

At the crossroads of Architecture and Landscape

Preservation Strategies of Historic Military Systems:
a Comparison between Italy and the Netherlands

Federica Marulo



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At the crossroads of Architecture and Landscape

Preservation Strategies of Historic Military Systems: a Comparison between Italy and the Netherlands

Dissertation

for the purpose of obtaining the degree of doctor
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Wednesday 21 December 2022 at 12:30 o'clock

by

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Preface

‘Une expérience est quelque chose dont on sort soi-même transformé. Si je devais écrire un livre pour communiquer ce que je pense déjà, avant d’avoir commencé à écrire, je n’aurais jamais le courage de l’entreprendre. Je ne l’écris que parce que je ne sais pas encore exactement quoi penser de cette chose que je voudrais tant penser. De sorte que le livre me transforme et transforme ce que je pense’.¹

If I had to briefly describe the reasons behind this thesis, historic military systems would probably be the last thing that I would mention. It may sound like a contradiction, given the centrality they have in this work. Indeed, this PhD research primarily stems from the desire to explore the boundary between architecture and landscape in heritage preservation. My interest in this topic dates to when, as an architecture student at the University of Naples, I decided to do my master thesis in architectural heritage preservation. It consisted in a restoration project for a special case study to me: an abandoned mill at the bottom of a canyon, which had represented a natural defence for the small city of Sorrento throughout the centuries. It was immediately clear to me that the assignment involved much more than preserving a historical architecture. The interplay between natural and cultural values in that site, as well as the different scales and themes involved, have since then triggered my curiosity. Back then I didn’t know it yet, but I already had in front of me many of the ingredients of what would have become this PhD thesis.

In the process of turning this interest into a research proposal, a decisive step was for me the opportunity to start a dual doctoral program between the University of Naples and TU Delft, which marked the beginning of my – academic and personal – Dutch adventure. However, my journey to the Netherlands had already started before setting foot in the country. Exploring the available literature, the Dutch tradition of landscape protection intrigued me and raised many questions, given my cultural and

¹ ‘An experience is something from which one comes out transformed. If I were to write a book to communicate what I already think, before I started writing, I would never have the courage to undertake it. I am only writing it because I don’t yet know exactly what to think of this thing that I would so much like to think. So that the book transforms me and transforms what I think’ (cit. Foucault, M. (2001). *Dits et écrits II. 1976-1988*, D. Defert & J. Lagrange (Eds.). Paris: Gallimard Quarto, 860).

disciplinary background. However, it was the ‘discovery’ of the New Dutch Waterline and the experience carried out in the Netherlands for its revitalization to leave me with no doubt that it was a highly relevant case for a comparison with the Italian context on the topic of my interest. Most importantly, it was the gateway to historic military systems, which have become the main subject of this dissertation. The selection of the Italian case study was more complex but equally significant, finding in the Entrenched Field of Mestre an effective counterbalance to serve the main scope of this research.

In line with the starting intentions, this dissertation aims at going beyond the military connotation, so that the two selected case studies are regarded, more broadly, as historic systems at the crossroads of architecture and landscape heritage. At the same time, historic military systems have played more than just an instrumental role in this research. They have represented the key through which a deeper understanding of the research topic could take place, in turn influencing the definition of research questions and aims around their specific characteristics and preservation issues. In particular, the peculiar combination of cultural and natural values at the different scales in which historic military systems are deployed has represented the core of the investigation. Finally, the choice of a comparative approach involving the Dutch and Italian contexts with their landscape protection models has been crucial for the research process and outcomes. It is hoped that this work will stimulate a greater attention to historic military systems in the international discussion on nature-culture interlinkages, triggering questions and facilitating transnational exchanges in both academic and professional contexts.

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1 Introduction

1.1 Research background, problems and gap

In the field of heritage preservation, the need to address nature–culture interlinkages has gradually become a topical issue in the last thirty years.¹ This process is directly connected to the evolution of the concept of landscape, which – according to the European Landscape Convention (2000) – is now universally recognized as the result of the interaction between natural and/or human factors.² Consequently, the development of strategies integrating the methods and tools of natural and cultural heritage preservation has been consistently explored, especially in relation to sacred and agricultural landscapes. However, military landscapes have been almost completely ignored, leaving out one of the three human structures (sacred, work, power) which have influenced the historical evolution of our landscapes the most.³ The reason is that they are considered as ‘designed landscapes’ and, therefore, are evaluated within the domain of cultural heritage.⁴ Moreover, the increasing awareness of the negative impacts of military interventions on the environment – which is undeniable – has overshadowed the need for a reflection on nature-cultural interlinkages in military heritage preservation.⁵

1 With the term ‘nature–culture interlinkages’, reference is made to methods aimed at overcoming the nature–culture dichotomy in heritage policy and practice by ‘recognizing and supporting the interconnected biocultural character of the natural, cultural and social values of highly significant landscapes and seascapes’ (cf. ICOMOS & IUCN (2015). *Connecting Practice Project: Final Report*. ICOMOS/IUCN, 2). It is a recurring notion in the literature produced on this topic by UNESCO and its auxiliary bodies, of which a detailed account is given in paragraph 2.1.

2 According to the European Landscape Convention (2000), ‘landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors’ (cf. Council of Europe (2000). *European Landscape Convention*, 2 (article 1a)).

3 Cf. Tosco, C. (2009). *Il paesaggio storico. Le fonti e i metodi della ricerca*. Bari: Laterza, 165–166.

4 Cf. UNESCO (1994). *Operational Guidelines for the implementation of the World Heritage Convention*. Paris: UNESCO, 14.

5 For a detailed account on the effects of military actions on the landscape and their perception in contemporary literature, see paragraph 2.2.

Within this framework, historic military systems represent a valuable observatory for a reflection on this topic. Reference is made to structures with a wide territorial extension resulting from the military mastery in harnessing the available environmental resources for strategic purposes. They often rely on the combination of isolated artefacts (forts or other works), conceived to function together and fulfil a common military purpose. As the result of a peculiar 'way of seeing' the landscape, their construction relied on sight-based design solutions that transcend the local scale of the single military artefact.⁶ Accordingly, they reflect the definition of landscape systems, as provided by the Council of Europe, and their heritage preservation falls within the domain of landscape policies.⁷ In turn, the isolated and non-contiguous objects do not always correspond to a single building or construction, but they may also present a *system* character, resulting from the conception of the overall military system, of which they represent the most visible traces. Indeed, they often consist of a sophisticated combination of interrelated synthetic (buildings and constructions) and natural components (earthworks, vegetation, water ditches and canals), where the interaction with the environment is further developed to a local scale.⁸ As single objects, their conception is part of a much longer tradition of military architecture.⁹ Accordingly, they can rely on a long-standing theoretical and practical tradition within the field of architectural heritage preservation.

6 Reference is made to the interpretation of the landscape as 'a way of seeing' by D. Cosgrove (cf. Cosgrove, D. & Daniels, S. (Eds.) (1988). *The Iconography of Landscape: Essays on the Symbolic Representation, Design and Use of Past Environments*. Cambridge: Cambridge University Press, 9).

7 In the glossary provided by the Council of Europe as an explanatory appendix to the European Landscape Convention, 'landscape systems constitute the characteristics of a "specific landscape"'. They correspond to the natural and/or human interaction between landscape features, which include how populations perceive them'. About the landscape features, it is stated that 'when such elements, or basic components of the landscape, are studied or used in their own right, they cannot reflect the systemic, holistic dimension of the landscape. In practice, it is the interaction between the different elements that is more important than the elements themselves' (cf. Council of Europe (2018). *Glossary of the Information System of the Council of Europe Landscape Convention*, 32-33).

8 Reference is made to the definition provided by the International Scientific Committee on Fortifications and Military Heritage (ICOFORT) in the ICOMOS Guidelines (2021), in which it is stated that 'fortifications and military heritage comprise any structure built with either natural (i.e., botanical, geological) or synthetic materials, by a community to protect themselves from assailants' (cf. ICOMOS (2021). *ICOMOS Guidelines on Fortifications and Military Heritage* (article 1).

9 Cf. Brice, M. H. (1984). *Stronghold: a history of military architecture*. London: B.T. Batsford; Duffy, C. (1979). *Siege warfare: the fortress in the early modern world. 1494-1660*. London: Routledge and Kegan Paul; Duffy, C. (1985). *The fortress in the age of Vauban and Frederick the great, 1660-1789*. London: Routledge & Kegan Paul; Duffy, C. (1996). *Fire and stone: the science of fortress warfare, 1660-1860*. London: Greenhill Books; Hogg, I. V. (1975) *Fortress: a history of military defence*. London: Macdonald and Jane's.

However, the same cannot be said for historic military systems, given the younger developments in the field of landscape heritage preservation. Moreover, the understanding of the nature-culture interactions at the scale of the overall military system requires the sensibility and expertise of other disciplines than architectural heritage preservation (spatial planning, landscape architecture). At the same time, the main feature characterizing the built heritage of the individual objects – namely, the interaction of synthetic and natural components – also has some issues. Unlike other types of green heritage (e.g., historic gardens and parks), the living matter composing the architecture of fortifications has not received adequate attention in heritage preservation strategies, and it is often subordinated to the synthetic components. Finally, the need to connect the different scales on which historic military systems are deployed – the system, the military artefacts, the built heritage – also plays an important role.¹⁰ Indeed, unlike other heritage landscape systems, the common (military) purpose animating its original conception and functioning is lost. Consequently, they are often abandoned. In the best scenario, after losing their role as components of military systems, individual objects may get a second, independent life, but the memory of the historic military system and a part of the military landscape is lost. As a result, the lack of inter-scale strategies – i.e., strategies in which all the aforementioned scales are considered in an integrated way – in the preservation of historic military systems further complicates the way nature-culture interlinkages is addressed and frustrates the much needed cross-fertilization among various disciplines (spatial planning, landscape architecture, architectural heritage preservation).

Considering this, my dissertation explores the possibility of improving the implementation of nature-culture interlinkages in the preservation strategies for historic military systems, which – given their intrinsic characteristics – involves an inter-scale approach. In order to achieve this, the development of a conceptual framework requires taking into account the diversity of existing approaches to landscape, architectural heritage and their interconnection. Despite the great variety of views on the ethics of conservation, architectural heritage is traditionally inscribed in the domain of cultural heritage policies. Framing landscape heritage is more complex. In the European tradition of landscape appreciation and protection, two longstanding approaches can be distinguished, respectively characterized by a naturalistic and a cultural approach. Despite efforts made on both a national and international level to overcome the nature-culture dichotomy, it still haunts contemporary landscape policies as well as the World Heritage Convention. The result is the co-existence of two different attitudes towards the architectural heritage

¹⁰ The three scales considered are described in detail in the introduction of the case-study section.

domain, and two distinct views on the relations with spatial planning policies. The latter is relevant for the development of preservation strategies that, as is the case of historic military systems, rely on a dialogue between these domains. All these factors impact the way of addressing the nature-culture interlinkages at the different scales, as well as the interaction across scales. Therefore, a transnational perspective is needed in order to effectively bridge the gap in both theory and practice.

1.2 Research questions and objectives

Based on the research background, problems and gaps as described in the previous paragraph, the main research question is:

- **How to foster nature-culture interlinkages in the inter-scale preservation strategies for historic military systems?**

Sub-questions are:

- What is the relationship between landscape, architectural heritage and spatial planning in the evolution of **policies on a national base**? How does this affect nature-culture interlinkages? How does this affect the development (or the lack) of inter-scale approaches?
- What are the **current approaches** to the preservation of historic military systems? How is their inter-scale character addressed? What kind of nature-culture interlinkages are considered at each scale? What is the influence of inter-scale approaches (or the lack of them) on nature-culture interlinkages?
- What is the influence of **international heritage policies** on nature-culture interlinkages for historic military system and on inter-scale approaches?

The main aim is to develop a conceptual framework for enhancing nature-culture interlinkages in the preservation strategies for historic military systems. In order to do so, an inter-scale approach is required to properly address the intrinsic complexity of historic military systems, and to achieve nature-culture integration in preservation strategies. Consequently, this involves considering nature-culture interlinkages at each of the different scales in which historic military systems were conceived and deployed. Subsequently, matching the different issues arising from the different disciplinary perspectives involved at each scale, an overview on nature-culture interlinkages across scales can be provided. Finally – given the different approaches to landscape, architectural heritage, spatial planning and their interrelation – a transnational perspective is necessary, so as to effectively bring historic military systems into the international discussion on this topic.

1.3 Research methodology, methods and tools

The research question, sub-questions and aims require a research methodology that combines various methods and tools. This thesis is the result of a non-linear and explorative process. From the start, it has been based on two methodological choices: the use of a comparative approach, and a case-study strategy. They are the pillars on which this dissertation rests.

The choice of a comparative approach stems from the need for a transnational perspective, which is inherent in the research questions and aims. The nature-culture dichotomy originated in European landscape policies since the mid-19th century.¹¹

¹¹ As noted by L. Scazzosi, this phenomenon is related to two main trends: the first is related to the separation between naturalistic and historical-cultural aspects in landscape protection, especially in the northern European countries; the second is typical of countries (Italy, France) where landscape protection is closely linked to monuments conservation (cf. Scazzosi, L. (1999). *Politiche culturali del paesaggio in Europa e negli Stati Uniti: una lettura trasversale*, in: Scazzosi, L. (Ed.), *Politiche e culture del paesaggio: esperienze internazionali a confronto*. Roma: Gangemi, 18-21).

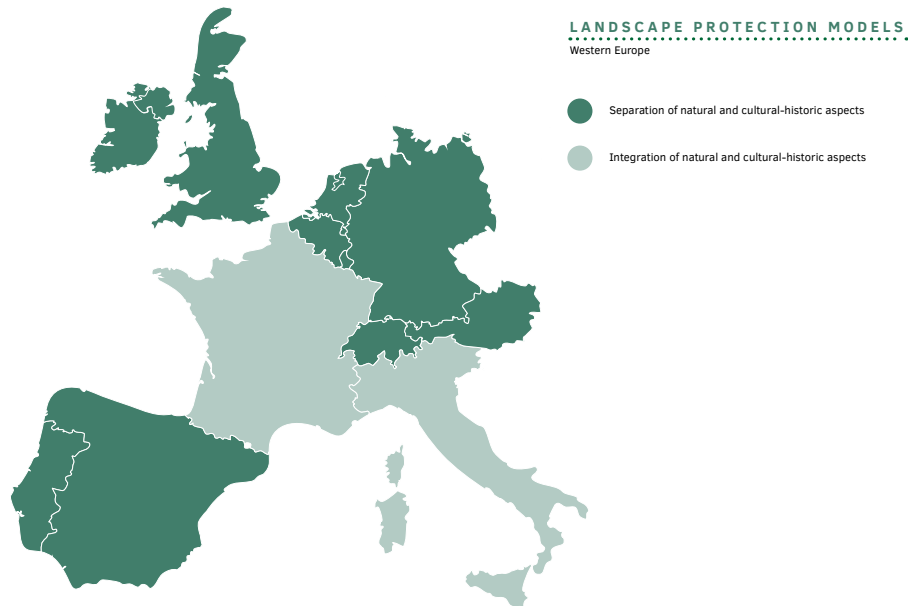


FIG. 1.1 Overview of landscape policies in Western Europe in relation to the integration/separation of nature and culture (F. Marulo 2019)

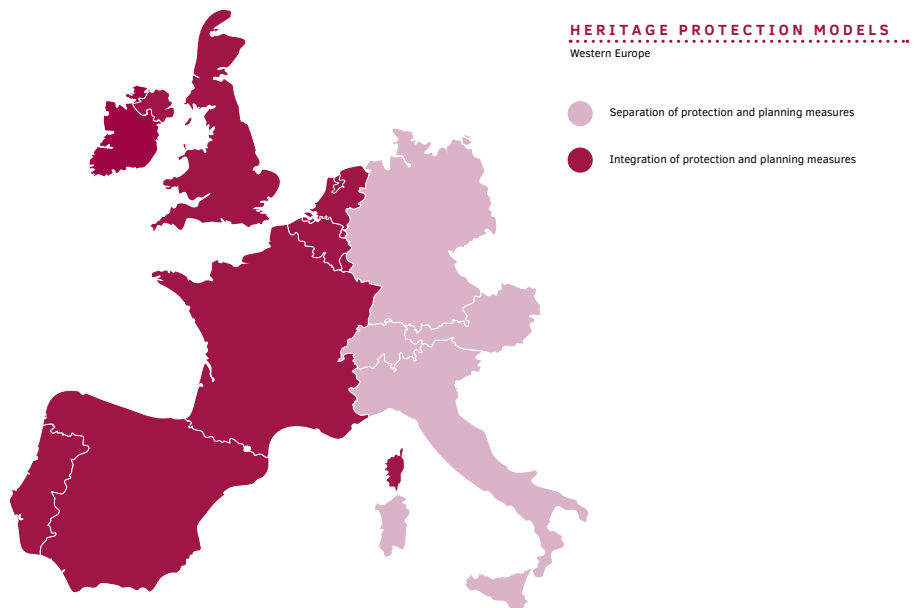


FIG. 1.2 Overview of heritage policies in Western Europe in relation to the integration/separation of protection and planning measures (F. Marulo 2019)

While recognizing the contribution of non-western and indigenous cultures for a broader understanding of man-nature interactions in the contemporary debate, a reflection on the different approaches matured within Europe in the light of this new awareness is still needed.¹² Consequently, the selection of two contexts which could be compared has been limited to Western Europe. They should exemplify the two main trends in the European evolution of landscape protection models (naturalistic/cultural approach) and represent national policies (FIG. 1.1). The degree heritage policies are integrated in spatial planning on the national level was also taken into account (FIG. 1.2).¹³

The next step was the selection of relevant case studies to investigate contemporary preservation strategies on historic military systems. In this framework, the New Dutch Waterline was identified as a first relevant case for the peculiarities of both this 19th century military system and the contemporary strategy developed in the Netherlands for its revitalization. Consequently, Italy was selected for the comparison with the Netherlands in order to provide variety in terms of landscape protection models.¹⁴ Within this second context, the Entrenched Field of Mestre was identified as the most relevant case to be compared with the Dutch experience. Also for this case, the qualities of this historic military system and the strategy put in place for its preservation justify the selection, aimed at providing an effective comparison.¹⁵

In order to compare the contemporary approaches to the preservation of historic military systems in the two national contexts, a theoretical background has been outlined. At first, the latest advancements on the topic of nature-culture interlinkages as developed in the frame of international policies and programs (UNESCO and its

¹² Cf. De Marco, L., Bourdin, G., Buckley, K., Leitão, L., Thibault, M. & Wigboldus, L. (2020). *Connecting Practice Phase III: Final Report*. ICOMOS/IUCN, 19-20.

¹³ According to C. Manfredi, there are two different models of heritage protection policies in Western Europe: the first uses classification as a tool for identifying the objects to be protected, followed by the drawing up of lists (Great Britain, France, Spain and the Netherlands); the second is based on the acknowledgement of specific characters in the objects to be protected (Germany, Austria and Italy). Consequently, Manfredi highlights a relationship between the first model to a greater integration between protection and planning measures for the listed objects (cf. Manfredi, C. (2017). *Le politiche di tutela del patrimonio costruito: modelli a confronto in Europa*. Milano: Mimesis, 35-41).

¹⁴ In both the Italian and French contexts, landscape policies have been integrated into cultural heritage policies since the first protection measures at the beginning of the 20th century. However, unlike in France, cultural heritage policies in Italy have been separated from spatial planning policies. All this considered, the Italian context is better suited to a comparison with the Netherlands, where landscape policies have instead been characterized by separation from cultural heritage policies and integration with spatial planning policies.

¹⁵ Detailed description of the characteristics of these two cases leading to selection (i.e., the intrinsic qualities of the two historic military systems and the strategies developed for their preservation) is provided in the introduction of the case-study section.

auxiliary bodies, Council of Europe) have been analysed and interpreted in relation to historic military systems. Subsequently, the nature-culture dichotomy has been investigated in the context of national policies. This involved historical studies on the landscape protection frameworks as they have developed over time in Italy and the Netherlands. The main aim has been to contextualise the more recent landscape policies and their relation with architectural heritage and spatial planning policies, as well as the evolution of concepts and theories. Understanding the historical roots to the contemporary policies represents an indispensable step to inform national strategies towards the achievement of the goal, posed on an international level, to overcome the nature-culture divide. In this sense, the comparison between two contexts sharing a similar challenge but with different historical background can stimulate fruitful reflections. Based on the principles of the *histoire croisée*, the two national experiences have been intertwined and cross-read.¹⁶ Primary and secondary literature produced in both contexts, as well as historic pictures and maps, have been the main sources. It helped to highlight recurring concepts and their different interpretations, as well as to make interdisciplinary associations between the domains of architectural heritage and spatial planning in landscape policies.

The second part of the research has concerned the analysis of the two case studies. They represent the link between (international and national) landscape policies, as described in the previous section, and contemporary heritage practices. First, the two historic military systems have been studied. The focus was on their historical construction and development, the demilitarization process and, most importantly, contemporary actions for their protection and preservation. Subsequently, a further step of selection has concerned the local artefacts, for which ownership and use

¹⁶ Within the family of comparative methods, that of *histoire croisée* stands out for the stress 'on a multiplicity of possible viewpoints and the divergences resulting from languages, terminologies, categorizations and conceptualizations, traditions, and disciplinary usages'. In it, the notions of crossing and intersection are crucial: the objects of research (i.e., social, cultural and political formations, generally at the national level) are 'not merely considered in relation to one another but also through one another'. These characteristics were considered as fitting the scope of this research. Moreover, the attention to the relationship between researcher and research object in the method of *histoire croisée* was also considered as particularly relevant. While the comparative approach generally assumes 'a point of view external to the objects that are compared [...] situated at equal distance from the objects so as to produce a symmetrical view', the approach proposed with the *histoire croisée* embraces asymmetrical positions – e.g., 'when the researcher is required to work with a language, concepts and categories that are not part of his or her sphere of socialization' – and proposes corrective procedures. The latter include questioning similarities to go beyond 'simple semantic equivalents' and investigate the often divergent meanings and practices encompassed by them, and a careful choice of the categories to be compared so as to avoid 'negative comparisons' (i.e., 'evaluating a society based on the absence of a category chosen because of its relevance to the initial environment of the researcher') (cf. Werner, M. & Zimmermann B. (2006). Beyond Comparison: Histoire Croisée and the Challenge of Reflexivity, *History and Theory*, 45(1), 30-50; see also: Zimmermann B. (2020). Histoire Croisée: A Relational Process-based Approach, *Footprint: Delft Architecture Theory Journal*, 14(1), 7-13).

conditions were considered. Both national and international initiatives that were promoted in the frame of the World Heritage Convention have been analysed. A wide range of sources have been collected, studied and interpreted (archival sources, literature, policy documents, historic pictures and maps, design drawings and reports, interviews, field trips). Finally, the observations of the two case studies have been compared with each other, as well as with the results of the analysis of the national landscape models. This has resulted in the identification of variables and features that constitute the basic structure for the conceptual framework.

1.4 Thesis outline

This thesis consists of six chapters, reflecting the methodology followed throughout the research process. **Chapter 2** provides a state of the art on nature-culture interlinkages for historic military systems. For this, international heritage policies and programs (UNESCO, Council of Europe) on the theme of nature-culture interlinkages have been analysed in order to understand if and in which way military heritage and, particularly, historic military systems have been studied. **Chapter 3** provides the results of the cross reading of landscape protection policies in the two analysed contexts. The different approaches to landscape protection are presented in relation to architectural heritage and spatial planning. The different evolution and interactions between heritage and planning evolved over time and is still visible in contemporary policies. Chapter 4 and Chapter 5 present the results of the analysis and interpretation of the two case studies. **Chapter 4** is dedicated to the New Dutch Waterline (NL), **Chapter 5** to the Entrenched Field of Mestre (IT). These two chapters present a symmetrical structure: after the historical background, the contemporary preservation strategies are described according to the different scales involved. Together, they represent the second section of this thesis. Finally, **Chapter 6** provides the thesis conclusions. At first, the cross reading of the case studies (chapter 4 & chapter 5) is discussed. Subsequently, the two cases are analysed in the framework of their respective landscape protection model (chapter 3) and of the World Heritage Convention (chapter 2). Finally, this thesis provides a transnational conceptual framework for analysing the nature-culture interlinkages in the inter-scale preservation strategies for military systems.

PART 1

Theoretical background

2 **Historic Military Systems at the crossroads of Architecture & Landscape Heritage**

State of the art of an on-going international debate

2.1 Landscape and the integration of nature & culture

Although landscape protection has been a matter of attention since the mid-19th century, the discussion on this topic has reached a renewed emphasis in the last thirty years. In particular, the unprecedented international exchange has led to the switch from an Eurocentric to a global vision on this topic. Consequently, the nature-culture divide has started to be consistently questioned.

In this sense, the first international recognition of landscape has represented only a partial answer to the long-standing dichotomy between nature and culture in the heritage discourse. The latter is embedded in the way landscapes are conceived in Europe since the first protection actions in the mid-19th century, and culminated in the UNESCO World Heritage Convention (WHC) (1972).¹⁷ Despite the merit of having brought together the conservation of nature and cultural properties, this seminal document, however, presented two separated definitions for cultural and natural heritage, which were, consequently, entrusted to different advisory bodies: ICOMOS (International Council of Monuments and Sites) and IUCN (International Union for Conservation of Nature).¹⁸ Nevertheless, the two definitions show some sparse hints on the possible interlinkages between the nature and culture domains, which represented a topic of discussion since the first assemblies of the World Heritage Committee.¹⁹ In particular, the ‘combined works of nature and man’ are identified as a feature for ‘sites’ – namely, one of the three categories composing cultural heritage in the WHC – while for the ‘groups of buildings’ the possible significance of

¹⁷ For an overview on the first setting of the World Heritage Convention, see: Batisse, M. & Bolla, G. (2005). *The Invention of World Heritage*. Paris: Association of Former UNESCO Staff Members; Cameron, C. & Rössler, M. (2013). *Many Voices, One Vision: The Early Years of the World Heritage Convention*. Farnham, Surrey, UK: Ashgate.

¹⁸ IUCN was set in the United States as a founder of the WHC, and then classified as auxiliary body (cf. Leitão, L. (2017). Bridging the Divide Between Nature and Culture in World Heritage Convention: An Idea Long Overdue?, *The George Wright Forum*, vol.34, n.2, p. 197). A third advisory body is ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property). However, ICOMOS and IUCN are directly responsible to evaluate properties nominated for inscription on the World Heritage List in their specific fields of expertise (cf. UNESCO (2019). *Operational Guidelines for the implementation of the World Heritage Convention*. Paris: UNESCO, pp. 16-17).

¹⁹ Cf. Leitão, L. (2017). Bridging the Divide, *op. cit.*, 197-199.

'their place in the landscape' had been acknowledged.²⁰ On the other hand, when looking at the definition of natural heritage, the outstanding universal value refers to both the 'aesthetic and scientific' significance of physical and geological formations, and mention is made to the 'beauty' of natural sites. But more than the general definitions of cultural and natural heritage – which have not changed since – the evolution undergone by the criteria used to assess the outstanding universal value in both categories is interesting to observe.

In relation to this, a watershed can be noticed with the introduction of cultural landscapes as eligible properties for the World Heritage List (1992). While recalling the 'combined work of nature and man', article 1 of the Convention is complemented by a specific reference to the influence played by the 'characteristics and limits of the natural environment they are established in'.²¹ This new category was, however, classified as only cultural heritage. Consequently, nominations in this field were to be primarily assessed by ICOMOS; however, the possible coexistence of natural values – to be found in 'specific techniques of sustainable land-use' or in a 'spiritual relation to nature' was referred to.²² This might call for the additional technical advice of IUCN. Accordingly, the criteria for the assessment of cultural properties were updated. In particular, in criterion (iv) landscapes were added at the side of buildings and architectural ensembles as a type of property 'which illustrates (a) significant stage(s) in human history,' while in criterion (v) reference was made to the 'human interaction with the environment'.²³ However, this latter addition coincided with the suppression of a similar clause from the criteria for assessing natural heritage, which also saw the omission of the 'exceptional combinations of natural and cultural elements' from the range of 'superlative natural phenomena'.²⁴ The need to find a better dialogue between the cultural and natural domains was addressed at the Amsterdam Global Strategy Meeting in 1998, where the merging of the two sets of

²⁰ Cf. UNESCO (1972). Convention Concerning the Protection of the World Cultural and Natural Heritage, 16 November 1972, Article 1, 2.

²¹ UNESCO (1994). Operational Guidelines for the implementation of the World Heritage Convention. Paris: UNESCO, 13-14.

²² Cf. Mitchell, N., Rössler, M. & Tricaud, P. M. (Eds.) (2009). *World Heritage Cultural Landscapes: A Handbook for Conservation and Management*, World Heritage Papers no. 26. Paris: UNESCO, 22.

²³ UNESCO (1994). Operational Guidelines, op. cit., 10.

²⁴ *Ibid.*

criteria in a unique list was proposed,²⁵ and then ratified in 2003.²⁶ But this step did not lead to a holistic redefinition of the coexistence relationship between nature and culture, and the criteria – although grouped in the same list – are still distinguished into cultural (i-vi) and natural (vii-x) sub-categories.

Even though these first steps were not decisive, they did stimulate a reflection outside UNESCO. Within this framework, the contribution of the Council of Europe served as a counterbalance to the nature-culture dichotomy as it was embedded in the World Heritage Convention. Although the distinction between the two domains had animated previous initiatives of this institution, the European Landscape Convention (2000) recognized the paramount ‘interaction of natural and/or human factors’.²⁷ The Council of Europe has, therefore, positioned the landscape concept above any cultural or natural adjective, while stressing their mutual co-dependence.²⁸ Moreover, the parallel path of the IUCN, independently from its role of UNESCO’s advisory body, is also relevant. Indeed, in 1992 ‘protected landscapes’ were identified as one of the six category of protected areas requiring nature conservation.²⁹

25 Von Droste, B., Rössler, M., Titchen, S. (Eds.) (1999). Linking Nature and Culture. Report of the Global Strategy Natural and Cultural Heritage Expert Meeting, 25 to 29 March 1998, Amsterdam, the Netherlands. Paris/The Hague: UNESCO/Ministry for Foreign Affairs/Ministry for Education, Science and Culture.

26 Cf. UNESCO (2005). Operational Guidelines for the implementation of the World Heritage Convention. Paris: UNESCO, 19.

27 Indeed, ‘natural landscapes’ had already been addressed as a separate unit in the Berna Convention (cf. Council of Europe (1979). *Convention on the Conservation of European Wildlife and Natural Habitats*), while the ‘threefold cultural dimension’ of the landscape seems to have been prioritized until the mid-1990s (cf. Council of Europe (1995). *Recommendation No. R(95)9 of the Committee of Ministers to Member States on the integrated conservation of cultural landscape areas as part of landscape policies (Adopted by the Committee of Ministers on 11 September 1995 at the 543rd meeting of the Ministers’ Deputies)*).

28 Council of Europe (2000). *European Landscape Convention*, article 1a, 2. For an overview on the European Landscape Convention and the nature-culture dichotomy, see: Priore, R. (2001). The Background to the European Landscape Convention. In: *The Cultural Landscape: Planning for a sustainable partnership between people and place*, Kelly, R., Macinnes, L., Thackray, D. & Whitbourne, P. (Eds). London: ICOMOS-UK, 31–37; Roe, M. H. (2007). The European Landscape Convention: a revolution in thinking about ‘cultural landscapes’, *Journal of Chinese Landscape Architecture*, 23(143), 10–15.

29 Cf. Phillips, A. (1995). Cultural landscapes: an IUCN perspective. In: *Cultural Landscapes of Universal Value. Components of a Global Strategy*, von Droste et al. (eds.). Jena: Fischer Verlag, 380–392; Phillips, A. (2001). The nature of cultural landscapes: a nature conservation perspective. In: *The Cultural Landscape: Planning for a sustainable partnership between people and place*, Kelly, R., Macinnes, L., Thackray, D. & Whitbourne, P. (Eds). London: ICOMOS-UK, 46–63; Mallarach, J. M. & Verschuuren, B. (2019). Changing Concepts and Values in Natural Heritage Conservation: A View through IUCN and UNESCO Policies. In *Values in Heritage Management: Emerging Approaches and Research Directions*, Avrami, E., Macdonald, S., Mason, R. & Myers, D. (Eds.). Los Angeles: The Getty Conservation Institute.

A first concrete attempt to bridge the divide between nature and culture within the World Heritage system as well as within the wider natural and cultural heritage fields was made in 2013, when IUCN and ICOMOS started the project 'Connecting Practice' with the aim of better integrating their evaluation process as UNESCO auxiliary bodies. However, this step was already anticipated by previous initiatives. Indeed, already in 2009, IUCN implemented a smaller programme to draft the WHL Capacity Building Strategy, which for the first time explicitly included a culture-nature component.³⁰ But in 2012, the management of cultural and natural world heritage is still addressed in two separate manuals, and no specific guidelines are provided for mixed sites.³¹ Nevertheless, both envisage the consultation of the three auxiliary bodies of the UNESCO World Heritage Committee. In 2014, two points of importance were raised at the 2014 IUCN World Parks Congress: 1) the natural setting of a cultural site influences the experience of visitors; this is related to the presence of longstanding cultural associations in natural sites. 2) new synergies between natural world heritage (natural sites & mixed sites) and other protected areas through comprehensive landscape conservation is crucial for natural areas, and to protect cultural diversity. In 2015, following the 2014 IUCN World Parks Congress, UNESCO addressed the topic of culture-nature links in a special issue of the World Heritage journal.³² Moreover, starting from 2014 three UNESCO chairs were introduced to work on the Nature-Culture Linkages.³³

The first exploration phase of the 'Connecting Practice' project aimed at finding strategies for experts from the two organizations to carry out joint missions and reports when assessing sites proposed as world heritage properties.³⁴ Based on that experience, the second phase of the project tried to apply these lessons into practice. Through field studies on two UNESCO sites, the working group developed a three-step assessment methodology, the most interesting aspect of which was the attempt to go beyond the outstanding value criterion, and look at the significance of the properties from a broader

³⁰ Cf. Huber, M., Zollner, D., Pecher, S., Wolf, L. (2020). *Mid-term Programme Evaluation: World Heritage Leadership. Final Evaluation Report*. Klagenfurt: E.C.O. Institute of Ecology, 17.

³¹ UNESCO, ICCROM, ICOMOS, IUCN (2012). *Managing Natural World Heritage*. Paris: UNESCO; Id. (2013). *Managing Cultural World Heritage*. Paris: UNESCO.

³² Culture-nature links (special issue), *World Heritage*, 75(2015).

³³ Reference is made to the UNESCO Chair on *Fleuves et patrimoine: diversité naturelle et culturelle des paysages fluviaux* (Rivers and heritage: natural and cultural diversity of river landscapes) at the University François Rabelais de Tours (France) (2014), then followed by that on 'Sustainable Heritage and Environmental Management-Nature and Culture' at the University of Bergen (Sweden) (2015), and that on 'Nature-Culture Linkages in Heritage Conservation' at the University of Tsukuba (Japan) (2017).

³⁴ ICOMOS & IUCN (2015). *Connecting Practice Project: Final Report*. ICOMOS/IUCN. See also: Leitão, L. (2017). *Bridging the Divide*, *op. cit.*, 203.

perspective. In this way, a more nuanced set of values – although not of an exceptional character – may be highlighted, which can prove to be relevant for understanding the interplay of culture-nature interlinkages; these may also be taken into account when dealing with the practical management of these sites.³⁵ This represented a significant advancement in the World Heritage domain, and a concrete answer to the criticism raised by the Council of Europe and the European Landscape Convention.³⁶

Following the practice-oriented collaboration of IUCN and ICOMOS in the ‘Connecting Practice’ project, in 2016 the two organizations launched – in cooperation with ICCROM – the first ‘Nature-Culture Journey’, a meeting for heritage practitioners to come together and recognize an approach to heritage based on the understanding that relationships between people and the natural environment have worked to shape both our physical environment and belief systems. Notably, this event was organized in the frame of the IUCN World Conservation Congress, held in Honolulu (Hawaii),³⁷ which then led to a first statement of commitment.³⁸ It addressed the problematic aspects of the ‘culture/nature divide’, considered as an ‘unsustainable path’ to be reversed for better ‘conservation outcomes’ and the ‘well-being of contemporary societies’.³⁹ In this sense, the role of local communities and of ‘place-based approaches’ was considered as crucial in order to get a better understanding of the ‘integral relationship of nature and culture’ in all its manifestations in the landscape, thus, calling for international bodies (UNESCO, IUCN, ICOMOS and ICCROM especially), national and local authorities, academic institutions and the civil society at broad to work toward the development of new working methods, practices and solutions ‘that bring together nature and culture’.⁴⁰

35 Leitão, L., Bourdin, G., Badman, T. & Wigboldus, L. (2017). *Connecting Practice Project: Final Report*. ICOMOS/IUCN.

36 Indeed, in the 2008 Recommendations from the Council of Europe clearly stated is that ‘the concept of landscape in the convention differs from the one that may be found in certain documents, which sees in landscape an “asset” (heritage concept of landscape) and assesses it (as “cultural”, “natural” etc. landscape) by considering it as a part of physical space.’ Moreover, within the European Landscape Convention ‘attention is focused on the territory as a whole, without distinguishing between the urban, peri-urban, rural and natural parts, or between parts that may be regarded as outstanding, everyday or degraded; it is not limited to cultural, artificial and natural elements: the landscape forms a whole whose constituent parts are considered simultaneously in their interrelations.’ Cit. Council of Europe (2008). *Recommendation CM/Rec(2008)3 of the Committee of Ministers to member states on the guidelines for the implementation of the European Landscape Convention (Adopted by the Committee of Ministers on 6 February 2008 at the 1017th meeting of the Ministers’ Deputies)*.

