illustrate the essential and distinct cultural elements of such regions*" (Mitchell et al., 2009, p.20). Each OUV is based on various criteria (see Table 1.1) and attributes which differ according to the characteristics of the site.

Table 1.1. Links between the cultural heritage criteria and the cultural landscape categories

Cultural Criteria	Cultural Landscapes Categories (Extract from The Operational Guidelines)	Decisions for Sustainability In The Maintenance of WH Cultural Landscapes
(i) represent a masterpiece of human creative genius; or	(I) Clearly defined landscape designed and created intentionally by man, constructed for aesthetic reasons, often (but not always) associated with religious or other monumental buildings and ensembles. (such as gardens and parks);	To be conserved at all costs;
(ii) 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; or (iii) bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared; or (iv) be an outstanding example of a type of building or architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history; or (v) be an outstanding example of a traditional human settlement or land-use which is representative of a culture (or cultures), especially when it has become vulnerable under the impact of irreversible change; or	(Ii) Organically evolved landscape: results from an initial social, economic, administrative, and/or religious imperative and has developed its present form by association with and in response to its natural environment. Such landscapes reflect that process of evolution in their form and component features. They fall into two sub-categories: a) a relict (or fossil) landscape in which an evolutionary process has come to an end but where its distinguishing features are still visible in material form; b) a continuing landscape is one which retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress. At the same time, it exhibits significant material evidence of its evolution over time (which is the case of viticultural landscapes);	Subject to limited change provided that the overall character and significance of the resource is maintained;
(vi) be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance (the Committee considers that this criterion should justify inclusion in the List only in exceptional circumstances and in conjunction with other criteria cultural or natural)	(Iii) Associative cultural landscape, with a strong link with intangible heritage;	Suitable for exchange in return for other benefits;

Over the years, 14 viticultural landscapes of Europe have been recognized as genuine examples of "*outstanding universal value whose loss would be irreplaceable for the collective memory of humanity*" and declared as UNESCO WH sites (see Table 1.2). The existence of winegrowing was not always the only reason for being, nor even the main feature, listed on the UNESCO WH list. The vineyards of Alto Douro, Tokaj, Pico, Piedmont and Lavaux have been listed as the main feature of the UNESCO sites the other landscapes being "mixed", in different proportions, with architecture, towns, nature, meadows or another kind of agriculture.

Table 1.2. Viticultural landscapes inscribed on the UNESCO World Heritage List

Name Of Cultural Landscape	Country	Cultural Criteria	Date Of Inscription
Portovenere, Cinque Terre, and the Islands (Palmaria, Tino and Tinetto)	IT	(ii)(iv)(v)	1997
Jurisdiction of Saint-Emilion	FR	(iii)(iv)	1999
The Loire Valley between Chalonnes and Sully-sur-Loire	FR	(i)(ii)(iv)	2000
Wachau Cultural Landscape	AT	(ii)(iv)	2000
Alto Douro Wine Region	PT	(iii)(iv)(v)	2001
Fertö / Neusiedlersee Cultural Landscape	HU/ AT	(v)	2001
Upper Middle Rhine Valley	DE	(ii)(iv)(v)	2002
Tokaj Wine Region Historic Cultural Landscape	HU	(iii)(v)	2002
Landscape of the Pico Island Vineyard Culture	PT	(iii)(v)	2004
Val d'Orcia /Montalcino	IT	(iv)(vi)	2004
Lavaux, Vineyard Terraces	CH	(ii)(iv)(v)	2007
Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato	IT	(iii)(v)	2014
The Climats, terroirs of Burgundy	FR	(iii)(v)	2015
Champagne Hillsides, Houses and Cellars	FR	(iii)(iv)(vi)	2015

From the above listed UNESCO WH sites, the direct relation to the present research have:

Fig. 1.13. Saint-Emilion Cultural Landscape (FR)

(1) Jurisdiction of Saint-Emilion (Fig. 1.13): The territory was selected in view of the fact that "*is an outstanding example of a historic vineyard landscape that has survived intact and in activity to the present day (iii), and it illustrates in an exceptional way the intensive cultivation of grapes for wine production in a precisely defined area (iv)"* (UNESCO, 1999).

Fig. 1.14. Wachau Cultural Landscape (AT)

Fig. 1.15. Alto Douro Cultural Landscape (PT)

Fig. 1.16. Tokaj Cultural Landscape (HU)

(2) Wachau Cultural Landscape (Fig. 1.14): The territory was included on the WH list owing to the fact that the area "*is an outstanding example of a riverine landscape bordered by mountains in which material evidence of its long historical evolution has survived to a remarkable degree (ii). The architecture, the human settlements, and the agricultural use of the land vividly illustrates a basically medieval landscape which has evolved organically and harmoniously over time (iv)*" (UNESCO, 2000). Therefore, it was inscribed as "Wachau Cultural Landscape" in the UNESCO List in recognition of its architectural and agricultural history.

(3) Alto Douro Wine Region (Fig. 1.15): One of the criteria on which UNESCO based its decision was the importance of the human hand in the shaping of the landscape, using traditional methods and transforming it from a sterile land. "*The cultural landscape of the Alto Douro is an outstanding example of a traditional European wine-producing region, reflecting the evolution of this human activity over time (v)*". And also based on the facts that "*the wine has been produced for nearly two thousand years (iii) and the components of its landscape are representative of the full range of activities associated with winemaking - terraces, Quintas (wine-producing farm complexes), villages, chapels, and roads (iv)*" (UNESCO, 2001).

(4) Tokaj Wine Region Historic Cultural Landscape (Fig. 1.16): The region was registered due to the fact that "*represents a distinct viticultural tradition that has existed for at least a thousand years and which has survived intact up to the present (iii), and the entire landscape,*

including both vineyards and long established settlements, vividly illustrates the specialized form of traditional land use that it represents (v)" (UNESCO, 2002).

Fig. 1.17. Lavaux Cultural Landscape (CH)

Fig. 1.18. Langhe-Roero Viticultural Landscape (IT)

(5) Lavaux Vineyard Terraces (Fig. 1.17): The viticultural landscape was labelled as a WH site because "*demonstrates in a highly visible way its evolution and development over almost a millennium, through the well-preserved landscape and buildings that prove a continuation and evolution of longstanding cultural traditions, specific to its locality (iii). It illustrates very graphically the story of patronage, control and protection of this highly valued wine-growing area, all of which contributed substantially to the development of Lausanne and its Region and played a significant role in the history of the geo-cultural region (iv). Also, it is an outstanding example that displays centuries of interaction between people and their environment in a very specific and productive way, optimizing the local resources to produce a highly valued wine that was a significant part of the local economy. Its vulnerability in the face of fast-growing urban settlements has prompted protection measures strongly supported by local communities (v)*" (UNESCO, 2007).

Fig. 1.19. Monferrato Viticultural Landscape (IT)

(6) Vineyard Landscape of Piedmont: Langhe-Roero and Monferrato (Fig. 1.18, 1.19): The viticultural landscapes of Langhe-Roero and Monferrato were inscribed on the WH list due to the fact that "provide outstanding living evidence to

wine-growing and winemaking traditions that stem from a long history, and have been continuously refined and adapted up to the present day. They bear witness to an extremely comprehensive social, rural and urban realm, and to sustainable economic structures and include a multitude of harmonious built elements that testify its history and its professional practices (iii). As well as they constitute an outstanding example of man's interaction with his natural environment. Following a long and slow evolution of winegrowing expertise, the best possible adaptation of grape varieties to land with specific soil and climatic components has been carried out, which in itself is related to winemaking expertise, thereby becoming an international benchmark. The winegrowing landscape also expresses great aesthetic qualities, making it into an archetype of European vineyards (v)" (UNESCO, 2014). (A detailed description of the mentioned viticultural landscapes can be found in Chapter 3)

The inscription of the viticultural landscapes on the WH list highlights the significance of a diversity of manifestations of the interaction between humankind and its natural environment. The WH inscription brings them added value, not only symbolic but also economic as a result of the arrival of immediate economic benefits (the growth increase in the tourism sector is an example) and requires a management, which guards and maintains against economic, social, cultural, and technological globalization (Biagioli *et al.*, 2012).

Besides the UNESCO corpus of conventions, new legislation, such as the European Landscape Convention has been adopted by the Council of Europe in October 2000 in Florence (Italy). It was established to recognize and protect sites, which do not fulfil the strict criteria of the World Heritage Convention and its Operational Guidelines (Bandarin, 2002, p.7). The Council of Europe acknowledged that "*landscape is an essential feature of human surroundings, that it contributes to the formation of local cultures and that it is a basic component of the European natural and cultural heritage, contributing to the human wellbeing and consolidation of the European identity*" (Mitchell et al., 2009, p. 29). Therefore, the target of the European Landscape Convention is to encourage public authorities to implement policies and actions at the local, regional, national and international level for protecting, managing and planning of all types of landscapes, natural, rural, peri-urban and urban areas, outstanding as well as ordinary, which determine the quality of people's living environment. Viticultural landscapes are one of the major challenges of this interaction, which was officially stated in 2003, by signing the Fontevraud International Charter in France by the Ministry of Ecology and Sustainable Development, the National Institute of Origin and Quality (formerly for "Appellations d'Origine" – AOC), the Loire Valley Wines confederation, the Val du Loire Mission, and the International Organization of Vine and Wine aiming to protect, improve and manage viticultural landscapes in Europe by mobilizing the local authorities and economic players. It also aims to

make them better known and promote them, relying on voluntary approaches that bring representatives of the viticultural sector together with other local players, local authorities, State departments, and tourism and culture professionals. (Fontevraud International Charte, 2012, p.4; Val de Loire - Loire Valley World Heritage, 2011)

1.4. Threats and guidelines for viticultural landscape preservation

> "*In the drama of Wine, the land itself is a character-rough and brutal sometimes but also tender and, ultimately, fragile. [...] The Earth has her own vinous erogenous zones - a few places of harmonic convergence, where every facet of the vineyard and every nuance of grape fit together like chromosomes a DNA helix.*"
>
> *(Karen MacNeil, 2015, p.16)*

The viticultural landscapes experienced structural changes in the course of history and continue to be modified to this day. For example, economic considerations, productivity and urban developments have often taken precedence over the aesthetic and heritage aspects. The mechanization of the vineyards has often been reflected in the banalization or even degradation of landscapes. The hill-slopes have been restructured and vine plots have often been enlarged following land regrouping operations. The destruction of landscape components (embankments, single trees or rows of trees, hedgerows, copses, etc.) or architectural elements (walls, vineyard cabins, etc.) has often accompanied this restructuring process (Incze and Novák, 2016). These landscapes have been and continue to be exposed to threats (to a different extent in each site, depending on the specific set of core physical elements of the landscape) such as urban sprawl, new developments in the landscape, provision of utility services, adaptation of historic structures for new uses, new constructions, excessive pressure from tourism, etc. and also erosion, landslides, abandonment. These wine-growing areas are fragile and vulnerable to the uncertainties of wine markets and, above all, to climate changes that cause disease, global warming, drought and, ultimately, changes in the nature of the distinctive landscape features in these territories. (Mitchell *et al.*, 2009; Biagioli *et al.*, 2012)

As a consequence of the series of events mentioned in the subchapter 1.3 numerous actions started to preserve and manage the viticultural landscapes. For instance, the VITOUR Landscape Project (INTERREG III C 2005-2007), launched in 2005, brought together six viticultural landscapes - Fertö-Neusiedler See (HU/AT), Cinque Terre (IT), Upper Middle Rhine Valley (DE), Val de Loire (FR), Tokaj (HU), Alto Douro (PT) - in order to create innovative sustainable development policies and strategies for the effective safeguarding and innovative enhancement of European UNESCO WH viticultural landscapes. In 2008 (after finishing the program VITOUR I), four more UNESCO WH viticultural sites were added - Pico Island in the Azores

(PT), Val d'Orcia/Montalcino (IT), Wachau (AT), Lavaux (CH) - to present a new INTERREG IVC project (VITOUR II) to improve and innovate local and regional policies for cultural landscape preservation and enhancement in these European UNESCO WH wine-growing areas. The aim of the extended VITOUR project was to present the WH sites as an "*open laboratory of experiments*" in good practices, still in progress, useful for other protected and/or endangered sites, taking into consideration emerging conflicts between conservation, the change of agricultural technologies, industrialization and mass tourism in order to collect, develop and deliver and tailor these good management practices to all areas concerned. Hence, the relationships between winegrowing, relief, water, settlement structures and infrastructural elements and the value of the built and intangible heritage of the landscape and its social structure and historical significance constituted the cornerstone of the project.

According to The ViTour Landscape project (Biagioli *et al.*, 2012), the good practices that add value to the landscape are the following:

Agricultural transformations that respect the outstanding universal value of the site. These transformations should be accompanied by agro-environmental actions to preserve, if not enrich, the biodiversity of these areas; and should occur within the framework of a public land policy (observatory, preemptions, public landholding).

Regulating Architectural and Landscape Evolution. Improvement in architectural and landscape quality is the second orientation common to all the sites; it lies on public incentives and regulatory policies as well as on project approaches. For example, Montalcino in Val d'Orcia (IT) has a common building regulation that tries to combine preservation, maintenance and development of characteristic Tuscan landscapes and settlements. Lavaux (CH), Val de Loire (FR) and Cinque Terre (IT) face the problem of urban pressure. The three of them handle this problem in different ways: restrictive laws (CH), the introduction of land use plans based on the Geographical Information System (FR) and regulations for real estate transactions (IT). For harmonizing settlement development with landscape scenery, Wachau (AU), together with the municipalities and other public bodies, drew up a guideline for settlement extensions. To integrate a building on World Heritage site, the Upper Middle Rhine Valley (DE) developed a guideline "*Building Culture Guidelines*" that discuss specific subjects such as proportions, facade elements, materials, roofs and gardens. The Douro Valley (PT) established in 2006 an architectural prize for contemporary architecture, taking heritage values into account. The objectives of the "*Douro Architecture Prize*" are to distinguish architectural works done since 2001 (when the Douro was included in the UNESCO WH list) as well as to improve contemporary architectural languages regarding heritage values, proper integration of modern materials, the recovery of traditional forms of construction, renewal of public spaces,

encouraging private owners to renew their deteriorated buildings. Moreover, the aim is to promote, through qualified architecture, the Alto Douro as a tourist region and a cultural landscape that knows how to care for its heritage values. The Upper Middle Rhine Valley (DE) also set up a prize but for the excellent transformation of existing structures within the centre of villages.

Mediation with tourism vocation. Reinforcement of the mediation tools and the dedicated signposting strategies involving the inhabitants, who have become the ambassadors of their territory with respect to visitors. This local involvement plays a part in the renewal of the tourism offer: projects that link the exploration of the winegrowing heritage (vineyard landscapes, the constructed heritage, and know-how), the quality of accommodation and restaurants, and the networking efforts of professionals in tourism, winegrowing and the managers of cultural properties (châteaux, abbeys, museums, etc.).

Undoubtedly, the global trends of the revaluation of wine culture and the importance of viticultural landscapes have led to a new era of wine architecture, which celebrates relationship/alliance with the landscape. The design of a winery into a viticultural landscape came to be an important challenge and a popular commission among prominent architects in the 21st century. The architects have been provoked not only to update old structures to improve production, considering the additional value that a remarkable building can have for marketing and promotional purposes, but also to display all their talent and imagination to design new wineries and extensions as a bold contemporary expression of tradition and innovation, agriculture and technology, and production and hospitality in accordance with the viticultural landscapes. This served to emphasize and incorporate visual quality and cultural values of the landscape to their architectural concepts in addition to ecological concerns.

To be more precise, to design new wineries, extensions or even to reconstruct wineries, is important to respect a number of standards in order to achieve the following objectives: to maintain unique site characteristics; to respect the topography of the terrain and genius loci of the site where the structure is located; to express the character as well as the tradition and the mystery of wine production (Bahna, 2013); to preserve the scenic vistas and architectural style of old constructions; to mitigate the physical and visual impacts of the proposed development (Biagioli *et al.*, 2012). In other words, it is important to “make them appropriately blend into landscape”.

2. MATERIALS AND METHODS

As I mentioned in the Introduction, the particular focus of this research is to analyze the communication between contemporary wine architecture and its landscape and to conclude the ways and methods which lead to a harmonious result. To reach the aim and objectives of the thesis, I relied on the case study method, which is "*a particularly useful research method in professions such as landscape architecture, architecture, and planning where real-world context tends to make more controlled empirical study difficult*" (Francis, 1999).

2.1. Case studies selection criteria

There are different strategies for the selection of study-cases that are generally divided into two approaches: *random selection* and *information-oriented selection*. In random selection, cases are randomly selected from a large number of samples mainly for establishing credibility (i.e., avoiding subjective bias). In information-oriented selection, cases are selected to demonstrate a characteristic or attribute of interest. Thus, in my work, I used *the information-oriented selection approach*, because random selection of a small number of cases from a very large universe of potential wine architecture research projects might result in cases that are not appropriate to the project objectives.

Given the small number of case studies conducted in this research and the information-oriented selection approach, I applied the following specific criteria for the selection of examined wineries:

1. *Location: they should be located in the open viticultural landscapes (i.e., should be built outside or at least outskirts of the villages/towns) of the European wine-producing countries;*
2. *Date of completion: they should be built after the millennia, namely from the 2000s;*
3. *Architectural appearance and their architectural appreciation: they should have an international architectural appreciation (i.e., should be published in books, periodicals and on architectural websites);*

Relying on these criteria and also on my personal appreciation, I have selected 30, recently built, examples of remarkable and inspiring wine architecture out of which 21 are new wineries and 9 are wineries' extensions (the draft list is represented in Table 2.1). The selected case studies, varying in sizes, functions and architectural shapes, were built between 2000-2014s and are situated in the especially valuable and protected viticultural landscapes of the European wine-producing countries, namely France (4), Italy (5), Spain (3), Portugal (4), Germany (2), Hungary (5), Austria (3), Switzerland (2) and Slovenia (2). From 30 cases 10 are located on the territories that are included in the UNESCO World Heritage (WH) List in the category of

cultural landscapes as “living cultural landscapes” (Fig. 2.1). The case studies are owned by prominent entrepreneurs and are designed either by the world’s foremost architects or country’s leading architects. The samples are highly appreciated and have international popularity.

Due to the above-mentioned restrictions, it was impossible to find the same number of examples from the same territory, but the study focuses not on regional architectural specialities but on the communication between landscape and contemporary wine architecture.

The selected research projects were collected (identified) from a number of sources such as Adventurous Wine Architecture (Webb and Pfeiffer, 2005), Wine architecture: The Winery Boom (Herausgegeben and Steiner, 2005), AREA: Rivista internazionale di architettura e arti del progetto. Wineries. (2011, XXII, vol. 117), Wine and Architecture (Woschek, Duhme, and Friederichs, 2012), Architecture and Wine in Central Europe (Merta, 2013), The Architecture of Wine (Meyhöfer and Frahm, 2015).

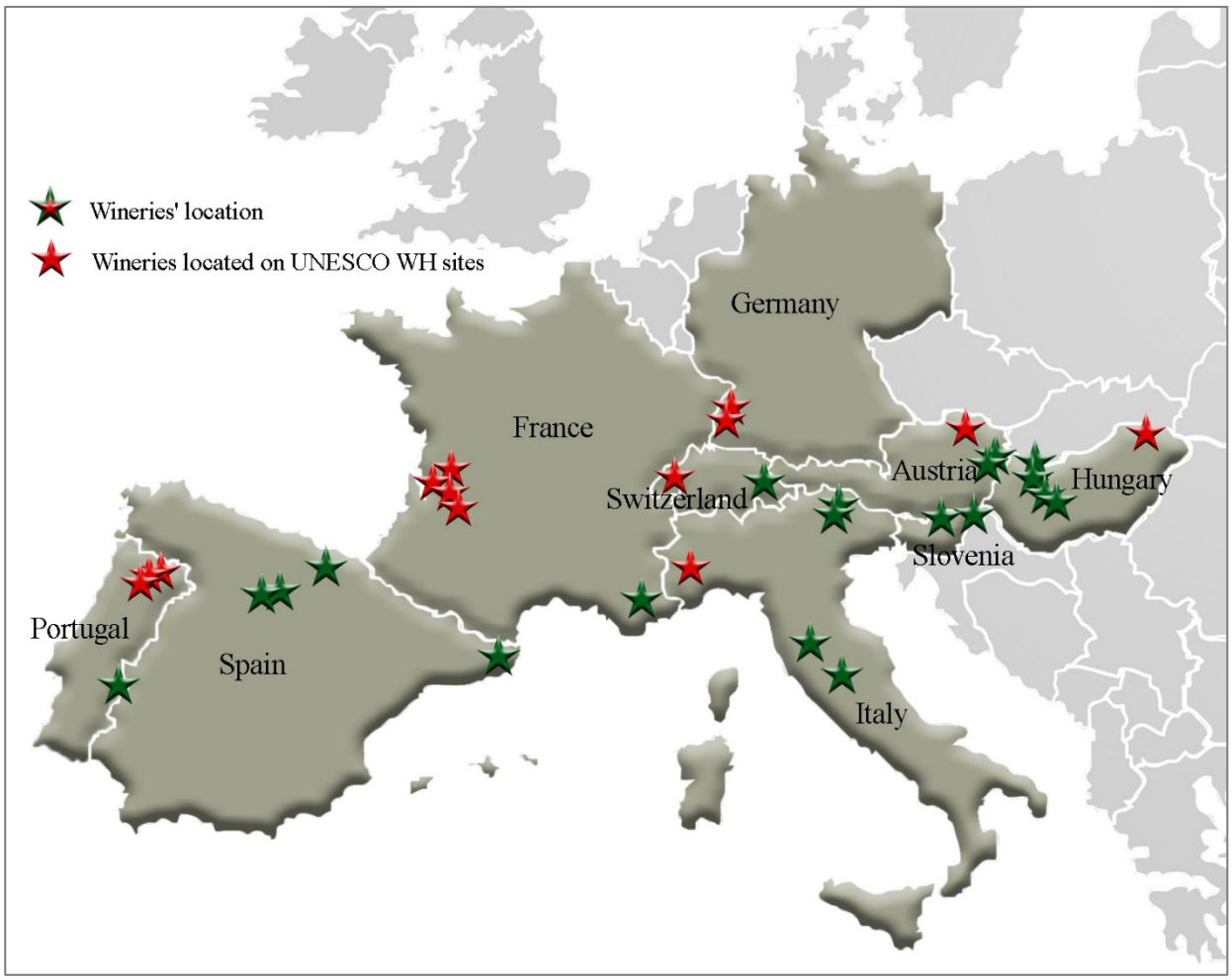

Fig. 2.1. Map location of the case studies

Table 2.1. Draft list of the case studies

Nr.	Name Of The Winery	Type Of Construction (new building / extension)	Date Of Completion	Country / Wine Region / Subregion
1	Chateau Thuerry	Extension	2001	France: Provence / Coteaux Varois, Villecroze
2	Château Faugères	New building	2009	France: Bordeaux / Saint-Émilion, Libournais, (UNESCO WH site)
3	Château Cheval Blanc	Extension	2011	France: Bordeaux / Saint-Émilion, Libournais (UNESCO WH site)
4	Château La Dominique	Extension	2014	France: Bordeaux / Saint-Émilion, Libournais (UNESCO WH site)
5	Cascina Adelaide Farm	Extension	2004	Italy: Piedmont / Barolo (UNESCO WH site)
6	Manincor Winery	Extension	2004	Italy: Trentino Alto Adige / Bolzano, Caldaro
7	Tramin Winery	Extension	2010	Italy: Trentino Alto Adige / Bolzano, Termeno
8	Antinori Winery	New building	2012	Italy: Tuscany / Chianti / Chianti Classico, Bargino
9	Bulgari Winery	New building	2013	Italy: Tuscany / Chianti, San Casciano dei Bagni
10	Ysios Winery	New building	2001	Spain: Rioja / Rioja Alavesa[1], Laguardia
11	Brugarol (Bell-Lloc) Winery	New building	2007	Spain: Catalonia / Emporda, Palamos
12	Faustino Winery (Bodegas Portia)	New building	2010	Spain: Castilla y Leon / Ribera del Duero, Gumiel de Izan
13	Adega Mayor	New building	2006	Portugal: Alto Alentejo / Portalegre, Campo Maior
14	Quinta do Napoles	New building	2007	Portugal: Douro Valley / Cima Corgo, Santo Adriao (UNESCO WH site)
15	Quinta do Vallado	Extension	2010	Portugal: Douro Valley / Baixo Corgo, Peso da Régua (UNESCO WH site)
16	Quinta da Faísca	Extension	2013	Portugal: Douro Valley / Cima Corgo, Favaios (UNESCO WH site)
17	Abril Winery	New building	2012	Germany: Baden / Kaiserstuhl, Bischoffingen
18	Franz Keller Winery	New building	2013	Germany: Baden / Kaiserstuhl, Oberbergen
19	Abbey Winery Pannonhalma complex[2]	New buildings	2003	Hungary: Northern Pannonia / Pannonhalma
20	Béres Winery complex	New buildings	2006	Hungary: Tokaj, Erdőbénye (UNESCO WH site)
21	Konyári Winery	New building	2004	Hungary: Balaton / Balatonboglar, Balatonlelle
22	Bazaltbor-Laposa	New buildings	2010	Hungary: Balaton /

[1] Ysios Winery is located in Rioja wine region, Rioja Alavesa sub-region. “La Rioja and Rioja Alavesa Vine and Wine Cultural Landscape” was proposed in 2013 for inclusion in the UNESCO WH list.

[2] The Pannonhalma Archabbey Winery complex is located at the south-eastern foot of Saint Martin’s Hill in the direct neighbourhood of the Benedictine Monastery, which with its surroundings is listed as UNESCO WH site since 1996.

	Winery complex			Badacsony, Badacsonytomaj
23	Kreinbacher-St.Ilona Winery complex	New buildings	2012-2014	Hungary: Balaton/Somló
24	Hill- Leo Hillinger Winery	New building	2004	Austria: Burgenland / Neusiedlersee, Jois
25	Claus Preisinger Winery	New building	2009	Austria: Burgenland / Neusiedlersee, Gols
26	F.X. Pichler Winery	New building	2009	Austria: Lower Austria / Wachau, Oberloiben (UNESCO WH site)
27	Gantenbein Winery	Extension	2008	Switzerland: Graubunden, Fläsch
28	Lavaux Vinorama	New building	2010	Switzerland: Vaud / Lavaux, Rivaz (UNESCO WH site)
29	Marof Winery	New building	2009	Slovenia: Podravje / Prekmurje, Mačkovci
30	Škalce Winery	New building	2009	Slovenia: Podravje, Slovenske Konjice

2.2. The analysis criteria of the case studies

The issue of landscape integration and architectural quality is progressively stepping to the forefront, as testified by a greater awareness and attention on the part of public bodies, and growing calls within the population for better protection, enhancement and recovery of landscape resources. In this regard, several authors, focused on agricultural buildings, make specific reference to the visual impact of the buildings' appearance in the rural landscape and suggest design criteria to make them appropriately blend into the landscape through their architectural composition and (or) proper sitting in the development site. They grounded these criteria on the analysis of basic visual elements of landscape and its components, at the landscape, farm, farmyard and building scales. For example, Di Fazio (1989) in his work "*Designing agricultural buildings in relation to the landscape*" - research carried out in eastern Sicily, describes the main factors affecting the appearance of agricultural buildings and proposes general design criteria for improving their visual impact on the landscape. The considered factors are: (1) *the correct sitting of the building in relation to the landscapes' natural contour*, (2) *the building's shape and forms, materials, colors, textures and volume subdivisions*, (3) *the relationship to existing buildings and their groupings*, and (4) *the organization of the space surrounding the building, which links it to the landscape*.

The same subject was intensively studied and developed by the Garcìa *et al.,* (2006) in the work "*Analysis of the materials and exterior texture of agro-industrial buildings: a photo-analytical approach to landscape integration*" and also in the work "*Analysis of lines and forms in buildings to rural landscape integration*" signed by García-Moruno *et al.,* (2010). In both of these works, the researchers mentioned the aspects to understand the relationship between a building and its surrounding landscape. These aspects are: (1) *the landscape value*; (2) *the*

location of the building (visual characteristics and the scene); (3) *the color, texture, lines and form that characterize the landscape* (the colors, textures, lines and forms of the main elements, such as vegetation, soil, and traditional buildings, etc.); and (4) *the building's visual and aesthetic appearance* (the building's scale, the materials' color and texture, the lines and forms of the roof, walls and windows).

The three above-mentioned works were cited in several pieces of research related to this topic. The summary of the mentioned aspects defines the concept of "*landscape integration*". According to Rodriguez and Martin (2011) the term "*landscape integration*" indicates «*Making someone or something become part of a whole*». The subordination of one part to the whole entails understanding integration in the sense of adaptation. Landscape integration, so understood, constitutes an intervention strategy in the territory which aims at channeling the transformations of the landscape or correcting the ones which have been already carried out into adapting them to the landscape used as a reference. More precisely, it would consist of adjusting an object or territorial action to the physiognomic characteristics of a given landscape, or some of its components.

Table 2.2. *Factors* which should be considered in designing of *agricultural buildings* for improving their visual impact on the landscape.

<table>
<tr><th>Source</th><th>1</th><th>2</th><th>3</th><th>4</th></tr>
<tr><td>Di Fazio S. (1989)</td><td>The correct sitting of the building in relation to the landscapes' natural contour</td><td>The building's shape and forms, materials, colors, textures and volume subdivisions</td><td>The relationship to existing buildings and their groupings</td><td>The organization of the space surrounding the building, which links it to the landscape.</td></tr>
<tr><td>Garcìa, L., Hernàndez, J., and Ayuga, F. (2006)</td><td rowspan="2">The landscape value</td><td rowspan="2">The location of the building (visual characteristics and the scene)</td><td rowspan="2">The colour, texture, lines and form that characterize the landscape (the colors, textures, lines and forms of the main elements, such as vegetation, soil, and traditional buildings)</td><td rowspan="2">The building's visual and aesthetic appearance (the building's scale, the materials' colour and texture, the lines and forms of the roof, walls and windows).</td></tr>
<tr><td>García-Moruno, L., Montero-Parejo, M. J., Hernández-Blanco, J. and López-Casares, S. (2010)</td></tr>
</table>

The process of identifying, describing, classifying and mapping variation in the character of the landscape is known as "*Landscape Character Assessment (LCA).*" It seeks to identify and explain the unique combination of elements and features (characteristics) that make landscapes distinctive (Tudor, 2014). The process of doing this has evolved over the last 30 years, with the former Countryside Agency (now part of Natural England) leading the way in developing

guidance for undertaking LCAs. In 2002 the Countryside Agency published the "*Landscape Character Assessment: Guidance for England and Scotland*" which provides a technical guide to LCA for specialists and professionals. Later this was reviewed and replaced by "*An Approach to Landscape Character Assessment*", Natural England, 2014.

According to the new guidance (Tudor, 2014) there are four factors likely to be considered for the assessment of the landscape character, namely: (1) *Natural factors:* geology, landform, hydrology, climate, soils, land cover/flora and fauna; (2) *Cultural/social factors:* land use, settlement (settlement patterns, building types and styles, materials), enclosure (pattern and type of field enclosure, urban morphology), land ownership, time depth; (3) *Cultural associations*: art, literature, descriptive writings, music, myth/legend/folklore, people, events and associations; (4) *Perceptual and aesthetic factors:* memories, associations, perceptions, touch/feel, smells/sounds, sight.

Parallel, the same subject was intensively studied and developed in Hungary, where the above-mentioned four factors formed the basis for the assessment of the landscape character. A noticeable work, which revealed a methodology of landscape character assessments for Hungary, appeared in 2011 and was signed by Boromisza *et al.*, (2011). The methodology was applied to two specific landscape types and two dominant elements of the Hungarian rural landscape. Namely, authors analyzed the landscape character of the settlements (Ipoly-valley), agricultural areas (Szentendre Island), mines and natural lakes. According to them, there are four factors of landscape character which can be assessed for every landscape type and element: *(1) natural elements, (2) landscape structure, (3) visual aspects, and (4) emotions and traditions.*

In their research, the settlements' landscape character is defined by *natural factors*: hydrology and topography/relief; *visual factor*: the sight from the roads and the look-out points, the visibility of the whole settlement and the visibility of the most significant buildings (castles, churches); *pattern of the settlements*: situation of the settlement in the landscape determined by the natural elements and land-use; the layout of the settlement, and the landscape elements that affect the quality of the sight - important buildings; *emotions and traditions*: unique historical man-made features related to the settlement - these preserve the local traditions and demonstrate the inhabitants' affection for the landscape. In the case of *agricultural areas*, their character is defined by: hydrology, topography/relief, soil, natural vegetation; *landscape patterns*: pattern of cultivation, plots' structure, types of the cultivated crops, and patterns of the settlements, build forms and natural elements; *visual factor*: visual elements, external visual connections; *emotional factor*: preservation of the traditions regarding the cultivated crops and the applied agrotechnics.

Another remarkable work, which revealed the methodology of landscape character assessment of a wine region is signed by the Hungarian scholars Csima and Pádárné (2012). Their research is based on the Tokaj-Hegyalja wine region. According to them, the main factors that define the landscape character are: (1) *ensemble of natural elements,* (2) *landscape utilization and structure*, (3) *landscape, sight,* and (4) *traditions, feelings*.

Table 2.3 Four factors for the Assessment of the Landscape Character

Source	1	2	3	4
Boromisza *et al.* (2011)	Natural features	Landscape pattern	Visual aspects	Emotions and traditions
Csima and Pádárné Török, (2012, p. 255)	Ensemble of natural elements	Landscape utilization and structure	Landscape, sight	Traditions, fealings
Tudor, (2014, p. 29)	Natural factors	Cultural and social factors	Perceptual and aesthetic factors	Cultural associations

To perform the research and get a qualitative result, I took into consideration the above-mentioned aspects that should be considered in designing agricultural buildings for improving their visual impact on the landscape (see concise in Table 2.2), factors likely to be considered for the assessment of the landscape character (see concise in Table 2.3) and I analyzed the selected case studies considering the following order and factors/aspects:

I. To formulate an "objective, measurable judgement" of "subjective, artistic interventions," first of all, I created a qualitative description of the 30 examples, which include:

- ✓ General details of the case studies, namely: (1) *project name*, (2) *year of completion*, (3) t*ype of construction* (new building or extension), (4) s*ize, functions*, (5) *vine area and annual production*, (6) *architect*(s), (7) *landscape architect*(s), (8) *awards or special recognition for the project, and* (9) *location (country, wine region and sub-region/district).*
- ✓ Analysis and assessment of the case studies according to: (1) *natural features* (landforms, hydrology, climate, soil), (2) *land use and structure* (pattern plots' structure, and patterns of build forms and natural elements), (3) *culture, emotions, traditions*, and (4) *visual, aesthetic aspects of the buildings* (the volume, shape and forms, the shape of the roof and windows, scale, materials and colors) and its natural and cultural context.
- ✓ The architects' intentions and the reviewers' appreciations.

The information for case studies was gathered from written materials (designers texts, architectural critics' review), photos, site layout plans from Google Maps, wineries' websites, architectural websites such as Architizer.com, ArchDaily.com, Dezeen.com, Divisare.com, etc., site visits in case of Hungarian, Spanish (1 from 6, Faustino Winery), Portugues (2 from 4, Quinta do Napoles and Quinta da Faísca) wineries and from Wine-Searcher database, which

includes an encyclopedia of wine regions, grape varieties and wine producers (https://www.wine-searcher.com/).

II. For a quantitative result, a comparative analysis was created. Taking into consideration the analyses of the exterior aspects of the new buildings and their surroundings, I divided the 30 examples according to the four factors which define the landscape character. Although all case studies can be analyzed in terms of the 4 aspects, I distributed them according to the predominant features of the building which refers to the chosen aspect (some of them will be mentioned in different lines). More precisely, the first group, "Natural features: morphology and the building" contains examples which have an essential relationship with the landscape morphology, the second one "Landscape patterns and the building" includes wineries whose aspects have direct or symbolic references to the landscape patterns and which tend to belong to their viticultural landscape, to be an integral part of the landscape that has evolved over the years. The third "Culture, emotions, tradition" embraces the wineries that embody the spirit of the local traditional vernacular architecture that provides the landscape with intangible values such as the ones of identity character. Finally, the fourth "Perceptual, visual aspects" covers architectural objects which have a prominent visual impact on the cultural landscape.

3. ANALYSIS AND ASSESSMENT OF WINERIES IN VITICULTURAL LANDSCAPES OF THE EUROPEAN WINE-PRODUCING COUNTRIES

3.1. France: Château Thuerry, Château Faugères, Château Cheval Blanc, Château La Dominique

France, the largest country in Western Europe, is one of the world's most important wine-producing country. For hundreds of years, it was relishing the reputation of being the world's greatest producer of wines - it has produced wine in greater quantity and greater quality than any other nation (Wine-Searcher.com, 2017). Today, that reputation is being rivalled by other European wine-producing countries, which have made great strides in the production of world-class wines in recent decades, thanks in large parts to the significant groundwork laid by France, which, among other things, has established quantitative norms that now have role model character for virtually all wine-producing countries in the world. France was the starting point of the global advance of the grape varieties Cabernet, Merlot and Chardonnay; pioneered the use of the small oak barrel, the barrique, in winemaking; and established the Appellation Contrôlée system of wine classification (Woschek *et al*., 2012, p. 128). More than that, it was in France that the fundamental concept of "terroir" (the idea that the site determines the quality of the wine) became pervasive and flourished (MacNeil, 2015, p.112). Last and not less important, France, namely Bordeaux played a leading and multifaceted role in the evolution of wine architecture, discussed in sub-chapter 1.2.3: History of Wine Architecture.

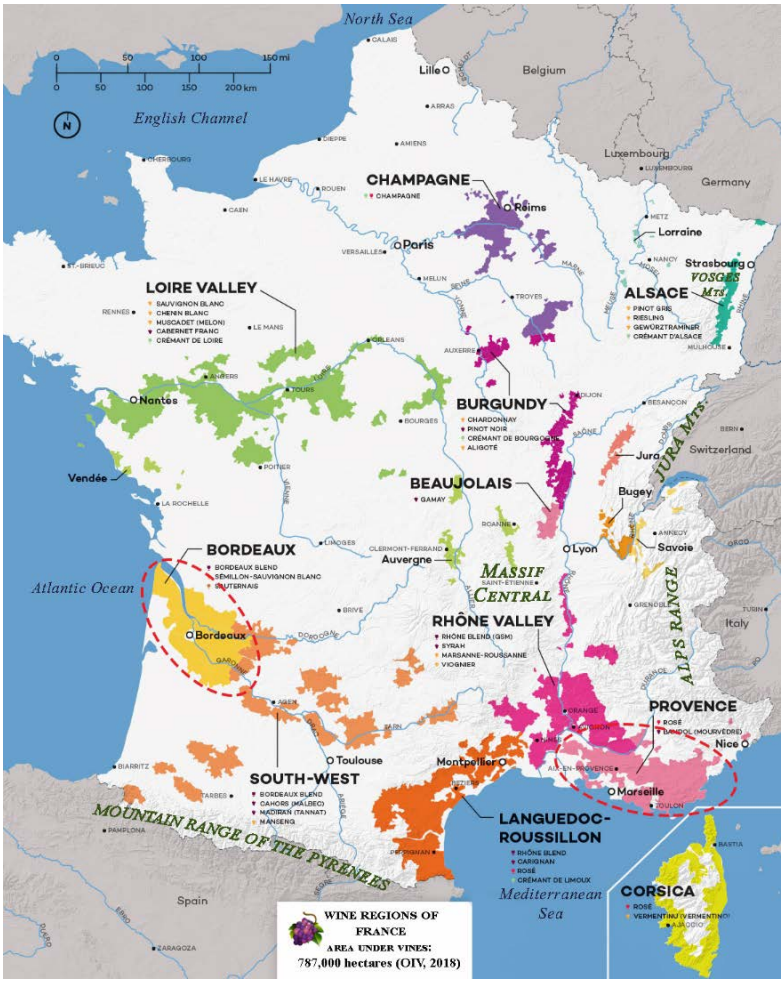

Fig. 3.1. Map of the French wine regions

France, drained by dozens of rivers and each with many smaller tributaries, has a diverse topography with few homogeneous regions. Structurally, it contains the three basic elements of Europe's relief: a

monotonous plain in the north, a succession of low-lying ancient massifs in the centre, high Alpine and Pyrenean mountains in the south. Plains and hills, which occupy two-thirds of its territory, provide fertile agricultural lands. From the country's usable agricultural area, consisting of nearly 30 million ha (nearly 60% of the surface area) (Ray, 2014, p.35), the vines cover only a limited area, namely 787,000 ha. Nevertheless, France ranks 2nd among wine-producing countries worldwide, producing roughly 36,7 mhl of wine (OIV, 2018, p.4, 7). The vineyards, scattered across the country, most of which in the proximity of large, navigable rivers, are classified into 14 main wine-producing regions (Fig. 3.1). All these regions - divided into a large number of sub-regions defined by its particular geographical features, which in turn create specific characteristics in the wines produced there - are characterized by a long historical tradition that, for many of them, dates back to Roman times.

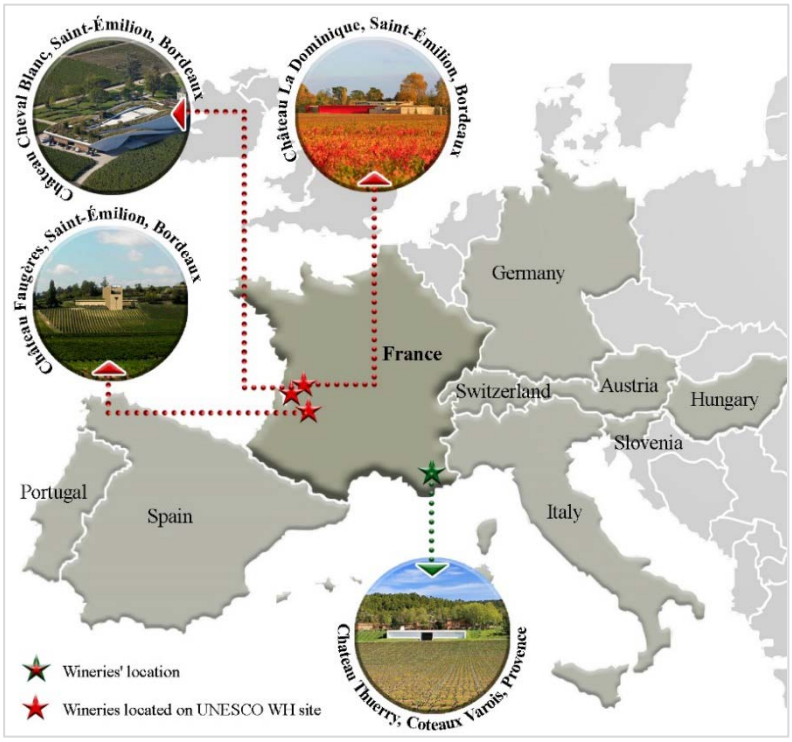

Fig. 3.2. Map location of the French case studies

The selected case studies (Fig. 3.2) belong to two wine regions. The *Château Thuerry* is located in the viticultural landscape of *Coteaux Varois,* a wine sub-region of *Provence*, while *Château Faugères, Château Cheval Blanc* and *Château La Dominique* in the *Jurisdiction of Saint-Émilion,* a wine sub-region of *Bordeaux.*

PROVENCE region is the oldest wine-growing area of France. The ancient Greeks brought vines and wine culture to Provence as early as 600 B.C., settling in Massalia, today Marseille. Roman conquerors followed, naming the region "*Provincia*" and further extending vineyards deep into the surrounding countryside of Provence. The wine region, with an area of 27,000 ha of vines and 600 winemakers - 540 private wineries and 60 cooperative wineries - is the only region in France and also in the world to focus primarily on the production of rosé. Located in the far southeastern corner of France (Fig. 3.1), the Provence's vineyards extend over approximately 200 km between the Mediterranean Sea and the Alps Mountains in the French departments of the Var, the Bouches-du-Rhône, to a lesser extent, the Alpes-Maritimes. The wine region of Provence is

comprised of 9 main viticultural sub-regions or AOC (Appellation de'Origin Contrôlée). (Wine Folly.com, 2019)

Côteaux Varois is a key appellation of the region and covers more than 2,700 ha in 28 communities in the Var department. It is located in the heart of "green Provence", between the Sainte-Baume Massif to the south and Les Gorges du Verdon-Verdon Canyon to the north, and crossed by the Argens river, which is formed by several streams. Its territory is distinguished by pronounced mountainous reliefs that peak at 600 to more than 1,000 m in the Sainte-Baume Mountain Range. The climate is the Mediterranean, with very mild autumns and springs and with sometimes torrid summers and very cold, harsh winters. The soil is characterized in part by a series of folded limestone and calcareous clay that alternate with zones of fine gravel and flint. In this viticultural landscape, dominated by the wooded mountains, the vineyards lie down at altitude, which varies between 350 and 500 m. (Penna, 2018; Millo and Todorovska, 2014)

The CHÂTEAU THUERRY (see Appendix 1), with its 340 ha of lands (45 ha of vines and some 750 olive trees) which extend over three communities, Villecroze, Flayosc and Tourtour, is located in the heart of Regional Nature Park of Haut-Var-Verdon. The estate itself is situated on the productive land which lies on the plain area of the doorsteps of the Var hills, on the south-eastern outskirts of the Villecroze village. This piece of land, consisting of few grassy slopes dotted with olive trees and a huge plot of the sparse, stony soil of clay and limestone covered by the parallel rows of vines, is enclosed by a natural barrier. On the eastern side, it is bounded by the riparian forest of the Thuéry Creek - a tributary of the River Bresque - and on others sides by the rocky slopes of the Var hills covered with shrubberies, pines and holm oaks. The estate consists of the old manor house dating from 12th-century - a long, ocher-painted structure with sloped tiled roofs and pale blue shutters which serves as both office, shop and wine tasting room - and a new technical cellar, built in 2001 and designed by the French architects, Xavier Leibar and Jean-Marie Seigneurin. The new cellar, whose footprint is almost invisible above ground, is nestled between the historic building that lies at the foot of the hills and the vineyards, on the gentle slope that separates them. The building length is oriented along to the contour lines and parallel with the old building and the vine rows. The cellar has a huge, compact volume - a parallelepiped 70 m long and about 20 m deep - which accommodates a bottling area, a fermenting room, a barrique cellar and a bottle cellar. The building's mass, built in concrete, is partially embedded into the slope and covered with a layer of earth planted with grass. The green flat roof forms a large terrace in front of the old building merging with the grassy slope planted with the olive trees. It houses a paved area that allows tractors to access the trapdoor through which the grapes are poured into the vats below and a concrete pyramid with an oak door that serves as the entrance to the cellar for the visitors. The roof is used for various cultural and

festive events and provides a panoramic view of the surrounding landscape. The most distinct part of the structure is its long white south facade, in the middle of which is a huge rectangular hole that contains a corridor providing direct access to the cellar rooms. Its white surface, made of limestone masonry and framed by the rough concrete band, accentuates the building appearance, making it stand out from its natural and cultural context. According to the architects, "*the project does not seek to compete with what pre-exists, but to emphasize and support it, operating as a remote base*" (Leibarseigneurin.com).

The new cellar of Chateau Thuerry is evaluated by a reviewer as "*a project that affirms the possible coexistence between modernity and tradition, between a building reflecting the multiple stages of its history and a radically minimal realization, between the ancestral methods of vinification and their updating by an advanced technical mastery*" (Woschek *et al.*, 2012, p. 40).

BORDEAUX is one of the world's most famous, prestigious and prolific wine regions. The region, with about 120,000 ha planted with vines and some 6,000 chateaux, is located in the southwest of France. It stretches for 130 km inland from the Atlantic coast and lies along the path of three important rivers - the Gironde Estuary and the two large rivers that feed it, the Dordogne and the Garonne (Fig. 3.1). Unlike many of France's regions where cultivation occurs on steep hills, Bordeaux's vineyards occupy largely flat terrain, with some gently rolling hills, that create variations in topography. Broadly, the region is divided into three primary areas: The Left Bank of the Garonne - a plateau that gently slopes towards the coastline; the Right Bank of the Dordogne - a rolling plateau (100 to 130 m high), mostly hilly with relatively deep valleys, but no steep slopes or sharp relief; and the Entre-Deux-Mers ("Between Two Seas") stretching between the Garonne and Dordogne rivers - a hilly region where the highest points of the region are located. These areas are sliced into 38 sub-regions with 57 different appellations. (Wine-Searcher.com, 2017; The Wine Cellar Insider.com)

Jurisdiction of Saint- Émilion - covering 8 communes - is a sub-region of Libournais wine-growing district. It is located on the right bank of the Dordogne river, in the north-east of Bordeaux, and is delimited to the south by the Dordogne and to the north by the Barbanne stream. The territory is composed of a plateau (partly wooded), hillsides, concave valleys and a plain. The climate is temperate oceanic and is characterized by mild (and generally dry) winters, hot summers and the long, warm autumns. Geologically, Saint-Émilion is divided into three main areas: the limestone plateau on which Saint-Émilion town is located, and the slopes around it; south of the limestone plateau is the alluvial, sandy plain which slopes gently down to the banks of the Dordogne; in the northwestern corner of the Saint-Émilion area is an ancient alluvial terrace, formed by glacial activity at the very beginning of the Quaternary period roughly 2 million years ago. The surface soils are diverse, alternating between combinations of gravel,

sand, clay and limestone. The landscape presents a monoculture, comprised exclusively of vines (5,400 ha) occupying more than 67.5% of the total area. The vineyards are predominantly planted with red grape varieties, such as Merlot, Cabernet Franc and Cabernet Sauvignon. Besides the vineyards and the human settlements, the other traces of exploitation of the land are the abandoned underground quarries, which supplied limestone for the religious and public buildings of Bordeaux and its hinterland until the 18th century. (Wine-Searcher.com, 2019)

Viticulture was introduced into this region by the Romans and intensified in the Middle Ages. The long history of winemaking had produced its characteristic architecture, which dominates the vineyard scenery. For instance, the settlements are characterized by modest stone houses with tiled pitched roofs, most dating from the first half of the 19th century. These have one or two storeys and are grouped in small hamlets, for the use of vineyard workers. The *chais* (wine storehouses) are large functional rectangular structures built in stone or a mixture of brick and stone, with tiled double-pitched roofs. They began to be built in the 1930s, either as new constructions or as adaptations of earlier structures. The "*vineyard castles*" (châteaux with the *cuverie* - the building where the wine is made, and the *chai* - the cellar where it is stored and aged) are located at the centre of their respective domains. These range in date from the mid-18th century through the early 19th century to the late 19th and early 20th centuries. The earlier buildings are in a relatively sober classical style, but the later ones are more extravagant (UNESCO, 1999). The historic architecture of the Jurisdiction is characterized by the uniformity of the building materials: the limestone for the walls and tiles, fabricated from clay mined in the river valleys, for the roofs.

The Jurisdiction of Saint- Émilion is a remarkable example of a historic viticultural landscape which survived intact. The alliance of stone, vine, wood and water, both built and the natural, has created a distinguished cultural landscape, which was the first viticultural landscape to be placed on UNESCO's preservation list in 1999.

The **CHÂTEAU FAUGÈRES** (see Appendix 2), with its 37 ha of vines, is located on the plateau, east of the Saint-Émilion town. The vineyards lie down on the clay-limestone plateau and gentle slopes facing south-southeast in a circular formation. The estate consists of old château, built in the 18th-century chartreuse style, and new winery built in 2009, designed by the internationally famous Swiss architect, Mario Botta. The Botta's "*cathedral of wine*," as he likes to call it, is built on the slope at the top of the plateau overlooking the old château. This is bounded by the road on one side and vines' rows on the others and is surrounded by a "sea of vines", which is shaped by the patterns of curvilinear roads and punctuated by "vineyard castles" and small hamlets - stone houses with practical geometric shapes and tiled double-pitched roofs.

The productive land is divided into dynamic, irregular plots characterized by the parallel vine's rows with a different orientation.

The winery building, which keeps the local scale, consists of two pure volumes - a horizontal rectangular form and a vertical one that rises from its centre. The horizontal volume, which accommodates the vat room, barrel cellar and other technical areas, is partly sunken into the ground. The visible part is almost windowless, only the lateral walls are penetrated by the narrow, glazed strips that are slightly noticeable. Its flat roof, covered by plantings of lavender, rosemary and sedum, serves as a panoramic terrace that offers fabulous views of the vineyards. The most distinct part of the design is the central tower which, in addition to the spaces relating to wine-making, houses a tasting room and an extensive covered terrace overlooking the countryside. The tower's lateral facades are punched out by the rows of tiny square openings, while the frontal facade is pierced by a window that recalls the shape of a glass wine funnel. The building's mass is made of reinforced concrete and is covered with gently textured natural yellow stone, which accentuates the geometric outline of the composition. According to Taylor (2019, p. 54), the material used is Spanish limestone which corresponds to Saint-Émilion's famous limestone, which has now been exhausted.

The architect's main objective was simply to evoke the mutually beneficial relationship between the Saint-Émilion terroir and the men who turn its fruit into wine (Taylor, 2009, p. 54). "*The project sets "rational" architecture created by man against the "organic" transformation of the landscape, in order to enhance the beauty of both*" (Botta, 2011).

The new winery of Château Faugères is evaluated by reviewers as "*a masterly work of art - a veritable cathedral of wine - a harmonious addition to the countryside;*" (Winepaths.com) and "*an impressive building with outstanding architecture perfectly integrated into its natural surroundings*" (GreatWineCapitals.com). However, I found some cautious reservation as well, but with a final celebration: "*a bold cellar that makes a clear statement in the otherwise reserved Saint-Emilion region [...] but nevertheless is harmoniously integrated into the landscape: the stone blocks on the exterior corresponding to the region's traditional architectural style*" (Archello.com). In 2013, the complex won a gold medal in the "Architecture and Landscapes" category Best of Wine Tourism Awards.

The **CHÂTEAU CHEVAL BLANC** (see Appendix 3), with its 39 ha of vines, is located on the plateau, northwest of the town of Saint-Émilion, close to the border of Pomerol wine district. The vines are grown on the plateau, around the estate, and on two gravel hillsides with gentle slopes. The productive land is divided into geometric regular plots characterized by three main soil types – fine-textured with clay, more coarsely textured with gravel, and large gravel with sand. The estate consists of two-storey château with a classical style, an orangery, a small chapel,

dating from 19th-century and a new winery built in 2011, designed by the French Pritzker Prize Winner (1994) architect, Christian de Portzamparc in collaboration with the landscape architecture firm, Méristème - Régis Guignard. The new winery, also known as "*the winery under the hill*" extends out in the northwestern part of the chateau, from the orangery towards the vines. The entire built area, bounded by rows of vines on one side and a park on the other, is surrounded by a vast landscape of vineyards shaped by meandering water plans of Barbanne and Taillas streams and embellished by the region's most famous châteaux (e.g. Château La Dominique, Château Figeac, Château L'Evangile, Château La Conseillante, etc.).

The new establishment has a massive volume with curved surfaces and a wavy roof. The two-storey building, partly embedded into the ground, accommodates a cuvier with 52 vats, wine cellars, a tasting room, workshops, a packaging room and offices. The building's structure, which greatly exceeds the scale of the neighbouring estates, consists of six white polished concrete curvilinear load-bearing walls that act as the main support. The unusual geometry of the walls creates an open courtyard, voids that are coated with wood and glass accompanied by a series of wooden pillars, and also spaces along the north and south-facing facades that accommodate the wooden stairs that lead to the green rooftop. Landscaped with wooden terrace and planted verges of different varieties of wild grasses, flowers and clumps of blue bushes, the roof like a promontory Belvedere offers an astonishing panoramic view over the viticultural landscape.

The architect's idea was to design a winery that would open up the view onto the beauty of the environment shaped by man (Miesarch.com, 2013). The winery was hailed as one of the most successful examples of new architecture in Bordeaux: "*To have a piece of art like the Château Cheval Blanc standing in the middle of vast vineyard plots and next to a complimentary country house is an amazing expression of modernity*." The reviewer appreciates the building as a piece of art, as an independent object, while its environmental conscious technical solutions appear somehow as an added aspect. "*This building is a significant achievement in the wine-making industry around the world. No other winery in the world has been certified for the High-Quality Environmental (HQE) standard. This certification usually focuses on the care taken in choosing building materials, energy-saving, waste management and waste collection and sorting, as well as acoustic comfort and employee well-being*" (Mutuli, 2015).

The **CHÂTEAU LA DOMINIQUE** (see Appendix 4), with its 30 ha of vines, is settled in the direct neighbourhood of the Château Cheval Blanc, in the eastern part. The vines are on clay-gravel soils in the northern part of the estate and on clay-limestone soils in the southern part. The estate, enclosed by rows of vines on one side and a park on the other, is comprised of a two-storey country manor house, cellars, agricultural buildings - large functional rectangular

structures with classical stone facades and tiled hip roofs - and an innovative new cellar completed in 2014, designed by French architect Jean Nouvel, also a Pritzker Prize Winner (2008), in collaboration with the landscape architecture firm, OOk Paysagiste. The new technical cellar extends out of the existing manor house and its cellar wings towards geometric vineyard plots whose parallel rows seem to guide its footprint. It has a simple box-like volume consisting of a horizontal plane and vertical mirror walls. The east and west facades consist of a concrete veil, covered in a set of horizontal stainless steel slats that are polished and lacquered in a dark red colour. All blades are angled, at the bottom, these are angled upwards, reflecting the sky, while at the top, these are angled progressively downwards, reflecting the ground and the rows of vines. The north facade is transparent, consisting of a large mirror that reflects the vines. A staircase concealed behind one of the red facades leads up to the most impressive part of the structure, its roof, which offers a unique view of the neighbouring prestigious vineyards. The roof houses a restaurant with floor-to-ceiling glass walls and hip roof, and a generous terrace dominated by a sea of red glass pebbles which look like a giant pile of grapes that have just been harvested.

