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# Cultivating Archaeological Landscape

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## *Notes on a Mediterranean Applied Case Study*

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### *Attribution*

– Silvia Guideri is the author of paragraphs 3, 4 and 7, whereas Tessa Matteini is responsible for paragraphs 0, 1, 2, 5 and 6. Paragraph 8 can be attributed to both of them.

*The paper proposes an interdisciplinary exploration in order to define a set of strategies and tools oriented at planning/design/management of archaeological landscapes, especially featured by productive layers.*

*The article adopts as a key dimension the “cultivating” approach, which can become a fertile ground for experimentation for developing sustainable and innovative planning methodologies to be applied in layered landscapes. In an extended semantic dimension, the term cultivation can be interpreted as a continuous attitude of taking care of (archaeological) places over time, to preserve and regenerate resources for the future in a holistic vision, also considering*

*economic sustainability and liveability for inhabitants and local fauna.*

*The cultivating approach can preserve heritage places by an active and inventive conservation, also fostering biodiversity and temporal diversity. As a case study, the article proposes the Landscape Masterplan for the Baratti and Populonia Archaeological Park.*

- 1 Massimo Angelini, *Dalla cultura al culto* (Genoa: Nova Scripta 2012), 39-46; about the term *cultivation*, see also the contribution: Tessa Matteini, “Coltivazione,” in *40 parole per la cura della città. Lessico dei paesaggi della salute*, Isotta Cortesi, Alessandra Criconia, and Anna Giovannelli, eds. (Macerata: Quodlibet 2020), 95-99.
- 2 Louis Albertini, *Agriculture Méditerranéennes. Agriculture et paysage des origines à nos jours* (Arles: Actes Sud, 2009) 14, 45.
- 3 For the derivation of the term *cultivation*, see Angelini, *Dalla cultura al culto*. For the connection among practical and poetic dimension of cultivating, Luigi Latini and Tessa Matteini, *Manuale di Coltivazione pratica e poetica per la cura dei luoghi storici e archeologici nel Mediterraneo* (Padua: Poligrafo 2017).
- 4 Silvia Guideri, “La rocca di S. Silvestro e il sistema dei parchi,” in *Manuale di Coltivazione pratica*, 282.
- 5 Patrizia Boschiero, Luigi Latini, and Simonetta Zanon, ed. *Curare la terra Luoghi, pratiche, esperienze /Caring for the land. Places, practices, experiences* (Treviso: FBSR-Antiga Edizioni, 2017).

### For a Semantic Introduction

Before addressing the core issues proposed by this paper, it seems crucial to explore the different meanings of the verb *cultivate*, highlighting its broad semantic extension, as interpreted and proposed in recent works focusing on landscape architecture projects.

In order to do this, we should remind ourselves that the term *cultivation* derives from the Latin verb *còlere* which is supposed to have come from an Indo-European root *kwel*, intended with the primary meaning of di “revolving the soil,” “tilling the earth.”<sup>1</sup>

Specifically, the Latin word expresses the wide range of cultivation and farming practices, but it also means “to take care of,” “to treat with respect,” “to venerate,” and by extension, “to dwell,” “to inhabit” and “to live in.”

In fact, we can enhance how *cultivating* signifies, first of all, becoming sedentary and appropriating a place to till it and make it fertile, therefore passing from the nomadism of hunters/gatherers to the sedentary life that generated the first settlements, following an evolutionary process that in the Fertile Crescent is documented between the 10th and 9th century BC.<sup>2</sup>

The term *culture* is also derived from the same root and from the future participle of *còlere* and, in affinity with this second germination from the Latin verb, we can place the metaphorical *cultivation* of knowledge, but also the *cultivation* of future projects, thus, from the semantic point of view, constituting an inseparable connection between the practical and the poetic dimension of cultivating.<sup>3</sup>

The word can also be interpreted as *exploitation* (in particular of the mineral resources present in a specific place, or in the case of intensive agricultural crops), thus assuming an antithetical meaning compared to the nuances of the original vocation, which implies an attitude of care, respect and sustainable and balanced use.<sup>4</sup>

Taking into specific consideration the landscape architecture field, and the art of “making places,” we can highlight how the action of cultivating can be interpreted as the continuity of taking care of places over time.<sup>5</sup> In fact the word *cultivation* also implicitly incorporates the chronological dimension in both its forms: either the evolutionary process (*linear time*) and of cyclicity/seasonal return (*circular time*).

Due to these aspects of continuity and evolution, the specific practices concerning cultivation (working the land, sowing and planting, pruning, watering, harvesting, in addition to different crop care required by the various species) have to be necessarily guided by an overall and strategic vision that is projective and experimental, and in this sense, strictly related to a *planning/design/project* approach.

Thus, a proactive and strategic vision, generated by that “forward-looking attitude” recommended by the European Landscape Convention (Florence, 2000) seems essential for all the protection,

- 6 Definition proposed by Gilles Clément in Alessandro Rocca, *Gilles Clément, Nove giardini planetari* (Milan: 22 publishing, 2007) 63.
- 7 Tessa Matteini, “Coltivare i luoghi delle archeologie,” in *Antiche presenze e nuove figurazioni*, ed. Fabio Fabbrizzi (Florence: Edifir, 2020), 163-172.
- 8 Latini and Matteini, *Manuale di Coltivazione pratica*; the term *Inventive Conservation* is proposed by Pierre Donadieu. See “Pierre Donadieu,” in Augustin Berque et al., *La Mouvance. Du jardin au territoire, cinquante mots pour le paysage* (Paris: La Villette, 1999), s.p.
- 9 About landscape project for urban archaeological sites, see Matteini “Strategie per la conservazione attiva e inventiva dei siti archeologici urbani,” in *Ruderi, baracche e bambini. CEIS. Riflessioni a più voci su di una architettura speciale*, Andrea Ugolini, ed. (Florence: Altralinea, 2017) 88-107; for a definition of *Urban Archaeology* see Riccardo Francovich, Daniele Manacorda, ed., *Dizionario di Archeologia* (Rome; Bari: Laterza, 2006), 350.
- 10 Simona Ceschin, Giulia Caneva, and Alma Kumbaric, “Biodiversità ed emergenze floristiche nelle aree archeologiche romane,” *Webbia* 61 (1) (2006): 133-144.

management and planning processes applied to urban and rural landscapes, in which the project and the care of (and for) the living components, whether plant, animal or human, necessarily involve the ability to project the gaze to the future in order to cultivate its various and unpredictable possibilities. In this sense, the verb *cultivate* has remarkable similarities with the practice of a landscape architect who plans and designs open spaces through the different scales of space and time, taking care of the “void and the living” just like any other crop-farmer. <sup>6</sup>

### 1 Cultivating Archaeological Places<sup>7</sup>

Adopting these premises, the aim of the paper is to reflect on issues of active and *inventive* conservation for archaeological systems integrated in a rural landscape, and on their possible *cultivation*, interpreting this term in a broader and deliberately project-based semantic meaning.<sup>8</sup>

How can we rediscover and reinvent these special archaeological cores making them accessible (from a physical and cultural point of view) for the contemporary era? And what are the visions, strategies and tools that can be adopted for their innovative, compatible and sustainable reinterpretation through the landscape architecture project?