37 IUCN (2016). *Proceedings of the Members’ Assembly*. Gland: IUCN.

38 ‘Mālama Honua – to care for our island Earth’ (2016).

39 Cit. *Ibid.*

40 Cit. *Ibid.*

Additionally, in the occasion of the IUCN Congress the ‘World Heritage Leadership Program’ was launched, and then started by ICCROM and IUCN in partnership with the Norwegian Ministry of Climate and the Environment in the same year (2016). They made an ‘integrated approach to nature and culture’ one of its priorities.⁴¹

The experience of the journey was then repeated at the 2017’s ICOMOS Triennial General Assembly in Delhi (India). It resulted in an ICOMOS resolution (19GA 2017/25) about the need of ‘Incorporating the interconnectedness of nature and culture into heritage conservation’.⁴² Moreover, this CultureNature journey led to a second statement of commitment.⁴³ Building on the concepts of Honolulu a year before, it addressed the issue of language; recognizing the tendency in western ontology to ‘separate nature from people and culture’, it stressed the need ‘to find different concepts and words that can overcome this situation’ and proposed the term ‘naturecultures (with no space, hyphen or “and” between them)’ stressing both components ‘as inseparable, entangled and mutually constituted’ domains. The third exploration phase of the ‘Connecting Practice’ project made this concrete by developing a list of selected keywords.⁴⁴ Compared to the glossary provided by the Council of Europe, the attempt of the working group joining the ‘Connecting Practice’ project is of a more exploratory nature. The council’s appendix to the Landscape convention acknowledged that the assessment of landscapes relies on heritage value systems coming from the two distinct domains of nature and culture.⁴⁵ Instead, the working group tries to eliminate ‘confusion, uncertainties and misunderstandings that disciplinary vocabularies may cause when introduced in other realms.’⁴⁶ It marks the first steps to explore the ‘origins’ and ‘progressive stratifications’ of a number of concepts, selected within the three main clusters of ‘biocultural approaches, resilience and traditional knowledge’ and feeds on definitions from both domains.⁴⁷

41 Cf. Huber, M., Zollner, D., Pecher, S., Wolf, L. (2020). *Mid-term Programme Evaluation: World Heritage Leadership. Final Evaluation Report*. Klagenfurt: E.C.O. Institute of Ecology.

42 Cit. ICOMOS (2017). 19th General Assembly. Results and Proceedings of the Scientific Symposium. Paris: ICOMOS, 14.

43 ‘Yatra aur Tammanah: our purposeful Journey and Tammanah: our wishful aspirations for our heritage’ (2017).

44 ; De Marco, L., Bourdin, G., Buckley, K., Leitão, L., Thibault, M. & Wigboldus, L. (2020). *Connecting Practice Phase III: Final Report*. ICOMOS/IUCN, 323-379.

45 Council of Europe (2018). Glossary of the Information System of the Council of Europe Landscape Convention, 68-69.

46 De Marco, L., Bourdin, G., Buckley, K., Leitão, L., Thibault, M. & Wigboldus, L. (2020). *Connecting Practice, op.cit.*, 19.

47 *Ibid.*, 20.

To conclude, the steps made by ICOMOS, ICCROM and IUCN, together with the general framework provided by the European Landscape Convention, show a significant advancement in the debate on the nature-culture interlinkages, which has opened the way to more structural actions.⁴⁸ However, this issue is still in the process of being explored, and further steps still need to be done in the direction of a greater understanding of the interconnectedness of the nature and culture domains in the landscape, and on the way of dealing with their interplay in contemporary heritage practices. In this sense, broadening the knowledge about specific landscapes is highly relevant and represents the most viable way to create a critical mass for further developing strategies and tools.

2.2 Nature and cultural landscapes. The case of military heritage

The preservation of military heritage implies dealing with a heterogeneous set of cases for which overcoming the nature-culture dichotomy takes on a more complex connotation. Within the large number of cultural landscapes nominated as UNESCO sites in the last thirty years, the poor presence of military heritage seems to suggest a difficult acknowledgement of this kind of properties in their landscape dimension. Among the three sub-categories identified for classifying the cultural landscapes of universal value – which are deliberately broad in their definition and not bound to any functional characterization – fortified sites and structures seem to fully belong to the so-called ‘designed landscapes’. However, the latter are predominantly associated with historic gardens and parks, and when compared to the ‘organically-evolved landscapes’ and the ‘associative landscapes’, they are the sub-category less represented on the World Heritage list. A reason for that is identified in their ‘obviousness’ as part of the European heritage with a worldwide diffusion.

⁴⁸ For example, the preparation of a joint manual for both natural and cultural World Heritage properties is the process of being developed (cf. De Marco, L., Bourdin, G., Buckley, K., Leitão, L., Thibault, M. & Wigboldus, L. (2020). *Connecting Practice, op.cit.*, 5.

Moreover, historic gardens and parks are more likely to be nominated 'in modes others than cultural landscapes' because of 'the strength of the aesthetic, architectural and art historical point of view' in their appreciation.⁴⁹ Likewise, military heritage shares a similar fate and the conspicuous amount of fortifications introduced in the UNESCO list over time – walled cities, castles, fortresses, defence systems – have been mostly nominated as purely cultural properties.

The subordinate role assigned to the natural/biological heritage of fortifications is also confirmed by the contemporary principles internationally set for preserving military heritage. In this sense, reference can be made to the more recent ICOFORT Guidelines (2021). In this international document it is acknowledged that 'fortifications and military heritage comprise any structure built with either natural (i.e., botanical, or geological) or synthetic materials, by a community to protect themselves from assailants';⁵⁰ however, their conservation is still mainly centred on the principles of architectural conservation.⁵¹ On the other hand, when looking at the considerable efforts made by IUCN towards the recognition of the cultural significance of natural areas, military heritage is almost never considered. Indeed, sacred landscapes and the spiritual associations in natural sites have been the subject of a broad reflection, which is comparable to the great attention given to rural and agricultural landscapes.⁵² Instead, the negative environmental impact of military actions on the landscape seems to be the main concern from the perspective of nature conservation, together with the call for the preservation of residual natural

49 Cit. Fowler, P. (2002). World Heritage Cultural Landscapes, 1992-2002: a Review and Prospect. In: *Cultural Landscapes: the Challenges of Conservation*. Paris: UNESCO, 21.

50 Cit. ICOMOS (2021). ICOMOS Guidelines on Fortifications and Military Heritage.

51 Indeed, to be mentioned as the main reference point for conservation matters is the *ICOMOS Charter-Principles for the Analysis, Conservation and Structural Restoration of Architectural Heritage* (Zimbabwe Charter) (2003). Cf. ICOMOS (2021). *ICOMOS Guidelines on Fortifications and Military Heritage*.

52 Schaaf, T. & Lee, C. (2006). *Conserving Cultural and Biological Diversity: The Role of Sacred Natural Sites and Cultural Landscapes*, proceeding of UNESCO-IUCN International Conference, Tokyo (Japan). Paris: UNESCO; Schaaf, T. & Rossler, M. (2010). *Sacred Natural Sites, Cultural Landscapes and UNESCO's Action*. London: Routledge; World Heritage Centre (2013). *Agricultural Landscapes, World Heritage* (special issue), n. 37 (2013); Ishizawa, M., Inaba, N. and Youshida, M. (Eds.) (2017). *Agricultural landscapes. Proceedings of the First Capacity Building Workshop on Nature-Culture Linkages in Heritage Conservation in Asia and the Pacific, Journal of World Heritage Studies*. Japan: University of Tsukuba; Ishizawa, M., Inaba, N. and Youshida, M. (Eds.) (2018). *Sacred Landscapes. Proceeding of the Capacity Building Workshop on Nature-Culture Linkages in Heritage Conservation, Asia and the Pacific 2017, Journal of World Heritage Studies*. Japan: University of Tsukuba.

values in demilitarized sites, however considered as an accidental outcome of the military presence.⁵³

This 'natural' *damnatio memoriae* – which is added to the already difficult war memories often associated to military sites and structures – has its roots in the academic discussion on military landscapes, which has seen the primary involvement of disciplines like cultural geography and environmental history. In order to understand the terms of this debate, it is necessary to mention the rise of the so-called 'military environmentalism', a term used within the military sphere to describe the efforts made towards environmental protection, especially starting from the 1970s.⁵⁴ Within this frame, light has been shed on the possible positive environmental effects – as both direct or indirect results – of the military presence.⁵⁵ However, the latter has determined the rise of perplexities and critical positions, which see in this trend only an attempt to 'green wash' and overshadow the broader destructive impacts of military actions during both war and peace time.⁵⁶ This process has seen a considerable expansion in the scope and research methods of military geography and has found a collateral validation in the ethical and moral implications connected to the study of militarism and 'organized violence' at broad.⁵⁷

⁵³ This is evident from the various resolutions adopted by the IUCN on this topic: General Assembly 1984 (Madrid), RES 002: 'Conservation and military activities'; General Assembly 1994 (Buenos Aires), RES 042: 'The Conversion of Military Bases into Wildlife Conservation Areas'; World Conservation Congress 2000 (Amman), RES 030: 'Impacts of military activities on the environment and indigenous peoples' communities; World Conservation Congress 2004 (Bangkok), RES 058: 'Military activities and the production, stockpiling and use of weapons that are of detriment to the environment'; World Conservation Congress 2008 (Barcelona), RES 100: 'Military activities detrimental to the environment'. Moreover, also the literature produced from the organization confirms this trend (cf. IUCN (1996). *Tanks and thyme: biodiversity in the former Soviet military areas in central Europe*. Gland: IUCN; IUCN (1998). *Parks for life 97. Proceedings of the IUCN/WCPA European regional working session on protecting Europe's natural heritage*. Gland: IUCN; Wit, P. de, Noome, D. A. (2016). *Winning the environment: the ecosystem approach and its value for military operations. A way to improve your mission*. Gland: IUCN).

⁵⁴ Cf. Coates, P., Cole, T., Dudley, M. & Pearson, C. (2011). Defending Nation, Defending Nature? Militarized Landscapes and Military Environmentalism in Britain, France, and the United States, *Environmental History*, 16, n. 3, 456-491.

⁵⁵ See also: Duempelman, S. (2014). Conserving the Land. The Aerial View and Environmental Planning and Design. In: *Flights of Imagination: Aviation, Landscape, Design*, Id. Charlottesville: University of Virginia Press, 209-246.

⁵⁶ In relation to this, relevant is the contribution of Rachel Woodward: Id. (2001). Khaki Conservation: An Examination of Military Environmentalist Discourses in the British Army, *Journal of Rural Studies*, 17(2), 201-217; Id. (2004). *Military Geographies*. Malden, Mass.: Blackwell; Id. (2005). From Military Geography to Militarism's Geographies: Disciplinary Engagements with the Geographies of Militarism and Military Activities, *Progress in Human Geography*, 29, n. 6, 718-740; Id. (2014). Military Landscapes: Agendas and Approaches for Future Research, *Progress in Human Geography*, 38, n.1, 40-61.

⁵⁷ Cf. *Ibid.*, 732.

Nevertheless, an intermediate way is proposed by those who advocate the need to go beyond ideological stances when addressing the relationship between nature and the military in academic research.⁵⁸

In this sense, the role of landscape research is considered as crucial. While contributing to expand the 'polysemic notion' of military landscape, the necessity of landscape studies is associated to the marked landscape-oriented vision in the military occupation of space over time, and of which the fortified heritage of today is the result.⁵⁹ Reference is made to the centrality of landscape features – the topographic conditions, the presence of water bodies and vegetation – in the conception of military sites and structures, the interpretation of which has constantly represented a core skill in the expertise that military educational programs have aimed at achieving throughout history.⁶⁰ Moreover, the predominance of the visual component in the military approach to the landscape is also relevant, which was translated into an extensive evolution of cartographic tools for representing and quantifying the observed landscape features in terms of strategically-relevant data, as well as in the sight-based strategies for the fortification and concealing of defended areas and sites.⁶¹ But despite this common frame, the approach to nature and landscape features developed by the military in different periods and geographical conditions cannot be described in a univocal way. Indeed, a rather ambivalent tendency can be observed, being the natural environment sometimes considered as an ally, while in others cases it has represented an enemy for the achievement of the military strategic goals. Additionally, considerable fluctuations can also be noticed in the attention towards the maintenance of an overall environmental balance in the planning and implementation of military works and

⁵⁸ Cf. Coates, P., Cole, T., Dudley, M. & Pearson, C. (2011). *Defending Nation, Defending Nature?*, *op. cit.*; Pearson, C. (2012). *Researching Militarized Landscapes: A Literature Review on War and the Militarization of the Environment*, *Landscape Research*, 37, n.1, 115-133.

⁵⁹ From the traditional understanding of purposeful transformation in response to strategic military objectives, the notion of military landscape is gradually opening to include also the by-products and broader influences of military actions, not necessarily bearing the signature of military engineers (cf. Picon, A. (2021). *Military Landscapes. Landscapes of Events*. In: *Military landscapes*, Tchikine, A. & Davis, J. D. (Eds.). Washington, D.C.: Dumbarton Oaks, 23-26).

⁶⁰ Cf. Brinckerhoff Jackson, J. (1984). *Landscape as seen by the Military*. In: *Discovering the Vernacular Landscape*, Id. New Haven: Yale University Press, 134. For a reflection on the role of landscape at the 18th-century French school for military engineers – l'École royale du génie de Mézières – see: Picon, A. (2021). *Military Landscapes. Landscapes of Events*, *op. cit.*, 27-28.

⁶¹ Fitzhugh, A. (1943). *Camouflage. Adaptation of basic principles of landscape architecture*, *Landscape Architecture*, 33(4), 119-124; Duempelman, S. (2014). *Concealing the Land. Creating Invisible Landscapes of War and Peace*. In: *Flights of Imagination*, *op. cit.*, 153-208.

infrastructures and, even before the more-recent 'military environmentalism' phenomenon, a so-called 'proto-environmental dimension' can be recognized in the early-modern period – although still embedded in a vision of the natural resources as unlimitedly disposable assets – and then gradually eroded with the advent of industrialization.

Whether considered as an ally or an enemy, as a resource to protect or exploit, the complex relationship established with nature and the landscape by the military is always deployed on different and interrelated levels or scales. This common trait is inherent to the system character recognizable in the most of military structures that respond to the need – especially felt since the Modern Age – to extend defence on a wider territorial scale. The latter is linked to the rapid evolution in artillery occurred in the 19th century. The theory of permanent fortification knew a great peak with the tireless development of more and more sophisticated military systems that, however, often turned out to be obsolete by the time of their completion. As tangible manifestations of those 'anthropic structures' that are historically connected to the exercise of power in a given area, they often consist of a network of isolated and non-contiguous objects spread over a large spatial extension, but conceived in a 'synchronic' way and with an often 'repetitive' configuration, to fulfil a common military purpose.⁶² Therefore, they can be isolated as landscape systems by virtue of the multiple interrelations existing between the parts and with the environment in which they, and the system as a whole, are inserted.⁶³ About the 'synchronic' and 'repetitive' characters used to describe the components of military systems, they are to be considered as relative, since they are a function of the time and spatial scale at which the system is observed. Consequently, also the type and the way in which the relationships with the available natural resources and the landscape are established need to be considered from an inter-scale perspective.

62 About the 'anthropic structures', reference is made to the definition given by C. Tosco (2009), who describes them as 'forms of social organization which define, in a certain period, the interaction between a society and the natural resources at its disposal. In themselves, anthropic structures escape perception, but they materialize in forms on the territory'. Accordingly, he identifies three dominant anthropic structures in the historical landscape, connected to the sphere of the sacred, of work and of power. It represents an instrumental subdivision – given their constant interrelation in every landscape – which reflects an image that society had of itself between the Middle Ages and the Modern Age (cf. Tosco, C. (2009). *Il paesaggio storico. Le fonti e i metodi della ricerca*. Bari: Laterza, 165-166).

63 Council of Europe (2018). Glossary of the Information System, *op. cit.*, 32-33.

2.3 Historic Military Systems at the crossroads of Architecture and Landscape Heritage: conservation issues

There are several conservation issues involved in historic military systems and, apart from some applied research experiences, they have not received a specific in-depth analysis from a methodological point of view.⁶⁴ This lack is of great importance, considering that they fully reflect the definition of 'degraded landscapes' provided by the Council of Europe.⁶⁵ Indeed – as landscape systems – they today appear as frequently affected by 'abandonment' because of the end of their original strategic function, to which is associated a 'loss of usefulness' and a negative perception from the community. The latter aspect is exacerbated by the rejection of war and the military heritage from both a cultural and a natural point of view. But, strongly related to that, the degradation of these systems is then associated to their subsequent 'fragmentation', according to which the components of the system – once their common function has come to an end – are frequently destined to abandonment or start a new life, but still losing their character of nodes within a wider landscape system and the multiple interrelations – both natural and cultural – associated with it. This aspect results in a 'simplification', in which the already 'physical' invisibility that is a typical trait for military systems – being composed by disconnected and non-continuous components deployed on a wide territorial extension – is followed by a deeper 'cultural' invisibility in people's perception.

The need to mend the lost relationships involves two main issues. On the one hand, it is necessary to rethink the entire historic system in an organic way. It follows that, given their territorial extension, it is necessary to establish a dialogue between the conservation needs – of both the system and of the individual objects, intertwined – and the needs of sustainable development that characterize the area of interest. About the former nodes of the system, they may not correspond to a single architecture, but to a complex of biologic and syntetic components, representing a sub-system that is to be tackled as an intermediate scale. Moreover, it is necessary to extend the definition of 'built heritage' also to biologic components, which

⁶⁴ Cf. Fiorino, D. R. (2020). Europa 'trincerata'. Scenari di riuso, in *Paesaggi militari del Campo Trincerato di Roma: Progetti per Forte Aurelia*, Chiri, G. M., Fiorino, D. R., Morezzi, E. and Novelli, F. (Eds.). Torino: Politecnico di Torino, 42-57.

⁶⁵ Council of Europe (2018). Glossary of the Information System, *op. cit.*, 49.

represent a constant feature of these systems and that, like architecture in the strict sense, they have a not-negligible cultural, as well as ecological, connotation. However, the specific preservation demands posed by the natural dimension is often omitted. A valid reference point could be found in neighbouring domains (e.g. that already-mentioned of historic gardens) that can count on a well-established tradition in the conservation of natural components presenting a combined, cultural and ecological significance.⁶⁶ Finally, there is a lack of principles to organically address their preservation together with the synthetic components – beyond the degradation effect that they might have on historic buildings – with which they coexist in the frame of an often blurred distinction.

⁶⁶ Cf. UNESCO-ICOMOS Documentation centre (2011). *Restoration and conservation of historic gardens: a bibliography*. UNESCO-ICOMOS: Paris.

3 Beyond nature and culture

Landscape as heritage in the Dutch and Italian protection models

The history of the European landscape phenomenon is frequently described in literature through the conventional dialectics between a 'naturalist' and a 'cultural' approach. These two facets are characterized by the different values put in place in the appreciation of the landscape: ecological, social and economic on one side, historic, aesthetic and identity-related values on the other.⁶⁷ C. Tosco has expressed this duality in terms of an 'objective' and a 'subjective' dimension, in which the focus is respectively centred on geographical phenomena or personal perceptions.⁶⁸ This binomial reading key has also been applied for studying the evolution of European protection policies, where two tendencies have been identified: one characterized by the separation between naturalistic and cultural aspects, the other by the inclusion of landscape protection in the frame of cultural heritage policies.⁶⁹

This scenario represents the indispensable framework for dealing with a comparison between the Netherlands and Italy on the evolution of landscape appreciation and protection. While sharing a similar, although very peculiar, manmade character and landscape artistic tradition, these countries embody the two antinomial souls of the European landscape phenomenon. In the light of the more recent advancements in the field of landscape studies and international conventions, this chapter aims at

⁶⁷ Donadieu, P. (2014). *Scienze del paesaggio: tra teorie e pratiche*. (A. Inzerillo, Trans.). Pisa: ETS, 213.

⁶⁸ Tosco, C. (2007). *Il paesaggio come storia*. Bologna: Il Mulino, 12.

⁶⁹ Scazzosi, L. (1999). Politiche culturali del paesaggio in Europa e negli Stati Uniti: una lettura trasversale, in *Politiche e culture del paesaggio: esperienze internazionali a confronto*, Scazzosi, L. (Ed.). Roma: Gangemi, 18.

going beyond the conventional interpretation of ‘nature’ and ‘culture’ as opposite forces, highlighting the frequent use of the same concepts and recurrence of similar issues in the two contexts. At the same time, the different interpretative keys used by the different actors (and disciplinary backgrounds) involved still leave some space for a deeper understanding of the historical duality of the European landscape, beyond ‘simple semantic equivalents’ (FIG. 3.1).⁷⁰

This interpretative path between similarities and differences represents a fundamental premise for understanding the more recent strategies developed in Italy and the Netherlands for preserving historic military systems. The latter can be interpreted as border territories between the domains of architecture and landscape. While architecture is commonly included in the frame of cultural expressions and related protection policies, the different definition of the landscape ‘problem’ plays a decisive role in the preservation strategies put in place for these systems. Consequently, the evolution of landscape appreciation and protection is the main observation point, with the fields of cultural heritage and spatial planning as indispensable references for the comparison.⁷¹

With the aim of investigating the relationship between landscape, architectural heritage and spatial planning in the evolution of Italian and Dutch policies in a comparative perspective, the main questions addressed in this chapter are:

- What is considered as *heritage* in landscape?
- What are the *values* serving the landscape patrimonialization process?
- What is the connection between landscape heritage and cultural heritage at broad and, more specifically, with architectural heritage?
- What are the *strategies* and *tools* used for landscape protection?
- What is the connection between landscape protection and planning?

⁷⁰ Cit. Werner, M. & Zimmermann B. (2006). Beyond Comparison: Histoire Croisée and the Challenge of Reflexivity, *History and Theory*, 45(1), 44. We need to consider as ‘actors’ not only the individuals or groups directly engaged in the described historical events (primary literature), but also the people who have written this story until now (secondary literature) for their inevitable influence on this research and, more broadly, on the general understanding of the landscape phenomenon on a national, but subsequently also international, base.

⁷¹ The focus on landscape has determined the selection of the (primary and secondary) literature analysed. In order to avoid ‘negative comparisons’ – i.e., ‘evaluating a society based on the absence of a category chosen because of its relevance to the initial environment of the researcher’ (cf. Werner, M. & Zimmermann B. (2006). Beyond Comparison, *op.cit.*) – the analysis has implied looking at literature produced in those disciplinary fields relevant – and different – for the two contexts (e.g., nature conservation and spatial planning in the Netherlands, architectural heritage preservation in Italy). At first, the primary aim has been to investigate the main discourse and arguments for landscape protection in the two contexts. Thanks to the cross-reading, each context was then observed through each other, which has opened the way to a deeper understanding of similarities and differences between the two countries.

Accordingly, the two contexts are jointly analysed through the diachronic evolution of theoretical and practical developments relevant for these queries. The cross reading is organized in four paragraphs, reflecting the steps through which the relation of the landscape concept with neighbouring domains (cultural heritage, nature, environment) has evolved over time. The timespan considered goes from the first protection initiatives, including the incubation phase started from the mid-19th century, to the present.

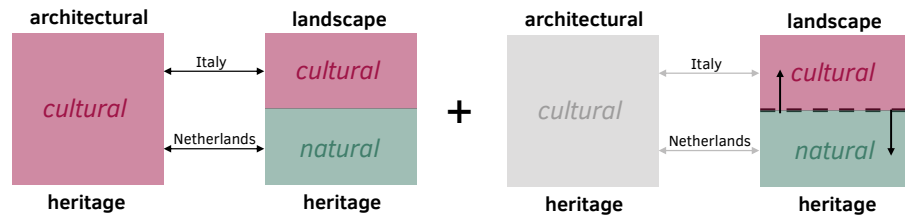


FIG. 3.1 Concept of the interactions (architecture and landscape heritage, nature and culture in landscape heritage) analysed within this chapter (F. Marulo 2022)

3.1 Nature as monument. The safeguard of nature ‘relics’ and ‘memorials’ in the early 20th century

3.1.1 One plea, different voices: the arguments of nature conservation and historic-artistic heritage protection

The emergence of landscape protection in Europe is related to the experience of brand-new environmental issues in the second half of the 19th century. It was particularly England, first marked by the effects of the industrial revolution, to lead the way in the implementation of protection measures and policies already in the 1860s, then followed by other European countries by the end of the century.⁷²

⁷² For an overview on the first environmental waves in Europe, see: Piccioni, L. (2014). The rise of European environmentalism: a cosmopolitan wave, 1865-1914. *Ekonomika I Ekohistorija*, 10(1), 7–15.

Although the concept of landscape was not new to the ‘eye of the painter and the measurement of the cartographer’, it is at this moment – permeated by the romantic season – that its rediscovery got started within the frame of a general concern for nature conservation, which in some cases also met the influence of an on-going state building process and the nationalist rhetoric associated with it.⁷³ Indeed, the first initiatives for protection are focused on securing natural areas, which were now perceived as endangered assets and as a heritage for consolidating the national identity. However, the interpretation of the values characterizing natural spots was different within the European countries, of which the Netherlands and Italy – the two reference contexts of this research – represent relevant examples.

In the Dutch context, landscape protection has its roots in the so-called ‘green wave’ that invested the country during the 19th century.⁷⁴ This phenomenon, which will assume the character of a ‘biological reveil’,⁷⁵ can only be understood in the context of considerable transformations that were taking place at the time. Apart from industrialization, the strong population growth and the following massive urbanization process are global phenomena that had visible effects on Dutch cities. Even worse was the impact of infrastructures on the image of the countryside, which was also affected by the rising agricultural pressure. The negative consequences of these developments did not immediately lead to a protest movement, but several reactions arose from different actors. The deplorable living conditions of cities were the most impelling issue: the middle-class city dwellers used to leave the crowded and polluted cities looking for ‘free nature’ in the countryside;⁷⁶ architects and doctors started to criticize the urban situation from an hygienic point of view. Also in the field of arts and literature there was a reaction to the industrial culture

⁷³ Cit. Tosco, C. (2007). *Il paesaggio come storia. op.cit.*, 24.

⁷⁴ Used for the first time by Cramer (1989) for describing the development occurred since the late 1960s in the Dutch environmental movement, the definition of ‘green wave’ has been then extended by other scholars (van der Windt 1995: 94; Renes 2008: 145-147) also to the previous stages of the nature and landscape protection movement in the Netherlands (cf. Cramer, J. (1989). *De groene golf. Geschiedenis en toekomst van de Nederlandse milieubeweging*. Utrecht: Van Arkel; Windt, H. van der (1995). *En dan: Wat is natuur nog in dit land? Natuurbescherming in Nederland 1880-1990* (Doctoral dissertation, 1995). Boom; Renes, J. (2008). *Landscape preservation in The Netherlands since the end of the Nineteenth century*, in *Re-Marcable Landscapes / Marc-ante landschappen; liber amicorum Marc Antrop*, Eetvelde, V.V., Sevenant, M. and Velde, L. van de (Eds.). Gent: Academia Press).

⁷⁵ Cit. Coesèl, M. (2018). *Van vuilnisbelt tot natuurmonument*: Jac. P. Thijsse en het Naardermeer. 2E druk edn. Zeist: KNNV Uitgeverij, 19.

⁷⁶ For this reason, the *Nederlandsche Velocipedisten-bond* (Dutch Cyclists Association) was founded in 1883, later renamed as *Touristenbond* (ANWB – Tourists Association) (cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 40).

and a claim for a renewed contact between man and nature.⁷⁷ Starting from the mid-19th century, a renewed interest for nature arose within the frame of an ambivalent perception of the progress investing the country. Although the occurring transformations were seen as the inevitable price to be paid for the required modernization, the rise of the hiking-report literary genre can be interpreted as a first reaction to the need for keeping track of the losses by setting up ‘a monument of the disappearing Netherlands’.⁷⁸ In this scenario, the voice of F. W. van Eeden sr. (1829-1901) stands out for the influence it will have on the following developments in the field of nature conservation.

Secretary of the *Nederlandsche Maatschappij tot bevordering van Niverheid* (Dutch Society for the Promotion of Industry) and director of its affiliated museums for almost his entire life, Van Eeden had matured a strong disposition for nature observation since its childhood’s countryside visits – a lasting habit that he would keep as a grown-up amateur botanist.⁷⁹ But contrary to what might be expected from any romantic nature lover of his time, his opinion about the contemporary human interventions on wild natural environments had not been unequivocally negative.⁸⁰ However, the destruction of the Beekbergerwoud in 1869 – an almost unspoiled forest, valuable for its rare flora and fauna – stimulated a revision of his positions:

⁷⁷ Cf. *Ibid.*, 39-41.

⁷⁸ Reference is made to the words by J. Craandijk, expressing the general aim of his work *Wandelingen door Nederland* (Walks through the Netherlands) (1874-1875) (cf. Berkel, K. (2006). Voor Heimans en Thijsse: Frederik van Eeden sr. en de natuurbeleving in negentiende-eeuws Nederland, *Koninklijke Nederlandse Akademie van Wetenschappen: Mededelingen van de Afdeling Letterkunde*, 69(3), 17).

⁷⁹ In 1866, he started to divulgate the outcomes of such observations in a series of articles published in the magazine *Album der Natuur*, a part of which was later on re-edited and further developed in his most famous work (1886): *Onkruid. Botanische wandelingen van F.W. van Eeden* (“Weeds. Botanical walks by F.W. van Eeden”) (cf. *Ibid.*, 8-12).

⁸⁰ About the destruction of a forest in the area of Velzen for the construction of a new canal, van Eeden said: ‘The man who, ignoring his predisposition, hates all development and whose monotonous life is divided between mechanical work and insignificant pleasures, presents a sad spectacle. But where man appreciates his talent, develops his mind and manages nature by naughty ventures, the sight of him and his labour is no less uplifting than the contemplation of nature. In the first case man is a morbidly degenerated object, in the second a real son of his mother, the earth’ (cit. Eeden, F. W. van (1886). *Onkruid: botanische wandelingen van F.W. van Eeden (twee delen)*. Haarlem: H.D.T. Willink, 85-86. In: Berkel, K. (2006). Voor Heimans en Thijsse, *op.cit.*, 21).

‘As a monument of the primeval nature of our land, this forest was not less valuable than the old buildings for the history of the fatherland’s art, and the saving of such remarkable places from demolition had to be entrusted to the Royal Academy of Sciences’.⁸¹

The historical significance characterizing the fatherland’s primeval nature is condensed in the concept of *natuurmonumenten* (nature monuments), which – as well as the national architectural monuments – were now recognized as equally worthy of being safeguarded through the same institution.⁸²

Van Eeden’s ideas had a considerable influence on researchers from different fields. In particular, the teachers J. P. Thijssse (1865-1945) and E. Heimans (1861-1914) would treasure his legacy, while laying the foundations for the following decisive step of the nature protection movement. In the attempt of matching the interests for biology and pedagogic issues,⁸³ in 1893 Heimans published a successful book, entitled *De Levende Natuur* (The Living Nature).⁸⁴ Together with several booklets realized with Thijssse afterwards, this work spread an idea of nature as a *levengemeenschap* (living community), in which flora and fauna formed a unity of interrelated elements. In response to their success, Thijssse and Heimans started the journal *De Levende Natuur* (1896), which offered a stage to those involved in nature studies for sharing their findings. The two editors also introduced the term *natuursport* to describe the ‘hobby’ of collecting observations about nature and exchanging them. In addition to this, a call published on the columns of the journal led, in 1901, to the foundation of the *Nederlandsche Natuurhistorische Vereeniging* (NNV – Dutch Society for Natural History). The main goal of the organization was the study of nature, but from its statutes it is possible to already recognize the will to protect natural areas. Thus, Thijssse and Heimans gave a strong impulse to the following creation of a proper nature protection movement, for which the introduction of the journal *De Levende Natuur* and the foundation of the NNV

⁸¹ Cit. Eeden, F.W. van (1880). Herinneringen aan de Veluwe, *Album der Natuur*, 161-176. In Berkel, K. (2006). Voor Heimans en Thijssse, *op.cit.*, 24.

⁸² Founded by Louis Napoleon in 1808 as *Koninklijke Instituut voor Kunsten en Wetenschappen* (Royal Institute for Arts and Sciences) and then renamed *Koninklijke Akademie van Wetenschappen* (Royal Academy of Sciences) in 1851, it represented for a long time the main institution for the knowledge and protection of the built heritage in the Netherlands (cf. Kuipers, K. (1998). The Long Path to Preservation in the Netherlands, *Transactions of Ancient Monuments Society*, 42(1998), 18).

⁸³ Starting from 1857, ‘Knowledge of Nature’ became a mandatory subject in the Dutch schools (cf. Windt, H. van der (1995). *En dan: Wat is natuur*, *op.cit.*, 45).

⁸⁴ Heimans, E. (1893). *De levende natuur: Handeling bij het onderwijs in de kennis van planten en dieren op de lagere school in het bijzonder voor grote steden*. Amsterdam: Versluys.

represented the most important steps. They also set the focus of attention on the biological aspects of nature, which would be the leading attributes in the definition of which kind of natural areas had to be protected for several years.⁸⁵

Different was the path to landscape protection in Italy, which is rooted in the radical reform of the cultural heritage policy that followed the national unity.⁸⁶ The unification process (1861) involved the construction of a national system of laws to replace those of the former states in which the peninsula was previously divided.⁸⁷ The suppression of a centuries-old equilibrium, and the consequent acquisition by the State of a huge – and mostly unknown – cultural heritage called for an urgent reaction for its knowledge and protection from the liberal economy rules.⁸⁸

Even if there was a widespread interest in the protection of this national heritage, the practical actions of conservation and protection pushed ahead with difficulty, and at different speeds according to the heritage sector involved.⁸⁹ Already in 1861,

⁸⁵ Cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 45-48.

⁸⁶ Cf. Tosco, C. (2014). *I beni culturali: storia, tutela, valorizzazione*. Il Mulino: Bologna, 53.

⁸⁷ After having been for long divided into small state entities, the Italian unification process was run by the pre-unification state who had less invested in protection rules: the Kingdom of Sardinia. Indeed, if the ‘Council of Antiquities and Fine Arts’ created by King Carlo Alberto in 1832 was in some ways in line with the contemporary measures introduced in the rest of Italy, it had, however, set a limit to protection, consisting in the need to operate ‘without infringing the right of property’. The *Statuto Albertino* of 1848 reaffirmed the principle that ‘all properties, without exception, are inviolable’, although mitigated by the possibility to expropriate, in exchange of a ‘proper indemnity’, when justified by a ‘legally established public interest’ (cf. Settis, S. (2010). *Paesaggio Costituzione Cemento: la battaglia per l’ambiente contro il degrado civile*. Torino: Einaudi, 110).

⁸⁸ Within this frame, the institute of *fedecommesso* (through which art collections of aristocratic and bourgeois families were made inalienable and indivisible), the inalienability of religious properties and the *usi civici* (which burdened on many areas, assuring them for collective uses) were repealed or restricted. The consequence was the drastic and immediate commercial liberalization of large assets, which started an uncontrolled transformation of immovable properties and the dispersal of art objects (cf. Ventura, F. (1987). Alle origini della tutela delle “bellezze naturali” in Italia, *Storia Urbana*, XI(40), 3). As a consequence, foreign art markets started to gain access to the available art works, taking advantage of the lack of protective laws – a situation that was worsened by the annexation of Rome to the Italian State (1870) (cf. Tosco, C. (2014). *I beni culturali, op.cit.*, 54).

⁸⁹ In the new economic and social context, conservation and protection could be only exercised by the State, since heritage, off-market, was destined to abandon and disappearance. But that involved financial, organizational and cultural difficulties related to the acquisition of assets, their maintenance and the identification of what actually was of public interest – a concept, this latter, still not fully clear (cf. Ventura, F. (1987). Alle origini della tutela, *op.cit.*, pp. 4-6). One of the first fields to get more attention by the government was the book heritage. Indeed, in 1861, the National Library of Florence was founded, then followed by other similar institutions. About the protection of mobile objects and real estates, despite the claims of many scholars, there was still a strong resistance, justified by the fear that too restrictive norms could have affected the inalienable rights of private property (cf. Tosco, C. (2014). *I beni culturali, op.cit.*, 53).

the historians and art critics G. B. Cavalcaselle (1819-1897) and G. Morelli (1816-1891) had been appointed for the drafting of the *Catalogo degli oggetti d'arte di proprietà ecclesiastica delle Marche e dell'Umbria* (Catalog of the ecclesiastical artworks of Marche and Umbria).⁹⁰ This task covered a primary requirement at that time: to deepen the knowledge about the consistency of the national artistic heritage. For them, that knowledge had an educational function for the dissemination of an historic-artistic culture, and represented an indispensable step towards the promulgation of a protection law.⁹¹ Also members from other disciplinary fields – e.g. that of architectural restoration, which was gradually acquiring autonomy – worked at the side of art historians to pursue this common goal.⁹² Consequently, the Italian State had its first general law on the 'Protection of Antiquities and Fine Arts' in 1902 (Nasi law n.185), after many unsuccessful attempts since the 1860s.⁹³ During that forty years, the foundations were laid for the organization of the responsible authorities for the supervision and protection of the heritage spread on the national territory.⁹⁴ The Nasi law was the first attempt to mediate between public interests and private property, but this latter still had much power.⁹⁵ Within this general frame, the first strives for protecting natural areas arose, almost simultaneously, as an extension of those related to art objects, archaeological assets and historical architecture. As highlighted by L. Piccioni, Italy was not free from a

⁹⁰ Considered as the founding fathers of art history in Italy, Cavalcaselle and Morelli were pivotal actors in shaping the cultural policy of the newborn Italian State. It was through these figures that a close relationship between art and heritage protection was established, which influenced the first generation of protection policies (cf. Pracchi, V. (2001). *La logica degli occhi: gli storici dell'arte, la tutela e il restauro dell'architettura tra positivism e neoidealismo*. Como: New Press, 13-14).