According to the architect, due to the prestigious vineyards that surround the estate, the main aim was to mark the territory by bringing out and transforming a very special landscape. "*The idea was born of creating an object that would rise up out of the existing building–a big stone barn smack bang in the middle of the domaine - and would venture into the vines like a piece of land art, in a nod to the artist Anish Kapoor*" (Jeannouvel.com).

Similar to the case of the Botta's monumental winery, the Château La Dominique received the gold medal in the "Architecture and Landscapes" category Best of Wine Tourism Awards 2018. It is appraised as "*a sleeping beauty, which while respecting the history it embraces innovation in winemaking, architecture, wine education and food - as a winning wine tourism combination*" (GreatWineCapitals.com) and "*a true art form that captures the landscape plays with the terroir creates emotion*" (Winepaths.com).

3.2. Italy: Cascina Adelaide Farm, Manincor Winery, Tramin Winery, Antinori Winery, Bulgari Winery

Italy and France often exchange top ranking as the world's major wine-producing country. According to the International Organisation of Vine and Wine (April 2018, p.7), Italy ranks 1st, producing about 42,5 mhl of wine. Italy's vineyard area is about the same as France, 695,000 vs. 787,000, but more table grapes are grown in Italy than in France, 7% vs. 2%. Italy's territory consists of about 40% mountains and another 40% hills. The combined zigzagging slopes of hills and mountains, plus the close proximity of four seas (the Tyrrhenian, Adriatic, Ligurian, and the

Fig. 3.3. Map of the Italian wine regions

Fig. 3.4. Map location of the Italian case studies

Mediterranean), plus the geologic impact of numerous earthquakes have produced a variety of environments in which grapes grow. Grapevines grow everywhere, from high mountains to coastal areas, from hills to alluvial plains, from dry to marshy areas, with bed-rock that range from granites to limestones, from conglomerates to schists and from volcanic and volcaniclastic rocks to marls and clays. Every region, district of the country produce wine. The humans living in Italy have been growing grapes and turning them into wine for at least 4,000 years. The Greeks brought viticulture to Italy, the Romans grew grapes and built vineyards across all of Europe, and the Italians turned their wine industry into one of the world's largest. The vineyards are distributed over 20 wine regions (Fig.3.3) that encompass literally hundreds of officially classified appellations - the legally defined areas where grapes for a wine are grown. (MacNeil, 2015; Amato and Valletta, 2017)

The selected case studies (Fig. 3.4) belong to three wine regions. The *Cascina Adelaide Farm* is located in the viticultural landscape of *Barolo,* a wine sub-region of *Piedmont* wine region. The *Manincor Winery* and *Tramin Winery* are both settled in *Alto Adige* wine region. The *Antinori Winery* and *Bulgari Winery* are established in *Tuscany,* in the *Chianti* wine sub-region.

PIEDMONT enjoys an unrivalled seat among the world's very finest wine regions. Barolo and Barbaresco - two of the country's most legendary and serious reds - are born here; so is the world's least serious sparkling wine, the playful spumante known as Asti. The wine region is located in the northwest corner of Italy (Fig. 3.3), at the foot of the Western Alps, which encircle its northern and western sides and forms its natural border with Switzerland and France. Its territory is comprised of mountains and rolling foothills. The best vineyards lie over two hilly, southeastern ranges known as the Langhe and Monferrato. The viticultural landscapes of Langhe and Monferrato, comprising a selection of five distinct wine-growing areas which stretch between the Po River and the Ligurian Apennines, were inscribed on the WH list in 2014. These landscapes are marked by cultivated hillsides, following ancient land divisions punctuated with buildings that lend structure to the visual space: hilltop villages, castles, Romanesque churches, farms, cellars and storehouses for cellaring and commercial distribution. Vine pollen has been found in the area dating from the 5th century BC when Piedmont was a place of contact and trade between the Etruscans and the Celts; Etruscan and Celtic words, particularly wine-related ones, are still found in the local dialect. During the Roman Empire, Pliny the Elder mentions the Piedmont region as being one of the most favourable for growing vines in ancient Italy. (MacNeil, 2015; UNESCO, 2014)

The *Barolo* sub-region is situated in the northwestern part of Langhe, on the right bank of the Tanaro River. Its territory is characterized by low hills watered by several creeks and densely planted with vines. It experiences a continental climate tempered by the river and its tributaries. The field structure ranges from a compact, sandstone-based soil dating from the Helvetian period to calcareous marl dating from the Tortonian period. Almost 90% of the appellation surrounds five villages: La Morra, Barolo, Castiglione Falletto, Monforte d'Alba and Serralunga d'Alba. These five towns are the most well-known and are considered the most significant.

The **CASCINA ADELAIDE FARM** (see Appendix 5), owning 11 ha of vineyards, is located on the northeastern edge of the Barolo village, in a small valley floor, between the soft, vine-covered foothills. The estate consists of an ensemble of historical buildings - pale yellow-coloured rectangular structures with pitched roofs - and a new winery built in 2004 and designed by the Italian architectural firm Archicura. The entire built area is bounded by the small stream called Rio della Fava and its riparian vegetation, local road and by the stone walls of the Castello

de Barolo which towers the scenery. The surrounding vineyards are divided into dynamic, irregular plots characterized by the parallel vine's rows that follow the contours of the hills. The new cellar stretches from the old farmstead towards the vineyards and has a barely visible footprint which, guided by the meandering water plan of the stream and sinuous road, takes shape of a patch of land. The building consists of two volumes. The main volume, housing all necessary premises for wine production, is mostly hidden into the ground. It extends like a small hillcrest descending to the valley like the ridges of the hills. Its grassy roof rises softly from the bank of the stream towards the western side, along the road, and is interrupted by a wide glazed gap that reveals the heart of the winery, the porch and the small circular courtyard that houses the entrance for the workmen, goods and machinery. The roof is supported by the wine-coloured iron pillars that recall the shape of the vine, the grape plant. Above the roof rises a small volume that accommodates the tasting room. It looks like an arc-shaped pocked of land. Its glazed arch offers a view towards the hill where the grapes grow, while the entire roof of the cellar, which provides access to it, a panoramic view of the surrounding landscape. Entirely, the new cellar, whose shape and colour are mixing visually with the lines and colour of the surrounding hills, discreetly joins with the existing buildings, adding the power of a new and contemporary architectural style to them.

"*In this project, we expressed the desire for a present but not shocking landscape integration. In a layer of earth that lies between the sky and the vineyards, this new winery takes shape following the natural paths of metamorphosis that leads the grape to turn into brilliant wine*"- explains the architects (Teknoring.com). The new cellar is evaluated as "*a contemporary architecture blending gently and modestly into the historic setting"* (Cuvee-av.com, 2018).

ALTO ADIGE is one of Italy's smallest and northernmost wine regions, located right in the middle between Austria and Switzerland on Italian soil, between Alpine peaks and a Mediterranean landscape (Fig. 3.3). The region is bisected by the Adige river, which gives Alto Adige its name. The valleys formed by the Adige and its tributaries are home to almost all of the region's vineyards. Outside of these areas, the terrain is generally mountainous. The vine cultivation stretches from the terraced slopes at the foot of high Alpine peaks in the north to vineyards in the Mediterranean-like landscape in the south. Around 5,000 winegrowers tend just 5,400 ha of vineyard area in different climatic zones with variable types of soils and at elevations ranging from 200 to 1,000 m above sea level. The geological composition of the region often changes at minimal distances, from one vineyard to another. The soils on which the vines grow range from volcanic porphyry to weathered primitive rock soils composed of quartz and mica to limestone and dolomite to sandy marl. (Altoadigewines.com; Wine-searcher.com, 2014)

The **MANINCOR WINERY** (see Appendix 6), owning its 50 ha of vines, is located outskirt of the viticultural village Caldaro, on the edge of the "Alto Adige Wine Road." The estate consists of an ensemble of historical buildings - simple rectangular structures with pitched roofs - and a new cellar built in 2004, designed by renowned architects Walter Angonese, Rainer Köberl and Silvia Boday. The built-up area is situated on a gentle hill above Lake Caldaro. It is bounded by the road on one side and vine rows on others and surrounded by the steep and gently undulating slopes covered with vines and dominated by the forested slopes and craggy peaks of the mountains. The new cellar, accommodating all necessary premises for wine production and storing, a shop and a wine tasting room, lies to the east of the historic manor house. It has an undistinguishable footprint. Its volume, made of concrete and consisting of three floors, is almost completely hidden below the ground and covered with vine rows. The only openly - displayed parts of the cellar are the entrance, wooden sales pavilion, and the Corten steel balcony and glass "eye" of the tasting room, which offer to the visitors a view towards the landscape. Entirely, the new structure has taken on all the characteristics of the location - the landscape was not changed but rather reinterpreted. It appears as a hillside on which vines grow.

According to the owner, to design a new cellar, the main challenge was the particular sensitivity of the site: "*from both a cultural and landscape perspective Manincor is an ensemble very much worth protecting and all interventions must be carried out with extreme care. [...] the solution was to construct the cellar entirely below ground beneath the vineyard*" (Manincor.com). The new building is evaluated by a reviewer as "*a showpiece cellar - rather than being a simple appendage of the historical estate, it integrates itself as an autonomous structure into the precious earth of the surrounding hillside vineyards and complements effectively the old estate"* (Woschek *et al.*, 2012, p. 126).

The **TRAMIN WINERY** (see Appendix 7) is located on the edge of the "Alto Adige Wine Road," at the entry of the wine village Tramin. It is enthroned on the slope and bounded by the main road on one side and by rows of vines and a narrow belt of trees on others. It is surrounded by the steep vineyard slopes that are moulded by the residential dwellings, cooperatives, farm holdings, wineries, mountains' forested slopes and reigned by mountains craggy peaks. The winery is one of the oldest winemaking cooperatives in Alto Adige. It has 290 "co-owners" who produce grapes according to the cooperative's strict winegrowing principles on 230 hectares of land. The cooperative's vineyards, nestled between the towns of Tramin, Neumarkt, Montagna and Ora. The vineyards, shaped by the mountains Mitterberg, Adige river, Caldaro Lake and residential areas, are grown on gently undulating slopes and on some steep slopes, which are covered by a combination of clay, gravel, limestone and porphyry soils (Cantinatramin.it).

The winery consists of an old ensemble of buildings such as production halls, wine storage areas and a visitor centre dating back to 1970, and two new structures built-in 2010. These were designed by the Italian architect Werner Tscholl, which is renowned in Alto Adige, considered to be a master of renovating and modernizing castles, ruins, monasteries and barns. The structures accommodate the sales and tasting area, a conference room, administration and marketing offices and many other spaces related to the wine production. These are located to the left and right of the old main building and are built above the existing level, which was covered by concrete platforms and planted with creeping plants. The old plaster-faced building with a gabled roof forms the heart of the new structures. It is used as a reception area and serves as a symbol of the winemaking tradition. The guest access is located on the newly created level above, to welcome visitors separately from the facility's operations. The existing level continues to provide delivery access to the vintners, the entrance and exit for goods, and anything else to do with the vital workings of the winery's operations, as well as the employee car park. The two wings-like structures represent massive, glazed cubes enclosed in a green steel web-like framework. The dynamic sculptural framework, which recalls the climbing vines, creates a loggia running along with the wings, which offer an astonishing view over the Adige Valley and its vineyards.

According to the architect, the basic idea for the project was: "*a vine that grows out of the ground of the delivery area and then climbs up to envelope the building, giving rise to a sculptural structure that opens itself out to visitors and gives the whole ensemble a new face*" (Woschek *et al.*, 2012, p. 61).

Even though the added organic parts contrast with the traditional form of the building, many reviewers appreciate the intervention. "*It is a unique architectural landmark - a work that signals the presence and the mission of the cellar*" (TheWinebowGroup.com, 2018). "*Its iconographic impact, linked to the environment, combining metal, concrete and glass, make the construction a Termeno landmark and a gateway to the town*" (Domus.com, 2010). "*With a form that recalls the surrounding steep vineyard slopes and mountain crags, the building blends harmoniously into the landscape*" (Woschek *et al.*, 2012, p. 60).

TUSCANY is the most enduringly famous of all Italian wine regions, thanks to the romantic glamour of its endless rolling hills, cypress-lined country roads and hilltop villages. The region is situated in central Italy and is bordered by the Tyrrhenian Sea to the west, which gives the area a warm Mediterranean climate (Fig. 3.3). Nearly 70% of the region is characterized by hills progressing inward to the Apennine Mountains. The hills have a tempering effect on the summertime heat, with many vineyards planted on the higher elevations of the hillsides. The soil varies considerably, but the well-drained slopes of the central hills tend to be sandy or stony, calcareous, and interspersed with schist and galestro (crumbly, stony marl). As is

the case with almost all of Italy's 20 regions, Tuscany has a long wine history; it can be traced back as far as the fifth century BC.

The *Chianti* wine sub-region lays in the heart of Tuscany, in the area broadly delimited by the cities of Florence, Siena and Pisa. Its landscape is characterized by green, gentle hills covered with wide fields of vineyards, olive groves and dense forests, small terracotta-roofed stone villages, characteristic parishes and honey-coloured stone farmhouses. The climate is continental, with cold winters and scorching summers. Most vineyards are located at the foot of the Apennines mountains, which have the effect of lowering the summer temperatures. The two most widespread soils are galestro - a mix of clay and marl schist - which is prevalent in the northern part of the Chianti Classico area; and alberese - a hard sandstone - is more widespread in the south of the region.

The **ANTINORI WINERY** (see Appendix 8) is located between Chianti hills, on the outskirt of the Bargino town, on the road between Siena and Florence on the side of the Strada Nationale 2, San Casciano in Val di Pesa. The winery was completed in 2012 and designed by the Italian architectural studio archer Associati. The building is settled into gentle and fascinating surroundings characterised by the undulating and sinuous profile of the hills covered by cypresses, forests, vineyards, olive groves, meadows, arable crops and structured by the Pesa River and its riparian woodlands, water bodies of lake Mulinvecchio, residential area of the Bargino town and sinuous roads and paths. The industrial complex's body, whose footprint is barely discernible, is buried into - literally inside - the hillside and extends horizontally along the natural slope, paced by the rows of vines, which along with the earth, form its "roof cover." It is divided into two floors with different levels: the lowest levels are dedicated to the storage and production of wine, while the upper level contains visitor facilities including a museum, a library, an auditorium with capacity for 200 people and areas of tasting and purchase. "The invisible building" is marked by two horizontal cuts that follow the curves of the hilly land. The first cut is closed by a large reflective glazed front - creating a sense of "openness and grandeur," while the second, upper one, is closed by walls and gates in Corten steel. The used materials, Corten steel, terracotta bricks (their reddish-brown colour match with the colour of the clay soil on which the vines grow), oak and glass, perfectly harmonize with the natural charm of the surrounding landscape. The structure's green stepped roof, from which the view onto the countryside is wide open and spectacular and which also covers the underground driveways that form an essential part of the aggregate, is pierced by a couple of brown, circular openings, which bring the light into the depths of it - the adoption of circular forms resonates with the shape of wine barrels, bottle and glasses, an intriguing play of symbolism. One void contains a large

spiral staircase that connects the two levels of the building. The structure opens to the landscape through the first cut, which is visible from the exterior and leads to the spacious balcony shaded by the roof, offering to the visitors a breathtaking view towards the landscape.

"*The physical and intellectual construction pivots the winery on deep-rooted ties to the land, creating a relationship that is so intense and sustained as to the architectural image is hidden and mixed in it*," explain the architects (Wikiarquitectura.com). The winery is appreciated by the reviewers as follow: "*It is an accurate expression of the cultural and social valence of the place where wine is produced. [...] is an authentic expression of a true merge between culture, class, function and the natural environment*" (Archute.com, 2017). "*The architecture doesn't just occupy the landscape; it becomes the landscape. The panoramic terrace is shaded by a curved deeply cantilevered canopy that is partly camouflaged under rows of young vines* (Kimmelman, 2013).

The **BULGARI WINERY** (see Appendix 9) is located near the medieval village of San Casciano dei Bagni, amidst the hills of the Chianti. It was completed in 2013 and designed by the Alvisi Kirimoto and Partners. The winery building is settled on the slope at the foot of the forested picks of the hills. It has an elongated rectangular footprint, whose length is oriented along to the contour lines. Bounded by a huge multifunctional yard on one side and by olive groves on the others, the winery is surrounded undulating and sinuous terrain covered with vineyards, olive groves, meadows and structured by sinuous roads and paths. The winery's body has a simple, terraced volume, partially embedded into the slope. It consisting of horizontal planes, four parallel concrete walls of varying lengths, painted in a clay-like tone, cleaving the soil according to the arrangement that follows the maximum slope of the hill and large glazed walls that connect them, composing two structure's sides. The building is embellished by a green roof planted with olive trees - serving as a panoramic lookout spot - and shades, which are a distinctive detail throughout the building. A system of metal shades shields the building from direct sunlight. The light and thin character of these elements aids to seemingly dilute the mass and solidity of the cement walls that, however, like everything in the design, have a specific and vital function but relate beautifully to nature.

According to a reviewer, the winery "*represents a highly concentrated synthesis of rationality and efficiency yet still with a focus on nature. If the job of architecture is to insert human activities into a natural setting, this winery can be interpreted as a building that has achieved total integration between design and landscape, according to an unequivocally contemporary language*" (Platformarchitecture.it, 2019). The project received two awards. One was the special Fassa Bortolo award, as the Winery was the only Italian project that won an

award at the 12th edition of the International Prize for Sustainable Architecture sponsored by the University of Ferrara. The second was the Tuscany Architecture Prize for the best new construction completed over the last 5 years in the region. The awards juries, which included leading architects and historians of architecture, recognised a great deal of quality in the work of the Alvisi Kirimoto studio, and architectural solutions that are in harmony with a set filled with history and beautiful landscape (Floornature.com, 2017).

3.3. Spain: Ysios Winery, Brugarol (Bell-Lloc) Winery, Faustino Winery

Along with Portugal, Spain forms the most westerly of the three major Mediterranean peninsulas, the Iberian Peninsula. Spain is a land of breathtaking landscapes, colourful history and a deep, complex culture in which wine has long played an important role. Grapevines have been grown on the Iberian Peninsula since at least 3000 B.C., although it was not until 1000 B.C. that winemaking began here in earnest - a skill brought by Phoenician traders from the eastern Mediterranean. Today, Spain is home to more vines than any other country in the world, with 967,000 ha, followed by France and Italy (OIV, 2018, p.4). All 17 of Spain's administrative regions (communidades autónomas) produce wine to some extent, including the Canary Islands and the Balearic Islands.

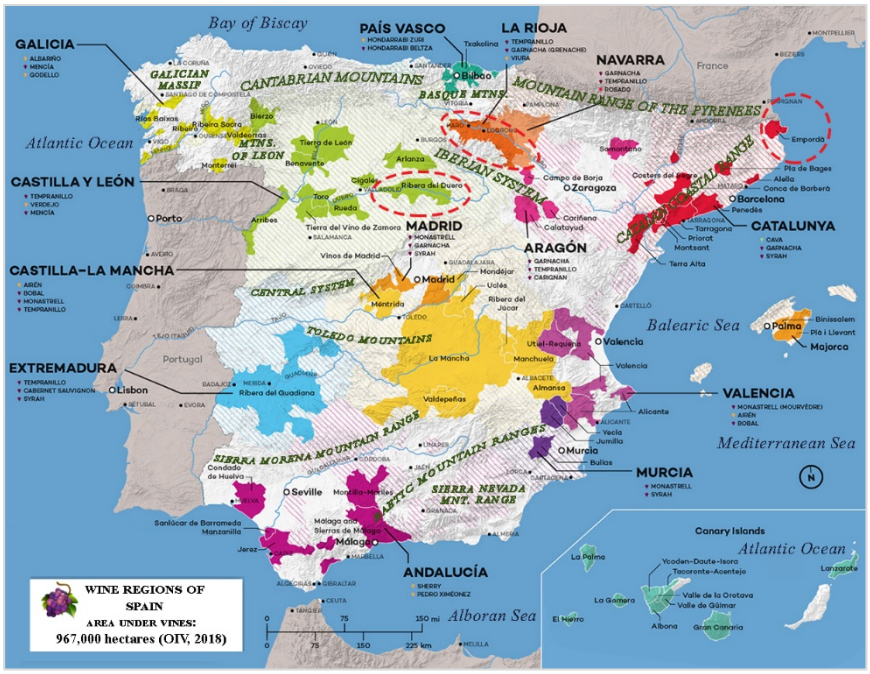

Fig. 3.5. Map of the Spanish wine regions

Geologically speaking, Spain, a giant rock lifted up out of the Atlantic, is the second most mountainous country in Europe, after Switzerland. The majority of Spain's peninsular landmass consists of the Meseta Central, a highland plateau divided into two smaller plateaus by the Sistema Central mountain range and a series of other mountain ranges that encompass the plateau. Other landforms include narrow coastal plains and some lowland river valleys. The mountain ranges have each its own particular effect on the local landscape and climate. The greatest part of the country has a continental climate of hot, dry summers and harsh, cold winters. Consequently, where these conditions prevail, the soils have eroded, vegetation is sparse, and agriculture is difficult. The vineyards stretch from the green, rolling

hills of the north to the arid expanses of the south (Fig.3.5), thus, even though Spain is the largest wine-growing country in the world it is only the 3rd bigger producer of wine, with 32,1 mhl, after Italy (42,5 mhl) and France (36,7 mhl) (OIV, 2018, p.7). This is due to low yields on arid, drylands and the fact that there is greater spacing between the vines in Spain than in other countries. (Wine-Searcher.com, 2014; MacNeil, 2001, p.112; Jackson, 2008, p. 609)

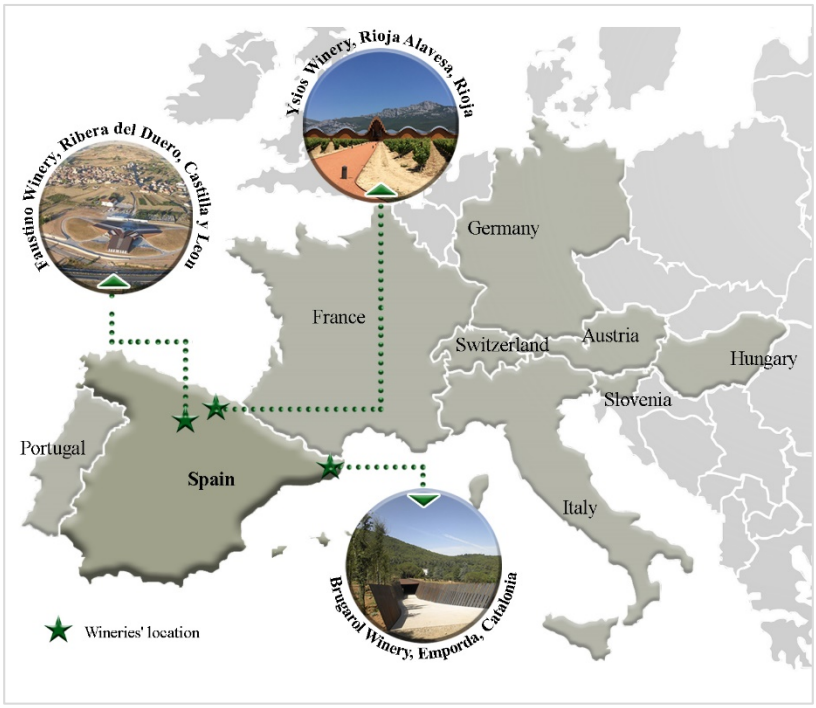

Fig. 3.6. Map location of the Spanish case studies

The case studies (Fig. 3.6) belong to three wine regions. The *Ysios Winery* is located in the viticultural landscape of *Rioja Alavesa*, a wine sub-region of *Rioja* wine region. The *Brugarol (Bell-Lloc) Winery* is settled in *Catalonia* wine region, namely in the *Empordà* sub-region. The *Faustino Winery (Bodegas Portia)* is established in *Ribera del Duero*, a sub-region of *Castilla y Leon* wine region.

The **RIOJA** is the most northern and the most prestigious Spanish wine-growing region. Its winemaking history stretches back to Roman times and has continued almost unbroken ever since. The region spans a broad 120-km section of the Ebro River valley and its tributaries from northwest of the Haro town to the east of Alfaro and is bounded by the Cantabrian Mountains to the north and the Demanda mountains - a part of the western section of the larger Sistema Ibérico - to the south (Fig. 3.5). Consisting of almost 64,000 ha of vines (GreatWineCapitals.com) and 500 wineries (Winepaths.com), the region is divided into three sub-regions, reflecting its variety of geological, climatic and historical facets: Rioja Alta, Rioja Baja and Rioja Alavesa. (Wine-Searcher.com, 2019)

Rioja Alavesa is the smallest of the three Rioja's wine-producing sub-regions. It consisting of an area of 12,000 ha of vines and is home to 300 of the region's 500 wineries. The sub-region is located in the very northern part of the Rioja region and extends from the rocky outcrops of the Cantabrian mountains to the bed of the Ebro River. Its geography is a complex mosaic of vine plots distributed over 15 municipalities. It has a climate that mixes Atlantic influences with warmer dryer air that flows up the Ebro River from the Mediterranean Sea. The sub-region

territory is predominantly hilly and possesses vineyards sitting between 400-1200 m above sea level. The vines are grown on terraces, plots, steep slopes and hillocks which consists of chalky clay-limestone soil, with a yellowish ochre colour. (Jackson, 2008, p. 610; Henderson and Rex, 2012, p. 285)

The **YSIOS WINERY** (see Appendix 10), with its 75 ha of vines, is located in the heart of Rioja Alavesa at the foothills of the Sierra Cantabria, a couple of km to the north of the medieval hill town of Laguardia. The winery, which gets its name from the Egyptian goddess of wine, Isis (Webb and Pfeiffer, 2005, p.10), was completed in 2001 and designed by the Spanish world-renowned architect Santiago Calatrava. The building is nestled on an uneven site, with pronounced grade changes of as much as 10 meters from the highest levels in the north, to the lowest in the south. It is bounded by a pool on one side and lawn on the other and enclosed by the parallel wine rows, which strike their roots in clay-limestone soil, with a well-marked yellowish ochre colour. The built-up area, reigned by the wooded slopes and ash-coloured crags of the Cantabrian mountains, is surrounded by gently rolling hills watered by the several streams. The land is divided into dynamic, irregular plots covered with vineyards, pastures and wheat.

The winery building, which exceeds the region's buildings scale, has an elongated rectangular structure (196x26 m) that represents a ruled surface wave, which combines concave and convex surfaces as it evolves along the longitudinal axis. The body of the building, partly embedded into the land, accommodate the precise and rigorous program of spaces needed to produce, store and sell wine. Its long load-bearing walls are made of concrete like the rest of the walls and trace a sinusoidal shape in both plan and elevation. The boldest feature of the structure is the shimmering silver roof, which, supported on the staggered sinusoidal cornice of the lateral walls, is composed of a series of gigantic, aluminium bars. Treated as a continuation of the facades, the wavy shape of the roof seems following the silhouette of the mountain range. From a birds-eye perspective, the bars of the roof seem to be guided by the orientation of the vine's rows from adjacent plots or vice versa. The main facade, the southern one, is clad with horizontally placed cedar slats that, reflected in the pools, resemble a row of wine barrels. In the middle of the facade, the roof pitches steeply upwards and extends far forward, forming a giant glass-panelled balcony. This raised centre marks the entrance to the winery and offers to the visitors a majestic view inside of the winery as well as out over the viticultural landscape. The northern facade, penetrated by few narrow openings, is made of precast concrete which is decorated by the climbing plants. The eastern and western facades, where the service entries are located, are clad in fret aluminium plates.

The winery - a pixelated-looking landmark - is considered the temple dedicated to wine, the most innovative winery of the Rioja and one of the first differential buildings made to welcome

the new century (Detea.es, 2018). It is evaluated by reviewers as "*an element that is integrated into the powerful surrounding landscape, while being somewhat autonomous at the same time, as a site-specific sculpture*" (Archiweb.cz), "*a bold but disciplined building which is an ideal fit for site and purpose*" (Webb and Pfeiffer, 2005, p.10), "*an exceptional building, in perfect harmony with its setting*" (News SpainHouses.net, 2013).

CATALONIA is an autonomous community and a distinct wine region that has been the source of many significant developments in the turbulent history of Spanish wine-making. It is located in the northeastern corner of Spain, bordering with the Mediterranean Sea on the east and the Pyrenees and France in the north (Fig. 3.5). It is a land of wide bioclimatic varieties: mountains, plains, valleys and coast. The majority of vineyards lie to the south of the distinctive peaks of the Montserrat Massif - a part of the Catalan Pre-Coastal Range, while smaller plantations lie to the north of Barcelona and south of the French border at the Pyrenees. The region, with approximately 60,000 ha of vines, is divided into 11 sub-regions (DOs), whose variety is founded on the extremely diverse relief that creates numerous local micro-climates. (MacNeil, 2001)

The *Empordà* is a small Catalan wine sub-region located in the far north-eastern corner of Spain (Fig. 3.5), where the Pyrenees in the north and the Mediterranean Sea on the east form natural borders. It is the oldest winemaking region of Spain and is traditionally regarded as the gateway through which the Greeks initially introduced vines to the Iberian Peninsula. The winemaking dates back to the 6th-century B.C. In the Middle Ages, flourishing vineyards tended by monks and nuns from nearby monasteries and abbeys produced wines that became popular and attracted many settlers to the area. But in the late 19th-century, phylloxera dealt a hefty blow, and many of the affected terraced vineyards have never been replanted (Wine-Searcher.com). Today, the Empordà has a small area of vineyards consisting of 2,000 ha of vines and some 50 wineries. The sub-region has a mosaic of different terrains stretching in small vineyards between the sea and the foothills of the Pyrenees. The soils are predominantly granite and slate, sand and silt. Some vineyards cling to terraces of schists and slate, while others grow on plain's areas of clay, pebbles and gravel. Emporda's climate is the Mediterranean, characterized by mild winters and warm summers. (Wine-Searcher.com, 2019; Masramon, 2017)

The **BRUGAROL WINERY** (see Appendix 11) is located three km inland from the coast of Catalonia, in the foothills of the Pyrenees, near Palamós. It was completed in 2007 and designed by the Spanish firm RCR Arquitectes, which was awarded the prestigious Pritzker prize in 2017. It is a small private winery, consisting of spaces necessary for the production and storing the wine, a tasting area and even an auditorium, of the estate called Bell Lloc. Hidden

between the wooded rolling hills, the estate, besides the winery, consists of Finca Bell-Lloc - an old white painted country house that serves as a private residence, hotel and restaurant - and a couple of small houses such as a bedroom house, an olive mill and the obrador - the food production house for goat's cheese, jams, pickles, cured meats and pâtés. The estate includes only 5 ha of vines which were planted in 2001. Some of the vineyards are grown adjacent to the estate, while others further out towards the sea.

The winery itself is nestled on the slope covered by the granitic and iron-rich red soil, between the woods and the vineyards. Being mostly buried underground, it stretches and branches along the slightly sinuous road that links the existing buildings together. On the whole, the wine production facility has an unusual shape and structure. It looks like a promenade, labyrinth with different spaces and voids of varying intensity. The main material used is Corten steel. The reddish-brown steel plates make up the walls and the roof. The walls are slightly outward-leaning, with small gaps between the plates through which penetrate the natural light, air and is revealed the natural rock that props up the vineyard. While the eastern part of the structure, the one that lies under the vineyards, has a secluded, quiet and dark atmosphere, the western edge that border with the forest is spoiled by the light. From here, a glass wall affords a direct view of the verdant landscape. The roof consists of plates arranged in an irregular zigzag pattern resembling an outsized piece of origami.

The winery is appreciated by many reviewers. For example, according to Woschek *et al.*, (2012, p.106): "*the new facility blends subtly into the landscape, underscoring the concept of a strong link between building and surroundings. In this eccentric structure, architecture, sculpture and landscaping meet. [...] the plates' reddish-brown patina allows the building to seem to melt into the surrounding, identically coloured earth*". Another reviewer concluded that "*the work of RCR Arquitectes unites landscape and architecture to create buildings that are intimately connected to place and time – i.e. the architects seek to create discourse between a space and its context. Bell-Lloc Winery is perhaps the most fitting example. The winery is a working wine-producing and wine-tasting facility, but space has been rearranged into a ceremonial sequence that explores the interaction between sky, land and the world underground*" (La Lolla, 2017).

CASTILLA Y LÉON, occupying the northern half of the central Iberian Plateau, is the largest of Spain's 17 administrative regions, covering about one-fifth of the country's total surface area. Although the region's economy has traditionally focused on cereal crops, viticulture has been also an important part of the local economy for nearly 2,000 years, with wine production in the region even pre-dating the arrival of the Romans. Today, Castilla y Léon is Spain's biggest wine-producing area. The region's vineyards are located in Spain's northwest,

bordering to the west by Portugal and running virtually from the north coast down to Madrid. Made up of open plains and rugged mountains, the wine region is bisected by the winding Duero river. (Wine-Searcher.com, 2019)

Ribera del Duero is one of the most notable wine sub-regions of the Castile and León, consisting of some 22,500 ha of vines and 288 wineries (Decanter.com, 2018). It is located in north-central Spain, just north of Madrid and to the south-west of Rioja (Fig. 3.5). In this wine-growing area, the Duero River forms a 35 km valley with flat-topped mountains on either side. The valley has a flat, rocky, gently undulating terrain, ranging from 911 m down to 750 m above sea level. The vineyards, interspersed among fields of grain and sugar beets, are scattered along a 115 km strip on the north and south sides of the valley. There are two general types of soil. Nearest the Duero River and its small tributaries, the soils are composed of sandy sediments, marl, and ancient riverbed stones. The higher vineyards are on slopes above the riverbeds and contain more limestone and clay. The climate is continental and Mediterranean, characterized by quite extreme climatic conditions such as long, dry summers with temperatures of up to 40 °C and hard winters during which temperatures may fall as low as -18 °C. (Wine-Searcher.com, 2019; Vinotables.com, 2013)

The **FAUSTINO WINERY** (see Appendix 12), owning 160 ha of vineyards, is located in the heart of Ribera del Duero, just outside of the small town of Gumiel de Izan, close the national highway A1. It was completed in 2010 and designed by the world-renowned British architect Norman Foster. The project site is characterised by the dry and brown gently undulating hills. The land, structured by the small river Puentevilla and its riparian vegetation, wavy highway road and residential area of the town, is divided into dynamic, irregular plots covered with vineyards, meadows and cereal crops. The winery sits atop a small hill and has a footprint shaped like a trefoil or three-point star which are enclosed on all its sides by the lush green vine rows. The building's three wings house three main stages of production: fermentation in steel vats; ageing in oak barrels; and maturation in bottles; at its core is an operations hub, from which all stages of the production process can be controlled. The two wings, which contains the barrel and bottle cellars, are partially buried into the sloping site to obtain a favourable microclimate, while the fermentation sector is left exposed to allow carbon dioxide to escape naturally. By embedding the wings into the earth, it was cut down the energy demand, and also it was minimised the visual impact the new building on the landscape. The roofs of the partially buried wings are slightly sloped and connected down to the main road, allowing freshly harvested grapes to be delivered straight into the hopper. The public part of the building functions alongside the manufacturing division. A well-lit reception, an administrative zone with terraces and water pools lay between the wings, overlooking vineyards. A glass-wrapped public gallery is

raised at the heart of the building which extends into glazed mezzanines while allowing audiences to have a glimpse of the blending tanks. To provide an atmosphere and aesthetic that corresponds with the production of wine, the building mainly incorporates a material palette of oak, steel and glass. The exterior walls of the winery's body, made of concrete, is clad with shingles of Corten steel, whose reddish-brown colour compliments the natural tone of the soil on which vineyards grow.

The winery achieved huge praises from architectural critics. Foster and Partners were awarded the prestigious RIBA Award (Europe) in 2011 as a recognition of excellence in design (Arch2o.com). The winery is evaluated as follow: "*a spectacular architectural project; a symbol of modernity and the future; an architectural icon in the world of wine; a symbol and a certainty. [...] Employing steel, wood, concrete and glass, its design combines the balance of materials and forms, of architecture and landscape, of earth and sky*" (Mundovinum.co.uk). "*The most remarkable thing about the winery is its combination of perfect functionalism and impressive architectural style. The winery offers a captivating contrast between architecture and environment, between the surrounding gentle landscape and the cool sobriety of the building and its cellars*" (Woschek *et al.*, 2012, p. 32).

3.4. Portugal: Adega Mayor, Quinta do Napoles, Quinta do Vallado and Quinta da Faísca

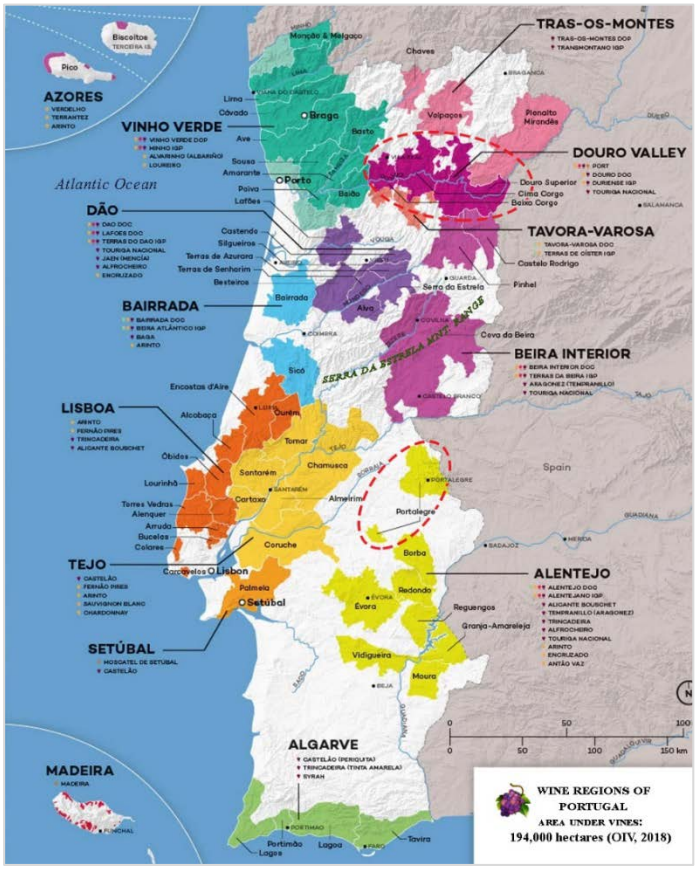

Fig. 3.7. Map of the Portuguese wine regions

Portugal, like its Iberian neighbour, Spain, is carpeted with vineyards. One might argue that Portugal's place in the wine world has centred more around its cork production than its wine, but this depends largely on which period of history one chooses. In the 18th-century, when the supply of French wines to England was threatened by deteriorating international relations, Portugal's vineyards proved more than capable of filling the void. It was not until the 20th-century when international demand for Portuguese wines had dwindled to almost nothing, that Portugal rose to dominate world cork production. In the 21st-century, the Portuguese cork industry

is struggling (due to the ever-growing popularity of plastic corks and metal screwcaps), but the nation's wines are once again on the rise. Today, it ranks 11th among the wine-producing country worldwide. It annually produces about 6,6 mhl of wine from 250,000 ha of vineyards (OIV, 2018, p.4, 7). The vineyards stretch throughout the country, from Minho to the Algarve, as well as in Azores and Madeira archipelagos (Fig. 3.7), covering mountains, river valleys, sandy littoral plains and limestone-rich coastal hills. The whole of the country is divided into 14 main wine-producing regions, which include 31 sub-regions or Protected Denominations of Origin. (Wine-Searcher.com, 2014)

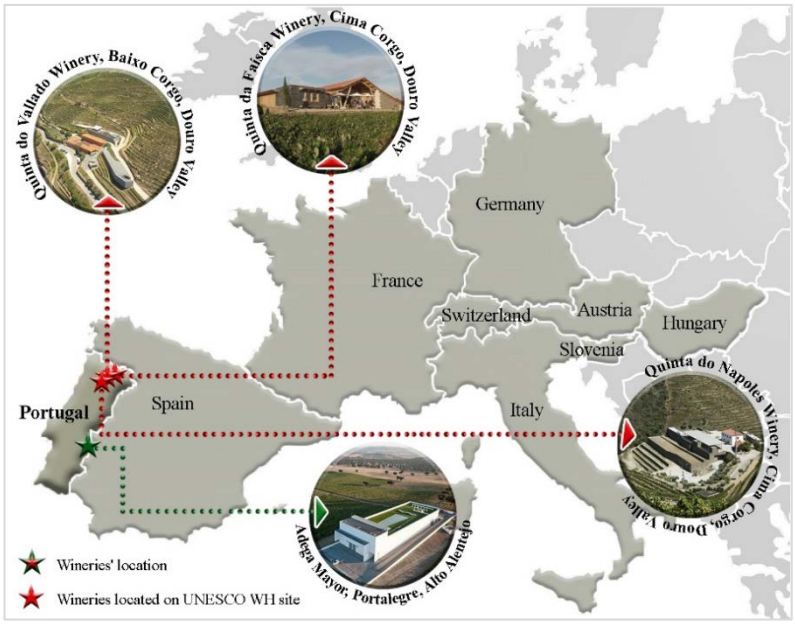

Fig. 3.8. Map location of the Portuguese case studies

The case studies (Fig. 3.8) belong to two wine regions. The *Adega Mayor* is located in the viticultural landscape of *Portalegre*, a wine sub-region of *Alentejo* wine region, while the *Quinta do Napoles*, *Quinta do Vallado* and *Quinta da Faísca* are settled in the *Douro Valley* wine region, namely in the *Cima Corgo* and *Baixo Corgo* sub-regions.

ALENTEJO is a well-known, highly respected wine region in eastern Portugal (Fig. 3.7). The region is named for its position south of the Tejo river, which bisects Portugal, entering the ocean near Lisbon. Alentejo extends across about a third of Portugal, with only the Algarve region separating it from the southern coast of the country. The region consists of undulating plains and gentle hills, with serious mountains only in the northeast, where the São Mamede mountain range rises up by the border with Spain. The land is used for the production of various cereal crops, and the cork for which Portugal is so famous. Despite its vast territory, the vineyards occupy only five per cent of the land, about 21,970 ha, which are divided into eight different sub-regions: Portalegre, Borba, Redondo, Vidigueira, Reguengos, Moura, Évora and Granja/Amareleja.

Portalegre is located along the Spanish border and is Alentejo northernmost sub-region. In most aspects - from terrain and soil, vines, altitude and age of the vines - Portalegre differs from the other sub-regions. The majority of the vineyards are found in the foothills of the Serra de São Mamede, with some planted on the steep slopes that peak at over 1,000 m. The soil is predominantly granitic in origin, interspersed with small patches of schist in the lower zones. In

the hills, vineyard ownership is very fragmented; consisting of a great number of small plots with very old vines, many over 70 years old.

The **ADEGA MAYOR** (see Appendix 13), owning 67 ha of vineyards, is located in the agricultural town Campo Maior, near the Spanish border. It was completed in 2006 and designed by the Portuguese Pritzker Prize Winner (1992) architect, Álvaro Siza Vieira. The winery is perched on the ridge of a small hillock amid orderly rows of vines and is surrounded by a wide expanse of gently rolling hills covered with vineyards, olive groves, meadows, cork oak plantations and structured by the ensemble of industrial buildings of the Delta Caffe company. The building has an elongated rectangular footprint, whose length is oriented against the contour lines and parallel with the vine rows. Its volume features a pure-minimalist-compact-almost windowless-rectangular-horizontal structure. It covers two floors longwise and one storey higher than the rest, at the southeast end of the building, which houses the tasting room and provides access to the extensive roof terrace which accommodates a rich green lawn with an azure blue pool. The terrace provides a panoramic view of the surrounding landscape. The winery has its own access road and car park which are located next to the building on an elevated platform surrounded by supporting walls. The entire outer facades are white, featuring the same whitewash traditionally used on the houses from the region.

According to the reviewers, "*this work is unquestionably an example of contemporary architecture blending into the landscape: it adds to it while keeping it beautiful and unspoilt*" (Barbosa-Turaventur, 2015); "*From a distance, the building marks its presence on the site by means of a gesture of essentiality that can be transported towards some poetical depth: the shining whiteness of this volume of clear geometry, of a subtle plasticity, that makes it wholly integrated in the landscape, silently but as an axis that enables the reconstruction of the beauty of the place, and makes it look untouched or, rather, better said, like something that has been erected out for the same conceptual reasons that make man farm and shape the earth, transforming and appropriating the landscape as expression of an indissoluble bond. And then, as the physical approximation to the building happens, it unveils another essentiality: that of its constructive rationality"* (Massad and Guerrero, 2009).

The **DOURO VALLEY** wine region - listed as a WH site in 2001- is located in the northern part of Portugal (Fig. 3.7). It is surrounded by mountains and extends for about 250,000 hectares. The region, birthplace of Port, is one of the oldest and most beautiful of the historic European wine regions. Wine has been made there for two thousand years and its landscape has been shaped by human activities. Most of the finest vineyards are planted on the steep hillsides bordering the Douro River and its tributaries, such as the Pinhão, the Távora and the Rio Torto.

About two-thirds of the vineyard area is planted on slopes with a gradient of over 30%. The traditional vineyard scenery, dominated by the old, narrow, stone-walled terraces, has changed in many places, though preserved in the central section of the region by World Heritage Site status. Until the early years of the 20th-century, this was done by constructing dry stone walls and then backfilling them with soil to create stable terraces. Today the cost of building these magnificent handmade structures would be prohibitive. On steeper slopes they have been replaced by "*patamares*", terraces carved out of the hillsides using earth moving equipment and separated by tall earth banks. On gradients of up to around 30%, an increasing number of vineyards have been converted to "*vinha ao alto*", a planting system in which the vines are laid out in perpendicular rows running vertically up the slopes (Taylor's Port, 2013). The Douro Valley is the only significant wine-producing area in the world to practice hot climate hillside viticulture. The region is sheltered from Atlantic winds by the Marão and Montemuro mountains and has a Mediterranean climate, with hot and dry summers and cold winters. The steep vineyards are predominantly composed of schist with sizable granite deposits. The total vineyard area is around 45, 000 hectares and is divided into the three sub-regions: Baixo Corgo, Cima Corgo e Douro Superior (Chronicle Vineyards.com, 2014). The Baixo Corgo lies at the western end, closest to the Marão mountains, where the rainfall and vineyard yields are highest. It is the smallest of the three areas but has the largest viticulture site with 13,500 hectares of vineyards. The grapes grown here are used mainly for the production of inexpensive ruby and tawny ports. The steep vineyards of Cima Corgo, with a drier climate and lower yields, is located further upstream from the Baixo Corgo and is centred on the town of Pinhão. With 17,000 hectares, this sub-region is the heartland of (port) winegrowing.

The **QUINTA DO NAPOLES** (see Appendix 14) is located atop a hill on the western bank of the Tedo River, which flows southeast from the Douro River. In 1987, the Quinta with its 30 ha (currently 62 ha) of terraced vineyards was purchased by Dirk van der Nieport. At that time Quinta do Nápoles was merely a disparate group of crumbling stone buildings, although, with a centuries-old noble Port making history. The winery's terraced vineyards (from which 25 are located in the direct vicinity) is predominantly composed of schist with sizable granite deposits. The Quinta do Nápoles's new winery was completed in 2007 and designed by the Austrian architect, Andreas Burghardt. It is perched on top of the same hill, adjacent to the old Quinta manor house - a small, traditionally white painted house - which was transformed into a tasting and presentation area as well as one of the entrances to the cellar (Woschek *et al.*, 2012, p. 71). The built area, bounded by vine rows planted on narrow, stone-walled terraces on one side and serpentine road on other, is surrounded by the vineyards carved out of the slate mountains and punctuated by olive trees and Italian-cypress. The productive land, shaped by the meandering

water plan of the rivers and its riparian area, forested peaks and slopes, is divided into elegant plots, characterized by smooth and curved edges.

The new winery, with its massive, rectangular, windowless volume, seems to be the continuation of the existing natural stone terraces. Following the terracing concept, the main parts of the building are situated underground - 30 meters deep into the hill (Woschek *et al.*, 2012, p. 71) - and the exterior walls are covered with natural stone (slate) which is the traditional local material for the retaining walls of the terraces. Its roof is covered with grass, except the upper part that serves as a grape reception area, which in turn is covered with grey-flat steel sheets. In addition to the technical requirements of a winery, the building includes a tasting room which opens to a huge patio and has a cantilevered Corten steel balcony that leads to the green-terraced roof. These spaces offer fantastic, breathtaking views of the river, valley and mountainous vineyards.

The main issue for the architect was to find a sensitive way to set a huge building in the landscape. According to the architect, his first idea was to make an invisible building. "*Essentially, we had an idea to erect an invisible winery - a building that disappears completely into the terraced landscape. Natural stone terraces, a completely invisible building, a hatch through which one descends. In the end, however, that was not entirely feasible, we would have had to blast away too much rock to do it, and that would have swallowed huge sums of money*" (Woschek *et al.*, 2012, p. 68). Their result is evaluated by the reviewers as follow: "*the building is an almost seamless continuation of existing natural stone terracing, thereby blending perfectly into the landscape*" (Woschek *et al.*, 2012, p. 71); "*this dynamic minimalist structure designed by Austrian architect Andreas Burghardt and carved out of the terraced hillside combines the latest winemaking technology with a genuinely green and ecologically friendly aspect*" (A Good Nose.com).

The **QUINTA DO VALLADO** (see Appendix 15), founded in 1716, is one of the first port houses in the Douro Valley. The wine estate, consisting of 130 ha, lies on both banks of the Corgo River, a tributary of the Douro river, in Baixo Corgo wine sub-region. In 2003 the Quinta do Vallado Douro Reserva received its first prizes, afterwards the wine estate became one of the most highly regarded in Europe and can now look back on a number of international awards. This recognition increased demand for the wines, so in 2006, the proprietors were already thinking about extending the estate. The proposal of enlargement of the winery included two areas of intervention - production and leisure - and a supplemental challenge: to maintain and to integrate the pre-existing buildings in a new complex with a clearly contemporary vocabulary (Woschek *et al.*, 2012, p. 44). The winery's extension was completed in 2010, while the wine hotel in 2012, both designed by the Portuguese architects Francisco Vieira de Campos and

Cristina Guedes. The built area, set in a dominant and strategic position, taking advantage of the network of curved pathways, is surrounded by the vineyards built on dizzyingly steep hillsides and by meandering water plan of the Corgo River. The productive land is divided into elegant patterns, which are characterized by smooth and curved edges. Most of the vines are planted in horizontal, continuous rows, on handbuilt stone terraces or bulldozed earth terraces. The vines' rows follow the ground lines and are bordered by olive trees and punctuated by the Italian-cypress.

The enlargement of the Quinta do Vallado Winery conciliated the need for the extension of the existing cellar with the proper integration in the landscape. The intervention aimed to maintain the existing buildings, completing them with the necessary reorganization of the construction of new buildings: fermentation warehouse, hogshead warehouse and reception. Thus, the winery today consists of many different and interconnected buildings, where the wine production from harvest to sale is emerging. The orange gleam of the old buildings - elongated rectangular structures with pitched roofs - was completed with a silver-grey gleam of the new structures. The volumes have simple rectangular shapes. These are partly embedded into the slope and stretch along the layers imitating the man-made form of the slope. These are organized in terraces, supported by retaining walls of schist and granite, the staircases and balustrades. The volumes are almost windowless and are built in concrete and coated with local burnt shale worked in a contemporary way. The guest rooms and passageways offer friendly decors, huge generous windows and amazing views towards the surrounding man-made landscape.

According to the architect, "*the challenge lied in bringing architecture, building and landscape together into a unified whole;*" the project was supposed to "*ideally blend into the natural landscape and not look too bulky and heavy*" (Woschek *et al.*, 2012, p. 45). For Vieira de Campos, there were two key aspects: making use of traditional regional building materials and emphasizing the building's relationship to the surrounding landscape. "*In a landscape as unique and astonishing as the Douro, any intervention must be very precise. That's why the first challenge was to underline the distinctive identity of the project while carefully respecting the landscape. The new structure should not compete with the estate's existing historical buildings, but rather present a natural contrast to them. Each gesture had to be incisive, adapting itself to the given program while conquering an expressiveness that could value both the built complex and the surrounding landscape*" also explained the architect (ArchDaily.com, 2012).

The new volumes are evaluated by reviewers as follows: "*the new buildings create a tense relationship between buildings and topography, they merge with the land and at the same time explain its artificial nature with the man-made terraces*" (Baunetzwissen.de). "*The orange gleam of the Quinta can be seen from far away, in contrast, the slate-covered exterior of the new*

buildings are very modestly designed. The extension imitates the natural form of the slope and is partially dug into the hill. The flat, silver-grey exterior appears understated yet elegant" (Woschek *et al.*, 2012, p. 45, 46).

The **QUINTA DA FAÍSCA** (see Appendix 16), with its 16 ha of vineyards, is located in the Favaios upland, Cima Corgo wine sub-region. The property consists of an old winery, which was renovated and adapted to new technologies and standards, an old manor house that provides accommodation and a new building which was completed in 2013 by Portuguese architect Carlos Castanheira. The entire built area is set on the slope of the plateau and surrounded by a wide rolling landscape covered with vineyards and olive trees.

The new building is composed of three different volumes and extends from the old winery along the slope. The flat roof volume clad in slabs of black slate comprises all the staff facilities, bathrooms, stores and kitchen. The volume covered by the large roof (which is very similar to the existing) includes, on the first floor, a big hall to host guests, and two terraces, one to the north, to receive visitors, one to the south to enjoy the landscape and the succession of mountains and valleys. Below this hall, in the basement, are two rooms for the treatment and resting of the wine, and at the lower level, which is attached directly to the existing winery, there is a space for temporary storage and distribution. The third volume is simply a covered space that shelters the exterior route between the existing winery and the new areas. The architect used the local materials, schist and granite, combined with wood and glass. "*The timber for the structures, the slate for the walls or the granite for the edging are not mimetic or pastiche, but rather the interpretation of the continuity of what we have and know how to do in our (Portuguese), construction, in particular in the Douro Region*" - explained the architect (ArchDaily.com, 2014). A wine touristic website advertises the Adega Quinta de Faísca as follows: "*The architecture of the Adega is part of the landscape, respecting the Douro architecture of schist and granite, combined with noble materials, such as wood and glass, offering comfort and hospitality*" (GreatWineCapitals.com).

3.5.Germany: Abril Winery, Franz Keller Winery

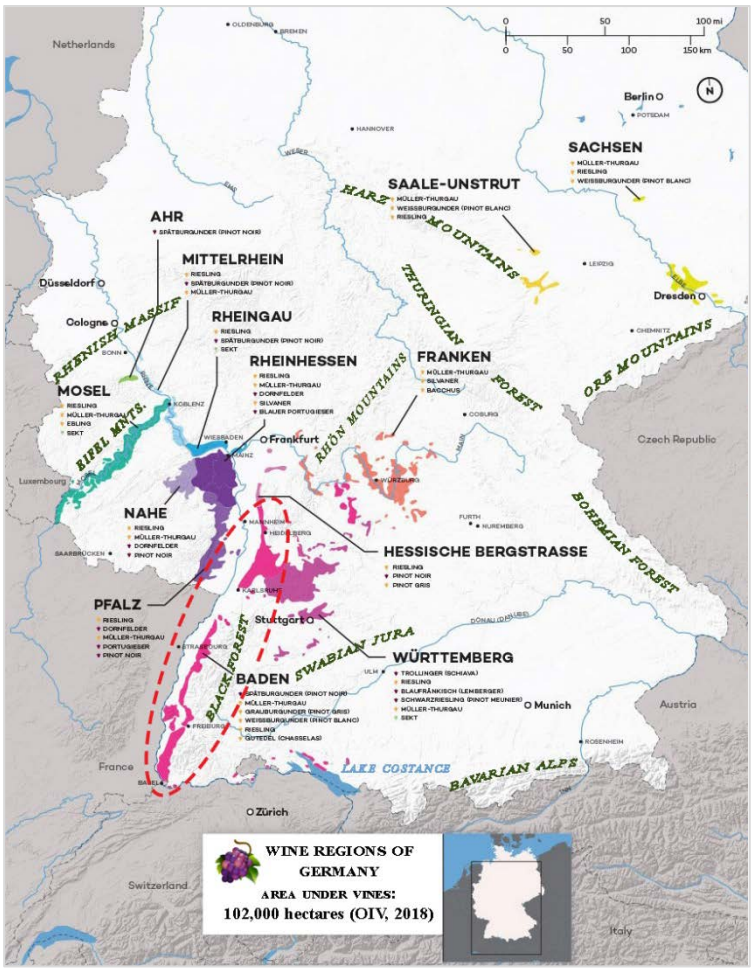

Fig. 3.9. Map location of the German wine regions

Fig. 3.10. Map location of the German case studies

Germany has a long history of winemaking. In the course of their conquests some 2,000 years ago, the Romans - who adopted viticulture from the Greeks and Etruscans - introduced viticulture to the Germanic territories.

In the 8th-century, Charlemagne regulated viticulture and viniculture as well as wine-related commerce. Monasteries were centres of wine culture, and wine was the drink of the people throughout the Middle Ages. Generally, until the 20th-century there were only two great wine-producing countries: France and Germany. While outstanding wines could occasionally be found elsewhere, no other country came close to these two for the supremacy of their wines. Today, Germany ranks 10th among the wine-producing country worldwide. It annually produces about 7,7 mhl of wine from 102,000 ha of vineyards (OIV, 2018, p.4, 7). The vineyards are distributed over 13 wine regions, of which 11 are located in the south-west of the country. Most of the vineyards are planted in the river valleys of the Rhine and Mosel or their tributaries (Fig. 3.9).