Urban archaeologies are usually integrated within the multiple stratification of cities and are connected with their complexity and temporal diversity,<sup>9</sup> rich in interactions between the different settlement levels, and an index of continuity of occupation, whereas an archaeological complex located in a rural setting generally follows a completely different fate.

These particular categories of open spaces can be defined as “temporal islands” in the surrounding agricultural landscape system, because they allow access to the historical depth of the places, experimenting with different chronological dimensions.

In agricultural landscapes, various seasonal practices supporting the crops are cyclically repeated and periodically renewed and modified, in a constant and progressive adaptation to the changing environmental and/or economic needs.

Archaeological structures integrated within this kind of landscape recognize another type of temporality, no longer linked to needs of use and functional contingencies, but rather influenced by the natural dynamics of alteration of the materials composing them, and by the sequences of the different and evolving ecological processes.

From an ecological point of view, it might be useful to recall that archaeological sites generally constitute an important reservoir of biological diversity: low anthropic pressure, and the presence of peculiar and diverse environmental conditions, often favour the establishment of rare species finding a habitat favourable to their development in these spaces.<sup>10</sup>

In rural zones these environments can thus become precious oases of biodiversity and ecological complexity, of course after due consideration of the advisability of vegetation in proximity to archaeological

- 11 Defined by Signorini in 1996. Maria Adele Signorini, "L'indice di pericolosità: un contributo del botanico al controllo della vegetazione infestante nelle aree monumentali," in *Informatore botanico italiano*, 28 (1) (1996), 714. Adopted in 2017 to compose a matrix of compatible species to be used in archaeological areas. Signorini, "Le piante delle rovine e la fatica di distruggere il giardino perfetto" in Latini and Matteini, *Manuale di coltivazione pratica*, 287-299.
- 12 For travel literature in Italy: Attilio Brilli, *Quando viaggiare era un'arte* (Bologna: Il Mulino, 1995); Cesare De Seta, *Vedutismi e viaggiatori in Italia tra Settecento e Ottocento* (Turin: Bollati Boringhieri, 1999); Raffaele Milani, *Il paesaggio è un'avventura. Invito al piacere di viaggiare e di guardare* (Milan: Feltrinelli, 2005). Beside the most renowned travel memories (Goethe, Ruskin, Dickens, Chateaubriand....), we can quote Elizabeth Caroline Johnstone Gray, *Tours of the Sepulchres of Etruria in 1839* (London: J. Hatchard and Son, 1843); George Dennis, *Cities and cemeteries of Etruria* (London: John Murray, 1848); Louis Simonin, *L'Etrurie et les Etrusques, souvenirs de voyage. Arezzo, le Val di Chiana et les ruines de Chiusi* (Paris: Librairie Internationale, 1866); Paul Bourget, *Sensations d'Italie, Toscane-Ombrie- Grand Grèce* (Paris: Plon, 1891).
- 13 Letter from Segeste, April 20, 1787 in Johann Wolfgang Goethe, *Goethe's Travels in Italy together with his second Residence in Rome and Fragments of Italy*, trans. from German (London: George Bell and sons, 1885), 260.

structures, and the use of appropriate instruments to evaluate their controlled coexistence, such as the *index of danger*.<sup>11</sup>

The memory and isolated and unstable remains of a lost, interrupted (or even removed) time, the archaeological presences inhabiting the rural landscape were usually found following the reports (literary or iconographic) of travellers, or they re-emerged fortuitously in response to the tools of the farmers tilling the earth.

The history of archaeological finds in agricultural areas is closely intertwined with the transformations of places and with cultivation practices: in many cases works carried out for the reclamation of the marshy areas or excavations for new tree plantations triggered the first step towards the discovery of the ruins scattered in the countryside of Central Italy, such as the Etruscan tumuli or the rustic villas of the Roman era.

On the other hand, the account of the explorations of archaeological sites in Etruria, Magna Graecia and Sicily, constituting a real *topos* in the travel literature in Italy between the 18th and early 20th centuries, is often usefully integrated with description, understanding and interpretation of the surrounding rural landscape.<sup>12</sup>

Thus, in narrations of writers, artists and naturalists, the description of ruins populating the countryside of the Maremma or of the Southern Italy is often preceded or followed by considerations on the crops and agricultural practices of the fields surrounding necropolises and ancient cities.

Some of Goethe's most interesting observations on Italian agriculture and agrarian practices in the 18th century are inspired by an excursion to the Valley of the Temples in April 1787, while in Segesta. The attention of the naturalist and the enchantment of the poet coexist, solicited by an extraordinary rural archaeological landscape: "The district reposes in a sort of melancholy fertility – every where well cultivated, but scarce a dwelling to be seen. Flowering thistles were swarming with countless butterflies, wild fennel stood here from eight to nine feet high, dry and withered of the last year's growth [...]. A shrill wind whistled through the columns as if through a wood, and screaming birds of prey hovered around the pediments."<sup>13</sup>

A century and a half of exploration has consolidated the dialectical relationship between archaeologies and rural landscape hosting them, defining categories and instruments of observation, but, above all, highlighting the alternation between different phases and temporalities. In this sense we can quote the statement of the physician and naturalist Giorgio Santi, who, in 1806, regarding the Roman remains found on the acropolis of Populonia, wrote: "on the slope of the hill we saw reservoir underground a, the external area of which was already covered by a well-connected and well-preserved marble pavement. But this pavement was, according to the usual destiny of such discoveries, unmade without