⁹¹ Indeed, already in 1862, Cavalcaselle had addressed a paper to Minister of Public Education Matteucci on the preservation of art works, denouncing the urgency of State intervention (cf. Tosco, C. (2014). *I beni culturali, op.cit.*, 53).

⁹² For a complete overview on the actors involved at this stage, see: Pracchi, V. (2001). *La logica degli occhi, op.cit.*

⁹³ For more details about these failed bills, see: Bencivenni, M., Dalla Negra, R. & Grifoni, P. (1992). *Monumenti e istituzioni. Vol. 2: Il decollo e la riforma del servizio di tutela dei monumenti in Italia, 1880-1915*. Firenze: Ministero per i beni culturali e ambientali, Soprintendenza per i beni ambientali e architettonici per le province di Firenze e Pistoia.

⁹⁴ For more details about the institution of Provincial Committees, General Direction, Regional Offices and Superintendencies, see: Cf. Tosco, C. (2014). *I beni culturali, op.cit.*, 55-56; Bencivenni, M., Dalla Negra, R. & Grifoni, P. (1992). *Monumenti e istituzioni, op.cit.*

⁹⁵ The law limited the catalog of private assets to things of 'high historical and artistic interest' for which exports were banned, leaving to the State only the right of first refusal on property for sale and, exceptionally, the expropriation right for public utility. But the State fund destined for these purchases was that coming from the export duties of art works (cf. Settis, S. (2010). *Paesaggio Costituzione Cemento, op.cit.*, 114).

scientific-naturalistic current.⁹⁶ But, unlike what was happening in the Netherlands in the same years, it will be the so-called ‘artistic-patriotic wave’⁹⁷ – characterized by the presence of the same actors involved in the protection of historic-artistic heritage – the one to turn single local actions in a matter of national interest.

3.1.2 First initiatives for the protection of natural areas: the cases of the Naardermeer and the Ravenna Pinewood

Despite the different backgrounds, it was a specific event to trigger, in both contexts, the first and coeval protection initiatives: the emerging threat to the natural environments of the Naardermeer (NL) and the Ravenna pinewood (IT). Nevertheless, different were the reasons and arguments used for averting their loss.

Located in the Vecht river plain at about 20 km south-west from the capital, the Naardermeer natural area included a fresh-water lake and its surroundings – made of peat lands, marshy woodlands, open reed-marshlands and meadows – for a total extension of about 700 hectares, and represented one of the few natural lakes in the Netherlands.⁹⁸ However, the history of the site had not been free from past human interference. Open to the Vecht river until the end of the 14th century, the Naardermeer had been partially reclaimed in 1628. Due to the difficult water management conditions and the feared threat of war against the Spaniards, the polder was flooded again for both technical and military reasons in the following years (FIG. 3.2). A new attempt was made in 1883, but the poor agricultural profitability of the reclaimed area led, also in this case, to the abandonment of this operation. In the meantime, the railway line Amsterdam-Amersfoort had been

⁹⁶ In this sense, relevant is the foundation in Florence (1888) of the *Società Botanica Italiana* (Italian Botanic Society), and the strives for the preservation of special natural environments or plant species from a botanical point of view, of which the claims for the Papyrus of Syracuse’s natural ‘archaeology’ (1891), the Gargano forest (1891) and the alpine flora – this latter leading to the creation of the ‘Chanousia’ botanical park (1897) – represent the starting initiatives (cf. Piccioni, L. (2014). *Il volto amato della patria: il primo movimento per la protezione della natura in Italia, 1880-1934* (2ed.). Trento: Temi, 50-55).

⁹⁷ Cit. *Ibid.*, 9.

⁹⁸ The most of the lakes in the Netherlands have been created with a process of peat cutting (cf. Hoeksema, R. J. (2007). Three stages in the history of land reclamation in the Netherlands. *Irrigation and Drainage*, 56(S1), 119). For a description of the lake, see: Barendregt, A., Wassen, M. J., & Schot, P. P. (1995). Hydrological systems beyond a nature reserve, the major problem in wetland conservation of Naardermeer, *Biological Conservation*, (72), 393; Kruk, R., van der (2005). *Hedonic valuation of Dutch wetlands*. Thesis dissertation, 123.

realized in 1874, the track of which split the lake in two parts.⁹⁹ Nevertheless, by the end of the 19th century the lake area had caught the attention of nature lovers, which started to identify in its flora and fauna a great potential for different kinds of nature studies.



FIG. 3.2 Detail of the *Kaart van het terrein gelegen tuschen Amsterdam, Utrecht en Naarden tot aanduiding van de omstreeks 1672-1673 aldaar bestaan hebbende verdedigings-werken tegen de Vesting Naarden onder Willem III in 1673 aangelegd* (Map of the site located between Amsterdam, Utrecht and Naarden, indicating the defense works that existed there around 1672-1673 against the Fortress of Naarden, constructed in 1673 under William III); the Naardermeer shows the signs of the reclamation (Nationaal Archief Den Haag)

However, this was not the case for the Amsterdam administrative board. The urban expansion that the city was experiencing at that time had led to the building of new residential areas, which turned out to be too close to the *Kostverlorenvaart* – the site that, since 1877, had been in use for the deposit of household and street waste. In order to solve this problem, in 1904 the director of the *Stadsreinigingsdienst* (City Cleaning Service) started to analyse the displacement opportunities for the city garbage dump, finding in the Naardermeer the most favourable location. Together

99 Cf. Thijsse, Jac. P. (1905). *Het Naardermeer*, *De Levende Natuur*, 9(10), 193-197; Barendregt, A., Wassen, M. J., & Schot, P. P. (1995). Hydrological systems, *op.cit.*, 393-394.

with its proximity to the urban centre and the already-existing train connection, the benefits of this choice included the possibility to turn this infertile and 'worthless puddle' into agricultural land.¹⁰⁰

Although not already approved by the municipal council, the news of the recent negotiations with the owners of the area and the transport company led to the spread of many dissatisfied reactions on local magazines. Among them, Thijsse made his position clear on the columns of the *Algemeen Handelsblad*.¹⁰¹ His 'sadness and annoyance' for the Amsterdam municipal plan was based on the following reasons:

'The Naardermeer is not a collection of ordinary puddles; it is a type-landscape of the highest significance and for every nature lover, for every civilized man who respects life, it is an unparalleled treasure room. There is no place in all Western Europe where there are as many biological and zoological peculiarities as here. All kind of song, water and marsh birds breed here in rare abundance; among them, the rarest species such as the nightingale, reed warbler and the bearded tit or even species that, except in a single privileged place in our country, do not occur anywhere else in Western Europe, like the spoonbills and the purple herons'.¹⁰²



FIG. 3.3 'Young Spoonbills in the Naardermeer' (Thijsse 1905: 196)

Giving voice to the concern of many birds' protectionists, Thijsse's arguments for opposing the filling plan laid on the importance that the Naardermeer's biological and, in particular, zoological peculiarities had for the advancements in the field of nature studies, the scientific relevance of which overcome the national boundaries (FIG. 3.3). Still not explicitly expressed, at this first stage, is the link of the scientific

¹⁰⁰ Cf. Coesèl, M. (2018). Van vuilnisbelt tot natuurmonument, *op.cit.*, 9-11.

¹⁰¹ Thijsse, Jac. P. (1904). Het Naardermeer, *Algemeen Handelsblad*, 16th November 1904. Integral version of the article can also be found in: Coesèl, M. (2018). Van vuilnisbelt tot natuurmonument, *op.cit.*, 12.

¹⁰² Cit. *Ibid.*

value with its being a 'type-landscape', which he would define as relevant for both 'art and science' a year later.¹⁰³

In the case of the Ravenna pinewood, the history and evolution of this natural environment is even more intertwined to the human presence and the close urban settlement from which it takes its name. Albeit its uncertain origins, a wood was already present when Ravenna was founded and the first mentions to a 'pinewood' date back to the end of the 5th century B.C.¹⁰⁴ However, studies affirm that the species of pine which has reached our days (*Pinus pinea* or stone pine) only appeared after the year 1000 A.C.¹⁰⁵ This change in the forest cover overlapped in time with the settlement of four local monastic communities,¹⁰⁶ and can be explained as the consequence of their exploitation needs of the natural environment.¹⁰⁷ Despite its productive function, the pinewood could benefit for its survival of a balanced process of cut and seaward replantation during the period of ecclesiastic property and use.¹⁰⁸ This long-lasting equilibrium was interrupted during the short period of the Cisalpine republic (1798-1816), in which the privatization and subsequent exploitation of the pinewood with no replantation took place.¹⁰⁹ After the Papal state

¹⁰³ Cf. Thijsse, Jac. P. (1905). *Het Naardermeer, op.cit.*, 193.

¹⁰⁴ Cf. Rava, L. (1897). La pineta di Ravenna, *Nuova antologia di scienze, lettere ed arti*, 4(70), 252; Andreatta, G. (2013). Le pinete di Ravenna: aspetti storici, culturali, e selvicolturali, *Dendronatura*, 1(2013), 50.

¹⁰⁵ Around the 12th century, a transition from the term *silvae* to *pignetae* occurred in historical documents. For reasons related to the climate of the time, it is believed that another species of pine (*Pinus sylvestris* or scots pine) was more likely to be found in the previous period (cf. Andreatta, G. (2013). *Le pinete di Ravenna, op.cit.*, 50).

¹⁰⁶ Reference is made to the Abbeys of San Vitale, Santa Maria di Porto, Sant'Apollinare in Classe and San Giovanni Evangelista, which gave the name to the four sectors in which the historical pinewood was divided (cf. *Ibid.*, 50-51).

¹⁰⁷ The pinewood represented a resource for the harvest of pine nuts and wood cut, as well as for the pasture space it made available. Subsequently, other activities like hunting, fishing and the harvest of fruits and herbs were added (cf. *Ibid.*, 50).

¹⁰⁸ During the Middle Ages, the owners of the area were the local Archbishops. Only for a short period the Venetian government came in to force, then replaced by the Papal state in 1509. Despite these property changes, the four abbeys kept their control on the pinewood through a special medieval concession called *emphyteusis*: they could use the asset in exchange of the necessary maintenance works, and keeping wood-cut and harvest rights (*ius lignandi* and *ius pascendi*) for the local community (cf. *Ibid.*, 51-52). Accordingly, the four abbeys assured all cares needed in order to extend the pinewood seawards during their presence. Within this process, they could benefit from the local natural phenomenon of progressive retreat of the sea, which offered new land for the reproductive insemination of the pine forest (cf. Ventura, F. (1987). *Alle origini della tutela, op.cit.*, 9).

¹⁰⁹ After the expropriation of the ecclesiastic properties, the government of the Cisalpine Republic sold the pinewood to a company of noblemen from Ravenna, which started a massive process of wood cut for shipbuilding (cf. Andreatta, G. (2013). *Le pinete di Ravenna, op.cit.*, 51).

came back into force,¹¹⁰ in 1860 the pinewood was once again in private hands. This operation started a dispute with the new-born Italian State, finally concluded with the transfer of ownership to the Ravenna municipality in 1873.¹¹¹



FIG. 3.4 The Ravenna pinewood during the winter 1879-1880 which destroyed a large part of the wood (Ricci 1905: 296)

However, the public property of the pinewood did not end the threats to its survival. The wide damage that the forest underwent during the winter frost of 1879-80 – then followed by a fire – opened the way for a local debate on whether restoring the lost pines or using the emptied area for agricultural purposes (FIG. 3.4). This last option prevailed, meeting the partial approval of the deputy from Ravenna L. Rava (1860-1938), which addressed the issue in a interpellation to the government in 1892.¹¹² As he shortly after explained in an article on the magazine *Nuova Antologia* (1897), the real damage inflicted to the Ravenna pinewood had not to be intended in terms of ‘*devastation of plants*’, but as the destruction or alienation or suffocation of the *forest*’ and, thus, mainly concerning the obstruction of what he believed to be ‘the law of its life’: to ‘perish upstream and grow towards the

¹¹⁰ Already in 1822, the Papal government sold to the Count Giacomo Paolucci of Forlì – which, in turn, took as partner and manager the Baron Bartolomeo Pergami – a wide area of about 5000 hectares between the pinewood and the sea, as well as the land emerging from the sea, which in the previous period served for replantation purposes (cf. *Relazione della Commissione sul disegno di legge presentato alla Camera l'8 Aprile 1905*. In: Ventura, F. (1987). *Alle origini della tutela*, *op.cit.*, 10).

¹¹¹ At first, the pinewood became property of the State, which then sold it to the Municipality of Ravenna (cf. Rava, L. (1897). *La pineta di Ravenna*, *op.cit.*, 261. See also: Andreatta, G. (2013). *Le pinete di Ravenna*, *op.cit.*, 51).

¹¹² Cf. Ventura, F. (1987). *Alle origini della tutela*, *op.cit.*, 11.

sea'.¹¹³ Reference was made to the interrupted replantation of the pinewood in the previous seventy-five years, concluded with an exhortative question to the State and the municipality:

'Would we all like to let this disappear with not only a moral, but also a material and social damage, and deny to the historical pine forest the law of its existence, and stifle the final breath of its life, and destroy the benefits that nature has bestowed, and snatch *forever* from the lido the *amantem litora pinum*?'¹¹⁴

With these words, Rava implicitly stated the need for saving this natural area from complete destruction, as well as the reasons for its protection. The *amantem litora pinum* – a citation of the Roman poet Silius Italicus – is one of the many references occurring in the article to the historical and literary memories connected to the Ravenna pinewood and giving it prestige.¹¹⁵ Given the lack of public intervention, these arguments would find even more strength in the following years. In relation to this, emblematic is the article written on the *Emporium* magazine in 1905 by the Superintendent for the Monuments of Ravenna, C. Ricci (1858-1934), titled *Per la bellezza artistica d'Italia* (For the artistic beauty of Italy).¹¹⁶ In the text, three events occurred in that period were jointly discussed: the attempt to open a new door in the city walls of Lucca, and the feared destructions of the Marmore waterfall and the Ravenna pinewood; thus, an architectural heritage and two natural areas were grouped as national artistic beauties (FIG. 3.5). In this sense, the arguments used by Ricci for supporting the preservation of the pinewood are interesting:

'We say "the pinewood is beautiful", they answer "the pinewood is less useful than the plowed countryside"[...] To save it, instead, everyone should agree at least on one thing: Let's save it because it is beautiful'.¹¹⁷

¹¹³ Cit. Rava, L. (1897). *La pineta di Ravenna*, *op.cit.*, p. 263.

¹¹⁴ Cit. *Ibid.*, 272.

¹¹⁵ Cf. *Ibid.*, 247-261.

¹¹⁶ It was conceived as the opening article for a new column that the author wanted to start for reporting 'the damage or threat to things of art and nature, which make our fatherland beautiful and famous' (cit. Ricci, C. (1905). *Per la bellezza artistica d'Italia*, *Emporium*, XII(124), 294). Although the intentions were broad, only another article will follow: Ricci, C. (1905). *Per la bellezza artistica d'Italia. I nemici di Venezia*, *Emporium*, XII(127), 34-44.

¹¹⁷ Cit. Ricci, C. (1905). *Per la bellezza artistica*, *op.cit.*, 295.

Opposing the ranks of those that he considered as ‘daring and ferocious realists’ and the ‘material utility’ they supported, Ricci saw in its beauty the first and main reason to protect the pinewood from further destruction.¹¹⁸ However, as already highlighted by F. Ventura, the aesthetic value ‘drew its strength and legitimacy from the historical and literary consecration that the pinewood had received over time’.¹¹⁹ Together with its celebrated Roman origins, the echoes of the ‘divine forest’ of Dante’s *Divina Commedia*, of the Boccaccio’s *Decameron* and Byron’s *Don Giovanni* – to name but a few – opened the way for a praise in which the description of the pinewood’s physical characteristics – including its flora and fauna – seems to cross over into the paraphrase of the literary and artistic memories associated with it (FIG. 3.6).¹²⁰ The claim for protecting a ‘beauty mediated by erudition’ is embedded in the wider unification process that Italy was experiencing since 1861, and which found in the literary and artistic history of a glorious past the cultural essence for building an Italian spirit, needed to solidly bind the young nation and its people.¹²¹

¹¹⁸ Interesting is that Ricci saw in the efforts of the Dutch ‘placid dreamers’ a good practice of landscape preservation, although his opinion was based on different arguments than the ones raised by the Dutch nature preservation movement: ‘In the pale stretches of Holland, the sails, which seemed to graze the ground, and the windmills are decreasing. The steam gave the chimney both to the boats and to the mills. You sail faster and grind faster. But the placid dreamers over there – poets and landscapers – say “A few sails and a few wings of a mill will always go [saved] and at any cost, because everyone in Holland will agree not to let the landscape completely sadden, to the total advantage of a utilitarian program”. (cit. *Ibid.*).

¹¹⁹ Cit. Ventura, F. (1987). *Alle origini della tutela*, *op.cit.*, 12.

¹²⁰ [...] the Romans saw it to give wood to the ships, health to the city, relief and help to the poor people. The story then says that Paolo, Oreste’s brother, was killed there in 476, while advancing against Odoacre in defence of Romulus Augustus, his nephew and last emperor of the West, jailed in Ravenna. Seventeen years later there camped Theodoric, for besieging Odoacre. [...] Not less important is the collection of literary and artistic memoirs [...] Dante, as everyone knows, describes it in the Earth’s Paradise; [...] Another wave of celebrities came to the pinewood by Boccaccio, making it the subject of a love novel inspired to a 13th-century French monk’s tale [...] Byron sang it in the ‘Ave Maria’ of the *Don Giovanni* [...] (cit. Ricci, C. (1905). *Per la bellezza artistica*, *op.cit.*, 296-301). In 1891, Ricci had already discussed the actual identification of the Earth’s Paradise in Dante’s *Divina Commedia* (*Purgatorio*, XXVIII) with the Ravenna pinewood (cf. Ricci, C. (1891). *L’ultimo rifugio di Dante Alighieri: con illustrazioni e documenti*, Milano: Ulrico Hoepli, 114-117).

¹²¹ In relation to this, the first society aimed at promoting the Italian culture abroad, founded in 1889, was named after Dante Alighieri (unlike the corresponding English, French and German societies) and had, among its members, Ricci and Rava – the latter as president from 1903 to 1907 (cf. Kessel, T.M.C. van (2011). *Cultural promotion and imperialism: the Dante Alighieri Society and the British Council contesting the Mediterranean in the 1930s* (Doctoral dissertation), 34-40).

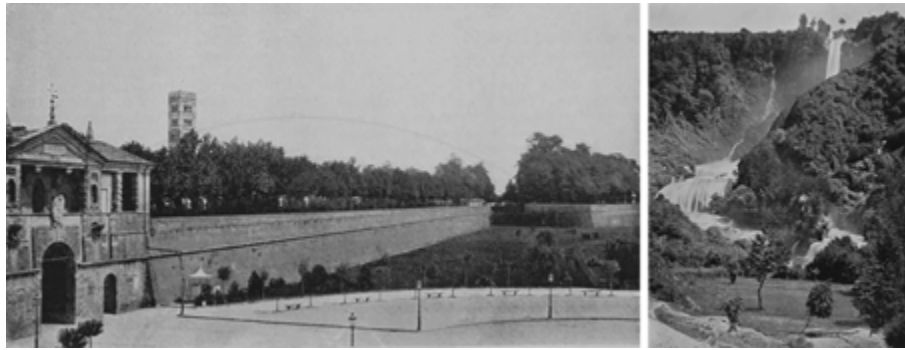


FIG. 3.5 The Lucca city walls (left) and the Marmore waterfall (right) in *Per la bellezza artistica d'Italia* (For the artistic beauty of Italy) (Ricci 1905: 294, 307)



FIG. 3.6 The four panels painted by Sandro Botticelli (1483), representing the novel of Nastagio degli Onesti, set in the Ravenna pinewood (Prado Museum)

The two natural areas at stake shared a more or less comparable degree of past human influence, the appreciation of which was, however, drastically opposite – a stain to the authenticity of the Naardermeer, a source of pride for the Ravenna pinewood. The latter stems from the different systems of values used for their evaluation, which are, in turn, strongly influenced by the different disciplinary interests involved. Nevertheless, the need to find a reference in the architectural heritage field for tackling this new challenge was felt in both contexts:

‘How would you like if the *Paleis op den Dam* became a rag warehouse? And really, the Naardermeer is a *temple* to us, and the number of those who agree with me is increasing every day’.¹²²

‘The tall and daring trunks spring up, often aligned *as columns in ancient basilicas*, to spread and embrace above [...] The opaque and thick pines never let the breezy wind through *the aisles* of this mysterious forest’.¹²³

If, echoing van Eeden, a *parallelism* was identified between the natural ‘treasure room’ of the Naardermeer and the built heritage, in the case of the Ravenna pinewood the attempt was to merge, with a process of *identification*, natural and architectural monuments. This slight but fundamental difference will influence the following dynamics occurred for starting the engine of national protection.

3.1.3 From isolated cases to national interest

In the Dutch context, the status of monument implicitly recognized to the Naardermeer led to the need for entrusting its protection and management to a qualified body. However, unlike Van Eeden, Thijssse saw in a scientific corporation like the *Ornithologische Vereeniging* (Ornithological Association), or – as stated shortly after in an article on the *Levende Natuur* – the already-mentioned NNV, the most suitable institution to accomplish that task.¹²⁴ In their hands, the Naardermeer could have been left ‘as untouched as possible, providing scholars and interested parties with the opportunity to properly assimilate this truly study material’.¹²⁵ Indeed, it will be the NNV to engage in the Naardermeer’s cause by addressing a petition to the Amsterdam municipal council.¹²⁶ Different arguments were used: together with the natural-historic and aesthetic value of the Naardermeer as a *natuurgedenken* (nature memorial), the NNV underlined the hygienic risks and financial weakness of the plan. Finally, the petition addressed a more general cultural argument related to the great value of the area for people’s civilization, just like a historical monument.

¹²² Cit. Thijssse, Jac P. (1904). *Het Naardermeer*, *op.cit.* In Coesèl, M. (2018). *Van vuilnisbelt tot natuurmonument*, *op.cit.*, 12.

¹²³ Cit. Ricci, C. (1905). *Per la bellezza artistica*, *op.cit.*, 297.

¹²⁴ Thijssse, Jac. P. (1905). *Het Naardermeer*, *op.cit.*, 204.

¹²⁵ Cit. Thijssse, Jac. P. (1904). *Het Naardermeer*, *op.cit.* In: Coesèl, M. (2018). *Van vuilnisbelt tot natuurmonument*, *op.cit.*, 12.

¹²⁶ Cf. Heinsius, H.W. (1905). *Het Naardermeer*, *Maandblad der NNV*, 3(10), 36-37.

Even if the financial and hygienic disadvantages had a decisive role, the ‘multifaceted objections’ put in place succeeded in persuading the municipality board to set the plan aside; a choice that, according to Thijsse, ‘gave each of the opponents the pleasure of believing that his voice had saved the Naardermeer’.¹²⁷

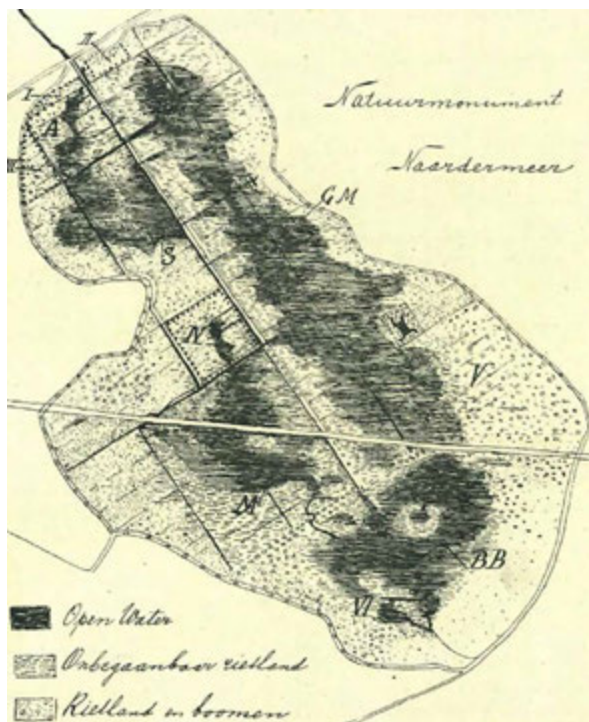


FIG. 3.7 The management of the Naardermeer under the Natuurmonumenten association (Thijsse 1922: 233)

Although the worst danger had passed, the future perspectives for the protection and management of the Naardermeer were still not clear; their identification was felt as an urgent task for avoiding the emergence of new ‘vandalic’ initiatives, and their importance was gradually going beyond that specific case (FIG. 3.7). Thijsse addressed this topic in an article on the *Levende Natuur* as soon as in 1905.¹²⁸ While stressing again the needed involvement of a scientific corporation, he stated his poor trust in the ability of public authorities to timely react and assure that ‘such *sanctuaría* are

¹²⁷ Cit. Thijsse, Jac. P. (1931). Uit de voorgeschiedenis van Natuurmonumenten, *De Levende Natuur*, 35(9), 276; cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 52-54.

¹²⁸ Thijsse, Jac. P. (1905). Het Naardermeer, *op.cit.*

preserved everywhere in our country'.¹²⁹ The only viable option was seen in the creation of a fund within the aforementioned scientific institution, which could have relied on the generosity of the *Nederlandsche Volk* as well as on other foundations for both collecting donations and watching over public interventions on the 'fatherland soil'.¹³⁰

This vision – by some considered as idealistic – was shortly after turned into reality.¹³¹ On April 22, 1905 a meeting was held in Amsterdam, led by major exponents of the NNV, and with the participation of several associations from different backgrounds.¹³² Together with the claim for nature protection as a major public and scientific interest, the participants agreed on the need to create a new independent body – instead of the proposed confederation of already-existing organizations – which, according to the chairman H. Heukels (1854-1936), would have been able to 'get more support than many separate ones'.¹³³ With this common understanding, the *Vereening tot Behoud van Natuurmonumenten in Nederland* (Association for the Preservation of Nature Monuments in the Netherlands) was founded. Subsequently, a statute was prepared, which made clear the composition and intentions of the new association. As first, strong emphasis was given to the background of the administrative board, which should have been composed by a man of science as director, together with three representatives from the fields of biology, geography and archaeology.¹³⁴ The scientific character was, then, underlined in the definition of the *natuurmonumenten* to be protected:

'All remarkable parts of the Dutch soil, all the remarkable animals, plants and living communities of the Netherlands, as well as relics from prehistoric human activity, which are likely to be lost due to the expansion of agriculture or other causes'.¹³⁵

¹²⁹ Cit. *Ibid.*, 205. About public authorities, he mainly referred to the central government, but reference is also made to provinces, municipalities, as well as to water, railway and construction companies (cf. *Ibid.*).

¹³⁰ Cit. *Ibid.*

¹³¹ When retracing the history of these events in an article from 1931, Thijsse mentioned the reaction of a non-better specified 'prominent Amsterdammer', who defined the idea of collecting funds for a purpose of 'special' and not 'general interest' like nature conservation as 'too simple and easy' and, therefore, difficult to be turned into concrete action (cf. Thijsse, Jac. P. (1931). *Uit de voorgeschiedenis van Natuurmonumenten, op.cit.*, 275-276).

¹³² The chairman was H. Heukels and the secretary H. W. Heinsius, both engaged in the foundation of the NNV (cf. De Levende Natuur Redactie (DLN) (1980). *Natuurmonumenten 75 jaar, De Levende Natuur*, 82, 3-5). Apart from the NNV, also representatives from many other scientific, artistic and even agricultural organizations joined the meeting (cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 54-55).

¹³³ Cf. De Levende Natuur Redactie (DLN) (1980). *Natuurmonumenten 75 jaar, op.cit.*, 5.

¹³⁴ Cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 55-57.

¹³⁵ *Ibid.*, 57.

Even if the intentions were broad, the scientific – and, more specifically, biologic – interests will have priority in the definition of what had to be considered as ‘remarkable’. At this stage, the areas to be secured – the *natuurmonumenten* – were the so-called *woeste gronden* (savage grounds) and it was more and more conceived as a ‘duty of a civilized nation to keep for posterity – as well as important buildings, memorials from the past and objects of art – also fragments of nature’.¹³⁶ The Naardermeer perfectly embodied the main aim of the new-born association, and its purchase on April 25, 1906 represented the capstone of the ‘herculean labour’ started with its securing from the Amsterdam municipal plan.¹³⁷

On the Italian side, given the institutional engagement of the actors involved in the afore-mentioned debate, the protection of the Ravenna pinewood rapidly switched from a local to a national issue the resolution of which was handled by the government. On June 30, 1904 the Italian State signed an agreement for acquiring 200 hectares of beaches adjoining the pinewood on the seaside.¹³⁸ This operation represented the premise for the next decisive step: the passing of the law n.411 ‘For the Conservation of the Ravenna Pinewood’ on July 16, 1905. Promoted by Rava, now Minister of Agriculture, Industry and Trade, it was signed by the deputy G. Rosadi (1862-1925) and has gone down in history as the first Italian law for the protection of a specific landscape. This legislative measure consisted in a declaration of inalienability which did not directly concern the actual historic pinewood, but ‘the maritime wrecks located in the province of Ravenna [...] and those others that would form in the future beyond that area’.¹³⁹ In line with what he had stated in the 1890s, Rava bridged the diverging interests and opinions at stake in a compromise solution, the main achievement of which was ‘to grow a new wood, yet wrapped in the fame of the old one’.¹⁴⁰ Indeed, the main action proposed on the so-called ‘maritime wrecks’ was ‘reforestation’, entrusted to the Ministry of Agriculture, Industry and Trade, which should have fostered the seaward reproduction of the pinewood, only indirectly protected through the compensation of what was being consumed for agricultural development.¹⁴¹ This solution was favoured by G. Boni (1856-1925), a prominent archaeologist who developed a ground-breaking theory for the

¹³⁶ Cit. Heinsius, H.W. (1905), *Natuurmonumenten*, *Maandblad der NNV*, 3(10), 40-41.

¹³⁷ Thijsse, Jac. P. (1906). *Het Naardermeer*, *De Levende Natuur*, 11(6), 116.

¹³⁸ Cf. Malfitano, A. L’opera di Luigi Rava e la protezione della natura: la pineta di Ravenna, *Natura e Montagna*, 43(3), 28.

¹³⁹ Cit. La legge 16 luglio 1905, n.411 per la conservazione della pineta di Ravenna. In: *Ibid.*

¹⁴⁰ Cit. *Ibid.*, 29.

¹⁴¹ Cf. *Ibid.*, 28.

conservation and use of vegetation in archaeological sites, together with a keen attention for the study of ancient indigenous plant species through classic literature and paintings.¹⁴²

Although the scope and application of these measures were limited to the Ravenna pinewood, also in the Italian context the first results achieved for a specific case boosted a wider reflection on the issue of national protection. Indeed, when approving the 1905 law, Rava raised the problem of a general protection law:

‘The House invites the government to submit a bill for the preservation of natural beauties that connects to the literature, art or history of Italy.’¹⁴³

Keeping the Ravenna pinewood and related discussions as a reference, the ‘natural beauties’ of public interest were ‘the mountains, waters, forests, and all those parts of the patriotic soil that the long traditions have associated with the moral attitudes and political events of a great Country’.¹⁴⁴ The link with historic and artistic traditions had the advantage to enrich the subjective concept of ‘natural beauty’ with an educational function, which – as for artworks and antiquities – expressed the public purpose of conservation.¹⁴⁵

¹⁴² In particular, reference is made to his proposal to use the *Pinus pinea* to favour the reforestation of the Ravenna coast (cf. Caravaggi, L. (1989). *Architettura e Natura: le reintegrazioni archeologiche*. In: *Tutela dei giardini storici: bilanci e prospettive*, Cazzato, V. (Ed.). Roma: Ministero per i Beni culturali e ambientali, 461). For an overview on the figure and contribution of G. Boni, see: Tea, E. (1932). *Giacomo Boni nella vita del suo tempo*. Milano: Ceschina; Favaretto, I. and Pilutti Namer, M. (Eds.) (2016). *Tra Roma e Venezia: la cultura dell'antico nell'Italia dell'unità: Giacomo Boni e i contesti*. Venezia: Istituto veneto di scienze lettere ed arti; Franchini, S. G. (2016). *Quando cultura e politica salvarono Venezia: Giacomo Boni e il destino di Venezia tra Otto e Novecento*. Venezia: Marsilio; Giuri, P. (2017). *Giacomo Boni: cronache di un ignorato patrimonio architettonico nell'Italia meridionale*. Galatina: Congedo; Pilutti Namer, Myriam (2019). *Giacomo Boni: storia, memoria, archeonomia*. Roma: L'Erma di Bretschneider; Matteini, T. And Ugolini, A. (2019). La lezione di Ruskin e il contributo di Boni. Dalla sublimità parassitaria alla gestione dinamica delle nature archeologiche, in *Memories on John Ruskin. Unto this last (Florence, 29 November 2019)*, Caccia Gherardini, S. and Pretelli, M. (Eds.), *Restauro Archeologico: Journal of the Department of Architecture University of Florence*, 2(special issue), vol. 1, 294-299; Turco, M.G. and Marinos, F. (2019). Città, verde, monumenti. I rapporti tra Giacomo Boni e John Ruskin, in *Memories on John Ruskin. Unto this last (Florence, 29 November 2019)*, Caccia Gherardini, S. and Pretelli, M. (Eds.), *Restauro Archeologico: Journal of the Department of Architecture University of Florence*, 2(special issue), vol. 2, 98-103; Russo, A., Alteri, R. and Paribeni, A. (Eds.) (2021). *Giacomo Boni: l'alba della modernità*. Milano: Electa; Consolato, S. (2022). *Giacomo Boni: scavi, misteri e utopie della Terza Roma*. Roma: Altaforte Edizioni.

¹⁴³ Cit. *Atti Parlamentari, Camera, Discussioni, 1905*, 5161. In: Ventura, F. (1987). Alle origini della tutela, *op.cit.*, 18. In particular, the vow was proposed by the then Deputy Attilio Brunialti (1849-1920) (cf. Parpagiolo, L. (1911). Per le bellezze naturali d'Italia, *Nuova antologia di lettere, scienze ed arti*, fasc.958(46),16 novembre 1911, 247).

¹⁴⁴ Part of the speech by Rava when presenting the law for the protection of the Ravenna pinewood to the House. In: Settis, S. (2010). *Paesaggio Costituzione Cemento, op.cit.*, 153.

¹⁴⁵ It was not by chance that the protection of the monuments was, since the beginning, entrusted to the Ministry of Education.

The underlying identification of natural beauties with the artistic and archaeological monuments of the nation then led to the attempt of bringing the two domains together in the same protective measure. Following a heated parliamentary debate, the Rava law n.364 – concerning *Norme per l'inalienabilità delle antichità e delle belle arti* (Rules for the inalienability of antiquities and fine arts) – was issued in 1909, with the contribution of Ricci and Rosadi. The first bill, presented by Rava in 1906, also included a report by Rosadi, which reflected the ideas that arose in the years preceding the 1909 legislative measure.¹⁴⁶ According with the commitment expressed when passing the law for the Ravenna pinewood in 1905, Rosadi claimed the need to consider not only things that have an archaeological or artistic interest, 'but also those that have only a historical interest, which are precisely those natural monuments, which deserve no less than others (walls, simulacra and arches) to be preserved and defended'.¹⁴⁷ The vague definition of Rosadi called for a revision by Rava, who felt the need to better specify that natural monuments included 'gardens, forests, landscapes, waters, and all those natural places and objects that have the aforementioned [historical] interest'.¹⁴⁸ As a consequence, the bill was not accepted by the Senate, which found the definition as too broad and excluded this natural heritage from the approved version of the 1909 law, putting off again its protection to a separate law.¹⁴⁹

In line with the different kind of link established with architectural heritage (parallelism vs. identification), the use of the 'nature monument' concept in Italy and the Netherlands bears witness of a different way of interpreting their natural heritage. The distinction made by W. Roenhorst between the meaning of monument as 'memorial' (*gedenken*) of past human events considered as relevant for the national history, and that of monument as 'remnant' (*overblijfsel*) of the country's primeval nature, seems to perfectly express the different nuances characterizing the use of this concept in the two contexts at this stage.¹⁵⁰ Moreover, the only partial success achieved was strongly affected, in both cases, by the lack of clear criteria for establishing whether a natural area was eligible for the monument status or not.