Cultivation takes place primarily on steep and hilly vineyards on various types of soil. (Germanwineusa.com; MacNeil, 2015)

The case studies, *Abril Winery* and *Franz Keller Winery*, are both settled in the *Baden* wine region, namely in the *Kaiserstuhl* wine district (Fig. 3.10). The **BADEN** region, comprising ca. 16,000 ha of vines and around 100 wine-growers' cooperatives, is the southernmost and the third largest German wine-growing region. It is nestled in the southwest corner of the country between the hills of the Black Forest and the Rhine River. The Baden's vineyards stretch in the north-south direction over a length of about 400 km from Heidelberg and the Tauber Valley in the north to the Swiss border and Lake Constance in the south (Fig.3.9). The region is subdivided into nine districts, each of which has a distinctive landscape and climatic conditions. The wine cultivation in Baden dates back to the Romans. They began cultivating grapes to the west of the Rhine over 2000 years ago. Beginning in Alsace, cultivation spread to what is now the wine-growing region of Baden. (Weber, 2011, p.23)

The *Kaiserstuhl*, the warmest wine districts of Baden, is located in the south of the region and embrace 4,200 ha of vines. The district is centered around a compact range of volcanic hills right next to the eastern bank of the Rhine River. The Kaiserstuhl hills, with a maximum height of 556.6 m, are the most impressive geological features of the Rhine Valley and rise up majestically from the Upper Rhine Plain. The climate is borderline Mediterranean and is characterized by mild winters and warm summers. The Kaiserstuhl range is, in broad geological terms, an alkali-carbonate rock formation created by numerous volcanic eruptions about 16-19 million years ago. The surface soils are largely made up of Quaternary loess (loose sedimentary soil) formed during the last Ice Age. (Wine-Searcher.com, 2018)

The surface area of the Kaiserstuhl has been changed by the people living there since their settlement. They conquered the slopes, creating terraces to increase the acreage and prevent the soil from erosion and sliding into the nearby river. These were mostly used as vineyards, as well as fruit growing or for other agricultural uses. With their hands and some rudimentary tools, they have sculpted huge and amazing works of art. More recently, in the process of consolidation of vineyards, modern techniques have been used to transform the small terrace landscape into one of large-scale terracing. Between 1968 and 1980 about four sq. km of new terrace slopes have been produced. The large-scale terracing is carried out in units of about 100 ha, each unit being denuded and reconstructed (Fischer, 1987). Nowadays, the Kaiserstuhl is a district of intense wine growing. The vineyards form a very distinct part of the landscape grown on wide terraces that follow the contours of the old volcanic cones.

The **ABRIL WINERY** (see Appendix 17), with its 20 ha of vines, is located in the northern outskirts of the Bischoffingen village, between the hills of the picturesque Kaiserstuhl. The winery was built in 2012 and designed by the German architect, Wolfgang Münzing in collaboration with the landscape architecture firm, Büro Hink. The winery is set on a gentle

slope, close to the Am Enselberg Road from which derive three roads to the site. The lower road leads to the visitor parking lot, to a terraced decorative garden, which extends from the building's south-eastern part to the Am Enselberg Road, and to an outdoor patio that stretches in front of the south-western part, where is the main entrance. The intermediary road leads to the depot and the grape delivery area, which are placed in the north-eastern part of the building, while the upper one leads to the vineyards. The entire built area is surrounded by the vineyards which grow on terraces and steep slopes consisting of heavy loess soil. This productive land, shaped by the volcanic hills, winding roads and the small village, is divided into dynamic, irregular patterns featured by the parallel rows of wine with different orientation.

The winery building, whose footprint seems to be guided by the vine's rows, has a flat, rectangular box-like mass, which appears as an architectural element in the landscape, standing as a distinctive feature. The building's mass, made of concrete and partly concealed into the slope, comprises three levels where the wine production processes strategically take place. Most of the mass is covered with Corten-steel cladding which is interrupted by a perforated metal sheet with ornamentation. The north-eastern facade is pierced by grey colored steel doors, while the south-eastern facade by mirrored windows and door, and a small rectangular volume made of glass and steel. This volume shelters the foyer and exhibition area and offers to the visitors an amazing view towards the landscape.

The main aim of the architect was to design a building that "*should be carefully inserted into the landscape*" (Stuttgarter-Zeitung.de, 2012). The winery is characterized as "*a modern building that fits into the landscape in a restrained and gentle manner, taking into account its special location [...]. The rusty colour of the Corten-steel envelope has a reference to the surrounding soil, recalling its brown tufa colour, while the additional steel band around the building reminds to the archaeological finds from the time of the band ceramics*" (Badische-Zeitung.de, 2012). It is a reference to history, namely that some artefacts from this pottery culture of 7,000 years were discovered in this part of the Kaiserstuhl.

The **FRANZ KELLER WINERY** (see Appendix 18), holding 57 ha of vineyards, is located at the southern edge of the Oberbergen, a small village that lies in a blind valley of the Kaiserstuhl mountains. The winery was built in 2013 and designed by the German architects, Michael Geis and Ulrich Brantner in collaboration with Cornelis Landscape Architects. Its vineyards, concentrated around the village and shaped by the volcanic hills with forested peaks, are grown on terraces. The productive land is divided into dynamic, irregular patterns that follow the contours of the old volcanic cones. The winery itself lies on the slope at the foot of the hill. It is bounded on its western and southern sides by the wine terraces, on the eastern by the service road, while on the northern side by the Bergstrasse road - the rout of mountains, wine and castles

- which separates the residential area from the vineyards. The building's footprint, which is almost invisible, is shaped by the geometries of the adjacent plots. The building's volume, made of reinforced concrete, has a terraced layout and seems to be the continuation of the terraced vineyard levels; it extends towards the settlement but does not reach it. The building is partly sunk into the ground and covers 3 levels, where each step in the wine process strategically takes place on a specific floor. On the top floor, the grapes are culled, while the second floor contains mash tanks and squeezing machines, and oak and wood barrels are stored on the bottom floor. On top, adjacent to the working area, are wine tasting facilities, a restaurant, offices and an exhibition space, and several private event spaces on different floors. Its flat terraced roof, following the shape of the hill, is covered with a layer of soil planted with grassy seeds and is supported by the tapered circular columns. The walls are pierced by the gates and doors made by oak and by two large mirrored windows, which provide lots of natural light in the upper guest and production rooms. The windows make the building open and communicative both inside and outside. In general, the winery offers interesting insights into the production process and a unique panoramic view from the terrace of the winery's restaurant into the magnificent landscape of the Kaiserstuhl.

According to the architects, the aim was to design a winery that should fit into the surrounding landscape and at the same time to offer ecological, practical and wine tourism added value (Geis-brantner.de). Their result is evaluated by a reviewer as "*a winery in harmony with the terraces of the Kaiserstuhl, it merges with the landscape while at the same time providing all the conditions for the production of good wine and for a true wine experience*" (Diearchitekten.org, 2016). Meyhöfer (2015, p. 114) asserts that "*the new Franz Keller winery is a very clear illustration of how everything to do with wine is changing in Central Europe. […] If the natural surroundings are taken into account and the processes of harvesting, storing, pressing and again storing are logically incorporated into the plans, the result will be a successful structure such as the* "*invisible*" *terraces of Oberbergen*."

3.6. Hungary: Abbey Winery Pannonhalma, Béres Winery complex, Konyári Winery, Bazaltbor-Laposa Winery complex, Kreinbacher-St. Ilona Winery complex

Of all the countries in the eastern part of Europe, none has had a more solid tradition of producing great wines than Hungary. From the 17th to the 20th-century, Hungary possessed the third most sophisticated wine culture in Europe, after those of France and Germany (MacNeil, 2000). Hungarian wine culture stretches back to Roman times and has survived numerous political, religious and economic challenges, including Islamic rule during the 16th-century

(when alcohol was prohibited) and the phylloxera epidemic of the late 1800s, two world wars, and forty years of communist collectivization.

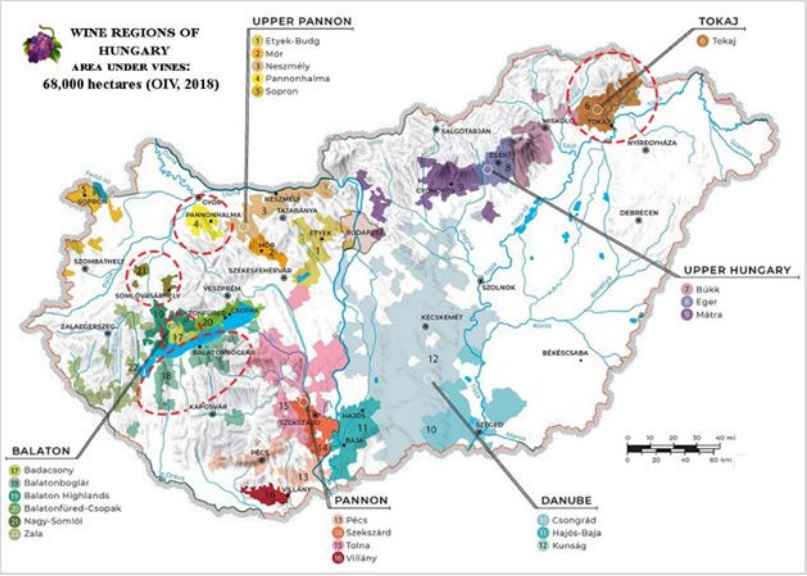

Fig. 3.11. Map of the Hungarian wine regions

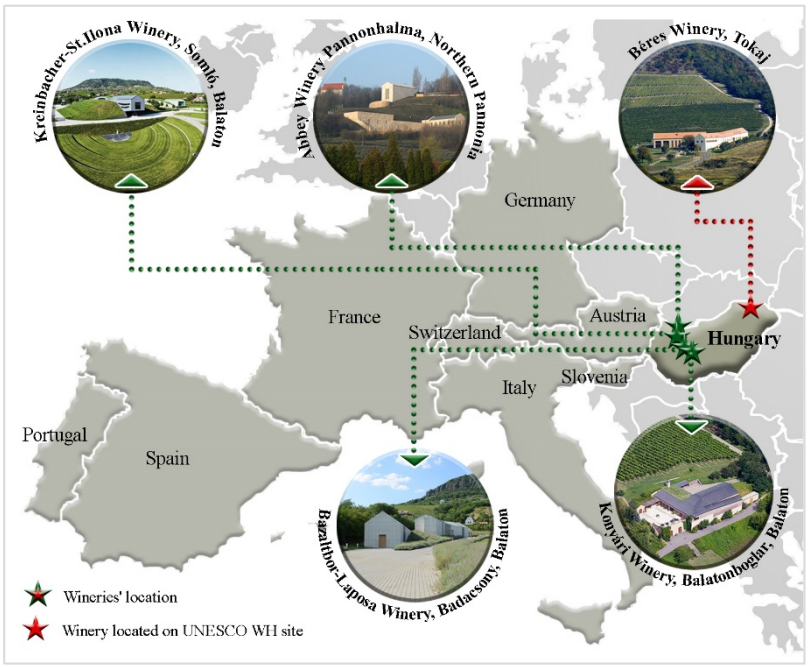

Fig. 3.12. Map location of the Hungarian case studies

The modern Hungarian vineyards cover only 2% of the cultivated landmass and are dispersed throughout the country's territory, which is diversified by plains, hills and mountains. The total vineyard area is 68, 000 ha. It produces approximately 3,1 m hl of wine annually, thus ranking 15th among the wine-producing countries worldwide (OIV, 2018, p.4, 7). The vineyards are classified into 6 main wine-producing regions (Fig. 3.11) and 22 wine districts (sub-regions), each of which has its own particular blend of culture, history, terroir and wine style.

The selected case studies (Fig. 3.12) belong to three wine regions. The *Abbey Winery Pannonhalma complex* is located in the viticultural landscape of the *Pannonhalma*, a wine district of the *Northern Pannonia* wine region. The *Béres Winery complex* is settled in the *Tokaj* wine region, while the *Konyári Winery*, the *Bazaltbor-Laposa Winery complex* and the *Kreinbacher-St. Ilona Winery complex* in the *Balaton* wine region, namely in the *Balatonboglar*, *Badacsony* and *Somló* wine districts.

The **NORTHERN PANNONIA** wine region, located in the north-western part of the country, comprises 5 smaller districts of Northern Transdanubia (i.e., the area of the country directly south and west of the Danube) with a total of 5,700 ha under vines in the northeastern

part of the Transdanubian Mountains, including the slopes of the Kőszeg, Sopron, Vértes, Velence, Buda and Gerecse ranges, as well as in the separate Pannonhalma Hills.

Pannonhalma, consisting about 650 ha of vineyards cultivated by about 500 wine-growers, it is the smallest wine district of the Northern Pannonia wine region and also of Hungary. The district - "*the cradle of Hungarian culture*" (Merta, 2013, p. 120) - is located in northwestern Transdanubia, on the fringes of Kisalföld, Hungary's "Little Plain." It characterized by Pannonhalma hills, also known as the Sokoró hills, which rise to a height of 200 to 300 in the south of Győr-Moson-Sopron County, and are dissected into three sections by two major valleys, the Pannonhalma and Tényő valleys. The climate is a temperate continental one, with moderately cold winters and warm summers with lots of sunshine. The bulk of the Pannonhalma hills consists of Late Miocene (Pannonian-Pontian) lacustrine sand and clay, along with Quaternary gravel and sand. These formations evolved brown earth and thin loamy loess soils, interspersed with patches of sand in a mosaic-like pattern.

The Pannonhalma is one of Hungary's oldest wine districts. The Grapes have been grown on the eastern and south-eastern slopes of the Pannonhalma hills since Roman times. The first written documents of the wine-growing area date back to 1002 when the Benedictine monks founded their first monastery. They went on to convert Hungarians, establish the first school, write the first Hungarian language document (in 1055), and cultivate vine on the nearby slopes. (Wine-Searcher.com, 2019)

The **ABBEY WINERY PANNONHALMA COMPLEX** (see Appendix 19) is situated close to the Benedictine Monastery, at the south-eastern foot of Saint Martin's Hill, which rises majestically above the Pannonhalma town. The host landscape, specifically the whole the monastic complex - buildings of the Archabbey, the Basilica its crypt, the educational buildings, the Chapel of Our Lady and the Millennium Monument - as well as its natural surroundings including the archabbey's botanical garden, herbal garden, parks and forests, was proclaimed in 1996 a World Heritage Site (UNESCO, 1996). The local 1,000-year-old tradition of wine production was interrupted by World War II and the hostile politics of the Communist regime. In the 1990s, the idea of renewing local wine production was revived. The concept was fulfilled in 2003 when the Abbey Winery Pannonhalma complex was completed. It was designed by the Hungarian firm CZITA Architects in collaboration with the landscape architects Helga Hencz/Gy. The winery's vineyards, consisting of 50 ha total area, stretches far away from the complex itself. The winery complex is mostly embedded into the hill and partly covered by natural vegetation, bushes and fruit trees. It consists of three distinctly separable parts: the four-storey press house, the wine house (situated at an altitude difference of 30 meters from each other) that houses the cellar, fermentation room with the stainless steel tanks, various passages

that hold the wooden casks, wine bottling and wine-tasting areas; and a structure that provides vertical access between the other two (the well). As the hill houses a big area of the complex, the visible parts are the one-storey of the press house that rises to the surface at the top of the slope; the supporting walls that include an entrance to the cellars and two buildings, where the wine bottling and wine-tasting areas are to be found, emerge at the foot of the hill. The visible volumes have an apparent archetypal shape with a saddle roof that reminiscent of the small houses from the neighborhood. The walls are conceived in a minimalist style. These are pierced by a limited number and small size of glazed surfaces and wood doors and are clad with light creamy limestone tiles. To provide a view of the surrounding landscape, the designers located a wine tasting terrace on the top of the hill, next to the Press-house.

According to the architects, besides the technological requirements of a winery, the aim was "*to build an "open cellar" of tourism value matching both to the environment and the spirit of the place*" (Miesarch.com, 2005). The reviewers appreciated the architectural embodiment of the complex and the relation to the environment: "*the winery complex, being almost all of it concealed within the hill, respects the surrounding landscape*" (Merta, 2013, p.142), "*It blends into the landscape with its archaic proportions and freestone coverage*" (Kovács, Polyák and Tegroeg, 2015, p.58). According to Szabó, "*the designers recognized the nice regularities and sacred traditions of the location, which is shown in their ambition to adjust to the individual hierarchy of former developments on the site*" (2005, p. 7). "*The monumental four-storey block is a reference to the primary house design, yet its homogeneous and minimalist shaping proves to go far beyond that, its influence and power rival with those of the Millenary Chapel. The components tend to get separated from each other in the long run, with the house and well turning into signs similar to other buildings of the hill area*" (Szabó 2009, p.125).

The **TOKAJ** wine region - listed as a WH site in 2002 - is located in the northeast of the country, in the Zemplen Mountains at the confluence of the Tisza and Bodrog rivers. Its landscape comprises low hills, river valleys with a complex pattern of vineyards (5,747 ha), oak-woods, wetlands, farms, historic networks of deep wine cellars, villages and small towns. The soil of the region is volcanic, covered with different volcanic topsoil of loess and clay, sometimes with huge stones. The climate is continental with long, sunny summers, dry autumns and the early morning mists. The whole landscape, its organization and character are specially shaped in interaction with the millennial and still living tradition of wine production. It is a historical site of the thousand-year-old Hungarian and universal vineyard and wine culture of the Carpathian Basin, where the influence of both the Caucasian and Roman wine cultures can be felt. Louis XIV, the first famous person in the recently revived and flourishing "French connection" of the Tokaj area, ordered that Tokaj wine should never be missed from his table.

His famous words of praise are still often quoted: "*C'est le roi des vins, et le vin des rois*", *i.e.* "*This is the king of wines, and the wine of kings*" (Tardy, 2002, p. 10). Moreover, it is one of the first legal separate wine-growing regions of the world, which dates back to 1737 when the decree of Emperor Charles VI (Charles III, King of Hungary) established the area as a closed wine region. (Wine-Searcher.com, 2016; Decanter.com, 2018)

The **BÉRES WINERY COMPLEX** (see Appendix 20), with its 45 ha of vines, is located outside of the residential area of the Erdőbénye village. It was completed in 2006 and designed by the Hungarian architects Tamás Pintér, Kata Csaba and Australian architect Anthony Gall in collaboration with the landscape architect Mónika Buella. The complex is built on the slope, at the foot of the Tolcsva-Peres Hill, namely at the intersection of three roads that cross the estate. The built area is bounded by vineyards, gently undulating fields and surrounded by the wooded hills. The complex consists of two elongated barn-like volumes, whose pitched roofs are covered with clay tiles. The longer volume, accommodating the storage and production facilities, lies perpendicular to the layer line and is partially embedded in the hillside. Its facades are covered with gently textured natural yellow stone and pierced by tiny windows. The shorter one stretches along the layer line and houses the visitor facilities. Its facades, whitewashed with yellow color, features large glazed areas which provide the view towards the landscape. In both cases, the windows are accompanied with larch wood shutters. The volumes' arrangement shapes a spacious terrace, partly covered by the guest house's roof, and is used for various cultural and festive events. This space not only provides views over the landscape but as well as an insight view over the process of the winery through a circular skylight, which also is an ideal solution for providing light into the below production area.

"*In the design of the facades of the buildings a traditional principle is followed which says that the people's house is plastered or whitewashed, while economic buildings remain raw brick, stone or wood. Thus, the longitudinal wing's façade is made of local stone and the guest house is scraped plastered from the dust of the same stone*" - explained one of the architects of the Béres Winery, Tamás Pintér (Hungarian architecture, 2015). For the construction of the complex, has been launched a restricted architectural contest, because according to the owners, besides the technological requirements of a winery, it was important to build a building that harmonizes with its surroundings. "*We wanted the buildings to match the architecture of the Tokaj Wine Region and county Zemplén, and we required that primarily local materials be used in the construction. This is why the walls are covered with yellow-toned Mád limestone. A further sign of adapting to the landscape and its history is that the edifice embraces the old walnut tree that became the symbol of the estate, and is erected right in front of the centuries-old cellar, the Lőcse farm*" (Beresbor.hu).

The reviewers appreciated the complex's relationship with the landscape as follow: "*The Béres Winery keeps the scale of traditional courtyard houses, as well as their harmonious relationship to the landscape. […] the winery complex follows local building traditions in covering the processing facility building with stone and the residential wing with plaster*". (Kovács, Polyák and Tegroeg, 2015, p.60).

BALATON wine region, with a total of some 8,600 ha under vines, is one of the seven larger wine regions of Hungary and is distributed across six wine districts: Badacsony, Balatonboglár, Balaton-felvidék, Balatonfüred-Csopak, Nagy-Somló and Zala. These wine-growing appellations are spread around Lake Balaton - the largest freshwater lake of Central-Europe. The significant, natural treasures of the entire Balaton wine region are the picturesque surface forms of volcanic origin which provide a special and aesthetic landscape enhanced with several-century-old viticulture and a folk architecture which lives on renewed. The volcanic mountains of the Balaton Highlands and on the nearby Small Plain have a special position: they testify to the height of the surface of the past. The outer forces cut off the softer rock area around them, but these peaks remained because the hard basement guard defended them from destruction. They are called "witness" mountains, which are guarding, showing, attesting to the old age. The natural gallery of volcanic and erosional phenomena has become a harmonic, humanized landscape of outstanding beauty in the wake of millennia-long human activity. The landscape has a powerful influence on the overall continental climate of the wine region, making summer cooler, the air more humid, and the winter milder than is the norm on the same latitude elsewhere in Europe. This creates especially good conditions for viticulture. The different climatic effects have influenced the formation of the soil and resulted in the birth of different soil types. Viticulture and wine production is the most important agricultural activity in this region. The historical root of winemaking dates back to Roman times. In the first century A.D., the Transdanubian region along with Lake Balaton became a province of the Roman Empire called Pannonia. Since that time, the sunny slopes of both the northern and southern shores are covered with vineyards. (Rohály and Mészáros, 2003)

The *Balatonboglár* wine district extends along the southern shore of the lake, reaching 20-25 km into the valley. The vines are planted on the slopes of a range of hills trending southwest. The bulk of the vineyards consists of sandy-clayey lacustrine sediments deposited by the Pannonian inland sea and covered by Aeolian loess.

The **KONYÁRI WINERY** (see Appendix 21) is situated in Balatonlelle, a town in the south-eastern part of the Balatonboglár wine district. It was completed in 2004 and designed by the Hungarian architects Kalmár László and Zsuffa Zsolt. The winery is embedded in a steep

embankment of the artificial environment of Kishegy (Small Hill) which is characterized by tiny traditional houses, woods and vineyards. Most of the building is concealed underground, while the mass on the ground is a natural extension of the hill itself. The facades combine local stone and recycled bricks, and with its closed forms, it recalls a buttressing stonewall running parallel with the layer lines. The upper floor of the building houses a restaurant, whose walls are penetrated by the large windows covered with larch wood blinds, and a terrace which offers a magnificent view of Lake Balaton. Though the roof of the building has a broken, undulating surface and is covered with the copper plate, the reviewers stress that the winery fits the smaller buildings of the neighbourhood and conforms to the local tradition of agricultural buildings (Merta, 2013, p.134). According to the architects, the basic idea consists in the pursuit of ideal relationship to landscape: "*We tend to give landscape compatibility for the mass of winery with the concept of an embankment house.* "*The usage of materials and some portions refer to the domestic agricultural premises. The embankment like the ground storey has a Transdanubian Cellar mood, while the fermentation place with the brick grid along the window is similar to the traditional sheds and granaries*" (Hungarian architecture, 2013).

The **BADACSONY** wine district is located in the northern shore of Lake Balaton. It is demarcated by volcanic buttes and cones, such as Badacsony, Szigliget, Gulács, Tóti, Szent György, Csobánc and Hajagos, creating a stunning and somewhat surreal landscape of unusually shaped hills. The district was named after the mountain Badacsony (438 m) - "standing as lord-paramount of the northern shore of the Lake" (Bazaltbor.hu). The vines are planted on the foothills, steep slopes, and terraces which are covered by a clay soil mixed with basalt debris.

The **BAZALTBOR-LAPOSA WINERY COMPLEX** (see Appendix 22), owning 17 ha of vines, is situated on the southern side of the Badacsony mountain, on the edge of the Badacsonytomaj village. The entire built-up area is surrounded by the vineyards, press houses and villas - small scale, simple shaped and structured buildings with pitched-roofs, by the basalt cliffs and stone screes, which emerge from the forested peak of the mountain, and lake. The complex consists of a winery completed 2010, which lies at the foot of the hill, and a wine hotel, built later, higher up the slope. The winery was designed by the Hungarian architects Péter Kis and Bea Molnár in collaboration with landscape architecture firm Bogner Studio.

The hotel, having an archetypal vineyard press-house form, includes also a catering, tasting, and wellness facilities and offers an extraordinary panorama of Lake Balaton, vineyards, and the winery. The winery, including the production facilities, cellar, and a visitor centre, has international popularity, it became the "Industrial Building of the Year 2010" in an international public vote organized by the Archdaily portal (ArchDaily, 2010). The building volume emerging

from the hillside is created by the serpentine of repeated blocks of stylized forms of the typical local, pitched-roofs of press houses. The longitudinal axis of the building, which is bent several times, recalls the tectonics of the landscape: poured out and hardened lava. The size of the winery exceeds local scales, even though three-quarters of the volume is submerged in the belly of the hill. The visible part of the blocks is homogeneously clad in prefabricated concrete facing panels with a slightly transformed pattern of grapevines climbing and twining around them. These panels are punctuated by the glazed areas covered in metal panels perforated with a similar pattern. According to the architects, their main principle was that the winery should be adapted to nature (Kis and Molnár, 2010).

The **NAGY-SOMLÓ** or "*Greater Somló*" wine district, consisting of one long-extinct volcanic hill, is Hungary's smallest wine region, which covers 690 ha of the vines. It is situated in western Transdanubia, on the boundary between the Bakony Mountains, and the Marcal Basin, on the eastern periphery of the Little Plain. Most of the vines are planted on the slopes of hill, which are covered by a loam mixed with basalt clast, and weathered volcanic tuff.

The **KREINBACHER-ST. ILONA WINERY COMPLEX** (see Appendix 23, lies at the foot of the volcanic hill, Somló and is surrounded by the vineyards, typical Hungarian buildings, and the basalt cliffs and stone screes which emerge from the forested peak of the mountain. The winery complex consists of four parts. Designed as individual buildings and completed in different periods, they are different in character, but their structures have much in common. The St. Ilona Winery was built as the first part of a major complex and includes the production facilities, cellars, and tasting room. The large part of the winery is hidden from view from the main road by an artificial hill, being visible just a cantilevered structure with a gabled roof, which protrudes from the body of the hill. In the back, the building opens towards the mountain and the vineyards. The second part, the Kreinbacher Champagne winery, comprising the fermentation and processing areas, administrative offices and a spacious professional tasting room, is the twin brother of the St. Ilona winery and appears as if it were carved out of the latter's hill. The monolithic concrete masses evoke forms of geological forces with shapes of lava flows appearing in their layouts and forms of tectonic movements and lava tunnels appearing in their sections. The third part of the complex is the Champagne maturing facility where the long-term storage, maturing and bottling take place. Its volume, influenced by the narrow plot allowed for the construction, represents another artificial hill. The visible elements are the longitudinal, dark grey wall punctuated by the "bubble" windows and a cantilevered structure with the gabled roof. The hotel, the last unit, employing the same architectural approaches as the adjacent buildings: it is a hill-house with a concrete structure and basaltic

colours. The long, mild curved shape of the building frames a cozy yard organized in terraces. On the longitudinal sides are generous windows, which make the building communicative and offer a panoramic view of the surrounding landscape.

According to the architect, the main aim was to fit the building into the land: "*The idea was not to make the buildings blend in with the other buildings in the area - which are small houses, and this, by contrast, is a huge industrial space - but with the land, as a part of it*" (Ekler, 2014, p.27).

3.7. Austria: Hill- Leo Hillinger Winery, F.X. Pichler Winery, Claus Preisinger Winery

Austrian viticulture is quite old. The Celts, discoverers of what would eventually become many of the top wine regions of central Europe, planted the first grapes in the 4th-century B.C. Later, the vineyards fell within the vast arc of the Roman Empire. By the Middle Ages, Austrian vineyards, like those of France, Germany, and Italy, were in the painstaking care of monks.

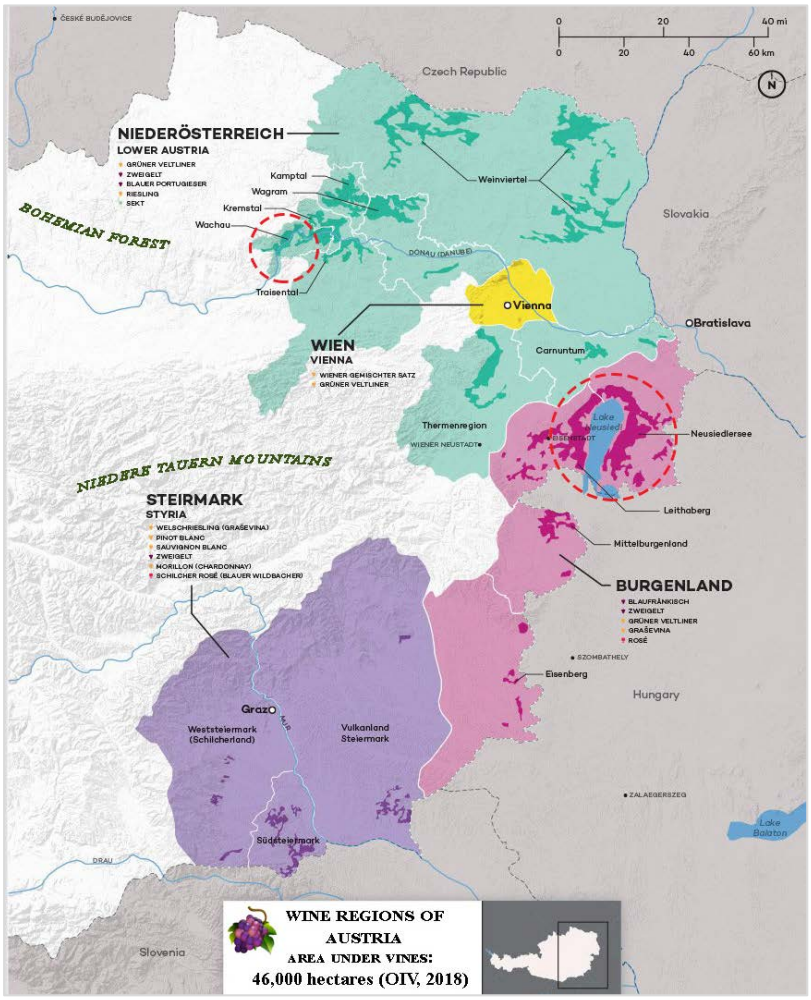

Fig. 3.13. Map of the Austrian wine regions

More than any other historical period, the 20th-century - and its tumultuous politics - shaped Austrian wine. Today, Austria ranks 18th among the wine-producing country worldwide. It annually produces about 2,4 mhl of wine from 46,000 ha of vineyards (OIV, 2018, p.4, 7). Much of the country - particularly the western half - is dominated by the chilly Eastern Alps, and to the east lies the vast, warm Pannonian Plain. Austria's 4 wine regions - Lower Austria, Burgenland, Styria and Vienna - are primarily concentrated in the east, forming a crescent along the country's border (Fig. 3.13). (MacNeil, 2015)

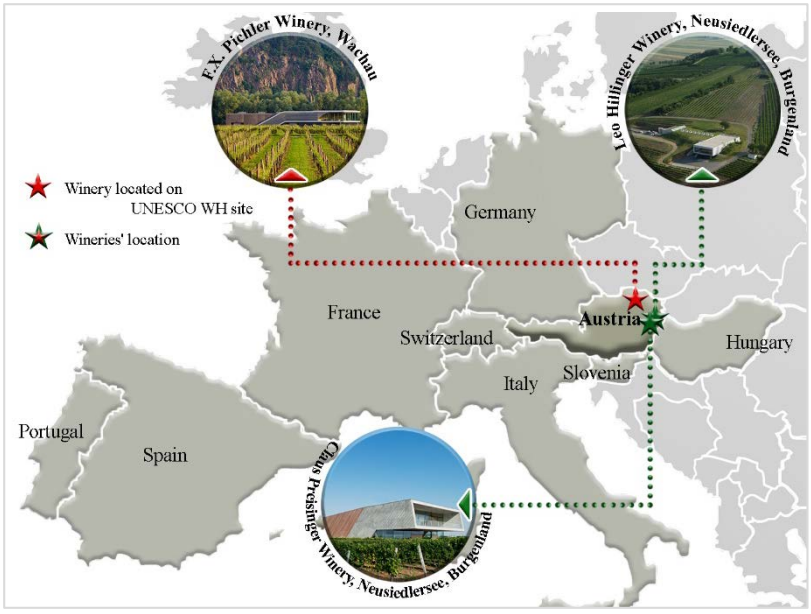

Fig. 3.14. Map location of the Austrian case studies

The selected case studies (Fig. 3.14) belong to two wine regions. The *Hill- Leo Hillinger Winery* and *Claus Preisinger Winery* are located in the viticultural landscape of the *Neusiedlersee*, a sub-region of *Burgenland* wine region, while the *F.X. Pichler Winery* in the Wachau, a sub-region of *Lower Austria*.

BURGENLAND is the easternmost Austrian wine region and consists of some 14,600 ha of vineyards that are spread out over the 4 wine sub-regions (Fig. 3.13). It is located on the famous Pannonian Plain in Central Europe. To the east is the Hungarian border, and to the west are the eastern foothills of the Alps. Burgenland occupies a narrow strip of land that extends from the Danube River down to the southern wine region of Steiermark. Due to its location, Burgenland has sunny continental summers. The wine sub-region *Neusiedlersee* is situated on the eastern shores of the large, shallow steppe lake, the Neusiedler See or Lake Neusiedl. The designated vineyard area stretches from the wine town of Gols in the north, through the level terrain of the Heideboden and on down to the Seewinkel, adjacent to the Hungarian border. The region lies in the core of the Pannonian climate zone which is characterized by hot, dry summers with moderate rainfall and cold winters with little snow. The area is characterized by sandy, loamy soils with a various proportion of gravel.

The **HILL- LEO HILLINGER WINERY** (see Appendix 24), owning 50 ha of vines, is located on the western outskirts of the Jois town, in a nature reserve between the northern shore of Lake Neusiedl and the southeastern edge of the Leitha Mountains. It was completed in 2004 and designed by the Vienna-based architectural office Gerner Gerner Plus. The winery, settled at the foot of the hill, is bounded on its sides by the vine rows and surrounded by vineyards structured by the wooded galleries and patches, rural road and residential area of the town. The building has an L-shaped structure, two-third of which is sunk into the ground and covered with covered with soil and vegetation. Its length is oriented along the contour lines and footprint is only partly visible. All that is visible above ground is the light grey concrete box with glass fronts that floats on subtle V-shaped supports - it accommodates the sales, tasting and seminar

room, - the eight skylight domes rising out of grass-covered volume, which houses the production and storage areas, and its glazed front that opens to the yard which serves as delivery area. The winery is opened and communicative, its wide glazed areas affords magnificent views from inside towards the surrounding landscape. Its accessible green roof, which also houses a terrace that opens in the back of the visible box-like volume, also provides a panoramic view of the surrounding.

According to the reviewers, "*the winery forms a symbiosis of landscape, viticulture and architecture in its whole. As a result of its special, sensitive in addition, difficult situation in the midst of the wine gardens of Jois, deeply dug into the soil, re-covered and re-planted, a special attraction in handling landscape arose for architecture*" (Architizer.com). "*The winery is sober, modern, straightforward, and yet just a bit extroverted; [...] it blends respectfully into the protected lakeshore area*" (Woschek *et al.*, 2012, p.57).

The **CLAUS PREISINGER WINERY** (see Appendix 25), owning 19 ha of vines, is located on the outskirts of the Gols village, on the eastern coast of Lake Neusiedlersee. It was completed in 2009 and designed by a Viennese architectural office known as propeller z. Settled on the edge of the rural road and bounded by a grassy area, the winery is surrounded by a largely flat terrain characterised by long strips of parallel vine rows and the residential area of the village. The building' s footprint has an elongated rectangular shape which seems to be guided by the geometry of the vineyard's plots. The building' body, one-third of which is hidden into the ground, has an elongated box-like volume. It is divided into two parts of different materials and at different heights in terms of functionality - the front two-storey building of concrete encompasses reception, office and changing rooms on the ground floor and the wine tasting on the first floor; and the single-storey warehouse and production facility designed as complete wood construction. Except for the south-west- facing facade (main facade) which is made mostly of glass - creating a sense of transparency - and which is completed by an overhanging terrace that provides a breathtaking view of the surrounding landscape; the others feature cleverly blended palette of timber and concrete, whose rhythmically texture recalls the parallel arrangement of the vine rows.

The **F.X. PICHLER WINERY** (see Appendix 26), one of the icons of Austrian winemaking and viticulture, was completed in 2009 and designed by the Austrian architect Thomas Tauber. The winery is situated in the Wachau Valley, between the hillside vineyards of Loiben, the ruins of Dürnstein castle and the Danube River. "*The long, flat-roofed building is in no way showy; it is not even located on the main road, but tucked away behind an old vintner's house, leaving the landscape of the Wachau undisturbed*" (Meyhöfer et al., 2015, p. 114). The winery's vineyards,

comprising 18 hectares, are concentrated on the southern side of the Danube and are planted in steep terraces and slopes, originating from the 13th century. Shaped by the river, settlements, forested hills and roads, the productive land is divided into geometric, regular patterns. The parallel rows of grapes guide the shape of the parking lot to the footprint of the building. Situated on flat terrain, the two-storey prism is faced with dark grey and anthracite-coloured concrete panels. The hand-ground and sanded concrete with inclusions of a green stone give the result of rough heterogeneous surface, which is reminiscent of the traditional stone walls that are so typical of this region and echo the rocks of the mountains behind. On the main facade, a contrasting band of aluminium laths rises up from the ground and optically connects the glass section of the building - the curved, wave-like aluminium appliqué reflects the Danube River, which lies beside it. On the other side, a generous glass facade, covering customer area, reflects the vines and offers a panoramic vista of the vineyards and surrounding landscape.

3.8. Switzerland: Gantenbein Winery, Lavaux Vinorama

Switzerland is a small wonderland of wine (ProWein.com) consisting of 15,000 ha vines and producing roughly 1,1 mhl of wine (OIV, 2018, p.4). It is one of the smallest wine-growing countries in Europe, which has been making wine for more than 2000 years.

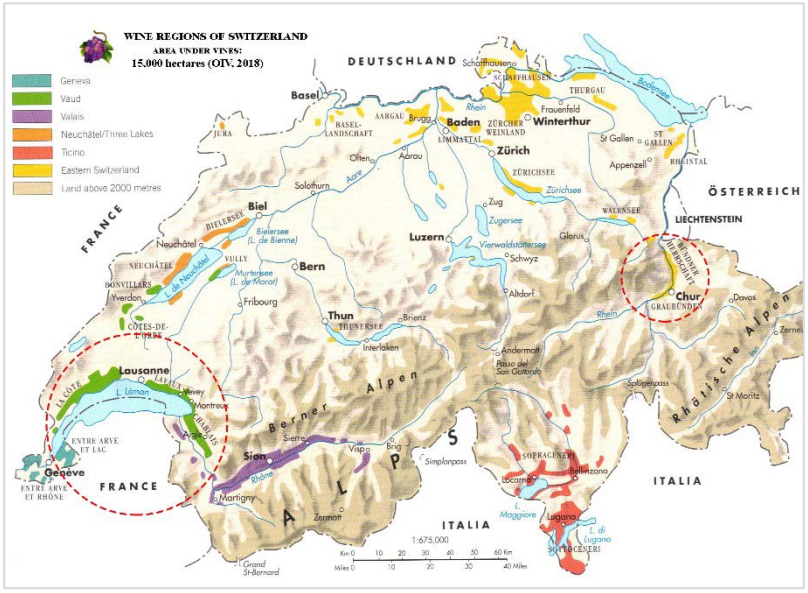

Fig. 3.15. Map of the Swiss wine regions

The country's territory, home to an array of rivers, lakes and mountain chains, is divided into three natural topographical regions: the Jura Mountains in the northwest, the Alps Mountains in the south and east, covering 60% of the country's total area, and the Central Plateau, consisting of fertile plains and rolling hills that run between the two mountain ranges. The vineyards cover six grape-growing regions, which are located around the country's edges in the proximity of mountains, lakes and rivers, leaving the center largely vineyard-free (Fig. 3.15). Terraces and steep slopes are a key feature of the vineyards. They hint to history, hard work and tradition, and gives an air of rustic charm to the national wine industry. (Wine-Searcher.com, 2016)

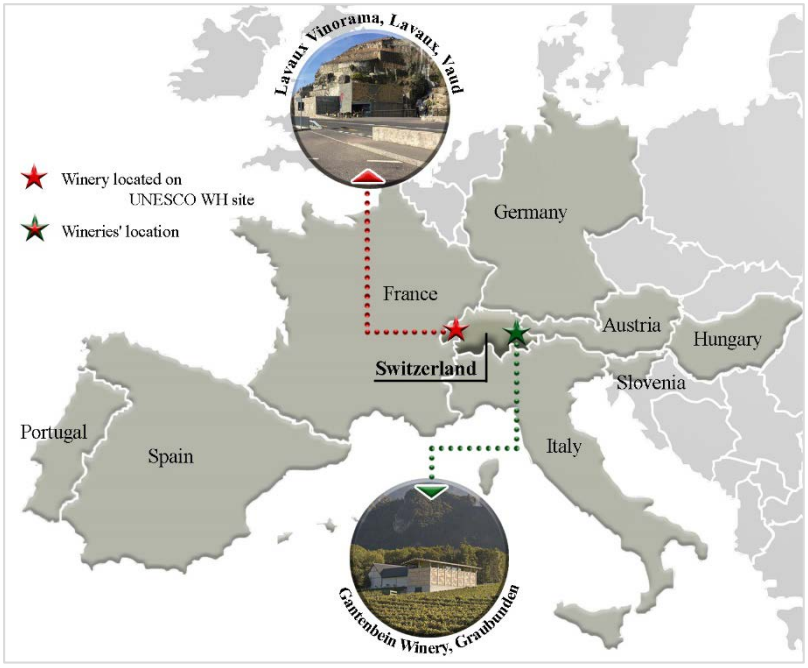

Fig. 3.16. Map location of the Swiss case studies

The selected case studies (Fig. 3.16) belong to two wine regions. The *Gantenbein Winery* is located in the viticultural landscape of the *Graubunden* wine region, while the *Lavaux Vinorama* in the *Lavaux*, a sub-region of *Vaud*.

GRAUBÜNDEN, the largest and easternmost canton of Switzerland, is entirely mountainous, comprising the highlands of the Rhine and Inn river valleys. The wine region stretches north to south along the upper Rhine valley and approaches the Swiss borders with Austria and Liechtenstein (Fig. 3.15). Its landscape includes both the fertile floor of the valley and the imposing snow-capped peaks of the Ratikon Alps. The vineyards, comprising 1,800 ha, are planted on both banks of the Rhine river and mountains' slopes. The better soils in the area are a mixture of schist and gneiss, loosely structured.

The **GANTENBEIN WINERY** (see Appendix 27), with its 6 ha of vines, is located on a gentle slope at the southern edge of the predominantly wine-growing village of Fläsch. The village with its agricultural land stretches on the right side of the Rhein valley and is overshadowed by the Fläscherberg (also known as Regitzer Spitz) and St. Luzisteig - the mountains of the Rätikon mountain range of the Central Eastern Alps. The wine estate and its vineyards, which are concentrated on its southern part, are delimited from the residential area and Rhine river by the riparian woodland of the Fläsch-Feldrüfi stream. Shaped by the riverine vegetation, a patch of arable crop and a patch of grassland, a rural road and a hedgerow, the vineyards are divided into large rectangular plots that slightly hug the meadow slope of St. Luzisteig mountain. The plots, compound of calcareous soil, are characterized by the parallel vine rows with vegetation alleys following the inclination of the slope. The entire property is reigned by the forests interspersed with vertical rockfalls of the mountains.

The estate, enclosed by the natural vegetation on one side and rows of vines on the other sides, is comprised of two simple farm buildings - a single-story rectangular structures with a concrete skeleton filled by limestone blocks and pitched roofs of corrugated sheets - constructed over a wine cellar dating from 1996s, and a new winery completed in 2008, designed by the

Swiss architects Valentin Bearth and Andrea Deplazes in collaboration with Fabio Gramazio and Matthias Kohler. The new service building, nestled along the slope, complements the two existing buildings, forming a modest Cour d'honneur that serves as a multipurpose area. The new building has a simple rectangular volume that accommodates a logistics warehouse on the lower floor, a large press room on the ground floor and hospitality space on the upper floor - the glazed walls of the tasting room frame the scenic vista while the loggia running along the walls provides a panoramic view of the dramatic Alpine landscape. The building respects the height, scale, proportions of the existing buildings and is connected with them via underground passages. Its structure, similar to the host buildings, features a concrete shell covered with a gable roof of corrugated sheets. The most impressive part of the structure is its outer skin. Made of sandstone bricks laid in different angles with open joints, it embodies the three-dimensional pattern of gigantic grapes. The brick facade was developed by the ETH university in Zurich and constructed by an industrial robot. The aesthetic of the design was proposed to look like a basket filled with grapes. "*We designed a generation process. We interpreted the concrete frame construction by Bearth & Deplazes as a basket and filled it with abstract, oversized grapes of varying diameters*" - explain the designers of the facades, Gramazio & Kohler (ArchDaily.com, 2012).

Due to its envelope, the winery was published nearly everywhere in professional circles and appreciated by many reviewers. Meyhöfer (2015, p. 19) points out that the building envelope is not only aesthetically beautiful but is also eminently practical - creates a natural filter for light and guarantees the right temperature in the fermentation room behind it. Furthermore, he asserts that the Gantenbein Winery "*was the first to follow in the footsteps of the Dominus wine-growing estate in Napa Valley as a masterly assimilation of architecture into the landscape*". According to the owner, the intention was not to create a place of architectural pilgrimage or a vehicle to boost sales, but a structure in which practicality is given aesthetic expression. The flow of wine, the lows of gravity, the need for temperature regulation, and the sequence of work processes determine the layout of the space. "*Good architecture must serve its purpose 100 percent. First, come work, then the showroom!*"- explains Gantenbein (Woschek *et al.,* 2012, p. 100).

VAUD is one of Switzerland's 26 administrative cantons and the country's second-largest wine region. It is distributed across three wine sub-regions: Chablais, La Côte and Lavaux. The *Lavaux* sub-region consists of 830 ha of vines and stretches for about 30 km along the south-facing northern shores of Lake Geneva, covering the lower slopes of the mountainside between the villages and the lake. Lavaux is a structured landscape where the main shapes reflect the rocky geological formations beneath the surface. The various levels were formed through the natural process of erosion which led to hills made of steps on which vines grew. What rendered

the Lavaux landscape remarkable is mankind's exploitation of the land, local inhabitants converted the landscape to make it suitable for farming (Reynard, 2006). The vines were grown in this area since Roman times, the present wine terraces can be traced back to the 11th-century when Benedictine and Cistercian monasteries controlled the area. The main elements are the series of walls running in parallel or perpendicular directions to the slope and were traditionally constructed of local limestone laid with lime mortar and maintained for centuries by the livestock farmers or craftsmen. Today some of the terraces are constructed of concrete with stone facings (ICOMOS, 2007). The climate of the Lavaux region is milder than its immediate surroundings because of its south-facing slopes and the modulating effects of Lake Geneva. While technically not Mediterranean climate, this part of the lake exhibits characteristics that are closer to Mediterranean type regimes than the mountain and continental climates that prevail just a few kilometers away. The soil is characterized by freshwater molasses, which was deposited with the formation of the Alps. The Rhone glacier made the most recent contribution, leaving behind debris during its retreat over 15,000 years ago. While primary rock soils dominate the upper slopes, the vines take root in the lower areas, on parent material containing active chalky limestone.

The **LAVAUX VINORAMA** (see Appendix 28), compared to all examples approached in this research, misses the production facilities of a usual winery, it focuses on wine tasting and selling - "teaching and social centre." It was completed in 2010 and designed by the Pascal Fournier and Sandra Maccagnan in collaboration with the artist Daniel Schlaepfer. The building is ideally situated at the edge of the road, between Lake Geneva and vineyards, and is surrounded by the stone terraces, residential area of the Rivaz village, and the Forestay waterfall - offering a division of the land as well as a unique structural element. The productive land is divided into dynamic, intricate patterns characterized by the steep stone-walled terraces running in parallel and perpendicular directions to the slope. The building footprint has an irregular geometric shape, which seems to be guided by the adjacent vineyard terraces and the waterfall ravine. The building has a monolithic, terraced structure which is nestled like a fortress into the steep slopes, emulating the rocky cliff where grapevines enjoy the warm and moisture-laden air. The structure is divided into two volumes by a narrow staircase that serves as outdoor access to the conference room and also to the vineyards terraces. The main facade is covered by a sculptural steel rain-screen, whose pixelated surface depicts grapevines, which impart a dappled light to the interior tasting rooms. From here the cascade, vineyards and lake are visible - the only place in the structure from where these may be viewed.

The project won the 2013 Architizer A+ Jury Award in the bars & nightlife category. The jurors appraised the architects strive to fit into the historic and natural context. "*They chose to*

build with concrete - a material both historic and modern, used by the ancient Romans and Swiss modernists. To pay further homage to local building traditions, the concrete was composed of local sand and aggregate, physically including the earth of the site into the structure" (Archtizer, 2013).

3.9. Slovenia: Marof Winery, Škalce Winery

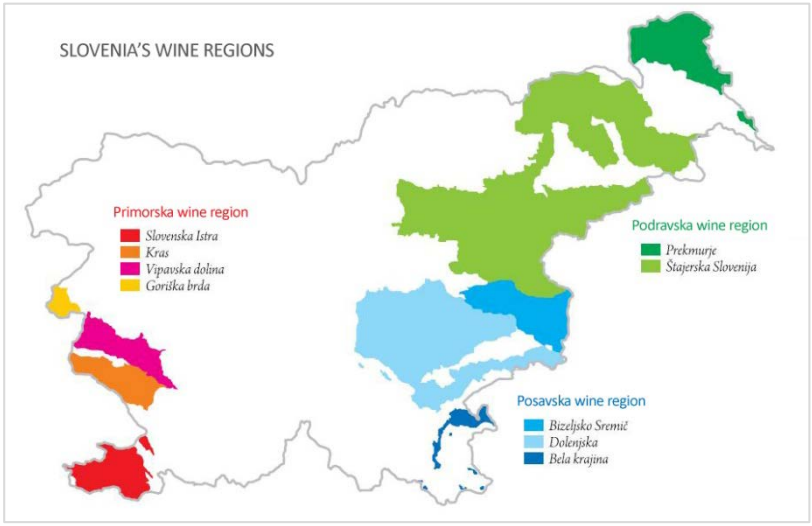

Fig. 3.17. Map of the Slovenian wine regions

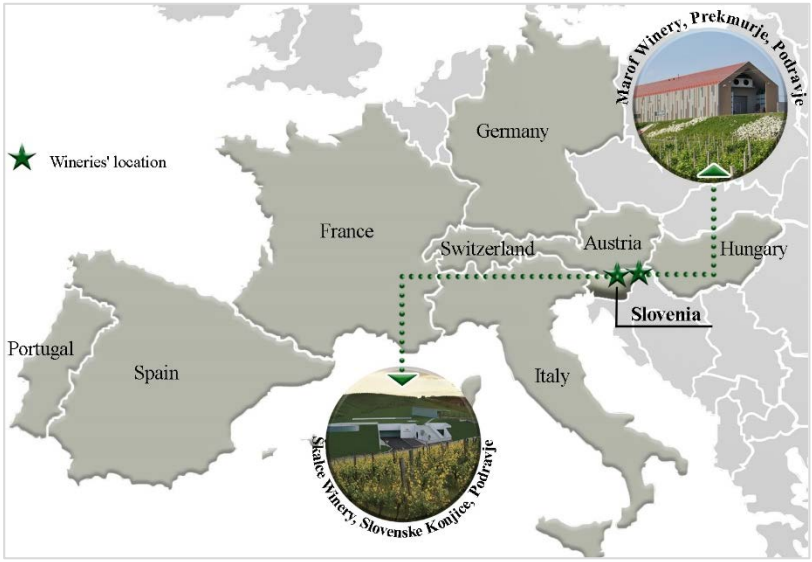

Fig. 3.18. Map location of the Slovenian case studies

Slovenia is a small European country with a long history of wine production. Viticulture and winemaking have existed within since the time of the Celts and Illyrians tribes, long before the Romans would introduce winemaking to the lands of France, Spain and Germany (Robinson, 2006, p. 632). The country's territory is characterized by the foothills of the Italian Alps to the northwest, which falls off rapidly to the east as they transition into a hilly landscape with wide valleys and rivers. The vineyards cover about 21,000 ha of the land, most of them grown on the slopes, with only some 10% on the flatlands. The country is officially divided into three winegrowing regions: Podravje, Primorska and Posavje (Fig. 3.17).

The selected case studies (Fig. 3.18), the *Marof Winery* and the *Škalce Winery*, are both located in the viticultural landscape of the *Prekmurje*, a wine district of *Podravje* wine region.

PODRAVJE is the engine room room of Slovenian wine industry, covering some 9,650 ha and producing roughly half of the country's national output. The wine region is located in the

Drava River Valley, in the north-eastern corner of the country. The region is featured by hundreds of small, rounded hills and is divided into two wine districts: Štajerska and Prekmurje.

The *Prekmurje wine district* located east of the river Mura, consists of 784 ha of vineyards. The highest point of this otherwise flat region are Goričko hills. The altitudes of the vineyards stretch from 270 meters in the North-east and over 400 meters in the North. The terrain is comprised of acidic brown soils, intertwined with sand marls and, in some parts, also of loamy and clayey soils. The climate is typically continental, with some influence from the Alps on the western portions of the region. Summers are very hot and sometimes dry, with winters being tempered somewhat by the shield of the mountains to the north and west.

The **MAROF WINERY** (see Appendix 29), with its ca. 40 ha of vines, is located in the bosom of the Goričko regional park, in the west of the Mačkovci village. The roots of the current estate go back to 1905 when Hungarian nobles Szápáry built their hunting lodge, complete with a mansion and wine cellar. The small historical manor house was revitalized to its original condition under the supervision of the Institute of the Protection of the Cultural Heritage of Slovenia, along with its outbuildings that were adapted to new functions and technologies, such as restaurant and hotel (Merta, 2013, 188). The estate was complemented with a brand new, modern winery which was built in 2009 and designed by the Slovenian architect Andrej Kalamar. The new winery stretches atop of the mildly undulating hill, in the direct vicinity of the historical manor house. The built up area is surrounded by slightly rolling hills covered with vines, lush forest and meadows.

The new winery, following the topography of the terrain, is split into two levels, one of which is hidden below ground. It accommodates technological areas, a laboratory, bottle filling station and storage areas. The visible upper part - a simple barn-like volume - serves partly as a visitor center and partly as the area for receiving grapes. Its pitched roof is finished in red brick, the roofing material of the old outbuildings. The long, concrete facades are rhythmically covered with vertical grey and brown panels which imitate the arrangement of grapevine support stakes. At their northern end, the facades are interrupted by a glass block which accommodates reception and visitors' area and provides views towards the surrounding vineyards and the natural environment. Merta (2013, p. 188) is certainly accurate in saying that "the building's location is in harmony with the surrounding conditions - the topography of the terrain, manor location and the fully grown linden tree in its proximity. The shape of the building is traditional."

The **ŠKALCE WINERY** (see Appendix 30) is the new wine production facility of the Zlati Grič company, which own 80 ha of vineyards grown on the slopes of the Škalce hills, around the small medieval town of Slovenske Konjice. The new winery, completed in 2009 and designed by

the Slovenian architects Andrej Kemr and Igor Skulj, is nestled between the gently rolling vineyard-clad hills, in the northern edge of the town. The one-storey building consists of six independently functioning sections, such as administrative section, visitor center composed of a shop, a wine-tasting room and a modernly equipped kitchen, technological area and wine cellars, a garage used for agricultural machinery and winepress area. The large, concrete body of the building is predominantly situated below ground level and covered by a slightly slanted roof covered with grass, which melts smoothly into the grassy slope. The only above-ground-level section of the complex is formed by the subtle wine press building. The roof is pierced by atriums allowing light to the interior space and by a wooden staircase that leads to its top, which serves as a panoramic terrace. The protruding parts of the building have white, sharp geometric shapes - the white color is a distinctive feature of the surrounding buildings.

The winery is featured in the project "*Architecture and Wine in Central Europe*" as one of the most interesting and inspiring wine production facilities in the region with respect to grape processing technology and architectural concept (Merta, 2013, p. 196).

4. RESULTS: COMMUNICATION BETWEEN CONTEMPORARY WINE ARCHITECTURE AND LANDSCAPE

"In reality, every work of architecture is a conversion of the existing environment. When writing on the parchments of history, new buildings should converse with the stones, listen to the wind and speak to the flowers." (Turner, 2014, p.103)

Based on the analysis of the exterior aspects of the new buildings and their surroundings, on the architects' expressed intentions and reviewers' evaluations, it can be concluded that the adaptation/integration to the existing viticultural landscape was one of determining criterions in every case. The architects emphasized and incorporated the visual quality and cultural values of the landscape to their architectural concepts in addition to ecological concerns. They created buildings that are intimately connected to place and time - i.e. they created a symbiotic relationship, interaction, connection, dialogue between their architecture and context; a mutually beneficial relationship where one informs the other and vice versa.

To create an integrated existence between the wine architecture and the viticultural landscape, the architects were influenced by different factors of the landscape and used different technics. The following subchapters reflect the key factors that shaped the contemporary wine architecture.