- 14 “[...] nella pendenza del Poggio vedemmo sotterra una conserva d’acqua, la di cui area esterna già era coperta da un lastrico di marmo ben connesso e ben conservato. Ma questo pavimento fu, secondo il solito destino di tali scoperte, disfatto senza discrezione allorché fu esso trovato nel lavorarvi il campo, giacché anche qui ciò che fu Città adesso è campo, come a Saturnia, a Cosa, a Roselle. Giorgio Santi, *Viaggio Terzo per le Due Province Senesi che forma il seguito del Viaggio al Montamiata*, (Pisa: Ranieri Prospero, 1806), 193.
- 15 Emilio Sereni, *Storia del paesaggio agrario italiano* (Rome; Bari: Laterza, 1989), 100-102; 227-229.
- 16 Giuseppe Barbera, “Sul giardino mediterraneo,” in Latini and Matteini, *Manuale di Coltivazione pratica*, 18.
- 17 Matteini, *Paesaggi del tempo. Documenti archeologici e rovine artificiali nel disegno di giardini e paesaggi* (Florence: Alinea, 2009).

discretion when it was found in working the field, since here too what was once city is now field, as in Saturnia, in Cosa, in Roselle.”<sup>14</sup>

## 2 Exploring Mediterranean Peculiarities

It may be interesting to combine the concept of *cultivation* of archaeological sites with the complex and controversial *milieu* of the Mediterranean basin, where classical civilizations have left a widespread and complex system of remains, while climatic conditions and the general need for water resource management introduce specific variables influencing in an important way care and construction of the landscapes of the *Mediterranean garden*.<sup>15</sup>

Giuseppe Barbera underlines the peculiar capacity of Mediterranean landscapes to “know how to mix biological and cultural diversity: to handle flora, fauna, and civilizations coming from three continents, with seasonal and geomorphological climatic variability, able [...] to develop different eco-system services.”<sup>16</sup>

We can add the famed literary and iconographic tradition established since the end of the 15th century that has consolidated in the collective imagination the image of Mediterranean landscape heritage as a natural area of ecological and aesthetic contamination and integration between archaeological systems and vegetation.<sup>17</sup>

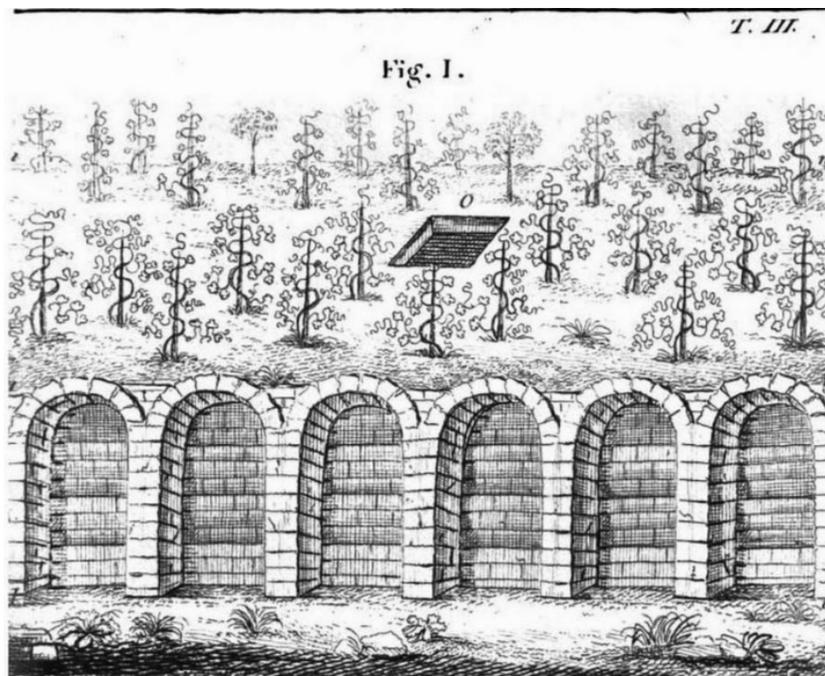


fig. 1 Giorgio Santi, *Viaggio Terzo per le due Province Senesi*, Pisa, 1806 (drawing by B. Benvenuti).

- 18 Considering suitable to be used in archaeological areas only “classical species” such as *Pinus pinea*, *Laurus nobilis*, *Quercus ilex*, *Buxus sempervirens*; about the use of *vegetation codes*, Ibid., 120-121.
- 19 *Flora dei Monumenti* (1896). Quoted in Massimo De Vico Fallani, *I parchi archeologici di Roma. Aggiunta a Giacomo Boni: la vicenda della “flora monumentale” nei documenti dell’Archivio Centrale dello Stato* (Rome: Nuova Editrice Spada, 1988), 65.
- 20 Matteini, “Il progetto di paesaggio per un sito archeologico Mediterraneo,” in Latini and Matteini, *Manuale di coltivazione pratica*, 256-262.
- 21 Andrea Ugolini and Matteini, “Trasformando lo sguardo. Il ruolo della vegetazione nella conservazione dei manufatti in forma di rudere,” in Mestre, Guido Driussi e Guido Biscontin, eds, *Eresia ed ortodossia nel restauro. Progetti e realizzazioni*, Atti del 32° Convegno Internazionale Scienza e Beni culturali (Bressanone: 28 June-1 July 2016), 461-470.
- 22 Matteini, “Il progetto di paesaggio,” 259.

In light of these considerations, it should be remembered that since the early decades of the 20th century, a series of political and cultural factors along the shores of the Mediterranean have conditioned the *vegetation codes* adopted for landscape intervention on archaeological sites, which has resulted in a clear reduction in biodiversity through the widespread homogenization of botanical choices.<sup>18</sup>

The reductive oxymoronic ideal of “immobile nature,” particularly appreciated by the aesthetics of the early decades of the last century, does not take into consideration the wealth of the Mediterranean botanical repertoire, already known in Roman times and reinterpreted by Giacomo Boni at the beginning of the 20th century in his list of species suitable for the *Flora of Monuments*.<sup>19</sup>

Today, the aspiration to total site control, protection from possible damage, and ease of maintenance, often undertaken with little understanding of the ecological implications and the relationship dynamics between vegetation and artefacts, frequently leads to the *desertification* of archaeological areas.

This tendency towards the reduction and simplification of the diversity naturally present in this kind of environment makes the challenge of cultivating historical and archaeological places more difficult, and therefore more imperative,<sup>20</sup> with the objectives of increasing ecological complexity and resilience and adaptation to climatic stress, in short, of promoting active conservation.<sup>21</sup>

The work of the landscape architect and of the archaeologist, obviously supported by an interdisciplinary team integrating all the necessary skills for work in such fragile sites, essentially consists in formulating objectives, strategies and interventions to guide active conservation, management and compatible transformations of the places, taking into account the complexity and the chronological component of the existing archaeological structures and landscape systems.

It means being able to work on different scales and to trigger or reactivate historical, cultural, ecological and functional relationships in space and time, preserving the existing heritage of biological and temporal diversity.<sup>22</sup>

To illustrate this kind of *cultivating* approach, an example case-study will be reported, concerning the Archaeological Park of Baratti and Populonia, included within the territorial system of the Val di Cornia Parks, in southern Tuscany.