¹⁴⁶ Cf. Settis, S. (2010). *Paesaggio Costituzione Cemento*, op.cit., 116-117.

¹⁴⁷ Cit. Report Rosadi, *Bollettino del Ministero della pubblica istruzione* del 1906, Tip. Cecchini, 13. In: Parpagliolo, L. (1911). *Per le bellezze naturali d'Italia*, op.cit., 248; *Atti Parlamentari*, Camera dei Deputati, Leg. XXIII sess. 1904-1909, Documenti, Documento n. 584, 16. In: Ventura, F. (1987). *Alle origini della tutela*, op.cit., 21.

¹⁴⁸ Cit. *Atti parlamentari*, Legisl. XXII, Sess. 1904-1907, Doc. Relaz. N. 584-A. In: Parpagliolo, L. (1911). *Per le bellezze naturali d'Italia*, op.cit., 248.

¹⁴⁹ Cf. Ventura, F. (1987). *Alle origini della tutela*, op.cit., 21.

¹⁵⁰ Roenhorst, W. (2009). *Monumenten van natuur en schoonheid*, in *Erfgoed: de geschiedenis van een begrip*, Grijzenhout, F. (Ed.). Amsterdam: University Press, 177.

Until that moment, the even-more vague concept of 'natural beauty' had been only hinted. But the next advancements went through a deeper reflection on the aesthetic dimension of nature.

In the Dutch context, the aesthetic qualities of nature monuments were barely mentioned at this stage and overshadowed by the botanical and zoological motives. While the number of assets under the control of the *Natuurmonumenten* association was growing, the attention on the Naardermeer didn't decrease. The events investing the site in the years following its acquisition represented the occasion for further reflecting on the significance of the nature monument *par excellence*.¹⁵¹ When criticizing, in 1922, the judgement of the Commission set for the *Gooische* tram plans – which had defined the Naardermeer as 'only a breeding ground for spoonbills' – Thijssse felt the need to counteract what he considered as a general misconception about the value of the area, in which – according to him – 'every inch is important for the significance of the Lake as a Dutch landscape'.¹⁵² In order to strengthen the undermined 'respect for the Lake as a landscape', he argued that although 'it does not look very picturesque on the map or from the airplane [...] it already existed in the fourteenth century, and the two drains have only been of short duration'.¹⁵³ The accent on its historical value – which also served to highlight its only partial alteration and the persistence of authentic *woeste gronden* within the site – opened the way to a different narrative for the natural area that, compared to the extensive scientific character given in 1906, is more prone to combine the description of its biological peculiarities with that of its most 'touchingly beautiful' scenes.¹⁵⁴

This gradual semantic and conceptual expansion reflects the growing interest around a still ambiguous notion in the Dutch field of nature conservation, which will play a key role in the years between the two world wars: the *natuurschoon* (nature beauty). Already in 1917, the *Nuttige Boschwet* (Emergency Forest Law) had been passed under the proposal of the Minister of Agriculture, Industry and Trade, Mr. Posthuma. Within its main aim of preventing the clearing of forests, the law stressed the need for protecting the nature beauty as one of their main values, although excluding privately owned assets. Even when it was suggested to remove the concept, the

¹⁵¹ Following the acquisition of the Naardermeer, in 1915 the association could already count on four more properties: the *Leuvenumsche Bosch*, the *Hagonau* estate, the forests and fens by *Oisterwijk*, and some areas on *Texel* (cf. Thijssse, Jac. P. (1915). *Natuurmonumenten, De Levende Natuur*, 20(10), 183).

¹⁵² Cit. Thijssse, Jac. P. (1922). *Het Naardermeer, De Levende Natuur*, 27(8), 232.

¹⁵³ Cit. *Ibid.*

¹⁵⁴ Cit. *Ibid.*

Minister succeeded in keeping it as the core of the law, which was passed by the Senate under the condition that its validity was limited to the ongoing state of war.¹⁵⁵ Nevertheless, a step forward had been done and – according to Thijsse – it was unlikely to be reversed, even if it would have meant facing a new question:

‘It is now inconceivable that we will return to the pre-1914 conditions after the war, and, among other things, the preservation of nature beauty will henceforth become an object of government policy and national interest. We will be faced with the very difficult question of what actually nature beauty is and in which cases other or different interests may be sacrificed to the conservation of nature beauty’.¹⁵⁶

At this stage, for Thijsse ‘it is impossible to define nature beauty’, which should apply not only to forests, but ‘to the native soil as a whole: the heaths and dunes, the marshes and beaches, the lakes and rivers, and the rocks of South Limburg’.¹⁵⁷ Moreover, for him ‘it usually goes hand in hand with the occurrence of special plant and animal forms or geological features, and this site may then be called a nature monument. Again, the line cannot be drawn’.¹⁵⁸ When confronted with this ambiguity, Thijsse’s attempt is to establish a bridge between different reading keys, reinterpreting the biological features of nature monuments through the lens of aesthetics and beauty.

Also in the Italian context, the failed attempt to unify under the same law natural and artistic heritage soon asked for a clarification of the still too-vague use of concepts like nature monument and natural beauty. This ambiguity was addressed by Luigi Parpagliolo (1862-1953), official at the Directorate for Antiquities and Fine Arts of the Ministry of Education, and attentive observer of the evolving dynamics in the field of heritage policy. When tracing back, in 1911, the recent events related to the suppression of natural beauties from the 1909 law, he expressed the need for a distinction between the ‘natural beauties in the strict sense’ and the ‘real

¹⁵⁵ Cf. Thijsse, Jac. P. (1917). Over natuurschoon, *De Levende Natuur*, 22(6), 201-202.

¹⁵⁶ Cit. *Ibid.*, 202.

¹⁵⁷ Cit. *Ibid.*

¹⁵⁸ Cit. *Ibid.*

[nature] monuments'.¹⁵⁹ To the first category belonged 'the waterfalls, the caves, the rocks, the forests [...] which find in the singular beauty of their nature the reason for the public interest, requiring their protection'.¹⁶⁰ They included all those sites 'unspecified by the hand of man, nor consecrated by historical or literary memories'.¹⁶¹ Different considerations had to be done for 'gardens, villas, the walks where man has impressed with his works the sign of his own genius and of the time in which he lived, and all those places that, recalling to the memory of men long traditions associated with the moral attitudes and political events of Italy, are part of our intellectual heritage'.¹⁶² These are, for Parpagliolo, 'real monuments, as they are sensitive signs of a historical fact or an artistic manifestation, and they fall well among the things referred to in art. 1 of the monumental protection law (things that have historical or artistic interest)'.¹⁶³ With this second category in mind, the law n.688/1912 was issued, extending the protection to 'villas, parks and gardens'. In this, the commitment of Ricci, who started a heated debate on the pages of *Il Giornale d'Italia* and *Corriere della Sera* national newspapers, was remarkable. It stimulated the Minister of Education Luigi Credaro to initiate a law for extending the monumental protection to those places where 'art has changed nature'.¹⁶⁴

However, also this measure was a compromise solution, getting around the difficult task of tackling the protection of natural beauties in the broader sense. Indeed, the proposal of Rosadi for a new law (1910-1911) included not only villas, parks and gardens, but also 'all those places that have considerable public interest due to their natural beauty'.¹⁶⁵ Conscious of the difficulties related to the practical implications of this broad definition, he clarified that:

¹⁵⁹ Cit. Parpagliolo, L. (1911). Per le bellezze naturali d'Italia, *op.cit.*, 249.

¹⁶⁰ Cit. *Ibid.*

¹⁶¹ Cit. *Ibid.*

¹⁶² *Ibid.*

¹⁶³ *Ibid.*

¹⁶⁴ Cit. *Ibid.* See also: Ventura, F. (1987). Alle origini della tutela, *op.cit.*, 23; Severini, G. (2009). I giardini come beni del patrimonio culturale. Storia di una legge e questioni interpretative, *Aedon*, 1(2009); Settis, S. (2010). *Paesaggio Costituzione Cemento*, *op.cit.*, 154.

¹⁶⁵ Parpagliolo, L. (1911). Per le bellezze naturali d'Italia, *op.cit.*, 255. A draft had already been defined on May 14, 1910 but it was actually discussed at the House of Parliament on July 5, 1911 (cf. Settis, S. (2010). *Paesaggio Costituzione Cemento*, *op.cit.*, 155).

'A law protecting natural beauties must not include them all, even if delicious and preferable to the sight of a spinnery or a mill, but only those that have an extraordinary value of nature or memories'.¹⁶⁶

The main issue was related to the identification of what could be defined as 'extraordinary' in order to be worthy of public interests; even if he considered it as indefinable, Parpagliolo thought that it should have been at least 'consecrated by a long tradition of public admiration'.¹⁶⁷ Additionally, he advised Rosadi to avoid the use of the word 'landscape': although he frequently referred to the attempts for protecting natural beauties as 'landscape defense', he also considered this notion as too general and 'dangerous' in the legislative field.¹⁶⁸ In the end, all these matters were once again excluded from the debate by reducing the scope of application of the 1912 law.

In conclusion, the discourse on natural monuments has represented the starting point for the Dutch and Italian paths to landscape protection. In both contexts, the field of historic-artistic heritage was a primary reference (FIG. 3.8). Their appreciation – as 'memorials' or 'remnants' – is, however, different and influenced by the values and voices raised for their protection, advocating for their 'natural-scientific' or 'historic-intellectual' national significance but, in both cases, bearing a great educational potential. In the Netherlands, a parallelism was made with the protection of historical and artistic monuments. But the nature to be protected bears other values – in particular, the scientific one – and it is a monument in its own physical consistency, as a *remnant* documenting a past unspoiled by man. This scientific value involved an historical dimension, which is not the one coming from civil history (of the man who experiences it and has inhabited it over time) but that of nature itself, in the absence of human interference. In Italy, the reference to the field of historical-artistic heritage followed the track of identification: the appreciation of art and nature is based on the recognition of the same historic-artistic values, nature itself is an historic-artistic monument in the sense of *memorial* of human (civil and artistic) history. To confirm this double way of understanding the same reference are the different actors involved in this process: on the one hand, representatives from the fields of biology and natural sciences and unrelated to the world of historic-artistic heritage protection; on the other hand, those same exponents of the historic-artistic culture who were jointly carrying out the two battles – that for the artistic

¹⁶⁶ *Ibid.*

¹⁶⁷ Cit. Parpagliolo, L. (1911). Per le bellezze naturali d'Italia, *op.cit.*, 255.

¹⁶⁸ Cit. *Ibid.*, 247, 255.

heritage and that for the natural heritage. The degree of government involvement is also different: in the Netherlands autonomy was pursued by associations, in Italy the alliance under the banner of a unique, total heritage led to an earlier interest in nature conservation by the State. Finally, the implemented protection strategies were different: in the Netherlands the nature monument (remnant) is a document and, as such, must be preserved in its tangible consistency and material integrity. In Italy, the protection involves the intellectual and intangible heritage that the nature monument (memorial) bears with it; its physical survival is certainly considered as necessary, but the organic matter of which it is composed is secondary, as its material integrity. These two paths both found in the issue of natural beauty – which is fully present in the Italian context since the beginning, while it will emerge only later in the Dutch context – a critical point. The latter opened the way for a revision to the meaning given to the concept of nature monument and, more broadly, to the process of nature monumentalization as set until that moment. Finally, the aesthetic qualities of nature monuments took on the role of necessary link between nature and landscape, at this stage only sporadically mentioned but further expanded in the following decades. The subjective dimension brought in by aesthetic appreciation, with the fear of an excessive widening of the object of attention, led to the need for fixing some selective criteria, which at this moment did not go beyond the vague notions of ‘remarkable’ or ‘exceptional’, but which will represent the main issue to be tackled in the next stage.



FIG. 3.8 Comparative scheme (NL/IT) for the first stage of landscape protection (1905-1920s) (F. Marulo 2022)

3.2 Beauty ennobled by man. The emancipation of the landscape concept between the two World Wars

3.2.1 Defining beauty: manmade areas in the spotlight

Both for Italy and the Netherlands, the period between the two World Wars saw the emergence of new issues, leading to a gradual shift from nature to landscape protection. In particular, the State involvement and the passing of national laws had an influence in this turning point, together with new voices from inside or outside the already consolidated groups of protectionists.

In the Dutch context, while the rise of the *Natuurmonumenten* association had taken place outside the institutional path, the limited State support to the protection of nature beauty turned into a standstill around the 1920s. Indeed, at the end of the WWI, the government started to engage in the promotion of measures aimed at increasing the Netherlands' productivity. A key role was given to the improvement of agricultural methods and techniques, determining a significant boost for the rural planning. The institutional representativeness of the agricultural sector had been already strengthened in the second half of the 19th century.¹⁶⁹ However, the government still lacked of appropriate knowledge and expertise in the field of the so-called *cultuurtechniek* (agricultural engineering).¹⁷⁰ In particular, the main issues

¹⁶⁹ Starting from the 1840s, several agricultural associations (*landbouwmaatschappijen*) were founded on a provincial basis. In order to reverse the unsatisfactory conditions of the Dutch agricultural sector, the latter decided to join their forces into the Agricultural Committee of the Netherlands (*Nederlandsch Landbouw Comité, NLC*), founded in 1884. But the decisive step for a full affirmation was the institution, in the same year, of the State Commission on Agriculture (*Staatcommissie voor den Landbouw*), then followed by the establishment, in 1898, of the Agricultural Department within the Ministry of Interiors. In the meantime, the *Nederlandsche Heidemaatschappij* had been founded (1888) by the *Geldersche-Overijsselse Maatschappij van Landbouw* (Gelderland-Overijssel Society for Agriculture); such organization – initially conceived for advising private landowners in the field of heathland planting – was soon turned into a commercial company and, later on, it became the main governmental executive agency (cf. Brink, van den, A. & Molema, M. (2008). The origins of Dutch rural planning: a study of the early history of land consolidation in the Netherlands, *Planning Perspectives*, 23(4), 430-431).

¹⁷⁰ Also defined as 'hydraulic engineering applied to soils', such discipline was related to the optimization of the agricultural productivity by modifying the soil and water conditions (cf. *Ibid.*, 434).

at stake were related to improving the drainage conditions of the already-existing farms,¹⁷¹ and creating new arable fields through the reclamation of those *woeste gronden* (savage grounds) so valuable for nature protectionists.¹⁷² These two pivotal aspects determined a renewed attention on another decisive factor for the Dutch agricultural practice, considered at this stage as an aggravating circumstance: the fragmentation of land holdings. Reviving some 19th-century discussions, the focus was brought on land consolidation – namely, the exchange of parcels of land among farmers in order to get larger and better shaped fields for the farming practice – as a key step for improving the agricultural productivity.¹⁷³ After the setting of a Committee in 1920 for drafting a bill, the government adopted the *Ruilverkawelingswet* (Land Consolidation Act) in 1924, which officially formalised the State involvement at the side of the agricultural sector.¹⁷⁴

These early-20th-century rural planning choices – mainly dominated by the agricultural interests – generated a conflict with the hard-won goals of nature preservation. The rise of disputes with the agricultural sector, which could now benefit of solid governmental support, triggered a change in the Dutch nature preservation movement. Known in literature as the ‘second green wave’, this new stage was characterized by the emergence, among the advocates of the Dutch ‘primeval nature’, of new allies in the urban planning sphere.¹⁷⁵ In particular,

¹⁷¹ In 1917, the *Heidemaatschappij* addressed a report to the Department of Agriculture about the drainage issues in the current farm management, which led the government to set up a specific Commission for Land Drainage (*Commissie Ontwatering*) (cf. *Ibid.*, 442).

¹⁷² If, starting from the 1890s, the rate of cultivated land had already increased thanks to the introduction of artificial fertilizers, a rapid growth was marked by the reclamation of the so-called *woeste gronden*, which considerably intensified after the WWI. This practice started to be considered by the government as an efficient remedy for unemployment in order to assure future perspectives for the demobilized soldiers (cf. *Ibid.*, 443).

¹⁷³ As well as the afore-mentioned 1917 report from the *Heidemaatschappij*, also the *Commissie Ontginning* (Commission on Reclamation) – established by the NLC in 1884 – had already reported in a survey from 1901 the bad influence played by the land holdings fragmentation; consequently, the intention of drafting a bill on that matter was raised, but the internal discussion on whether land consolidation would have meant an expropriation or just a shift in the ownership determined a considerable delay in the preparatory phase. Completed only in 1908, the proposed bill – grounded on the expropriation principle – was not immediately considered by the government, which feared the interference with the private property rights and the consequent lack of public support. Accordingly, a subsidy was granted to the *Heidemaatschappij* in 1913 for the implementation of experimental projects, the aim of which was to gain the general trust of landowners. Despite such experience proved to be relatively successful, the wartime financial difficulties caused the interruption of the subsidy already in 1915 and, with it, the advancement of the legislative measure (cf. *Ibid.*, 436-440).

¹⁷⁴ Cf. *Ibid.*, 445-446.

¹⁷⁵ Cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 94; Renes, J. (2008). Landscape preservation in The Netherlands, *op.cit.*, 147-149.

H. Cleyndert Azn. (1880-1958) would give a significant contribution to the cause of nature monuments, while consistently widening the perspective and scope of nature preservation.¹⁷⁶ Although he did not get an education in urban planning – a newly emerging field – it was during his travels to the United States that Cleyndert matured an interest for the American planning doctrine and, specifically, for the oversea National Parks System. Once back in the Netherlands in 1921, this experience was the subject of a lecture he held at the *Natuurmonumenten* annual meeting, after which he became a member of the Association in 1923.¹⁷⁷ The comparison with the situation in his home country would then lead Cleyndert to identify in the *natuurruimte* (nature space) ‘a necessary requirement for the lasting physical and, above all, mental health of people’.¹⁷⁸ However, this ‘primary human need’ in the Netherlands was faced with a contradiction: on the one hand, the increasing urge for nature space for an ever-growing population, on the other hand, its rapid reduction because of the changed demands of the contemporary life. More than an hygienic matter, this issue was for Cleyndert a profound ‘ethical problem’:

‘In this small territory of the Netherlands with its more than 7 million inhabitants [...] if one wants to satisfy all the requirements of the present life for the people living on that surface, thus being able to provide them with an existence “worthy of human dignity”, it will be not enough to take care for housing and employment, but also for the need of “relaxation in nature”, for the necessary amount of nature space’.¹⁷⁹

The notion of ‘relaxation in nature’ represented a central topic in Cleyndert’s thinking. However, he found that the Dutch word *ontspanning* (relaxation) – for him ‘factually passive and incomplete’ – was not appropriate to make his point of view. Instead, he thought that the English word ‘recreation’, in which ‘the active element of “building up” is present’, better expressed the man’s activity to re-create himself, to restore his soul, through the nature experience. Despite the presence of the Dutch word *herscheping* (to re-create, to re-shape), it had, according to Cleyndert, ‘not yet acquired civil rights in that spirit’, justifying the use of the English caption throughout his work.¹⁸⁰

¹⁷⁶ Cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 106-112.

¹⁷⁷ Significantly, the title of the lecture was *Wat ik zag en hoorde in Amerika* (What I’ve seen and heard in America) (cf. Coesèl, M. (2018). *Van vuilnisbelt tot natuurmonument, op.cit.*, 19).

¹⁷⁸ Cit. Cleyndert, H. Azn. (1925). *Parken en de natuur in Nederland*, in *Gewestelijke plannen*, Poelje, G.A. van (Ed.). Alphen aan den Rijn: Samsom, 83.

¹⁷⁹ Cit. *Ibid.*

¹⁸⁰ Cf. *Ibid.*

Also on the Italian side, even if the national government had had a more prominent role from the beginning, the passing of the Rosadi bill for the protection of natural beauties proceeded with difficulty. The clash between protection and the interests of private property, further worsened by the outbreak of the WWI, caused several passages between the House and the Senate, so that between 1910 and 1919 five different versions of the law were drafted. After ten years, it was only at the end of the 1910s that P. Molmenti (1852-1928) – head of the new-born Under-secretariat for Antiquities and Fine Arts – set up a Commission with the task of ‘preparing a bill for the defense and respect of the natural beauties of Italy’.¹⁸¹ Within a few months, Molmenti was replaced by Rosadi, who kept the office and continued his predecessor’s work. Based on his first bill (1910) and the continued debate of the last decade, it took only three months for the Commission to complete its task, accomplished in March 1920. However, due to the government instability, two more years were needed to complete the parliamentary approval procedure. Within this frame, the bill passed to B. Croce (1866-1952), who in the meantime had become Minister of Education.¹⁸² Already a supporter of the Rava Law of 1909 as well as of a specific protective measure for natural beauties since 1906,¹⁸³ Croce had a significant role in the difficult path to the approval of the aforementioned law.¹⁸⁴ He was a figure in continuity with the protectionists of the previous stage like Rosadi and Ricci.¹⁸⁵ Although the institutional presence of Croce did not accelerate the parliamentary process, the law n.778 *per la tutela delle bellezze naturali e degli immobili di particolare interesse storico* (for the protection of natural beauties and estates of particular historical interest) (1922) is inseparably associated with his name.¹⁸⁶

¹⁸¹ Some prominent personalities were part of this Commission: G. Rosadi as president, A. Sartorio (later replaced by C. Innocenti), L. Parpagliolo, the new General Director A. Colasanti, the deputy M. Marangoni, the archaeologist V. Spinazzola (Superintendent of Naples) and the lawyer Luigi Biamonti (cf. Settis, S. (2010). *Paesaggio Costituzione Cemento*, op.cit., 161-162).

¹⁸² Cf. *Ibid.*

¹⁸³ In relation to this, reference can be found in a note by Croce in his *Taccuini di lavoro* (Work notebooks) (vol. I: 1906-1916, Arte tipografica, Napoli 1987, 28), where he wrote down to have been working on a draft for a law protecting natural beauties, then presented to the General Committee of Fine Arts in November 1906 (cf. Sipari, L.A. (2017). La storia “civile” in rapporto alla conservazione della natura. Il dibattito Croce-Parpagliolo sulla legge per le bellezze naturali del 1922, *Diacritica*, Fasc. 13, 25 Febbraio 2017).

¹⁸⁴ In relation to this, the rich correspondence between B. Croce and C. Ricci represents an interesting document of this phase (cf. Pracchi, V. (2001). *La logica degli occhi*, op.cit., 113-125; Bertoni, C. (2009). *Carteggio Croce-Ricci*. Bologna: Il Mulino).

¹⁸⁵ Rosadi was at the Under-secretariat until February 1922, while Ricci had become General Director of Antiquities and Fine Arts (1906-1919).

¹⁸⁶ Cf. Settis, S. (2010). *Paesaggio Costituzione Cemento*, op.cit., 162.

As the result of a long path ascribable to the tenacity of the voices which had animated the national debate since the beginning of the 20th century, this law drew a new route for the Italian protection policy.¹⁸⁷ Indeed, in the opening of his introductory report presented to the Senate in September 1920, Croce emphasized the long course taken up to the approval of the law, of which the latter represented the long-awaited outcome. But the reasons substantiating the protection action were now broader:

'In the defense of natural beauties there is a very high moral and artistic interest that legitimizes the intervention of the State, coinciding with the interest that animated the laws for protecting monuments and artistic or literary properties. Certainly, the modern feeling, which takes hold of us to the spectacle of precipitating waters in the abyss, of snowy peaks, of secular forests, of sounding rivers, of infinite horizons, comes from the same source, from which flows the joy besieging us to the contemplation of a painting with harmonious colors, the audition of an inspired melody, the reading of a book full of images and thoughts. And if the modern civilization felt the need to defend, for the good of all, the painting, the music, the book, we cannot understand why we are so late in preventing the beauties of nature from being destroyed or tampered, which give men pure spiritual enthusiasms and actually inspire sublime works. Moreover, it is not from now that the conceptions of man were revealed to be the product, not only of the social conditions and the historical moment in which he was born, [but also] of the world that surrounds him, of the glad and sad nature in which he lives, of the climate, of the sky, of the atmosphere in which he moves and breathes'.¹⁸⁸

A moral reason is now permeating the aesthetic appreciation of natural beauties, which encompass a broader spectrum of assets not only valuable for their being connected to historic or artistic memories. This wider perspective still called for an identification between natural and artistic beauties, because their aesthetic appreciation stemmed, for Croce, from the same activity of the man's spirit. This latter was not just related to visual perception, but to a wider sensorial and cognitive experience (as for the painting, the music, the book). According to this, natural

¹⁸⁷ The introductory report (1920) starts as follow: 'A law in defense of the natural beauties of Italy has been invoked for a long time and by all the cultured men living in our country' (cit. Croce, B. (1920). *Per la tutela delle bellezze naturali e degli immobili di particolare interesse storico*. Senato del Regno: Disegno di legge presentato dal Ministro dell'Istruzione Pubblica (B. Croce) il 25 settembre 1920. Reference is made to the two commitments previously formulated (1905, 1909) and to the Rosadi bill (1910).

¹⁸⁸ Cit. *Ibid.*

beauties are considered as a source of inspiration for men, which must be preserved – as a moral duty – for the future of art itself. This reflection was connected to the romantic idea of the landscape as the ‘place of gestation for the folks’ spirit’,¹⁸⁹ which we find in Croce’s report, with a reconfirmed patriotic nuance, as ‘visible representation of the fatherland’.¹⁹⁰

Both in Italy and in the Netherlands it is possible to find, in this phase, a common sensitivity towards the ‘moral’ or ‘ethical’ implications that the protection of nature brought with it. However, if compared to the outcomes already achieved in the previous stage, this new awareness had a different impact in the two contexts. The reasons given by Croce represent an extension to the track already traced by his predecessors in the strive for protecting natural ‘memorials’ in Italy. Instead, those given by Cleyndert represent a complete reversal to the problem of preserving natural ‘remnants’ in the Netherlands. The anthropocentric dimension in the process of nature monumentalization (i.e., the definition of what kind of natural areas deserved to be protected/preserved and why) was already strong from the beginning and now confirmed in the Italian context, while it was now assuming a decisive character in the Netherlands. In both contexts, this will have an impact through the gradual opening towards the appreciation of areas modified by human intervention.

Together with bringing nature into the sphere of the human need for recreation, Cleyndert highlighted that ‘the necessity to meet the need for nature space is most important to the inhabitants of the big city, since they need nature as a counterbalance to the busy city life’.¹⁹¹ The possible answer to this impelling demand was formulated in two integrated proposals. The first one – to be implemented within the city itself – consisted in the creation of well-designed ‘urban parks’, which had to be ‘within easy and pleasant reach of man’, offering to the ‘urban

¹⁸⁹ Cit. Tosco, C. (2007). *Il paesaggio come storia, op.cit.*, 35.

¹⁹⁰ Evident is the reference, although not explicitly stated, to that ‘beloved face of the fatherland’, a quotation from many attributed to Ruskin, although it can only be found in a French text – *Ruskin et la religion de la beauté* by Robert de La Sizeranne (1897) – which had considerable diffusion in Italy in those years (cf. Ojetti, U. (1897). Ruskin e la religione della bellezza, *Nuova Antologia*, vol. LXX, fasc. XIV, 368-376; see also: Clegg, J. (2006). La presenza di Ruskin in Italia cento anni fa, in *L’eredità di John Ruskin nella cultura italiana del Novecento*, Lambertini, D. (Ed.). Firenze: Nardini Editore, 95-108; about the relation of Croce towards Ruskin’s theories in Italy, see also: Bertoni, C. (2006). Croce e il ruskinismo italiano: i rapporti con Conti e “Il Marzocco”, in *L’eredità di John Ruskin, op.cit.*, 31-64). Other references in Europe are for Croce the German *Heimatschutz*, the French law of 1906 and the protectionist associations that arose in other countries such as Switzerland, Austria and Belgium as well as in Italy. Cf. Settis, S. (2010). *Paesaggio Costituzione Cemento, op.cit.*, 146.

¹⁹¹ Cit. Cleyndert, H. Azn. (1925). *Parken en de natuur in Nederland, op.cit.*, 87

people' the opportunity to get in contact with nature 'in the few free hours of the working day'.¹⁹² Additionally, there was for Cleyndert 'a need for nature outside the build-up city'.¹⁹³ In relation to this, his second proposal met the interests of nature conservationists while considerably broadening their perspective. Together with the urban nature space, a central role in the envisaged recreational provision was given to the 'untouched nature spread throughout the country: forests, moors, dunes, beaches'.¹⁹⁴ In addition to 'the very great scientific interest for the whole population in the continued existence of their special flora, fauna, and soil conditions',¹⁹⁵ the main reason for conservation was, for Cleyndert, their aesthetic qualities 'which can give man the full sense of freedom, which can give him the "re-creation" that man needs'.¹⁹⁶ The will to preserve the Dutch *woeste gronden* was thus confirmed, although embedded in the new framework of a recreational need for the city man. Additionally, this need could be fulfilled through the so-called 'outer parks': reference is made to 'unproductive natural space reserved for park purposes', but also to the so-called 'productive parks' [...] where people want to flee the city on Saturday afternoons and Sundays'.¹⁹⁷ The outer parks represent a clear attempt to find a balance between the need for nature space and the agricultural improvements related to 'the cultivation of *woeste gronden*', the reclamations 'as an object of employment' and the more general 'progress in agricultural technology'.¹⁹⁸ This compromise was formulated in terms of a 'dual destination' for the countryside:

'If we agree that the national soil as a whole has to meet the dual destination of production and recreation, then it is a fundamental economic mistake [...] the designation of *woeste gronden* for reclamation [...] only taking into account the production possibilities and sacrificing the recreation needs, or at least neglecting them; looking at just one issue provides an incomplete and therefore incorrect solution in 99 out of 100 cases [...] Land of high production value will have to be preserved as much as possible for production, which does not exclude, however, that several times in urban expansions there will be the necessity to also use cultivated land for so-called "unproductive" park purposes.

¹⁹² Cit. *Ibid.*

¹⁹³ Cit. *Ibid.*

¹⁹⁴ Cit. *Ibid.*

¹⁹⁵ Cit. *Ibid.*, 91.

¹⁹⁶ Cit. *Ibid.*, 87.

¹⁹⁷ Cit. *Ibid.*

¹⁹⁸ Cit. *Ibid.*, 93.

However, not enough attention has yet been paid to make the [agri]cultural lands (*cultuurgronden*), especially in the vicinity of the big cities, serve the need for nature space, by using them as and making them suitable for the so-called “productive parks”. This can be done by building country roads as walking paths through the meadows, and by embellishing the often monotonous polder landscape with simple landscape-architectural means: planting willows along ditch edges, tree groups in the meadows, etc. This will of course entail much less burden than the “unproductive” parks’.¹⁹⁹

Alongside the untouched nature with its scientific and aesthetic significance, the agricultural landscape, resulting from the human labour, started to gain interest by virtue of its recreational potential. Albeit still considered as ‘monotonous’, the openness of the polder landscape represented a character to be preserved also by ‘counteracting the development along the country roads as much as possible’.²⁰⁰ Later defined as the ‘greatest recreational centres of the country’,²⁰¹ these roads were often affected by the so-called ‘ribbon development’. The latter caused ‘the loss of nature space and nature beauty, while these roads, due to the few farms attached to them, the plantations along the ditches, the unobstructed view of the city and village, often offer a special charm’.²⁰² A main aesthetic issue was raised, since through such interventions ‘the view of the open free landscape is being robbed forever’. Moreover, these arguments were supported by the identification of ‘major financial disadvantages’.²⁰³ Accordingly, a viable solution was to be found in ‘the purchase by the municipalities of the land located along these roads, and the inclusion of provisions in the building regulations, which will limit the right to build on those roads, or at least in the right direction’.²⁰⁴ In relation to this, Cleyndert had the opportunity to present his theories on an international stage: the International Town Planning Conference. Held in Amsterdam in 1924, this event can be regarded as ground-breaking for the affirming discipline of urban planning.

¹⁹⁹ Cit. *Ibid.*, 95-96.

²⁰⁰ Cit. *Ibid.*, 100.

²⁰¹ Also in this case, the English caption is used by Cleyndert, who quotes the way in which the roads are referred to in the United States (cf. Cleyndert, H. Azn. (1941). *De bescherming en de opbouw van het Nederlandsche Landschap*. In: *Jaarboek der Vereeniging tot Behoud van Natuurmonumenten in Nederland 1936-1940*, Amsterdam, 104).

²⁰² Cit. Cleyndert, H. Azn. (1925). *Parken en de natuur in Nederland*, *op.cit.*, 100.

²⁰³ Namely, ‘high costs for sewerage, pipelines for gas, water, electricity, for security and police, and also often for education’ (cit. Cleyndert, H. Azn. (1941). *De bescherming en de opbouw*, *op.cit.*, 104).

²⁰⁴ Cit. Cleyndert, H. Azn. (1925). *Parken en de natuur in Nederland*, *op.cit.*, 100.

Through the contamination with the garden city movement,²⁰⁵ it will define a significant advancement in regional planning with an echo for many years to come.²⁰⁶

The International Federation of Housing and Town Planning (i.e. the main organizer) selected Amsterdam as the venue for its annual meeting. The practical arrangement of the event was carried out by the recently-founded *Nederlands Instituut voor Volkshuisvesting en Stedenbouw* (NIVS – Dutch Institute of Public Housing and Urban Planning),²⁰⁷ of which Cleyndert was a member.²⁰⁸ Within the main topic of the conference (i.e., regional planning), one of the themes addressed was that of ‘Parks, Park Systems and Recreation’.²⁰⁹ Cleyndert was the author of one of the

²⁰⁵ For an overview on the garden city model with related movement and legacy, developed by the English town planner and social reformer E. Howard at the end of the 19th century, see: Macfadyen, D. (1970). *Sir Ebenezer Howard and the town planning movement*. Cambridge: M.I.T. Press; Segal, H. P. & Fishman, R. (1979). *Urban Utopias in the Twentieth Century: Ebenezer Howard, Frank Lloyd Wright, and Le Corbusier*, *Technology and Culture*, 20(4), pp. 815–815; Beevers, R. (1988). *The garden city utopia: a critical biography of Ebenezer Howard*. London: Macmillan; Buder, S. (1990). *Visionaries and planners: the garden city movement and the modern community*. New York: Oxford University Press; Richert, E. D. & Lapping, M. B. (1998). Ebenezer Howard and the Garden City, *Journal of the American Planning Association*, 64(2), pp. 125–127; Parsons, K. C. & Schuyler, D. (2002). *From garden city to green city: the legacy of Ebenezer Howard*. Baltimore: Johns Hopkins University Press; Clark, B. (2003). Ebenezer Howard and the Marriage of Town and Country: An Introduction to Howard's ‘Garden Cities of To-Morrow’ (selections), *Organization & Environment*, 16(1), pp. 87–97; Gillette, H. (2010) *Civitas by design: building better communities, from the garden city to the new urbanism*. Philadelphia: University of Pennsylvania Press; Akkerman, A. (2020). *The urban archetypes of Jane Jacobs and Ebenezer Howard: contradiction and meaning in city form*. Toronto: University of Toronto Press.

²⁰⁶ For a detailed account on the International Town Planning Conference held in Amsterdam in 1924, see: Bosma, K. (1993). *Ruimte voor een nieuwe tijd: vormgeving van de Nederlandse regio 1900–1945*. Rotterdam: Nederlands Architectuurinstituut, pp. 157–178; Wagenaar, C. (2009). *Stedenbouw 1924–2009: vijftig jaar vak van de toekomst, Stedenbouw & Ruimtelijke Ordening*, pp. 4–15; Id., (2015). The International Town Planning Conference in Amsterdam, 1924. In: *Town planning in the Netherlands since 1800: responses to enlightenment ideas and geopolitical realities* (2ed.), Id. Rotterdam: nai010, pp. 265–272; Schram, A. & Doevendans, K. (2018). Plannen over de grenzen heen. Een vakgebied in wording op het Internationale Stedenbouwcongres van 1924, *KNOB Bulletin*, 117(2), pp. 104–122.

²⁰⁷ Founded in 1918 as *Nederlands Instituut voor Volkshuisvesting* (NIV – Dutch Institute of Public Housing), the institute shortly after (1921) changed its name to include *Stedenbouw* (Urban Planning) among its interests (cf. Wagenaar, C. (2015). *The International Town Planning Conference in Amsterdam*, *op.cit.*, p. 265).

²⁰⁸ Cf. *Ibid.*, pp. 265–266.