4.1. Natural features: morphology and the building

The morphology of landscapes is linked to the geological structures of the earth's crust, modelled by the agents of erosion. Over time, these agents disintegrate the softest rocks, leaving behind the relief formed by the most resistant. The surface is fashioned by the wind, which shapes the dunes, the waves that cut into the cliff, the flowing waters that carve out the soft rocks and form the valleys. There are many mechanical agents of erosion: running water, frost, snow, glaciers and wind. Alongside this, the rock's mechanical and chemical properties are altered by the chemical transformation of all or part of its constituent minerals. The oceans and seas regulate the temperature and the system of precipitation, initiate the formation of fog and mists, while the wind and tides create the waves and sea currents. In addition to these traditional agents, "*humans are likely the most important geomorphic agent which sculpts the Earth's surface*" (Hook, 1994, p. 224).

The most remarkable buildings whose shape have a significant relationship with the landscape morphology are the *Quinta Do Vallado, Quinta do Nápoles, Franz Keller Winery, Lavaux Vinorama, Kreinbacher-St. Ilona Winery complex* and even the *Bazaltbor-Laposa Winery.* All of them are located in the landscapes that "witness" the reunion of man and nature through over two thousand years of wine culture.


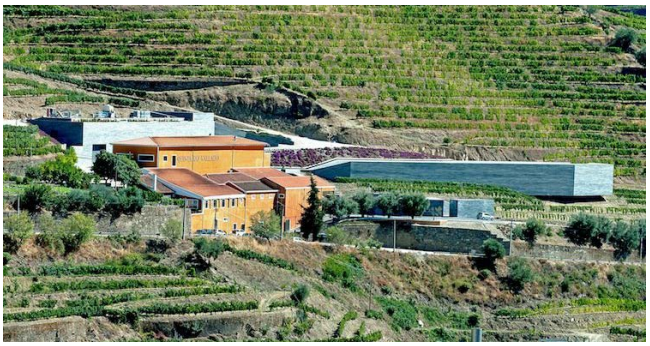

Fig. 4.1, 4.2. Aerial and close up view of the Quinta Do Vallado (4.142 m^2 | 2010 | WH site | PT)


Fig. 4.3, 4.4. Aerial and close up view of the Quinta do Nápoles (5.000 m^2 | 2007 | WH site | PT)


Fig. 4.5, 4.6. General and close up view of the Lavaux Vinorama (330 m^2 | 2010 | WH site | CH)


Fig. 4.7, 4.8. Aerial and close up view of the Franz Keller Winery (4.000 m^2 | 2013 | DE)



Fig. 4.9, 4.10. General and close up view of the Bazaltbor-Laposa Winery (420 m^2 | 2010 | HU)

Fig. 4.11, 4.12. Bird's eye views of the Kreinbacher-St. Ilona Winery complex (5.947 m^2 | 2012-2104 |

The architects' intention - not to disturb the landscape - is a recurrent motive in every case, although not always a fully realized one. The explanation is not only in the usually huge built-in mass of the production facilities but also in the tourism function. The new wineries must have an attractive appearance from outside and they should offer a view of the surrounding landscape from inside. Consequently, though the architects intended to hide the buildings, they only partially could: the wineries built for visitors could not have been hidden fully under the ground like a traditional cellar.

"*We lowered the winery deep into the loess - and then raised it up again, in some cases above ground level, by taking the typical Kaiserstuhl terraces - on which the vines can bask in the sun so splendidly - as a motif that impacted on the design more than anything else. I am glad that the building does not impinge too heavily on the eye,*" said one of the architects of the Franz Keller Winery, Michael Geis, being interviewed (Meyhöfer and Frahm, 2015, p.118).

"*Essentially, we had an idea to erect an invisible winery - a building that disappears completely into the terraced landscape. Natural stone terraces, a completely invisible building, a hatch through which one descends. In the end, however, that was not entirely feasible, we would have had to blast away too much rock to do it, and that would have swallowed huge sums of money*" - explained the head architect of the Quinta do Nápoles, Andreas Burghardt (Woschek *et al.*, 2012, p. 68). They were not the only ones who hid the big part of the building under the ground, this technic is common in each of the above-mentioned buildings and in the most of the other wineries and cellars approached in this thesis. The difference is in the proportion of the underground and above-ground parts. Generally, by embedding/concealment at least part of the building into the ground, the architects not only endowed the wineries/cellars with a gravity flow process and natural regulation of temperature and humidity - factors that are central to the production of wine - but also reduced their scale, thereby mitigating the visual impact of the buildings' mass on the surroundings.

As the architects could not fully hide their buildings, in the case of Quinta Do Vallado, Quinta do Nápoles, Franz Keller Winery, Lavaux Vinorama, Kreinbacher-St. Ilona Winery complex and even the Bazaltbor-Laposa Winery, in order to integrate the buildings into the existing landscape, their design concept was based to a great extent on the morphology of the

landscape. The architects were influenced and inspired by rhythm and geometry that characterize the landscape. To be more precise, in their design the unique site characteristics were considered, such as topography, natural contours, terrain-modelling, scenic vista etc.

In case of Quinta Do Vallado, Quinta do Nápoles, Franz Keller Winery and Lavaux Vinorama - wineries located in extreme and dramatic landscape structured by the terraced vineyards – the architects were influenced and inspired by the terraces and steps where the vine plants grow. The elongated, slate-covered strips of the new production wing of the **Quinta do Vallado** (Fig. 4.1, 4.2), extends the lines of the neighbouring terraces, following the architects' intention to shape it like to become a rock (Archilovers.com, 2012). Similar to Quinta do Vallado, the new building of the **Quinta de Nápoles** (Fig. 4.3, 4.4) reflects the stone buttresses of the landscape by shape and the used material: the natural stone (slate), which is traditional local material for the retaining walls of the terraces, made the volume merge in with the predominant colours of the surrounding landscape. The **Lavaux Vinorama** (Fig. 4.5, 4.6) seems to be an extension of the ascent above the building: the vineyard covers the top and the concrete facades recall the usual terrace support of the surroundings. The image of the building is highlighted by the presence of a stretched steel canvas representing pixelated vine leaves. Finally, the **Franz Keller Winery** (Fig. 4.7, 4.8) also seems to be the continuation of the terraced vineyard levels, its shape and grass-covered roof reflects the emblematic layers of the mountain.

Comparing with the above five examples, Kreinbacher-St. Ilona Winery complex and Bazaltbor-Laposa Winery, located in the viticultural landscapes characterized by the volcanic hills, follow different considerations. In the case of the **Kreinbacher-St. Ilona complex** (Fig. 4.11, 4.12), the design was based on the analogy of the enlarged formations of geological forces and tectonic movements. However, the complex isn't hidden under one huge tectonic layer, it forms three hill-houses imitating the topology of the volcanic terrain, blend in with the environment as an artificial part of the landscape (Ekler, 2000, p. 93). The analogy of lava flows running along the hill on its skirts is present also in the interior. "*The overhead illumination of the underground hall is facilitated by the retaining walls and slittings that run parallel to the neighbouring fences. The holes in the interior concrete walls are reminders of the porous quality of lava tubes and basalt, which gives rise to bubble-like vaults of diverse sizes*" (Ekler, 2014, p.27). The formal references of the volcanic hill appear in several forms, but the architect uses some direct formal references, too. The usual gabled roof of press houses is reflected in the cantilevered tasting room, which protrudes from the body of the artificial hill. The same shape, but in a smaller edition is repeated on the fermentation facility building, whose "bubble" windows has direct references to the champagne bubbles. Many reviewers appreciated the

complex's close connection to the landscape. "*It is not a house but a terrain feature, it is not a building but a hill*" (Wesselényi-Garay, 2013, p.42). It looks like a real hill, but "*in the background, we see the range of the Somló Hill, the model, so we can read the topographic shape as the enlarged version of the original*" - adds another reviewer (Széplaky, 2016, p.121). Some reviewers reflect on the spaces between the parts of the complex, but they interpret it differently. One sees the amphitheatre created between the winery and the hotel as a volcanic crater (Dékány, 2015, p.42), while the other interprets the narrow space between the winery and the champagne cellars, like the two parts being separated by an intense gully (Wesselényi-Garay, 2013, 43). The round windows are mentioned almost in every review, but they are interpreted differently: sometimes they refer to champagne bubbles, sometimes to grape berries, but they may look like a gas bubble in the active lava (Wesselényi-Garay, 2013, 45). The messages of the two cantilevered parts, recalling the old press houses are interpreted as intended: a reference to the neighbourhood architecture, or as a crash of tectonic and architectural character.

In case of the **Bazaltbor-Laposa winery** (Fig. 4.9, 4.10), according to the architects, in structuring and shaping the winery it was also considered the natural tectonic components of the site, and the neighbouring wine cellars (Kis and Molnár, 2010). "*In the geometric model two basic elements - the symmetric gable, closed roof abstraction of the press house and the hexagonal shaped idealized cross-section of the basalt pillars-layers - connect together into a new system, which at the same time is also a reminder of both references. The basic elements - as the basalt bands that erupted to the surface - run freely, in any direction where there are no obstacles; sometimes separating, sometimes joining. The dimensions of the geometrical basic elements (cross-sections) are variable, thus flowing into each other, in places rising from the soil and providing a distorted surface on the roof*" - the architects explain the origin of the distorted line of the processing house (Archdaily.com, 2010). The nature and the basalt of the mountain here manifested in the basalt bounds once going down from the volcanic hill, and the traces of which still can be seen on the uneven surface of the hillside. Interestingly the architects don't refer to the famous basalt columns (or organs) which are situated on the steep upper hillside, though they can be seen in the background of the precinct. This suggests that the designers were more influenced by topography. "*The single reference point can only be the earthbound architecture of the vine (the press house and the retaining wall) as well as nature itself. Being bound to the earth as a result of the programme should be taken literally: building shall take place downwards along the gravitational principle so that the grapes are exposed only to the most necessary procedures*" (Dezeen.com, 2010). To sum it up: the architects had two main reference points, the traditional press house form with a gable and the topography of the hillside. They intended to reflect on both but in an abstract way. The reviewers revealed deeper intentions

in the design. According to a reviewer, the design was inspired by the tectonics of the mountain. "*The basalt wall, almost vertical at the top, halfway downwards refracts and runs to the Lake Balaton as a declivous slope. The same dynamism can be felt on the streamlined masses, following the field lines*" (Wettstein, 2010, p.61). His colleague has the same impressions. "*The design is based on the analogy of the basalt columns, and vine-stocks grew in the soil of Badacsony*" (Szegő, 2011, p.18).

The design strategies of these buildings are essentially the same: they copy, refer to, represent, and illustrate certain objects or phenomena outside of architecture. The landscape, the landforms obviously served as an inspiration for the designers. The same inspiration, however, resulted in extremely diverse buildings being fundamentally different in their form, use of material and scale. All wineries are subordinated to the landscape, though they didn't want to melt into it - i.e. these do not intrude upon the landscape, but rather exist as an extension of it. Comparing with the architecture of Franz Keller Winery, Quinta de Nápoles, Lavaux Vinorama and Quinta do Vallado, which follow the form of the terraced landforms, the architects of Kreinbacher-St. Ilona and Bazaltbor-Laposa wineries don't intend to copy the shape of the natural landscape but reflect on it: in the hill form of the building, covered with the green roof, or in the lava-like processing building, to which rises the grape. Therefore, it can be concluded that the landscape as such as the landform has a driving impact on architects only in extreme, dramatic cases.

Undoubtedly, the above examples prove the POWER OF THE LANDSCAPE, impressing by the architecture of the wineries. The surrounding landforms influenced the shape of buildings; the tint of soil influenced the colour of the buildings' shell; the grapevine - the main element of the surrounding landscape - inspired the elements of the facades.

4.2. Landscape patterns and the building

Comparing with the six examples mentioned in subchapter 4.1, the architects of *Cascina Adelaide Farm*, *Manincor Winery*, *Antinori Winery*, *Škalce Winery*, *Hill- Leo Hillinger Winery*, *Château Thuerry*, *Bulgari Winery*, *Brugarol Winery*, *Bulgari Winery*, *Abril Winery*, *Claus Preisinger Winery*, *F.X. Pichler Winery* and *Gantenbein Winery* also endeavored to reduce as much as possible the buildings' impact on the landscape and make them appropriately blend into it. The architects approached the solution to this problem in different ways.

In the case of the Cascina Adelaide Farm, Manincor Winery, Antinori Winery, Škalce Winery, Hill- Leo Hillinger Winery, Château Thuerry and Bulgari Winery - wineries located in the viticultural landscapes characterized by the gently rolling hills - the architect focuses more on

the surrounding landscape than the construction itself. The main material for architecture is the land as it exists.

Fig. 4.13, 4.14. Site plan and close up view of the Cascina Adelaide Farm (1.472 m^2 | 2004 | WH site | IT)

Fig. 4.15, 4.16. Site plan and bird's eye view of the Manincor Winery (4.800 m^2 | 2004 | IT)

Fig. 4.17, 4.18. Site plan and bird's eye view of the Antinori Winery (49.000 m^2 | 2012 | IT)

Fig. 4.19, 4.20. Site plan and general view of the Škalce Winery (3.500 m^2 | 2009 | SI)

Fig. 4.21, 4.22. Site plan and bird's eye view of the Hill- Leo Hillinger Winery (2.000 m^2 | 2004 | AT)

Fig. 4.23, 4.24. Site plan and bird's eye view of the Château Thuerry (3.010 m^2 | 2001 | FR)

Fig. 4.25, 4.26. Site plan and close up view of the Bulgari Winery (4.500 m^2 | 2013 | IT)

"*It might seem easy to design a cellar, but alas, it is not quite so. There are many aspects to consider in this area, work phases, indoor temperature, size of the spaces and not least the impositions of the building regulation: municipal regulations require compliance with some traditional architectural styles such as the use of pitched roofs and green-coloured shutters*." [...] "*Careful research and attention to the surrounding hills have inspired the design of a building totally covered with grass*" - explain the architects of the new cellar of the Cascina Adelaide Farm (Archicura.it). As a result, they created a "silent" and almost undistinguished volume: partly concealed into the ground and covered by a grassy mantle from which emerge its steel and glass structures. Its shape mimics the sinuous lines of the hills that characterize the landscape

and round off the sharp angles of the old farmhouse. Entirely, the **new building of the Cascina Adelaide Farm** (Fig. 4.13, 4.14) looks like an additional hillside to the landscape, thus blending gently and modestly into the historic setting. In the case of the **new cellar of the Manincor estate** (Fig. 4.15, 4.16), the architects also developed a structure that is scarcely visible from the outside. The new cellar, extended over three floors deep into the interior of the hillside, is fully covered with the grapevines. The architects created a structure which not only respects its historic setting but also re-established the cultivated landscape. An evocative example is **Antinori Winery** (Fig. 4.17, 4.18). Making "the architectural image conceal itself" and blend into the landscape was the architects' main goal. The winery was conceived as an invisible building whose body merges with the folds of the hillside. The tiered roof is entirely covered with farmland and a pair of sliced openings infilled with glass are all that reveal the presence of the structure. It is elegantly inserted in the landscape evolving as a reflection of the immense vinefield aggregate. The architects of the **new building of Škalce Winery** (Fig. 4.19, 4.20), in order to keep the viticultural landscape intact, also developed a concept for a building almost completely covered by green soil. The building, being predominantly situated below ground level of the slope and covered by a grassy, slightly slanted roof, melts smoothly into the grassy slope of the vineyard-clad hills. The green roof follows the configuration of the land thus only slightly changing the environment. The white sharp geometric shapes of the atriums that pierce green blanket and winepress - the only part of the winery that is situated above the ground - are the elements that reveal the presence of the winery. The white colour (a distinctive feature of existing buildings) of the protruding parts create a harmonious contrast with the green slopes and an alliance with the surrounding buildings. The architects of the **Hill-Leo Hillinger Winery** (Fig. 4.21, 4.22), also created a symbiosis between the existing viticultural landscape and the newly-designed production site. As the building is located in a nature reserve, the planning permission was granted with the proviso that the project had to be blend into its surroundings as much as possible (Woschek *et al.*, 2012, p.57). In order to satisfy the condition, the architects skillfully used the features of the area by inscribing a considerable part of the structure into the slope of a mountain and covered it with a grassy layer. All that is visible above the ground are the skylight domes and a small, light grey concrete box with a glazed front that protrude from the artificial hill. In a whole, the building blends respectfully in the protected area. The architects of the new cellar of the **Château Thuerry** (Fig. 4.23, 4.24) followed almost the same principle. As in the case of the new cellar of Cascina Adelaide Farm and Manincor Winery, the architects disregarded the architectural character of the host building and developed a new construction under a green blanket, in a layer between the historical building and the vineyards' roots. They addressed the idea of minimalism - pure rectangular shape, few materials, "clean" lines - and hid

most of the structure into the natural slope, covering it with a layer of earth planted with grass. A distinctive feature of the cellar is that on the one hand, due to its location and green roof it stands in an alliance and harmonious balance with the historic building and the directly surrounding landscape elements, on the other, due to its white facade (the white colour was used for the better adaptation to climate which is characterized by the torrid summers - the white colour very well reflects wavelengths of light, or heat, thus stabilizing the interior temperature of the cellar) it is shouting out its architectural presence, thus highlighting the host building which is mostly screened by the tree crowns. In the design of the **Bulgari Winery** (Fig. 4.23, 4.24) the landscape is also a key element. The building was conceived as an extension of the surrounding landscape. The architects have designed a sensible structure of reinforced concrete and progressive layers of transparency partly embedded into the topography. Due to the "green" roof that partly covers the structure, the colour pallet of the used materials - similar to the colour palette of the site - and the olive trees that are planted on the roof and around the entire structure, the winery blend effortlessly into the landscape. "*We approach winemaking in a very respectful way. We try to preserve the historical heritage of winemaking, but at the same time, we are trying to develop it with the most sustainable technologies, in order to respect and especially preserve nature. Today winemaking has to be evolutionary itself because if we do not respect the environment, we cannot create a fresh history founded on the values of quality, elegance and respect.*" *[...]* "*The winery had to be part of the landscape, and the functionality was the most important aspect, followed by elegance and simplicity*" - explained the owner Giovanni Bulgari (Innovationhongkong.com, 2017).

The above-mentioned wineries and cellars (the Franz Keller Winery (Fig. Fig. 4.7, 4.8) and Kreinbacher-St. Ilona Winery complex (Fig. 4.11, 4.12) mentioned in the subchapter 4.1, also belongs to this group of buildings) have a profound and radical bond with the territory, by blending with the land to the point of being concealed by it. The line between their architecture and landscape are blurred - these are neither pure buildings nor pure open space; these are designed as artificial terrains/landscapes - field like effects. Neither the Antinori Winery and the new cellar of the Manincor Winery, whose vines grow on their roofs, nor the new cellar of the Cascina Adelaide Farm, new cellar of the Chateau Thuerry, Škalce Winery, Hill- Leo Hillinger Winery, Bulgari Winery and Brugarol Winery are not swallowed up by the ground - the architects, burying a substantial part of the buildings into the earth and covering them with a vegetative layer, left some parts visible as an indication of the invisible. Some of these parts are related to their context through their shapes, while some are rather independent or even opposed to their surroundings, but in all the cases, the green layer is essentially the instrument used to camouflage these architectural objects, thus lending unity to the scene. As Mirko Zardini points

out in his essay "*Seemingly Seamless*" from the book Landform Building: Architecture's New Terrain (Allen and McQuade, 2011p. 61) that: "*Green is the colour of a new Harmony*."

More specific, the green or also called "living" shell/roof is an important feature that contributes to establishing an interface that genuinely merges architecture and landscape. Throughout the year the green layer changes together with the surrounding landscape, leading to a transformation of the architecture during each season. More than that it serves several purposes for a building, such as absorbing rainwater, providing insulation, creating a habitat for wildlife etc.

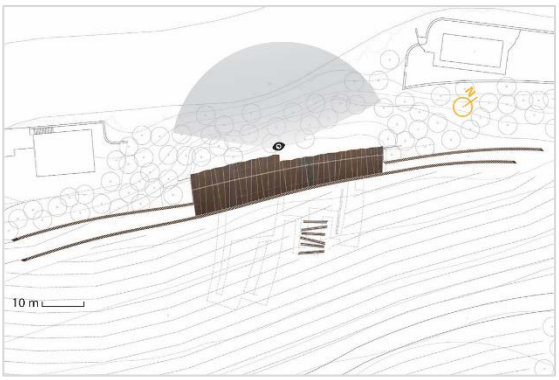

Fig. 4.27, 4.28. Site plan and close up view of the Brugarol Winery (980 m^2 | 2007 | ES)

Fig. 4.29, 4.30. Site plan and close up view of the Abril Winery (3.300 m^2 | 2012 | DE)

Fig. 4.31, 4.32. Site plan and close up view of the Claus Preisinger Winery (1.779 m^2 | 2009 | AT)

Fig. 4.33, 4.34. Site plan and close up view of the F.X. Pichler Winery (2.300 m^2 | 2009 | WH site | AT)

Fig. 4.35, 4.36. Site plan and side view of the Gantenbein Winery (980 m^2 | 2008 | CH)

Another, not less moving, work of architecture falling in the above-mentioned category of buildings that clearly illustrate the concept “less building, more landscape,” is the **Brugarol Winery** (Fig. 4.25, 4.26). The architects have designed a building which is not an “object” at all but rather an eccentric structure where architecture, sculpture and landscaping meet, where corroded iron and earth are an essential part of it. By burying a sequence of spaces under the vineyard and by employing the plates of Corten steel, a timeless material whose reddish-brown patina is almost identically with the granitic and iron-rich red soil on which vines grow, the building blends subtly into the landscape, underscoring the concept of a strong link between building and surroundings. Same material but with a different hue was used in the design of the **Abril Winery** (Fig. 4.27, 4.28). To fit the building into the landscape in a restrained and gentle manner, taking into account its special location, was the forefront task of the architect. Therefore, he conceptualized a volume with minimal impact on the surroundings, choosing a simple box form, whose footprint seems to be guided by the parallel rows of vines that surround it and whose mass is partly concealed into the slope. More than that to reinforce the relationship between the building and landscape, he used the Corten-steel for coating the structure, referring its rusty colour to the surrounding soil - brown tufa colour. However, the Corten-steel coat makes the building attractive as against the surrounding landscape. The dark red mass can be seen from far away, but it is sharply separated from the green vineyards on the slope behind,

except in Autumn. And even the architectural elements of the building, the running around steel band as a memory of the pottery findings has nothing to do with the existing landscape and history, it is a story for the visitors. In the case of the **Claus Preisinger Winery** (Fig. 4.29, 4.30), the owner's wishes were that "*the architecture of the wine should be something special and blend in well with the natural landscape. [...] The building should be large enough to accommodate everything under one roof, also gravity should play a vital role in the entire production process*" (Woschek *et al.*, 2012, p.35). As the project location is characterized by a largely flat, non-built-up terrain, in order to implement all the owner ambitions, the architects developed a lightweight, minimalist design whose elongated rectangular shape and dynamic facades were inspired by the horizontality, rhythm and geometry of the vineyard's plots. By hiding one-third of the building's mass into the ground, it was achieved a gravity flow process and natural regulation of temperature and humidity. This also helped partly to integrate the building's mass into the surroundings and prevented its full size from becoming apparent. In addition, the colour of a cleverly blended palette of timber and concrete - whose rhythmically texture recall the parallel arrangement of the vine rows - helped to minimize the visual disturbance of the building and thus creating an alliance with its context. However, the building's scale and even shape advocate the aesthetical contrast, dichotomy and even dissonance with its surrounding monotonous viticultural landscape. "*A temple of contemporary architecture paying homage to wine*" (Floornature.com, 2012), "*a winery which was the first to follow in the footsteps of the Dominus wine-growing estate in Napa Valley as masterly assimilation of architecture into the landscape*" (Meyhöfer and Frahm, 2015, p.19) is considered the **Gantenbein Winery** (Fig. 4.33, 4.34). Undoubtedly, the new winery stands in an alliance and harmonious balance with its host buildings and natural surroundings and has strong symbolic reference to the site. The architects took into consideration the character of the existing buildings, the topography of the land and the grapevine - the main element of the direct surroundings. By using the natural contour of the site, embedding a part of the building into the slope it was reduced the building's scale, thereby mitigating the visual impact of the building's mass and keeping the height of the existing buildings. By employing a simple geometric shape, a concrete shell, a gable roof covered with corrugated sheets (aspects that are reflected in the architecture of existing buildings) and light tan-coloured bricks - an archaic material - it was achieved harmony between the new architecture and its context. In addition, the innovative use of brick (the open-work masonry) not only gives the relief structure to the walls reminiscent of bunches of grapes but also gives a lightweight and almost transparent appearance to the building. Due to its complex facade design, the winery is considered a temple of contemporary architecture paying homage to wine.

All the aforementioned wineries and cellars, like the once mentioned in subchapters 4.1, prove that, alongside the physical requirements of a winery, the adaptation to the existing cultural landscape was an important task for the architects. The surrounding landscape, specifically the elements that are part of the cultural and spatial identity of the territory and which are essential, served as guidance, inspiration and resources for architects to create their projects. Consequently, they designed buildings which are located in the least environmentally sensitive location (ex. close to the edge of the existing roads, at the foot of the hills, on the existing built site, etc.); they considered the topography and natural contours of the land, thereby minimizing their impacts on the natural terrain of the project site. To mitigate the visual impact of the building mass and to strengthen the relationship between buildings and the existing landscape they used essentially the same techniques such as reduction in volumes, concealment at least part of the building into the slope, camouflage, tracing, adjustment to and (or) mimesis of the physiognomic qualities of one (or some) landscape forming elements. Concerning the extension of existing constructions, the architects respected and preserved the architectural style of old constructions - the new buildings neither dominate or imitate the existing buildings. The architecture of these wineries, embracing the character of the landscape, rejects the tradition of the object dominating the landscape thus becoming subservient to the landscape, except Abril Winery (Fig. 4.27, 4.28) and Claus Preisinger Winery (Fig. 4.29, 4.30). The Abril Winery clearly expresses the attitude of the architect, referring to the landscape character, developed a dominant concept where the architecture accentuates the place, while the Claus Preisinger Winery, appearing as a landmark, proves that the character of the site plays a significant role for achieving harmony between site and architecture - i.e. on the landscape with dynamic or dramatic character it is easier to blend the building than into monotonous landscape.

The samples prove that from the main two components of the viticultural landscape, namely “VINEYARD”, “WINERY,” there is a change in favour of the vineyard. Whether on a larger or small scale, the “landscape factors” played a very important role in their architectural concepts. Some of the samples have not only classical references of the landscape (ex. materials, colors and components that are related to the landscape forming elements) but also refers as well to the landscape patterns, the land-use traditions (to be a part of the external landscape, like a hill, slope, terraces)– which is great step forward to link themselves with the local tradition.

4.3. Culture, emotions, tradition

From the list of the examined case studies, in the case of *Abbey Winery Pannonhalma complex*, *Béres Winery complex*, *Konyári Winery*, *Quinta da Faísca* and *Marof Winery* the architects and architectural critics also counted with the landscape and stressed that to fit into the landscape was a decisive aspect when positioning the new building.

Fig. 4.37. General view of the Abbey Winery Pannonhalma complex and its natural and historical context (1.870 m^2 | 2004 | HU)

Fig. 4.38. Close view of the Abbey Winery Pannonhalma complex

Fig. 4.39, 4.40. General and close up view of the Béres Winery complex (3.000 m^2 | 2006 | WH site | HU)

In the case of **Abbey Winery Pannonhalma** complex (Fig. 4.37, 4.38), which stands in a historical protected landscape, to matching both to the environment and the spirit of the place was the main aim of the architects. To reach the aim, they took into consideration the topography of the hillside, the character of the local traditional architecture and not less important the spatial composition of the hill. To mitigate the visual impact of the complex's mass on the surroundings, the architects hid a big part of the winery into the hill, though the visible part of the press house at the top of the slope explicitly declare his presence. By letting it dominate the other parts of the complex, the architects did not break the balance of the hill's composition but rather completed it. To achieve harmony between the architecture and its context, they used materials and elements which are reflected in the traditional buildings of the hill

Fig. 4.41, 4.42. Bird's eye and close up view of the Konyári Winery (1.000 m^2 | 2004 | HU)

Fig. 4.43, 4.44. General view of the Quinta da Faísca and its cultural context (2013 | WH site | PT)

area. Reinforced concrete, steel, stone and wood are miraculously transformed in the pitch roofs, walls with a limited number of glazed surfaces, and top rounded main entrance. Taken all together, the complex is perfectly integrated into its sacral context. The architects of **Béres Winery** (Fig. 4.39, 4.40) approached an analogical principle. Although the complex is situated outside of the village and having no direct points of architectural reference it reflects the architecture of the traditional buildings of the neighbourhood. To reduce the visual impact of the winery, they accommodated the production and visitor facilities in different buildings and embedded them partly into the slope. The clever arrangement, yellow-toned facades with the larch wood shutters and pitched roofs give a lightweight appearance to the complex, making it delicately blend into its green, rolling landscape.

In the case of the **Konyári Winery** (Fig. 4.41, 4.42), the architects ignored the scale and shape of the traditional houses that surround it but considered the topography of the hill and local stone and recycled bricks masonry as an important architectural motif. The building's mass, mostly concealed underground, appears like a natural extension of the hill itself, recalling a buttressing stonewall running parallel with the layer lines. The used combination of the stone, bricks and wood, the shutters and rounded top doors recall the character of traditional agricultural constructions, thereby paying due homage to the architectural context. Although it looks modern, it seems to have been there for ages. The new volumes of **Quinta da Faísca** (Fig. 4.43, 4.44) also embody the spirit of the existing architecture. By using local materials such as schist and granite combined with wood and glass, by employing a simple geometric shape, pitched roofs, (aspects that are reflected in the architecture of existing buildings) and by respecting the proportions and height of the existing buildings it was achieved a perfect balance and harmony between the new architecture and its context. **Marof Winery** (Fig. 4.45, 4.46) also is designed in

Fig. 4.45, 4.46. The view of the Marof Winery and its natura and cultural context (2.200 m^2 | 2009 | SI)

the spirit of traditional architecture but with an artistic touch. Embedded partially into the slope, the facades of the visible part were inspired by the vineyard structure, namely, the dynamic texture and materials recall the grapevine support stakes, while the volume shape, roof's angles and material follow the character of the traditional built environment. Due to its scale, shape and neutral pastel colours of the facades, the building stands in alliance and harmony with its natural and cultural context. The Bazaltbor-Laposa Winery (Fig. 4.47) and Kreinbacher-St. Ilona Winery complex (Fig. 4.48) (mentioned in subchapter 4.1) also refer to this group, even though they have a different design concept, they pay respect to the traditions of the wine region by embodying the spirit of the place. In the case of **Bazaltbor-Laposa Winery**, the traditional cellars are reflected in the white color of the building's blocks and their gabled sections. In the case of **Kreinbacher-St. Ilona Winery complex**, though the idea was not to blend with the buildings that surround it but with the land as a part of it, the architect uses some direct formal references. The usual gabled roof of traditional press houses is reflected in the cantilevered masses which protrudes from the body of the artificial hills.

Fig. 4.47. The view Bazaltbor-Laposa Winery and its natural and cultural context

Fig. 4. 48. The view Kreinbacher-St. Ilona Winery complex and its natural and cultural context

All the aforementioned examples are located in viticultural landscapes which represent lands of traditions, places of enchantment and mysticism, great stretches of lands where nature reigns in perfect harmony with the inhabitants that have shaped the slopes and organized the lands. Where the traditional architecture of the cellars, wine storehouses, farm buildings and also of the villages are essential contributors to local distinctiveness and take part fully in the harmony and the grandeur of the vineyard landscapes. It is a fact that in all cases the architects and customers strived to harmonize

the new constructions with the surrounding landscape, architecture and landmarks. The architects hid partially the buildings' mass and used local and traditional materials, elements. As a further means of integration, the architects often recalled the forms of the traditional buildings, which concurred with the expectations of customers and architectural reviewers: to create the architectural and landscape background of a feeling, of a calm and quiet place.

As a conclusion, in order to integrate the buildings into the landscape, the architectural approach was to keep the image of the landscape that means to keep its historic image: the slope with vineyards and with traditional architecture. The buildings' colors and materials (recycled bricks, timber, plaster, local material: stone, slate, granite, etc.), pitch roofs and elements such as doors and windows (material, shape, size and accompanying elements such as blinds) also express this intention. If a project does not have all the mentioned elements, it has at least some of them.

4.4. Perceptual, visual aspects

Fig. 4.49. Bird's eye view of the Château Faugères estate (3.550 m^2 | 2009 | WH site | FR)

Fig. 4.50. Bird's eye views of the Adega Mayor (4.262 m^2 | 2006 | PT)

Analyzing the exterior aspects and the surroundings of the *Château Faugères*, *Adega Mayor*, *Château Cheval Blanc*, *Tramin Winery*, *Château La Dominique*, *Ysios Winery* and *Faustino Winery*, and also taking into consideration the architectural concepts of the examples mentioned in subchapters 4.1, 4.2, 4.3, it is clear that the architects had a different attitude towards the landscape. Comparing with other examples, which are subordinated to a lesser or greater extent to the landscape, the architects of the Château Faugères, Adega Mayor, Château Cheval Blanc, Tramin Winery, Château La Dominique, Ysios Winery and Faustino Winery neglected the subordination of their buildings. Their architectural objects - which are extremely diverse and fundamentally different in their forms, materials used and scales - have a prominent visual impact on the cultural landscape, all of these becoming dominant elements of the viticultural landscape. Nevertheless, it would be wrong to claim that the architects are totally indifferent to the

landscape, in all seven cases, the tendency to harmonize architectural composition with the surrounding landscape prevails. Obviously, they used the landscape as the backdrop as well as the inspiration for their architectural concepts - an inspiration for artistic self-expression.

Fig. 4.51. Bird's eye view of the Château Cheval Blanc estate (5.250 m^2 | 2011 | WH site | FR)

Fig. 4.52. General view of the Tramin Winery (4.300 m^2 | 2010 | IT)

Fig. 4.53. Bird's eye view of the Château La Dominique estate (3.200 m^2 | 2014 | WH site | FR)

Fig. 4.54. Bird's eye view of the Faustino Winery (12.500 m^2 | 2010 | ES)

Fig. 4.55. General view of the Ysios Winery (8.000 m^2 | 2001 | ES)

In the case of the **Château Faugères** (Fig. 4.49), the architect took into consideration the topography of the hillside and the spirit of the local traditional architecture. By using the natural contour of the site, embedding a part of the building into the slope and covering the roof with vegetation, he not only endowed the winery with a gravity flow process and natural regulation of temperature and humidity, but also reduced its scale, thereby mitigating the visual impact of the building's mass on the surroundings. By employing simple and practical geometric shapes and

natural stone (aspects that are reflected in the traditional architecture of Saint-Émilion's vineyards) a harmony between the architecture and the historical context was achieved. However, he nonetheless managed to give a powerful monumentality to the winery by establishing it on top of the plateau and imposing the vertical fracture. The central architectural element - a striking feature reminiscent of other Mario Botta designs - explicitly declares his presence, thus transforming the entire structure as a rival to its landscape. Undoubtedly, the winery's architecture reflects the architect's style, which is characterized by powerful, geometrical buildings that are in dialogue, by contrast, with the natural features of the surrounding landscape. Similar, in the case of **Adega Mayor** (Fig. 4.50), Alvaro Siza Vieira, to integrate a large facility for wine production with the surrounding landscape, also chose a daring solution. He tried to identify a balance between a countryside environment and the modern and simple lines of his architecture character, designing a white, functional, outwardly purist structure. The entire outer facades are white, featuring the same whitewash traditionally used on the houses in Alentejo - the paint also reflects the sunlight and protects the interior from too much heat. The structure's flat roof accommodates a rich green lawn (which also helps insulate the structure) with an azure blue pool (also cooling device) and marble walls. Here, too, Siza's characteristic style is unmistakable. From the above, the roof styling recalls a face with eyes, nose and mouth - a personal touch of the architect, who often includes these surprise elements in his work (Woschek *et al.*, 2012, p.27). To sum up, the white simple structure stands out in contrast to its surroundings because of its very size, colour and even location, daringly blending with it. The building is original thanks to its compactness, it looks like an imposing sculpture sitting amid orderly rows of vines, on the ridge of a small hillock declaring its architectural presence and importance.

Symbolic, emphatic and almost "sentimentally natural" are the new winery of Château Cheval Blanc and the new wings of Tramin Winery. In structuring and shaping the **new winery** of **Château Cheval Blanc** (Fig.4.51), the architect disregarded the character of the existing historic buildings, but took into account the topography of the land and addressed the idea of the metaphorical representation of naturalness. By using the curvilinear geometric forms - a feature typical of the Christian de Portzamparc designs - he created a large, elegant structure, which mimics a hill with gentle slopes and also the fluidity of its contents. To connect and incorporate the winery into the local scenography, and not less important, to stabilize its interior temperature, besides the building's shape created to set a harmonious relationship with the site and the use of materials - concrete, wood and glass - chosen with the same intention, a fraction of the building has been sunk into the ground and the other, which seems to float in the air, is covered with green strips punctuated by haphazardly arranged shrubs accentuating the impression of land.

However, the new winery, due to its huge scale, the hillcrest exceeds considerably the scale of the local surrounding hillsides, sculptural shape and white colour, creates a relationship of tension and misbalance between old buildings and topography, merging in the land declaring its artificial nature. As in the case of Château Faugères and Adega Mayor, the winery's architecture reflects the style of Christian de Portzamparc, distinguished by bold designs and an artistic touch. In the case of the new wings of **Tramin Winery** (Fig. 4.52), the architect also disregarded the character of the existing winery buildings, which compared with the old Château Cheval Blanc is not especially striking from the architectural point of view. He also approached the idea of the metaphorical representation of naturalness, drawing his inspiration from the forms and motion of the grapevine. He used forms reminiscent of leafless vines in winter and translated the bizarre shapes into a green steel construction, which forms a frame for the glass facades that reflect them. More than that he located the structures on sides of the main historical building, on the exact footprint of the original cellar so as not to sacrifice any land from the surrounding vineyards. By doing so, he also preserved and emphasized the old building by giving a new eye-catching image. However, the wings, due to their huge scale, sculptural shapes, colour and arrangement, are strident and emphatically noticeable, thereby giving the entire built area the appearance of reigning above the vineyards as the surrounding mountains do. Undoubtedly, the new structures bear the signature of the Werner Tscholl, the architect of the year 2016 in Italy, which is known for its capacity to achieve a natural-although not camouflaged-synthesis between his creations and their setting, for building emotions and memory, and for its architectural sculptures towering above the ground.

Not less evocative examples, which have a strong metaphoric and symbolic reference to the sites, are the new cellar of Château La Dominique and Ysios Winery. In the case of the **new cellar of Château La Dominique** (Fig. 4.53), the architect, rather than trying to complement the existing structures, designed a strikingly different building with bright red, wine-coloured walls. He gave to the "elegant red wine", for which Château La Dominique is recognized and ranked as Saint-Émilion Grand Cru Classé, a built recognizable face, thus creating a new "story" for the estate. A distinctive feature of this structure is that on the one hand, it is shouting out its architectural presence, on the other, it stands in an alliance and harmonious balance with its host buildings and the directly surrounding landscape elements. It is clear that this effect was achieved, partly due to the building's location, height and shape - it fills the gap between the old structures, thus being partly screened by them - and partly due to the use of reflecting materials that created an intricate sense of connection with the context, the horizontal metallic strips on the outer walls providing a reverse mirror effect, and the two-way mirror facade captures and highlights the old structures, sky, ground and the rows of vines. Indeed, these reflections helped

the new cellar to blend in with its direct surroundings in the form of mirrored camouflage, but in general, it acts as a powerful means of highlighting the estate and its vineyards. Even though Jean Nouvel claims that he "has no style [of his own]", he is known for his affection for heights, lights and reflections, and for his flamboyant and colourful - typically red - buildings and this cellar has a recognizable pattern of his personality. In the case of **Ysios Winery** (Fig. 4.55), designed by Santiago Calatrava, takes a contemporary analogical approach to its architecture. Calatrava is famed for his sculptural architecture and engineering virtuosity, inspired by natural and human forms fusing them with carefully chosen materials to create aesthetic harmony. His style is both unique and symbolic, recognizable in the world for the sense of movement that he manages to capture on a stationary object. The Ysios Winery is a pure Calatrava design, where ingenuity and structural mastery emphasis his signature style. By giving a volumetric treatment to the winery's roof and walls it was achieved static "movement" which captures the essence of the surrounding landscape and functions. The silver-wavy roof, which greatly helped to mitigate the visual impact of the building's mass, mimics the rugged thrusts of the grey Cantabrigian crags, while the walls echo the surrounding rolling land. In the same time, the roof and the south facade, clad with light-cedar paneling (whose color matches with the warm gold hue of the clay-limestone earth), recall large barrels lying side by side and connected by a band of silver (Woschek *et al.,* 2012, p. 105), thereby symbolizing the process of transforming grapes into wine. A specific feature of this winery is that on the one hand, it is harmoniously integrated into the surrounding landscape, on the other, stands as an autonomous site-specific sculpture. Peter Richards (2004, p.167) asserts that "*it is the kind of winery that is forcibly dragging, not just Rioja, but the entire world into the future in some style*."

Finally, the winery that bears the recognizable pattern of the architect's style is the **Faustino Winery** (Fig. 4.54), designed by the world-renowned British architect Norman Foster. The architect is famous for high-tech buildings, which are generally pure classicism, rigorously based on geometry and canons. The Faustino Winery is no exception: the image is certainly high-tech, modern, efficient a structured. The building's three wings reflect the three stages of production - fermentation in steel vats, ageing in oak barrels, and bottle ageing - that are controlled by an operations hub at the core. The building is partially embedded below the ground level, thereby decreasing the visual impact of the building on the landscape and increasing the benefits of passive environmental energy. On the outside, the reinforced concrete walls - which keeps out the strong summer heat - are covered with plates made of Corten steel, thereby making the building to blend with the chalky-clay soil on which the vines are grown. Even though beneath its dramatically formed roof lies the lavish drama of its subterranean, the strongly geometric building flaunts its presence in the landscape.

Two features can be easily distinguished in these case studies. Firstly, there is the scenic vista, which was also considered and emphasized by the architects, as in the all approached case studies in this research. The architectural compositions are opened and communicative (terraces, glass facades, generous windows, loggias), providing a unique view over the viticultural landscape. By framing vistas and connecting the surroundings with the buildings, the architects created the illusory impression of volumes integrity with the landscapes. They realize an architectural approach described by Le Corbusier in 1923: "*Architecture is the masterly, correct and magnificent play of masses brought together in light*" (Le Corbusier, 1986, p. 29), I may add: in the light of the viticultural landscape. Secondly, is the contrast (mass, scale, colour, shape), by using it, the architects strengthen both phenomena architecture and landscape identity to point out the difference. With this difference, they underline the architectural concepts which express their style and the owners' egos. These buildings symbolize class, status and superiority.

NEW SCIENTIFIC ACHIEVEMENTS AND CONCLUSIONS

The world of wine, despite its strong identity, is undergoing a profound transformation in the ways of producing and vinifying and a highly competitive environment that concerns the globalization of wine markets. The radical changes in the vineyards and cellars are a reflection of this dynamic. The prominent visual proof of the changes are the new winemaking facilities, which are special not only for their wine production but also for the architectural appearance of their production plants. Architecture is used as a marketing instrument - giving to the wine and its viticultural landscape a built recognizable face. Thanks to these contemporary winemaking facilities, viticultural landscapes and wine production became an attractive landscape and architectural experience for every visitor.

THESIS_1: **The contemporary wine architecture bears the answer to the philosophical question that takes into account the surrounding landscape, namely how should be designed and built places that do not intrude upon the landscape identity, but rather preserve and add value to it - places where architecture and landscape enhance and elevate each other.**

This research defines the characteristics of the site-embedded contemporary wine architecture and highlights the landscape factors that inspired the architects and the used technics. To perform the study, I selected wineries and cellars that are owned by prominent entrepreneurs and are designed either by the world's foremost architects or country's leading architects. These are highly appreciated and have international popularity. Analyzing the exterior aspects of the new buildings and their surroundings, and taking into consideration the architects' expressed intentions and reviewers' evaluations, I found out that the adaptation/integration to the existing viticultural landscape was one of determining criterions in every case. The architects emphasized and incorporated the visual quality and cultural values of the landscape to their architectural concepts in addition to ecological concerns. They created buildings that are intimately connected to place and time - i.e. they created a symbiotic relationship, interaction, connection, dialogue between their architecture and context; a mutually beneficial relationship where one informs the other and vice versa.

THESIS_2: This research defined, that there is an order to create an integrated design between the wine architecture and the viticultural landscape, all architects used essentially the same techniques such as **(a) reduction in volumes, (b) concealment at least part of the building into the slope (c) camouflage or adjustment to and (or) mimesis of the physiognomic qualities of one (or some) landscape forming elements.**

(a) **Reduction in volumes:** The wine production requires large resources of land, labour, and time. For years, wineries themselves were essentially industrial complexes consisting of grape nurseries and farms, with onsite factories, storage facilities, and living quarters for workers and owners. The analyzed case studies are not only industrial places adequate to produce wine, but also public buildings which comprise visitor facilities. In the past the winery's facilities were accommodated in several buildings, architects of today developed compact structures where one building house all the facilities, in many cases under one roof, thereby reducing the physical impact of the winery on the land. (b) **Concealment at least part of the building into the slope:** it is a common technic which is used in each case studies, the difference is in the proportion of the underground and above-ground parts. Generally, by embedding/concealment at least part of the building into the ground, the architects not only endowed the wineries/cellars with a gravity flow process and natural regulation of temperature and humidity - factors that are central to the production of wine - but also reduced their scale, thereby mitigating the visual impact of the buildings' mass on the surroundings. (c) To mitigate the visual impact of the above-ground parts and to strengthen the relationship between buildings and the existing landscape, some of the architects **camouflaged** the presence of the buildings by covering them with a vegetative shell or earth-colored materials; some of them **adjusted** the buildings to the topography, rhythm and geometries of the landscape patterns, existing buildings and (or) **mimicking** the shape, colour, materials of the landforms, landscape patterns, traditional buildings etc.

THESIS_3: Based on my 30 analyzed examples I could identify two different patterns of the communication between wine architecture and its landscape: **(a) the built forms (wineries and cellars) are the DOMINANT elements of the viticultural landscape, acquiring an important role - they serve as landmarks, drawing the attention of public's eye; (b) the built forms are BLENDED into the viticultural landscape, giving up their role - they are designed as being a part of the artificial terrain/landscape.**

To go beyond that statement, there are two more correlations within these two group:

- **Wineries built on rather flat areas (where no specific landforms, patterns, rocks appear) tend to be DOMINANT** (for example see Fig. 5.1-5.2), **while wineries with a location on hillsides or special relief situation tend to be more BLENDING in their communication strategies** (Fig. 5.3-5.4).
- **The buildings of the world's foremost architects tend to be DOMINANT, they want to create a faraway-visible focus points** (Fig. 5.5-5.6), **while the less known, local architect tend to design BLENDING forms** (Fig. 5.7-5.8).

As each viticultural landscape and the creative imagination and stylistic language of the architect are different, consequently the buildings are extremely diverse being fundamentally different in their form, use of material, scale and their impact on the cultural landscape. It is difficult to prove this with the below-listed images, but the individual analysis, which encompasses Chapter 4, explains the “communication” between buildings and landscape in details.


Fig. 5.1-5.2. Claus Preisinger Winery and Adega Mayor


Fig. 5.3-5.4. F.X. Pichler Winery and Bazaltbor-Laposa Winery


Fig. 5.5-5.6. Tramin Winery and Ysios Winery


Fig. 5.7-5.8. Cascina Adelaide Farm and Škalce Winery

THESIS_4: The analyzed examples prove **that the IMPRESSION of the LANDSCAPE plays an increasing role in the design process of contemporary architects**. Under the impression of the landscape, I define the complexity of effects, which can influence the design outcomes:

(a) **the surrounding landforms influenced the buildings' size, shapes and roofs;** (see Appx. 5, 10, 14,15, 18, 22, 28)

(b) **the tint of soil, the material of the rocks influenced the colour of the buildings' shel**l; (see Appx. 9, 11, 12, 14, 15, 17, 25, 28)

(c) **the landscapes patterns/agricultural units influenced the color of the buildings' shell, footprint, elements;** (see Appx. 1, 5, 6, 8, 9, 17, 18, 22, 24, 25, 26, 28, 30)

(d) **the grapevine - the main element of the surrounding landscape - inspired the colour, structure, and elements of the facades;** (see Appx. 4, 7, 21, 26, 27, 28, 29)

(e) **the traditional architecture - the essential contributors to local distinctiveness which take part fully in the harmony and the grandeur of the vineyard landscapes - influenced buildings' shape, roof, materials and elements;** (see Appx. 2, 13, 16, 19, 20, 21, 23, 29)

To conclude: The surrounding landscape, specifically the elements that are part of the cultural and spatial identity of the territory and which are essential, served as guidance, inspiration and resources for architects to create their projects. In their design aims, missions and programs they gave more-and-more attention to the impression of the surrounding landscape.

THESIS_5: **The landscape has a powerful driving impact on architects only when the landscape itself is extreme and dramatic.**

A unique characteristic of the viticultural landscape are the terraced vineyards, a perfect example of landscape architecture created by man in inaccessible surroundings. The terraced landscapes with its rhythmic and geometric forms, slopes/ramps, retaining walls and color palette influenced and inspired the architects. Wineries built in these landscape character are extremely fitted into the landforms, and they are the ones, which hide themselves with the blending attitude (Fig. 5.9,5.10, 5.11, 5.12)

Fig. 5.9, 5.10. Franz Keller Winery and Quinta Do Vallado


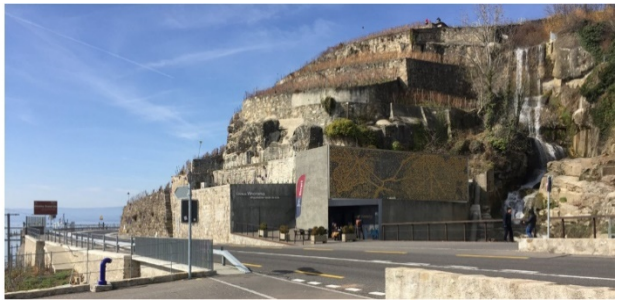

Fig. 5.11, 5.12. Quinta do Napoles Winery and Lavaux Vinorama

THESIS_6: **LANDSCAPE IDENTITY is a product in Contemporary Wine Architecture. The new wineries do not serve only for collecting, production and selling the wine, but also "selling the landscape".**

The idea of social space, emerged as an integral part in the winery in 1966, in the Winery of Robert Mondavi from Napa Valley. The winery - a mixture of event space and factory - became the area's biggest attraction - for tours, concerts, and art exhibitions. The success of the winery marked the awareness of the importance of complementary programs in the offer of wine-making experience. Consequently, the wine industry recognized that wineries offer the potential for the representation of values and identities. The wine architecture, thus, turned into the most powerful tool to express place identity and to increase profit margins. Napa Valley wine architecture lead to the development of a new wine architecture, the prototypes of a new era were built there (see subchapter 1.2.3). The analyzed wineries incorporate the same design philosophy that welcomes visitors. Their architecture values both sensory and social experience. These spaces are designed for visitors to test, learn winemaking methods, connect with the surrounding landscape. While their architecture is diverse as the wine is, all the structures include intimate public spaces. The core of these spaces is the tasting rooms which are accompanied with glazed walls or large windows and (or) glazed doors which provide visitors with immersing views of the landscape. By "framing the view" and connecting the surroundings with the buildings, the architects created a visual and physical connection between the building and its surroundings and reinforced the sense of place in their new developments. The transparency of the walls, windows and doors gives the interior space another dimension, a sense of belonging to what is visible and expressional, to what is beyond the structure of the building, and to what is visible in a more distant perspective. The terraces, balconies and loggias, which are important architectural elements in some of the wineries/cellars, strengthen the visual experiences, thereby intensify the visual effects of spatial unity. Thus, the wineries embrace a new philosophy: these are selling not only the wine but the whole experience of the LANDSCAPE - the vineyards, landforms, the whole palette of the senses, the whole identity of the place

THESIS_7: **The new contemporary Wine Architecture has a complex of open spaces which maintain and increase its value due to their aesthetic characteristics and functionality. Based on the analyses, open spaces of wineries can be defined such as the (a) attractive terraces, balconies, loggia, (b) multifunctional roofs and (c) road-circulation system.**

(a) These exterior spaces are not offering only unique opportunities to be in these exceptionally beautiful places but also to allow the visitors to fulfil the surrounding landscape in a new way - the long-distance view and panoramic view. These are the places where visitors can get a taste of the beauty of the man-made landscapes, the silence can be "heard", the aroma of the wine can be perceived, the strength of the materials and the changes in temperature can be felt, the minimal light and shadows experienced.

(b) The shape, size of the ROOFS (in many cases) correlate with this functional need of terraces, but is also a design element, it either attracts the viewer, or tries to be covered with local material, soil, or turf – the point is that the roof is even more important in the design aims, then the walls. It is the roof which determines and gives of the overall-impression of the building.

(c) There is a shift as well in organizing the open space and road network around the buildings. This trend started in Napa Valley, but it still continues today: the service roads, truck-ways and all serving/production facilities getting hidden from the visitors' eye in the backsides, while parking lots, decorative gardens and patios appear in the front sides.

THESIS_8: **In general, it may be believed that a small building can be integrated better into the landscape. So, according to my research, analyzing wineries of different sizes, which vary from 49.000 m^2 (Antinori Winery) - 330 m^2 (Lavaux Vinorama) of built-up area, I can state that the size does not matter. The factors that play a significant role to reach a better communication of a built form and its landscape are the character of the site** (ex. Claus Preisinger Winery proves that the character of the site plays a significant role for achieving harmony between site and architecture - i.e. on the landscape with a dynamic or dramatic character it is easier to blend the building than into monotonous landscape), **the financial targets and the creative imagination and stylistic language of the architect.**

Many of the analyzed examples can prove this statement, but the most evocative examples are Antinori Winery and Franz Keller Winery (see Appendix 8, 18). Their architectural concepts indeed bear the answer to the most important question of the 21st-century: how the countryside can be built on, now and in the future, and how a new understanding of the symbiosis of nature and culture could be created.

THESIS_9: **From 30 case studies 10 are located on the territories that are included in the UNESCO World Heritage. Based on their analyses, I could not find a strong correlation between them, on the contrary, these are extremely diverse and fundamentally different in their forms, materials used and scales. And if some of them are subordinated to the landscape, as many others examples which are located in non-World Heritage Sites, the architects of the case studies (Château Faugères, Château Cheval Blanc, Château La Dominique, designed by the world's foremost architects) located in Saint- Émilion - the territory which was the first viticultural landscape to be placed on UNESCO's preservation list in 1999 - neglected the subordination of the buildings to the historical-cultural landscape. Their architectural concepts express their style and the owners' egos. These buildings symbolize class, status and superiority. Thus, I can conclude that the special protection, regulation has no impact on winery architecture.**

SUMMARY

The communication between built forms and the landscape has been always in progress and developed over the years. Increased awareness of the planet's limited natural resources, the growth of tourism and the associated needs of regions to retain a sense of unique identity, led to a "new direction in contemporary architecture" in which the landscape importance has acquired the renewed attention.

Since the beginning of the 21st-century, the landscape became an important conceptual reference for an increasing number of wineries. This approach offered a substantial innovation for wine architecture with interesting potential for artistic, social and ecological gains. Thus, the aim of the research was to investigate the unique European viticultural landscape character in its communication to contemporary wine architecture and take into consideration not only the architectural intentions but also the landscape impact on the buildings; to provide a richer understanding of the current state of wine architecture; to offer a summary of the "best practice" solutions, methods, elements which result in a harmonious co-existence of landscape and winery.