### 3 Cultivating a Territory: the Val di Cornia Parks System

The parks system, a network of parks and museums in the province of Livorno, spanning the municipalities of Piombino, San Vincenzo, Campiglia Marittima, Suvereto and Sassetta, was identified in the 1970s with urban planning restrictions coordinated by the five municipal councils in the Val di Cornia.

- 23 Massimo Zucconi, "La pianificazione territoriale coordinata e la realizzazione del Sistema dei parchi della Val di Cornia," in Maria Cristina Gibelli and Edoardo Salzano ed., *No sprawl* (Florence: Alinea Editrice srl, 2006).
- 24 Silvia Guideri, "La Rocca di San Silvestro e il Sistema dei parchi della Val di Cornia," in Latini and Matteini, *Manuale di Coltivazione pratica*, 281-287.

Today the Val di Cornia parks system constitutes one of the fundamental factors for the conversion of the local economy, within which cultural resources, protected natural areas, landscapes and tourism services have become major phenomena, and have taken on strategic significance.

In that period of coordinated planning, which in itself already constituted a profound methodological innovation compared to the dominant municipal-based philosophy in the field of planning, the municipal councils perceived that the local historical, archaeological and natural heritage had a distinct unified nature of its own, and that the historical transformations that had shaped it over the centuries, from the Etruscans to contemporary life, would have been more understood, and better communicated, with unified policies of integrated protection, valorization and management.<sup>23</sup> Ever since then, the Piombino promontory, with the ancient Etrusco-Roman city of Populonia, the mining areas in the hills of Campiglia, with the medieval village of San Silvestro, the huge natural coastal areas of Rimigliano (San Vincenzo) and La Sterpaia (Piombino), the hills of Campiglia, Sassetta and Suvereto that surround the river Cornia plain, were all included as part of a single conservation and valorization project. In 2009, it was Italy's standard-bearer for the mIBAC at the Council of Europe's Landscape Award.

Indeed, the project that was set up was found, according to the directorate for quality and protection of landscapes, architecture and contemporary art at the Ministry for Cultural Assets and Activities, to be fully in line with the criteria identified by the regulations of the award scheme, and was described by the commission as *'an example of virtuous balance between incentives for economic development, social equity, public participation, and respect for the environment. An exemplary intervention, aimed at improving the attractiveness and quality of the local area, thanks to the valorization of its environmental, cultural and landscape resources, and thanks to targeted protection and management measures designed to achieve sustainable tourism.'*

The parks system is thus, first and foremost, a project of territorial valorization that has set itself the mission of "cultivating" places of cultural and natural interest. It develops an awareness of their value by means of research, protects their peculiar characteristics and local memory through planning, and invests resources to make them accessible. They can be managed in a system-based rationale that, in an overall and integrated way which is easier to understand, is capable of representing the transformations that have left their mark over the millennia on the sites, the history, and the landscapes of the Val di Cornia.<sup>24</sup> All this with the aim of contributing to economic conversion, in response to declining economies (such as mining and metallurgy) which, ever since the last decades of the last century, had given unmistakable signs of structural crises which, in the case of the mines, were irreversible.



fig. 2 Riccardo Francovich in front of the Rocca San Silvestro (Parchi Val di Cornia Archive, late 1980s).

- 25 Riccardo Francovich and Jamie Buchanan, "Il progetto del parco archeominerario di Rocca San Silvestro," in Bruna Amendolea ed., *I siti archeologici: un problema di musealizzazione all'aperto: secondo seminario di studi* (Rome: Gruppo Editoriale Internazionale, 1994), 176-195; Riccardo Francovich, "Dalla ricerca al parco archeologico: il caso di Rocca San Silvestro e l'esperienza della Società Parchi Val di Cornia," in Alessandra Casini and Massimo Zucconi eds., *Un'impresa per sei parchi. Come gestire in modo imprenditoriale e innovativo il patrimonio culturale e ambientale pubblico* (Milan: Il sole24ore, 2003).

Speaking just a few years after the archeo-mining park of San Silvestro was inaugurated, this was how Riccardo Francovich summed up the philosophy behind the project and the creation of the *Sistema dei Parchi della Val di Cornia*: "An incisive archaeological investigation does not only involve the people who actually work on it, it also involves local area policy in general [...]. In this context, therefore, one cannot contemplate conducting an archaeological excavation, unless it be purely for the purposes of rescue archaeology, without first making arrangements for, or at least envisaging, the drafting of a project. Without the culture of a project, any planned archaeological intervention makes no sense."<sup>25</sup>

It is in this peculiar and unprecedented administrative context that a fundamental role was played by scientific research, in particular archaeological research. This has proceeded hand-in-hand, and inseparably, first with territorial planning (guiding it in locating the perimeters of the parks) and later with interventions to make the valorized features accessible to the public, in other words to hand the social value of scientific research back to the communities. These are all phases in a single process which, not without some difficulty, has been put into effect on a large scale in the Val di Cornia parks system.

#### 4 From Research to Valorization: the Archaeological Park of Baratti and Populonia

It was thanks to the initial archaeological research, and the subsequent state-imposed restrictions, that the decision was made towards the end of the 1960s to block a development in the Gulf of Baratti. The site was



around 1.8 million cubic metres in size, in the form of new buildings (including hotels, villages and villas), envisaged under the planning scheme adopted by Piombino Town Council. These plans were thwarted in 1970 by the Public Works Ministry on the advice of the Superintendency, which was opposed to the scheme, and thanks to a radical change in the position of Piombino Council itself. Indeed, ever since then, Piombino Council would always include the promontory of Populonia and the Gulf of Baratti among areas to be protected, owing to the extraordinary archaeological and landscape features of value to which it still bears witness today, creating

fig. 3 Populonia, Baratti Gulf in the sixties (Parchi Val di Cornia Archive).

fig. 4 Populonia, Baratti Gulf in the seventies (Parchi Val di Cornia Archive).



the preconditions for the birth of the Archaeological Park of Baratti and Populonia.

By subtracting portions of the territory from speculative interests, which would have destroyed them, the historical-identity heritage was preserved by starting a process of economic recovery and regeneration destined to implement identity, sense of belonging and cultural value. The crossroads is always the same: knowing how to distinguish between destructive crops and creative crops, of future and well-being.

In this territory, over the following decades, the most innovative models of institutional cooperation were tried out, often interpreting



fig. 5 Populonia, Baratti Gulf nowadays (Parchi Val di Cornia Archive).

fig. 6 Populonia, crops on the acropolis (Poggio del Molino), first half of the 20th century (Parchi Val di Cornia Archive).