²⁰⁹ As previously highlighted, the main focus of the meeting was on regional planning, as evident from the other topics addressed during the first two days of conference (followed by field visits in Amsterdam, The Hague and Rotterdam): ‘General Principles of Regional Planning’, ‘Technical Problems in Regional Planning’ and ‘Legal Problems of Regional Planning’ (cf. International Federation of Town Planning and Housing (1924). *Conférence internationale de l'aménagement des villes, Amsterdam, 1924: Internationale städtebaugung, Amsterdam, 1924: International town planning conference, Amsterdam, 1924: Internationaal stedenbouwcongres, Amsterdam, 1924*. Amsterdam: N.v. de erven M. Van Munster & zoon; see also: Schram, A. & Doevendans, K. (2018). *Plannen over de grenzen heen*, *op.cit.*).

three reports discussed on this topic as representative of the *Naatuurmonumenten* Association.²¹⁰ According to the summary of the overall session, his report 'Parks and Recreation Grounds in the Netherlands' seems to stand out, compared to the other two academic contributions, for the accent put on the 'importance of *increasing woodland areas and preserving types of nature landscapes*'.²¹¹ Moreover, some general appreciations were raised by his reference to the 'productive parks' for the possible compromise he envisioned with production needs (FIG. 3.9).²¹²

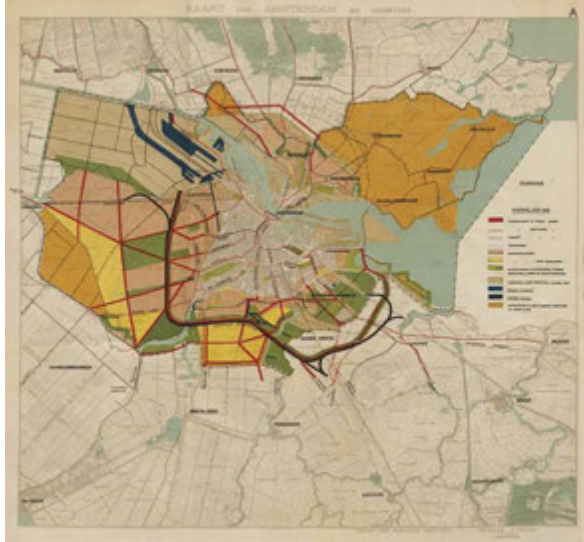


FIG. 3.9 Plan for the urban extension of Amsterdam, in which H. Cleyndert Azn. was involved together with M. J. Granpré Molière, D. Hudig and Th. K. van Lohuizen (1926) (NIVS & Groep Groot Amsterdam 1926: afb. A)

²¹⁰ However, because of health problems, he was not able to physically attend the meetings (cf. International Federation of Town Planning and Housing (1924). *Conférence internationale de l'aménagement des villes*, *op.cit.*, p. 50).

²¹¹ In line with Cleyndert's vision, the contribution by the professor of landscape architecture at Harvard University (US), Henry V. Hubbard ('Parks and Playgrounds, American Experience as to their Requirements and Distribution as Elements in the City Plans') proposed to introduce '*recreational districting* as an integral part of the *regional plan*', while the report presented by the professor of the *Ecole des Hautes Etudes urbaines de Paris*, Jacques Gréber (*Note sur les espaces libres dans les grandes Villes françaises*) identified in 'hygienic necessity', 'aesthetic value' and contributions to 'municipal prosperity' the main issues of public parks (cf. *Ibid.*, pp. 49-50).

²¹² This was the case of the comments given by Secretary of the Federation, Mr. H. Chapman, who feared the 'green revolutions' and the danger of looking at the parks' issue only 'from the point of view of the townsman', while neglecting the 'needs of agriculture.' (Cf. *Ibid.*, p. 53).

In Italy, the Croce law already included some hints on the acknowledgment of man-made assets. In this sense, the definition of properties put under protection is relevant. In the first article of the law reference is made to two main categories. The first one included all the 'immovable things, the conservation of which is of considerable public interest due to their natural beauty or their particular relationship with civil and literary history'. Thus, the autonomy of natural beauties from natural memorials is confirmed, but they are merged in the same protective measure. The second category was represented by the so-called 'panoramic beauties'. Their definition is not better specified in the law. In this sense, the comparison between the bill drafted by the Molmenti Committee (March 1920) and the one presented by Croce to the Senate (September 1920) can be of help, together with the comments given by Parpagliolo (1923).²¹³ In the Molmenti Committee's version, 'immovable things' were not only related to natural beauty and the civil-literary history, but also to so-called 'traditional environment of places': in other words, historic human interventions in nature (e.g. architectural heritage) were considered as worthy of protection.²¹⁴ However, this notion was omitted in the Croce's version. According to Parpagliolo, it was already included in the definition of 'panoramic beauties' – at least, the sight of them – which encompassed both panoramas and the observation points from which they could be appreciated.²¹⁵

A significant echo of this reflection can be found in the initiatives started by the mayor of Capri, E. Cerio (1875-1960), who addressed a petition to the Undersecretary of Fine Arts G. Rosadi in 1920 to denounce the increasing exploitation of the island for touristic purposes.²¹⁶ The initiative had considerable success, so that Cerio decided to organize on the island a 'Convention on the Landscape', held in 1922.²¹⁷ This occasion was the ideal stage for a dialogue between exponents of the Italian intellectual world. The report presented by Cerio

²¹³ Parpagliolo, L. (1923). *La difesa delle bellezze naturali in Italia*. Roma: Soc.ed. d'arte illustrata.

²¹⁴ Cf. Sipari, L.A. (2017). La storia "civile", *op.cit.* In this sense, relevant is an article by the Neapolitan jurist Giuseppe Lustig on the *Filangieri* magazine already in 1918, according to which 'natural beauties include the great effort spent by man to make nature come to his will [...] buildings and monuments, which give each city its appearance, shape, character... forming at the same time heritage of nature and art.' Cit. G. Lustig, La tutela del paesaggio a Roma, *Il Filangieri*, XLIII(1918), 449-504, in: Settis, S. (2010). *Paesaggio Costituzione Cemento*, *op.cit.*, 159-160.

²¹⁵ Cf. Parpagliolo, L. (1923). *La difesa delle bellezze naturali*, *op.cit.*; Sipari, L.A. (2017). La storia "civile", *op.cit.*

²¹⁶ Cf. Picone, R. (2017). Restauro architettonico e tutela del paesaggio. Prospettive future di un dialogo storico. In *RICerca/REStaura*, sez. 3A, *Progetto e cantiere: orizzonti operativi*, Fiorani, D. and Della Torre, S. (Eds.), Roma: Quazar, 660.

²¹⁷ Cerio, E. (1923). *Il convegno del Paesaggio*. Capri: Gaspare Casella.

himself, entitled 'The rural architecture in the land of Sirens',²¹⁸ is interesting. In it, the description of the landscape of Capri shows the prominent role attributed to anthropic components:

'The mural structures with heterodox arches – rarely is the circle, the ellipse, the scholastic geometric line in the structures improvised by the masons, who are extemporaneous poets and who handle the mortar and the stone, like the common people in love they handle the verse and rhyme – the vaulted roof structures – the *lamie* (vaults) with their fantastic shapes, which bear the imprint of the manual skills –, these elements of improvised, spontaneous, unimagined constructions that spring from the soul of the southern people as their songs, are a large part of the charm of the landscape'.²¹⁹



FIG. 3.10 Some of the images associated to E. Cerio's description of the landscape of Capri: the roofs of Anacapri (top); tools for 'beating' the roofs (below, left); worker handling the *mazzoccola* (mallet) (below, right) (Cerio 1923)

²¹⁸ *Ibid.*, 55-65.

²¹⁹ *Ibid.*

For Cerio, rural architecture is a significant part of the landscape of Capri. Nature and architecture are seen as complementary elements, harmoniously integrated in the landscape, as an expression of local identity. Thanks to the creative flair of locals, the island has 'an architecture that so happily completed the work of nature in the creation of a landscape of legendary beauty'. For him, not only the outward appearance, but also the constructive knowledge that made those 'fantastic shapes' possible is to be protected (FIG. 3.10).²²⁰

A gradual semantic shift from natural beauties to landscape was taking ground as a consequence of the inclusion of architectural heritage in the Italian debate. Additionally, the limits related to the application of the Croce law triggered some advancements. In this sense, the contribution of another figure from the lively context of Campania is relevant: Gino Chierici (1877-1961). As Superintendent of the Medieval and Modern Art of Campania (1924-1935), he set up for that region a 'landscape plan' *ante litteram* as early as in 1925. As explained in his essay 'For the protection of the natural beauties of Campania', Chierici identified in the roads of the Naples hillside a great panoramic value (FIG. 3.11).²²¹ Consequently – echoing a measure dating back to the Bourbon rule of the city²²² – within the plan all the free areas adjoining such roads were catalogued, and then subjected to a prohibition on building. This operation was mainly aimed at protecting the view on the gulf and city of Naples that these roads offered,²²³ compensating the ineffective notification and authorization processes that the Croce law had envisaged for natural and panoramic beauties (FIG. 3.12).²²⁴ Subsequently, these measures were extended to the lakes of Campi Flegrei and to some stretches of the Neapolitan coast and the islands.

²²⁰ Cf. *Ibid.*

²²¹ Reference is made to the roads Tasso, Manzoni, Aniello Falcone, the Corso Vittorio Emanuele and the Posillipo site (cf. Chierici, G. (1925). *Per la tutela delle bellezze naturali della Campania*. Milano, Roma: Bestetti & Tumminelli).

²²² Reference is made to the so-called *Rescritti Borbonici*, conceived in Naples between 1841 and 1843, which 'forbade to raise buildings that obstruct the view along the roads of Mergellina, Posillipo, Campo di Marte, Capodimonte'. This protective measure was mentioned by Croce in his report to the Senate (1920), following a trend – as in the already-mentioned work of Lustig (1917) and other authors like Parpagliolo (1923) and that of Nicola Falcone (Id. (1914). *Il paesaggio italico e la sua difesa. Studio giuridico-estetico*. Firenze: Alinari) – to reference the measures conceived by the Italian pre-unification states in order to embed the current law in a long tradition of protection (cf. Settis, S. (2010). *Paesaggio Costituzione Cemento, op.cit.*, 166- 167).

²²³ Cf. Picone, R. (2005). Restauri a Napoli tra le due guerre: l'opera di Gino Chierici. In: S. Casiello (ed.), *La cultura del restauro: teorie e fondatori* (3ed.). Venezia: Marsilio, 321-322; Picone, R. (2017). Restauro architettonico e tutela del paesaggio, *op.cit.*, 660-661.

²²⁴ Cf. Settis, S. (2010). *Paesaggio Costituzione Cemento, op.cit.*, 165-167.



FIG. 3.11 Naples (IT), the Manzoni panoramic road (Chierici 1925)



FIG. 3.12 Naples (IT), the plan for the Tasso road by G. Chierici with indication of the properties where building activity was restricted (Chierici 1925)

The discourse on nature protection was, thus, reaching a turning point with the switch from natural monuments – in the double meaning of ‘memorials’ or ‘remnants’ – to the concept of natural beauty. As pointed out, it led to the inclusion of human products among the elements worthy of protection. However, the manmade components considered in the two contexts are different: on the one hand, the agricultural lands as an expression of nature tamed by man with a recreational potential; on the other, the recognition of architecture as a complement inseparable from nature. Moreover, different is the accent on use and contemplation – and their combination – in the value attributed to these areas. But a common trait is in their aesthetic – and mainly visual – appreciation, in all its social (ethical or moral) significance, which was gradually leading the transition towards the concept of landscape, and to the first experimentations with protection tools. However, these hints had not yet reached full maturity and the issue of natural beauty still raised interpretative doubts.

In the Netherlands, the broadened arguments for nature preservation generated a reaction in the conservationist circles of the previous stage. When tackling the issue of ‘Legal Nature Protection’ in 1923, Thijsse – who had already expressed his doubts in relation to the vague notion of nature beauty – recognized that a governmental measure on that matter should have been ‘not just about our wild plants and animals or remarkable places of geological interests, but about the Dutch landscape itself and above all the opportunity to relax and exalt our people in general and youth in particular’.²²⁵ But together with a law for preserving the Nature Beauty of the country – through which ‘the determination of a desirable number of protected landscapes’ could have been achieved²²⁶ – a ‘Law for the Protection of the Dutch Flora and Fauna’ was also envisaged.²²⁷ If compared to the early-20th-century formulations, this wish can be interpreted as the expression of a discovered reliance on governmental intervention. Additionally, it shows the need to make a distinction between two domains – i.e. nature and landscape – which, for Thijsse, had started to assume different and not always compatible protection demands. Indeed, this feeling gradually called for a revision of what could be actually considered as a *natuurmonument* and about its ‘inviolability’:

‘The term “nature monument” has acquired an already instable meaning through use and abuse for several decades. It is therefore necessary that we distinguish the nature monuments in the narrow sense (the real ones) from those in the broader sense: the beautiful, pleasant and interesting relaxation landscapes. This is not a contradiction, because a real nature monument is usually a relaxation landscape in the best sense of the word. By real nature monument we mean landscapes large or small, which because of their geological condition, their vegetation and the associated fauna have a scientific (and usually aesthetic) value that their undisturbed survival, free of human interference, must be regarded as a great treasure for present and future. We then get to see the rare phenomenon of Nature that freely runs its course. [...] The development of that landscape often gives us unexpected things to see, it brings us to a better understanding of the past, it provides inexhaustible material for scientific research. So it goes without saying that a real nature monument will not remain in the same condition for centuries We must never say here: “Beautiful moment! Do not pass away”.

²²⁵ Cit. Thijsse, Jac. P. (1923). Wettelijke Natuurbescherming, *De Levende Natuur*, 28(4), 97.

²²⁶ Cit. *Ibid.*, 99.

²²⁷ Cf. *Ibid.*

Anyone who knows the Faust knows that because of that wish he came into the devil's power. The real nature monument goes through several stages, each of a different beauty, the evaluation of which we should leave to personal judgement'.²²⁸

The adoption of a landscape lens in the interpretation of nature is now fully supported, and strongly linked to the interrelated notions of beauty and recreation. However, the scientific value of nature is still crucial for Thijssse and the other nature conservationists. It represents the exceptional character distinguishing the 'real nature monuments' from the 'relaxation landscapes'. Additionally, the aesthetic qualities characterizing the landscape of the 'real nature monuments' do not represent an incentive to eternalize a temporary perception of beauty, which – in turn – was seen as extremely variable according to the free run of nature and, therefore, to be left to 'personal judgement' (FIG. 3.13).



FIG. 3.13 Botanical research at the Naardermeer (1939), showing the continued focus on the scientific relevance of the 'real nature monuments' (Natuurmonumenten 1939-1940: 157)

228 Cit. Thijssse, Jac. P. (1936). De onaantastbaarheid van natuurmonumenten, *De Levende Natuur*, 41(7), 198-199. The ambiguity assumed by the term *natuurmonument* had already been hinted in 1930: 'We may discover that there is no true contradiction between man and nature, but that man is part of nature itself and should therefore form a harmonious whole. Our movement for nature protection, nature conservation or whatever we want to call it, strives for that harmony. It is really not just about the rare or unique plants and animals. The word nature monument seems to mean that, but the course of events has broadened the meaning of that word, so much that it is in my opinion often misused' (cit. Thijssse, Jac. P. (1930). Behoud van Natuurschoon, *De Levende Natuur*, 35(1), 2-3).

Also in Italy, the emancipation of the landscape concept from that of natural beauty involved the need to protect nature in its scientific value. Even if the Croce law had represented an important achievement, it did not stop the national debate on this topic. Already during the parliamentary debate for its approval, an idea of nature protection going beyond the only aesthetic aspects or historic-literary connections started to be raised. In particular, E. Niccolini (1853-1939) became a spokesman for all those who felt the need to consider other purposes, such as the documentation and study of biodiversity, but also the development of recreational activities. He was supported by natural science scholars, worried by the excessive depletion of flora and fauna due to industrial development and urban transformations.²²⁹ Considering panoramic beauties was not enough for them because, even if they referred to an overall view of nature, they were only linked to their external appearance and, according to Niccolini, it was therefore a partial approach:

'It is the environment that makes beauty; if you save a spring or a pool, nothing is saved: we need the National Park'.²³⁰

Thus, already during the parliamentary debate on the Croce law, the need for national parks came out. But some people considered this institution as useless, because there were already laws for the preservation of fauna from hunting or for agricultural-related issues. Among them, Rosadi expressed his reluctance in giving space to what he considered a secondary concern – i.e. 'the life and fortune of the animals, which should be better preserved in the parks' – because, according to him, 'the presence of an ibex' would not have made 'the natural picture of a wood more attractive, or that of the bear the voice of the forest more resounding'.²³¹

Instead, Luigi Parpagliolo supported the inclusion of scientific interests in the definition of the natural areas to be protected, because for him their 'disappearance would damage science in general and geology in particular'.²³² But, in the end, even the proposal for a future commitment could not be approved, so that these issues were referred to in a simple recommendation to the government for drafting

²²⁹ Cf. Ventura, F. (1987). Alle origini della tutela, *op.cit.*, 28.

²³⁰ Part of the speech by E. Niccolini during the discussion at the Senate of the Croce law on January 28, 1921. In: *Ibid*, 25.

²³¹ Cit. Senato del Regno (1921). *Per i parchi nazionali. Estratto dalla Relazione dell'Ufficio Centrale e dai discorsi degli on. Mazzoni (relatore), Mengarini, Frola, Niccolini, Bertetti, e da S. E. Rosadi, sottosegretario di Stato per le Antichità e Belle Arti*, Roma: Tip. del Senato, 33-34. In: Sipari, L.A. (2017). La storia "civile", *op.cit.*

²³² Cit. Parpagliolo, L. (1923). *La difesa delle bellezze naturali d'Italia*, *op.cit.*, 51.

a specific law on that matter. But more than a conceptual friction, there were also economic reasons to make this request difficult to implement. Through the institution of national parks, wide lands would have been taken out of the market for their conservation. Indeed, it is no coincidence that the first Italian parks were set up, immediately after the passing of the Croce law, on areas free from economic exploitation, such as the royal hunting reserves (FIG. 3.14).²³³



FIG. 3.14 Gran Paradiso National Park (IT) (1950). The institution of the Gran Paradiso National Park is closely linked to the protection of its fauna and, in particular, the ibex. Hunting this animal was already forbidden by royal decree in 1821 (Archivio Fotografico del Parco Nazionale Gran Paradiso)

²³³ These are the parks of Gran Paradiso and of Abruzzo, established respectively in 1922 and 1923. They were followed by the Circeo park in 1934, the Stelvio park in 1936 and the park of Calabria in 1968 (cf. Ventura, F. (1987). *Alle origini della tutela*, *op.cit.*, 27).

3.2.2 Reaching consensus: the national inventories of natural beauties

The increasing uncertainties in both contexts about the future of natural beauties – at the edge of aesthetic, historic and scientific values – was calling for an additional effort in order to better understand the object and scope of protection. In particular, the need to deepen the knowledge about the actual consistency of the national landscape – in its still unclear mix of natural and manmade components – started to be felt as a matter of primary concern.

In the Dutch context, this process went through the prior acknowledgement of the inefficiency in the purchase-based approach to nature protection, and of the need for governmental intervention. Already in 1925, Cleyndert highlighted that, although some mitigating measures could come from the municipalities, the whole nature-space issue was to be tackled at the national level.²³⁴ A reason for that was to be found in the financial incapability of the cities in ‘purchasing nature reserves far beyond the municipal boundaries, the advantage of which would benefit not only their own townspeople, but the inhabitants of the whole country’.²³⁵ Additionally, another argument was related to the Netherlands’ geographical condition, in which the north-west region was more suitable for production, while the whole east could count on a larger extent of ‘untouched nature with a lot of nature beauty’,²³⁶ generating a situation in which ‘the western part of the country depends on the eastern part’.²³⁷ Consequently, a ‘national nature-space plan’ was envisaged through the establishment of a ‘national study committee, which will have to consider the problem as broadly as possible, i.e. from a urban, economic, constitutional, hygienic, pedagogical, landscape-architectural and natural-scientific point of view, and therefore also in connection with a general “Urban Design” (National Plan)’.²³⁸ The first task of the committee was, in Cleyndert’s view, the creation of an ‘inventory of the unspoilt nature still present in our country: rugged lands, forests, ponds, etc., and to indicate the most appropriate destination for the parts thereof.’²³⁹

²³⁴ Indeed, according to Cleyndert, ‘as soon as such interest involves both the whole territory and the whole population, it ceases to be an urban, regional, or provincial interest, but it becomes a national matter (not without reason the words nation and nature have a common origin) [...] which first must be observed and studied nationally, and after it can be decided how to justify the burdens and sacrifices required for the achievement of that aim’ (cit. Cleyndert, H. Azn. (1925). *Parken en de natuur in Nederland*, *op.cit.*, 91).

²³⁵ Cit. *Ibid.*

²³⁶ Cit. *Ibid.*

²³⁷ Cit. *Ibid.*, 92.

²³⁸ Cit. *Ibid.*, 95.

²³⁹ Cit. *Ibid.*

In line with that, a new organization was founded in 1932: the *Contact Commissie inzake Natuurbescherming* (CC – Contact Committee on Nature Protection). The composition of its first administrative board demonstrates the widening of visions of the nature protection movement: in addition to some iconic figures from the *Natuurmonumenten* Association (i.e. Thijsse, Van Tienhoven, Drijver), the other members were from the fields of monuments conservation (H. Westermann) and spatial planning (H. Cleyndert). Also the task taken by the organization was broader: to influence and change the governmental policies about nature protection.²⁴⁰ The aim of the CC was firstly expressed in the action against the plan of the *Rijksinspecteur voor de werkverschaffing* (Plan of the State Inspector for the provision of work), who proposed the reclamation of a wide land surface as a measure against unemployment.²⁴¹ But the first concrete and significant result of the CC's vision for nature protection was the report *Het voornaamste Natuurschoon in Nederland* (The most important Nature Beauty in the Netherlands), outlined in 1939.²⁴²

The idea of making an inventory of the most remarkable natural areas of the country was, actually, not new. Indeed, it already was in the statute of the *Natuurmonumenten* Association.²⁴³ A first attempt to concretize this wish was made in 1929 by the *Staatsbosbeheer* (SBB – State Forestry Service),²⁴⁴ which had identified three main categories for the selection of areas eligible for protection: *natuurschoon* (nature beauty), *wetenschappelijke waarde* (scientific value) and *historische waarde* (historical value).²⁴⁵ This inventory was conceived as a 'wish list': all the areas already covered by other kinds of protection were not included.²⁴⁶ Although the preparatory work had begun, the drafting of the

²⁴⁰ Cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 101-106.

²⁴¹ Cf. Westhoff, J. Th. (1938). *De directe mogelijkheden der werkverschaffing bij de werkloosheidsbestrijding*. 's-Gravenhage: Rijksuitgeverij.

²⁴² Brouwer, G. A., Cleyndert, H., Kloot, W. G., Thijsse, Jac. P. & Weevers, Th. (1939). *Het voornaamste Natuurschoon in Nederland*. Contact-Commissie inzake Natuurbescherming.

²⁴³ Cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 106.

²⁴⁴ Established in 1899 for stimulating wood production, SBB had jointly started the purchase of nature reserves; consequently, starting from 1928, it was given the official task to take care for nature conservation (cf. Buis, J. & Verkaik, J. (1999). *Staatsbosbeheer: 100 jaar werken aan groen Nederland*. Utrecht: Matrijis, 47; Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 101; Renes, J. (2008). *Landscape preservation in The Netherlands, op.cit.*, 147).

²⁴⁵ Cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 106-107.

²⁴⁶ Reference is made to the areas covered by the *Natuurschoonwet*, a law passed in 1928 for protecting estates by means of fiscal allowances to the owners. Cf. Keiser, J.W. (1949). *Overheidszorg voor het natuurschoon*. Rotterdam: W.L. & J. Brusse.

list was not completed. Only in 1939, the CC decided to take on the SBB's task. As already expressed more than a decade before, Cleyndert was one of the main supporters of the inventory. Even if his views on nature space and recreation were the subject of several oppositions, a mixed sub-commission (Cleyndert, Brouwer, Van der Kloot, Weevers, Thijsse) was composed for the redaction of an *urgentielijst* (urgency list).²⁴⁷ As a result, in 1939 the report *Het voornaamste Natuurschoon in Nederland* (The most important Nature Beauty in the Netherlands) was outlined. The list included 700 areas covering all those 'natural objects the conservation of which must be regarded as eminently important, and which therefore require protection against the violation of the landscape, which is to be expected from works by major parties for the purpose of traffic, housing, mining or other measures of an agricultural engineering nature or public interest'.²⁴⁸ According to the sub-committee, the size of this *groslijst* (gross list) reflected the need to keep together the different interests arose within the CC:

'We considered it necessary to first compile a gross list, taking into account the nature of the various organizations that are united in the Contact Committee: to summarize, recreational in the broadest sense of the word, scientific, touristic, archaeological and historical interests. Experience shows that these interests are already served to a very large extent when proper attention is paid to the geological condition and the interests of Flora and Fauna. Once again, the great significance of nature conservation for science in the narrow sense has been pointed out here'.²⁴⁹

The expansion of conservative horizons is still in continuity with what had already been achieved in the previous stage of the nature conservation movement. The importance of nature in its scientific value is confirmed, and the precursors are acknowledged for their positive contribution in protecting a wide range of nature values – i.e. recreational, touristic, archaeological, historical – even if not initially prioritized. However, it is also further recognized that 'the concepts of recreation and general landscape beauty provide a fairly large size for this list'.²⁵⁰

²⁴⁷ The oppositions to Cleyndert's ideas mainly came from the biologists, like T. Weevers (1875-1952) (cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, pp. 108).

²⁴⁸ Brouwer, G. A., Cleyndert, H., Kloot, W. G., Thijsse, Jac. P. & Weevers, Th. (1939). *Het voornaamste Natuurschoon in Nederland, op.cit.*, 1.

²⁴⁹ Cit. *Ibid.*

²⁵⁰ Cit. *Ibid.*



FIG. 3.15 Utrecht (NL), Kooikerhuisje: *Binnenzijde van eendenkooi* (Inside of a duck decoy) (1971)
(Rijksdienst Cultureel Erfgoed Beeldbank)

Accordingly, all those ‘landscapes that, due to their construction, their geological condition, their wealth of remarkable vegetal forms as a whole, require conservation and shelter from destructive influences’²⁵¹ are, at the same time, also described for their historical and aesthetic qualities, and their preservation for the sake of science is always combined to their recreational potential. This is the case of the dunes and the puddles landscapes, but also of specific areas – like South Limburg, the Veluwe, East-Twente and Gasterland – the peculiarities of which are specifically described, together with their future perspectives, in the introductory part of the report.²⁵²

²⁵¹ Cit. *Ibid.*

²⁵² Cf. *Ibid.*, 2-8.

In few occasions – as in the case of South Limburg – not only the loss of the ‘most beautiful expressions of the wild flora’, but also of ‘the large estates with their castles’ are identified as a possible cause of future landscape deterioration.²⁵³ A rising appreciation for the results of human labour in the landscape is also expressed in the attention given to the *wielen* (wheels) – considered as ‘monuments of the water management adventure of the Netherlands’²⁵⁴ – but also to some peculiar vegetal architecture like the *eendenkooien* (duck decoy) – which, ‘apart from their practical, often lucrative value’, were seen as significant for their being a ‘refuge for flora and fauna’²⁵⁵ – as well as to remarkable archaeological monuments like the *hunnbedden* (dolmens) – which, despite their being ‘a fine example of total protection’, they ‘would require an appropriately spacious environment’ (FIG. 3.15).²⁵⁶

Also in the Italian context, where the governmental involvement was at this stage already a fact, a list of the national natural beauties had started to be seen as fundamental for knowledge and protection. Actually, the need for a list was already mentioned in the first draft (1910) of what would have become the law n.778/1922. However, the latter was removed from the final version of the law. Out of the institutional sphere, various associations had also tried to fill this lack since the end of the 19th century.²⁵⁷ Among them, it was particularly the *Touring Club Italiano* (TCI) to start, through the publication of guides and magazines, what L. Piccioni has defined an ‘informal’ cataloguing operation for touristic purposes (FIG. 3.16).²⁵⁸ Indeed, when the journalist and art critic U. Ojetti (1871-1946) for the first time addressed, already in 1904, the need for a ‘catalog of landscapes essential to the national character’, he saw in the TCI the most suitable organization for accomplishing this task.²⁵⁹

²⁵³ Cit. *Ibid.*, 4-5.

²⁵⁴ Cit. *Ibid.*, 2.

²⁵⁵ Cit. *Ibid.*

²⁵⁶ Cit. *Ibid.*

²⁵⁷ As soon as in 1913, the new-born *Comitato nazionale per la difesa del paesaggio e dei monumenti italici* (National Committee for the defense of the Italic landscape and monuments) considered the making of this list as one of the main tasks in its program. A campaign was started for this purpose, but it was stopped by the outbreak of WWI. Alongside this, many other associations had been variously involved, from the end of the 19th century, in the knowledge and protection of nature and the landscape. Reference is made to the *Club Alpino Italiano* (CAI), the *Touring Club Italiano* (TCI), the *Pro Montibus*, the *Associazione Nazionale per i Paesaggi e i Monumenti Pittoreschi d'Italia* (National Association for Landscapes and Picturesque Monuments of Italy) as well as to the *Lega Nazionale per la Protezione dei Monumenti Naturali* (National League for the Protection of Natural Monuments) (cf. Piccioni, L. (2012). *Paesaggio della belle époque. Il catalogo delle bellezze naturali d'Italia 1913-1926*, in *Il caso italiano. Industria, chimica e ambiente*, Poggio, P.P. and Ruzzenenti, M. (Eds.). Milano: Jaca Book, 107).

²⁵⁸ Cf. *Ibid.*

²⁵⁹ Ojetti, U. (1904). In difesa dei nostri paesaggi, *L'illustrazione italiana*, 12 giugno 1904, 467.



FIG. 3.16 Touring Club Italiano (TCI): monthly magazine cover (1908) (TCI Archive)

In 1921, the issue of an institutional list of the natural beauties of Italy was consistently handled. In that year, the *Direzione Antichità e Belle Arti* (Directorate for Antiquities and Fine Arts) within the Ministry of Education ordered an official census for realizing a 'Catalogue of the natural beauties of Italy'. To be involved were, firstly, the local Superintendences for Monuments, together with five associations.²⁶⁰ L. Parpagliolo – at that time also involved in the catalogue for the national artistic heritage²⁶¹ – drafted a form model through which all the afore-mentioned bodies could notify the existing natural beauties in their jurisdiction.²⁶² In it, six categories of natural assets were identified, the rationale of which was strongly linked to the twofold scope of the list: on the one hand, to facilitate the implementation of the Croce law once approved; on the other, to assess the possible future developments in the field of nature protection. Indeed, the first three categories were strictly related

²⁶⁰ Reference is made to the afore-mentioned CAI, TCI, *Pro Montibus*, the National Association for Landscapes and Picturesque Monuments of Italy, but also the *Ente Nazionale Italiano per il Turismo* (ENIT – Italian National Body for Tourism) (cf. Piccioni, L. (2012). *Paesaggio della belle époque*, *op.cit.*, 111-112).

²⁶¹ Cf. Parpagliolo, L. (1921). Per il catalogo del patrimonio artistico nazionale, *Il Marzocco*, a. XXVI, n.6.

²⁶² Parpagliolo, L. (1922). Il catalogo delle bellezze naturali d'Italia e la legislazione estera in materia di tutela delle bellezze naturali e del paesaggio. Milano: Touring Club Italiano-Comitato nazionale per la difesa dei monumenti e dei paesaggi italiani. The topic is extensively analysed in: Piccioni, L. (2012). *Paesaggio della belle époque*, *op.cit.*

to the kind of objects included in the Croce law. First of all, the ‘things that are of considerable interest due to their natural beauty’, which also included manmade objects, like ‘ruins’ and ‘dolmens’, as well as ‘rare plants’ in its subcategories.²⁶³ The second category was related to ‘things that are of considerable interest because of their natural beauty and their relationship with civil or literary history’, covering the sphere of the natural memorials in the strict sense. Finally, with the third category of ‘observation points, panoramas and picturesque sites’ all the well-established fields of institutional nature protection were included. Not the same for the last three categories, which were, instead, related to controversial aspects in the previous debate. Apart from the mixed fourth category, which included both woods as well as parks, villas and gardens, reference is made to the fifth category dedicated to ‘rare animals or animals whose species is about to disappear’ – which will be then complemented by ‘rare plants’, removed from the first category – but also to the sixth category related to what could now be defined as intangible heritage (i.e., ‘traditional clothing, customs, rituals that give the landscape special characteristics’).²⁶⁴

However, after only few years, the collection of notifications was interrupted in 1926. Given the lack of a final publication of the results and the loss of the original forms, the only surviving trace of this effort is an inventory including 3400 objects. As analysed by L. Piccioni, this document is surely incomplete, even if it can give interesting hints on what he has defined the ‘popular test of the aesthetic-patriotic paradigm’ supported by the government.²⁶⁵ Indeed, the most of the notified properties belong to those categories already included in the Croce law. Among them, the ‘real’ nature monuments – namely, the ones in which beauty and civil or literary memories are connected – are, however, not on top of the list, expressing a preference for purely aesthetic matters.

²⁶³ The almost hidden presence of ‘rare plants’ as only a subcategory within the range of natural beauties was contested by the botanist Renato Pampanini (1875-1949) in an article from 1925 (Pampanini, R. (1925) Gli esponenti più rimarchevoli e più rari della flora Toscana nel censimento dei monumenti naturali d’Italia, *Nuovo Giornale Botanico Italiano*, XXXII, 7-9). As a consequence, the previous cataloguing form was modified, introducing the ‘rare or particularly interesting plants. Plant formations and associations of special interest’, at the side of the fauna, as part of the fifth category. Cf. Piccioni, L. (2012). *Paesaggio della belle époque*, *op.cit.*, 111-112. If this choice increased the relevance of flora and vegetation in the catalogue, at the same time it marked an even more evident separation between historic-aesthetic and natural-scientific interests.

²⁶⁴ Cf. *Ibid.*, 110-112.

²⁶⁵ Cf. *Ibid.* 111-116.

Evidently, the making of a catalogue represented, in both contexts, the stress test for all the different opinions and arguments turning around the notion of natural beauty. As noted by H. van der Windt, this concept had become an 'umbrella term' in the Netherlands, used for bringing together different tendencies, as the result of a negotiation.²⁶⁶ In Italy, the catalogue represented, instead, a first institutional attempt to bring controversial categories – like the ones related to flora and fauna – in the consolidated discourse on the protection of natural beauties, although keeping a sharp separation and with a poor success for the new entries. However, both these contexts show the search for a balance between aesthetic and scientific values, thus standing in an intermediate position if compared to the catalogues previously realized in other European countries.²⁶⁷ But, surely, to make a difference between these two examples – realized at a distance of seventeen years – is the much more operational character of the Dutch list, in which the already protected areas are excluded, compared to the mainly informative aim of the Italian catalogue.

Indeed, the Dutch sub-commission was not only engaged in the selection of the areas to be listed, but it also set possible protection strategies. In particular, two possibilities were envisaged. The first option consisted of the institution of reserves. This is the case of the dunes landscape, for which a 'large National Park' was envisaged.²⁶⁸ For those cases the complexity of which was considered as falling outside of the sub-committee's expertise, protective measures were delegated to 'carefully prepared regional plans'.²⁶⁹ Finally, an *eerst-* and a *tweedekeuze lijst* (first- and second-choice lists) were identified, in order to set a priority for the most vulnerable areas. The list turned out to be of great importance for governmental policy, through the influence it had on the so-called *Nationale Plan* (National Plan).

Indeed, during the *Interbellum*, spatial planning had undergone a significant development, in which the *gemeentelijke uitbreidingsplan* (municipal expansion plan) and the *regionale streekplan* (regional zoning plan) had gained strong significance

²⁶⁶ Cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 113.

²⁶⁷ In particular, the French and the Prussian catalogues, mentioned by Parpagliolo himself as reference for the Italian cataloguing form (cf. Parpagliolo, L. (1922). *Il catalogo delle bellezze naturali d'Italia e la legislazione estera in materia di tutela delle bellezze naturali e del paesaggio*. Milano: Touring Club Italiano-Comitato nazionale per la difesa dei monumenti e dei paesaggi italiani, 19-21).

²⁶⁸ Cit. Brouwer, G. A., Cleyndert, H., Kloot, W. G., Thijsse, Jac. P. & Weevers, Th. (1939). *Het voornaamste Natuurschoon in Nederland, op.cit.*, 3.

²⁶⁹ Cit., *Ibid.*, 2.

and the idea of a *Nationale Plan* started to be considered.²⁷⁰ With the contribution of the already-mentioned *Nederlandse Instituut voor Volkshuisvesting en Stedenbouw* (NIVS – Dutch Institute for Public Housing and Spatial Planning), the *Rijksdienst voor het Nationale Plan* (National Service for the National Plan) was set up in 1941. This National Agency spent a lot of attention in its first years on an overview of the natural areas that needed protection. In 1942, the first result of this work was published: *De voorlopige lijst van natuurresevaten welke in de eerste plaats voor bescherming in aanmerking komen* (The provisional list of nature reserves qualified at the first place for protection), in which 309 areas are listed. The correspondence with the *eerstekeuze lijst* made by the CC is evident. This list represented a basis for the purchase policy of SBB and *Natuurmonumenten*. Eventually, the most part of the areas on the *groslijst* became properties of nature protection organizations.²⁷¹

In Italy, the effectiveness of the Croce law kept on animating the national debate in the light of a rapidly changing context, characterized by large urban and territorial transformations. In particular, protection was challenged by a massive construction process of buildings and infrastructures. The problems emerging from the application of the law in these new circumstances were discussed in a meeting organized in Milan (1931) by the *Comitato nazionale per la difesa del paesaggio e dei monumenti italici* (National Committee for the defense of the Italic landscape and monuments). This reflected the arguments of L. Parpagliolo in his report *Intorno alla legge in difesa delle bellezze naturali e del paesaggio* (Around the law for the defense of natural beauties and landscape),²⁷² in which he pointed out that the widespread building speculation had represented the main threat to natural beauties in the eight years in which the law had been into force. Given the lack of an inventory, the identification of individual beauties (i.e., natural beauties and memorials) still required considerable effort; however, once they were defined, the owners were notified and given prescriptions. A similar procedure was not envisaged for panoramic beauties. For the latter, the Ministry of National Education could only provide specific regulations for those areas ongoing a process of transformation. Consequently, the owners – not informed with a notification – could damage, knowingly or not, the panoramic beauty of their assets with poor room for the government to avoid it. In the meanwhile, various solutions had been adopted to prevent this inconvenience, but only on a

²⁷⁰ Cf. Keiser, J.W. (1949). *Overheidszorg voor het natuurschoon*, *op.cit.*; Valk, van der, A. (1982). *Planologie en natuurbescherming in historisch perspectief*, 's-Gravenhage: NIROV; Ruijter, P. de (1987). *Voor volkshuisvesting en stedenbouw*. Utrecht: Matrijs.