I selected 30 case studies (wineries and cellars) that are designed either by the world's foremost architects or country's leading architects and analysed them through the prism of the landscape approach, based on landscape assessment methods. I concluded that the surrounding landscape, the cultural and spatial identity of the territory, often served as guidance, inspiration and resources for architects to create their projects. An integrated design between the wine architecture and the viticultural landscape was usually achieved by techniques such as *the reduction in volumes, concealment at least part of the building into the slope, camouflage or adjustment to and (or) mimesis of the physiognomic qualities of one (or some) landscape forming elements.*

Generally, I could identify two different patterns of the communication between wine architecture and its landscape: *the built forms (wineries and cellars) are the DOMINANT elements of the viticultural landscape and serve as landmarks, capturing the attention; the built forms are BLENDED into the viticultural landscape being a part of the terrain/landscape.*

KEYWORDS: landscape, cultural landscape, viticultural landscape, wine architecture

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NEW TECHNICAL CELLAR OF CHATEAU THUERRY, VILLECRONZE (FR)

ARCHITECTS: XAVIER LEIBAR & JEAN-MARIE SEIGNEURINGROSS (www.leibarseigneurin.com) | FLOOR AREA: 2.200 sq.m. | COMPLETION: 2001 | WINE REGION: PROVENCE - COTEAUX VAROIS | www.chateauthuerry.com

NEW TECHNICAL CELLAR IS NESTLED BETWEEN THE HISTORIC BUILDING AND THE VINEYARD, ON THE GENTLE SLOPE THAT SEPARATES THEM

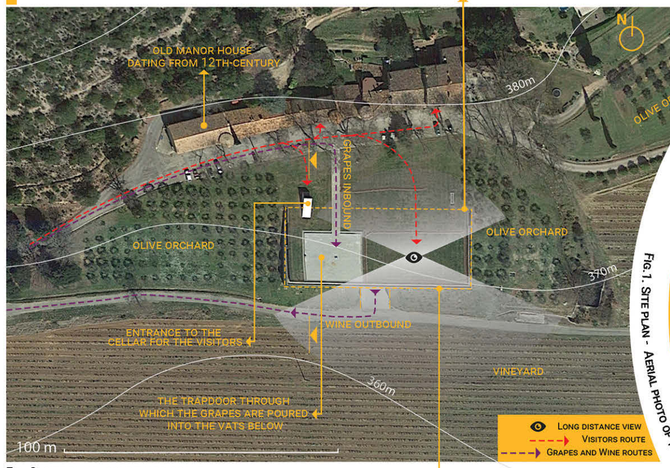


FIG. 2. SITE PLAN - COURTYARD SCALE

THE CELLAR HAS A SIMPLE RECTANGULAR SHAPE | ITS FOOTPRINT IS ALMOST INVISIBLE ABOVE GROUND | BUILDING LENGTH IS ORIENTED ALONG TO THE CONTOUR LINES AND PARALLEL WITH THE OLD BUILDING AND THE VINES' ROWS |

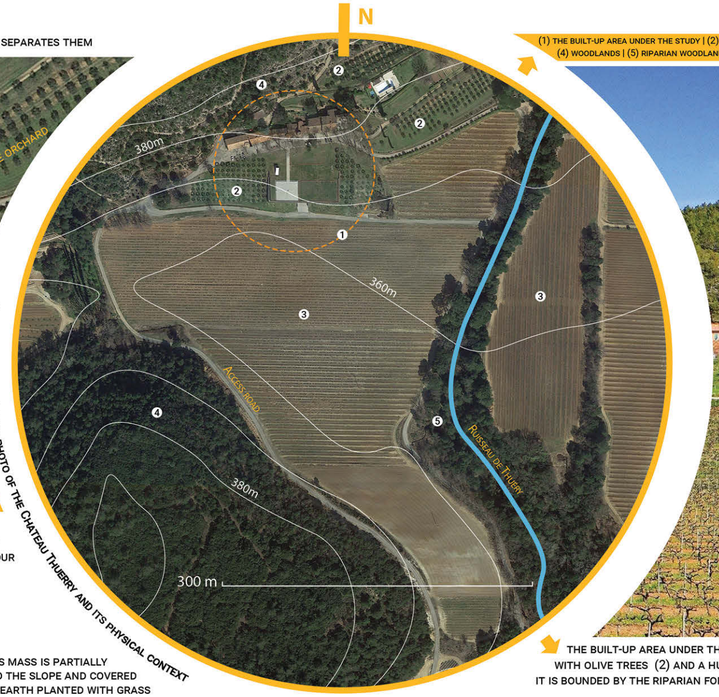


FIG. 1. SITE PLAN - AERIAL PHOTO OF THE CHATEAU THUERRY AND ITS PHYSICAL CONTEXT

(1) THE BUILT-UP AREA UNDER THE STUDY | (2) OLIVE ORCHARDS | (3) VINEYARDS | (4) WOODLANDS | (5) RIPARIAN WOODLAND OF THE THUÉRY CREEK

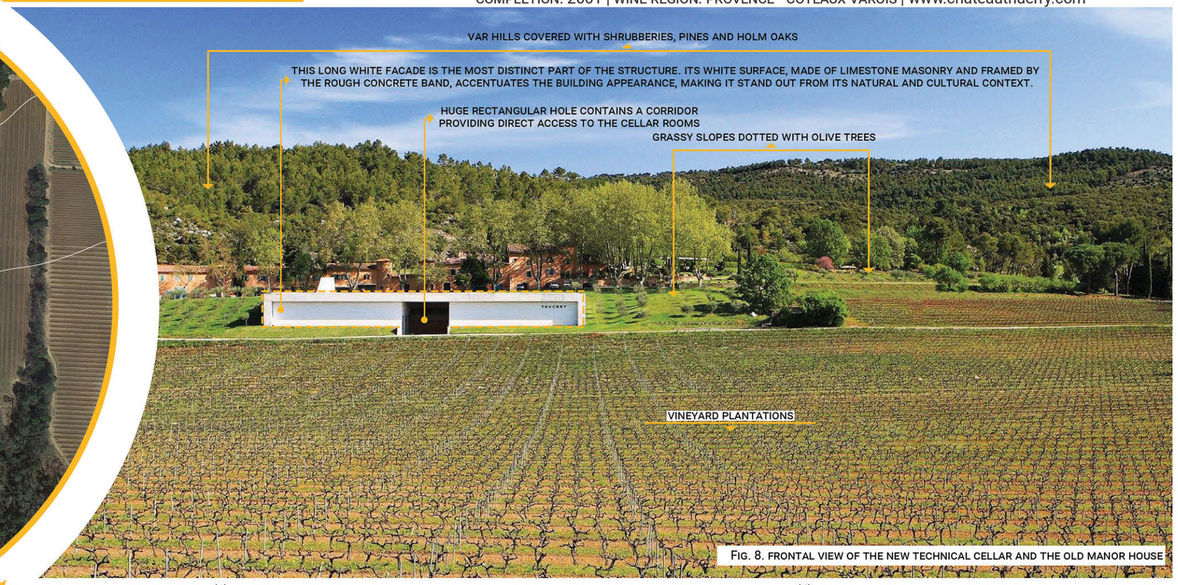


FIG. 8. FRONTAL VIEW OF THE NEW TECHNICAL CELLAR AND THE OLD MANOR HOUSE

THE BUILT-UP AREA UNDER THE STUDY (1) IS SETTLED ON ITS PRODUCTIVE LAND, WHICH LIES ON THE PLAIN AREA OF THE DOORSTEPS OF THE VAR HILLS (4). THE PRODUCTIVE LAND CONSISTS OF FEW GRASSY SLOPES DOTTED WITH OLIVE TREES (2) AND A HUGE PLOT OF THE SPARSE, STONY SOIL OF CLAY AND LIMESTONE COVERED BY THE PARALLEL ROWS OF VINES (3). THIS PIECE OF LAND IS ENCLOSED BY A NATURAL BARRIER: ON THE EASTERN SIDE, IT IS BOUNDED BY THE RIPARIAN FOREST OF THE THUÉRY CREEK - A TRIBUTARY OF THE RIVER BRESQUE (5) - AND ON OTHERS SIDES BY THE ROCKY SLOPES OF THE VAR HILLS COVERED WITH SHRUBBERIES, PINES AND HOLM OAKS (4).

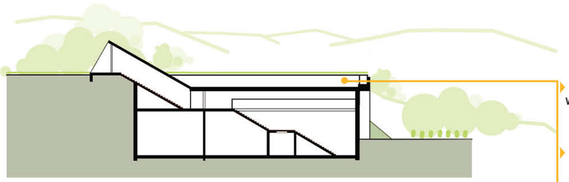


FIG. 3. CELLAR'S TRANSVERSAL SECTION, SHOWING THE CONNECTION WITH THE TERRAIN

BUILDING'S MASS IS PARTIALLY EMBEDDED INTO THE SLOPE AND COVERED WITH A LAYER OF EARTH PLANTED WITH GRASS

THE GREEN FLAT ROOF FORMS A LARGE TERRACE IN FRONT OF THE OLD BUILDING USED FOR VARIOUS CULTURAL AND FESTIVE EVENTS

CONCRETE PYRAMID WITH AN OAK DOOR PROVIDES ACCESS FOR VISITORS TO THE CELLAR

THE INTERIOR CONNECTION OF THE CELLAR WITH THE LANDSCAPE IS MISSING, BUT ITS ROOF SERVES AS A PANORAMIC TERRACE, OFFERING A LONG-DISTANCE VIEW OVER THE GREEN SURROUNDING LANDSCAPE

FIG. 4. VIEW OF THE CELLAR, REFLECTING THE GREEN ROOF AND THE VIEW TOWARDS ITS SURROUNDING LANDSCAPE

THE OLD MANOR HOUSE HAS A LONG, OCHER-PAINTED STRUCTURE WITH SLOPED TILED ROOFS AND PALE BLUE SHUTTERS. IT SERVES AS BOTH OFFICE, SHOP AND WINE TASTING ROOM

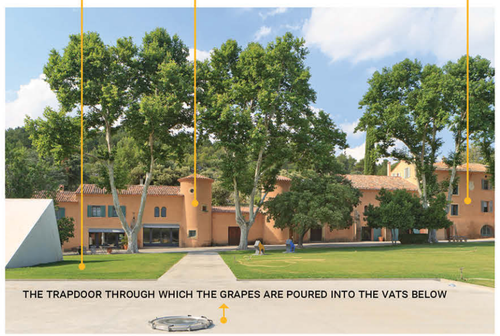


FIG. 5, 6. CLOSE VIEW OF THE NEW TECHNICAL CELLAR AND THE OLD MANOR HOUSE

LIMESTONE MASONRY

CONCRETE

WHITE-COLOURED LIMESTONE AND THE LIGHT-GREY OF CONCRETE REFLECTS THE SUNLIGHT AND PROTECTS THE INTERIOR FROM TOO MUCH HEAT.

CONCLUSION

IN STRUCTURING AND SHAPING THE NEW BUILDING, THE ARCHITECT DISREGARDED THE CHARACTER OF THE EXISTING HISTORIC BUILDING BUT TOOK INTO ACCOUNT THE TOPOGRAPHY OF THE PROJECT SITE AND ADDRESSED THE IDEA OF THE MINIMALISM - PURE RECTANGULAR SHAPE, FEW MATERIALS (CONCRETE, LIMESTONE AND WOOD), A SINGLE DOMINANT COLOUR (WHITE), "CLEAN" LINES. A DISTINCTIVE FEATURE OF THIS CELLAR IS THAT ON THE ONE HAND, IT STANDS IN AN ALLIANCE AND HARMONIOUS BALANCE WITH THE HISTORIC BUILDING AND THE DIRECTLY SURROUNDING LANDSCAPE ELEMENTS, ON THE OTHER, IT IS SHOUTING OUT ITS ARCHITECTURAL PRESENCE, THUS HIGHLIGHTING THE HISTORICAL BUILDING WHICH IS MOSTLY SCREENED BY THE TREE CROWNS.

FIG. 7. BIRD'S EYE VIEW OF THE CHATEAU THUERRY ESTATE AND ITS NATURAL CONTEXT

NEW WINERY OF CHATEAU FAUGÈRES, SAINT-ÉMILION (FR)

ARCHITECT: MARIO BOTTA (www.botta.ch) | FLOOR AREA: 3.550 sq.m. | COMPLETION: 2009 | WINE REGION: BORDEAUX - SAINT- ÉMILION | http://www.chateau-faugeres.com |

NEW WINERY IS BUILT ON THE SLOPE AT THE TOP OF THE PLATEAU OVERLOOKING THE OLD CHÂTEAU | THE CELLAR HAS A SIMPLE RECTANGULAR FOOTPRINT WHICH IS ALMOST INVISIBLE ABOVE GROUND DUE TO ITS LIVING ROOF | BUILDING LENGTH IS ORIENTED ALONG THE CONTOUR LINES |

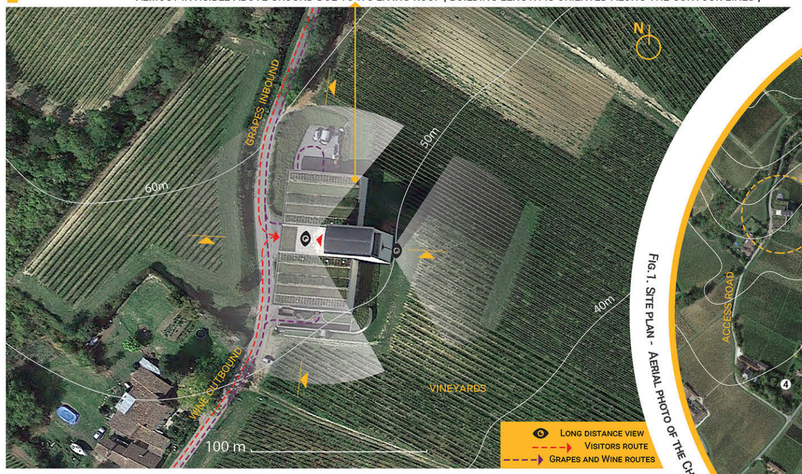


FIG. 2. SITE PLAN - COURTYARD SCALE

FIG. 1. SITE PLAN - AERIAL PHOTO OF THE CHATEAU FAUGÈRES AND ITS CULTURAL CONTEXT

(1) OLD CHÂTEAU | (2) THE BUILT-UP AREA UNDER THE STUDY | (3) VINEYARDS LIE DOWN ON THE CLAY-LIMESTONE PLATEAU AND GENTLE SLOPES FACING SOUTH-SOUTHEAST IN A CIRCULAR FORMATION | (4) "VINEYARD CASTLES" AND SMALL HAMLETS - STONE HOUSES WITH PRACTICAL GEOMETRIC SHAPES AND TILED DOUBLE-PITCHED ROOFS |

FIG. 3. BIRD'S EYE VIEW OF THE CHÂTEAU FAUGÈRES ESTATE AND ITS NATURAL AND HISTORICAL CONTEXT

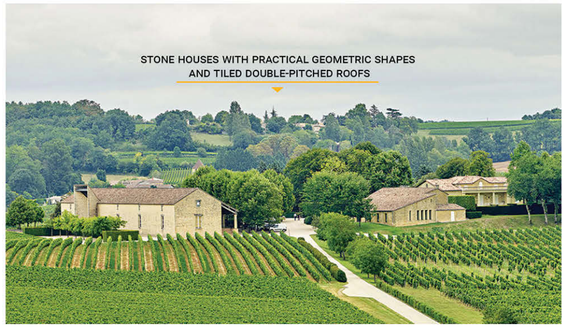


FIG. 4. CLOSE UP VIEW OF THE EXISTING ENSEMBLE OF BUILDINGS

CONCLUSION

THE ARCHITECT TOOK INTO CONSIDERATION THE TOPOGRAPHY OF THE HILLSIDE AND THE SPIRIT OF THE LOCAL TRADITIONAL ARCHITECTURE. BY USING THE NATURAL CONTOUR OF THE SITE, EMBEDDING A PART OF THE BUILDING INTO THE SLOPE AND COVERING THE ROOF WITH VEGETATION, IT WAS REDUCED ITS SCALE, THEREBY MITIGATING THE VISUAL IMPACT OF THE BUILDING'S MASS ON THE SURROUNDINGS. BY EMPLOYING SIMPLE AND PRACTICAL GEOMETRIC SHAPES AND NATURAL STONE (ASPECTS THAT ARE REFLECTED IN THE TRADITIONAL ARCHITECTURE OF SAINT-ÉMILION'S VINEYARDS) A HARMONY BETWEEN THE ARCHITECTURE AND THE HISTORICAL CONTEXT WAS ACHIEVED. HOWEVER, THE ARCHITECT NONETHELESS MANAGED TO GIVE A POWERFUL MONUMENTALITY TO THE WINERY BY ESTABLISHING IT ON TOP OF THE PLATEAU AND IMPOSING THE VERTICAL FRACTURE. THE CENTRAL ARCHITECTURAL ELEMENT - A STRIKING FEATURE REMINISCENT OF OTHER MARIO BOTTA DESIGNS - EXPLICITLY DECLARES HIS PRESENCE, THUS TRANSFORMING THE ENTIRE STRUCTURE AS A RIVAL TO ITS LANDSCAPE.

FIG. 5. FRONTAL VIEW OF THE NEW WINERY, REFLECTING ITS SHAPE AND USED MATERIALS

FIG. 6. CLOSE UP VIEW OF THE WINERY, REFLECTING THE TEXTURE OF THE MATERIAL, GREEN ROOF AND THE VIEW TOWARDS THE OLD CHÂTEAU

FIG. 11. WINERY'S TRANSVERSAL AND LONGITUDINAL SECTIONS, SHOWING THE CONNECTION WITH THE TERRAIN

THE BUILDING CONSISTS OF TWO PURE VOLUMES - A HORIZONTAL RECTANGULAR FORM AND A VERTICAL ONE THAT RISES UP FROM ITS CENTER. THE HORIZONTAL VOLUME IS PARTLY SUNKEN INTO THE GROUND. THE VISIBLE PART IS ALMOST WINDOWLESS, ONLY THE LATERAL WALLS ARE PENETRATED BY THE NARROW, GLAZED STRIPS THAT ARE SLIGHTLY NOTICEABLE. THE MOST DISTINCT PART OF THE DESIGN IS THE CENTRAL TOWER WHICH HOUSES AN EXTENSIVE COVERED TERRACE OVERLOOKING THE COUNTRYSIDE. THE TOWER'S LATERAL FACADES ARE PUNCHED OUT BY THE ROWS OF TINY SQUARE OPENINGS, WHILE THE FRONTAL FACADE IS PIERCED BY A WINDOW THAT RECALLS THE SHAPE OF A GLASS WINE FUNNEL. THE BUILDING'S MASS IS MADE OF REINFORCED CONCRETE AND IS COVERED WITH GENTLY TEXTURED NATURAL YELLOW STONE, WHICH ACCENTUATES THE GEOMETRIC OUTLINE OF THE COMPOSITION.

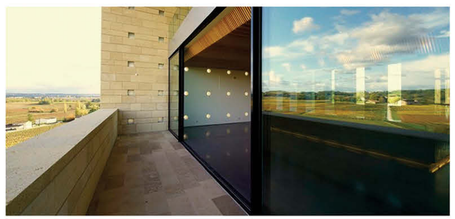


FIG. 9, 10. VIEWS FROM THE COVERED TERRACE AND FROM THE BALCONY OF THE TASTING ROOM

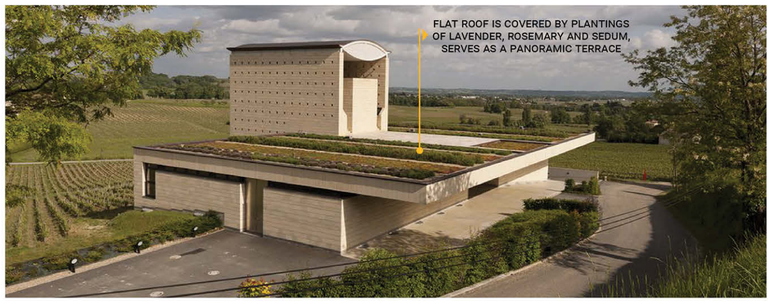


FIG. 7, 8. SIDE AND AXONOMETRIC VIEWS OF THE WINERY, REFLECTING THE SHAPE AND USED MATERIALS

NEW WINERY OF CHÂTEAU CHEVAL BLANC, SAINT-ÉMILION (FR)

ARCHITECT: CHRISTIAN DE PORTZAMPARC (www.christiandeportzamparc.com) IN COLLABORATION WITH THE LANDSCAPE ARCHITECTURE FIRM, MÉRISTÈME - RÉGIS GUIGNARD (www.agencemeristeme.com) | USABLE FLOOR AREA: 5.250 sq.m. | 2011 | WINE REGION: BORDEAUX - SAINT-ÉMILION | www.chateau-cheval-blanc.com |

NEW WINERY, ALSO KNOWN AS "THE WINERY UNDER THE HILL" EXTENDS OUT IN THE NORTHWESTERN PART OF THE CHATEAU, FROM THE ORANGERY TOWARDS THE VINES | IT HAS AN ALMOST INDISTINGUISHABLE FOOTPRINT THANKS TO THE ROOF'S GREEN STRIPES THAT ARE PUNCTUATED BY HAPHAZARDLY ARRANGED SHRUBS, THUS ACCENTUATING THE IMPRESSION OF LAND.

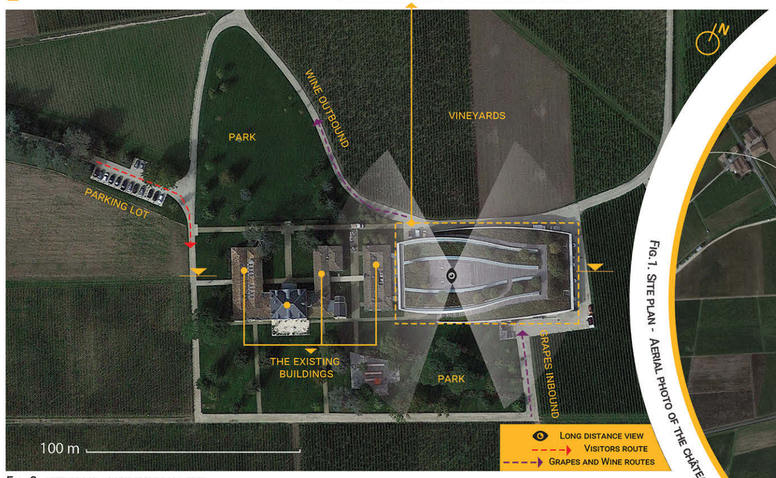


Fig.1. Site plan - aerial photo of the château cheval blanc estate and its physical context

CHÂTEAU CHEVAL BLANC IS LOCATED IN THE VITICULTURAL LANDSCAPE CHARACTERIZED BY A LARGELY FLAT TERRAIN | (1) THE BUILT-UP AREA UNDER THE STUDY | (2) CHÂTEAU LA DOMINIQUE | (3) CHÂTEAU JEAN FAURE AND ITS PARKLAND | (4) VINEYARDS | (5) TAILLAS STREAM AND ITS RIPARIAN VEGETATION

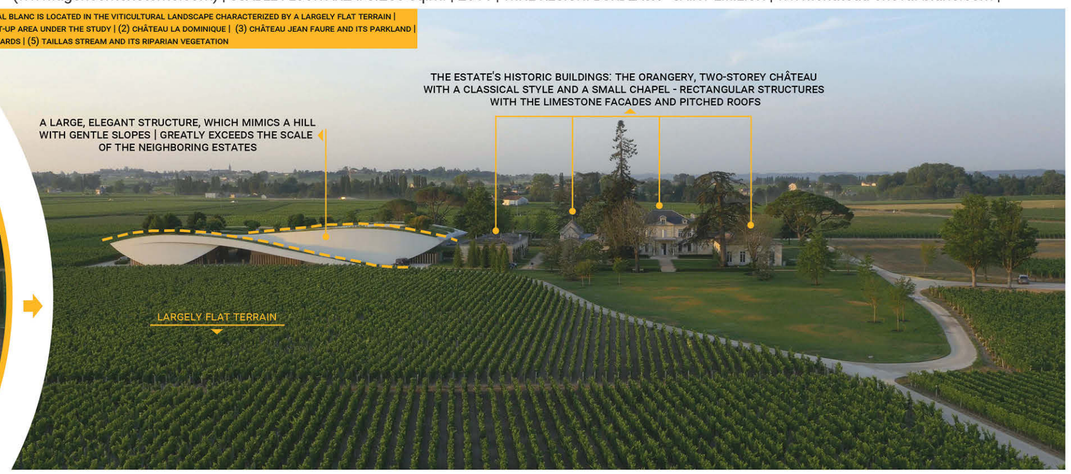


Fig. 3. View of the château cheval blanc estate and its natural and historical context

Fig. 2. Site plan - courtyard scale

CONCLUSION

IN STRUCTURING AND SHAPING THE NEW WINERY THE ARCHITECT DISREGARDED THE CHARACTER OF THE EXISTING HISTORIC BUILDINGS, BUT TOOK INTO ACCOUNT THE TOPOGRAPHY OF THE LAND AND ADDRESSED THE IDEA OF THE METAPHORICAL REPRESENTATION OF NATURALNESS. HOWEVER, THE NEW WINERY, DUE TO ITS HUGE SCALE, THE HILL CREST EXCEEDS CONSIDERABLY THE SCALE OF THE LOCAL SURROUNDING HILLSIDES, SCULPTURAL SHAPE AND WHITE COLOR, CREATES A RELATIONSHIP OF TENSION AND MISBALANCE BETWEEN OLD BUILDINGS AND TOPOGRAPHY, MERGING IN THE LAND DECLARING ITS ARTIFICIAL NATURE.

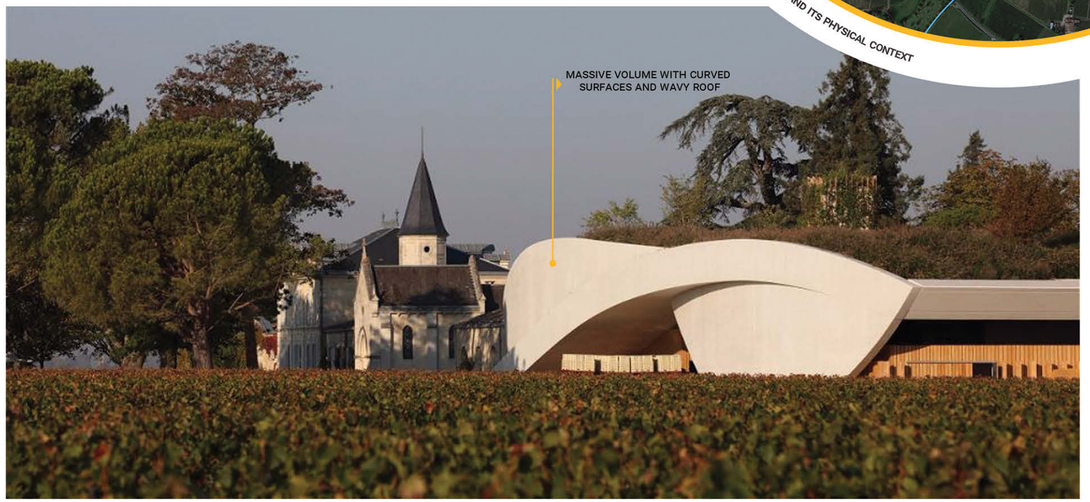


Fig. 8, 9. Winery's roof - landscaped with wooden terrace and planted verges of wild grasses, flowers and clumps of blue bushes = the roof like a promontory belvedere

Fig. 10. Cellar's longitudinal section, showing the connection with the terrain and the host buildings

Fig. 11, 12. View from inside and from the courtyard towards the landscape

Fig. 4, 5, 6, 7. Close up and bird's eye views of the new winery and the existing buildings, reflecting their shape, scale and used materials

NEW CELLAR OF CHÂTEAU LA DOMINIQUE, SAINT-ÉMILION (FR)

ARCHITECT: JEAN NOUVEL (www.jeannouvel.com) IN COLLABORATION WITH THE LANDSCAPE ARCHITECTURE FIRM, OOK PAYSAGISTE (www.ook-paysagistes.com) | AREA: 3.200 sq.m. | 2014 | WINE REGION: BORDEAUX - SAINT-ÉMILION | www.chateau-ladominique.com |

THE NEW TECHNICAL CELLAR EXTENDS OUT OF THE EXISTING MANOR HOUSE AND ITS CELLAR WINGS TOWARDS GEOMETRIC VINEYARD PLOTS WHOSE PARALLEL ROWS SEEM TO GUIDE ITS FOOTPRINT

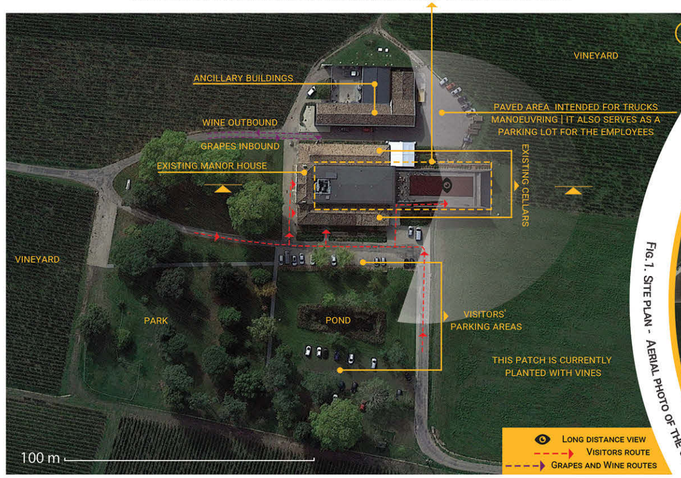


FIG. 3. SITE PLAN - COURTYARD SCALE

FIG. 1. SITE PLAN - AERIAL PHOTO OF THE CHÂTEAU LA DOMINIQUE ESTATE AND ITS PHYSICAL CONTEXT

(1) THE BUILT-UP AREA UNDER THE STUDY | (2) CHÂTEAU CHEVAL BLANC AND ITS PARKLAND | (3) CHÂTEAU JEAN FAURE AND ITS PARKLAND (4) CHÂTEAU LA GRAVE FIGEAC | (5) VINEYARDS | (6) RIPARIAN VEGETATION OF THE TAILLAS STREAM

FIG. 2. BIRD'S EYE VIEW OF CHÂTEAU LA DOMINIQUE ESTATE AND ITS NATURAL AND HISTORICAL CONTEXT

FIG. 13, 14. WINERY'S ROOF, INCLUDING TERRACE, RESTAURANT AND THE PANORAMIC VIEW TOWARDS THE VITICULTURALLANDSCAPE

BUILDING'S MASS IS PARTIALLY EMBEDDED INTO THE TERRAIN

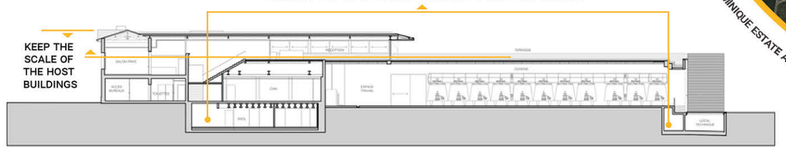


FIG. 4. CELLAR'S LONGITUDINAL SECTION, SHOWING THE CONNECTION WITH THE TERRAIN AND THE HOST BUILDINGS

CONCLUSION

A DISTINCTIVE FEATURE OF THIS STRUCTURE IS THAT ON THE ONE HAND IT IS SHOUTING OUT ITS ARCHITECTURAL PRESENCE ON THE OTHER, IT STANDS IN AN ALLIANCE AND HARMONIOUS BALANCE WITH ITS HOST BUILDINGS AND THE DIRECTLY SURROUNDING LANDSCAPE ELEMENTS. IT IS CLEAR THAT THIS EFFECT WAS ACHIEVED, PARTLY DUE TO THE BUILDING'S LOCATION, HEIGHT AND SHAPE - IT FILLS THE GAP BETWEEN THE OLD STRUCTURES, THUS BEING PARTLY SCREENED BY THEM - AND PARTLY DUE TO THE USE OF REFLECTING MATERIALS THAT CREATED AN INTRICATE SENSE OF CONNECTION WITH THE CONTEXT. INDEED, THESE REFLECTIONS HELPED THE NEW CELLAR TO BLEND IN WITH ITS DIRECT SURROUNDINGS IN THE FORM OF MIRRORED CAMOUFLAGE, BUT IN GENERAL, IT ACTS AS A POWERFUL MEANS OF HIGHLIGHTING THE ESTATE AND ITS VINEYARDS.

FIG. 15. VIEW FROM INSIDE TOWARDS THE LANDSCAPE

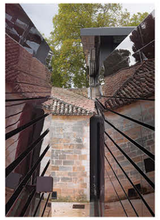


FIG. 11,12. VIEWS OF THE STAIRS THAT LEAD TO THE ROOFTOP

FIG. 16. GENERAL VIEW OF THE ESTATE - SYMBOLIZE CLASS, STATUS AND SUPERIORITY

THE USED MATIRIALS REFLECT THE SKY, GROUND AND THE ROWS OF VINES, HOST BUILDINGS, LANDSCAPE

TWO-STOREY COUNTRY MANOR HOUSE, CELLARS - LARGE FUNCTIONAL RECTANGULAR STRUCTURES WITH CLASSICAL STONE FACADES AND TILED HIP ROOFS

GLASS WALL OF THE RESTAURANT

FIG. 5. VIEW OF THE OLD CHÂTEAU AND OLD CELLAR

CELLAR: SIMPLE BOX-LIKE VOLUME CONSISTING OF A HORIZONTAL PLANE AND VERTICAL MIRROR WALLS | STAINLESS STEEL SLATS POLISHED AND LACQUERED IN A DARK RED COLOR = WINE COLOR

TRANSPARENT, LARGE MIRROR REFLECTING THE VINES

RESTAURANT WITH FLOOR-TO-CEILING GLASS WALLS AND HIP ROOF

FIG. 6. AXONOMETRIC VIEW, REFLECTING THE SHAPE, COLOR OF THE NEW CELLAR AND HOST BUILDINGS

FIG. 7, 8, 9, 10. WINERY'S WALLS AND THE MIRRORED CONTEXT

CASCINA ADELAIDE FARM , BAROLO (IT)

ARCHITECTS: ARCHICURA STUDIO - PAOLO DELLAPIANA, FRANCESCO BERMOND DES AMBROIS AND UGO DELLAPIANA (www.archicura.it) | GROSS FLOOR AREA: 1.472 sq.m. | 2004 | WINE REGION: PIEDMONT - BAROLO | www.cascinaadelaide.com |

THE NEW CELLAR IS LOCATED IN A SMALL VALLEY, AMONG THE SOFT FOOTHILLS. THE STRUCTURE, EXTENDING FROM THE EXISTING FARM'S BUILDINGS, HAS AN ALMOST INVISIBLE FOOTPRINT. ITS IRREGULAR SHAPE IS GUIDED BY THE BANK OF THE RIVER AND THE SINUOUS LOCAL ROAD.

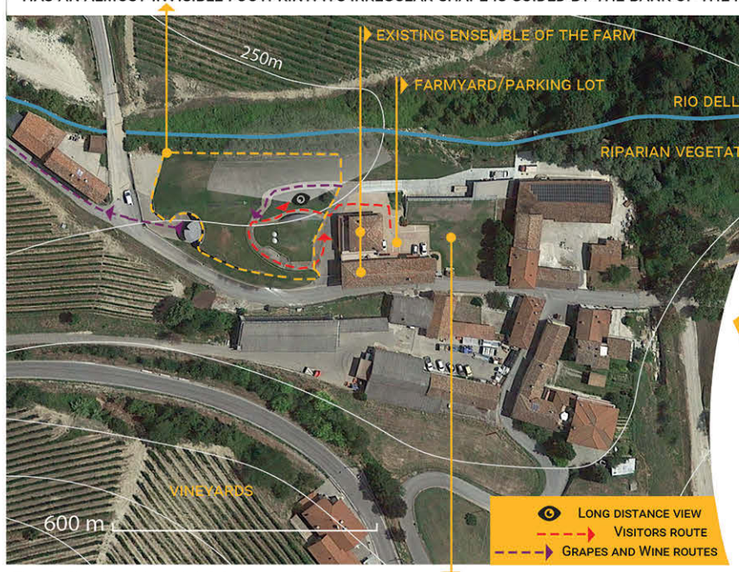


FIG. 2. SITE PLAN - COURTYARD SCALE

A GREEN SHELTER THAT PROTECTS THE ENTRANCE TO THE EXISTING WINE CELLAR AND PORCH, WHERE THE AGRICULTURAL MACHINES ARE STORED

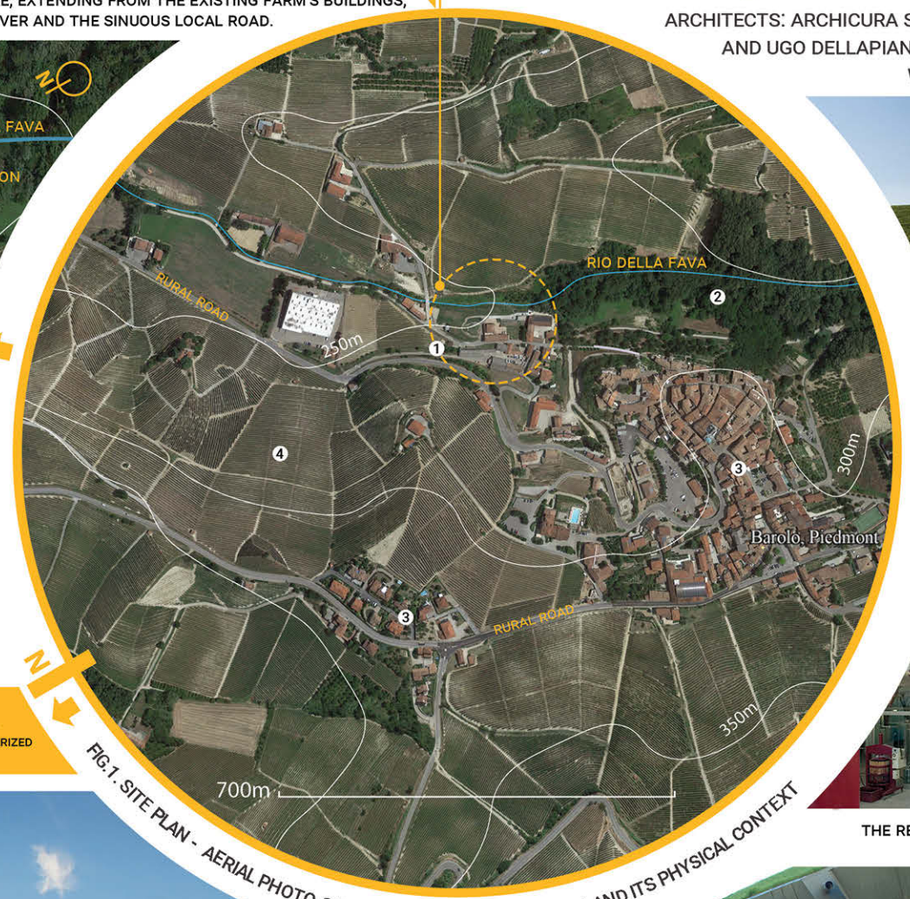


FIG.1. SITE PLAN - AERIAL PHOTO OF THE CASCINA ADELAIDE FARM AND ITS PHYSICAL CONTEXT

CASCINA ADELAIDE FARM IS LOCATED IN THE VITICULTURAL LANDSCAPE CHARACTERIZED BY THE LOW ROLLING HILLS | (1) THE BUILT-UP AREA UNDER THE STUDY | (2) RIPARIAN WOODLANDS OF THE RIO DELLA FAVA STREAM | (3) RESIDENTIAL AREA OF BAROLO VILLAGE | (4) VINEYARDS - THE PRODUCTIVE LAND IS DIVIDED INTO DYNAMIC IRREGULAR PLOTS CHARACTERIZED BY THE PARALLEL VINE'S ROWS THAT FOLLOW THE CONTOURS OF THE HILLS.

CASTELLO DE BAROLO, PERCHED ON THE HILL, TOWERS WITH ITS MIGHTY STONE WALLS OVER THE SMALL SOUL VILLAGE, CASCINA ADELAIDE FARM AND THE SURROUNDING VINEYARDS.

EXISTING ENSEMBLE OF THE FARM - PALE YELLOW-COLOURED RECTANGULAR STRUCTURES WITH PITCHED ROOFS

THE CELLAR'S ROOF SMOOTHLY RISES FROM THE RIVERBANK

FIG. 3. VIEW OF THE CASCINA ADELAIDE FARM AND ITS NATURAL AND HISTORICAL CONTEXT

THE NEW CELLAR HAS A VOLUME THAT RECALLS A SINUOUS GREEN HILL = ITS SHAPE IS MIXING VISUALLY WITH THE LINES OF THE HILLS THAT CHARACTERIZE THE LANDSCAPE.

THE HILLY STRUCTURE OF THE CELLAR OPENS UP ONTO THE WESTERN SIDE ALONG THE ROAD AND GIVES WAY TO A WIDE RIFT WITH SPLIT EDGES, THUS REVEALING THE PORCH IN FRONT OF THE ENTRANCE AND THE SMALL CIRCULAR COURTYARD THAT HOUSES THE ENTRANCE FOR THE WORKMEN, GOODS AND MACHINERY.

THE REINFORCED CONCRETE STRUCTURE IS SUPPORTED BY THE WINE-COLOURED IRON PILLARS THAT RECALL THE SHAPE OF THE VINE, THE GRAPE PLANT.

FIG. 4, 5, 6, 7, 8. AXONOMETRIC VIEW OF THE NEW CELLAR AND CLOSE UP VIEWS OF ITS DETAILS, REFLECTING THE SHAPE AND USED MATERIALS

CONCLUSION

THE NEW CELLAR HAS A "SILENT" AND ALMOST UNDISTINGUISHED VOLUME: PARTLY CONCEALED INTO THE GROUND AND COVERED BY A GRASSY MANTLE FROM WHICH EMERGE ITS STEEL AND GLASS STRUCTURES. ITS SHAPE MIMICS THE SINUOUS LINES OF THE HILLS THAT CHARACTERIZE THE LANDSCAPE AND ROUND OFF THE SHARP ANGLES OF THE OLD FARMHOUSE. ENTIRELY, THE NEW CELLAR LOOKS LIKE AN ADDITIONAL HILLSIDE TO THE LANDSCAPE, THUS BLENDING GENTLY AND MODESTLY INTO THE HISTORIC SETTING.

THE HIGHEST PART OF THE NEW CELLAR ACCOMMODATES THE TASTING ROOM. IT LOOKS LIKE AN ARC-SHAPED POCKET OF LAND. ITS GLAZED ARCH OFFERS A VIEW TOWARDS THE HILL WHERE THE GRAPES GROW, WHILE THE ENTIRE ROOF OF THE CELLAR, WHICH PROVIDES ACCESS TO IT, A PANORAMIC VIEW OF THE SURROUNDING LANDSCAPE.

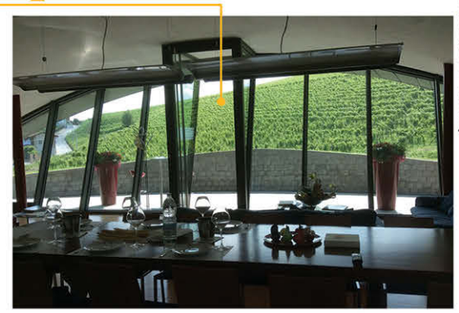


FIG. 9, 10. VIEW OF THE SPOT THAT HOUSES THE TASTING ROOM AND THE VIEW FROM THIS ROOM TOWARDS THE LANDSCAPE

NEW CELLAR OF MANINCOR WINERY, CALDARO (IT)

ARCHITECTS: WALTER ANGONESE, SILVIA BODAY AND RAINER KÖBERL (www.rcrarquitectes.es) | GROSS FLOOR AREA: 3.000 sq.m. | 2004 | WINE REGION: TRENTINO ALTO ADIGE - BOLZANO | www.manincor.com |

THE MANINCOR WINERY IS LOCATED IN THE VITICULTURAL LANDSCAPE CHARACTERISED BY VINEYARDS GROWN ON STEEP SLOPES AND GENTLY UNDULATING SLOPES AND BY MOUNTAINS' FORESTED SLOPES AND CRAGGY PEAKS.
(1) THE BUILT-UP AREA UNDER THE STUDY | (2) VINEYARDS | (3) RESIDENTIAL AREA OF CALDARO VILLAGE | (4) LAKE CALDARO | (5) MOUNTAINS' FORESTED SLOPES |

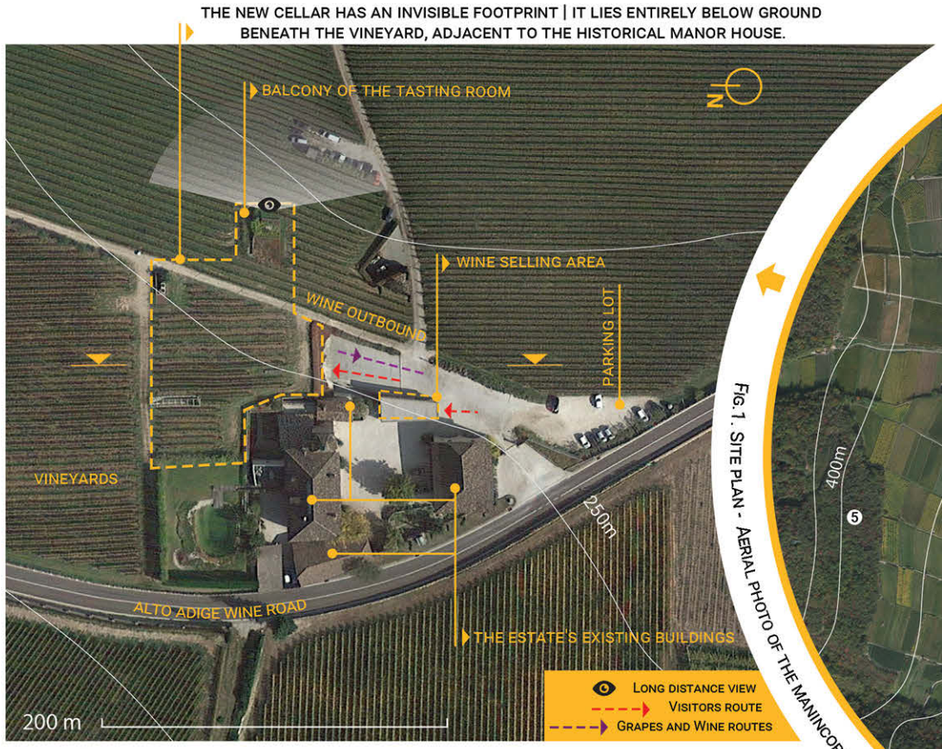


FIG. 2. SITE PLAN - COURTYARD SCALE

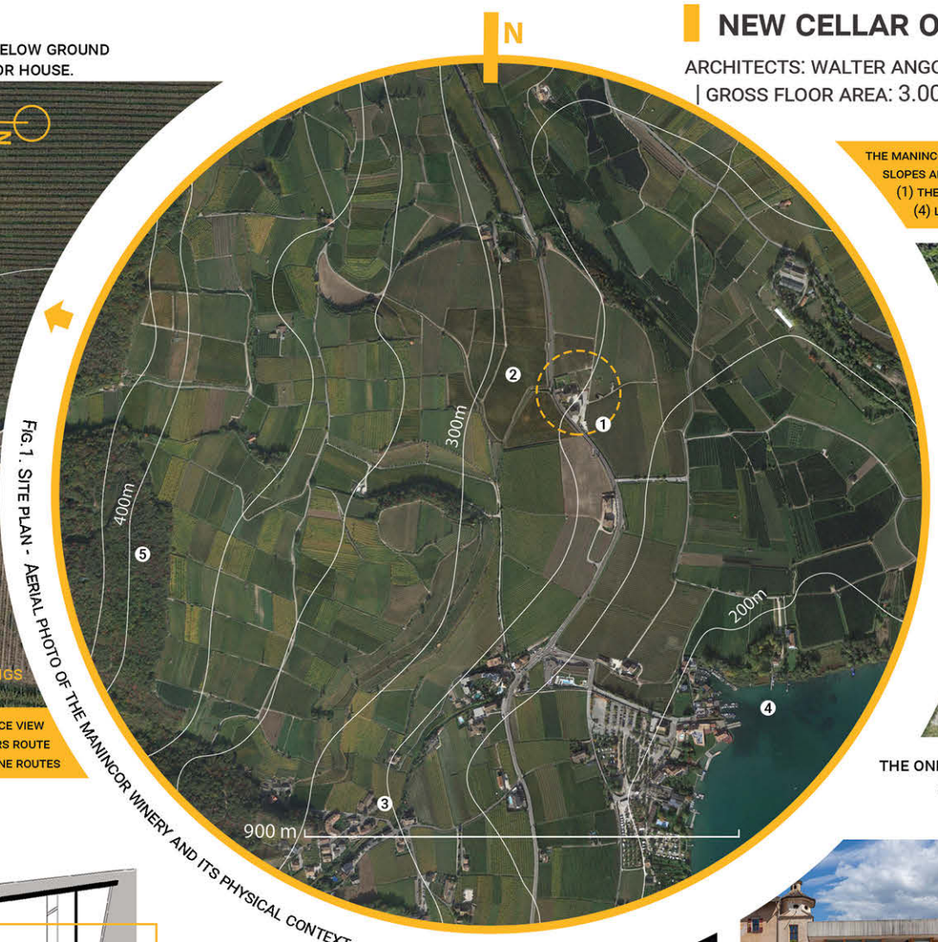


FIG.1. SITE PLAN - AERIAL PHOTO OF THE MANINCOR WINERY AND ITS PHYSICAL CONTEXT

FIG.11. BIRD'S EYE VIEW OF THE ESTATE

THE ONLY OPENLY - DISPLAYED PARTS OF THE CELLAR ARE THE ENTRANCE, WINE SELLING ARE =VINOTECA AND THE BALCONY OF THE TASTING ROOM, WHICH OFFER TO THE VISITORS A VIEW TOWARDS THE LANDSCAPE.

FIG. 9, 10. CLOSE VIEWS OF THE WINE SELLING AREA AND THE ENTRY

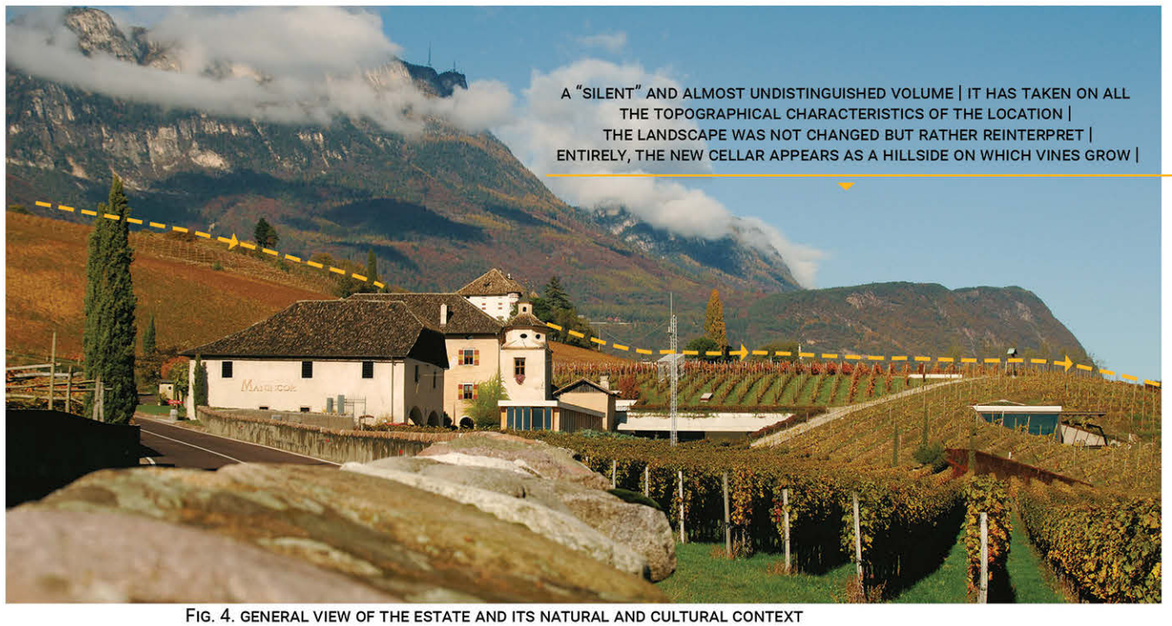


FIG. 4. GENERAL VIEW OF THE ESTATE AND ITS NATURAL AND CULTURAL CONTEXT

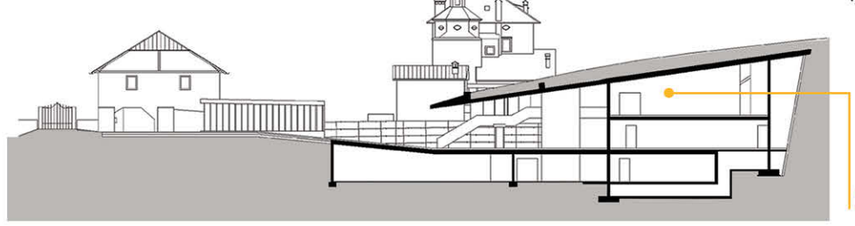


FIG. 3. CROSS-SECTION OF THE NEW CELLAR, SHOWING THE CONNECTION WITH THE TERRAIN

NEW CELLAR, EXTENDED OVER THREE FLOORS DEEP INTO THE INTERIOR OF THE HILLSIDE

FIG. 6, 7, 8. VIEWS FROM THE TASTING ROOM TOWARDS THE LANDSCAPE AND CLOSE VIEW OF THE BALCONY OF THE TASTING ROOM

THE ARCHITECTS CREATED A STRUCTURE WHICH NOT ONLY RESPECTS ITS HISTORIC SETTING BUT ALSO RE-ESTABLISHED THE CULTIVATED LANDSCAPE.

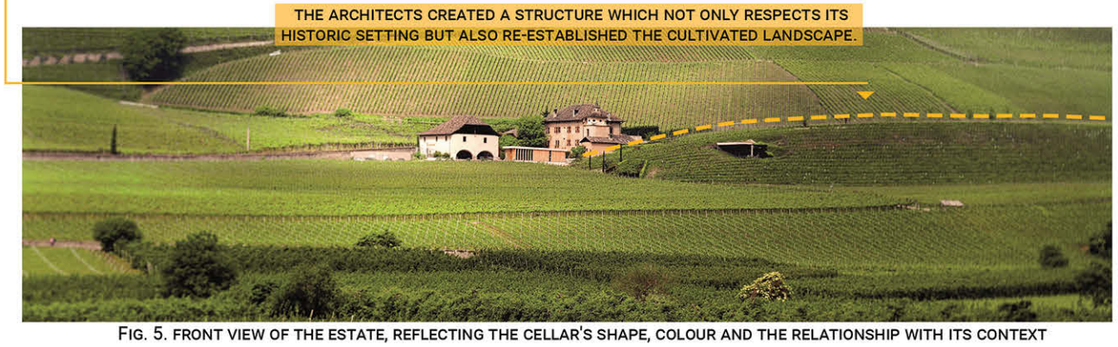


FIG. 5. FRONT VIEW OF THE ESTATE, REFLECTING THE CELLAR'S SHAPE, COLOUR AND THE RELATIONSHIP WITH ITS CONTEXT

NEW WINGS OF TRAMIN WINERY, TERMENO (IT)

ARCHITECT: WERNER TSCHOLL (www.werner-tscholl.com) | GROSS FLOOR AREA: 4.300 sq.m. | 2010 | WINE REGION: ALTO ADIGE - BOLZANO | www.cantinatramin.it |

EXISTING ENSEMBLE OF BUILDINGS: PRODUCTION HALLS AND WINE STORAGE AREAS

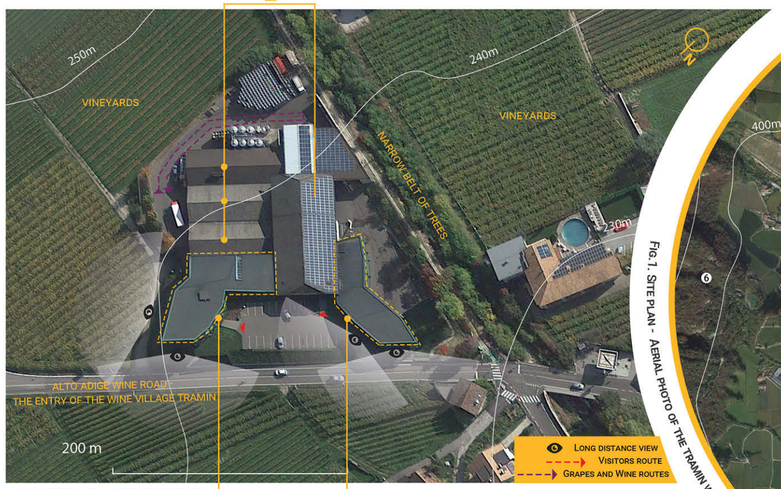


FIG. 2. SITE PLAN - COURTYARD SCALE

THE TWO NEW STRUCTURES ARE LOCATED TO THE LEFT AND RIGHT OF THE OLD MAIN BUILDING. THEIR FOOTPRINTS HAVE AN IRREGULAR GEOMETRIC SHAPE RECALLING THE WINGS-LIKE STRUCTURES.

THE TWO WINGS REPRESENT MASSIVE, GLAZED CUBES ENCLOSED IN A GREEN STEEL WEB-LIKE FRAMEWORK | THESE ARE PERCHED ABOVE THE EXISTING LEVEL, WHICH WAS COVERED BY CONCRETE PLATFORMS AND PLANTED WITH CREEPING PLANTS | THE DYNAMIC SCULPTURAL FRAMEWORK CREATES A LOGGIA RUNNING ALONG THE WINGS, WHICH OFFER AN ASTONISHING VIEW OVER THE ADIGE VALLEY AND ITS VINEYARDS.

FIG. 4. SIDE VIEW OF THE WINERY'S BUILDINGS, REFLECTING THEIR SCALE, SHAPE AND COLOUR

FIG. 1. SITE PLAN - AERIAL PHOTO OF THE TRAMIN WINERY AND ITS PHYSICAL CONTEXT

THE TRAMIN WINERY IS LOCATED IN THE VITICULTURAL LANDSCAPE CHARACTERISED BY VINEYARDS GROWN ON STEEP SLOPES AND GENTLY UNDULATING SLOPES AND BY MOUNTAINS' FORESTED SLOPES AND CRAGGY PEAKS.
(1) THE BUILT-UP AREA UNDER THE STUDY | (2) RESIDENTIAL AREA OF TERMENO TOWN | (3) VINEYARDS
(4) NARROW BELT OF TREES | (5) PARKLAND | (6) MOUNTAINS' FORESTED SLOPES

ENTIRELY, THE NEW STRUCTURES RECALL THE SURROUNDING STEEP VINEYARD SLOPES AND MOUNTAIN CRAGS, THE BUILDING BLENDS HARMONIOUSLY INTO THE LANDSCAPE. HOWEVER, THE WINGS, DUE TO THEIR HUGE SCALE, SCULPTURAL SHAPES, COLOR AND ARRANGEMENT, ARE STRIDENT AND EMPHATICALLY NOTICEABLE, THEREBY GIVING THE ENTIRE BUILT AREA THE APPEARANCE OF REIGNING ABOVE THE VINEYARDS AS THE SURROUNDING MOUNTAINS DO.

FIG. 3. GENERAL VIEW OF TRAMIN WINERY AND ITS NATURAL AND HISTORICAL CONTEXT

CONCLUSION

THE ARCHITECT DISREGARDED THE CHARACTER OF THE EXISTING WINERY BUILDINGS, WHICH IS NOT ESPECIALLY STRIKING FROM THE ARCHITECTURAL POINT OF VIEW. HE APPROACHED THE IDEA OF THE METAPHORICAL REPRESENTATION OF NATURALNESS, DRAWING HIS INSPIRATION FROM THE FORMS AND MOTION OF THE GRAPEVINE. HE USED FORMS REMINISCENT OF LEAFLESS VINES IN WINTER AND TRANSLATED THE BIZARRE SHAPES INTO A GREEN STEEL CONSTRUCTION, WHICH FORMS A FRAME FOR THE GLASS FACADES THAT REFLECT THEM. MORE THAN THAT HE LOCATED THE STRUCTURES ON SIDES OF THE MAIN HISTORICAL BUILDING, ON THE EXACT FOOTPRINT OF THE ORIGINAL CELLAR SO AS NOT TO SACRIFICE ANY LAND FROM THE SURROUNDING VINEYARDS. BY DOING SO, HE ALSO PRESERVED AND EMPHASIZED THE OLD BUILDING BY GIVING A NEW EYE-CATCHING IMAGE.