- 26 Daniele Manacorda, "La ricerca scientifica a Populonia," in *Un'impresa per sei parchi*. Andrea Camilli et al., "Leggere la storia. Un progetto di conservazione e valorizzazione per il parco archeologico di Baratti e Populonia," in Guido Biscontin and Guido Driussi eds., *Conservazione e Valorizzazione dei siti Archeologici: approcci scientifici e problemi di metodo*, Atti del 29° Convegno Internazionale Scienza e Beni culturali. Bressanone 9-12 luglio 2013 (Venice: Arcadia Ricerche, 2013), 995-1007.
- 27 Antonella Romualdi, *Populonia. Ricerche sull'acropoli* (Pontedera: Bandecchi & Vivaldi, 2002).
- 28 Silvia Guideri, "Tante storie per un'unica rete: Parco Archeominerario di San Silvestro, Parco Archeologico di Baratti, Museo archeologico del territorio di Populonia," in *Un'impresa per sei parchi*.
- 29 Antonella Romualdi and Rosalba Settesoldi, *Populonia. La necropoli delle Grotte. Lo scavo dell'area nella cava 1997-1998* (Pisa: ETS, 2009).
- 30 Angelo Bottini, "Il rapporto fra Ministero per i Beni e le Attività Culturali e la Società Parchi Val di Cornia," in *Un'impresa per sei parchi*.
- 31 Giovanna Bianchi and Sauro Gelichi eds., *Un monastero sul mare. Ricerche a San Quirico di Populonia (Piombino, LI)* (Florence: Insegna del Giglio, 2016).
- 32 Guideri, "Lo sviluppo del Sistema dei Parchi: gli interventi sul territorio operati dalla società," in Tommaso Luzzati and Luca Sbrilli eds., *Tra cultura e ambiente: verso un bilancio sociale per la Parchi Val di Cornia SpA* (Milan: Il sole24ore, 2009).
- 33 See the 11-volume *Materiali per Populonia* (2002-2015), bringing together the countless papers presented during the cyclical Seminars on Populonia, with the aim of rapidly providing the findings made during research curated by the university departments of Pisa, Roma Tre, Siena, Milan and Venice, under the scientific oversight of the Soprintendenza per i Beni Archeologici della Toscana.
- 34 The project entitled "*Interventi di conservazione, adeguamento, valorizzazione del archeologico di Baratti e Populonia*," Piano d'intervento ARCUS (ALES) 2009 issued by MIBACT. Implementers: Piombino Town Council (LI), Parchi Val di Cornia S.p.A. Scientific oversight: Andrea Camilli (Soprintendenza Archeologia della Toscana) Planning group: DIACON Srl.

the framework of regulations in such a way as to allow the objective to be achieved. That objective was to allow archaeological research to be shifted up in scale to make it possible to get an idea of the archaeological complexity of the ancient city of Populonia, to extend the perimeter of the park as far as the acropolis, and to create services for the public and to provide information for visitors.<sup>26</sup>

The project, in harmony with planning provisions, set out, right from the start, to extend archaeological research over the larger territory that was earmarked for the park, and to expand the archaeological space that was open to the public, ascending from the gulf of Baratti to the top of the promontory,<sup>27</sup> eventually incorporating the industrial areas, the outer walls of the ancient city of Populonia, and the archaeological features scattered across the local area as a whole. At the same time, the intention was to create paths and services for visitors (a visitor centre, refreshment point, toilets, etc.) that did not exist before.<sup>28</sup>

It is thanks to this method (together with the continual technical and administrative cooperation between the municipal council, Parchi Val di Cornia S.p.A., universities and the Archaeological Superintendency) that, after an intense research campaign in the area of the necropolises,<sup>29</sup> it was possible to draw up innovative solutions for dealings between the ministry and the local authorities that eventually led to the opening of the Archaeological Park of Baratti in 1998.<sup>30</sup> It is also thanks to this method that, in the years immediately afterwards, it was possible to draw up a complex and coordinated project for archaeological research. Less than 10 years on from the inauguration of the first park area, this meant it was possible to open the ancient city acropolis and other features of great archaeological and monumental interest to the public, such as the Benedictine Monastery of San Quirico.<sup>31</sup>

The visitor areas, and the new routes and trails opened to the public in 2007, looking beyond a mere visit to the Etruscan necropolises, today mean it is possible to contextualize the differing phases of settlement that have appeared one after the other on the Populonia promontory. The relationship between burial sites, settlement sites, and production sites can be seen and understood and one's gaze can be extended through the continuity and the transformations of the landscape.<sup>32</sup>

The undeniable beauty of these places, some of which were unknown even to local people up until a few years ago, goes hand-in-hand today with a rare opportunity for scientific documentation, and to once again make the long and complex history of this territory available to the public.<sup>33</sup>

The same direction and the same methodological approach were used to plan the interventions financed by the ministry's public funding,<sup>34</sup> presented to the public on 30 March 2018.

In this case, however, thanks to the awareness developed in the first years of management, and thanks to constant engagement

- 35 Guideri, "Accessibilità e Partecipazione. Nuovi progetti per la fruizione del patrimonio culturale," in Francesca Velani ed., *Capitale culturale e capitale umano, l'innovazione al servizio della cultura*, Atti di Lu.Bec (Lucca: LuBec, 2015).
- 36 The *Strategic Cultural Development Plan* was drawn up by a Technical Discussion Group comprising Stefano Casciu and Maria Gatto (Polo Museale della Toscana), by Andrea Muzzi and Andrea Camilli (Soprintendenza per l'Archeologia, Belle Arti e Paesaggio per le Province di Pisa e Livorno), Roberto Ferrari, Alessandro Compagnino, Maurizio Martinelli (Culture and Research Sector, Tuscany Region), Alessandro Bezzini (Piombino Town Council), Silvia Guideri (Parchi val di Cornia S.p.A.).
- 37 Indeed, as of 2007, for the management of an area that was so delicate and, at the same time, complex, it was agreed that it would be advisable to draw up, under the terms of Art. 112 (and later modifications) of d. lgs 42/2004, an *Accord to regulate relations between the Ministry for Cultural Assets and Activities, Tuscany Region, and Piombino Town Council for the coordinated and integrated exercise of activities to valorize the cultural heritage of the Baratti-Popolonia area*, aimed at completing and operating the Archaeological Park. This initial, pioneering accord, which was signed on 05/11/2007, was followed, after some extensions, by a new accord signed by the parties involved on 29/06/2016, which will be valid until 2022; on the Valorization Accord: Mario Lolli Ghetti, "Un innovativo accordo per la valorizzazione e la fruizione del Parco Archeologico di Baratti e Popolonia," *Notiziario MIBAC*, xxii-xxiii/83-88 (May 2007-December 2008), 85-88.
- 38 Guidelines to establish and valorize archaeological parks, adopted by D.M. on 18/04/2012.
- 39 Drawn up in January 2017 by the working group comprising: T. Matteini (architect, coordination and landscape planning), G. Fantilli (architect, architectural planning); consultants: A. Lambertini (architect, Florence University); A. Ugolini (architect, University of Bologna); collaborators: Dr Giulia Bagni, Marcella Claps (architect); points of reference for archaeological and management aspects (Parchi Val di Cornia): Dr Silvia Guideri, Dr Francesco Ghizzani, Dr Marta Coccoluto, Massimo Bellucci, surveyor. This masterplan was commissioned by the Parchi Val di Cornia in the context of the project entitled "Gli Etruschi in Toscana. Le città dell'Etruria," financed by the 2014-2020 ERDF Regional Operational Program.