²⁷¹ Cf. Windt, H. van der (1995). *En dan: Wat is natuur*, *op.cit.*, 112-115.

²⁷² The report was originally published by the *Touring Club Italiano* (La difesa del paesaggio, *Le vie d'Italia*, 4 aprile 1931, 281-290).

case-by-case basis.²⁷³ The need for appropriate planning tools, valid throughout the country, thus started to be considered. According to Parpagliolo, a solution could be found by improving the land-use plans already introduced by the urban planning law n.2359/1865, but only if validated by the Superior Council of Fine Art or, alternatively, by a new technical organ bringing together various competences.²⁷⁴

Consequently, also in Italy the protection of landscape and the interests of the new-born urban planning discipline started to cross each other. In the years between the two World Wars, Urbanism was introduced as a subject in the faculties of Architecture and Engineering, and the National Institute of Urbanism was founded (1930). This events took place in the context of a large-scale movement aimed at the modernization of urban planning, which led to the need for an upgrade of the existing urban planning law. Accordingly, in 1932 the Ministry of Public Works set a Commission for drafting a new bill.²⁷⁵ In that occasion, the urbanists felt the need to protect the natural beauties of the nation as an inherent and fundamental component of their task. A crucial point was seen in the introduction of 'regional plans' as a tool for managing building activity, especially in those areas involved in industrial or touristic developments and, more generally, in all areas with a need to 'efficiently provide for the protection of the landscape'.²⁷⁶ As clearly expressed by V. Testa (1889-1978) in his report, the Croce law and the exclusive involvement of the Ministry of Education were considered as insufficient in the urban planning sphere 'to ensure the preservation of those natural beauties, which represent the greatest wealth of our country'.²⁷⁷ However, the first bill proposed by the Committee did not succeed. In relation to this, relevant is that, with the march on Rome of June 1922, Italy had entered the Fascist era. The anti-

²⁷³ In his report, Parpagliolo (1931) reference is made to the measures adopted in the landscape plan by Chierici for Naples. Another expedient was that used for Capri, and then replicated in Taormina, consisting in the issuing of a ministerial decree. In this way, the whole territory of the island was subjected to the provisions of the law n.778/1922 through a series of recommendations regarding new buildings, modifications of pre-existing buildings and general land use – all interventions requiring the prior authorization from the Superintendence to Monuments of Campania (cf. Ventura, F. (1987). *Alle origini della tutela*, *op.cit.*, 32-33).

²⁷⁴ In observing the need for planning in landscape protection, Parpagliolo (1931) highlighted the inadequacy of the planning tools envisaged by the 1865 law, because they were only inspired by health and traffic reasons and technically reduced to simple alignment plans that had caused much more damages to urban environments (cf. Ventura, F. (1987). *Alle origini della tutela*, *op.cit.*, 33).

²⁷⁵ The Commission was made up of A. Leoni (Under-secretary of State for Public Works, as president), E. Affini, L. Biamonti, A. Calza Bini, E. Del Bufalo, G. Giovannoni, G. Lampis, F. Potenza, G. Sarti, A. Cusinno, G. Tafuri, V. Testa, G. Schellembri (cf. *Ibid.*, 34).

²⁷⁶ From the Report by V. Testa, entitled *Il progetto di legge Urbanistica* (The bill of the Urban planning law) (1933) (cf. *Ibid.*).

²⁷⁷ *Cit. Ibid.*

regionalistic attitude of the regime, negatively affected the development of regional planning, both for ideological reasons and to avoid territorial transformations out of central control.²⁷⁸ Even though this first attempt failed, the National Institute of Urban Planning kept on animating a lively debate on the urban planning law. The main result was the idea of a ‘territorial plan’ – instead of its ‘regional’ predecessor – the scope of which, once again, covered the protection of natural beauties:

‘natural beauties cannot be protected only by landscape plans, studied and prepared only for the sake of panoramic interests. The conservation and improvement of natural beauties may also be affected by urban planning rules, which are aimed at achieving other purposes related to traffic control, hygiene protection, to the increase of housing, etc.’²⁷⁹

In both contexts, the need to integrate protection and development had, therefore, become a crucial point. In this sense, the Dutch path to landscape protection – although pursued outside the institutional sphere – proved to be of great influence on the governmental measures in the field of urban planning, laying the foundations for an integrated approach. In the Italian context, the debate on urban planning had also raised the need for this integration, but its implementation was complicated by the political situation and the already-existing protection measures from the Ministry of Education.

3.2.3 Tools for landscape protection and development, between isolation and integration

In the Netherlands, the list from the report *Het voornaamste Natuurschoon in Nederland* marked the start of a new approach, the most relevant aspect of which was an increased attention on the landscape. A clear consequence of that is the change in name of the CC, which in 1941 became the *Contact Commissie voor Natuur- en Landschapsbescherming* (Contact Committee for Nature and Landscape

²⁷⁸ Cf. *Ibid.*, 30-33.

²⁷⁹ Testa, V. (1983). Piani Territoriali, *Urbanistica*, 4(1983), 230; Ventura, F. (1987). Alle origini della tutela, *op.cit.*, 35. In this regard in 1937 a plan for the island of Capri was launched, including the two municipalities of Capri and Anacapri. It was drawn up by a Committee chaired by Giovannoni and nominated by Minister Bottai, and consisted in a urban and landscape planning (cf. Civico, V. (1937). Capri (Napoli). La “Commissione” per il Piano regolatore dell’isola, *Urbanistica*, 6(1937); Talamona, M. (1989). Gustavo Giovannoni: il Piano Regolatore Paesistico dell’isola di Capri, *Bollettino del Centro di Studi per la Storia dell’Architettura* (Roma), 1989; Canali, F. (2016). Dalle pagine della rivista “Urbanistica”: Gustavo Giovannoni e i “suoi” per l’urbanistica della villeggiatura e del turismo, *ASUP*, 3(2016), 15).

Protection).²⁸⁰ This new tendency prompted several debates, also because the landscape notion was even more difficult to define than the comparatively clear nature concept. But the main issue was related to the ‘beauty’ notion, which was not considered as a central aspect for nature protectionists; conversely, it was, since the beginning, a matter for urban planners. It was thanks to these latter that ideas about the conservation of the landscape in the strict sense were developed.

Following his 1920s reflections, Cleyndert kept on playing a leading role for a greater autonomy of the landscape concept. In relation to this, the introduction of the *landschapsverzorging* (landscape care) notion, is significant.²⁸¹ As the title of Cleyndert’s lecture to the 1941 *Natuurmonumenten* meeting shows, it encompassed both ‘The Protection and Construction of the Dutch landscape’.²⁸² For Cleyndert, not only the ‘preservation of the existing, but also the care for the creation of new landscape beauty is of great importance’.²⁸³ Evidently, landscape beauty had now fully acquired a central position in his reflections, also expressed in his will to not address the landscape issue ‘from a scientific: geographical, geological, biological point of view’ but in relation to ‘the landscape image, the visible form, the shape of nature, whether or not influenced by people, whether or not provided with human elements’.²⁸⁴ This choice was linked to what was, for Cleyndert, the essence of the human landscape experience:

‘Our love for the landscape rests in its essence on the art and the gift of sight. We speak of contemplation with regard to the Beautiful, the Noble, the Exalted, whereby, instead of subjective seeing, the objective contemplation is: when the object reveals itself and speaks in its appearance, and man beholds and is silent. So it is with the truly great Art: we do not see the Night Watch, the Emmaus Goers of Rembrandt and Vermeer – we behold them; we behold the Firm in all its majesty, the clear splendour of the stars, silently; we see Nature, the Landscape as a Revelation. Contemplation, Revelation, but also Recreation: contemplation of the Created, revelation of the Hidden, the Beautiful, the Exalted, re-creation of the Inner-human’.²⁸⁵

²⁸⁰ The main argument used for such a shift was that ‘the protection of the landscape in general has demanded constant attention in recent years’ (cf. Dekker, J.N.M. (1993). *De ontdekking van het kultuurlandschap: de bijdrage van de werkgroep voor de cultuurlandschappen van de Contactcommissie voor Natuur- en Landschapsbescherming 1944-1950: een voorstudie*. Utrecht: Vakgroep NW&S, Rijksuniversiteit Utrecht, 15).

²⁸¹ Cf. Valk, A. van der (1982). H. Cleyndert een pionier van de planologie, *Rooilijn*, 14(3), 58-65.

²⁸² Cleyndert, H. Azn. (1941). De bescherming en de opbouw, *op.cit.*

²⁸³ Cit. *Ibid.*, 101.

²⁸⁴ Cit. *Ibid.*

²⁸⁵ Cit. *Ibid.*, 120.

The identified parallelism between landscape and artworks permeated both the landscape protection and construction issues. Both should have drawn inspiration from the *Pietas*, which encompassed gratitude for the Created and commitment for future generations.²⁸⁶ Accordingly, the protection of the existing landscape was now 'not only about the preservation of special, limited nature reserves'.²⁸⁷ It had to be focused on preserving the 'integrity and beauty of the landscape itself everywhere in our country, almost no place and no road, and no hedge and no alley except'.²⁸⁸ In this, a central role was given to the already-highlighted need for preserving 'the landscape openness, so that it remains visible and its appearance is not made impossible'.²⁸⁹

In close connection to the preservation issues, also the construction of new landscape beauty called, according to Cleyndert, for a revision. In particular, a new 'category of experts' was highly desirable: 'the skilled and experienced landscape architect'.²⁹⁰ As already pointed out in his 1920s reflections, reference is not made to the 'garden architect',²⁹¹ but to a much more comprehensive figure 'that is to say, the one who, through his work, forms the landscape, who lays the foundation of the future shape, the image of our country'.²⁹² Together with reporting the lack of a proper landscape-architecture educational path in the Netherlands, Cleyndert emphasized the work and relevance of this professional in terms a 'noble art'.²⁹³

²⁸⁶ 'On what bases should the protection and construction of the landscape beauty be grounded? [...] I want to tell you that in my opinion the main basis must be the *Pietas*: the piety and respect for the Wonder of Creation, as it is in the landscape, as part of the Universe, that to us reveals, as well as reverence for the true essence of man, who receives this Wonder as a gift and a grace, and who knows it is a duty to show himself as worthy as possible of this gift and this grace, as a responsible creature. Then let [be] this true pity, this gratitude for the Created, bestowed upon us from Higher Hand, then let [be] that sense of responsibility, as a duty to our fellow human beings, and above all to that "unborn people who are coming after us", [let it be] for us, conservationists: Start and End!' (cit. *Ibid.*, 120-121).

²⁸⁷ Cit. *Ibid.*, 104.

²⁸⁸ Cit. *Ibid.*

²⁸⁹ Cit. *Ibid.*

²⁹⁰ Cit. *Ibid.*, 106. The need for better education in the field of landscape architecture had already been raised during the International Town Planning Conference (1924) (cf. International Federation of Town Planning and Housing (1924). *Conférence internationale de l'aménagement des villes, op.cit.*).

²⁹¹ Cit. Cleyndert, H. Azn. (1925). *Parken en de natuur in Nederland, op.cit.*, 93.

²⁹² Cit. Cleyndert, H. Azn. (1941). *De bescherming en de opbouw, op.cit.*, 106.

²⁹³ 'The field of activity of the landscape artist is nature itself and the landscape; his materials are the earth and everything that grows on it: the plants, the bushes the trees. What he creates in gardens, parks and landscape is of an ever-changing natural beauty, of which he initially only lays the foundations, but it is a beauty that grows and develops under the guidance of him and his successors, and only later it will fully reach maturity. More than other artists, he must therefore have imagination: to every other artist it is self-sufficient to give his creation the decisive final form, and to see it completed by his own hand; the landscape artist designs and lays the foundations for the future beauty of his work: he prepares, it is the nature that realizes' (cit. *Ibid.*, 106-107).

However, the latter had to be performed under the guidance and in collaboration with other experts – the biologist, the forester, the farmer, the agricultural and hydraulic engineer, the urban planner and the architect – in order to be based as much as possible ‘on the needs and requirements of the everyday practical life, but also with the ideal of beauty in the heart’. On the other hand, for Cleyndert equally important was ‘that these other experts themselves at least understand the significance and basic principles of landscape care and that they are already taught in this during their studies and training.’²⁹⁴ These considerations are permeated by a gradually-grown conceptual evolution, consisting in the acknowledgment that the landscape ‘can also be ennobled by man, by the human spirit’.²⁹⁵ This shift, already partially expressed in his previous reflections on the ‘productive parks’, will lead Cleyndert to pay attention to ‘not only the natural landscape, that is the naturally grown landscape, but also the [agri]cultural landscape’,²⁹⁶ which in that years was experiencing impressive transformations.²⁹⁷ Accordingly, he started a question within the CC on whether agricultural areas belonged to the task of nature and landscape preservation.

During the CC’s plenary meeting held in February 1943, Cleyndert addressed the need for an inventory of valuable agricultural landscapes within the general topic of ‘land consolidation and nature beauty’.²⁹⁸ This started a heated debate, enlivened by old and new voices from the CC board.²⁹⁹ One of the main concerns was related to the influence that this shift in interest would have had on nature protection.³⁰⁰ An underlying motive

²⁹⁴ Cit. *Ibid.*, 107.

²⁹⁵ Cit. *Ibid.*

²⁹⁶ Cit. *Ibid.*, 102.

²⁹⁷ ‘It is especially in the field of [agri]cultural landscape that the landscape architect has a great creative task now in our country, for the fight against unemployment and the reclamation of new cultivated land [...] Landscape management is now indispensable for the aesthetic treatment of the emerging new [agri]cultural landscape’ (cit. *Ibid.*, 107-108).

²⁹⁸ Cf. Dekker, J.N.M. (1993). *De ontdekking van het kultuurlandschap*, op.cit., 15.

²⁹⁹ A trace of such discussions can be found in the letters and report realized by the biologist Victor Westhoff (1916-2001), which referred to the correspondence occurred between Cleyndert, Benthem and Thijsse after the CC’s plenary meeting (cf. *Ibid.*, 16).

³⁰⁰ For example, the landscape architect J.T.P. Bijhouwer (1898-1974) thought that the involvement in the protection of the agricultural landscape would have weakened the position for nature protection; similarly, the biologist T. Weevers (1875-1952) shared the reluctance for interfering with the agricultural landscape, while advocating, at least, for a sharp distinction between the action to be put in place for nature conservation and landscape care. This intermediate position was also shared by the lawyer and nature conservationist H.P. Gorter (1914-2001) and by the biologist V. Westhoff (1916-2001), who considered it indispensable to make a distinction between different landscape types. Extensive analysis of this debate can be found in: *Ibid.*, 15-18.

of the opposition was a scarce consideration for the national agricultural areas, which the landscape architect J.T.P. Bijhouwer (1898-1974) considered as 'already so strongly influenced by man that the conservation biologist has to renounce to his aspiration'. However, an increasing appreciation was embodied by Cleyndert, who confirmed the importance of the agricultural landscape for recreation by virtue of its beauty.³⁰¹ He also strengthened its previous position about the polder landscape, now considered as 'virtually unique in the world' and 'the most specific and characteristic part of the Dutch landscape'.³⁰² In the end, an agreement was reached in favour of engaging with an inventory of valuable agricultural landscapes. Accordingly, on February 29, 1944 the *Werkgroep Cultuurlandschappen* (WLC – Workgroup Agricultural Landscapes) was set up as a consulting group within the CC.³⁰³

Since the beginning, the attention of this group was centred on the selection criteria to be applied for the inventory, which in the first WLC meeting was defined as aimed at identifying 'the most characteristic and valuable examples of those different landscape types from the point of view of beauty, recreation and science'.³⁰⁴ Thus, it had to provide the basic knowledge for developing 'the most correct method of treatment and/or maintenance' of these areas.³⁰⁵ However, in the second meeting (April 3, 1944) the inevitability of landscape change for human developments was brought in the discussion, stimulating a revision of the inventory's general goal, which was now reformulated as aimed 'to guard against unnecessary damage to the character of the Dutch [agri]cultural landscape'.³⁰⁶ Following this second version, the task of the WLC was limited to only focus on those valuable agricultural areas concretely threatened by future developments.

A core issue was related to the attributes according to which an agricultural landscape could be considered as 'valuable'. As evident from the definitions given in the first two WLC meetings, new aspects were taking ground. Indeed, the emphasis

³⁰¹ Together with Cleyndert, the geodesist and nature conservationist R.J. Benthem (1911-2003) shared his view about the need to protect the agricultural landscape 'against very drastic, top-down works such as land consolidation, redevelopment, large-scale drainage'. The same goes for Thijssse, who didn't agree with the disparaging definition of *cultuursteppe* (agricultural steppe) frequently used for describing these areas because, according to him, 'also an intensively built-up [agri]cultural site can often boost great beauty and can impressively demonstrate a healthy entrepreneurial spirit and interesting technology' (Cf. *Ibid.*).

³⁰² Cit. *Ibid.*

³⁰³ The Workgroup Agricultural Landscapes was composed by Benthem, Cleyndert, van der Kloot, Weevers and Westhoff (cf. *Ibid.*, 19).

³⁰⁴ Cf. *Ibid.*

³⁰⁵ Cf. *Ibid.*

³⁰⁶ Cf. *Ibid.*

on beauty and the importance for recreation – which had already appeared in the list from the 1939 – started to be considered as no longer sufficient to frame the landscape issue. Less-subjective criteria were found in the concepts of ‘character’ and ‘uniqueness’, which concretely distinguished the agricultural landscape from natural sites, and mainly consisted in aspects related to the parcel pattern, the farm situation, the spatiality or seclusion of these areas.³⁰⁷

The will to isolate the agricultural landscape from the nature conservation discourse is also clear from the scarce consideration given to the natural-scientific significance of these areas at this stage. The biologist V. Westhoff (1916-2001) acknowledged that natural elements could also occur in cultivated sites, but he also underlined the very different nature of the issues at stake from a biological point of view, which required completely different strategies and tools.³⁰⁸ Indeed, he described the features of natural and agricultural landscapes in terms of human influence:

‘In a natural landscape flora and fauna are wholly or at least largely original, that is to say outside of man’s control, but the vegetation image may have been determined by man; in a cultural landscape, not only the vegetation image, but also the flora and fauna are largely due to man’.³⁰⁹

Consequently, Westhoff further developed the distinction between the two domains, identifying some intermediate shades – i.e. the apparently-natural and the semi-natural landscape – still valuable for biological sciences. Instead, the relevance of the agricultural landscape rested on its recreational function. Indeed, reference was made to its value for ‘science’ in the first WLC meeting, but in relation to the cultural and historical significance which had started to be recognized in these areas.³¹⁰ This aspect is also confirmed by the values that Westhoff identified in agricultural landscapes: together with the aesthetic value (corresponding to the beauty and character attributes) and social value (connected to its importance for recreation), reference is made to an ‘intellectual’ – instead of scientific – value, related to its uniqueness.³¹¹

³⁰⁷ Cf. *Ibid.*, 25-27.

³⁰⁸ Westhoff 1945; Westhoff, V. & Dijk, J. (van) (1946). *Landschap en plantengroei van Oost-Twente*, *Natuur en Landschap*, 1 (2,3): 34-52; Dekker, J.N.M. (1993). *De ontdekking van het kultuurlandschap*, *op.cit.*, 23.

³⁰⁹ Westhoff, V. & Dijk, J. (van) (1946). *Landschap en plantengroei*, *op.cit.*, in: Dekker, J.N.M. (1993). *De ontdekking van het kultuurlandschap*, *op.cit.*, 24.

³¹⁰ Later interviews to Gorter and Westhoff in: *Ibid.*, 27.

³¹¹ Cf. *Ibid.*, 25.

In the light of these reflections, a smaller committee was set in 1946, which led to the definition of the *Urgentielijst van landschappen die zoveel mogelijk bewaard moeten blijven* (Urgency List of landscapes that have to be preserved as much as possible) in 1947.³¹² The list, complemented by a map and an explanatory pre-advice, contained 61 areas, which were classified according to ten landscape types and further grouped in three main categories: the 'old agricultural landscape types'³¹³ (shaped before 1500 A.D.), the 'young agricultural landscape types'³¹⁴ (shaped since 1500 A.D. and mainly after 1850 A.D.), and the stand-alone hilly landscape of South Limburg.³¹⁵ However, the emphasis on character and uniqueness led to a greater attention on the old landscapes, which were also considered as the most vulnerable in the context of agricultural improvements.³¹⁶

Together with the selection of the most valuable and endangered agricultural landscapes, the identification of instruments to assure appropriate protection was crucial. Already in 1943, Westhoff had prepared a first list of so-called 'landscape monuments', better defined in the first WLC meeting as the 'most important landscape objects' to be included in the urgency list.³¹⁷ However, there was a general reluctance about the use of the term 'monument' with reference to the agricultural landscape, which led to a rapid abandonment of this definition and the protective measures it embodied. Indeed, it was Westhoff himself to recognize that 'it is by no means our intention to make the [agri]cultural landscape a museum piece'.³¹⁸ Compared to nature protection, landscape care was seen as characterized by 'a more dynamic character'.³¹⁹ However, an efficient strategy had to be developed to counteract the advancements in the field of land consolidation, which had now become the most impelling threat for the national landscape. Compared to the 1920s and 1930s situation, the reclamations had consistently slowed down

³¹² This committee was composed by Bijhouwer, van Rijsinge and Westhoff (cf. *Ibid.*, 31).

³¹³ To the 'old landscape typologies' belonged: 1) the *esdorp* landscape; 2) the old farms landscape; 3) the mounds landscape; 4) the stream-ridges landscapes; 5) the strokes landscapes. (cf. *Ibid.*, 30).

³¹⁴ To the 'young landscape typologies' belonged: 6) the landscape of drains and dikes; 7) the peat landscape; 8) the landscape of sand carvings; 9) the landscape of heath reclamation (cf. *Ibid.*).

³¹⁵ Cf. *Ibid.*

³¹⁶ This is reflected in the number of selected *esdorpen*, old farms and strokes landscapes, which represent the major part of the urgency list (cf. *Ibid.*, 32).

³¹⁷ Cf. *Ibid.*, 44.

³¹⁸ Cf. *Ibid.*, 35.

³¹⁹ Gorter, H.P., Westhoff, V., Brouwer, G.A. & Morzer Bruins, M.F. (1951). Behoud van natuurruimten ten dienste van de wetenschap: wens en mogelijkheden. *Natuur en Landschap*, 5(1951), 4; Dekker, J.N.M. (1993). *De ontdekking van het kultuurlandschap*, op.cit., 27.

during the WWII. The latter could benefit nature protection but, at the same time, it represented a serious threat for its effects on the agricultural landscape, which had now become the hot point in the discussion with the agricultural sector.³²⁰ However, a positive attitude towards a possible dialogue between the diverging interests at stake characterizes the approach to this issue at this stage,³²¹ which is expressed in the kind of instruments proposed for landscape care.

Indeed, already in the pre-advice to WLC list, a limited form of land consolidation was envisaged, resulting in 'a simplification of the landscape, not a destruction'.³²² However, a greater potential in terms of landscape care was seen in the instrument of the landscape plan. After 1940, SBB had become more involved in landscape care and started to develop such planning instruments, which had also gained the attention of the National Service for the National Plan.³²³ Accordingly, in 1944 the geodesist and nature conservationist R.J. Benthem (1911-2003) described the three main tasks of a landscape plan: firstly, the preservation of the existing beauty, to be pursued through 'practical regulations' and not by means of 'prohibitions'; secondly, the correction of mistreated landscapes and, finally, the promotion of new landscape beauty, which didn't exclude land consolidation.³²⁴ Thus, for Benthem, the landscape plan represented 'a real basis for a fruitful convergence of agricultural interests, on the one hand, and that of nature and landscape on the other'.³²⁵ This integration could be achieved through direct consultation with the agricultural engineers and farmers. Consequently, the elaboration of landscape plans could not be demanded just to local committees. Moreover, the recognition of this instrument by law was seen as indispensable. Accordingly, a greater involvement of nature preservation and landscape care in the agricultural legislation started to be claimed.³²⁶ Including these matters since the start in land consolidation plans was seen as crucial. In 1950, this

³²⁰ This change was also reflected in the national agricultural policy. Already 1946, the Minister of Agriculture Mansholt expressed the need to save the last remaining *woeste gronden*, while shifting the attention on improving the agricultural productivity of the already-existing cultivated areas through land consolidation (cf. *Ibid.*, 33).

³²¹ For example, in 1948 the *Commissie Overleg Landbouw Natuurbescherming* (COLN – Committee for the Consultation of Agriculture and Nature Protection) was established, in which the CC and the *Stichting voor de Landbouw* (Foundation for Agriculture) could cooperate and discuss their mutual relationship (cf. *Ibid.*, 40).

³²² Cf. *Ibid.*, 35.

³²³ Cf. *Ibid.*, 40-44.

³²⁴ Cf. *Ibid.*, 45.

³²⁵ Although conceived as a dynamic instrument, integral conservation for well-defined parts within the plan area was also envisaged (cf. *Ibid.*).

³²⁶ Cf. *Ibid.*, 45.

issue was addressed by WLC in a formal letter to the Minister of Agriculture. As a result, in 1954 the revised Land Consolidation Act was passed, which introduced the landscape plan as mandatory for land consolidation projects.³²⁷

Also in Italy, the need of a planning tool in the field of landscape protection had gained great attention. After the frictions between the domains of heritage protection and urban planning, the weaknesses of the Croce law had now started to be questioned also from the circles that had contributed to its approval. A structural change took place when G. Bottai (1895-1959) was appointed as Minister of National Education in 1936. After several years at the side of Mussolini,³²⁸ the new minister launched a program for renewing the art politics of the regime.³²⁹ Although at the beginning his efforts were mainly aimed at promoting a contemporary art that could be considered as 'fascist',³³⁰ the Minister also showed a great sensitivity for a broader range of social and cultural issues,³³¹ relying on the collaboration of notable scholars.³³² In 1938, Bottai set a special Commission aimed at drafting a new law for the protection of artistic heritage.³³³ In the same year, he also promoted a Conference in Rome for discussing the legislative reform underway. Among the several topics at stake, the issue of landscape protection was raised by the art historian and Superintendent of Umbria, A. B. Calosso (1882-1955).³³⁴ In his report, he carefully analysed the main problems with the Croce law, consisting in the slow application of its procedures, the excessively restrictive character of

³²⁷ The discussion started within the WLC on the revision of the Land Consolidation Act proved to be of great influence. However, the WLC list was less useful than the one from 1939, since both the government and the CC itself took it into account to a lesser extent. Indeed, when the CC started to be directly involved in land consolidations, the areas considered were, in the most of the cases, not the one on the WLC list and vice versa (cf. *Ibid.*, 43-46).

³²⁸ After a first phase in the ranks of the Futurist movement, G. Bottai participated in the march on Rome and remained at the side of Benito Mussolini for a long time: he was Deputy in 1921, Undersecretary and then Minister to the Corporations from 1926 to 1932, Governor of Rome in 1935, before being appointed Minister of National Education in 1936; he would hold this position until 1943 (cf. Settis, S. (2010). *Paesaggio Costituzione Cemento*, *op.cit.*, 168).

³²⁹ Cf. Tosco, C. (2014). *I beni culturali*, 98.

³³⁰ Cf. Settis, S. (2010). *Paesaggio Costituzione Cemento*, *op.cit.*, 168.

³³¹ Cf. Tosco, C. (2014). *I beni culturali*, 98.

³³² Reference is made to G. Giovannoni, R. Longhi, G. C. Argan, C. Brandi, M. Lazzari and M. Maccari (cf. Settis, S. (2010). *Paesaggio Costituzione Cemento*, *op.cit.*, 122).

³³³ The Commission was chaired by S. Romano (President of the Council of State), and was composed by M. Lazzari (General Director), M. Grisolia (ministerial official), A. Terenzio (Superintendent), B. Pace (archaeologist), L. Miranda (State Councillor), G. Latour (State lawyer) and some representatives of the fascist corporations (cf. *Ibid.*, 124).

³³⁴ Cf. *Ibid.*, 124-125.

some constraints and, finally, its lack of connection with other laws. Subsequently, Bottai set a specific Commission, aimed at drafting a new law for the protection of natural beauties.³³⁵ The president of this commission was G. Giovannoni, (1873-1947), who played an important role for the institutional recognition of landscape plans. Considered as both a 'master of urban planning' and a protagonist in the debate on architectural restoration, Giovannoni acted as a mediator in the dialogue between these disciplinary fields that were intersecting their interests on the issue of landscape protection.³³⁶

Within this framework, in 1939 the two so-called 'Bottai laws' took shape: the n.1089, for the 'Protection of the things of artistic and historical interest', and the n.1497, for the 'Protection of natural beauties'. These two laws were launched at a distance of about a month from each other and were, indeed, conceived as a diptych. Promoted by the fascist government, the Bottai laws still represented a continuation of the previous protection measures, conceived in liberal Italy.³³⁷ Indeed, the law n.1089 inherited the law of 1909, while the n.1497 revised the Croce law of 1922.³³⁸ About the latter, the innovative scope of the new law for natural beauties was expressed by the General Director M. Lazzari (1883-1975) in three articles, all entitled "Our landscape", with the aim of spreading the new legislative measure after its approval and getting greater support in public opinion. Although in the title of the law reference was still made to natural beauties, the contributions of Lazzari showed the centrality given to the landscape, which now represented a key concept:

'the landscape to be protected is not only the one that the indomitable and virgin nature offers us [...] but it is the whole landscape of Italy, with the signs of human work, with its networks of roads, with its villages, its land reclamations and agricultural or industrial exploitations'.³³⁹

³³⁵ To be part of the Commission together with Giovannoni, there were: M. Lazzari (General Director), L. Parpagliolo, the architect M. Piacentini, the jurists L. Severi (Councilor of State) and V. Galigaris (State lawyer), C. Aru (Superintendent of Turin), M. Bertarelli (representative of the Italian Touring Club), as well as some representatives of the world of building and industrial entrepreneurship (cf. *Ibid.*, 170).

³³⁶ Cf. Sette, M.P. (2005). *Gustavo Giovannoni: Riflessioni agli albori del XXI secolo*. Roma: Bonsignori Editore; Pane, A. (2013). Attualità di Gustavo Giovannoni, *Ananke*, n.70, 21-29; Canali, F. (2016). Dalle pagine della rivista "Urbanistica", *op.cit.*, 10-19; Centro Studi per la storia dell'Architettura Casa dei Crescenzi (2018). *Gustavo Giovannoni tra storia e progetto*. Roma: Quazar.

³³⁷ Cf. *Ibid.*, 124.

³³⁸ Surely, the fascist regime favoured the overcoming of the residual resistances opposed by the private property, traditionally endorsed by previous liberal governments (cf. Tosco, C. (2014). *I beni culturali*, 98; Settis, S. (2010). *Paesaggio Costituzione Cemento*, *op.cit.*, 124).

³³⁹ Article published by M. Lazzari on the newspaper *Il Corriere della Sera*. In: *Ibid.*, 172.

The link between artistic and natural heritage of Italy required their joint protection as part of the Italian landscape, the physiognomy of which represented 'an essential element of our ancient civilization'. Accordingly, Lazzari took distance from the romantic fascination for the 'wild nature', which excluded the most vibrant aspect of human work. This point marks a substantial difference with the debate in liberal Italy: it was no longer just 'the glad and sad nature in which he lives'³⁴⁰ to influence the 'man's conceptions'; also the traces impressed by man were now considered as an essential component of the landscape. Consequently, these considerations had an influence on the way in which landscape protection should have been carried out. As S. Settis has pointed out, the scope of the law was protection and not passive conservation.³⁴¹ Accordingly, these considerations were channelled in the tool conceived for achieving this goal, which represented one of the main innovations of the law: the landscape plan. Proposed by G. Giovannoni during the discussion of the report by A. B. Calosso at the Conference in Rome (1938), it was presented as a tool to 'foresee how the countryside will be when the building spread will extend'. While accepting transformations to meet the needs of contemporary life in wide areas, the latter represented a preventive tool 'conceived with rational and aesthetic criteria [...] so as not to expose these changes to the whim of individual persons'.³⁴²

Compared with the definitions given in the Croce law for identifying the object of protection (i.e., 'natural beauties' and 'panoramic beauties'), the Bottai law n.1497/1939 refers to 'individual beauties' (individual sites, villas, parks) and 'ensemble beauties'.³⁴³ The landscape plans were intended to protect this second category. In relation to this, Giovannoni outlined some guiding principles for drafting the aforementioned plans.³⁴⁴ In his theoretical elaboration, central was the distinction between 'visual-panorama, that is, the view from inside out' and 'picture-panorama, seen from outside'. According to Giovannoni, the first type referred to cases of easy solution.³⁴⁵ Instead, picture-panoramas posed more complex problems. Thus, he developed some general considerations for their protection. First of all, a necessary starting point was, for him, the identification of the essential lines that frame the panorama, namely:

³⁴⁰ Croce, B. (1920). *Per la tutela delle bellezze naturali*, op.cit.

³⁴¹ Cf. Settis, S. (2010). *Paesaggio Costituzione Cemento*, op.cit., 171.

³⁴² Cf. *Ibid.*

³⁴³ The latter included 'panoramic beauties considered as natural paintings', but also complexes with 'traditional aesthetic value' (cf. *Ibid.*, 174).

³⁴⁴ Giovannoni, G. (1938). *Piani regolatori paesistici*, *Urbanistica*, 5(1938), 37-40.

³⁴⁵ In such cases it is sufficient to 'identify points or lines which frame the *belvedere*, within which the view must be defended. It will be necessary to request not to build any construction or other artificial diaphragms within those extreme borders, established both in azimuth and in the zenith' (cit. *Ibid.*, 38).

‘the mountain ridges, the buttresses that descend from the rocky walls, the intensely wooded areas. To them the greatest protection must be applied, which can go from the absolute prohibition of constructions and deforestation; while in semi-hidden areas concessions can be allowed’.³⁴⁶

Despite the idea inspiring the landscape plan was not static protection, the absolute prohibition of new constructions and deforestation was, however, contemplated. Even in semi-hidden areas, where some exceptions could be made, the most suitable building typology for landscape additions had to be carefully gauged. In particular, the ‘huge buildings, the miserable neighbourhoods of detached houses, sparse but not much, with buildings surrounded by small and skimpy gardens, arranged not according to the natural line, but to artificial subdivisions determined by speculative criteria’ were, for Giovannoni, ‘the worst of diseases, which must be avoided’.³⁴⁷ Instead of these solutions, he rather preferred ‘the organic groups of small units, leaning against each other, so as to constitute villages in well-defined positions, comparable to natural villages’.³⁴⁸ The reference to ‘natural villages’ – namely, the ones of the local tradition that, like a second nature, were harmoniously integrated in the surrounding natural context – clearly shows his general mistrust towards contemporary architecture. Hence, the need to establish specific rules, from the landscape up to the architectural scale.³⁴⁹ His considerations highlight the centrality of the aesthetic value in the appreciation of landscape, together with a main regulatory – and less design-oriented – nature of the landscape plan. While historical architecture was now fully accepted as an integral component of the landscape, that same appreciation could not be easily extended to contemporary human interventions.³⁵⁰

³⁴⁶ Cit. *Ibid.*

³⁴⁷ Cit. *Ibid.*

³⁴⁸ Cit. *Ibid.*

³⁴⁹ Indeed, the size, height and location of the new buildings had to be ruled in order to follow the ‘altimetric and orographic characters of the region, so as to blend with the natural fiber of the place; horizontal development along the seashore, scattered order and wavy contours on the hills, towers on the cusps’. Also the colours used in the new additions had to be ruled; in this sense, he recommended to avoid ‘roofs with too red tiles or the exotic brightly coloured plasters, or the horizontal strips of various shades. It will be to encourage the use of local stone and, more generally, local materials and works corresponding to the regional building tradition. Also using climbing plants is desirable, in order to combine natural green elements to the Architecture’ (cit. *Ibid.*, 38-39).

³⁵⁰ Apart from these theoretical innovations, the law also brought some novelties in relation to procedural aspects. In particular, Provincial Committees were introduced for listing natural beauties in their territory. They had to be composed by the Superintendent, as president, and by various representatives of municipalities, private owners, industrialists, architects and engineers involved in the area. Cf. Settis, S. (2010). *Paesaggio Costituzione Cemento, op.cit.*, 173.