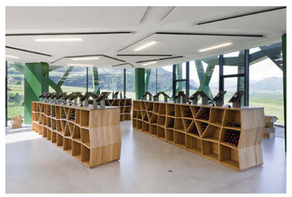


FIG. 7, 8, 9. VIEWS FROM INSIDE OF THE TASTING ROOM AND LOGIA TOWARDS THE SURROUNDING LANDSCAPE

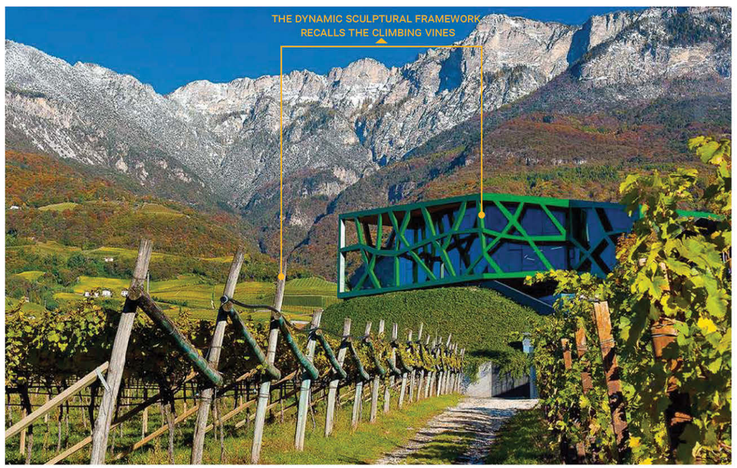


FIG. 5, 6. CLOSE UP VIEW OF THE WINERY'S NEW STRUCTURES AND ITS SURROUNDING DRAMATIC LANDSCAPE

THE SURROUNDING LANDFORMS INFLUENCED THE STRUCTURES' SHAPE; THE GRAPEVINE INSPIRED THE COLOR AND STRUCTURE OF THE FACADES;

ANTINORI WINERY, BARGINO (IT)

ARCHITECTS: ARCHEA SSOCIATI STUDIO - LAURA ANDREINI, MARCO CASAMONTI, SILVIA FABI, GIOVANNI POLAZZI (www.archea.it) BUILT-UP AREA: 49.000 sq.m. | USABLE FLOOR AREA - 139.950 sq.m. | 2012 | WINE REGION: TUSCANY - CHIANTI CLASSICO | www.antinori.it |

THE INDUSTRIAL COMPLEX'S BODY HAS AN UNDISTINGUISHABLE FOOTPRINT | BEING ALMOST COMPLETELY UNDERGROUND, IT EXTENDS HORIZONTALLY ALONG THE NATURAL SLOPE, PACED BY THE ROWS OF VINES WHICH, ALONG WITH THE EARTH, FORM ITS ROOF COVER.

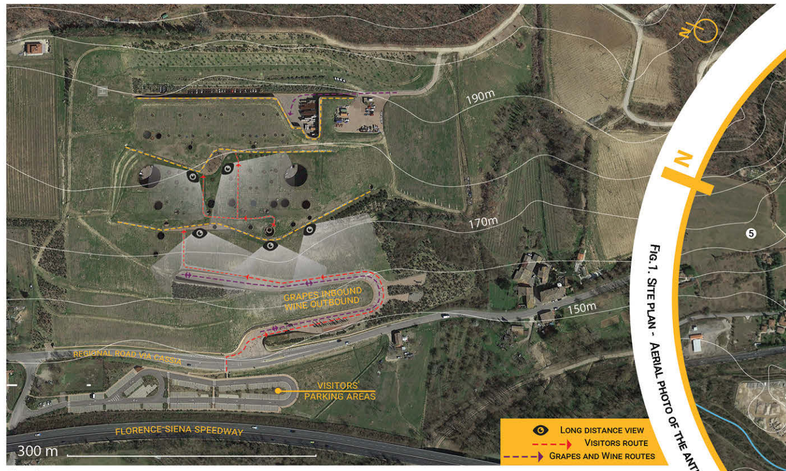


FIG. 2. SITE PLAN - COURTYARD SCALE

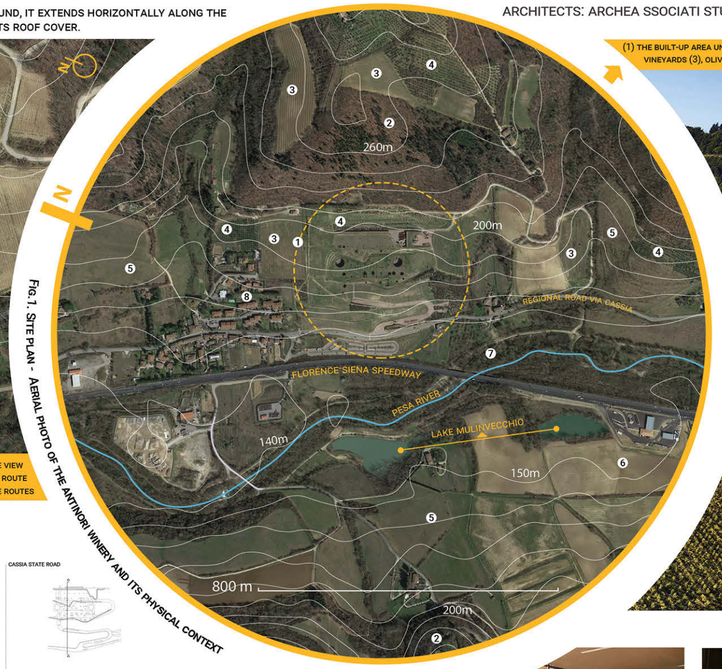


FIG. 1. SITE PLAN - AERIAL PHOTO OF THE ANTINORI WINERY AND ITS PHYSICAL CONTEXT

(1) THE BUILT-UP AREA UNDER THE STUDY IS LOCATED ON GENTLY UNDULATING HILLS ; THE LAND IS DIVIDED INTO IRREGULAR, SINUOUS PATTERNS COVERED WITH FOREST (2), VINEYARDS (3), OLIVE PLANTATIONS (4), MEADOWS (5), ARABLE CROPS (6); STRUCTURED BY PESA RIVER AND ITS RIPARIAN WOODLANDS (7) AND RESIDENTIAL AREA OF BARGINO TOWN (8)

FIG. 3. BIRD'S EYE VIEW OF THE WINERY AND ITS NATURAL AND HISTORICAL CONTEXT, REFLECTING ITS SHAPE, COLOR AND RELATIONSHIP WITH THE LANDSCAPE

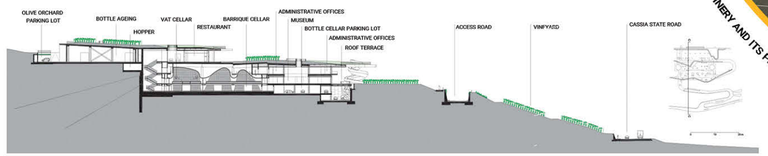


FIG. 4. LONGITUDINAL SECTION OF THE WINERY, REFLECTING THE CONNECTION WITH THE TERRAIN

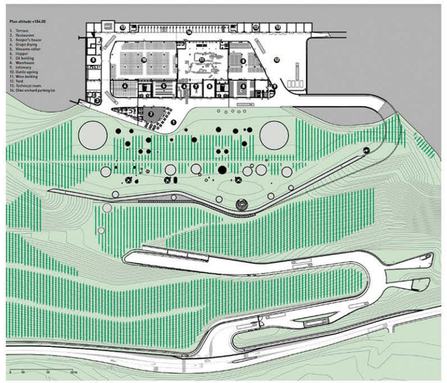


FIG. 5. LAYOUTS OF THE BUILDING

MAKING "THE ARCHITECTURAL IMAGE CONCEAL ITSELF" AND BLEND INTO THE LANDSCAPE WAS THE ARCHITECTS' MAIN GOAL. THE WINERY WAS CONCEIVED AS AN INVISIBLE BUILDING WHOSE BODY MERGES WITH THE FOLDS OF THE HILLSIDE. THE TIERED ROOF IS ENTIRELY COVERED WITH FARMLAND AND A PAIR OF SLICED OPENINGS INFILLED WITH GLASS ARE ALL THAT REVEAL THE PRESENCE OF THE STRUCTURE. IT IS ELEGANTLY INSERTED IN THE LANDSCAPE EVOLVING AS A REFLECTION OF THE IMMENSE VINEFIELD AGGREGATE.

FIG. 6, 7, 8, 9,10,11,12. DETAILED VIEWS OF THE WINERY'S FRAGMENTS

BULGARI WINERY, SAN CASCIANO DEI BAGNI (IT)

ARCHITECT: ALVISI KIRIMOTO + PARTNERS (www.alvisikirimoto.it) | AREA: 4.500 sq.m.
2013 | WINE REGION: TUSCANY - CHIANTI | www.podernuovoapalazzone.com |

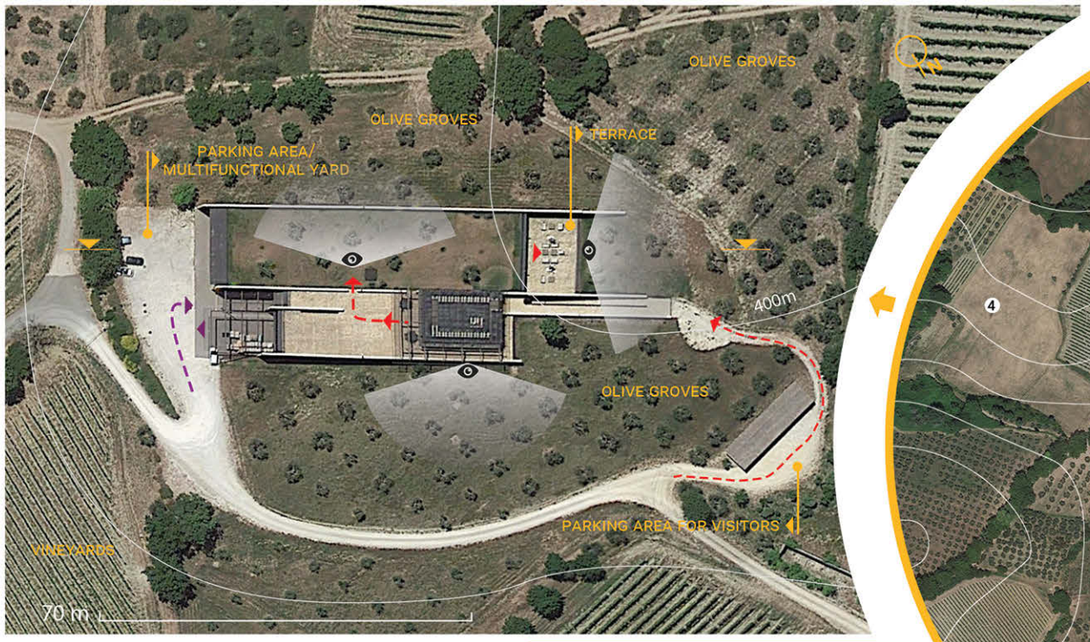


FIG. 2. SITE PLAN - COURTYARD SCALE

VISITORS ROUTE | LONG DISTANCE VIEW
GRAPES AND WINE ROUTES

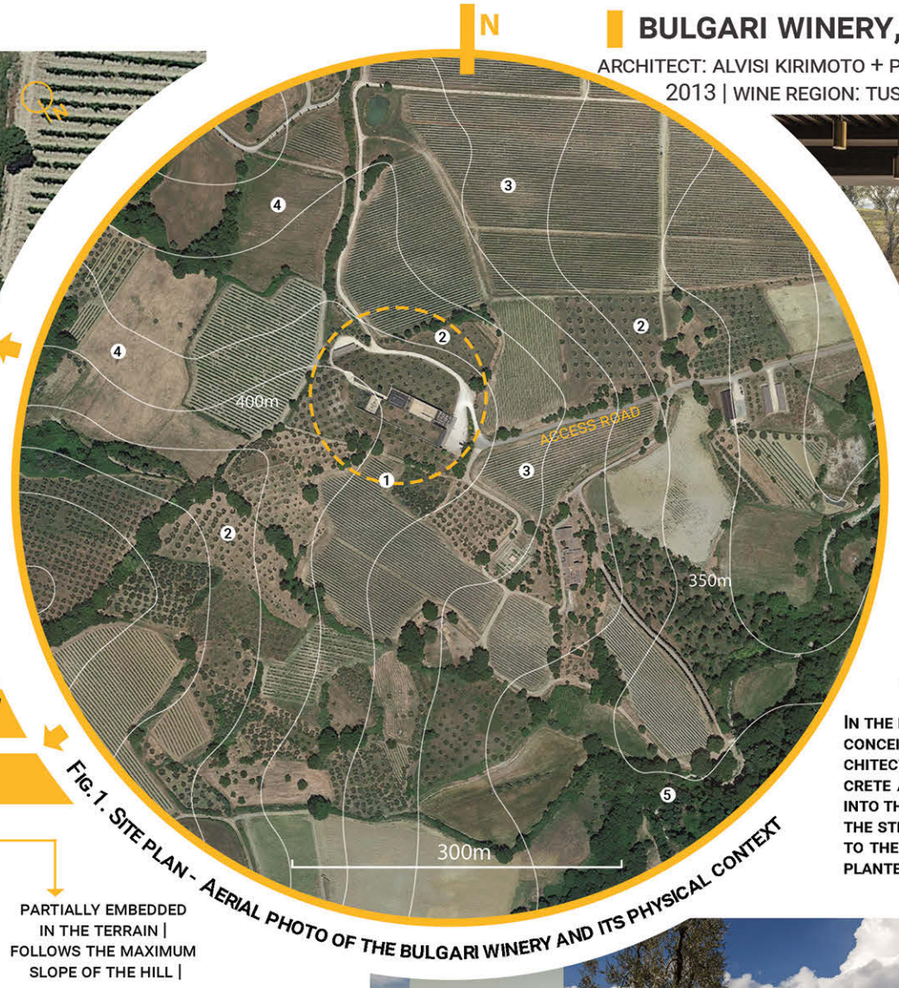
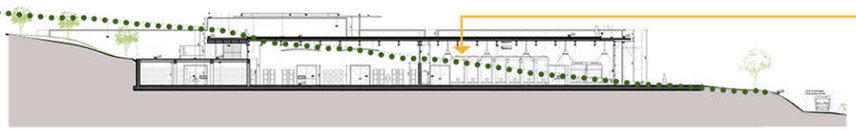


FIG. 1. SITE PLAN - AERIAL PHOTO OF THE BULGARI WINERY AND ITS PHYSICAL CONTEXT

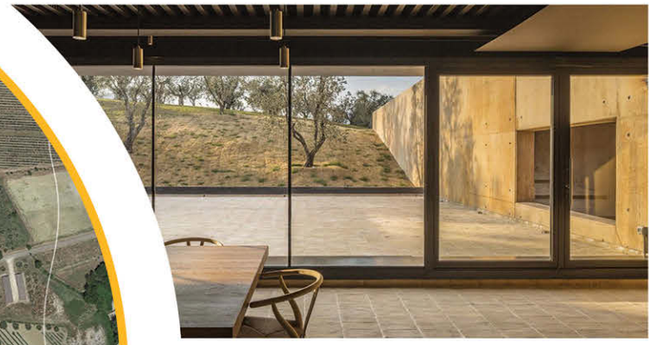
(1) THE BUILT-UP AREA UNDER THE STUDY S SETTLED INTO GENTLE AND FASCINATING SURROUNDINGS CHARACTERISED BY THE UNDULATING AND SINUOUS PROFILE OF THE HILLS COVERED BY OLIVE GROVES (2), VINEYARDS (3), MEADOWS (4) AND FOREST (5)



PARTIALLY EMBEDDED
IN THE TERRAIN |
FOLLOWS THE MAXIMUM
SLOPE OF THE HILL |

FIG. 3. LONGITUDINAL SECTIONS OF THE WINERY, REFLECTING THE CONNECTION WITH THE TERRAIN

FIG. 4. GENERALVIEW OF THE WINERY AND ITS NATURAL AND CULTUARL CONTEXT, REFLECTING THE RELATIONSHIP WITH THE SURROUNDING LANDSCAPE



IN THE DESIGN, THE LANDSCAPE IS ALSO A KEY ELEMENT. THE BUILDING IS CONCEIVED AS AN EXTENSION OF THE SURROUNDING LANDSCAPE. THE ARCHITECTS HAVE DESIGNED A SENSIBLE STRUCTURE OF REINFORCED CONCRETE AND PROGRESSIVE LAYERS OF TRANSPARENCY PARTLY EMBEDDED INTO THE TOPOGRAPHY. DUE TO THE "GREEN" ROOF THAT PARTLY COVERS THE STRUCTURE, THE COLOUR PALLET OF THE USED MATERIALS - SIMILAR TO THE COLOUR PALETTE OF THE SITE - AND THE OLIVE TREES THAT ARE PLANTED ON THE ROOF AND AROUND THE ENTIRE STRUCTURE, THE WINERY BLEND EFFORTLESSLY INTO THE LANDSCAPE.

FIG. 5, 6, 7, 8, 9 . CLOSE VIEWS OF THE WINERY, REFLECTING THE ROOF, ELEMENTS, USED MATERIALS AND THE CONNECTION WITH THE LANDSCAPE

YSIOS WINERY, LAGUARDIA (ES)

ARCHITECT: SANTIAGO CALATRAVA (www.calatrava.com) | GROSS FLOOR AREA: 8.000 sq.m. | 2014 | WINE REGION: RIOJA - RIOJA ALAVESA | www.bodegasysios.com |

(1) THE BUILT-UP AREA UNDER THE STUDY IS LOCATED IN THE VITICULTURAL LANDSCAPE CHARACTERIZED BY THE GENTLY ROLLING HILLS WATERED BY THE SEVERAL STREAMS | THE LAND IS DIVIDED INTO DYNAMIC, IRREGULAR PLOTS COVERED WITH VINEYARDS (2), PASTURES (3) AND WHEAT (4) | THE BUILT-UP AREA AND THE PRODUCTIVE LAND IS REIGNED BY THE CANTABRIAN MOUNTAINS.

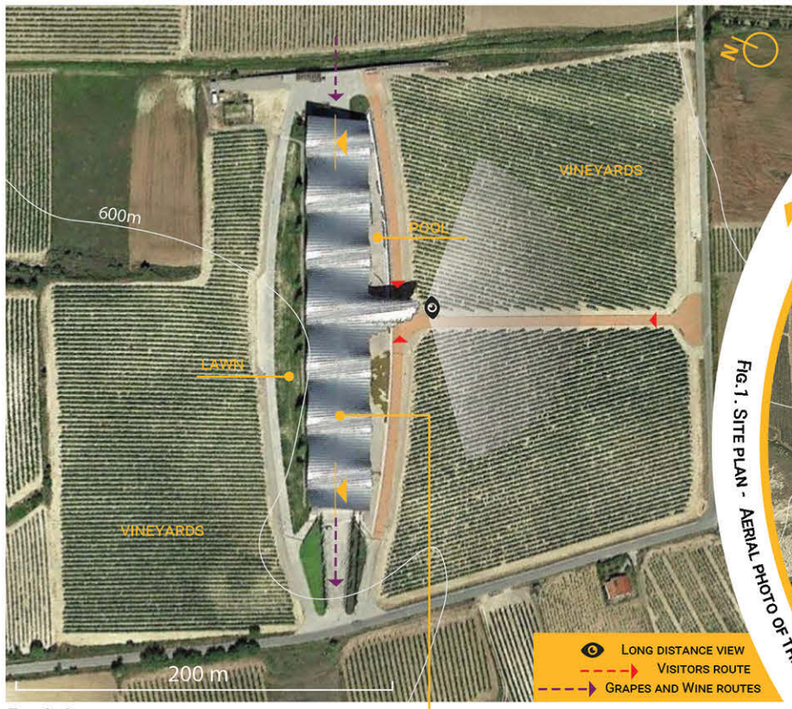


FIG. 2. SITE PLAN - COURTYARD SCALE

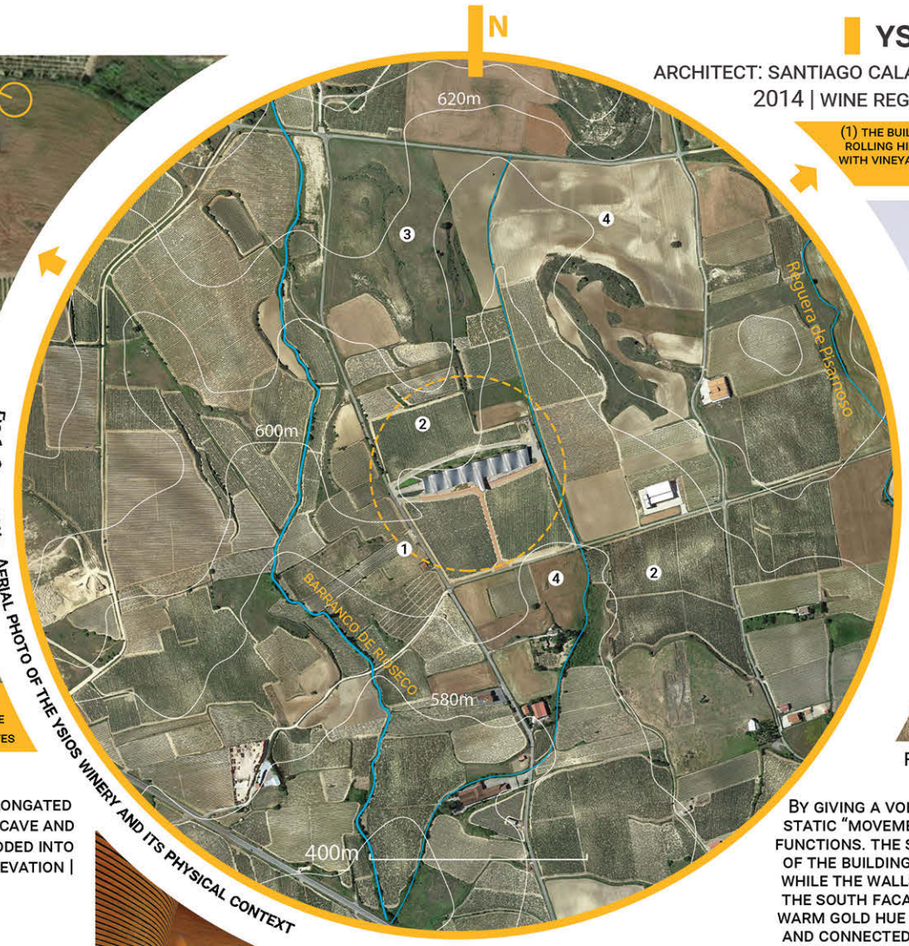


FIG. 1. SITE PLAN - AERIAL PHOTO OF THE YSIOS WINERY AND ITS PHYSICAL CONTEXT

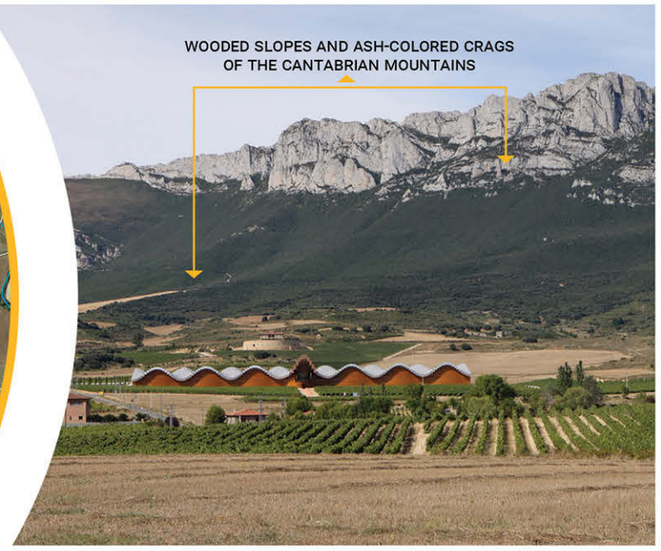


FIG. 3. BIRD'S EYE VIEW OF THE WINERY AND ITS NATURAL AND CULTURAL CONTEXT

BUILDING IS NESTLED ON AN UNEVEN SITE, WITH PRONOUNCED GRADE CHANGES | IT HAS AN ELONGATED RECTANGULAR STRUCTURE THAT REPRESENTS A RULED SURFACE WAVE, WHICH COMBINES CONCAVE AND CONVEX SURFACES AS IT EVOLVES ALONG THE LONGITUDINAL AXIS | ITS BODY IS PARTLY EMBEDDED INTO THE LAND | ITS LONG LOAD-BEARING WALLS TRACE A SINUSOIDAL SHAPE IN BOTH PLAN AND ELEVATION |

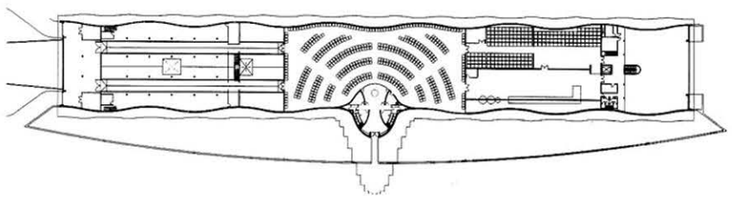


FIG. 4. WINERY'S LAYOUT, REFLECTING THE SHAPE OF THE WALLS

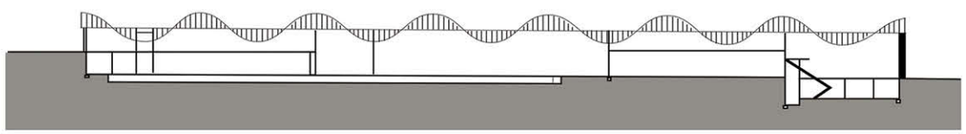


FIG. 5. WINERY'S LONGITUDINAL SECTIONS, REFLECTING THE CONNECTION WITH THE TERRAIN

BY GIVING A VOLUMETRIC TREATMENT TO THE WINERY'S ROOF AND WALLS IT WAS ACHIEVED STATIC "MOVEMENT" WHICH CAPTURES THE ESSENCE OF THE SURROUNDING LANDSCAPE AND FUNCTIONS. THE SILVER-WAVY ROOF, WHICH GREATLY HELPED TO MITIGATE THE VISUAL IMPACT OF THE BUILDING'S MASS, MIMICS THE RUGGED THRUSTS OF THE GREY CANTABRIGIAN CRAGS, WHILE THE WALLS ECHO THE SURROUNDING ROLLING LAND. IN THE SAME TIME, THE ROOF AND THE SOUTH FACADE, CLAD WITH LIGHT-CEDAR PANELLING (WHOSE COLOR MATCHES WITH THE WARM GOLD HUE OF THE CLAY-LIMESTONE EARTH), RECALL LARGE BARRELS LYING SIDE BY SIDE AND CONNECTED BY A BAND OF SILVER THEREBY SYMBOLIZING THE PROCESS OF TRANSFORMING GRAPES INTO WINE.

CONCLUSION

FIG. 6, 7, 8, 9, 10. DETAILED VIEWS OF THE WINERY'S FRAGMENTS

A WAVY, SHIMMERING SILVER ROOF, COMPOSED OF A SERIES OF GIGANTIC, ALUMINIUM BARS | SUPPORTED ON THE STAGGERED SINUSOIDAL CORNICE OF THE LATERAL WALLS | TREATED AS A CONTINUATION OF THE FACADES, THE WAVY SHAPE OF THE ROOF SEEMS FOLLOWING THE SILHOUETTE OF THE MOUNTAIN RANGE |

FIG. 11, 12, 13. AXONOMETRIC AND FRONT VIEW OF THE WINERY, REFLECTING ITS SCALE, SHAPE AND USED MATERIALS

THE SURROUNDING LANDFORMS INFLUENCED THE BUILDING' S SHAPE AND ROOF;

BRUGAROL (BELL-LLOC) WINERY, PALAMOS (ES)

ARCHITECTS: RCR ARQUITECTES - RAFAEL ARANDA, CARME PIGEMAND AND RAMON VILALTA (www.rcrarquitectes.es) | GROSS FLOOR AREA: 981 sq.m. | 2007 | WINE REGION: CATALONIA - EMPORDA | www.brugarol.com |

THE BRUGAROL WINERY IS LOCATED IN THE VITICULTURAL LANDSCAPE WHICH IS CHARACTERISED BY A MOSAIC OF DIFFERENT TERRAINS STRETCHING IN SMALL VINEYARDS BETWEEN THE SEA AND THE FOOTHILLS OF THE PYRENEES.
(1) THE BUILT-UP AREA UNDER THE STUDY | (2) EXISTING BUILDINGS OF THE ESTATE | (3) VINEYARDS - PARALLEL VINE ROWS GROWN ON THE SLOPE COVERED BY THE GRANITIC AND IRON-RICH RED SOIL | (4) BELL-LLOC STREAM AND ITS RIPARIAN WOODLAND | (5) WOODED ROLLING HILLS |

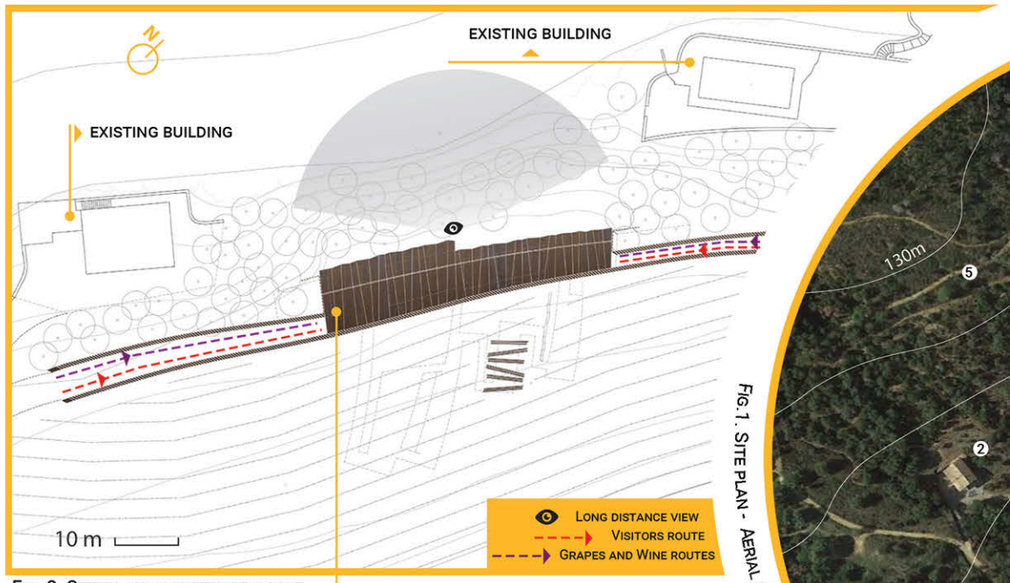


FIG. 2. SITE PLAN - COURTYARD SCALE

FIG. 1. SITE PLAN - AERIAL PHOTO OF THE BRUGAROL WINERY AND ITS PHYSICAL CONTEXT

A PART OF THE STRUCTURE, THE ONE THAT LIES UNDER THE VINEYARDS, HAS A SECLUDED, QUIET AND DARK ATMOSPHERE, WHILE THE WESTERN EDGE THAT BORDER WITH THE FOREST IS SPOILED BY THE LIGHT. FROM HERE, THE GLASS WALL AFFORDS A DIRECT VIEW OF THE VERDANT LANDSCAPE.

THE WINERY IS NESTLED ON THE SLOPE BETWEEN THE WOODS AND THE VINEYARDS | IT IS MOSTLY BURIED UNDERGROUND | IT STRETCHES AND BRANCHES ALONG THE SLIGHTLY SINUOUS ROAD THAT LINKS THE EXISTING BUILDINGS TOGETHER | IT HAS AN UNUSUAL SHAPE AND STRUCTURE = LOOKS LIKE A PROMENADE, LABYRINTH WITH DIFFERENT SPACES AND VOIDS OF VARYING INTENSITY |

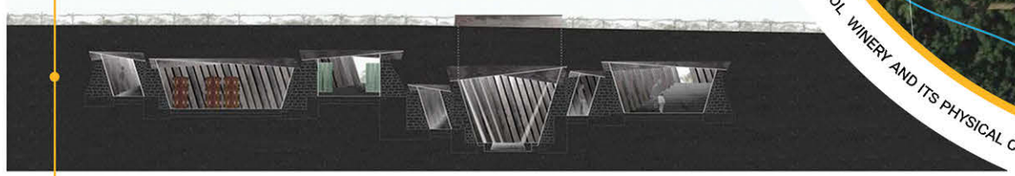


FIG. 3, 4. CROSS-SECTIONS OF THE WINERY, SHOWING THE CONNECTION WITH THE TERRAIN

FIG. 5, 6, 7, 8. DETAILED VIEWS OF THE WINERY'S FRAGMENTS

THE MAIN MATERIAL USED IS CORTEN STEEL. THE REDDISH-BROWN STEEL PLATES MAKE UP THE WALLS AND THE ROOF | THE WALLS ARE SLIGHTLY OUTWARD-LEANING, WITH SMALL GAPS BETWEEN THE PLATES | THE ROOF CONSISTS OF PLATES ARRANGED IN AN IRREGULAR ZIGZAG PATTERN RESEMBLING AN OUTSIZED PIECE OF ORIGAMI.

REDDISH-BROWN PATINA OF THE CORTEN STEEL PLATES IS ALMOST IDENTICALLY WITH THE GRANITIC AND IRON-RICH RED SOIL ON WHICH VINES GROW = THE BUILDING BLENDS SUBTLY INTO THE LANDSCAPE, UNDERSCORING THE CONCEPT OF A STRONG LINK BETWEEN BUILDING AND SURROUNDINGS

FIG. 4. CLOSE VIEW OF THE WINERY, REFLECTING THE SHAPE AND COLOUR OF THE VISIBLE PART ABOVE THE GROUND

THE TINT OF SOIL INFLUENCED THE COLOR OF THE BUILDING'S SHELL;

FAUSTINO WINERY (BODEGAS PORTIA), GUMIEL DE IZÁN (ES)

ARCHITECT: NORMAN FOSTER (www.fosterandpartners.com) | GROSS FLOOR AREA: 12.500 sq.m. | 2010 | WINE REGION: CASTILLA Y LEON - RIBERA DEL DUERO | www.faustino-msia.com |

THE WINERY SITS ATOP A HILL AND IS ENCLOSED ON ALL ITS SIDES BY THE LUSH GREEN VINE ROWS | IS SHAPED LIKE A TREFOIL, OR A THREE-POINT STAR, COMPRISED OF THREE WINGS THAT COME TOGETHER |

FIG. 2. SITE PLAN - COURTYARD SCALE

(1) THE BUILT-UP AREA UNDER THE STUDY IS LOCATED IN THE VITICULTURAL LANDSCAPE CHARACTERIZED BY THE GENTLY ROLLING HILLS | THE LAND IS DIVIDED INTO DYNAMIC, IRREGULAR PLOTS COVERED WITH VINEYARDS (2), MEADOWS (4) AND CEREAL FIELDS (5) | (3) RESIDENTIAL AREA OF THE GUMIEL DE IZAN TOWN | (6) PUENTEVILLA RIVER AND ITS RIPARIAN VEGETATION |

FIG. 1. SITE PLAN - AERIAL PHOTO OF THE FAUSTINO WINERY AND ITS PHYSICAL CONTEXT

THE SCENOGRAPHY OF THE PROJECT SITE IS DOMINATED BY THE BROWN COLOUR OF THE SOIL - THE CHALKY-CLAY SOIL - WHICH COVER THE GENTLY UNDULATING HILLS

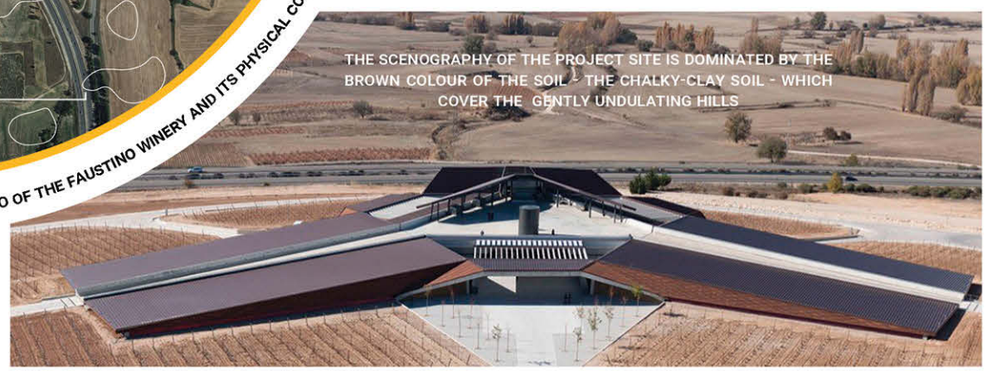


FIG. 3, 4. BIRD'S EYE VIEWS OF THE WINERY AND ITS NATURAL AND CULTURAL CONTEXT

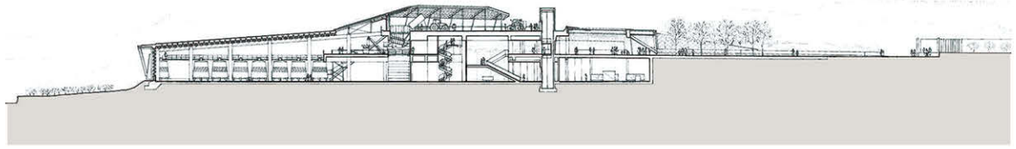


FIG. 5. WINERY'S LONGITUDINAL SECTIONS, REFLECTING THE CONNECTION WITH THE TERRAIN

THE BUILDING FOLLOWS THE NATURAL TOPOGRAPHY OF THE SITE AND IS PARTIALLY EMBEDDED WITHIN THE GROUND

FIG. 6, 7, 8, 9. DETAILED VIEWS OF THE WINERY'S FRAGMENTS

CONCLUSION

THE IMAGE OF THE WINERY IS CERTAINLY HIGH-TECH, MODERN, EFFICIENT A STRUCTURED. THE BUILDING'S THREE WINGS REFLECT THE THREE STAGES OF PRODUCTION - FERMENTATION, AGEING IN OAK BARRELS, AND BOTTLE AGEING - THAT ARE CONTROLLED BY AN OPERATIONS HUB AT THE CORE. THE BUILDING IS PARTIALLY EMBEDDED BELOW THE GROUND LEVEL, THEREBY DECREASING THE VISUAL IMPACT OF THE BUILDING ON THE LANDSCAPE AND INCREASING THE BENEFITS OF PASSIVE ENVIRONMENTAL ENERGY. ON THE OUTSIDE, THE REINFORCED CONCRETE WALLS - WHICH KEEPS OUT THE STRONG SUMMER HEAT - ARE COVERED WITH PLATES MADE OF CORTEN STEEL, THEREBY MAKING THE BUILDING TO BLEND WITH THE CHALKY-CLAY SOIL ON WHICH THE VINES ARE GROWN. EVEN THOUGH BENEATH ITS DRAMATICALLY FORMED ROOF LIES THE LAVISH DRAMA OF ITS SUBTERRANEAN, THE STRONGLY GEOMETRIC BUILDING FLAUNTS ITS PRESENCE IN THE

THE WINERY HAS AN INTERIOR-EXTERIOR CONNECTION: BETWEEN THE WINGS IS A LIGHT-FILLED PUBLIC RECEPTION AND ADMINISTRATION AREA WHICH ARE ACCOMPANIED BY EXTENSIVE TERRACES WITH WATER POOLS, OVERLOOKING THE VINEYARDS.

FIG. 10, 11, 12. VIEWS OF THE WINERY'S FACADES, REFLECTING THE USED MATERIALS AND ELEMENTS

THE TINT OF SOIL INFLUENCED THE COLOR OF THE BUILDING' SHELL;

ADEGA MAYOR, CAMPO MAIOR (PT)

ARCHITECT: ÁLVARO SIZA VIEIRA (www.alvaroleitesiza.com) | GROSS FLOOR AREA: 4.262 sq.m. | 2006 | WINE REGION: ALTO ALENTEJO - PORTALEGRE | www.adegamayor.pt |

ADEGA THE MAYOR WINERY IS LOCATED IN A GENTLY ROLLING LANDSCAPE | (1) THE BUILT-UP AREA UNDER THE STUDY | (2) VINEYARDS| (3) INDUSTRIAL COMPLEX - DELTA CAFÉS | (4) OLIVE PLANTATIONS | (5) CORK OAK PLANTATIONS

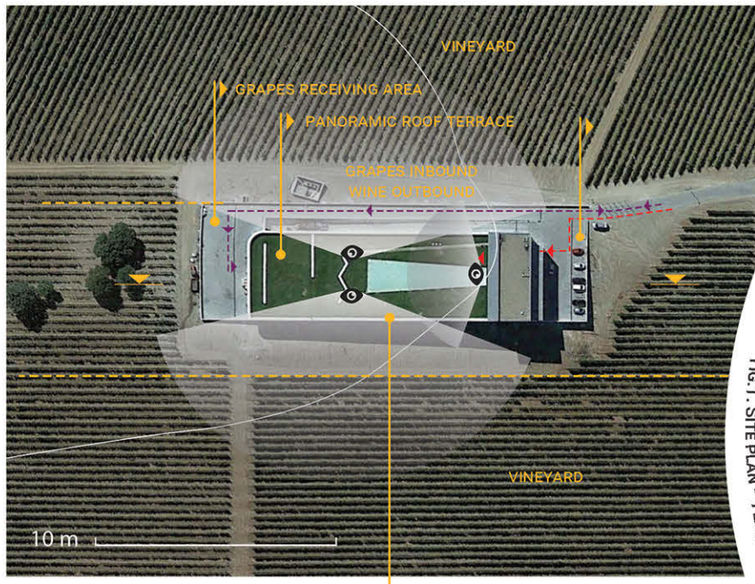


FIG. 2. SITE PLAN - COURTYARD SCALE

THE WINERY IS LOCATED AMID ORDERLY ROWS OF VINES, ON THE RIDGE OF A SMALL HILLOCK | IT HAS AN ELONGATED RECTANGULAR FOOTPRINT, WHOSE LENGTH IS ORIENTED AGAINST THE CONTOUR LINES, PARALLEL WITH THE VINE ROWS |

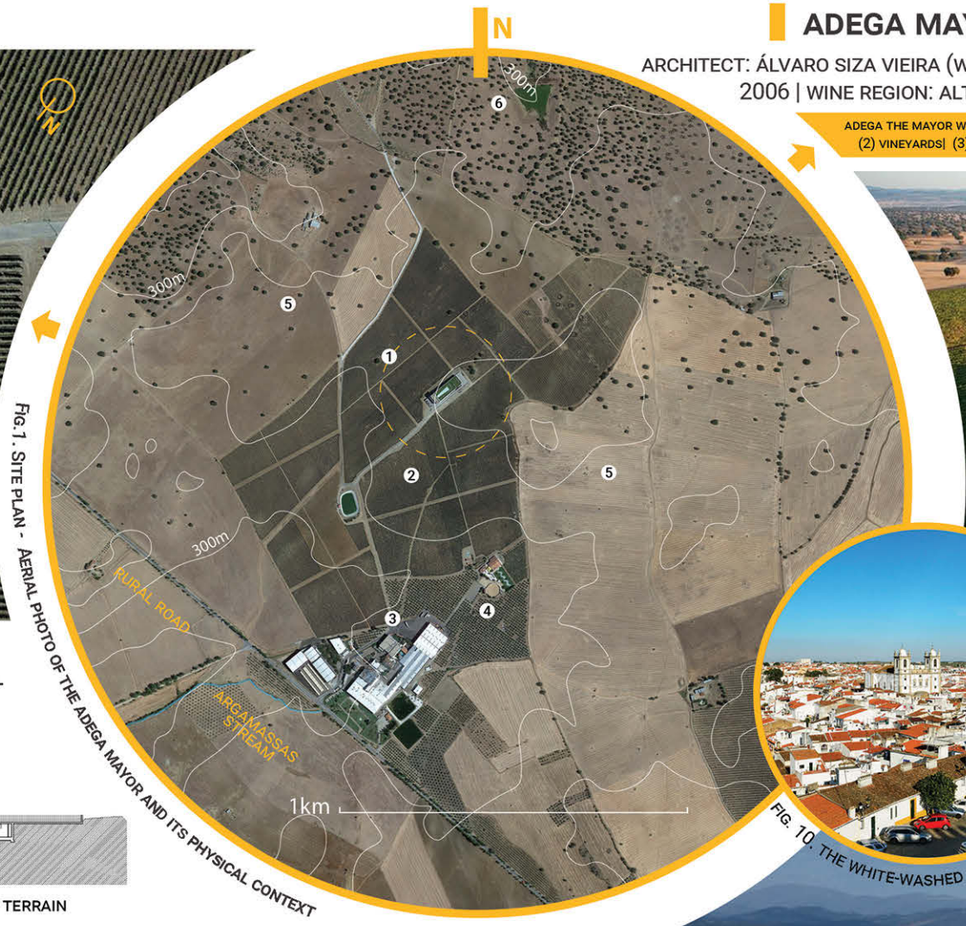


FIG.1. SITE PLAN - AERIAL PHOTO OF THE ADEGA MAYOR AND ITS PHYSICAL CONTEXT

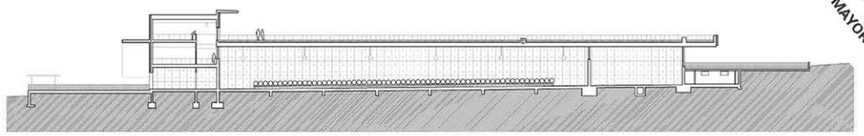


FIG. 9. WINERY'S LONGITUDINAL SECTION, SHOWING THE CONNECTION WITH THE TERRAIN

FIG. 8. FIG. 8. VIEW FROM INSIDE OF THE TASTING ROOM TOWARDS THE GREEN, PANORAMIC TERRACE

CONCLUSION

IN ORDER TO INTEGRATE A LARGE FACILITY FOR WINE PRODUCTION WITH THE SURROUNDING LANDSCAPE, THE ARCHITECT CHOSE A DARING SOLUTION. HE TRIED TO IDENTIFY A BALANCE BETWEEN A COUNTRYSIDE ENVIRONMENT AND THE MODERN AND SIMPLE LINES OF HIS ARCHITECTURE CHARACTER, DESIGNING A WHITE, FUNCTIONAL, OUTWARDLY PURIST STRUCTURE. THE WHITE SIMPLE STRUCTURE STANDS OUT IN CONTRAST TO ITS SURROUNDINGS BECAUSE OF ITS VERY SIZE, COLOR AND EVEN LOCATION, DARINGLY BLENDING WITH IT. THE BUILDING IS ORIGINAL THANKS TO ITS COMPACTNESS, IT LOOKS LIKE AN IMPOSING SCULPTURE SITTING ON THE RIDGE OF A SMALL HILLOCK DECLARING ITS ARCHITECTURAL PRESENCE AND IMPORTANCE.

THE WINERY HAS AN INTERIOR AND EXTERIOR CONNECTION WITH THE LANDSCAPE - THE LARGE WINDOWS OF THE TASTING AREA AND THE GREEN ROOF OFFER FANTASTIC VIEWS OF THE SURROUNDING.

FIG. 6, 7. VIEW OF THE PANORAMIC TERRACE AND THE VIEW FROM IT TOWARDS THE SURROUNDING LANDSCAPE

WINERY HAS A SIMPLE RECTANGULAR SHAPE | THE ENTIRE OUTER FACADES ARE WHITE, FEATURING THE SAME WHITEWASH TRADITIONALLY USED ON THE HOUSES IN ALENTEJO | FLAT ROOF ACCOMMODATES A RICH GREEN LAWN WITH AN AZURE BLUE POOL |

FIG. 10. THE WHITE-WASHED VILLAGE OF CAMPO MAIOR

FIG. 3,4. BIRD'S EYE VIEW AND SIDE VIEW OF THE WINERY AND ITS NATURAL AND CULTURAL CONTEXT

FIG. 5. BACK VIEW OF THE WINERY AND ITS NATURAL AND CULTURAL CONTEXT

NEW WINERY OF QUINTA DO NAPOLES, SANTO ADRIAO (PT)

ARCHITECT: ANDREAS BURGHARDT (www.burghardt.co.at) | GROSS FLOOR AREA: 5.000 sq.m. | 2007 | WINE REGION: DOURO VALLEY - CIMA CORGO | www.niepoort-vinhos.com |

THE NEW WINERY IS LOCATED ATOP A HILL ADJACENT TO THE OLD QUINTA MANOR HOUSE

ACCESSIBLE GREEN-TERRACED ROOF - OFERS VIEWS OF THE RIVER, VALLEY AND MOUNTAINOUS VINEYARDS.

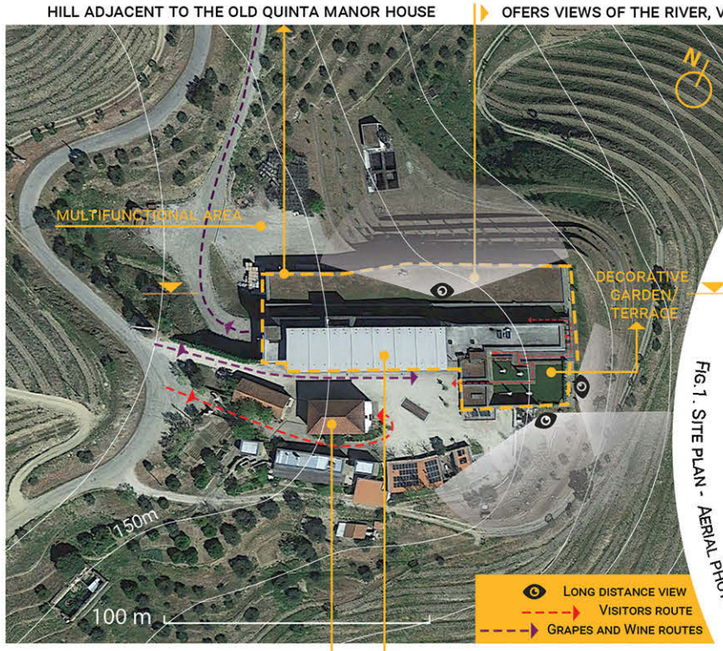


FIG. 2. SITE PLAN - COURTYARD SCALE

GRAPE RECEPTION AREA

THE OLD QUINTA MANOR HOUSE - WAS TRANSFORMED INTO A TASTING AND PRESENTATION AREA AS WELL AS ONE OF THE ENTRANCES TO THE NEW WINERY

FIG. 1. SITE PLAN - AERIAL PHOTO OF THE NEW WINERY OF QUINTA DO NAPOLES AND ITS PHYSICAL CONTEXT

QUINTA DO NÁPOLES IS LOCATED IN EXTREME AND DRAMATIC LANDSCAPE STRUCTURED BY THE TERRACED VINEYARDS | (1) THE BUILT-UP AREA UNDER THE STUDY | (2) TEDO RIVER AND ITS RIPARIAN VEGETATION | (3) OLD, NARROW WINE TERRACES THAT FOLLOW THE GROUND LINE; (4) NEW, WIDE WINE TERRACES - THE PRODUCTIVE LAND IS DIVIDED INELEGANT PLOTS, CHARACTERIZED BY SMOOTH AND CURVED EDGES. | (5) FORESTED PEAKS AND SLOPES

FIG. 4. BIRD'S EYE VIEW OF THE QUINTA DO NÁPOLES ESTATE

FIG. 5. WINERY'S LONGITUDINAL SECTION, SHOWING THE CONNECTION WITH THE TERRAIN

ALL VISIBLE WALLS ARE COVERED WITH NATURAL STONE - SLATE - WHICH IS THE TRADITIONAL LOCAL MATERIAL FOR THE RETAINING WALLS OF THE TERRACES

FIG. 11. GENERAL VIEW OF THE QUINTA DO NÁPOLES AND ITS NATURAL AND CULTURAL CONTEXT

FIG. 6. CLOSE VIEW OF THE WINERY, WHICH REFLECTS THE USED MATERIAL, PANORAMIC WINDOW AND THE VIEW FROM ITS ROOF WHICH IS OFFERED TO VISITORS

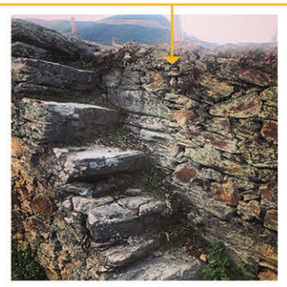


FIG. 7. CLOSE VIEW OF THE STONE-WALLED TERRACE AND STAIRCASE WHICH PROVIDES ACCESS BETWEEN THE WINE TERRACES

FIG. 8, 9. VIEWS OF A FRAGMENT OF THE GARDEN/TERRACE, REFLECTING THE VIEW OF THE SURROUNDINGS WHICH IS OPENED FROM IT

THE WINERY HAS AN INTERIOR AND EXTERIOR CONNECTION WITH THE LANDSCAPE - THE GLAZED AREA OF THE TASTING ROOM, THE BALCONY, THE PANORAMIC WINDOW,THE ROOF AND THE GARDEN/TERRACE OFFERFANTASTIC, BREATHTAKING VIEWS OF THE RIVER, VALLEY AND MOUNTAINOUS VINEYARDS.

FIG. 10. VIEW OF THE VITICULTURAL LANDSCAPE FROM THE CANTILEVERED STEEL BALCONY

THE SURROUNDING LANDFORMS INFLUENCED THE BUILDING'S SHAPE; THE TINT OF SOIL AND THE MATERIAL ROCK INFLUENCED THE COLOR OF THE BUILDING'S SHELL;

NEW STRUCTURES OF THE QUINTA DO VALLADO, PESO DA RÉGUA (PT)

ARCHITECTS: FRANCISCO VIEIRA DE CAMPOS AND CRISTINA GUEDES (www.menosemais.com) |GROSS FLOOR AREA: 4.142 sq.m. | 2010 | WINE REGION: DOURO VALLEY - BAIXO CORGO | www.quintadovallado.com |

THE SURROUNDING LANDFORM INFLUENCED THE STRUCTURES' SHAPES; THE TINT OF SOIL, MATERIAL OF THE ROCKS INFLUENCED THE COLOR OF THE STRUCTURES' SHELL;

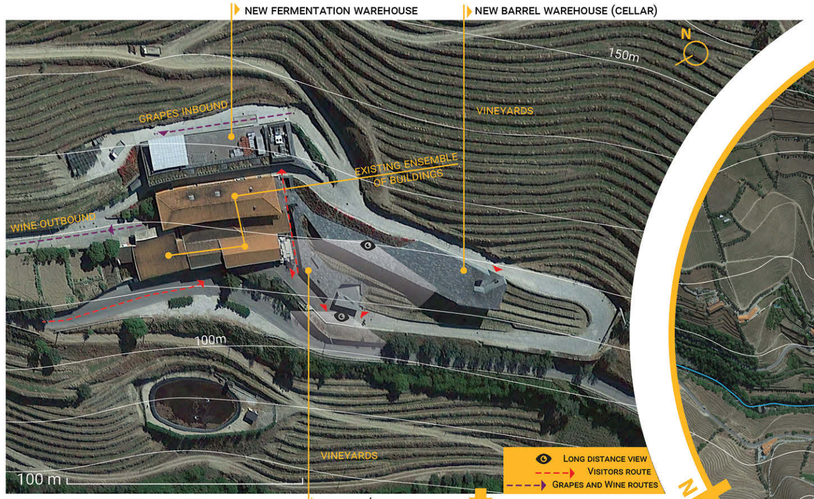


FIG. 2. SITE PLAN - COURTYARD SCALE

FIG. 11, 12. OVERALL VIEW OF THE WINE CELLAR AND RECEPTION AREA FROM THE LEVEL OF FERMENTATION HALL

THE NEW BUILT AREA IS SET IN A DOMINANT AND STRATEGIC POSITION, TAKING ADVANTAGE OF THE NETWORK OF CURVED PATHWAYS | THE NEW STRUCTURES STRETCH ALONG THE LAYERS ON THE VARIOUS LEVELS |

THE WINERY HAS AN INTERIOR AND EXTERIOR CONNECTION WITH THE LANDSCAPE - THE GLAZED DOOR OF THE GUEST ROOM AND PASSAGEWAYS OFFER VIEWS TOWARDS THE SURROUNDING MAN-MADE LANDSCAPE.