with the public, most of the interventions were dedicated to improving understanding of the archaeology of the area of the ancient city, inevitably the hardest information to interpret.<sup>35</sup>

In drawing up the project's development outlines, consideration was thus given on the one hand to heritage conservation needs (accentuated by visitor access and the progress of archaeological research), and, on the other hand, to visitors' needs, in terms of understanding the archaeology and expanding services, beginning with an analysis of problems that emerged during this period of management. With these interventions, the supplementary project thus secured the protection of the assets, the acquisition of new archaeological knowledge, scientific and academic communication, and the needs of visitor access.

Indeed, the interventions carried out in this last decade have involved areas in which at times there were very different levels of research, conservation and valorization. This necessitated a wholesale review of the systems of access, supports and information panels along visitor routes, and of the practical fixtures and fittings, integrated with pre-existing ones, but at the same time projected toward a further phase of planning.

The need to harmonize the interventions can hence be seen, and to integrate the strategic development guidelines for the area into a single overall system, with a *Masterplan for the Park Landscape*. This later became the policy basis for the "*Strategic Cultural Development Plan*,"<sup>36</sup> the substantial appendix to the Valorization Accord between the Cultural Assets and Activities Ministry, Tuscany Region, and Piombino Town Council, entered into in 2007.<sup>37</sup>

Indeed, ever since the first meetings of the technical discussion group set up by Tuscany Region to draft the accord, it was decided that it would be advisable to see to it that the strategic objectives included the joint drafting of a cultural development plan. It was intended that this plan should not just be a statement of intentions, but instead should represent a concrete management tool on the part of the town council for activities aimed at valorizing and allowing access to the public, in line with the quality standards set out under the regulations currently in force.<sup>38</sup>

Within the same *Strategic Plan*, it was also deemed appropriate, in compliance with the provisions of the legislation regarding the enhancement of public cultural assets, to hope for a future expansion of the areas affected by this agreement in order to include the whole heritage of the system of parks and archaeological museums of the Val di Cornia.

## 5 A Masterplan for an Archaeological Landscape

It now seems important to focus specifically on the Masterplan for the Park Landscape, drawn up in 2016 and 2017 by an interdisciplinary team as part of a regional project financed by European funds.<sup>39</sup> It was devised as a crucial tool intended to integrate and harmonize planning, design and management levels, considering both heritage values and living resources.

- 40 In particular the PRT, having the status of Regional Landscape Plan (2015), the PRCP for the province of Livorno (2009), and, at the municipal level, the Detailed Plan (2011).
- 41 Thematic itineraries conceived for visitors are: Via del Ferro, Via delle Cave, Via della Romanella, Via dell'Acropoli and Via del Monastero.
- 42 About the temporal phases: the first corresponds to the investments financed by the Regional Operational Program ERDF 2014-2020, the second refers to subsequent moments.

Indeed, in the territory of ancient Populonia, the landscape context and the network of visible archaeological features are intimately connected, forming an integrated and inseparable complex requiring specific multidisciplinary attention on an ample timescale.

Constructed as an instrument to orient landscape transformation in strategies and projects, the masterplan was conceived as an active interface between the super-ordinate planning level and future project processing on the park scale.<sup>40</sup>

The operational scope of the masterplan is the entire archaeological park, with its two recognizable thematic sectors corresponding to the logic of the Etruscan and Roman settling of Populonia and which coincide with the two main visitor ambits: the area of the acropolis, or the *upper city*, with its sacred buildings and public spaces, and that of the *lower city* where the ancient port was located near the industrial iron works and the necropolis.

The *acropolis* and the *lower city*, together with the historical defensive system, are integrated into an extensive network of archaeological and heritage elements found outside the perimeter of the park and which extend over the entire promontory of Piombino: the Monastery of St. Quirico, the burial features, and the various excavation sites along the coastline of Baratti and on the surrounding hills.

A system of pathways runs through this archaeological complex: inside the park are thematic itineraries for visitors while outside the park, a network of trekking paths follows the historical routes of the promontory, such as the *Via dei Cavallegeri*.<sup>41</sup>

Born of the intention to coordinate the complexity and multiple scales of the transdisciplinary strategic guidelines, the masterplan has been configured as an instrument to orient the planned interventions in time and space. This will be done according to a long-term strategic vision which intends to integrate the conservation objectives of the archaeological patrimony with those of the landscape management of the park.

To provide these orientations and create coherence between the various sectors of the park's territory, a series of differentiated plans have been produced to offer programmers direction and guidelines at the various scales of the plan and project.

Firstly, a strategic overall view of the entire landscape system of the Gulf (1:7.500) in two different temporal phases orients the categories of interventions inside the thematic and archaeological areas, and on the network of internal and external connections (also in relation to soft mobility), proposing differentiated options for the treatment and potential extension of the margins of the park.<sup>42</sup>

For the various *thematic landscape ambits*, a series of interventions have been proposed, essentially involving three different kinds of action: 1. restoration and active conservation of the archaeological patrimony; 2. landscape configuration and management of the vegetation;



- 43 See the entire *Materiali per Populonia* series, published by Edizioni all'Insegna del Giglio, as of 2002, and later by ETS.
- 44 Among the evergreen species are: *Pistacia lentiscus*, *Rhamnus alaternus*, *Myrtus communis*, *Phyllirea latifolia*, *Phyllirea angustifolia*, *Arbutus unedo*; among thorny species: *Prunus spinosa*, *Crataegus monogyna*, *Paliurus spina-christi*.
- 45 The so-called "ha-ha" is a morphological delimitation device used mainly in the construction of landscape parks starting from the early 18th century.