Further specifications regarding the landscape plans were given in the Applicative Regulation of the law, enacted by the Royal Decree n.1357/1940. In particular, it was defined that the drawing up of these plans was an exclusive task of the Superintendences –the peripheral bodies of the Ministry of National Education entrusted with the protection of artistic and natural heritage – in agreement with the municipalities involved. Once drafted, the landscape plan should have been approved by an ad-hoc Commission appointed by the Minister of National Education, including at least one representative of the Ministry of Public Works. Finally, construction licenses in the area covered by the landscape plan could be issued by the municipalities only after the binding opinion of the Superintendent.³⁵¹ Evidently, a feeble attempt to address the difficult dialogue with urban planning was made through the limited involvement of the Ministry of Public Works in the Committees approving the landscape plans. But the law for the protection of natural beauties, together with its equivalent in the field of artistic heritage protection, was only a part of the broader legislative reform pursued during the fascist period. In relation to landscape protection, the passing of the new urban planning law (n.1150/1942) was also relevant. Although these laws were conceived as an integrated system, their implementation procedures were not meant to allow an harmonious connection. Such criticality, together with the occurrence of unpredicted events – i.e. the Second World War and the post-war challenges – led to the overlap between different competences or, conversely, the presence of legislative gaps.³⁵²

In conclusion, the period between the two World Wars has represented a crucial moment both in Italy and in the Netherlands, the main outcome of which was the autonomy of the landscape concept from that of nature (FIG. 3.23). This process of emancipation has found a catalyst point in the discourse on natural beauty, which led to the affirmation of the aesthetic value as a reason for protection. In turn, aesthetic appreciation was connected to moral or ethical implications, introducing (in the Netherlands) or emphasizing (in Italy) an anthropocentric dimension in landscape protection. Accordingly, human interventions started to be recognized as valuable features in the aesthetic experience of landscapes. However, different kinds of manmade components are considered: on the one hand, the complex of (agro-technical, hydraulic) works that had shaped a humanized nature in the Dutch agricultural landscape, which is not valuable from the historic-scientific point of view, but aesthetically relevant for human recreation; on the other hand, the historical architecture that had complemented nature in the Italian rural landscape, which is

³⁵¹ Cf. *Ibid.*, 173-176.

³⁵² Cf. *Ibid.*, 126-127.

appreciated – also in this case – from an aesthetic point of view. Compared to the previous stage, the relationship between landscape and historic-artistic heritage domain (parallelism/identification) took a different path in the two contexts. In the Netherlands, the emancipation of the landscape concept resulted in an interrupted parallelism (contrast) with the field of historic-artistic heritage protection, leading to a compromise solution in terms of protection strategy and tool. In Italy, the emancipation of the landscape concept did not prevent the continued identification (affinity) with the field of historic-artistic heritage, resulting in a protection strategy and tool that is the result of a cross-fertilization, but still in line with the previous stage. This had an impact on the tool envisaged for pursuing the two visions: the landscape plan. Although sharing the same name, the Italian and Dutch versions of this instrument reflect two different protection strategies. Unlike for the nature domain, the landscape cannot be defined as a monument in the Netherlands (contrast: interrupted parallelism) and, accordingly, protection in the strict sense is not a viable solution; instead, landscape care – in its combination of protection and construction – is the most appropriate action. The landscape plan conceived in this framework has a prominent design-oriented character. The Italian interpretation of landscape – in its combination of manmade and natural components – did not lead to a radical break with the previous stage (affinity: continued identification). Additionally, the poor trust in future interventions resulted in a landscape plan conceived as a tool for preventive protection. Finally, the actors involved are crucial: in the Netherlands, the new alliance between nature protectionists and urban planners was the decisive ingredient in this process, leading to a gradual institutional recognition of landscape issues in (rural) planning legislative measures. In Italy, the alliance between the fields of historic-artistic heritage and landscape was confirmed at the institutional level, although the contribution of voices from the discipline of planning and natural sciences were important triggering agents during the process. However, this considerable expansion of horizons would lead, in both contexts, to a revision in the years of post-war reconstruction.

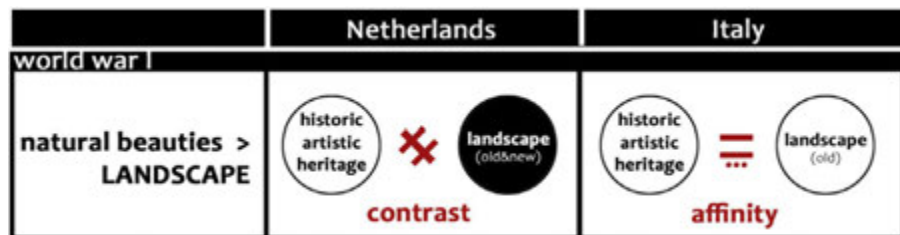


FIG. 3.17 Comparative scheme (NL/IT) for the second stage of landscape protection (1920s-1940s) (F. Marulo 2022)

3.3 Difficult autonomy. Landscape protection between post-war and environmental challenges

3.3.1 Post-war reconstruction: new lenses for old landscapes

Following the devastating legacy of the Second World War, the post-war period represented, in both contexts, a time of profound changes. Among these, the subversion of the centuries-old balance based on the sharp separation between city and countryside is particularly significant. This process had a significant impact on the protection of the landscape which had been linked to it until that moment.

In the Netherlands, the reconstruction period following the WWII was characterized by a profound restructuring of the rural area by means of massive government-sponsored interventions. Bearing the 1930s agricultural crisis and the war-time food shortage in mind, central again in the government agenda was the aim of improving the agrarian productivity, which was strongly promoted through several actions and tools like subsidies, import restrictions and the extensive implementation of land consolidation projects (FIG. 3.18). Together with the national measures, also the Common Agricultural Policy (CAP) of the European Economic Community with its subsidy system stimulated, in these years, a renewed emphasis on food production. In this scenario, land consolidation had assumed an even increased importance as the main instrument within the government policy. However, the goals of nature and landscape preservation were marginalized.³⁵³ Although the introduction of mandatory landscape plans in land consolidations had been institutionalized by law, the integrated protection and construction of the national landscape – embodied by the pre-war concept of landscape care – and the related reliance on the possibilities of planning, began to show their weaknesses already in the late 1950s. On the one hand, the construction of the modern landscape gained an unprecedented emphasis, which

³⁵³ Cf. Janssen, J., & Knippenberg, L. (2008). The heritage of the productive landscape: landscape design for rural areas in the Netherlands, 1954-1985. *Landscape Research*, 33(1), 3-5; Renes, J. (2008). Landscape preservation in The Netherlands, *op.cit.*, 150; Janssen, J. (2009). Protected landscapes in the Netherlands: Changing ideas and approaches. *Planning Perspectives*, 24(4), 441.

went hand in hand with the affirmation of the landscape architecture discipline.³⁵⁴ Indeed, the post-war 'production landscape' was the test bed for developing a new approach, based on the conditions of the soil and regional diversity more than on subjective formal canons. The landscape plans conceived in this scenario aimed at the creation of wide open spaces, which expressed the combined fulfilment of both the contemporary needs of agricultural production and the new aesthetics.³⁵⁵



FIG. 3.18 Eemsdelta (NL): *Ruilverkaveling Godlinze* (Land consolidation Godlinze) (1958) (Wageningen Universiteit Beeldbank)

³⁵⁴ Such a phenomenon can be ascribed to the transposal in the Dutch context of the Modernism optimistic vision for a 'bright new society located in a neatly organized and truly modern landscape' (Janssen & Knippenberg 2008: 5). Accordingly, the landscape architecture discipline found in the modernistic stance a fertile ground for emancipating from the long-standing tradition of garden and park design, and having its position recognized. The main incubators for this radical change were the University of Wageningen, which represented in the post-war period the only academic institution offering a complete educational path in the field of landscape architecture, and the Landscape Department of SBB, as the main public body taking charge of the massive post-war restructuring plans of the Dutch countryside commissioned by the government (cf. Janssen, J., & Knippenberg, L. (2008). The heritage of the productive landscape, *op.cit.*, 5-10).

³⁵⁵ A significant example for the main approach of the time is the landscape plan developed for the isle of Walcheren (1947), inundated for military reasons during the WWII. It was conceived by two active exponents in the previous stage of nature and landscape protection, which gradually assumed a relevant position in the new-born field of landscape architecture: Bijhouwer, as first professor of landscape architecture at the Wageningen University, and Benthem, who would soon become the head of the Landscape Department of SBB. The plan they designed took advantage from the need to repair to the war damages for transforming the pre-existing landscape, with its typical small-scale structure of fragmented land holdings, into a modern and open landscape. It involved the farm relocation and reorganization, the paving of the many unsurfaced roads and the planting with trees instead of the former hedgerows. Agricultural, aesthetic and, thus, recreational issues were combined in a vision that, however, profoundly altered the previous image and historical structure of the area. Such plan, designed immediately after the end of the war, represented a reference model for the many restructuring interventions implemented in the two following decades (cf. *Ibid.*, 13-15).

But if the creation of the modern production landscape had found its way in the post-war government agenda, the issues concerning the preservation of the old Dutch landscape were still not solved, undermining the consensus reached by the CC board since the 1930s. In particular, there was a general dissatisfaction of the 'biological' side of the organization about the outcomes of the integration of nature and landscape preservation in the agricultural policy.³⁵⁶ These issues were the subject of several discussions the CC held with the *Cultuurtechnische Dienst* (Agricultural Engineering Agency), the most relevant outcome of which was the stop on further reclamations in 1960.³⁵⁷ However this increased the pressure on the old agricultural landscapes, which had simultaneously started to be seen under a different light. In expressing his general concern about the too optimistic attitude of nature conservationists towards land consolidation, Westhoff had claimed already in 1950 for a broadened view on nature and its protection, which went beyond the reserves boundaries.³⁵⁸ In line with this, the fast deterioration of flora and fauna outside the protected natural areas gradually raised the awareness that the old agricultural landscapes also had a relevant scientific value for their role in the overall ecological balance of the country.³⁵⁹ As expressed by Gorter in a note from 1966 on 'The preservation of old agricultural landscapes',³⁶⁰ the 1940s belief that these areas could not be left untouched in their current state started to be revised, together with the trust in the concept of landscape care – now labelled as 'face lifting' – and the landscape plan as the most appropriate preservation tool. Moreover, given the arguments animating the debate, it is not particularly surprising to note that, when the *Monumentenwet* (Monuments Act) was passed in 1961, landscape protection was not directly addressed. Indeed, within the first law for the

³⁵⁶ While the contemporary developments still found the support of Cleynert and the active involvement of Benthem and Bijhouwer, Gorter changed his pre-war positions and called for a more active engagement of the CC in the dispute with the agricultural sector on the ongoing restructuring process of the rural area. This wish was then embraced by R. De Wit (1927-2012), the biologist appointed as new secretary of the CC in 1955. Stressing the main side effects of the current agricultural policy like overproduction, the latter strongly pushed for interrupting reclamations and introducing a more 'multi-purpose approach' to land consolidation (cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 131-132).

³⁵⁷ Cf. *Ibid.*, 133-134; Renes, J. (2008). Landscape preservation in The Netherlands, *op.cit.*, 150; Janssen, J. (2009). Protected landscapes in the Netherlands, *op.cit.*, 441.

³⁵⁸ Cf. Westhoff, V. (1952). *De betekenis van natuurgebieden voor wetenschap en praktijk*. Amsterdam: Contact-Commissie voor Natuur- en Landschapsbescherming; Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 131.

³⁵⁹ Cf. Westhoff, V. (1955). Hedendaagse aspecten der natuurbescherming, *Wetenschap en Samenleving*, 9(3), 25-34; Nijhoff, P. (1967). Verstoorde balans, *Natuur en Landschap*, 21(3/4), 106-121; Gorter, H.P. (1970). Landschap van Morgen. In: *Landbouw en Landschap van Morgen*. Amsterdam: Contact Commissie voor Natuur- en Landschapsbescherming, 16-28; Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 135.

³⁶⁰ Cf. *Ibid.*, 134.

protection of 'Monuments of History and Art' in the Netherlands,³⁶¹ the definition of 'monument' involved those 'things manufactured before at least fifty years, which are of general interest because of their beauty, their significance for science or their folkloric value' as well as for the 'historical memories' associated with them. Within this frame, reference was also made to *terreinen* (areas),³⁶² as well as to *stads- en dorpsgezichten* (city and village conservation areas), defined as 'groups of immovable properties' that 'form an image of general interest because of the beauty or character of the whole'.³⁶³

In Italy, the post-war period was characterized by a decisive governmental change: the shift from the monarchy – accused of having been complicit in the horrors of fascism – to republican rule (1946), one of the first actions of which was the writing of a new Constitution. Following a long elaboration phase, the Italian constitutional text – entered into force on January 1, 1948 – introduced the protection of landscape and historic-artistic heritage among the basic principles of the State.³⁶⁴ Although this choice can be seen as the linear consequence of the pre-war path to protection, the phrasing of article 9 – 'The Republic promotes the development of culture and scientific and technical research. It protects the landscape and the historical and artistic heritage of the Nation' – was, however, the subject of a long debate. The first issue was about the terminology for describing the object of protection, which from the first definition of 'artistic, historic and natural monuments'³⁶⁵ was changed into the final version ('landscape and historic-artistic heritage'), highlighting the emancipation of the landscape concept and the gradual shift from monuments to the broader notion of heritage. The introduction

³⁶¹ The full title of the law was *Wet houdende voorzieningen in het belang van het behoud van Monumenten van Geschiedenis en Kunst* (Act containing provisions in the interest of the preservation of Monuments of History and Art). Full text in: Tillema, J. A. C. (1975). *Schetsen uit de geschiedenis van de monumentenzorg in Nederland*. 's-Gravenhage: Staatsuitgeverij, pp. 651-656). For a retrospective account on this legislative measure realized in the occasion of its 50th anniversary, see the monographic issue: AA.VV. (2012). Vijftig jaar Monumentenwet 1961-2011, *Bulletin K.N.O.B.*, 111(1).

³⁶² These areas fell within the scope of the law only if characterized by the presence of those 'things' as previously described (cf. Tillema, J. A. C. (1975). *Schetsen uit de geschiedenis van de monumentenzorg in Nederland*, *op.cit.*, 651).

³⁶³ According to the legislative text, they might include 'trees, roads, streets, squares and bridges, canals, ditches and other waters' (cf. *Ibid.*). About the evolution occurred in the preservation of city and village conservation areas, see: Niemeijer, F. (2012). Bescherming van stads- en dorpsgezichten. Van beeld naar inhoud, *Bulletin K.N.O.B.*, 111(1), 26-34.

³⁶⁴ Before that date, the German and Spanish constitutions had introduced similar articles, but not within their basic principles (cf. Settis, S. (2010). *Paesaggio Costituzione Cemento*, *op.cit.*, 140). About the Dutch constitution, a main revision will occur in 1983 and, in line with the changed topics of discussion, it will be focused on the environment.

³⁶⁵ Cf. *Ibid.*

itself of these issues among the basic principles of the nation was, however, at the centre of a heated discussion. Being the protection of landscape and historic-artistic heritage already fixed by national laws, their presence within the constitutional text was seen by some as unnecessary. Nevertheless, among the arguments of those supporting the article 9, crucial was the expected regional autonomy, envisaged in other constitutional articles in relation to the protection and maintenance of the national heritage, which would have generated a conflict with the national legislative measures. In the end, these arguments prevailed in the Constituent Assembly, and the introduction of the article 9 avoided the administrative fragmentation for that 'heritage which transcends not only the regional character, but often also the national character, to reach global importance'.³⁶⁶ However, for what the landscape is concerned, another pitfall – almost neglected in the constitutional debate – was the relationship between landscape protection and urban planning. The latter was the subject of a specific article (n.117), in which the urban planning matters were delegated to regional control. This worsened the already difficult dialogue with the field of landscape protection. The urban planning law (n.1150/1942) had already omitted the consultation with the Ministry of Education in the outline of the *Piano Territoriale di Coordinamento* (Territorial Coordination Plan), which overlapped with the landscape plan introduced by the Bottai law n.1497.³⁶⁷

Thus, the pre-war balance reached in both contexts between protection and planning measures proved to be inadequate in the post-war reconstruction period. In the Netherlands, the trust in the possible combination of protection of the existing and construction of the new turned out to be problematic for old landscapes; thus, the protection of the latter started to be seen as an issue to be autonomously tackled. In Italy, the protection of old landscapes was already seen as independent from future developments; nevertheless, this situation now started to generate a clash between the pre-war protection and planning measures. In both contexts, the revision process went through the overcoming of the centrality given to the aesthetic value in the appreciation of the national landscape.

³⁶⁶ Cf. *Ibid.*

³⁶⁷ The planning tools introduced by the urban planning law (n.1150/1942) were: *Piano Territoriale di Coordinamento* (regional level), *Piano Regolatore Generale* (municipal level), *Piano Particolareggiato* (neighbourhood level). Out of these three, only for the last planning level consultation was envisaged with the Superintendences.

In the Netherlands, this conceptual advancements – together with the stimuli coming from the more recent national and European policies in the fields of spatial planning³⁶⁸ and agriculture³⁶⁹ – triggered the need for a renewed reflection on the kind of nature and landscape areas to be protected and the strategy to do so. Accordingly, the CC started two working groups with the aim of underpinning the possible claims to be made on rural areas.³⁷⁰ The first result was a new classification of areas, published in 1967 by the secretary of the CC, the biologist P. Nijhoff (1934–2007).³⁷¹ In it, five types of areas with their specific preservation strategies were identified: the (remaining) nature reserves and the landscape reserves (still to be determined), requiring integral protection; the agricultural areas and the food production areas, where landscape care could be applied, but with a different accent on landscape values in the first case and agricultural productivity in the second case; finally, the urban parks with new nature. Following the idea formulated by Cleynert since the 1920s, the underlying principle to this classification was the creation of a green infrastructure serving the whole country. However, the need to settle landscape reserves is remarkable, thus, extending to some selected agricultural areas the most restrictive protection measure, which until that moment had been only applied to natural areas.³⁷²

³⁶⁸ Reference is made to the *Tweede nota over de Ruimtelijke ordening in Nederland* (Second Memorandum on Spatial Planning in the Netherlands) (1967), in which attention was given to the decisive role nature and landscape beauty can play for outdoor recreation, thus, still stressing the visual attributes of the landscape (cf. Renes, J. (2008). *Landscape preservation in The Netherlands*, *op.cit.*, 151). In line with Cleynert's views from 1920s, the Memorandum envisaged the creation of a national system of parks connecting urban and rural regions (cf. Janssen, J. (2009). *Protected landscapes in the Netherlands*, *op.cit.*, 441–442).

³⁶⁹ In particular, the Mansholt Plan (Mansholt 1968) – drafted by the then EC Commissioner for Agriculture Sicco Mansholt – proposed the extinction of agricultural activity in some European less productive areas, in change of a greater intensification in more favourable areas (cf. *Ibid.*, 442).

³⁷⁰ The two working groups were the Commissie ad hoc voor het formuleren van ruimtelijke aanspraken der natuurbescherming in het kader van Tweede nota over de ruimtelijke ordening (1967–1969) (Ad Hoc Committee for the formulation of spatial claims of nature conservation in the context of the Second Memorandum on Spatial Planning), and the Werkgroep Landelijke Gebieden (1969–1972) (WLG – Workgroup Rural Areas). Such groups were both chaired by Gorter and included, among their members, Benthem, van der Goes van Naters, van der Kloet, Westhoff, De Wit and a few planners from the CC (cf. Windt, H. van der (1995). *En dan: Wat is natuur*, *op.cit.*, 136).

³⁷¹ Nijhoff, P. (1967). *Verstoorde balans*, *op.cit.*

³⁷² Cf. *Ibid.*; Windt, H. van der (1995). *En dan: Wat is natuur*, *op.cit.*, 136.

Shortly after, these reflections converged in the draft of a new map: *Het Landschap van Morgen* (The Landscape of Tomorrow) (1970), in which the CC not only attempted to secure remarkable areas from agricultural development, but expressly aimed at integrating ‘the often strongly contrasting interests of agriculture, recreation, natural sciences, cultural history and landscape aspects’.³⁷³ In it, the afore-mentioned areas typology was spatially defined, albeit with some changes. Indeed, only three out of the five areas previously identified were included. Firstly, the green areas represented the natural reserves larger than 50 hectares, to be safeguarded from a natural-scientific point of view and, thus, with no opportunities for agricultural development. Secondly, the yellow areas identified the landscape reserves, relevant from a cultural-historical, natural-scientific and aesthetic point of view; from a planning perspective, these sites could no longer be considered as agricultural areas, representing a counterpart to natural reserves from the landscape point of view. Finally, the red and pink areas, consisting in already-determined (red) or to be further determined (pink) agricultural areas with recreational potential, where an extensive form of agriculture could be performed under certain conditions.³⁷⁴ Thus, the integration of nature and landscape preservation with agricultural development was shaped, at this stage, through an area-oriented approach, which perfectly fitted the planning-based preservation strategy put in place since the 1940s. With it, the CC aimed at fostering the spatial separation of clusters all over the national territory and the related identification of different kinds of agricultural management, ranging from the complete absence of agricultural activities (green and yellow areas), extensive agriculture (red and pink areas) and regular agricultural development (the white areas, which can be identified by subtraction, covering a big part of the map).³⁷⁵

Unlike the map of Dutch agricultural landscapes from 1947, this time the CC impacted governmental actions. Indeed, already in 1971 the *Ministerie van Cultuur, Recreatie en Maatschappelijke Werk* (CRM – Ministry of Culture, Recreation and Social Work) published a policy document in which the possibility of identifying a certain number of national parks and national landscape parks was envisaged.³⁷⁶

³⁷³ Cit. Gorter, H.P. (1970). *Landschap van Morgen*, *op.cit.*, 19.

³⁷⁴ Cf. Windt, H. van der (1995). *En dan: Wat is natuur*, *op.cit.*, 136-137.

³⁷⁵ Cf. *Ibid.*, 137.

³⁷⁶ Cf. Ministerie van Cultuur Recreatie en Maatschappelijk Werk (CRM) (1971). *Nota inzake een systeem van nationale parken en nationale landschappen in Nederland*. Den Haag: MRCM. The ministry had been settled in 1965 as an hybrid between the former *Ministerie van Onderwijs, Kunsten en Wetenschappen* (1918-1965) (Ministry of Education, Arts and Sciences) and the *Ministerie van Maatschappelijke Werk* (1952-1965) (Ministry of Social Work). See also: Janssen, J. (2009). Protected landscapes in the Netherlands, *op.cit.*, 442.

This perspective met the approval of the government, which ordered the settling of a specific committee within the CRM, the *Verhoeve Commissie*, for concretely developing a proposal.³⁷⁷ Within the framework of the 3rd Memorandum on Spatial Planning (1973–1979),³⁷⁸ in 1975 the CRM and the *Ministerie van Landbouw en Visserij* (LV – Ministry of Agriculture and Fishery) published three reports, also known as green memoranda, the contents of which strongly reflected the areas typology proposed by the CC in 1970. Indeed, the first report concerned the designation of national parks: namely, natural areas of at least 1000 hectares, the relevance of which consisted in their ‘natural’ value.³⁷⁹ The second report proposed the institution of a number of national landscape parks; with this definition, reference is made to ‘valuable’ agricultural landscapes of at least 10.000 hectares that needed special protection.³⁸⁰ Although a clear overlap can be observed with the landscape reserves identified as yellow areas in the 1970’s CC map, the CRM appreciation of these sites was characterized by a strong emphasis on the pre-war concept of landscape beauty and the related recreational potential of these areas for the urban population.³⁸¹ This aspect was also reflected in the CRM’s internal bodies specifically put in charge for the designations: the *Directie Natuur- en Landschapsbescherming* (NLB – Department of Nature and Landscape Conservation) was responsible for the national parks, while the *Directie Openluchtrecreatie* (OR – Department of Outdoor Recreation) worked on the national landscape parks.³⁸² Instead, the ‘natural’ value of the agricultural landscapes had a more prominent role in the last of the three reports, which was outlined by the Ministry of Agriculture and Fishery (LV).³⁸³

³⁷⁷ Renes, J. (2011). The Dutch National Landscapes 1975–2010: Policies, Aims and Results, *Tijdschrift voor economische en sociale geografie*, 102(2), 238.

³⁷⁸ The *Derde nota over de Ruimtelijke ordening in Nederland* (1973–1983) (Third Memorandum on Spatial Planning in the Netherlands) specifically addressed the issue of integrating agriculture, nature and landscape interests, and envisaged the introduction of ‘conservation grants’ compensating farmers for not harming the natural and landscape features of their assets (cf. Janssen, J. (2009). Protected landscapes in the Netherlands, *op.cit.*, 444).

³⁷⁹ Ministerie van Cultuur Recreatie en Maatschappelijk Werk (CRM) (1975). *Advies van de Interdepartementale Commissie nationale parken en nationale landschapsparken: deel 1 Nationale Parken*. ‘s-Gravenhage: Staatsuitgeverij. See also: Windt, H. van der (1995). *En dan: Wat is natuur*, *op.cit.*, 140; Renes, J. (2011). The Dutch National Landscapes, *op.cit.*, 238–239.

³⁸⁰ Ministerie van Cultuur Recreatie en Maatschappelijk Werk (CRM) (1975). *Advies van de Interdepartementale Commissie nationale parken en nationale landschapsparken: deel 2 Interimadvies Nationale Landschapsparken*. ‘s-Gravenhage: Staatsuitgeverij. See also: Janssen, J. (2009). Protected landscapes in the Netherlands, *op.cit.*, 443.

³⁸¹ Cf. Windt, H. van der (1995). *En dan: Wat is natuur*, *op.cit.*, 140; Janssen, J. (2009). Protected landscapes in the Netherlands, *op.cit.*, 443.

³⁸² Cf. *Ibid.*, 442.

³⁸³ Ministerie van Landbouw en Visserij (LV) (1975). *Nota Betreffende de relatie landbouw en natuur- en landschapsbehoud waardevolle agrarische cultuurlandschappen*. ‘s-Gravenhage: Staatsuitgeverij.

In it, the fragile relationship between agriculture, nature and landscape in agricultural areas with a so-called 'high nature value' was addressed, which mainly overlapped with the red and some of the yellow areas of the CC map.³⁸⁴ For this kind of sites, the report envisaged the institution of management areas with a related management agreement, according to which the farmers could perform their production activities under certain conditions.³⁸⁵ To this end, the report introduced a special form of subsidy, the 'conservation grants', aimed at urging farmers for not damaging the natural and landscape qualities of their assets by means of a proper financial compensation.³⁸⁶ As pointed out by Van der Windt, relevant is the new dimension assumed, at this stage, by the concept of 'natural value', which, as the pre-war notion of natural beauty, became an umbrella term embedding and, at the same time, broadening the early-20th-century meaning of 'scientific value' to also include the landscape recreational nuances, and used also for appreciating the agrarian landscape.³⁸⁷

Alongside this, the 1970s also represented a fertile moment for a substantial evolution in landscape studies. Indeed, three fields of investigation acquired a more defined identity: landscape physiognomy, landscape ecology, and landscape heritage; it is this last branch that started to pay attention to the tangible remnants of past human activities in the landscape, mapping the presence of historical landscape features and spreading awareness on the importance of the so-called *cultuurhistorie* (cultural history) also in the field of landscape studies.³⁸⁸ This is also reflected in the design approach developed for the landscape plans realized in this period, in which a greater sensibility started to rise in relation to the landscape historical structure.³⁸⁹

³⁸⁴ Cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 141.

³⁸⁵ Cf. *Ibid.*, 140.

³⁸⁶ Renes, J. (2008). Landscape preservation in The Netherlands, *op.cit.*, 151.

³⁸⁷ Cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 139.

³⁸⁸ Cf. Renes, J. (1999). *Landschappen van Maas en Peel; een toegepast historisch-geografisch onderzoek in het streekplangebied Noord- en Midden-Limburg*. Leeuwarden: Eisma; Renes, J. (2008). Landscape preservation in The Netherlands, *op.cit.*, 151.

³⁸⁹ A relevant example can be found in the land consolidation plan developed for the village of Vries (1975). In it, H. de Vroome, SBB landscape architect and designer of the plan, took inspiration from the main historical features of this *esdorpslandschap* in the region of Drenthe, consisting in the presence of a small introvert village (*esdorp*), surrounded by arable fields and heath lands, which had been, however, altered during the 20th-century transformations of the area. With his plan, De Vroome aimed at restoring – by means of plants, roads and watercourses – the historical relations and the topography of this small-scale *esdorpslandschap*, while assuring the main contemporary needs of modern agriculture (cf. Janssen, J., & Knippenberg, L. (2008). The heritage of the productive landscape, *op.cit.*, 16-17).

On the Italian side, the post-war period represented a moment of profound redefinition in the field of architectural heritage preservation. The challenges posed by the war damages had inevitably shown the weaknesses characterizing the rigid categories of intervention used up to that moment. Rather, it raised an idea of restoration as a critical act, based on a case-by-case value judgment. Moreover, the attention shifted from major monuments to minor buildings and architectural ensembles. It was thanks to the contribution of R. Pane (1897-1987) that, as early as 1948, a distinction was made between what he defined as the architectural 'poetry' and 'literature' in the historic centre of Naples, attributing an unprecedented attention to this second category.³⁹⁰ Consequently, he extended his thoughts to areas outside the boundaries of the dense urban cores.³⁹¹ The origins of Pane's reflection on this theme can be found in his youthful interest in the rural architecture of Campania,³⁹² the overall figurative characters of which were initially appreciated as a valid model for contemporary architecture.³⁹³ This opened the way, already before the WWII, to the interest in the construction techniques associated with the architectural forms in relation to the local materials and characteristics, as well as to the acknowledgement of their value as components of the landscape.³⁹⁴ In the post-war period, the island of Capri was the focus of a first reflection by Pane on this issue (FIG. 3.19).³⁹⁵ Recalling the 1920s' pioneering intuitions of E. Cerio, rural architecture in its 'choral' dimension represented for him an essential part of the island's landscape. But, unlike in Giovannoni's pre-war reflections, which inspired the landscape plan, its aesthetic appreciation was not associated with a general mistrust

³⁹⁰ It was, in turn, inspired to the distinction made by B. Croce for the literary field Cf. Pane, R. (1948). *Architettura e letteratura*. In: Id., *Architettura e arti figurative*. Venezia: Neri Pozza; republished in: Id. & Civita, M. (1987). *Attualità e dialettica del restauro: educazione all'arte, teoria della conservazione e del restauro dei monumenti*. Chieti: M. Solfanelli, 76-83. This new perspective was shortly after put into practice in: Pane, R. (1949). *Napoli impreveduta*. Torino: Einaudi.

³⁹¹ Cf. Fiengo, G. (2010). L'opera di Roberto Pane in difesa della natura e dei valori ambientali. In: Casiello, S., Pane, A. & Russo, V. (eds.), *Roberto Pane tra storia e restauro. Architettura, città, paesaggio*. Venezia: Marsilio, 446.

³⁹² In 1922, Pane graduated at the *Scuola Superiore di Architettura* of Rome with a thesis titled *Studio dell'architettura rustica dei Campi Flegrei* (Study of the rustic architecture of Campi Flegrei) (cf. Pane, A. (2007). Roberto Pane (1897-1987). *Ananke*, n.50-51, 25; Boriani, M. (2010). Roberto Pane e il paesaggio: 'architettura rustica', 'coralità', 'stratificazione storica', 'ecologia umana'. In: Casiello, S., Pane, A. & Russo, V. (eds.), *Roberto Pane tra storia e restauro, op.cit.*, 456).

³⁹³ Cf. Pane, R. (1928). Tipi di architettura rustica in Napoli e nei Campi Flegrei, *Architettura e arti decorative*, VII(12), 529-543.

³⁹⁴ Cf. Pane, R. (1936). *Architettura rurale campana*. Firenze: Rinascimento del Libro. A reflection on Pane's early interest in rural architecture can be found in: Boriani, M. (2010). Roberto Pane e il paesaggio, *op.cit.*, 456.

³⁹⁵ Cf. Pane, R. (1954). *Capri*. Venezia: Neri Pozza.

in contemporary architecture.³⁹⁶ He criticized the imitation of old structures in new constructions, while confirming the need for volumetric constraints in order to foster harmonic additions in the existing landscape. Hence the close interdependence between landscape protection and the conservation of historic buildings as an expression of a local constructive knowledge,³⁹⁷ which will be central also in other subsequent contributions,³⁹⁸ has represented a reference point in the field of architectural restoration for many decades to come. In addition to his reflection on ‘minor’ architecture, now elevated to the rank of heritage to be protected from both the architectural and landscape point of view, the contribution of Pane in denouncing the speculative building boom of the time is equally relevant.³⁹⁹ Indeed, this issue dominated the post-war reconstruction debate for both urban and extra-urban contexts, exacerbating the dispute between protection and development needs.

Apart from the stimuli coming from the field of architectural restoration, in Italy the field of landscape studies at large also underwent a significant evolution in these years. In particular, reference is made to the *Storia del paesaggio agrario italiano* (History of the Italian agrarian landscape) by Emilio Sereni (1961).⁴⁰⁰ It represented a milestone in the field of landscape historical studies in Italy, depicting an image of the countryside on the eve of a radical transformation. Moreover, it contributed to the definition and appreciation of those human interventions – e.g. the Roman

³⁹⁶ About this aspect, an essential reference point to understand Pane’s point of view is in his positive position in the parallel debate on the possible relationship between ‘ancient’ settlements and ‘new’ additions in historic urban cores (cf. Pane, R. (1959). *Citta antiche, edilizia nuova*. Napoli: Edizioni scientifiche italiane). For a retrospective analysis on Pane’s contribution on this topic, see: Pane, A. (2007). Roberto Pane, *op.cit.*, 28-30; Aveta, A. (2010). Roberto Pane e l’urbanistica dei centri antichi. In: Casiello, S., Pane, A. & Russo, V. (eds.), *Roberto Pane tra storia e restauro, op.cit.*, 288-293; De Vita, M. (2010). L’antico e nuovo di Roberto Pane: un insegnamento senza tempo per il progetto di Restauro. In: Casiello, S., Pane, A. & Russo, V. (eds.), *Roberto Pane tra storia e restauro, op.cit.*, 333-336; Di Biase, C. (2010). Roberto Pane ed Ernesto Nathan Rogers: dibattito sugli inserimenti nelle preesistenze ambientali. In: Casiello, S., Pane, A. & Russo, V. (eds.), *Roberto Pane tra storia e restauro, op.cit.*, 364-369; Vinardi, M.G. (2010). Ricostruzioni e restauri della città: ‘antico e nuovo’ tema di un dibattito. In: Casiello, S., Pane, A. & Russo, V. (eds.), *Roberto Pane tra storia e restauro, op.cit.*, 370-376.

³⁹⁷ Cf. Picone, R. (2010). Capri, mura e volte. Il valore corale degli ambienti antichi nella riflessione di Roberto Pane. In: Casiello, S., Pane, A. & Russo, V. (eds.), *Roberto Pane tra storia e restauro, op.cit.*, 312-319.

³⁹⁸ In particular, reference is made to: Pane, R. (1955). *Sorrento e la costa*. Napoli: Edizioni scientifiche italiane; Id. (1961). *Campania: la casa e l’albero*. Napoli: Montanino. Additionally, he will also continue his reflection on Capri, re-editing the 1954’s volume: Id. (1965). *Capri. Mura e volte*. Napoli: Edizioni Scientifiche Italiane (II ed.); Id. (1982). *Capri*. Napoli: Adriano Gallina (III ed.).

³⁹⁹ Also in this case, the parallel engagement of Pane in relation to building speculation issues in historic urban cores – and, in particular, that of Naples – represents a crucial aspect of his unitary vision on this topic (cf. Pane, A. (2007). Roberto Pane, *op.cit.*, 28-30).

⁴⁰⁰ Sereni, E. (1961). *Storia del paesaggio agrario italiano*. Bari: Laterza.

centuriation, ruins, city walls and roads – characterizing the Italian agrarian landscape. Within this frame, another fundamental work was *Il paesaggio e l'estetica* (The landscape and the aesthetics) by Rosario Assunto (1973), in which the author claimed the need for a renewed aesthetic appreciation of the landscape.⁴⁰¹ Indeed, the contemplation of the landscape takes place by living inside it and not just as an external spectator. In this sense, the historical dimension of the landscape not only stemmed, for Assunto, from its combined natural and manmade components, but also from the sensitivity of the eye looking at it, inevitably embedded in a historical period.⁴⁰²



FIG. 3.19 Capri (IT), La Certosa: *Mura dirute sullo sfondo della Marina piccola* (Ruined walls with Marina piccola in the background), picture of R. Pane (Pane 1954)

Thus, the overcoming of the purely aesthetic value of the landscape was driven by a different appreciation shift in the two contexts (FIG. 3.20). In the Netherlands, the autonomy assumed by the old agricultural landscapes from the overall discourse on landscape care went through the acknowledgement of what now had started to be defined as 'nature' value in manmade areas. Hence, there was an attempt to

⁴⁰¹ Assunto, R. (1973). *Il paesaggio e l'estetica*. Napoli: Giannini.