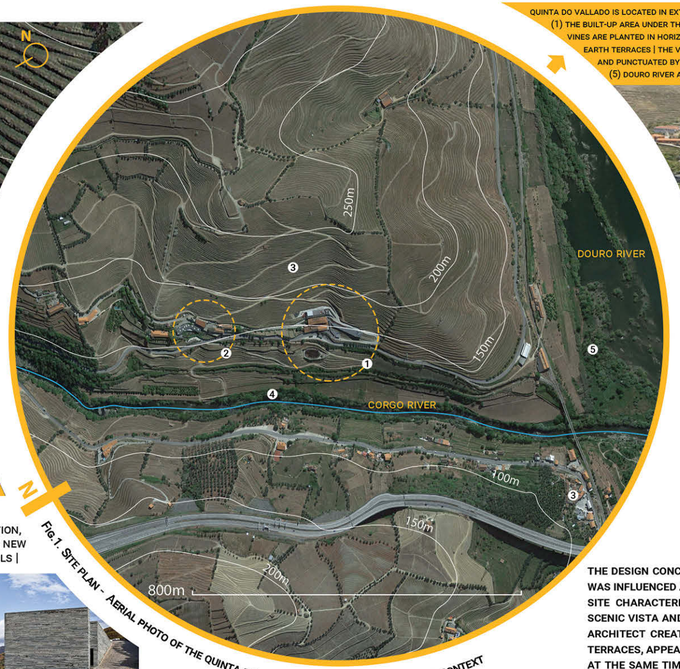


FIG.1. SITE PLAN - AERIAL PHOTO OF THE QUINTA DO VALLADO ESTATE AND ITS PHYSICAL CONTEXT

QUINTA DO VALLADO IS LOCATED IN EXTREME AND DRAMATIC LANDSCAPE STRUCTURED BY THE TERRACED VINEYARDS | (1) THE BUILT-UP AREA UNDER THE STUDY | (2) QUINTA DO VALLADO WINE HOTEL | (3) VINEYARDS - MOST OF THE VINES ARE PLANTED IN HORIZONTAL, CONTINUOUS ROWS, ON HANDBUILT STONE TERRACES OR BULLDOZED EARTH TERRACES | THE VINES' ROWS FOLLOW THE GROUND LINES AND ARE BORDERED BY OLIVE TREES AND PUNCTUATED BY THE ITALIAN-CYPRESS | (4) CORGO RIVER AND ITS RIPARIAN VEGETATION | (5) DOURO RIVER AND ITS RIPARIAN VEGETATION |

SIMPLE RECTANGULAR SHAPES, PARTIALLY EMBEDDED INTO THE HILL | THESE WINDOWLESS, SILVER-GREY STRUCTURES IMITATE THE MAN-MADE TERRACES AND, ENTIRELY, THESE APPEAR LIKE ROCKS |

FIG. 3. BIRD'S EYE VIEW OF THE ESTATE'S EXISTING HISTORICAL BUILDINGS, NEW STRUCTURES AND THE SURROUNDING TERRACED LANDSCAPE - REFLECTS THE BUILDINGS' SHAPE, SCALE, COLOR AND ALSO THE RELATIONSHIP BETWEEN THE BUILDINGS AND LANDSCAPE

FIG. 4. VIEW OF THE ACCESS BETWEEN EXISTING AND NEW WAREHOUSE

FIG. 5. CLOSE VIEW OF THE NEW FERMENTATION WAREHOUSE

FIG. 6. CLOSE VIEW OF THE VISITORS' RECEPTION AREA

CONCLUSION

IN ORDER TO INTEGRATE THE BUILDING INTO THE EXISTING LANDSCAPE, THE DESIGN CONCEPT WAS BASED TO A GREAT EXTENT ON THE MORPHOLOGY OF THE LANDSCAPE. THE ARCHITECT WAS INFLUENCED AND INSPIRED BY THE RHYTHM AND GEOMETRY THAT CHARACTERIZE THE LANDSCAPE. THE UNIQUE SITE CHARACTERISTICS WERE CONSIDERED, SUCH AS TOPOGRAPHY, NATURAL CONTOURS, TERRAIN-MODELLING, SCENIC VISTA AND TRADITIONAL LOCAL MATERIAL FOR THE RETAINING WALLS OF THE TERRACES. AS A RESULT, THE ARCHITECT CREATED ELONGATED, SLATE-COVERED STRUCTURES THAT EXTEND THE LINES OF THE NEIGHBOURING TERRACES, APPEARING LIKE ROCKS PROTRUDING FROM THE HILL. THE NEW STRUCTURES MERGE WITH THE LAND AND AT THE SAME TIME EXPLAIN ITS ARTIFICIAL NATURE WITH THE MAN-MADE TERRACES. THE SILVER-GREY GLEAM OF THE NEW STRUCTURES COMPLETE HARMONIOUSLY THE ORANGE GLEAM OF THE OLD BUILDINGS.

THE VOLUMES ARE WINDOWLESS AND ARE BUILT IN CONCRETE AND COATED WITH LOCAL BURNT SHALE WORKED IN A CONTEMPORARY WAY. THE SLATE MATERIAL WAS CHOSEN IN ORDER TO INTEGRATE THE NEW STRUCTURES INTO THE STONY LANDSCAPE. THE SOIL LIKE AS THE VERNACULAR ARCHITECTURE CONSISTS MAINLY OF SLATE AND GRANITE.

THE OLD BUILDINGS HAVE ELONGATED RECTANGULAR SHAPES WITH PITCHED ROOFS AND ORANGE-WASHED FACADES

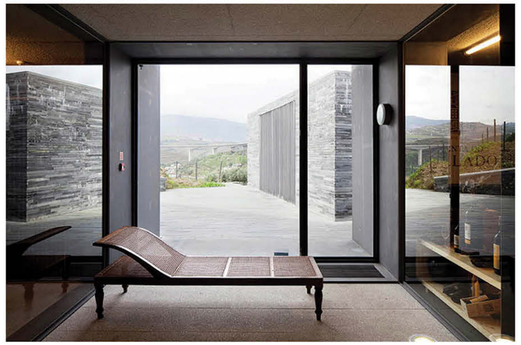


FIG. 10. VIEW FROM INSIDE OF THE RECEPTION AREA TOWARDS THE LANDSCAPE

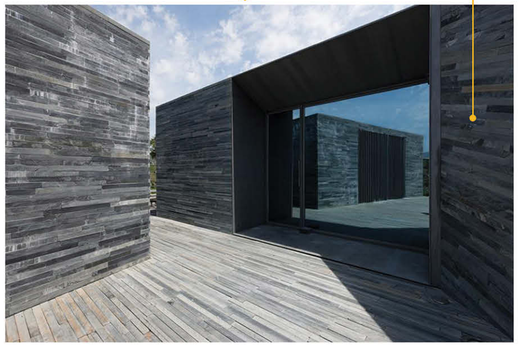


FIG. 9. VIEW OF THE RECEPTION ENTRANCE

FIG. 8. DETAIL VIEW OF THE BARREL WAREHOUSE (CELLAR) AND THE STONY TERRACE ON WHICH THE VINES GROW

FIG. 7. GENERAL VIEW OF THE WINERY

NEW STRUCTURES OF THE QUINTA DA FAÍSCA, FAVAIOS (PT)

ARCHITECT: CARLOS CASTANHEIRA (www.carloscastanheira.pt) | 2013 | WINE REGION: DOURO VALLEY - CIMA CORGO | www.secretspotwines.com |

QUINTA DA FAÍSCA IS LOCATED IN THE VITICULTURAL LANDSCAPE CHARACTERISED BY ROLLING TERRAIN | (1) THE BUILT-UP AREA UNDER THE STUDY | (2) VINEYARDS - VINE ROWS GROWN ON THE STEEP SLOPES | (3) VINEYARD - VINE ROWS GROWN ON THE MAN-MADE TERRACES | (4) OLIVE ALLEYS AND ORCHARDS |

ENTIRE BUILT AREA IS SET ON THE SLOPE OF THE PLATEAU | THE EXTENSION IS COMPOSED OF THREE DIFFERENT VOLUMES AND EXTENDS FROM THE OLD WINERY ALONG THE SLOPE |

FIG. 2. SITE PLAN - COURTYARD SCALE

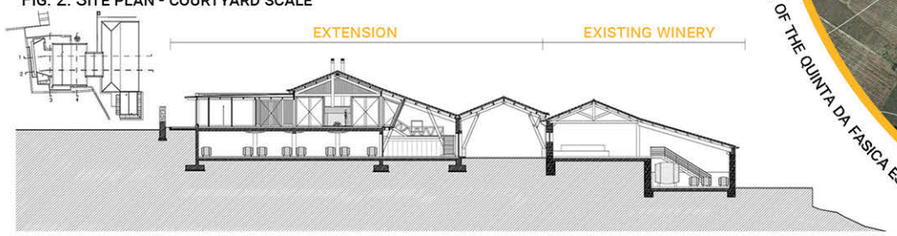


FIG. 4. CROSS-SECTION OF THE WINERY'S EXTENSION, SHOWING THE CONNECTION WITH THE TERRAIN AND HOST BUILDING

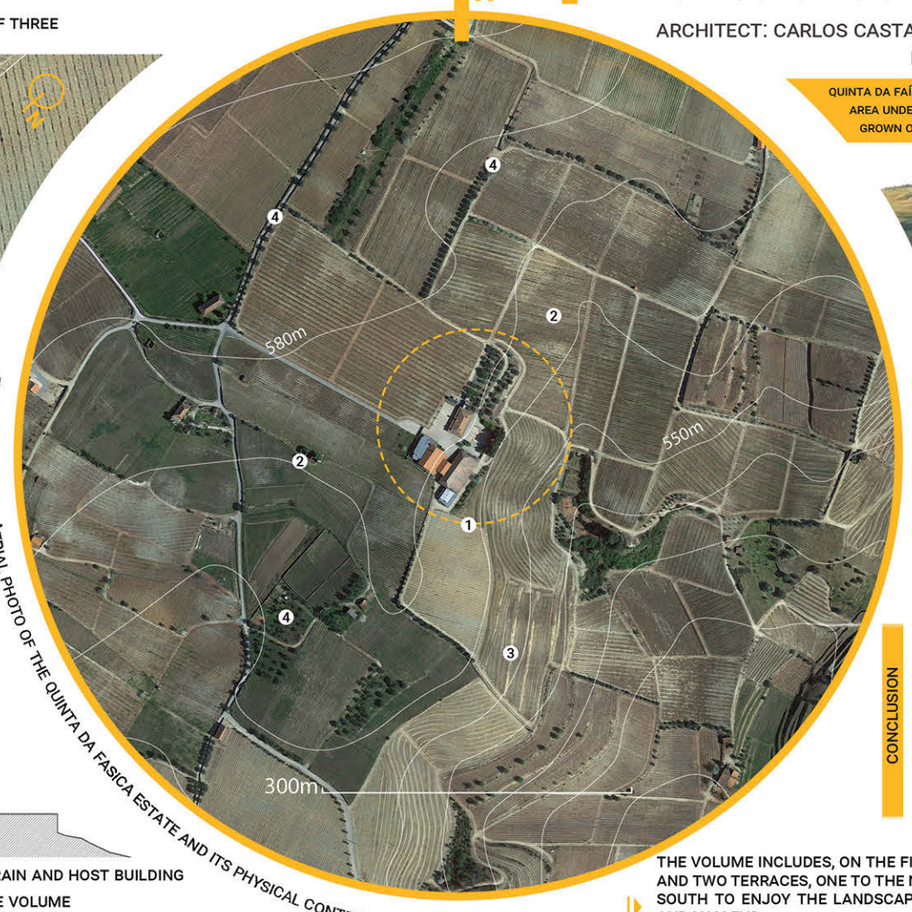


FIG.1. SITE PLAN - AERIAL PHOTO OF THE QUINTA DA FASICA ESTATE AND ITS PHYSICAL CONTEXT

FIG. 3. BIRD'S EYE VIEW OF THE ESTATE'S EXTENSION

CONCLUSION

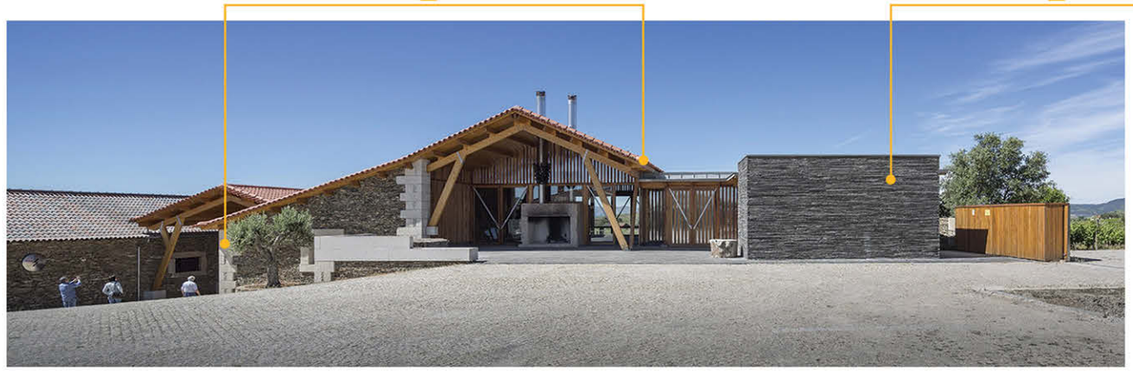
THE NEW VOLUMES OF QUINTA EMBODY THE SPIRIT OF THE EXISTING ARCHITECTURE. BY USING LOCAL MATERIALS SUCH AS SCHIST AND GRANITE COMBINED WITH WOOD AND GLASS, BY EMPLOYING A SIMPLE GEOMETRIC SHAPE, PITCHED ROOFS, (ASPECTS THAT ARE REFLECTED IN THE ARCHITECTURE OF EXISTING BUILDINGS) AND BY RESPECTING THE PROPORTIONS AND HEIGHT OF THE EXISTING BUILDINGS IT WAS ACHIEVED A PERFECT BALANCE AND HARMONY BETWEEN THE NEW ARCHITECTURE AND ITS CONTEXT.
THE EXTENSION HAS AN INTERIOR AND EXTERIOR CONNECTION WITH THE LANDSCAPE - THE GLAZED AREA OF GUESTS' HALL AND THE TERACCES OFFER FANTASTIC VIEWS OF THE SURROUNDING.

VOLUME COVERED BY THE LARGE ROOF (WHICH IS VERY SIMILAR TO THE EXISTING ONE) - THE VOLUME IS PARTLY TRANSPARENT - GLAZED WALLS ACCOMPANIED WITH WOOD STRIPS - AND PARTLY IS SOLIDLY COATED WITH SLATE AND THE GRANITE ON ITS EDGES (SIMILAR TO THE EXISTING WINERY)

FLAT ROOF VOLUME CLAD IN SLABS OF BLACK SLATE

THE VOLUME INCLUDES, ON THE FIRST FLOOR, A BIG HALL TO HOST GUESTS, AND TWO TERRACES, ONE TO THE NORTH, TO RECEIVE VISITORS, ONE TO THE SOUTH TO ENJOY THE LANDSCAPE AND THE SUCCESSION OF MOUNTAINS AND VALLEYS.

VOLUME IS SIMPLY A COVERED SPACE THAT SHELTERS THE EXTERIOR ROUTE BETWEEN THE EXISTING WINERY AND THE NEW AREAS



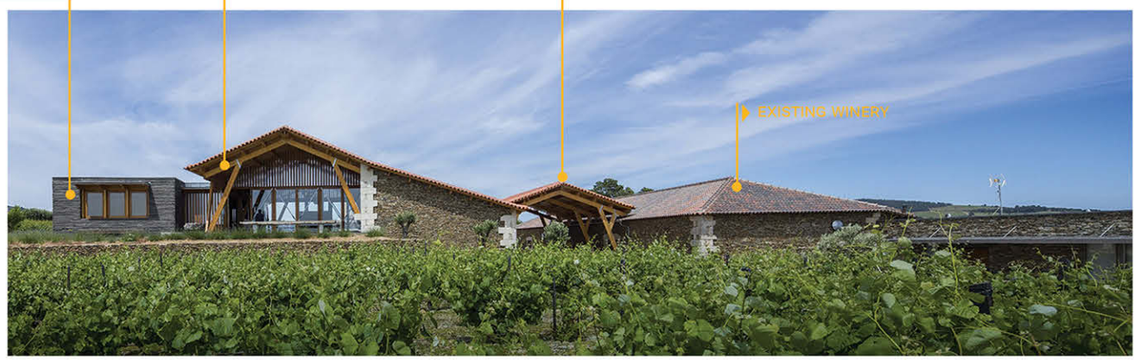


FIG. 5, 6. FRONT AND BACK VIEWS OF THE EXTENTION, REFLECTING ITS SCALE, SHAPE AND USED MATERIAL

FIG. 7. SIDE VIEW OF THE EXTENTION, REFLECTING THE USED MATERIAL

FIG. 8, 9. THE SOUTH TERRACE AND THE VIEWS THAT IT OFFERS TO VISITORS

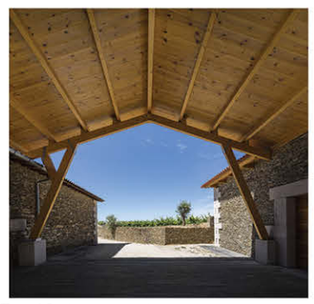


FIG. 10. CLOSE VIEW OF THE SHELTERED ROUTE BETWEEN THE EXISTING WINERY AND THE NEW AREAS

ABRIL WINERY, BISCHOFFINGEN (DE)

ARCHITECT: WOLFGANG MÜNZING (www.wolfgang-muenzing.de) IN COLLABORATION WITH THE LANDSCAPE ARCHITECTURE FIRM BÜRO HINK (WWW.BUEROHINK.DE) | GROSS FLOOR AREA: 3.300 sq.m. | 2012 | WINE REGION: BADEN - KAISERSTUHL | www.weingut-abril.de |

THE WINERY HAS A REGULAR GEOMETRIC FOOTPRINT WHICH SEEMS TO BE GUIDED BY THE VINE'S ROWS | BUILDING LENGTH IS ORIENTED ALONG TO THE CONTOUR LINES |

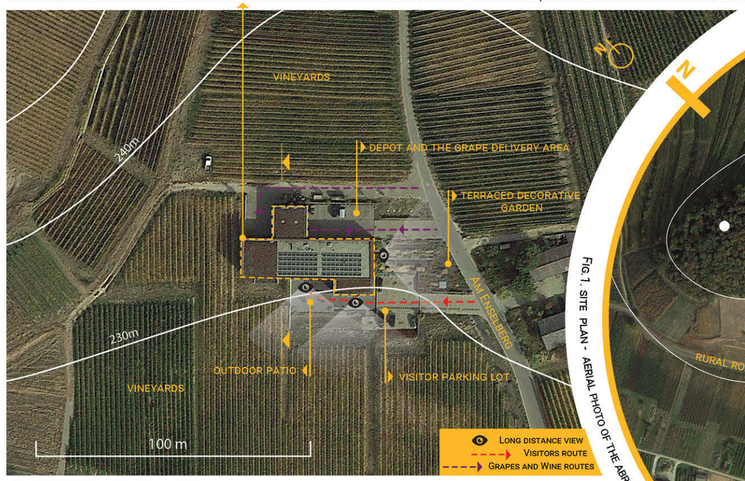


FIG. 2. SITE PLAN - COURTYARD SCALE

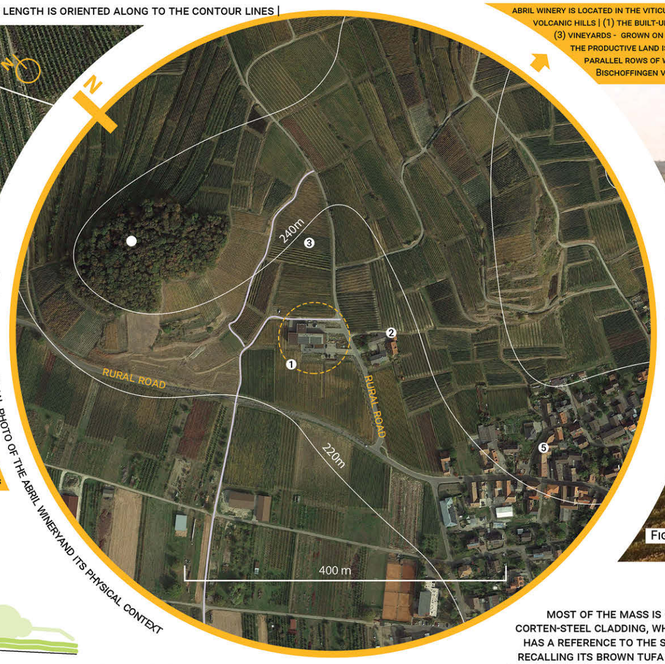


FIG. 1. SITE PLAN - AERIAL PHOTO OF THE ABRIL WINERYAND ITS PHYSICAL CONTEXT

ABRIL WINERY IS LOCATED IN THE VITICULTURAL LANDSCAPE CHARACTERIZED BY A COMPACT RANGE OF VOLCANIC HILLS | (1) THE BUILT-UP AREA UNDER THE STUDY | (2) SMALL HOTEL COMPLEX | (3) VINEYARDS - GROWN ON TERRACES AND STEEP SLOPES CONSISTING OF HEAVY LOESS SOIL; THE PRODUCTIVE LAND IS DIVIDED INTO DYNAMIC, IRREGULAR PATTERNS FEATURED BY THE PARALLEL ROWS OF WINE WITH DIFFERENT ORIENTATION | (4) RESIDENTIAL AREA OF BISCHOFFINGEN VILLAGE | (5) FOREST |

FIG. 3. BIRD'S EYE VIEWS OF THE WINERY AND ITS NATURAL AND CULTURAL CONTEXT

FIG. 8, 9, 10. VIEWS FROM INSIDE OF THE BUILDING TOWARDS THE LANDSCAPE

FIG. 4. WINERY'S TRANSVERSE SECTION, SHOWING THE CONNECTION WITH THE TERRAIN

THE WINERY, COMPRISING THREE LEVELS WHERE THE WINE PRODUCTION PROCESSES STRATEGICALLY TAKE PLACE, IS MOSTLY CONCEALED INTO THE SLOPE

MOST OF THE MASS IS COVERED WITH CORTEN-STEEL CLADDING, WHOSE RUSTY COLOUR HAS A REFERENCE TO THE SURROUNDING SOIL, RECALLING ITS BROWN TUFA COLOUR. HOWEVER, THE COLOUR OF THE SOIL IS BARELY VISIBLE DUE TO THE VINE ALLEYS ARE COVERED WITH VEGETATION.

CONCLUSION

TO FIT THE BUILDING INTO THE LANDSCAPE IN A RESTRAINED AND GENTLE MANNER, TAKING INTO ACCOUNT ITS SPECIAL LOCATION, WAS THE FOREFRONT TASK OF THE ARCHITECT. HE CONCEPTUALIZED A VOLUME WITH MINIMAL IMPACT ON THE SURROUNDINGS, CHOOSING A SIMPLE BOX FORM, WHOSE FOOTPRINT SEEMS TO BE GUIDED BY THE PARALLEL ROWS OF VINES THAT SURROUND IT AND WHOSE MASS IS PARTLY CONCEALED INTO THE SLOPE. MORE THAN THAT TO REINFORCE THE RELATIONSHIP BETWEEN THE BUILDING AND LANDSCAPE, HE USED THE CORTEN-STEEL FOR COATING THE STRUCTURE, REFERRING ITS RUSTY COLOR TO THE SURROUNDING SOIL. HOWEVER, THE COAT MAKES THE BUILDING ATTRACTIVE AS AGAINST THE SURROUNDING LANDSCAPE. THE DARK RED MASS CAN BE SEEN FROM FAR AWAY, BUT IT IS SHARPLY SEPARATED FROM THE GREEN VINEYARDS ON THE SLOPE BEHIND, EXCEPT IN AUTUMN. AND EVEN THE ARCHITECTURAL ELEMENTS OF THE BUILDING, THE RUNNING AROUND STEEL BAND AS A MEMORY OF THE POTTERY FINDINGS HAS NOTHING TO DO WITH THE EXISTING LANDSCAPE AND HISTORY, IT IS A STORY FOR THE VISITORS.

PERFORATED METAL SHEET WITH ORNAMENTATION - IT REFERS TO HISTORY, NAMELY THAT SOME ARTEFACTS FROM THE POTTERY CULTURE OF 7,000 YEARS WERE DISCOVERED IN THIS PART OF THE KAISERSTUHL

WINERY BUILDING HAS A FLAT, RECTANGULAR BOX-LIKE MASS, WHICH APPEARS AS AN ARCHITECTURAL ELEMENT IN THE LANDSCAPE, STANDING AS A DISTINCTIVE FEATURE

FIG. 5, 6, 7. SIDE, AXONOMETRIC AND FRONTAL VIEW OF THE WINERY

FRANZ KELLER WINERY, OBERBERGEN (DE)

ARCHITECTS: MICHAEL GEIS AND ULRICH BRANTNER (www.geis-brantner.de) IN COLLABORATION WITH CORNELIS LANDSCAPE ARCHITECTS | AREA: 4.000 sq.m. | 2013 | WINE REGION: BADEN - KAISERSTUHL | www.franz-keller.de |

THE SURROUNDING LANDFORMS INFLUENCED THE BUILDING'S SIZE, SHAPE AND ROOF; THE LANDSCAPES PATTERNS/AGRICULTURAL UNITS INFLUENCED THE COLOR OF THE BUILDING'S ROOF AND THE SHAPE OF ITS FOOTPRINT;

THE WINERY LIES ON THE SLOPE AT THE FOOT OF THE HILL | IT HAS AN ALMOST INVISIBLE FOOTPRINT | ITS IRREGULAR GEOMETRIC SHAPE IS GUIDED BY THE GEOMETRIES OF THE ADJACENT VINEYARDS PLOTS |

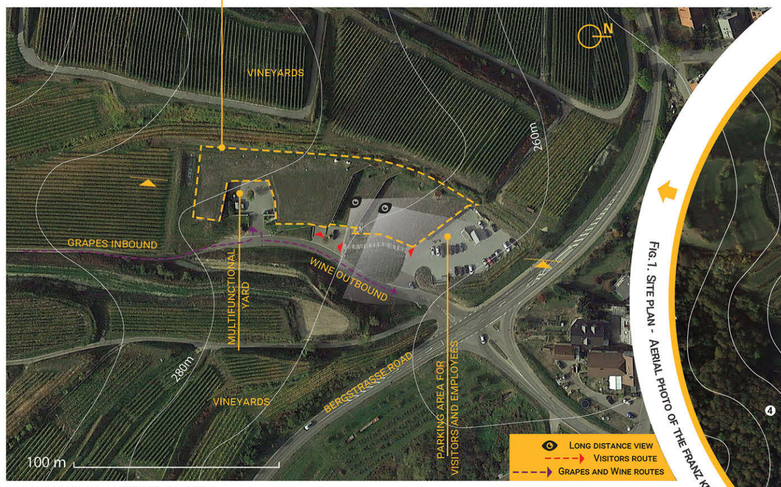


FIG. 2. SITE PLAN - COURTYARD SCALE

RANZ KELLER WINERY IS LOCATED IN THE VITICULTURAL LANDSCAPE CHARACTERIZED BY A COMPACT RANGE OF VOLCANIC HILLS | (1) THE BUILT-UP AREA UNDER THE STUDY | (2) TERRACED VINEYARDS - THE PRODUCTIVE LAND IS DIVIDED INTO DYNAMIC, IRREGULAR PATTERNS THAT FOLLOW THE CONTOURS OF THE OLD VOLCANIC CONES | (3) RESIDENTIAL AREA OF OBERBERGEN VILLAGE | (4) FOREST |

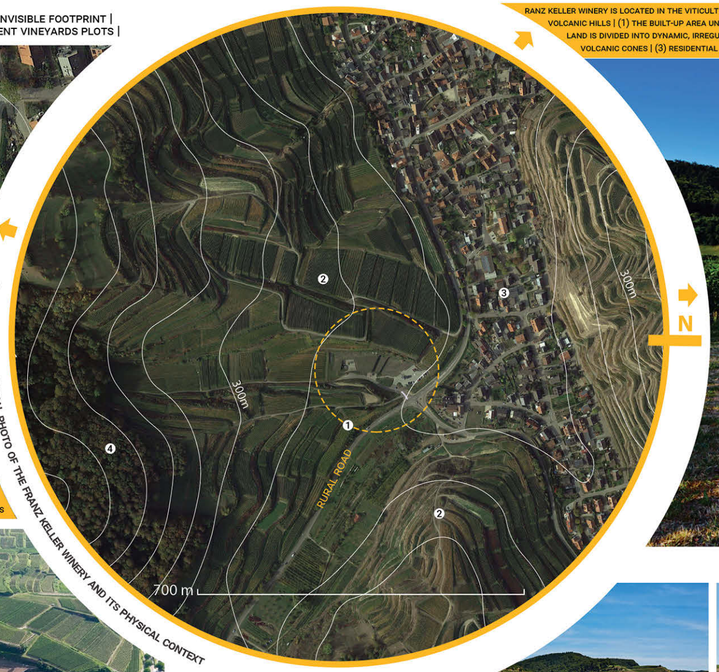


FIG. 1. SITE PLAN - AERIAL PHOTO OF THE FRANZ KELLER WINERY AND ITS PHYSICAL CONTEXT

FIG. 3. BIRD'S EYE VIEW OF CHÂTEAU LA DOMINIQUE ESTATE AND ITS NATURAL AND HISTORICAL CONTEXT

CONCLUSION

IN ORDER TO INTEGRATE THE BUILDING INTO THE EXISTING LANDSCAPE, THE DESIGN CONCEPT WAS BASED TO A GREAT EXTENT ON THE MORPHOLOGY OF THE LANDSCAPE. THE ARCHITECT WAS INFLUENCED AND INSPIRED BY RHYTHM AND GEOMETRY THAT CHARACTERIZE THE LANDSCAPE. THE UNIQUE SITE CHARACTERISTICS WERE CONSIDERED, SUCH AS TOPOGRAPHY, NATURAL CONTOURS, TERRAIN-MODELLING AND SCENIC VISTA. AS A RESULT, THE ARCHITECT CREATED A BUILDING WHOSE SHAPEAND GRASS-COVERED ROOF REFLECT THE EMBLEMATIC LAYERS OF THE MOUNTAIN. IT IS SUBORDINATED TO THE LANDSCAPE AND BLEND PERFECTLY INTO IT.

FIG. 4, 5. BIRD'S EYE VIEW AND CLOSE VIEW OF THE WINERY AND ITS NATURAL AND HISTORICAL CONTEXT, REFLECTING THE SHAPE, SCALE AND USED MATERIALS

THE BUILDING'S VOLUME HAS A TERRACED LAYOUT AND SEEMS TO BE THE CONTINUATION OF THE TERRACED VINEYARD LEVELS; IT EXTENDS TOWARDS THE SETTLEMENT BUT DOES NOT REACH IT | THE FLAT TERRACED ROOF FOLLOWS THE SHAPE OF THE HILL AND IS COVERED WITH A LAYER OF SOIL PLANTED WITH GRASSY SEEDS | THE GREEN LAYER IS ESSENTIALLY THE INSTRUMENT USED TO CAMOUFLAGE THE BUILDING, THUS LENDING UNITY TO THE SCENE.

FIG. 8, 9, 10, 11. VIEWS FROM INSIDE OF THE BUILDING AND FROM THE TERRACE TOWARDS THE SURROUNDING LANDSCAPE

BUILDING IS PARTLY SUNK INTO THE GROUND AND COVERS 3 LEVELS, WHERE EACH STEP IN THE WINE PROCESS STRATEGICALLY TAKES PLACE ON A SPECIFIC FLOOR

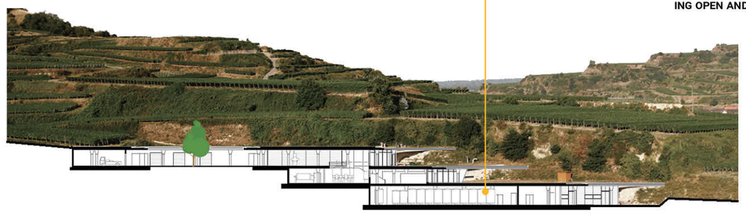


FIG. 6. WINERY'S LONGITUDINAL SECTION, SHOWING THE CONNECTION WITH THE TERRAIN

THE BUILDING'S VOLUME IS MADE OF REINFORCED CONCRETE | THE ROOF IS SUPPORTED BY THE TAPERED CIRCULAR COLUMNS | THE WALLS ARE PIERCED BY THE GATES AND DOORS MADE BY OAK AND BY TWO LARGE MIRRORED WINDOWS, WHICH PROVIDE LOTS OF NATURAL LIGHT IN THE UPPER GUEST AND PRODUCTION ROOMS | THE WINDOWS MAKE THE BUILDING OPEN AND COMMUNICATIVE BOTH INSIDE AND OUTSIDE |

FIG. 7, 8. CLOSE VIEW OF THE WINERY AND ITS MULTIFUNCTIONALYARD

ABBEY WINERY COMPLEX, PANNONHALMA (HU)

ARCHITECTS: CZITA - TAMÁS CZIGÁNY, GYÖRGYI TÓTH, RÓBERT PAPP (www.czita.hu) | LANDSCAPE ARCHITECT: HELGA HENCZ | AREA: 1.870 sq.m. | COMPLETION: 2004 | WINE REGION: NORTHERN PANNONIA | www.apatsagipinceszet.hu |

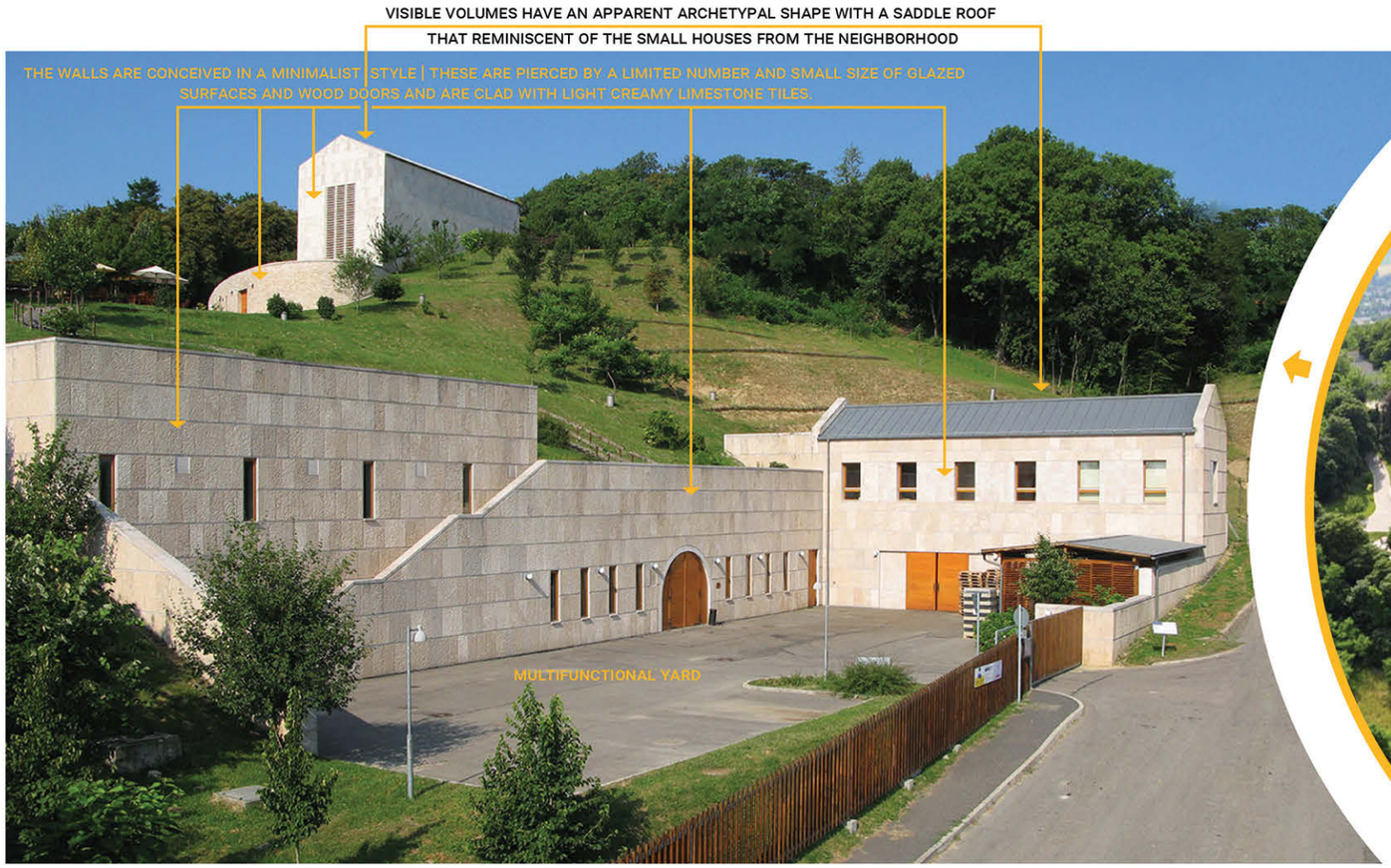
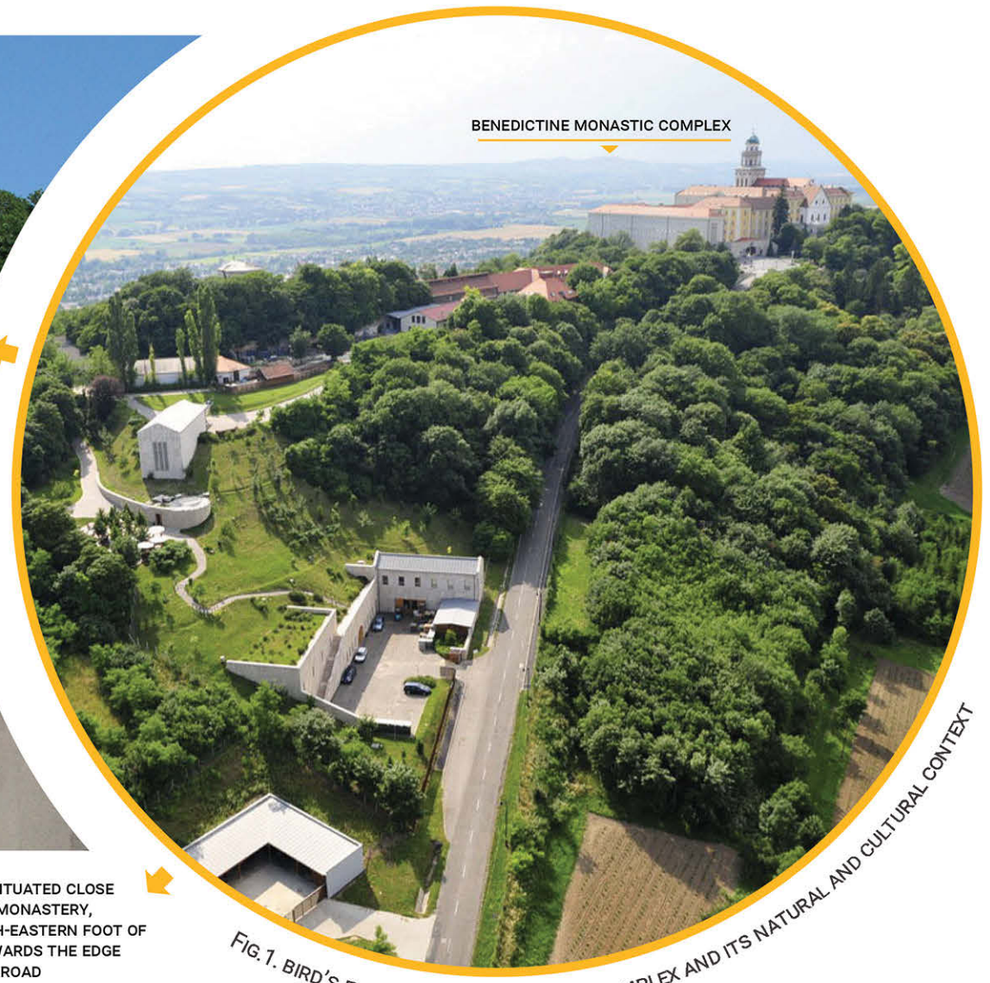


FIG. 2. GENERAL VIEW OF THE WINERY COMPLEX AND ITS NATURAL CONTEXT



THE WINERY COMPLEX, SITUATED CLOSE TO THE BENEDICTINE MONASTERY, STRETCHES FROM THE SOUTH-EASTERN FOOT OF SAINT MARTIN'S HILL TOWARDS THE EDGE OF THE RURAL ROAD

FIG. 1. BIRD'S EYE VIEW OF ABBEY WINERY COMPLEX AND ITS NATURAL AND CULTURAL CONTEXT

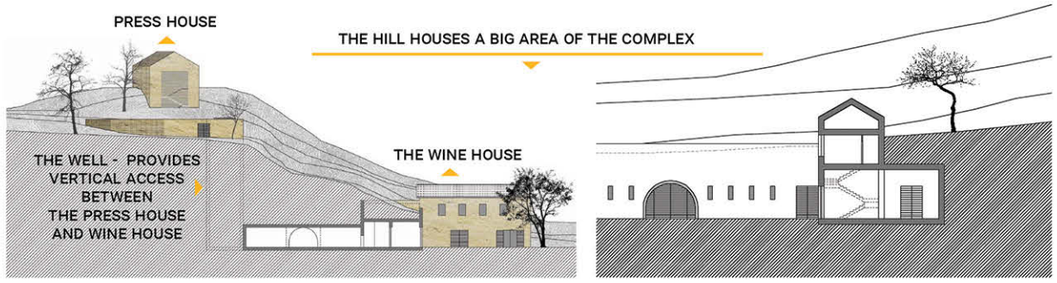


FIG. 3. CROSS SECTION OF THE WINERY, REFLECTING THE CONNECTION WITH THE TERRAIN

CONCLUSION

THE ARCHITECTS TOOK INTO CONSIDERATION THE TOPOGRAPHY OF THE HILLSIDE, THE CHARACTER OF THE LOCAL TRADITIONAL ARCHITECTURE AND NOT LESS IMPORTANT THE SPATIAL COMPOSITION OF THE HILL. TO MITIGATE THE VISUAL IMPACT OF THE COMPLEX'S MASS ON THE SURROUNDINGS, THE ARCHITECTS HID A BIG PART OF THE WINERY INTO THE HILL, THOUGH THE VISIBLE PART OF THE PRESS HOUSE AT THE TOP OF THE SLOPE EXPLICITLY DECLARE HIS PRESENCE. BY LETTING IT DOMINATE THE OTHER PARTS OF THE COMPLEX, THE ARCHITECTS DID NOT BREAK THE BALANCE OF THE HILL'S COMPOSITION BUT RATHER COMPLETED IT. TO ACHIEVE HARMONY BETWEEN THE ARCHITECTURE AND ITS CONTEXT, THEY USED MATERIALS AND ELEMENTS WHICH ARE REFLECTED IN THE TRADITIONAL BUILDINGS OF THE HILL AREA. TAKEN ALL TOGETHER, THE COMPLEX IS PERFECTLY INTEGRATED INTO ITS SACRAL CONTEXT.

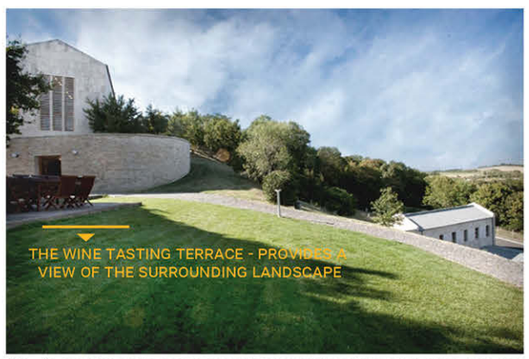


FIG. 4. VIEW OF THE PRESS HOUSE AND THE WINE TASTING TERRACE

FIG. 5. VIEW FROM THE TERRACE TOWARDS THE SURROUNDING LANDSCAPE

FIG. 6. GENERAL VIEW OF THE WINERY COMPLEX AND ITS NATURAL AND HISTORIC CONTEXT

KONYÁRI WINERY ,BALATONLELLE (HU)

ARCHITECTS: LÁSZLÓ KALMÁR, ZSOLT ZSUFFA | AREA: 1.000 sq.m. | COMPLETION: 2004 | WINE REGION: BALATON - BALATONBOGLAR | www.konyari.hu |

THE WINERY IS EMBEDDED IN A STEEP EMBANKMENT OF THE ARTIFICIAL ENVIRONMENT OF KISHEGY (SMALL HILL) IN LELLE WHICH IS CHARACTERIZED BY TINY TRADITIONAL HOUSES, WOODS AND VINEYARDS. ACCORDING TO THE ARCHITECTS, THE BASIC IDEA CONSISTS IN THE PURSUIT OF IDEAL RELATIONSHIP TO LANDSCAPE: "WE TEND TO GIVE LANDSCAPE COMPATIBILITY FOR THE MASS OF WINERY WITH THE CONCEPT OF AN EMBANKMENT HOUSE."

FIG. 1. BIRD'S EYE VIEW OF THE WINERY, REFLECTING ITS SHAPE, ELEMENTS, SCALE AND USED MATERIALS

FIG. 2. VIEW OF THE TRADITIONAL HOUSES THAT SURROUND THE WINERY

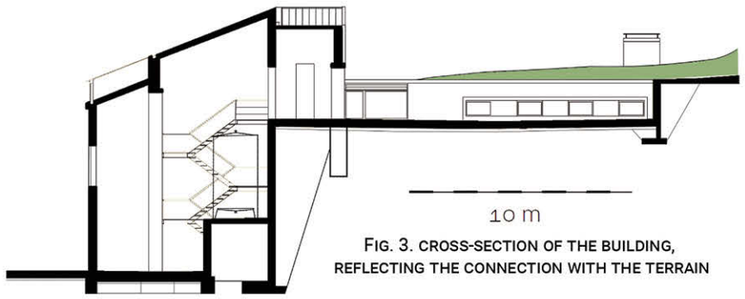


FIG. 3. CROSS-SECTION OF THE BUILDING, REFLECTING THE CONNECTION WITH THE TERRAIN

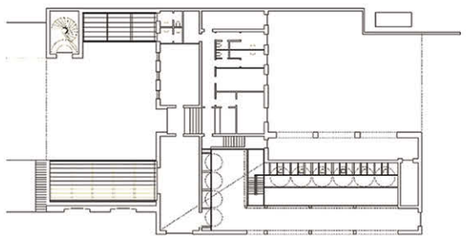


FIG. 4. LAYOUTS OF THE BUILDING

THE ARCHITECTS IGNORED THE SCALE AND SHAPE OF THE TRADITIONAL HOUSES THAT SURROUND IT BUT CONSIDERED THE TOPOGRAPHY OF THE HILL AND LOCAL STONE AND RECYCLED BRICKS MASONRY AS AN IMPORTANT ARCHITECTURAL MOTIF. THE BUILDING'S MASS, MOSTLY CONCEALED UNDERGROUND, APPEARS LIKE A NATURAL EXTENSION OF THE HILL ITSELF, RECALLING A BUTTRESSING STONEWALL RUNNING PARALLEL WITH THE LAYER LINES. THE USED COMBINATION OF THE STONE, BRICKS AND WOOD, THE SHUTTERS AND ROUNDED TOP DOORS RECALL THE CHARACTER OF TRADITIONAL AGRICULTURAL CONSTRUCTIONS, THEREBY PAYING DUE HOMAGE TO THE ARCHITECTURAL CONTEXT. ALTHOUGH IT LOOKS MODERN, IT SEEMS TO HAVE BEEN THERE FOR AGES.

ON THE UPPER FLOOR OF THE BUILDING IS LOCATED THE RESTAURANT | ITS LARGE WINDOWS ACCOMPANIED BY LARCH WOOD BLINDS AND THE TERRACE OFFERS A MAGNIFICENT VIEW OF LAKE BALATON AND GREEN SURROUNDINGS.

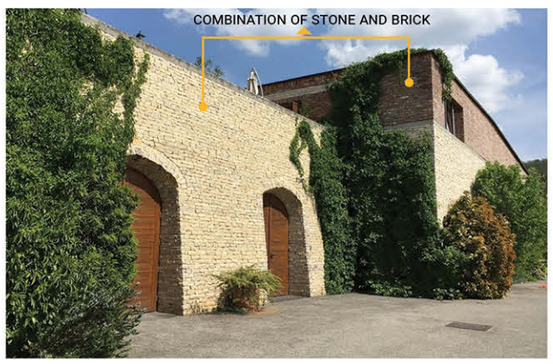


FIG. 5, 6. CLOSE VIEWS OF THE WINERY, REFLECTING THE SHAPE, ELEMENTS AND USED MATERIALS

FIG. 7, 8, 9. VIEWS OF THE WINERY'S PANORAMIC TERRACE

BAZALTBOR-LAPOSA WINERY COMPLEX, BADACSONYTOMAJ (HU)

ARCHITECTS: PÉTER KIS & BEA MOLNÁR | www.plant.co.hu | LANDSCAPE ARCHITECTURE: BOGNER STUDIO | FOOTPRINT AREA: 420 sq.m. | COMPLETION: 2010 | WINE REGION: BALATON - BADACSONY | www.bazaltbor.hu |

FIG.1. BIRD'S EYE VIEW OF BAZALTBOR-LAPOSA WINERY AND ITS NATURAL AND CULTURAL CONTEXT

FIG. 3. CROSS SECTION OF THE WINERY, REFLECTING THE CONNECTION WITH THE TERRAIN

FIG. 2. GENERAL VIEW OF THE BAZALTBOR-LAPOSA COMPLEX AND ITS NATURAL AND CULTURAL CONTEXT

CONCLUSION

IN STRUCTURING AND SHAPING THE WINERY IT WAS CONSIDERED THE NATURAL TECTONIC COMPONENTS OF THE SITE AND THE NEIGHBOURING WINE CELLARS. IN STRUCTURING AND SHAPING THE WINERY IT WAS CONSIDERED THE NATURAL TECTONIC COMPONENTS OF THE SITE AND THE NEIGHBOURING WINE CELLARS. THE ARCHITECTS DID NOT COPY THE SHAPE OF THE NATURAL LANDSCAPE BUT REFLECT ON IT: IN THE LAVA-LIKE PROCESSING BUILDING, TO WHICH RISES THE GRAPE. THE TRADITIONAL CELLARS ARE REFLECTED IN THE WHITE COLOR OF THE BUILDING'S BLOCKS AND IN THEIR GABLED SECTIONS.

FIG. 4, 5. REAR VIEW OF THE WINERY AND THE CLOSE-UP VIEW OF ITS FACADE, REFLECTING THE USED MATERIALS

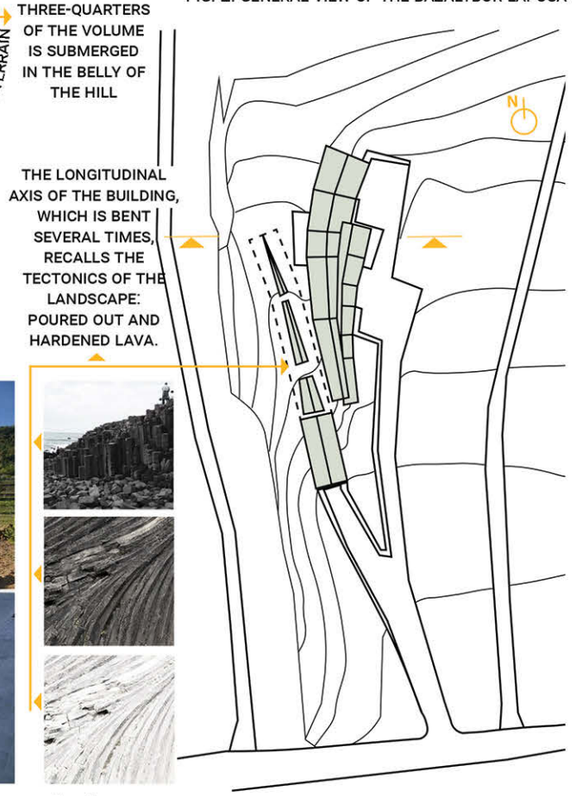


FIG. 6. SITE PLAN - COURTYARD SCALE, REFLECTING THE SHAPE OF THE BUILDING FOOTPRINT

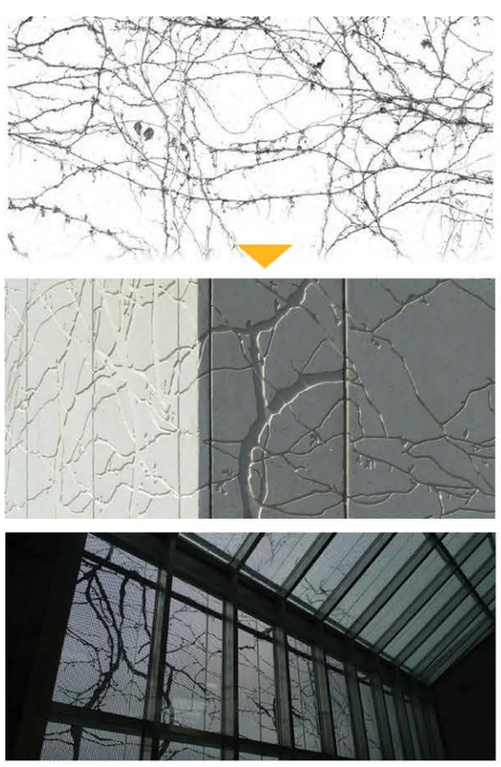


FIG. 7, 8. DETAILED VIEWS USED MATERIALS AND ITS TEXTURE

KREINBACHER-ST.ILONA WINERY COMPLEX, SOMLÓVÁSÁRHELY (HU)

ARCHITECT: DEZSŐ EKLER | www.ekler-architect.hu | LANDSCAPE ARCHITECTURE: BOJZA BT. | ST. ILONA WINERY + KREINBACHER CHAMPAGNE WINERY - AREA: 5.947 sq.m., COMPLETION: 2012 | CHAMPAGNE MATURING FACILITY + HOTEL - COMPLETION: 2014 | WINE REGION: BALATON - SOMLÓ | www.kreinbacher.hu |

KREINBACHER CHAMPAGNE WINERY: IS THE TWIN BROTHER OF THE ST. ILONA WINERY AND APPEARS AS IF IT WERE CARVED OUT OF THE LATTER'S HILL.

ST.ILONA WINERY: THE LARGE PART OF THE WINERY IS HIDDEN BY AN ARTIFICIAL HILL, BEING VISIBLE JUST A CANTILEVERED STRUCTURE WITH A GABLED ROOF, WHICH PROTRUDES FROM THE BODY OF THE HILL. IN THE BACK, THE BUILDING OPENS TOWARDS THE MOUNTAIN AND THE VINEYARDS.

THE CHAMPAGNE MATURING FACILITY: ITS VOLUME, INFLUENCED BY THE NARROW PLOT ALLOWED FOR THE CONSTRUCTION, REPRESENTS ANOTHER ARTIFICIAL HILL. THE VISIBLE ELEMENTS ARE THE LONGITUDINAL, DARK GREY WALL PUNCTUATED BY THE "BUBBLE" WINDOWS AND A CANTILEVERED STRUCTURE WITH THE GABLED ROOF.

THE COMPLEX IS SITUATED ON THE FOOT OF THE BADACSONY MOUNTAIN, ON THE EDGE OF THE BADACSONYTOMAJ VILLAGE. THE ENTIRE BUILT-UP AREA IS SURROUNDED BY THE VINEYARDS, PRESS HOUSES AND VILLAS - SMALL SCALE, SIMPLE SHAPED AND STRUCTURED BUILDINGS WITH PITCHED-ROOFS, BY THE BASALT CLIFFS AND STONE SCREES, WHICH EMERGE FROM THE FORESTED PEAK OF THE MOUNTAIN, AND LAKE.

THE HOTEL EMPLOYING THE SAME ARCHITECTURAL APPROACHES AS THE ADJACENT BUILDINGS: IT IS A HILL-HOUSE WITH A CONCRETE STRUCTURE AND BASALTIC COLOURS. THE LONG, MILD CURVED SHAPE OF THE BUILDING FRAMES A COZY YARD ORGANIZED IN TERRACES. ON THE LONGITUDINAL SIDES ARE GENEROUS WINDOWS, WHICH MAKE THE BUILDING COMMUNICATIVE AND OFFER A PANORAMIC VIEW OF THE SURROUNDING LANDSCAPE.

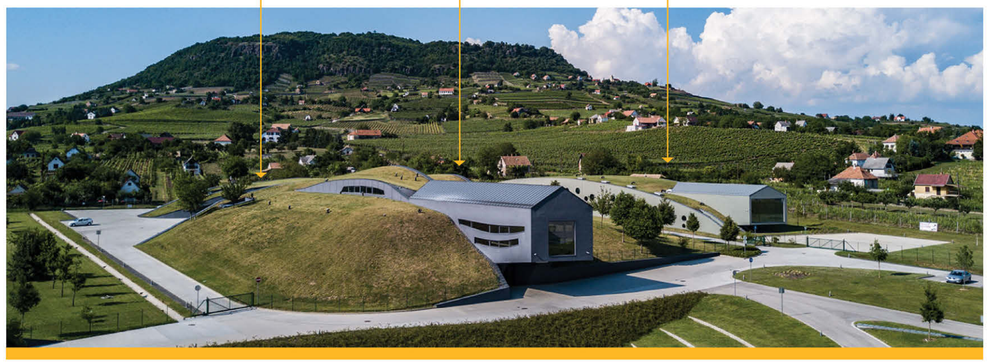


FIG. 1, 2, 3. GENERAL VIEWS OF THE KREINBACHER-ST.ILONA WINERY COMPLEX AND ITS NATURAL AND CULTURAL CONTEXT, REFLECTING THE SCALE, SHAPE, COLOR AND ELEMENTS

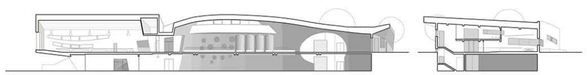


FIG. 4. LONGITUDINAL SECTION OF THE ST.ILONA WINERY AND KREINBACHER CHAMPAGNE WINERY, REFLECTING THE CONNECTION WITH THE TERRAIN

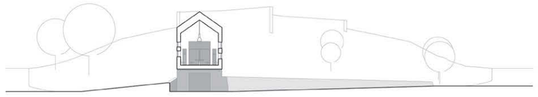


FIG. 5. TRANSVERSAL SECTION OF THE ST.ILONA WINERY

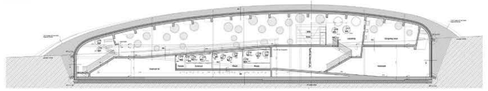


FIG. 6. LONGITUDINAL SECTION OF THE CHAMPAGNE MATURING FACILITY

FIG. 7. VIEW OF THE HOTEL'S TERRACED YARD

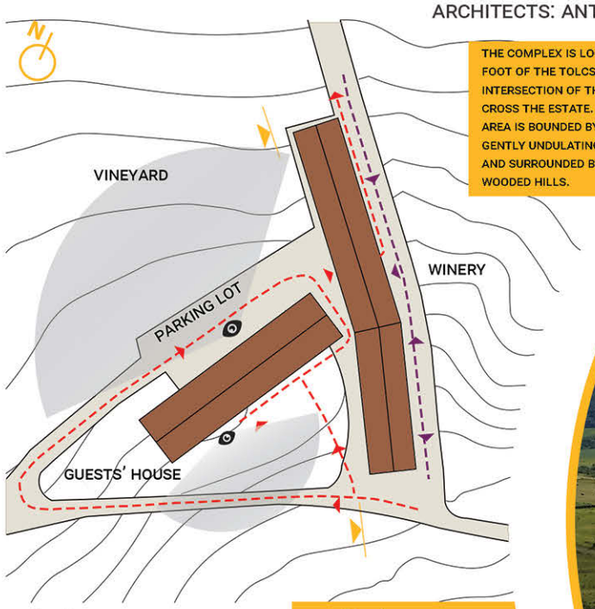
FIG. 8. BACK VIEW OF THE ST.ILONA WINERY AND KREINBACHER CHAMPAGNE WINERY

FIG. 9. AXONOMETRIC VIEW OF THE CHAMPAGNE MATURING FACILITY

FIG. 10, 11,12,13. DETAILED VIEWS OF THE COMPLEX'S FRAGMENTS

BÉRES WINERY COMPLEX, ERDŐBÉNYE (HU)

ARCHITECTS: ANTHONY GALL, TAMÁS PINTÉR, KATA CSABA | LANDSCAPE ARCHITECT: MÓNIKA BUELLA | FLOOR AREA: 3.000 sq.m. | COMPLETION: 2006 | WINE REGION: TOKAJ | www.beresbor.hu |



THE COMPLEX IS LOCATED ON THE SLOPE, AT THE FOOT OF THE TOLCSVA-PERES HILL, AT THE INTERSECTION OF THREE ROADS THAT CROSS THE ESTATE. THE BUILT AREA IS BOUNDED BY VINEYARDS, GENTLY UNDULATING FIELDS AND SURROUNDED BY THE WOODED HILLS.