3. communication and translation of the archaeological, botanical and historical contents. There are various *design intensity gradients* for each type of intervention, corresponding to the level of professional and specialized competence/expertise necessary for the design and construction phases.

A series of planning documents extended to the open space scale (1: 2.500, 1:1.000; 1:500) for the areas of greater complexity and importance (like the acropolis, with the Roman forum area) completes the repertoire of maps so as to provide ground planimetric schemes to support future definitive and executive project designs.

Lastly, to give substance and concreteness to the orientation provided by the masterplan, and to allow its immediate application in ordinary management and extraordinary maintenance, an *operative dossier* has been prepared at a detailed scale comprising a series of project files on the architectural and landscape systems and on the various materials, including costs and technical characteristics.

## 6 Cultivating Biodiversity

Due to its complexity, diachrony, and biological and temporal diversity, for the last twenty years the territory of Populonia and Baratti has been an ideal laboratory where exploration and theoretical and practical experimentation have been developed regarding the complicated interactions generated between landscape and archaeological remains.<sup>43</sup>

The working guidelines proposed by the masterplan indicate another possible vocation for this exceptional landscape involving experimentation on the management of greenery in an archaeological environment: if well conceived, it might contribute to the conservation of the existing historical elements and improve biodiversity and cultural accessibility, besides of course constituting an important ecological aid to bettering the environment.

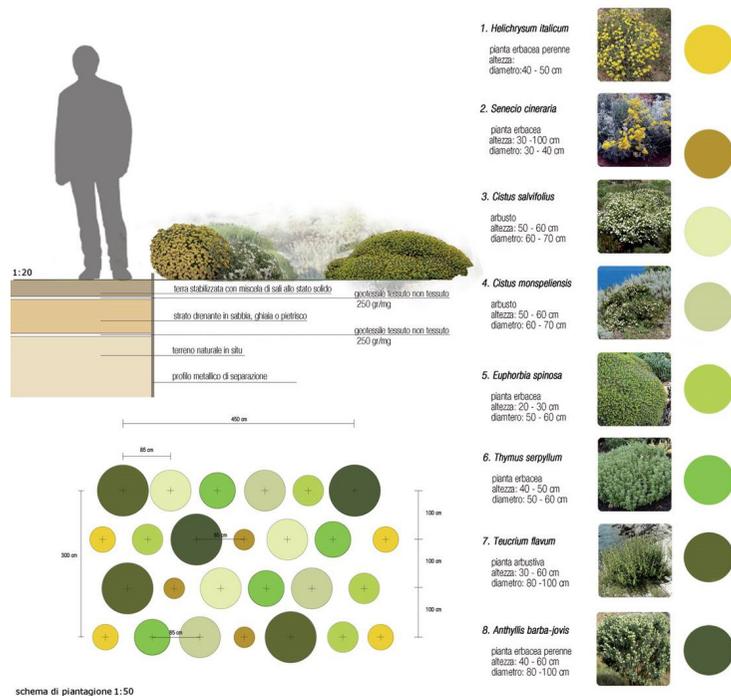
Considering the consolidated symbiosis of landscape and archaeological features characterizing the park, particular attention has been paid to the integration and management of compatible greenery in order to conserve and increase resilience against hydrogeological risks and reduce fragility, in its broadest sense, related to increased access and usage.

In general, the shared objective of the team of designers was to work with local botanical species and associations wherever possible to optimize the ecological compatibility of the interventions and economic sustainability, and to save on resources.

The landscape integration of demarcation and fencing was realized with a differentiated polyspecific hedge repertoire of thorny evergreen species,<sup>44</sup> as well as with morphological modelling and ha-ha.<sup>45</sup>

Ground protection was considered to be among the essential objectives: in the zones at a higher risk of being washed away/eroded and subject to issues related to visiting, carpeting with a mantle of vegetal "cushions" composed of thorny xerophile species with reduced

fig. 8 Ground protection: the mantle of thorny xerophile specie vegetal “cushions” with reduced water necessities (from the masterplan dossier, 2017).



- 46 The species chosen, from among local ecologically compatible species, are *Helicrysum italicum*, *Senecio cineraria*, *Cistus salvifolius*, *Cistus monspeliensis*, *Euphorbia spinosa*, *Thymus serpyllum*, *Teucrium flavum*, *Anthyllis barba-jovis*.
- 47 Datable in its various phases between the end of the second and the beginning of the first century BC. Already prefigured in the masterplan, the proposal for the garden was fully developed during the definitive project (July 2017) developed by the same working group.

water necessities<sup>46</sup> was proposed, which would function as natural deterrents. Moreover, a suggestion was made to use ground-covering species with a low danger index, such as *Lippia repens* and *Lobularia maritima*, to denote ongoing research activity and thus both indicate and protect the areas awaiting excavation.

Several escarpments inside the park needed stabilizing and consolidation to avoid further rilling, erosion and landsliding issues. For these situations, the masterplan proposed initial morphological remodelling followed by consolidation, by firstly introducing pre-seeded grass matting containing fertilizers and granular improvers and subsequently planting stabilizing tree species such as *Teucrium fruticans*, *Spartium junceum*, and *Myrtus communis*.

Vegetation has also been used as a support to increase physical and cultural accessibility to monuments by eliminating restrictive barriers and substituting them with living devices and also reproducing *in vivo* arrangements that aid understanding of the ancient spatial logic, such as the garden of the *Roman Domus* placed on the acropolis.<sup>47</sup>

The basic idea was to suggest a possible spatial organization of the original, no longer detectable, garden. Thus the garden space was envisaged based on numerous literary and iconographic sources referring

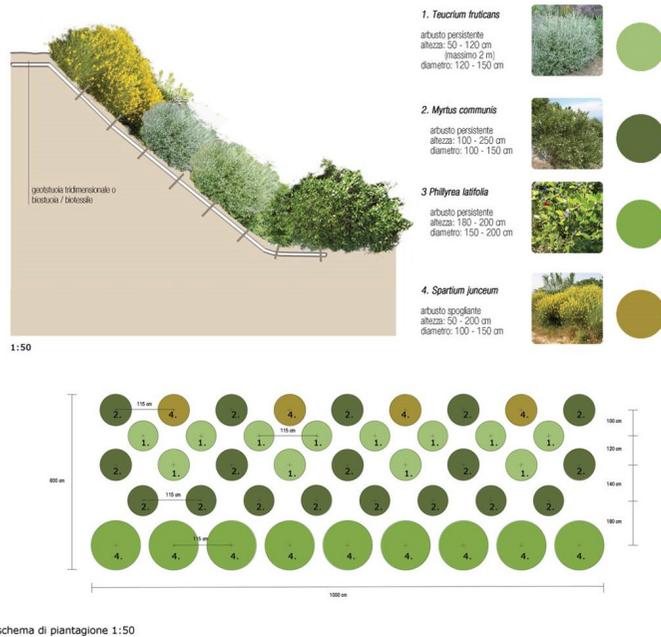


fig. 9 Planting patterns for remodeling and consolidating the slopes within the park (from the masterplan dossier, 2017).