Long distance view
Visitors route
Grapes and Wine routes

FIG. 2. SITE PLAN - COURTYARD SCALE, REFLECTING THE SHAPE OF THE BUILDING FOOTPRINT

WINERY LIES PERPENDICULAR TO THE LAYER LINE AND IS PARTIALLY EMBEDDED IN THE HILLSIDE

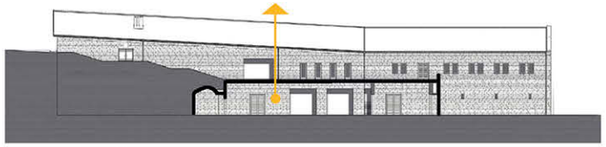


FIG. 3. CROSS-SECTION OF THE COMPLEX, REFLECTING THE CONNECTION OF THE WINERY WITH THE TERRAIN

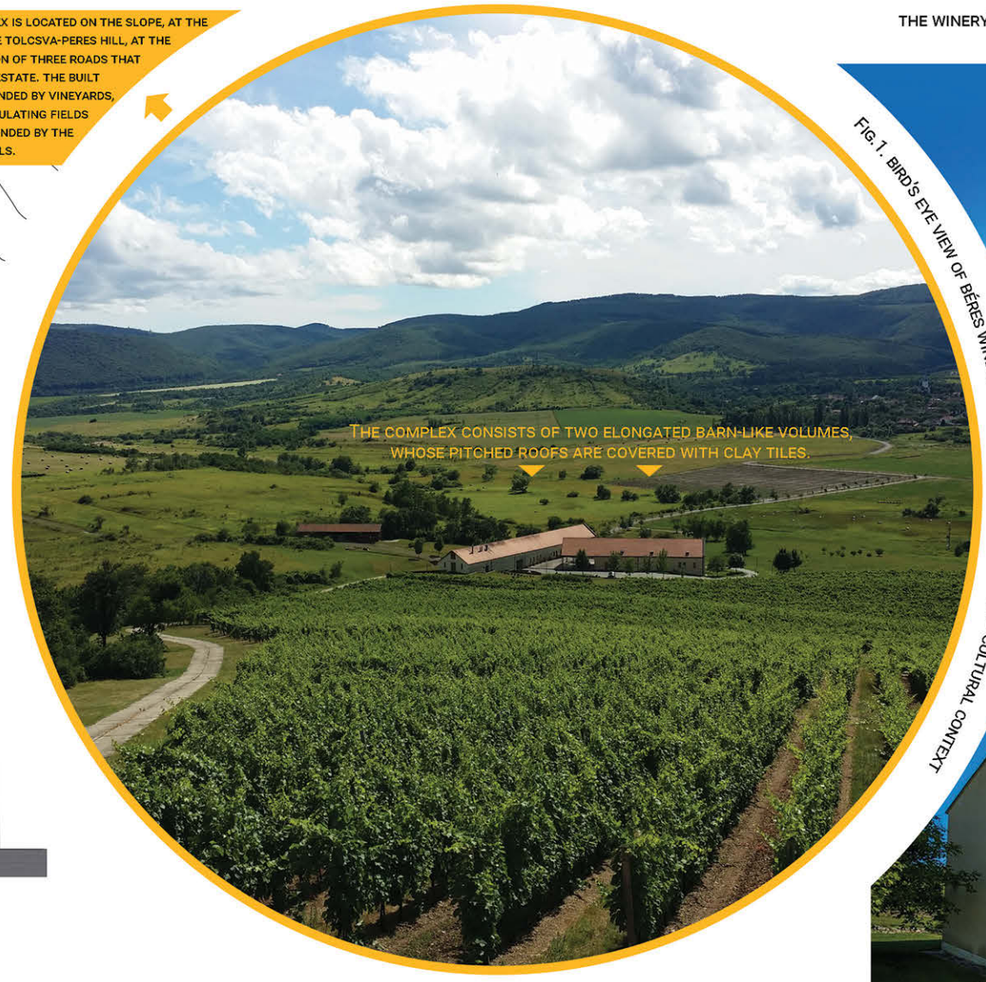


FIG. 1. BIRD'S EYE VIEW OF BÉRES WINERY COMPLEX AND ITS NATURAL AND CULTURAL CONTEXT

THE WINERY'S FACADES ARE COVERED WITH GENTLY TEXTURED NATURAL YELLOW STONE AND PIERCED BY TINY WINDOWS ACCOMPANIED WITH LARCH WOOD SHUTTERS

THE GUESTS' HOUSE FACADES ARE WHITEWASHED WITH YELLOW COLOR AND FEATURE LARGE GLAZED AREAS ACCOMPANIED BY LARCH WOOD SHUTTERS AND A BALCONY WHICH PROVIDE A VIEW TOWARDS THE LANDSCAPE.

FIG. 4, 5. VIEWS OF THE WINERY AND THE GUESTS' HOUSE, REFLECTING THE SHAPE, USED MATERIALS AND ELEMENTS

CONCLUSION

THE ARCHITECTS TOOK INTO CONSIDERATION THE TOPOGRAPHY OF THE HILLSIDE, THE CHARACTER OF THE LOCAL TRADITIONAL ARCHITECTURE AND NOT LESS IMPORTANT THE SPATIAL COMPOSITION OF THE HILL. ALTHOUGH THE COMPLEX IS SITUATED OUTSIDE OF THE VILLAGE AND HAVING NO DIRECT POINTS OF ARCHITECTURAL REFERENCE IT REFLECTS THE ARCHITECTURE OF THE TRADITIONAL BUILDINGS OF THE NEIGHBOURHOOD. TO REDUCE THE VISUAL IMPACT OF THE WINERY, THEY ACCOMMODATED THE PRODUCTION AND VISITOR FACILITIES IN DIFFERENT BUILDINGS AND EMBEDDED THEM PARTLY INTO THE SLOPE. THE CLEVER ARRANGEMENT, YELLOW-TONED FACADES WITH THE LARCH WOOD SHUTTERS AND PITCHED ROOFS GIVE A LIGHTWEIGHT APPEARANCE TO THE COMPLEX, MAKING IT DELICATELY BLEND INTO ITS GREEN, ROLLING LANDSCAPE

THE ACCESSES AROUND THE COMPLEX PROVIDE BREATHTAKING VIEWS OVER THE SURROUNDING LANDSCAPE

THE VOLUMES' ARRANGEMENT SHAPES A SPACIOUS TERRACE, PARTLY COVERED BY THE GUEST HOUSE'S ROOF, AND IS USED FOR VARIOUS CULTURAL AND FESTIVE EVENTS. THIS SPACE NOT ONLY PROVIDES VIEWS OVER THE LANDSCAPE BUT AS WELL AS AN INSIGHT VIEW OVER THE PROCESS OF THE WINERY THROUGH A CIRCULAR SKYLIGHT, WHICH ALSO IS AN IDEAL SOLUTION FOR PROVIDING LIGHT INTO THE BELOW PRODUCTION AREA.

FIG. 6, 7, 8, 9. VIEWS OF THE COMPLEX'S FRAGMENTS

HILL- LEO HILLINGER WINERY, JOIS (AT)

ARCHITECT: GERNER°GERNER PLUS (www.gernergernerplus.com) | AREA: 2.000 sq.m. | 2004 | WINE REGION: BURGENLAND - NEUSIEDLERSEE | www.leo-hillinger.com |

(1) THE BUILT-UP AREA UNDER THE STUDY | (2) VINEYARDS | (3) RESIDENTIAL AREA OF JOIS VILLAGE | (4) WOODED SLOPES |

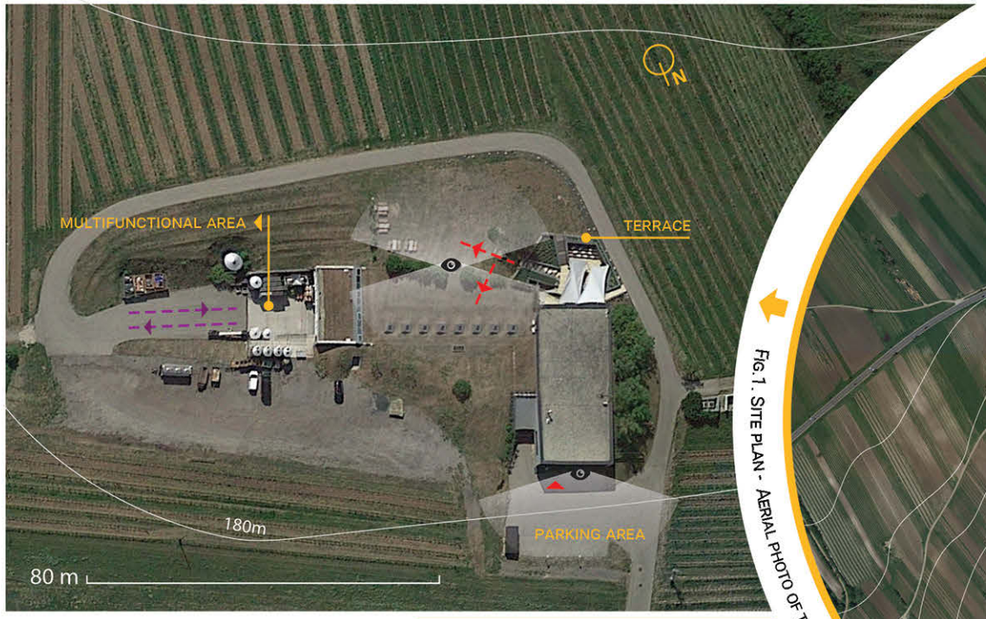


FIG. 2. SITE PLAN - COURTYARD SCALE

VISITORS ROUTE | LONG DISTANCE VIEW | GRAPES AND WINE ROUTES

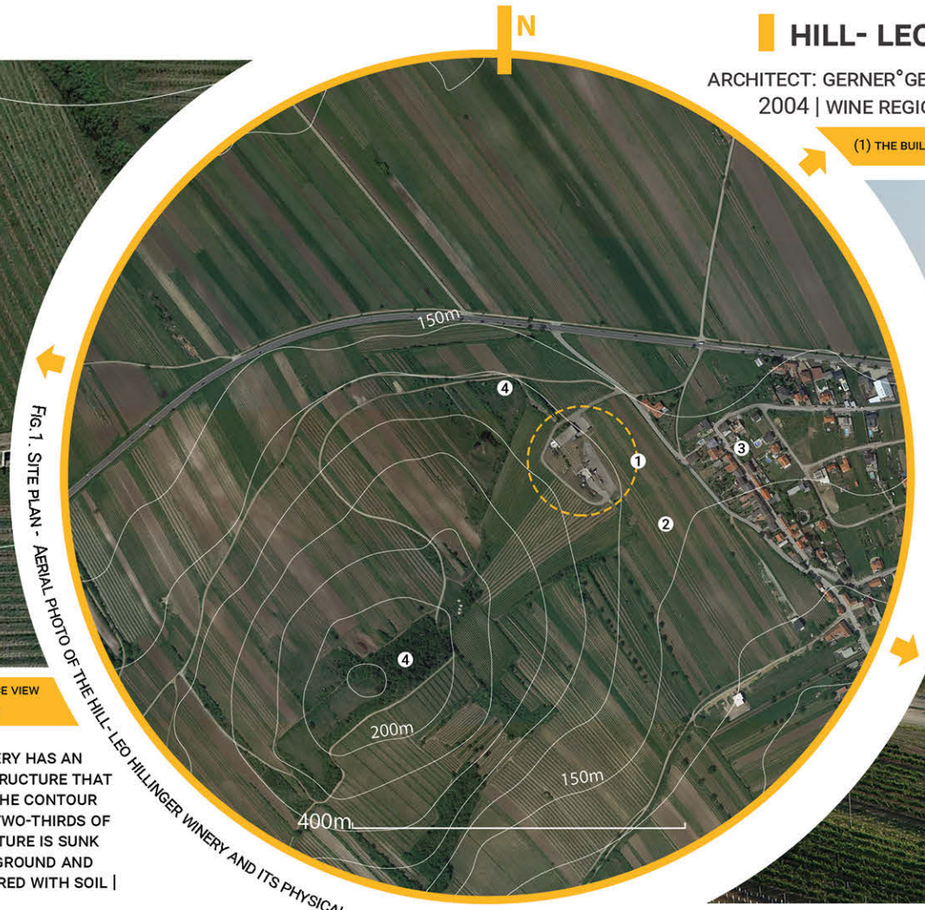
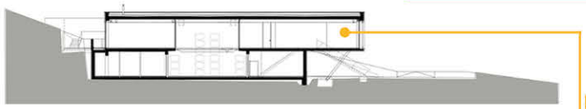


FIG. 1. SITE PLAN - AERIAL PHOTO OF THE HILL- LEO HILLINGER WINERY AND ITS PHYSICAL CONTEXT

FIG. 4. BIRD'S EYE VIEW OF THE WINERY, REFLECTING THE SHAPE, USED MATERIALS AND THE RELATIONSHIP WITH THE SURROUNDING LANDSCAPE



THE WINERY HAS AN L-SHAPED STRUCTURE THAT FOLLOWS THE CONTOUR LINES | THE TWO-THIRDS OF THE STRUCTURE IS SUNK INTO THE GROUND AND PARTLY COVERED WITH SOIL |

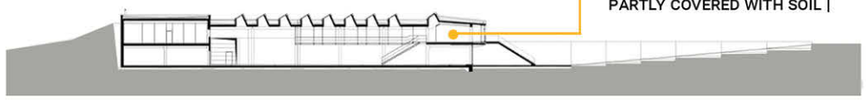


FIG. 3. LONGITUDINAL AND TRANSVERSE SECTIONS OF THE WINERY, REFLECTING THE CONNECTION WITH THE TERRAIN

THE ARCHITECTS CREATED A SYMBIOSIS BETWEEN THE EXISTING VITICULTURAL LANDSCAPE AND THE NEWLY-DESIGNED PRODUCTION SITE. THE ARCHITECTS SKILLFULLY USED THE FEATURES OF THE AREA BY INSCRIBING A CONSIDERABLE PART OF THE STRUCTURE INTO THE SLOPE OF A MOUNTAIN AND COVERED IT WITH A GRASSY LAYER. ALL THAT IS VISIBLE ABOVE THE GROUND ARE THE SKYLIGHT DOMES AND A SMALL, LIGHT GREY CONCRETE BOX WITH A GLAZED FRONT THAT PROTRUDE FROM THE ARTIFICIAL HILL. IN A WHOLE, THE BUILDING BLENDS RESPECTFULLY IN THE PROTECTED AREA.

FIG. 5, 6, 7. CLOSE VIEWS OF THE WINERY, REFLECTING THE SHAPE, USED MATERIALS AND THE CONNECTION WITH THE TERRAIN

FIG. 8, 9, 10. VIEW OF THE TERRACE WHICH OPENS IN THE BACK OF THE VISIBLE BOX-LIKE VOLUME THAT HOUSES THE SALES, TASTING AND SEMINAR ROOM; VIEWS FROM INSIDE OF THIS AREA TOWARDS THE SURROUNDING LANDSCAPE

F.X. PICHLER WINERY, OBERLOIBEN (AT)

ARCHITECT: THOMAS TAUBER (www.arch-tauber.at) | AREA: 2.300 sq.m. | 2009 |
WINE REGION: WACHAU | www.fx-pichler.at |

THE BUILDING IS SITUATED ON A FLAT TERRAIN | THE PARALLEL ROWS OF GRAPES GUIDE THE SHAPE OF THE PARKING LOT TO THE FOOTPRINT |

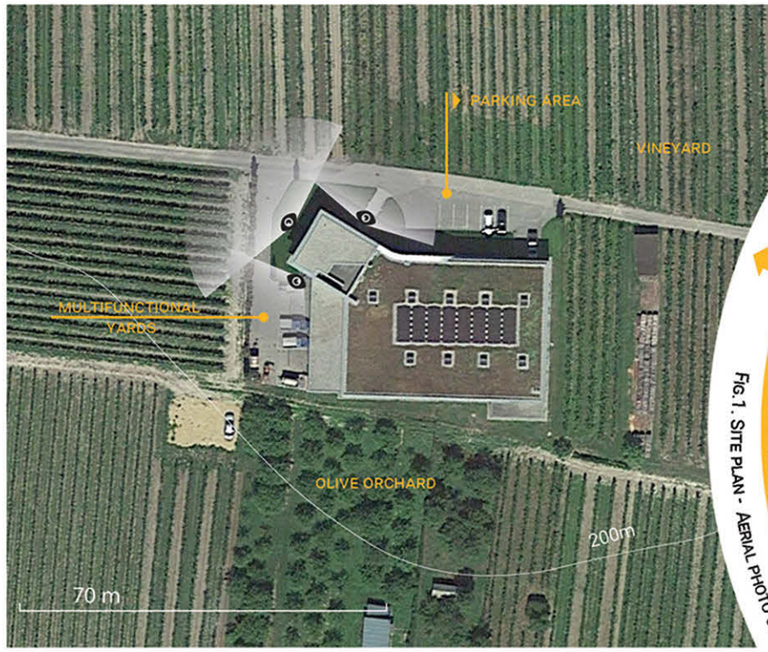


FIG. 2. SITE PLAN - COURTYARD SCALE

THE TWO-STOREY PRISM IS FACED WITH DARK GREY AND ANTHRACITE-COLOURED CONCRETE PANELS. THE HAND-GROUND AND SANDED CONCRETE WITH INCLUSIONS OF A GREEN STONE GIVE THE RESULT OF ROUGH HETEROGENEOUS SURFACE, WHICH IS REMINISCENT OF THE TRADITIONAL STONE WALLS THAT ARE SO TYPICAL OF THIS REGION. ON THE MAIN FACADE, A CONTRASTING BAND OF ALUMINIUM LATHS RISES UP FROM THE GROUND AND OPTICALLY CONNECTS THE GLASS SECTION OF THE BUILDING. THE CURVED, WAVE-LIKE ALUMINIUM APPLIQUÉ REFLECTS THE DANUBE RIVER, WHICH LIES BESIDE IT. ON THE OTHER SIDE, A GENEROUS GLASS FACADE, COVERING CUSTOMER AREA, REFLECTS THE VINES AND OFFERS A PANORAMIC VISTA OF THE VINEYARDS AND SURROUNDING LANDSCAPE.

FIG. 1. SITE PLAN - AERIAL PHOTO OF THE FX.PICHLER WINERY AND ITS PHYSICAL CONTEXT

(1) THE BUILT-UP AREA UNDER THE STUDY | (2) VINEYARDS - CONCENTRATED ON THE SOUTHERN SIDE OF THE DANUBE RIVER, PLANTED IN STEEP TERRACES AND SLOPES; THE PRODUCTIVE LAND IS DIVIDED IN GEOMETRIC, REGULAR PATTERNS | (3) RESIDENTIAL AREA OF OBERLOIBEN VILLAGE | (4) DANUBE RIVER AND ITS RIPARIAN VEGETATION | (5) FORESTED HILLS

FIG. 3. GENERAL VIEW OF THE WINERY AND ITS NATURAL AND HISTORICAL CONTEXT

FIG. 4, 5. CLOSE, AXONOMETRIC VIEWS OF THE WINERY, REFLECTING ITS SHAPE, ELEMENTS AND USED MATERIALS

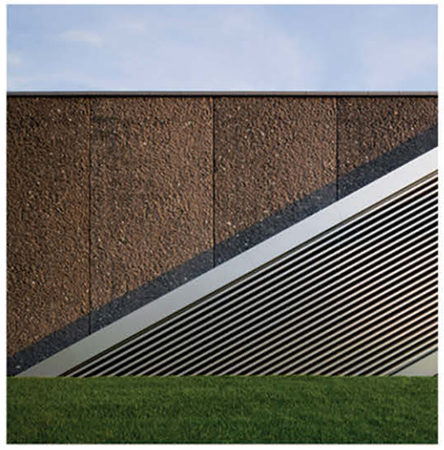


FIG. 8. VIEWS OF THE MAIN FACADE'S FRAGMENTS

FIG. 7. BACK VIEW OF THE WINERY AND ITS NATURAL AND HISTORICAL CONTEXT

FIG. 6. VIEWS FROM INSIDE TOWARDS THE LANDSCAPE

CLAUS PREISINGER WINERY, GOLS (AT)

ARCHITECTS: JPROPELLER Z (https://propellerz.at/) | AREA: 1.779 sq.m. | 2009 |
WINE REGION: BURGENLAND - NEUSIEDLERSEE | http://clauspreisinger.at/ |

(1) THE BUILT-UP AREA UNDER THE STUDY IS LOCATED ON A LARGELY FLAT TERRAIN CHARACTERISED BY LONG STRIPS OF PARALLEL VINE ROWS (2) AND STRUCTURED BY RESIDENTIAL AREA OF GOLS VILLAGE (3) |

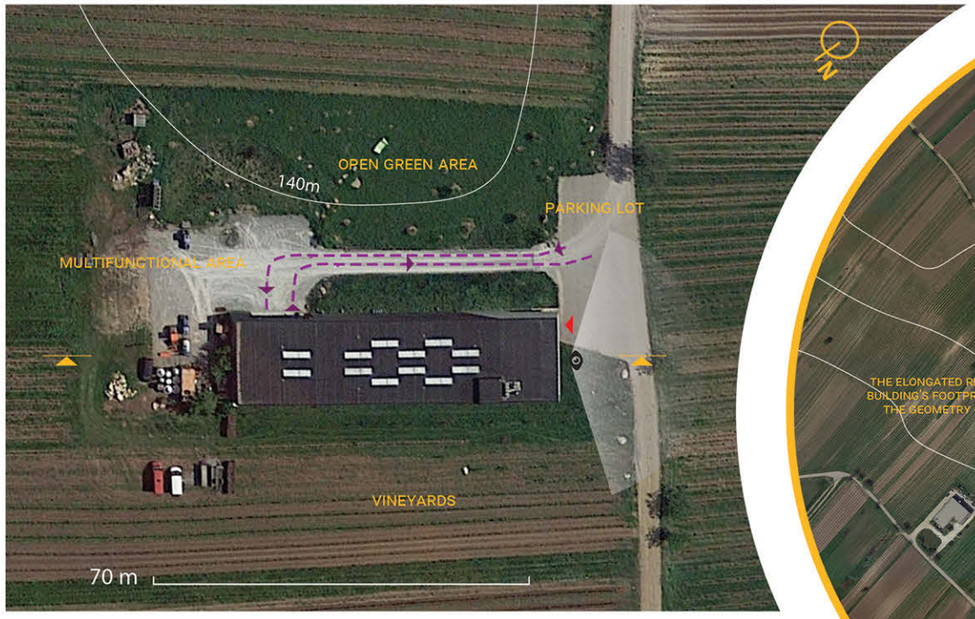


FIG. 2. SITE PLAN - COURTYARD SCALE

VISITORS ROUTE LONG DISTANCE VIEW
GRAPES AND WINE ROUTES

FIG.1. SITE PLAN - AERIAL PHOTO OF THE CLAUS PREISINGER WINERY AND ITS PHYSICAL CONTEXT

FIG.3. AXONOMETRIC VIEW OF THE WINERY, REFLECTING ITS SHAPE AND USED MATERIALS

THE ARCHITECTS DEVELOPED A LIGHTWEIGHT, MINIMALIST DESIGN WHOSE ELONGATED RECTANGULAR SHAPE AND DYNAMIC FACADES WERE INSPIRED BY THE HORIZONTALITY, RHYTHM AND GEOMETRY OF THE VINEYARD'S PLOTS. BY HIDING ONE-THIRD OF THE BUILDING'S MASS INTO THE GROUND, IT WAS ACHIEVED A GRAVITY FLOW PROCESS AND NATURAL REGULATION OF TEMPERATURE AND HUMIDITY. THIS ALSO HELPED PARTLY TO INTEGRATE THE BUILDING'S MASS INTO THE SURROUNDINGS AND PREVENTED ITS FULL SIZE FROM BECOMING APPARENT. IN ADDITION, THE COLOUR OF A CLEVERLY BLENDED PALETTE OF TIMBER AND CONCRETE - WHOSE RHYTHMICALLY TEXTURE RECALL THE PARALLEL ARRANGEMENT OF THE VINE ROWS - HELPED TO MINIMIZE THE VISUAL DISTURBANCE OF THE BUILDING AND THUS CREATING AN ALLIANCE WITH ITS CONTEXT. HOWEVER, THE BUILDING'S SCALE AND EVEN SHAPE ADVOCATE THE AESTHETICAL CONTRAST, DICHOTOMY AND EVEN DISSONANCE WITH ITS SURROUNDING MONOTONOUS VITICULTURAL LANDSCAPE.

FIG. 11. CLOSE VIEW OF THE BLENDED PALETTE OF TIMBER AND CONCRETE, WHOSE RHYTHMICALLY TEXTURE RECALLS THE PARALLEL ARRANGEMENT OF THE VINE ROWS.

FIG.4. FRONT VIEW OF THE WINERY, REFLECTING ITS FRONT FACADE AND THE TOPOGRAPHY OF THE SITE

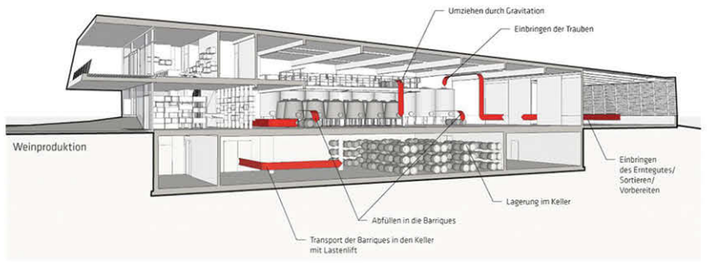


FIG. 10. LONGITUDINAL SECTION OF THE WINERY, REFLECTING ITS HEIGHTS AND CONNECTION WITH THE TERRAIN

FIG. 7, 8, 9, VIEWS PROVIDED FROM THE INTERIOR OF THE BUILDING AND TERRACE TOWARDS THE LANDSCAPE

FIG.5, 6. SIDE VIEWS OF THE WINERY, REFLECTING ITS SCALE, USED MATERIALS AND THEIR TEXTURE, THE GLAZED SURFACES AND THE OVERHANGING TERRACE

NEW WINERY OF GANTENBEIN ESTATE, FLÄSCH (CH)

ARCHITECTS: VALENTIN BEARTH & ANDREA DEPLAZES (www. bearth-deplazes.ch) IN COLLABORATION WITH FABIO GRAMAZIO & MATTHIAS KOHLER (www.gramaziokohler.com) | GROSS FLOOR AREA: 980 sq.m. | 2008 | WINE REGION: GRAUBUNDEN | www.gantenbeinwine.com

THE TRADITIONAL ARCHITECTURE INFLUENCED THE BUILDING'S SHAPE, ROOF AND STRUCTURE; THE GRAPEVINE INSPIRED THE STRUCTURE OF THE BUILDING'S SHELL;

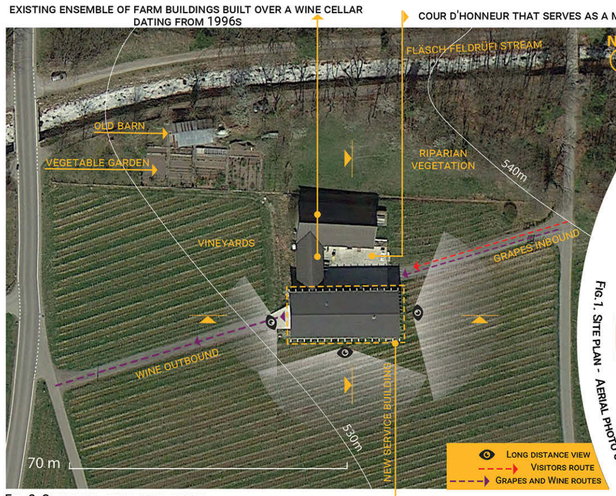
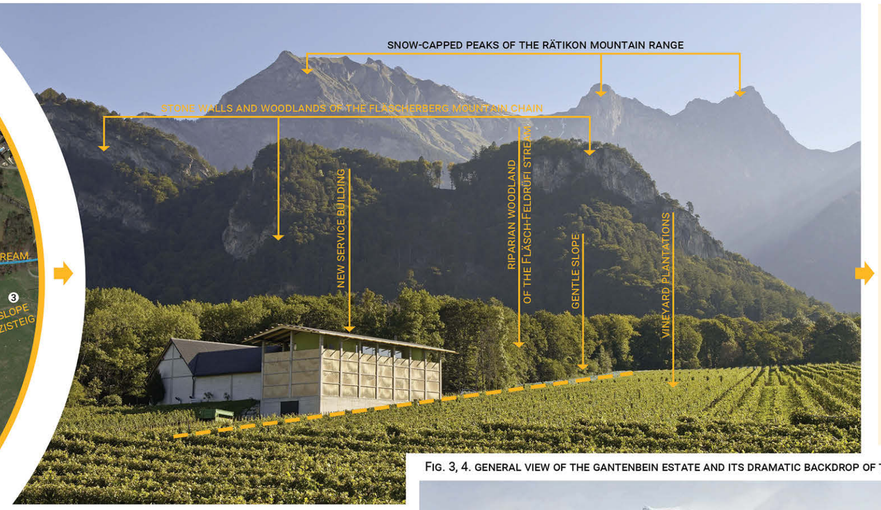


FIG. 2. SITE PLAN - COURTYARD SCALE

HAS A SIMPLE RECTANGULAR FOOTPRINT | THE LENGTH OF THE BUILDING IS ORIENTED ALONG OF THE EXISTING BUILDINGS, THUS COMPLIMENTING THEM AND FORMING A MODEST COUR D'HONNEUR |

FIG. 1. SITE PLAN - AERIAL PHOTO OF THE GANTENBEIN ESTATE AND ITS PHYSICAL CONTEXT

(1) THE BUILT-UP AREA UNDER THE STUDY | (2) VINEYARDS | (3) MEADOWS (4) RIPARIAN WOODLANDS | (5) RESIDENTIAL AREA OF FLÄSCH VILLAGE (6) HEDGEROWS | (7) PATCH OF ARABLE CROP



THE BUILT-UP AREA UNDER THE STUDY (1) IS LOCATED ON A GENTLE SLOPE AT THE SOUTHERN EDGE OF THE PREDOMINANTLY WINE-GROWING VILLAGE OF FLÄSCH (5). THE VILLAGE WITH ITS AGRICULTURAL LAND STRETCHES ON THE RIGHT SIDE OF THE ALPINE RHEIN VALLEY AND IS OVERSHADOWED BY THE FLÄSCHERBERG AND ST. LUZISTEIG – THE MOUNTAINS OF THE RÄTIKON MOUNTAIN RANGE OF THE CENTRAL EASTERN ALPS. THE WINE ESTATE AND ITS VINEYARDS, WHICH ARE CONCENTRATED ON ITS SOUTHERN PART, ARE DELIMITED FROM THE RESIDENTIAL AREA AND RHINE RIVER BY THE RIPARIAN WOODLAND (4) OF THE FLÄSCH-FELDRÜFI STREAM. SHAPED BY THE RIVERINE VEGETATION (4) , A PATCH OF ARABLE CROP (7) AND A PATCH OF GRASSLAND (3), A RURAL ROAD AND A HEDGEROW (6), THE VINEYARDS ARE DIVIDED INTO LARGE RECTANGULAR PLOTS THAT SLIGHTLY HUG THE MEADOW SLOPE OF ST. LUZISTEIG MOUNTAIN. THE PLOTS, COMPOUND OF CALCAREOUS SOIL, ARE CHARACTERIZED BY THE PARALLEL VINE ROWS WITH VEGETATION ALLEYS FOLLOWING THE INCLINATION OF THE SLOPE. THE ENTIRE PROPERTY IS REIGNED BY THE FORESTS INTERSPERSED WITH VERTICAL ROCKFALLS OF THE MOUNTAINS.

FIG. 3, 4. GENERAL VIEW OF THE GANTENBEIN ESTATE AND ITS DRAMATIC BACKDROP OF THE THE RÄTIKON MOUNTAIN RANGE

NEW WINERY - RESPECTS THE HEIGHT, SCALE, PROPORTIONS OF THE EXISTING BUILDINGS | UTILISES THE NATURAL CONTOUR OF THE SITE - THE LOWER FLOOR IS MOSTLY BURIED INTO THE SLOPE |

FIG. 5, 6. WINERY'S TRANSVERSAL AND LONGITUDINAL SECTIONS, REFLECTING THE CONNECTION WITH THE TERRAIN AND HOST BUILDINGS

THE NEW WINERY STANDS IN AN **ALLIANCE AND HARMONIOUS BALANCE** WITH ITS HOST BUILDINGS AND NATURAL SURROUNDINGS AND HAS STRONG SYMBOLIC REFERENCE TO THE SITE. THE ARCHITECTS TOOK INTO CONSIDERATION THE ELEMENTS THAT ARE PART OF THE CULTURAL AND SPATIAL IDENTITY OF THE TERRITORY AND WHICH ARE ESSENTIAL, NAMELY THE CHARACTER OF THE EXISTING BUILDINGS, THE TOPOGRAPHY OF THE LAND AND THE GRAPEVINE - THE MAIN ELEMENT OF THE DIRECT SURROUNDINGS. BY USING THE NATURAL CONTOUR OF THE SITE, EMBEDDING A PART OF THE BUILDING INTO THE SLOPE IT WAS REDUCED THE BUILDING'S SCALE, THEREBY MITIGATING THE VISUAL IMPACT OF THE BUILDING'S MASS AND KEEPING THE HEIGHT OF THE EXISTING BUILDINGS. BY EMPLOYING A SIMPLE GEOMETRIC SHAPE, A CONCRETE SHELL, A GABLE ROOF COVERED WITH CORRUGATED SHEETS (ASPECTS THAT ARE REFLECTED IN THE ARCHITECTURE OF EXISTING BUILDINGS) AND LIGHT TAN-COLOURED BRICKS - AN ARCHAIC MATERIAL - IT WAS ACHIEVED HARMONY BETWEEN THE NEW ARCHITECTURE AND ITS CONTEXT. IN ADDITION, THE INNOVATIVE USE OF BRICK (THE OPEN-WORK MASONRY) NOT ONLY GIVES THE RELIEF STRUCTURE TO THE WALLS REMINISCENT OF BUNCHES OF GRAPES BUT ALSO GIVES AND ALMOST TRANSPARENT APPEARANCE TO THE BUILDING. DUE TO ITS COMPLEX FACADE DESIGN, THE WINERY IS CONSIDERED A TEMPLE OF CONTEMPORARY ARCHITECTURE PAYING HOMAGE TO WINE.

CONCLUSION

NEW BUILDIG - RECTANGULAR STRUCTURE WITH A CONCRETE SHELL PARTLY FILLED WITH SANDSTONE BRICKS AND COVERED WITH A PITCHED ROOF OF CORRUGATED SHEETS

EXISTING BUILDINGS - RECTANGULAR STRUCTURES WITH A CONCRETE SKELETON FILLED BY LIMESTONE BLOCKS AND PITCHED ROOFS OF CORRUGATED SHEETS

FIG. 7. CLOSE VIEW OF THE NEW WINERY AND THE EXISTING BUILDINGS, REFLECTING THEIR SHAPE, SCALE AND USED MATERIALS

THE OUTER SKIN WITH THE INNOVATIVE USE OF BRICK IS THE MOST IMPRESSIVE PART OF THE STRUCTURE. THE BRICKS LAID IN DIFFERENT ANGLES WITH OPEN JOINTS FORM THE THREE-DIMENSIONAL PATTERN OF GIGANTIC GRAPES.

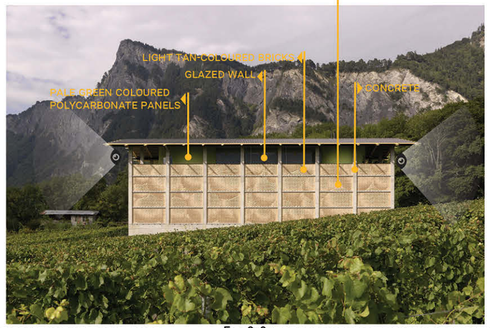


FIG. 8, 9. SIDE AND AXONOMETRIC VIEWS, REFLECTING THE THREE-DIMENSIONAL PATTERN OF GRAPES ON THE BUILDING'S ENVELOPE

THE WINERY HAS AN INTERIOR AND EXTERIOR CONNECTION WITH THE LANDSCAPE - THE GLAZED WALLS OF THE TASTING ROOM FRAME THE SCENIC VISTA WHILE THE LOGGIA RUNNING ALONG THE WALLS PROVIDES A PANORAMIC VIEW OF THE DRAMATIC ALPINE LANDSCAPE

FIG. 10, 11, 12. VIEWS OF THE WINERY'S FERMENTATION ROOM, TASTING ROOM AND LOGGIA

LAVAUX VINORAMA, RIVAZ (CH)

ARCHITECTS: PASCAL FOURNIER & SANDRA MACCAGNAN (www.fourniermaccagnan.ch) IN COLLABORATION THE ARTIST DANIEL SCHLAEPFER (www.dschlaepfer.com) | USABLE AREA: 330 sq.m. | 2010 | WINE REGION: VAUD - LAVAUX | www.lavaux-vinorama.ch |

(1) THE BUILT-UP AREA UNDER THE STUDY IS LOCATED IN EXTREME AND DRAMATIC LANDSCAPE STRUCTURED BY THE TERRACED VINEYARDS | | (2) HIGHWAY | (3) RAILWAY LINES | (4) FORESTAY WATERFALL | (5) RIPARIAN VEGETATION | (6) VINEYARDS - THE PRODUCTIVE LAND IS DIVIDED INTO DYNAMIC, INTRICATE PATTERNS CHARACTERIZED BY THE STEEP STONE-WALLED TERRACES RUNNING IN PARALLEL AND PERPENDICULAR DIRECTIONS TO THE SLOPE | (7) RESIDENTIAL AREA OF RIVAZ VILLAGE | (8) WATER BODY OF LAKE GENEVA |

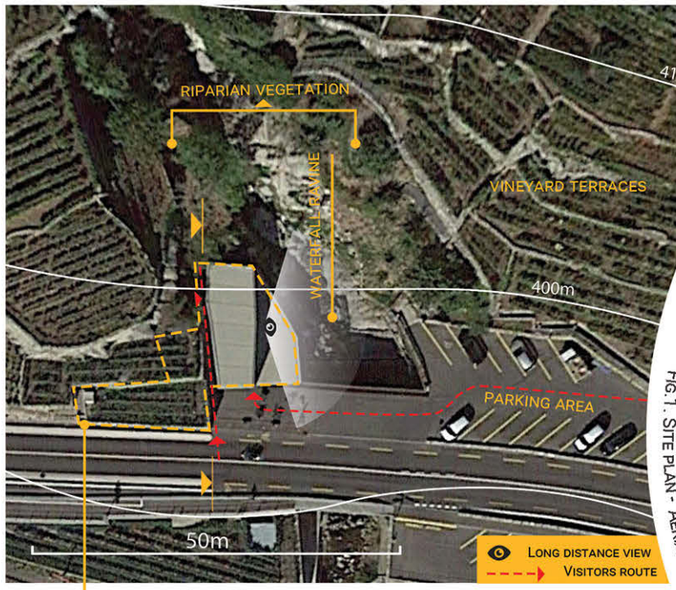


FIG. 2. SITE PLAN - COURTYARD SCALE

THE BUILDING FOOTPRINT HAS AN IRREGULAR GEOMETRIC SHAPE, WHICH WAS GUIDED BY THE ADJACENT VINEYARD TERRACES AND THE WATERFALL RAVINE. THE BUILDING'S MASS IS DIVIDED INTO TWO VOLUMES BY A NARROW STAIRCASE THAT SERVES AS OUTDOOR ACCESS TO THE CONFERENCE ROOM AND ALSO TO THE VINEYARD TERRACES.

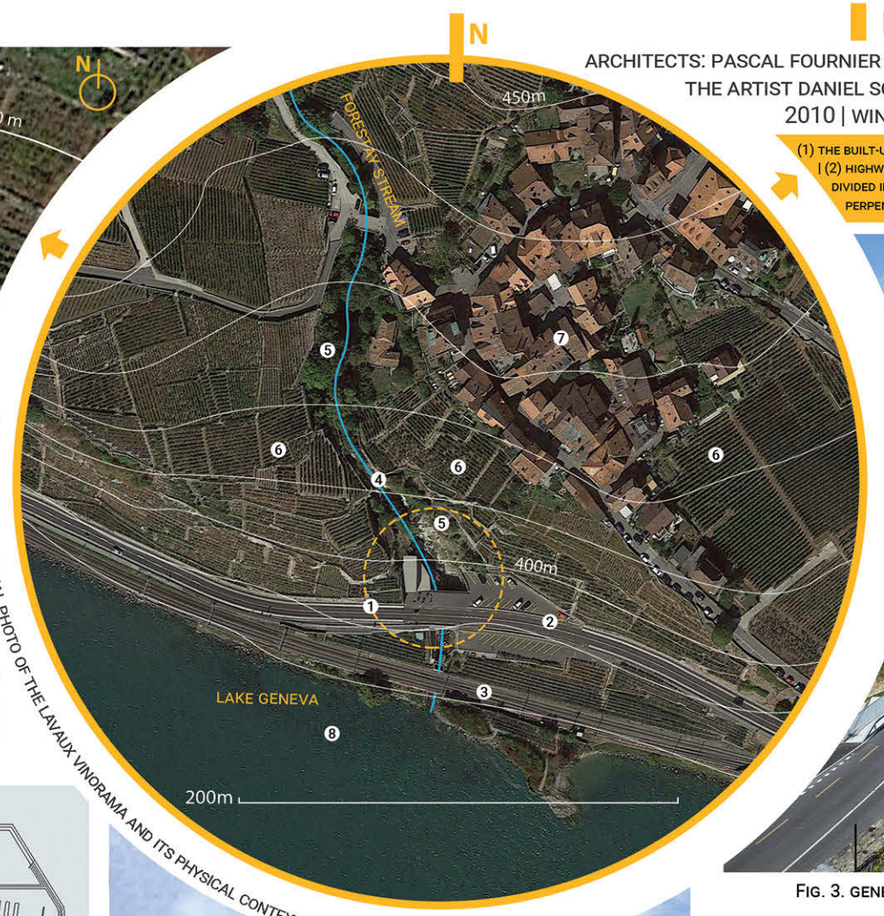


FIG. 1. SITE PLAN - AERIAL PHOTO OF THE LAVAUX VINORAMA AND ITS PHYSICAL CONTEXT

FIG. 3. GENERAL VIEW OF THE LAVAUX VINORAMA AND ITS NATURAL AND HISTORICAL CONTEXT

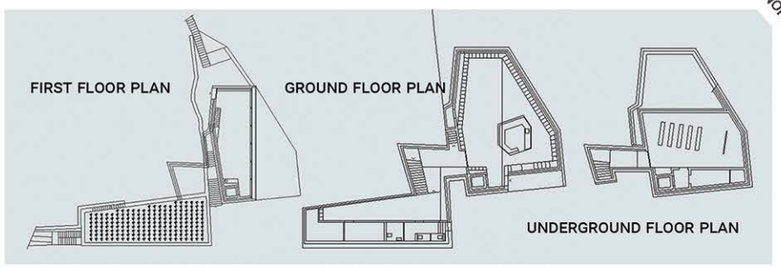


FIG. 4. LAYOUTS OF THE BUILDING

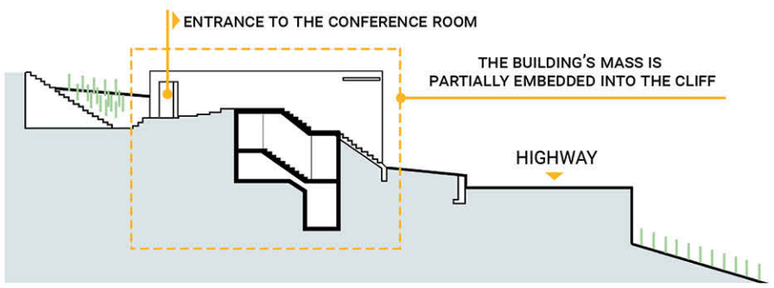
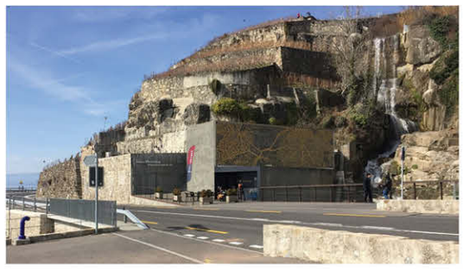


FIG. 5. CROSS-SECTION OF THE BUILDING, REFLECTING THE CONNECTION WITH THE TERRAIN

FIG. 6. VIEW FROM THE TASTING ROOM TOWARD THE LANDSCAPE



THE DESIGN CONCEPT WAS BASED TO A GREAT EXTENT ON THE MORPHOLOGY OF THE LANDSCAPE. THE ARCHITECT WAS INFLUENCED AND INSPIRED BY THE STEEP STONE-WALLED TERRACES - THEIR RHYTHM, GEOMETRY AND MATERIALS - THAT CHARACTERIZE THE LANDSCAPE. THE GREY STRUCTURE SEEMS TO BE AN EXTENSION OF THE ASCENT ABOVE THE BUILDING: THE VINEYARD COVERS THE TOP AND THE CONCRETE FACADES RECALL THE USUAL TERRACE SUPPORT OF THE SURROUNDINGS. THE IMAGE OF THE BUILDING IS HIGHLIGHTED BY THE PRESENCE OF A STRETCHED STEEL CANVAS REPRESENTING PIXELATED VINE LEAVES. ENTIRELY THE BUILDING IS SUBORDINATED TO THE LANDSCAPE AND BLEND PERFECTLY INTO IT.

MONOLITHIC CUBE NESTLED LIKE A FORTRESS INTO THE STEEP SLOPES, EMULATING THE ROCKY CLIFF WHERE GRAPE VINES ENJOY THE WARM AND MOISTURE-LADEN AIR

FIG. 7, 8, 9, 10. CLOSE VIEWS OF THE WINERY, REFLECTING THE SHAPE, SCALE, USED MATERIALS AND THE RELATIONSHIP WITH THE LANDSCAPE

NEW WINERY OF THE MAROF ESTATE, MAČKOVCI (AT)

ARCHITECT: ANDREJ KALAMAR | AREA: 2.200 sq.m. | 2009 |
WINE REGION: PODRAVJE - PREKMURJE | https://marof.eu/en/ |

(1) THE BUILT-UP AREA UNDER THE STUDY IS LOCATED IN THE BOSOM OF THE GORIČKO REGIONAL PARK, IN THE WEST OF THE RESIDENTIAL AREA OF MAČKOVCI VILLAGE (4) | IT IS SURROUNDED BY SLIGHTLY ROLLING HILLS COVERED WITH VINES (2), MEADOWS (3) AND LUSH FOREST (5).

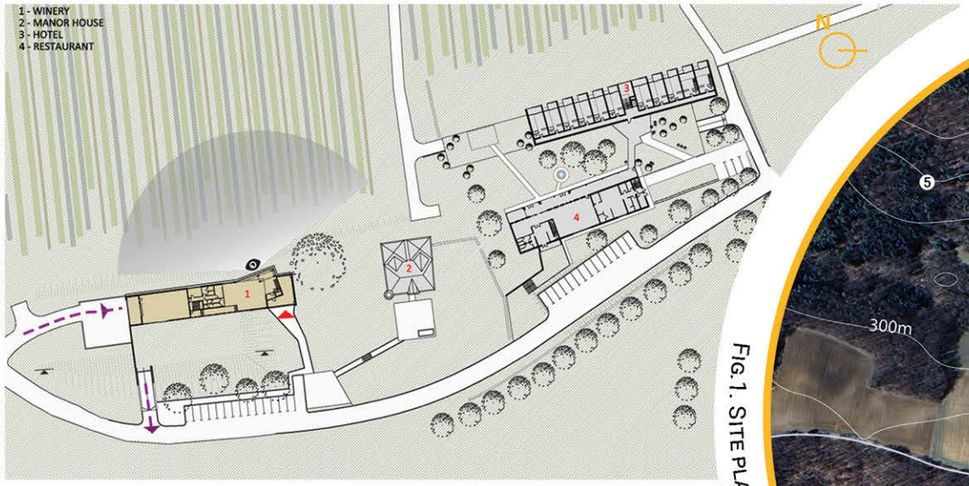


FIG. 2. SITE PLAN - COURTYARD SCALE

VISITORS ROUTE — LONG DISTANCE VIEW
GRAPES AND WINE ROUTES

FIG. 1. SITE PLAN - AERIAL PHOTO OF THE MAROF ESTATE AND ITS PHYSICAL CONTEXT

FIG.3. BIRD'S EYE VIEW OF THE ESTATE AND ITS NATURAL AND CULTURAL CONTEXT

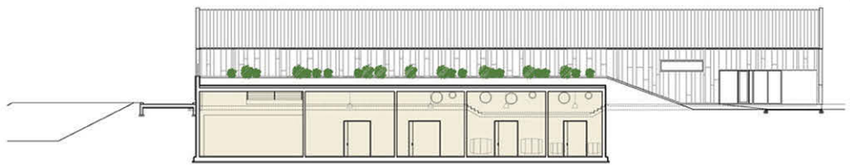


FIG. 9. LONGITUDINAL SECTION OF THE WINERY, REFLECTING THE CONNECTION WITH THE TERRAIN

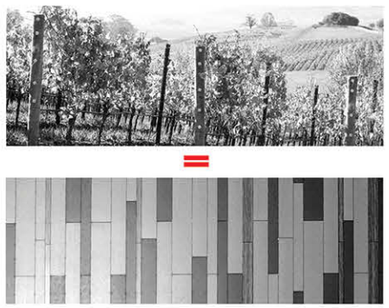


FIG. 8. CLOSE VIEW OF THE BLENDED PALETTE OF GREY AND BROWN PANELS, WHOSE RHYTHMICALLY TEXTURE IMITATES THE ARRANGEMENT OF GRAPEVINE SUPPORT STAKES

THE WINERY IS DESIGNED IN THE SPIRIT OF TRADITIONAL ARCHITECTURE BUT WITH AN ARTISTIC TOUCH. EMBEDDED PARTIALLY INTO THE SLOPE, THE FACADES OF THE VISIBLE PART WERE INSPIRED BY THE VINEYARD STRUCTURE, NAMELY, THE DYNAMIC TEXTURE AND MATERIALS RECALL THE GRAPEVINE SUPPORT STAKES, WHILE THE VOLUME SHAPE, ROOF'S ANGLES AND MATERIAL FOLLOW THE CHARACTER OF THE TRADITIONAL BUILT ENVIRONMENT. DUE TO ITS SCALE, SHAPE AND NEUTRAL PASTEL COLOURS OF THE FACADES, THE BUILDING STANDS IN ALLIANCE AND HARMONY WITH ITS NATURAL AND CULTURAL CONTEXT.

FIG.7. VIEW FROM INSIDE TOWARDS THE LANDSCAPE

FIG.4, 5, 6. AXONOMETRIC VIEWS OF THE WINERY, REFLECTING ITS SCALE, SHAPE, USED MATERIALS AND ELEMENTS

ŠKALCE WINERY, SLOVENSKE KONJICE (SI)

ARCHITECTS: ANDREJ KEMR & IGOR SKULJ | GROSS FLOOR AREA: 3.500 sq.m. | 2009 |
WINE REGION: PODRAVJE | www.zlati-gric.si |

(1) THE BUILT-UP AREA UNDER THE STUDY IS NESTLED BETWEEN THE GENTLY ROLLING HILLS COVERED WITH VINE ROWS (3) AND MEADOW (2), STRUCTURED BY WAVING ROADS AND SURROUNDED BY THE WOODED HILLS (5) AND RESIDENTIAL AREA OF THE MEDIEVAL TOWN OF SLOVENSKE KONJICE (6)

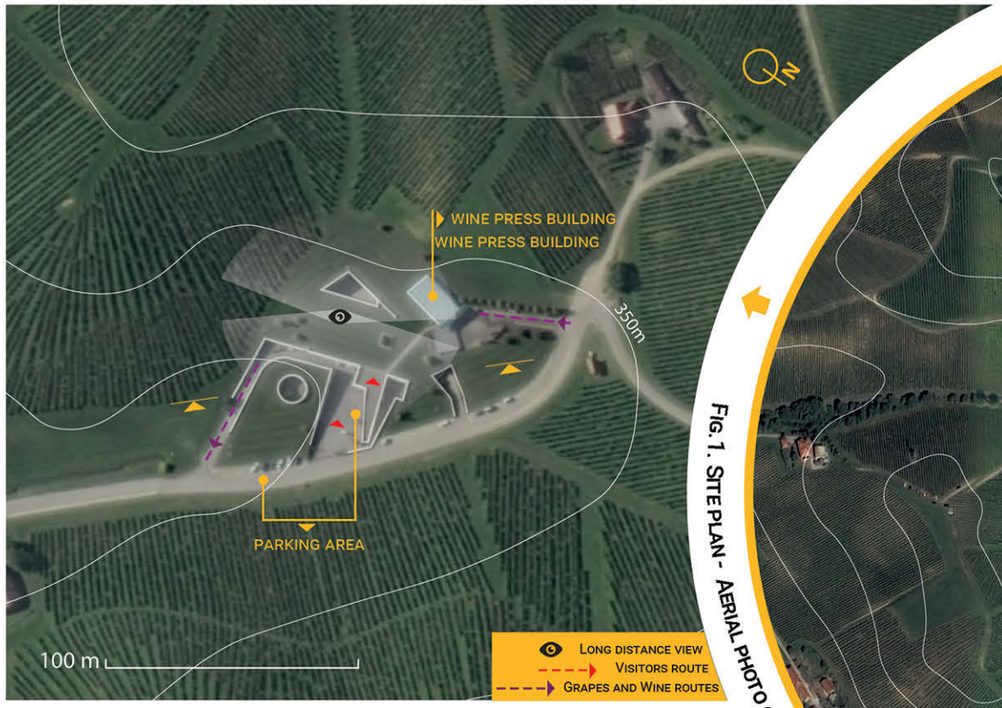


FIG. 2. SITE PLAN - COURTYARD SCALE

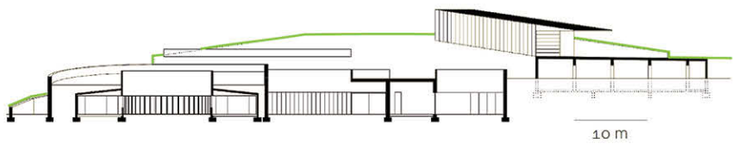


FIG. 3. WINERY'S CROSS-SECTION, SHOWING THE CONNECTION WITH THE TERRAIN

FIG. 1. SITE PLAN - AERIAL PHOTO OF THE ŠKALCE WINERY AND ITS PHYSICAL CONTEXT

FIG. 6, 7, 8, 9, 10. VIEWS OF THE BUILDING FRAGMENTS

IN ORDER TO KEEP THE VITICULTURAL LANDSCAPE INTACT, ALSO DEVELOPED A CONCEPT FOR A BUILDING ALMOST COMPLETELY COVERED BY GREEN SOIL. THE BUILDING, BEING PREDOMINANTLY SITUATED BELOW GROUND LEVEL OF THE SLOPE AND COVERED BY A GRASSY, SLIGHTLY SLANTED ROOF, MELTS SMOOTHLY INTO THE GRASSY SLOPE OF THE VINEYARD-CLAD HILLS. THE GREEN ROOF FOLLOWS THE CONFIGURATION OF THE LAND THUS ONLY SLIGHTLY CHANGING THE ENVIRONMENT. THE WHITE SHARP GEOMETRIC SHAPES OF THE ATRIUMS THAT PIERCE GREEN BLANKET AND WINEPRESS - THE ONLY PART OF THE WINERY THAT IS SITUATED ABOVE THE GROUND - ARE THE ELEMENTS THAT REVEAL THE PRESENCE OF THE WINERY. THE WHITE COLOUR (A DISTINCTIVE FEATURE OF EXISTING BUILDINGS) OF THE PROTRUDING PARTS CREATE A HARMONIOUS CONTRAST WITH THE GREEN SLOPES AND AN ALLIANCE WITH THE SURROUNDING BUILDINGS.

FIG. 4, 5. GENERAL VIEWS OF THE WINERY AND ITS NATURAL AND CULTURAL CONTEXT