- 48 Among the rich variety of examples we can recall the wall-garden of Livia's Villa, the Domus of Farnesina and paintings of Casa del Bracciale d'oro, in Pompeii. For the bibliography among a huge repertory: Pierre Grimal, *I giardini di Roma antica* (Milan: Garzanti, 1990); Aude Gros de Beler, Bruno Marmiroli, and Alain Renouf, *Jardins et paysages de l'Antiquité, Grèce et Rome* (Arles: Actes Sud 2009).
- 49 See footnote 27; Anna Maria Ciarallo, *Flora Pompeiana* (Rome: L'erma di Bretschneider, 2004).
- 50 Tuscany Region has identified Piombino Municipal Council as one of the recipients of funding under the "Gli Etruschi in Toscana. Le città dell'Etruria" scheme, financed by the 2014-2020 ERDF Regional Operational Programme - DGR n. 1023 (18 November 2014).

to Roman gardens, as well as on the archaeological evidence,<sup>48</sup> without any pretence towards philologically reconstruction, but rather to proffer an idea filtered through a contemporary project of what a first century *hortus* might have looked like.

As for the type of vegetation, to be contained in removable vases to avoid problems in the underlying layers, and to allow removal in case of necessity or critical environmental problems, the choice was oriented towards the botanical species of the *Flora* known and used in Roman times. This has been amply documented by Giacomo Boni and researchers such as Anna Maria Ciarallo,<sup>49</sup> and among these preference fell on local or naturalized species compatible with the area's arid climate, characterized by marine winds, and offering easier maintenance.

## 7 A First Step of Implementation

The final planning intervention involving the Park<sup>50</sup>, currently in the process of being implemented, is in line with the strategic content proposed by *Masterplan*.

The *Executive project for interventions of active conservation and valorization of the archaeological and landscape heritage of the Park of Baratti and Populonia* proposes measures to conserve the archaeological and

- 51 Given the complexity and delicacy of the context, the project has been entrusted to a planning group composed of architects and landscape designers (Arch. Giancarlo Fantilli, as holder of the mandate for the Temporary Group of Professionals), assisted by the archaeologists and experts from the Parchi company.
- 52 In 2018 an agreement was renewed to jointly carry out research in the territory of Populonia, between the Soprintendenza and Siena University, supplemented by the work of the University of Toronto. The scientific directors in charge of the archaeological investigations in the area of the acropolis, are the Soprintendenza official Andrea Camilli (SABAP for the provinces of Pisa and Livorno), Stefano Camporeale and Cynthia Mascione for the University of Siena (DSSBC), and Seth Bernard for the University of Toronto (Department of Classics).
- 53 CM/REC (2008)3, parte I, punto 5.

landscape heritage, and a series of coherent and integrated operations to valorize the features present in the park, and to narrate them to visitors.

This project works on the two main contexts, the historical and the thematic ambits, which are reflected in the two differing visitor sectors: the area of the acropolis and the area of the necropolises in the lower town. Here, the project has been particularly focused on a series of infrastructure and functional interventions more connected to an improvement in management, devoting special attention to the component of vegetation, which is one of the most changing features of this landscape, but also one of the most fundamentally defining, at the same time.<sup>51</sup>

As regards the acropolis, the project sets out to conduct a general reconfiguration of the open spaces that make up the ambit of the visit, supplementing the current existing routes and itineraries. This will necessarily be accompanied by major restoration and conservation works, to supplement the work done thanks to previous funding.

For the ambit of the necropolises, the predominant aspects of the project which is underway are related to the reconfiguration of the area of the entrance to the park, to make it more functional as regards an understanding of the services and the system of paths and roads, and supplementing a number of sections of fencing from the point of view of landscaping.

With a view to assuring continuity and coordination between the research phases, the restoration phase, and the subsequent valorization of the archaeological features, the interventions that are envisaged have been drawn up by planning staff in constant synergy with the authorities responsible for protection and conservation, with the team from the Universities of Siena and Toronto, and in coordination with the Parchi Val di Cornia company.<sup>52</sup>

## 8 Outputs and Research Prospects

This paper has proposed an innovative and integrated approach in the protection/planning/design/management of a Mediterranean archaeological rural landscape, trying to explore the concept of cultivation through the illustration of an applied case study in southern Tuscany.

The *cultivating* approach seemed particularly appropriate to express the continuity of an integrated and holistic process, in which planning, design and management are coherent parts of the same vision, as recalled by the guidelines for the implementation of the European Landscape Convention, which state that: “Landscape action is a combination of protection, management and planning conducted over one and the same territory.”<sup>53</sup>

*Cultivating* is also an appropriate term to take the care of living elements into account within the planning of a territory over time, aiming to increase landscape complexity, resilience, biodiversity and temporal diversity.

fig. 10 Populonia, Acropolis, 2018, after the works for remodelling the slopes along the Roman basolata (photo by T. Matteini).



Indeed, working on the landscape of an archaeological site means understanding, accompanying or managing processes and dynamics, according to multiple existing temporalities (those of the various archaeological documents and those of the present, spontaneous or cultivated plant component).

As experimented in the Populonia and Baratti case study, a territorial landscape masterplan envisioned and drawn up by a transdisciplinary group seems the most appropriate tool to orient transformations over time in such a complex and integrated environment. In this way a coherent and strategic vision can be developed and heritage protection and territorial project can be harmonized through diverse time and space scales of intervention.

Moreover, it seems important to highlight how, in the active conservation of heritage (archaeological remains, but also historical landscape features), protection, management and *mise en valeur* are part of the same integrated vision which has to be continuously nourished by archaeological and applied research, in a sort of virtuous cycle and mutual exchange.

We would like to close this contribution with a wish.

That same strategic coherence that led to the construction of the project of the Val di Cornia Parks System, today should be read as a first piece that laid the methodological foundations for a further phase of *cultivation*. Indeed, just as a landscape whose layers continuously change according to natural and/or human factors, those called to administer and manage the territory in the public interest must also be able to renew their visions and goals according to new *quality objectives*.