⁴⁰² Cf. D'Angelo, P. (2009). *Estetica e paesaggio*. Bologna: Il Mulino, 85-87.

implement the same protection measure for both nature and landscape reserves, according to a process that can be interpreted as a restored parallelism with the field of cultural heritage. Additionally, the nature and landscape domains are now tackled together by the Ministry of Culture, Recreation and Social Work, thus going temporarily out of the spatial planning sphere, but still with a strategy aimed at isolating the protection areas to not interfere with the national planning system. In Italy, this shift, involved considering the manmade components (i.e. historic rural architecture) not only for their aesthetic contribution to the landscape of an area, but also for the local constructive knowledge they embodied. Thus, there is no break in the identification of landscape with cultural heritage, the reasons for which were, however, extended in this phase (extended identification). Additionally, the pre-war dislike for contemporary interventions – which was no longer viable in the post-war changed conditions – was paving the way for a greater openness towards a possible dialogue between old and new features in historic rural landscapes. Nevertheless, this attempt to reach a new balance in line with the post-war conditions was once again affected, in both contexts, by the rise of new challenges in the following decades.



FIG. 3.20 Comparative scheme (NL/IT) for the third stage of landscape protection (1950s-1970s) (F. Marulo 2022)

3.3.2 The environmental wave: landscape at the background of new alliances

In the Netherlands, while the institution of the national parks was easily carried out, the implementation phase concerning the national landscape parks was highly controversial.⁴⁰³ In particular, the definition of these areas as 'parks' raised a strong resistance among farmers organizations for the restrictive implications it entailed. It would lead, from the 1980s onwards, to the omission of this term from their denomination, significantly modified in 'national landscapes.'⁴⁰⁴ For this reason, the implementation of the park model went through an experimentation phase, which was carried out in five pilot regions. In it, the approach developed by CRM was inspired by a notion of landscape as a lived-in environment, the preservation of which meant having the protection goals recognized through local support. Accordingly, the decision was taken to entrust the provinces with a leading role in this operation, which also involved the task to coordinate the interaction with local authorities (e.g. municipalities, water boards and nature organizations).⁴⁰⁵ This experience was judged successful in four out of the five pilot areas.⁴⁰⁶ Only in the region called *Omgeving Winterswijk* the experimentation met the fierce opposition of local farmers and the authorities, so that the implementation process was blocked (FIG. 3.21).⁴⁰⁷ However, in 1980 these projects were the subject of a critical final advice by a Parliamentary Commission.⁴⁰⁸ Although the experimentation of the park

⁴⁰³ Together with the already-existing and privately-found national parks of Veluwezoom (1930) and Veluwe (1935), starting from the 1980s the Ministry of Agriculture – then renamed *Ministerie van Landbouw, Natuurbeheer en Visserij* (1989-2003) (Ministry of Agriculture, Nature management and Fishery) – instituted 18 national parks. A clear stimulus for such a policy can surely be found in the establishment of international organizations in the field of nature conservation, like the International Union for Conservation of Nature (IUCN) and the related guidelines (IUCN 1967) for the identification and preservation of areas considered as relevant for biodiversity and their ecosystem functions (cf. Janssen, J. (2009). Protected landscapes in the Netherlands, *op.cit.*, 442-443).

⁴⁰⁴ Cf. *Ibid.*, 444; Renes, J. (2011). The Dutch National Landscapes, *op.cit.*, 4-5.

⁴⁰⁵ Cf. Janssen, J. (2009). Protected landscapes in the Netherlands, *op.cit.*, 444.

⁴⁰⁶ Reference is made to the Noord-West Overijssel, Waterland, Veluwe and Mergelland (cf. *Ibid.*; Renes, J. (2011). The Dutch National Landscapes, *op.cit.*, 4). For the full assessment of the interventions on the five pilot regions, see: Kloet, W.G. van der (1980). Nationale Landschapsparken, *Nederlands bosbouw tijdschrift*, 52(11/12), 277-317. The other proposed national landscape parks in the CRM report (1975) were: Texel, Terschelling, Zuid-West Friesland, Noordenveld, Zuid-West Drenthe, Vecht- en Reggegebied, Noord-Oost Twente, Graftschap, Centraal Noord-Holland, Vechtstreek, Kromme Rijn, Gelderse Poort, Midden Brabant, Midden Limburg (cf. Renes, J. (2011). The Dutch National Landscapes, *op.cit.*, 4).

⁴⁰⁷ Cf. Janssen, J. (2009). Protected landscapes in the Netherlands, *op.cit.*, 444; Renes, J. (2011). The Dutch National Landscapes, *op.cit.*, 5.

⁴⁰⁸ Cf. Ministerie van Cultuur Recreatie en Maatschappelijk Werk (CRM) (1980). *Eindadvies Nationale Landschapsparken*. 's-Gravenhage: Staatsuitgeverij.

model in the pilot areas had not been yet concluded, the Committee claimed for a more flexible preservation strategy in order to mitigate the growing discontent of the agricultural entrepreneurship.⁴⁰⁹ The idea that the farmers themselves represented the best caretakers for nature and landscape also gained momentum.⁴¹⁰ As a result, the CRM experience with the national landscape parks came to a standstill at the turn of the 1980s, confirmed by the lack of their legal recognition in the following years. A similar fate characterized the implementation of the third green memorandum. Despite the installation of a workgroup within CRM for further deepening the implications that this report would have entailed, the envisaged extensification of the agricultural practice provoked the hostility of farmers.⁴¹¹ Neither the system of conservation grants nor the studies that proved the positive effects of an extensive form of agriculture on nature and landscape preservation succeeded in convincing the critics.⁴¹²

The obstruction of farmers, who had now almost replaced the agricultural engineers as spokesmen for the agricultural sector, represented the main practical obstacle for a successful application of the two debated green memoranda. Additionally, other concomitant factors need to be considered for the decisive role they played in this process. A crucial aspect is that during the 1970s a new generation of nature conservationists emerged, a consequence of the growing interest for environmental issues. A typical characteristic of this current, which will gradually assume the character of a group with a proper identity leading the country towards its so-called third 'green wave',⁴¹³ was the reliance on a different meaning of the 'environment' concept, for a long time only considered in ecology and biology as the habitat for

⁴⁰⁹ Janssen, J. (2009). Protected landscapes in the Netherlands, *op.cit.*, 444.

⁴¹⁰ Cf. Denig, E. (1975) *Boer of parkwachter: enige gedachten over nationale landschapsparken*. 's-Gravenhage: Staatsuitgeverij (Agrarische reeks); Janssen, J. (2009). Protected landscapes in the Netherlands, *op.cit.*, 445.

⁴¹¹ Reference is made to the *Bolwerkgroep*, the composition of which included, together with the CRM, also other bodies, like the *Natuurmonumenten* Association and the Nature Conservation Consultants of the *Staatsboosbeheer*. The outcome of their joined work was the report *Natuurwaarden en Cultuurwaarden in het landelijk gebied* (1979) (Nature values and Cultural values in the rural area), in which, as the title shows, also the cultural values of the rural areas – mainly consisting of buildings like windmills, but also traditional landscape structures like the *terpenlandschappen* – were analysed and spatially identified in a specific map (cf. Windt, H. van der (1995). *En dan: Wat is natuur*, *op.cit.*, 139).

⁴¹² Cf. Padding, P. & Scholten, H.J. (1988). Ontwikkelingen in de landbouw, een ruimtelijk perspectief voor natuurontwikkeling?, *Landschap*, 5, 201-212; Wetenschappelijke Raad voor het Regeringsbeleid (1992). *Grond voor keuzen: vier perspectieven voor de landelijke gebieden in de Europese Gemeenschap*. 's-Gravenhage: Sdu; Renes, J. (2008). Landscape preservation in The Netherlands, *op.cit.*, 151.

⁴¹³ Cf. Cramer, J. (1989). *De groene golf*, *op.cit.*; Renes, J. (2008). Landscape preservation in The Netherlands, *op.cit.*, 150-151.

flora and fauna. To this vision, fully supported by the traditional nature conservation movement, the new generation opposed a broadened view as the 'physical living environment of humans'.⁴¹⁴ Accordingly, they claimed for a 'socially-oriented radical environmental strategy' of nature and landscape preservation, more careful about the social implications of the proposed conservation strategies. In line with this, it was seen as extremely fundamental to consider other interpretations of nature and landscape. For the new generation of conservationists, the views of the farmers had a pivotal role, by virtue of farmers being the actual users and living community of the countryside.

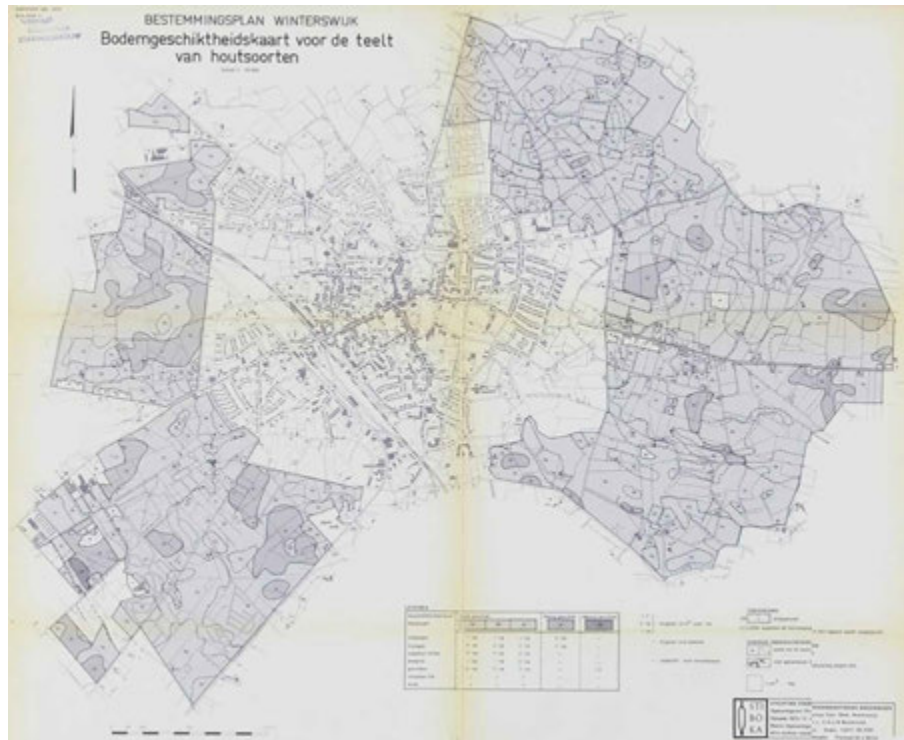


FIG. 3.21 Winterswijk (NL), *Bodemgeschiktheidskaart voor de teelt van houtsoorten* (Soil suitability map for the cultivation of wood species) (1973) (Wageningen Universiteit Beeldbank)

⁴¹⁴ Cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 144.

Consequently, the new environmental current easily found an ally in the farmers organizations and in the group of the Wageningen intellectuals in the field of agricultural studies, organized in the so-called *Boerengroep*, which shared a similar intolerance against the established nature conservation strategies.⁴¹⁵ Alongside the call for a more fair and democratic approach, another important aspect of the criticism made by the new environmental group concerned the actual tools and the protection strategy of spatial separation promoted by the CC with the 1970's map, and then embraced by CRM in the identification of the national parks and the national landscape parks. Thus, to be at the centre of debate was the reserve strategy itself, which relied on the concentration of special protection measures only on certain specific areas. Considering this approach as insufficient and unrealistic, they called for a broader view on the rural area as a whole, fostering a greater integration between the different interests involved. This meant the promotion, on the one hand, of what was defined as 'functional nature' – namely, a natural environment not only defined through aesthetic features but also useful in terms of agricultural development – and, on the other hand, of an 'integrated agriculture' – not only aimed at food production, but also providing an enjoyable and healthy environment for people and other forms of life.⁴¹⁶

Inevitably, the representatives of the established nature and landscape conservation movement had to face and adjust to the stimuli coming from the new environmental current, given the popularity and impact of the ideology it embodied. Indeed, starting from the late 1960s, the number of new environmental organizations increased considerably and, although the most of them were mainly concerned about specific local matters, they gave substance to a solid protest movement contrasting the traditional conservationists with the new 'green consciousness.'⁴¹⁷ As a result, the CC started to consider other collaborative and organizational strategies, which would result in the last and definitive change of the organization. In order to confirm its position, in 1972 the CC constituted a new association, resulting from the cooperation with the *Natuurmonumenten* Association and two other organizations: the *Stichting Natuur en Milieu* (Nature and Environment Foundation).⁴¹⁸

⁴¹⁵ Cf. *Ibid.*, 145.

⁴¹⁶ Cf. *Ibid.*, 146-147.

⁴¹⁷ Cf. Cramer, J. (1989). *De groene golf*, *op.cit.*; Windt, H. van der (1995). *En dan: Wat is natuur*, *op.cit.*, 147; Renes, J. (2008). Landscape preservation in The Netherlands, *op.cit.*, 150.

⁴¹⁸ The other two organizations were the *Nederlandse Vereniging tegen Water-, Bodem- en Luchtverontreiniging* (Dutch Association against Water, Soil and Air Pollution) and the *Stichting Centrum Milieuzorg* (Environmental Care Center Foundation). The establishment of the Nature and Environment Foundation factually marked the end of the CC organization, which will keep on its activity for a few years and finally expire in 1977 (cf. *Ibid.* Windt, H. van der (1995). *En dan: Wat is natuur*, *op.cit.*, 148).

Environmental matters were the main focus, now fully recognized in the definition of the main aim of the new-born association, which included 'the protection and management of nature, landscape and the environment, all in the broadest sense'.⁴¹⁹ Although the new association adopted a more democratic approach, it kept on wavering in an intermediate position between the strong link with the conservative associations like *Natuurmonumenten* and a greater dialogue with the agricultural organizations.⁴²⁰ However, as expressed in the booklet *Het dilemma van de Nationale Landschapsparken* (The dilemma of the National Landscape Parks), the new environmental conservationists were not satisfied with this solution, they opted for a stronger integration.⁴²¹ This difference of opinion encouraged the new group to organize itself in a brand new organization, the *Centrum voor Landbouw en Milieu* (CLM – Centre for Agriculture and Environment).⁴²²

The 1980s were marked by a continued emphasis on the new environmental awareness, in which the preservation of the historical landscape was, however, neglected once again. This phenomenon was officially formalized by an important institutional change: the abolishment of CRM in 1982 and the consequent acquisition of authority on nature and landscape conservation by LV, then renamed *Ministerie van Landbouw, Natuurbeheer en Visserij* (1989-2003) (LNV – Ministry of Agriculture, Nature management and Fishery). This shift entailed a greater attention on farming and agricultural production. As a result, the experimentation with national landscape parks in the pilot areas was definitively stopped and the governmental subsidies were drastically cut down.⁴²³ Moreover, in line with such general tendency and despite the previous involvement of the Ministry of Culture with national and landscape parks, landscape protection was once again left out from the new *Monumentenwet*

⁴¹⁹ Cit. *Natuur en Milieu 1977-1978* (1979). 's-Graveland: Stichting Natuur en Milieu, 112. In relation to this, significant is also that the CC magazine *Natuur en Landschap* (Nature and Landscape) was given, in those years, the subtitle *Tijdschrift voor natuurbescherming en milieubeheer* (Magazine for nature conservation and environmental management) (cf. Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 147).

⁴²⁰ This was reflected in the structure of the association itself, which now also included regional organizations – the so-called *Milieufederaties* (Environmental Federations) – but also in a greater attention to farmers and their aspirations (cf. *Ibid.*, 149).

⁴²¹ Weijden, W. J. van der, Baaijens, G. J. & Stichting Natuur en Milieu (1977). *Het dilemma van de Nationale Landschapsparken: naar een nieuwe visie op landbouw en landelijk gebied*. 's-Graveland: Stichting Natuur en Milieu.

⁴²² Windt, H. van der (1995). *En dan: Wat is natuur, op.cit.*, 150.

⁴²³ Cf. Janssen, J. (2009). Protected landscapes in the Netherlands, *op.cit.*, 444; Renes, J. (2011). The Dutch National Landscapes, *op.cit.*, 5.

(Monuments Act), which was passed in 1988 to update and replace that of 1961.⁴²⁴ This period of stagnation for landscape preservation was accompanied, however, by some interesting developments in relation to nature and environment matters. Together with the publication, in 1989, of a national *Natuurbeleidsplan* (Nature Management Plan) – which envisaged the creation of a National Ecological Network (NEN) – the idea took root that creating ‘new nature’ could also benefit the country environmental balance.⁴²⁵ This resulted in a number of plans inspiring the principle that low-productivity lands could be subtracted to agricultural development and given back to nature in change of higher intensification in other areas.⁴²⁶ This approach resulted in a new threat for the preservation of the traditional agricultural landscape.⁴²⁷

In Italy, although the lack of an adequate connection with urban planning obstructed effective measures against building speculation,⁴²⁸ the reasons for landscape protection had been considerably broadened through the new perspective coming from the architectural restoration field. In an attempt to better define the landscape concept in the light of this trend, an early notion of environment gained ground. A clear example of that can be found in the Venice Charter (1964),⁴²⁹ which has gone down in heritage studies as a considerable expansion of the architectural restoration field. However, when defining the broadened notion of historical

⁴²⁴ Net of some specifications (i.e. the more explicit definition of archaeological monuments) the kind of objects addressed by this law stayed mostly unchanged; however, the ‘folkloric value’ characterizing the monuments to be protected in the Act from 1961 was now rephrased into ‘cultural-historical value’ – a change by some considered as problematic for some heritage categories – like war heritage – bearing difficult memories (cf. Kuipers, M.C. (2012) Culturele grondslagen van de Monumentenwet, *Bulletin K.N.O.B.*, 111(1), pp. 10-25). The update to the law from 1961 was more on a procedural level and mainly concerned the will to have a greater involvement of local authorities. Within this frame, the competence of designating city and village conservation areas passed from the Ministry of Education, Culture and Science to that of Housing, Spatial Planning and the Environment.

⁴²⁵ Cf. Renes, J. (2008). Landscape preservation in The Netherlands, *op.cit.*, 152.

⁴²⁶ Examples can be found in the plans for the *Oostvaardersplassen* and the *Ooievaar* fluvial region (cf. *Ibid.*).

⁴²⁷ Cf. *Ibid.*; Renes, J. (2011). The Dutch National Landscapes, *op.cit.*, 5.

⁴²⁸ In this sense, the 1960s legislative measures – and, in particular, the law n.765/1967, which limited construction activities in those municipalities without a municipal plan – represented only a partial and, thus, insufficient solution (cf. Settis, S. (2010). *Paesaggio Costituzione Cemento*, *op.cit.*, 201).

⁴²⁹ This document was the final outcome of the *II Congresso Internazionale degli Architetti e Tecnici del restauro* (II International Congress of Architects and Restoration Technicians), held in Venice in 1964. In this occasion, the proposal was made by some participants – among which, R. Pane and P. Gazzola – for an update of the *Carta italiana del restauro* (Italian Charter of Restoration) from 1932 – namely, the Italian ratification of the Athens Charter (1931) – which will then turn into the approval of the internationally-recognized Venice Charter (cf. Fiengo, G. (2000). *La conservazione dei beni ambientali e le carte del restauro*. In: Casiello, S. (ed.), *Restauro: criteri, metodi, esperienze*. Napoli: Electa, 30-32; Pane, A. (2007). Roberto Pane, *op.cit.*, 30).

monument, the Charter did not mention the landscape but the so-called *ambiente urbano e paesistico*⁴³⁰ (literally: urban and landscape environment) ‘that constitutes the testimony of a particular civilization, of a significant evolution or of a historical event’ (art. 1). At the same time, the term ‘traditional environment’ is also used to describe the context in which a historical monument is inscribed, for which ‘no new construction, demolition or modification which would alter the relations of mass and colour must be allowed’ (art. 6). This mingling process of the landscape and environment notions – at least in the seemingly interchangeable use of the terms⁴³¹ – turned out to be crucial in the following decades. Indeed, it can also be found in the definitions given by the Study Committee (*Commissione Francheschini*) set in 1964 by the Ministry of Education with the aim of investigating possible updates to the pre-war protection laws.⁴³² In particular, reference is made to the so-called *beni culturali ambientali* (environmental cultural goods), which encompassed ‘the chorographic zones constituting landscapes, natural or transformed by the work of man, and the delimitable zones constituting urban and non-urban settlements, which, having particular values of civilization, must be preserved for the enjoyment of the community’. Thus, the landscape notion is used in the definition, while the environment is referenced in the name of the new category – confirming the increasing ambiguity between the two concepts. Additionally, in the definition specific reference is also made to ‘the assets that present geological, flora-fauna, ecological, agricultural-culture, territorial-infrastructure singularities, and those settlement structures, even minor or isolated, which are integrated with the natural environment in such a way as to form a representative unit’.

Together with this ambiguity in the use of terms like landscape and environment in the cultural heritage sphere, in Italy a more radical concern for the marginalized protection of nature and the environmental issues emerged. In this sense, the position of A. Cederna (1921-1996) in his 1975's work, titled *La distruzione della*

⁴³⁰ In the official translation by ICOMOS reference is made to ‘rural setting’, which is surely accurate in the contents but, at the same time, does not express the significant word choice of the Italian original version (cf. AA.VV. (1964). *International Charter for the Conservation and Restoration of Monuments and Sites*, Paris: ICOMOS. The Italian version can be found in: Esposito, D. (1996). Carte, documenti, leggi. In: Carbonara, G. (ed). *Trattato di restauro architettonico*. Torino: Utet, 420-422).

⁴³¹ Cf. Scazziosi, L. (2010). Roberto Pane e il paesaggio: attualità del pensiero. In: Casiello, S., Pane, A. & Russo, V. (eds.), *Roberto Pane tra storia e restauro*, *op.cit.*, 466.

⁴³² The Franceschini Committee was officially set with the law n.310/1964, while the final outcome of the study was published in three volumes titled *Per la salvezza dei beni culturali in Italia* (For the salvation of cultural goods in Italy) in 1967 (cf. Aveta, A. (2001). *Tutela, restauro, gestione dei beni architettonici e ambientali: la legislazione in Italia*. Napoli: CUEN, 39-40; Settis, S. (2010). *Paesaggio Costituzione Cemento*, *op.cit.*, 222-224).

natura in Italia (The destruction of nature in Italy) is exemplary.⁴³³ In it, the now outdated Bottai law was addressed since it focused on the protection of natural beauties, reducing 'nature to landscape, and landscape to mood'.⁴³⁴ According to Cederna, protecting beauty meant focusing on the 'skin' of the problem, leaving aside what he considered as the 'primary purposes of nature conservation as an environmental territorial good', which were 'scientific, economic, social, cultural, hygienic, hydrogeological, on which the life and safety of man and his works depend'.⁴³⁵ Thus, the protection of the men's life environment in its ecological significance should be added as a superior interest for its now acknowledged link with the wellbeing and survival of humankind. This shift in the attention, from landscape to environment, was also expressed in the denomination given to the new-born *Ministero dei beni culturali e ambientali* (Ministry of cultural and environmental goods) set in 1974 and absorbing the tasks of the former Ministry of Education on heritage protection matters.⁴³⁶ The gradual weakening of the landscape concept in the protection field is also illustrated by the transfer to regional control of the authority on landscape plans (D.P.R. n.8/1972), thus abandoning the efforts to assure landscape protection in both the Bottai law and the constitutional text, as well as worsening the still unsolved relationship with spatial planning measures.⁴³⁷

Given the increasing overlap between the landscape and environment notions in both conceptual and practical terms, some of the post-war advocates of landscape protection tried to at least theoretically address this ambiguity by giving more specific definitions. Among them, R. Assunto felt the need to come back to the notion of landscape by drawing a distinction from the concepts of territory and environment (1976).⁴³⁸ He defined territory as 'a more or less vast extension of the earth's surface, which can be delimited according to geophysical divisions (mountains, rivers), linguistic differences, or political-administrative delimitations'; for him, the notion of environment had two possible meanings: 'a 'biological' one, 'which refers to the physical conditions' of an area, and a 'historical-cultural' one, related to 'customs, traditions, the current morality' but also to 'cults' or 'local artistic

⁴³³ Cederna, A. (1975). *La distruzione della natura in Italia*. Torino: Einaudi.

⁴³⁴ Cit. Ibid., 5-6. See also: Piccioni, L. (2012). *Paesaggio della belle époque, op.cit.*, 100.

⁴³⁵ Cit. Cederna, A. (1975). *La distruzione della natura, op.cit.*, XIII.

⁴³⁶ Cf. Aveta, A. (2001). *Tutela, restauro, gestione, op.cit.*, 41-42; Settis, S. (2010). *Paesaggio Costituzione Cemento, op.cit.*, 243-245.

⁴³⁷ Cf. Aveta, A. (2001). *Tutela, restauro, gestione, op.cit.*, 48-49; Settis, S. (2010). *Paesaggio Costituzione Cemento, op.cit.*, 206-207.

⁴³⁸ Assunto, R. (1976). *Paesaggio, ambiente, territorio. Un tentativo di precisazione concettuale, Bollettino CISA, n.XVIII*, pp. 45-48.

testimonies'. These two notions are connected, since the concept of environment includes that of territory: 'indeed, a territory remains unchanged through the mutations of its biological environment and its historical-cultural environment'. These considerations led to his definition of landscape as 'the form that the environment [...] gives to the territory', the latter representing 'the material that it [the environment] uses'.

Despite the conceptual efforts to clarify the domains of landscape and environment, what Assunto had defined as 'biological environment' kept on playing a central role in governmental policies. In this sense, reference is made to the passing of the Galasso law in 1985, in which the kind of areas that could be put under landscape protection in the Bottai law was considerably extended according to physical – geographic, biological or, more broadly, environmental – criteria.⁴³⁹ To further complicate the already unclear definition of the landscape and environment fields was the introduction of the Ministry of the Environment in 1986, which overlapped with the Ministry of Cultural and Environmental Goods without a clear definition of competences.⁴⁴⁰

Thus, in both contexts, the 'environment era' marked a turning point and rekindled attention for nature. But, unlike in the pre-war discussions, the loss of natural areas, the value of which consisted in their scientific and/or aesthetic-historical significance was no longer an issue. Attention shifted to the safety of the humankind itself. The environmental turn reversed the way the relationship between man and nature was interpreted. However, this shift assumed a different impact in the two countries, according to the different backgrounds. In the Netherlands, this led to a new, isolated alliance between nature and environment issues, in which the protection of the landscape – and, with it, the post-war restored parallelism between cultural heritage, nature and landscape – is forgotten. In Italy, the rise of environmental issues meant, on the one hand, reviving the interest on nature, which had diminished after the pre-war discourse on natural beauty, now considered as an outdated notion; but, at the same time, the environment gradually absorbed the landscape concept and, consequently, it was assimilated in the cultural heritage sphere – a process that generated an ambiguous overlap.

⁴³⁹ Cf. Aveta, A. (2001). *Tutela, restauro, gestione*, op.cit., 46-47; Settis, S. (2010). *Paesaggio Costituzione Cemento*, op.cit., 210-212.

⁴⁴⁰ Cf. Aveta, A. (2001). *Tutela, restauro, gestione*, op.cit., 59-60; Settis, S. (2010). *Paesaggio Costituzione Cemento*, op.cit., 247-248.

3.3.3 **Fist signs of a trend reversal**

It was only during the 1990s that the Dutch government set out to reverse the trend. A favourable condition can be identified in the gradual change in the role of the agricultural sector in the development of the rural areas. Indeed, the awareness that the landscape's ecological and socio-cultural features had a driving role in the regeneration of the rural economy started to undermine the long-standing hegemony of the agricultural interests in the Dutch countryside. This was supported by the European reform of the Common Agricultural Policy (CAP), in which greater attention was now given to environment and landscape in the promotion of compatible development strategies for the rural areas.⁴⁴¹ Within this framework, in 1992 the LNV published the *Nota Landschap* (Landscape Memorandum), a spatial planning document setting the general framework for the *planologische bescherming* (planning protection) of the national landscape.⁴⁴² It clearly stated that 'the landscape in the Netherlands has been shaped by the sea and the rivers, by land ice and melting water, by the wind, by the peat formation and – later – by human activity'.⁴⁴³ The interaction between 'abiotic and biotic process' and the significance of the traces left by man in the landscape was acknowledged, so that the Dutch landscape in its current configuration is considered as 'pre-eminently a cultural landscape' bearing 'the stamp of an urban culture'.⁴⁴⁴ At the same time, the subordinate position of those culture-historical elements – namely, 'scattered buildings, such as farms, castles, country estates, mills and the like, or certain settlement forms and defences, such as the Dutch Waterline' – is clear, their principal role being their contribution 'to the differentiation between the landscape types' primarily defined by the physical-geomorphological landscape features of the ground relief, the water courses and green patterns.⁴⁴⁵ Accordingly, in 1994 LNV published the *Structuurschema Groene Ruimte* (Structural scheme for Green Space),⁴⁴⁶ a policy document concerning the provision of green zones connecting the major urban regions, and in particular the Randstad Holland, identifying the possibilities for agricultural development, nature conservation or their combination,

⁴⁴¹ Cf. Janssen, J. (2009). Protected landscapes in the Netherlands, *op.cit.*, 447.

⁴⁴² Ministerie van Landbouw, Natuurbeheer en Visserij, Directie Natuur, Bos, Landschap en Fauna (1992). *Nota landschap: regeringsbeslissing visie landschap*. Den Haag: Ministerie van Landbouw, Natuurbeheer en Visserij.

⁴⁴³ Cit. *Ibid.*, 19.

⁴⁴⁴ Cit. *Ibid.*, 19-21.

⁴⁴⁵ Cf. *Ibid.*

⁴⁴⁶ Ministerie van Landbouw, Natuurbeheer en Visserij (LNV) (1995). *Structuurschema Groene Ruimte: het landelijk gebied de moeite waard*. 's-Gravenhage: Ministerie van Landbouw, Natuurbeheer en Visserij.

as well as those areas to be kept open, such as the *Groene Hart* (Green Heart), and, finally, the limitations to urban sprawl. In this document, a specific operational program, the so-called *Waardevolle Cultuurlandschappen* (WLC – Valuable Cultural Landscapes), was introduced for the preservation and enhancement of the historical agricultural landscape. In relation to this, the subtle semantic shift in the meaning of *cultuurlandschap* is relevant. It is not only used to identify the [agri]cultural man-made landscape, but – most importantly – also the changed appreciation of such areas, now to be preserved also for their cultural significance. This intention was translated in structural interventions, sponsored by LNV, consisting in the implementation of projects aiming at stimulating agricultural and recreational activities that could strengthen the areas' landscape quality, considered as a valid alternative to passive protection even when the landscapes considered had a substantial documentary value.⁴⁴⁷

In Italy, a new ministerial reform at the end of the 1990s marked a turning point: the institution of the *Ministero per i Beni e le Attività Culturali* (Ministry for Cultural Goods and Activities) in 1999 and, shortly after, of the *Ministero dell'Ambiente e Tutela del Territorio* (Ministry of Environment and Protection of the Territory) in 2001.⁴⁴⁸ By removing the reference to the environment in the name of the first ministry, the attempt was to clearly separate this domain from that of cultural heritage. At the same time, this shift did not directly lead to the rehabilitation of the landscape concept, which was, however, fully included in the reorganization of all the ministerial bodies.⁴⁴⁹ Thus, the omission of the landscape from the name of the reformed Ministry can be explained by its acknowledgment as an integral part of cultural heritage. The ambiguity between the notions of landscape and environment, however, still survived in the legislative texts associated with this institutional reform. Reference is made to the d.lgs. n.368/1998, which saw in the 'protection, management and enhancement of cultural and environmental goods' the main task of the new Ministry, together with the 'promotion of cultural activities'

⁴⁴⁷ Cf. Ibid.; Hazendonk, N.F.C., E.J. van Beusekom & B.L. Looise (2000). *Landschap in feiten en cijfers*. Wageningen: Expertisecentrum LNV; Pleijte, M. (2000). *WLC's ingekleurd: Monitoring en evaluatie van het beleid voor Waardvolle Cultuurlandschappen*. Wageningen: Alterra; Janssen, J. (2009). *Protected landscapes in the Netherlands*, *op.cit.*, 447.

⁴⁴⁸ Cf. Settis, S. (2010). *Paesaggio Costituzione Cemento*, *op.cit.*, 247-248.

⁴⁴⁹ Reference is made to the *Direzione Generale* (General Directorate), the *Comitato tecnico-scientifico* (Technical-scientific Committee) and the *Soprintendenze* (Superintendencies) specifically dedicated to the domain of 'architectural goods and landscape', the latter considered as interconnected. The other domains covered by the Ministry of Cultural Goods and Activities were: a) historical, artistic and demoeconomic heritage; b) contemporary architecture and art; c) archaeological assets; d) archives; e) books and cultural institutes; f) cinema and live performances (cf. Aveta, A. (2001). *Tutela, restauro, gestione*, *op.cit.*, 59-77).

(art. 1).⁴⁵⁰ The persisting and ambiguous reference to environmental matters was also confirmed in one of the implementing regulations of the decree –the d.P.R. n.441/2000 – in which, when defining the task of the General Directorate for architectural goods and landscape, reference was made to the so-called ‘sector of environmental goods’, which included actions in relation to both the *valutazione di impatto ambientale* (environmental impact’s assessment)⁴⁵¹ and the *piani territoriali paesistici* (landscape territorial plans).⁴⁵² Together with this institutional change, a step was made towards an evolution of the now outdated laws for cultural heritage and landscape protection. Indeed, in 1999 a new legislative text was passed – the so-called *Testo Unico delle disposizioni legislative in materia di beni culturali e ambientali* (Consolidation Act of the legislative provisions on cultural and environmental goods) – the main aim of which was to unify and, where possible, clarify conceptual and procedural aspects of the already-existing legislative measures. Accordingly, the two Bottai laws (1939) and the Galasso law (1985) were repurposed but not updated, thus leaving unsolved the existing ambiguity between landscape and environment.⁴⁵³

In conclusion, the second half of the 20th century was characterized, both in Italy and the Netherlands, by a profound evolution in the appreciation and protection of the national landscape (FIG. 3.22). A comparison between the two countries highlights two different ways of reacting to those global challenges (the World War II and the environment era) that determined the need to revise the notion of landscape as developed in the previous stage, but which led to a similar understanding of the landscape’s cultural significance on the threshold of the new millennium. However, an apparently similar outcome still bears the traces of the very different paths from which it stemmed. In the Netherlands, this process went through a semantic and conceptual shift in the appreciation of the historical landscape (from agricultural to cultural), which – in the wake of the new environmental awareness –resulted in a changed relationship with the conservation of nature and the planning of the modern landscape. While not completely free from the legacy of these previous relations, the historical landscape has moved towards a greater autonomy; this has, on the one hand, exposed it to a greater weakness in the face of the agricultural development in the rural area. It also opened the way for a future dialogue with the cultural heritage field, until now only seen from a distance through the lenses of parallelism.

⁴⁵⁰ Cf. *Ibid.*, 61.

⁴⁵¹ The environmental impact’s assessment entered was introduced by the law n.349/1986 (cf. *Ibid.*, 67-68).

⁴⁵² Cf. *Ibid.*

⁴⁵³ Cf. *Ibid.*, 79-160; Settis, S. (2010). *Paesaggio Costituzione Cemento*, op.cit., 249-250.

Continuing the previous phase, the tools and strategies put in place for its protection remained tied to a planning approach, which, however, evolved from an attitude of separation to a greater integration between conservation and development needs. In Italy, this evolution is, instead, better described in terms of a continued extension of the landscape concept within the perimeter of the cultural heritage sphere, even when fading into neighbouring notions of nature and environment. This process has, however, led to a reluctant attitude towards future development, as expressed by the complicated relationship with the planning sphere on this matter. Hence, the strong difficulty in updating protection strategies and tools towards an integrated and development-oriented approach.

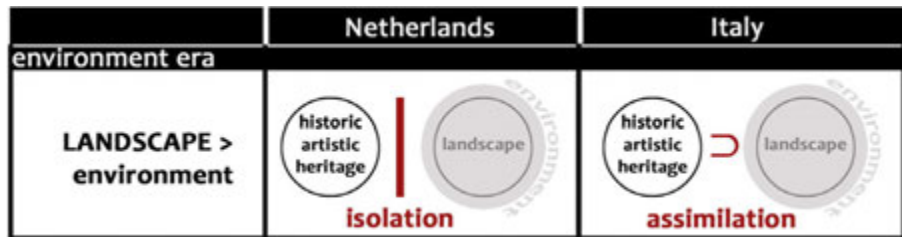


FIG. 3.22 Comparative scheme (NL/IT) for the fourth stage of landscape protection (1970s-1990s) (F. Marulo 2022)

3.4 Landscape reframed. Thirty years of protection policies: between tradition and innovation

By the end of the 20th century, the considerable advancements in the international discussion on the landscape topic have led to the acknowledgement of its interrelated cultural and natural dimension, which has opened the way towards an update of landscape policies on a national scale.⁴⁵⁴ The latter has proved to be a complex process: the path towards what now had become a common goal – i.e., fostering nature-culture interlinkages in landscape policies – still required a considerable effort in each country to integrate these conceptual advancements in their national landscape traditions and protection frameworks. Therefore – as the Italian and Dutch contexts clearly show – the efforts and outcomes of this process, although animated by the same spirit, differ substantially and can only be understood as the last page of a long journey.

In the Netherlands, this process entailed the opening towards the cultural significance of the national landscape. The latter reached an unprecedented emphasis with a policy document and related implementation program started by the Dutch government in 1999: the Belvedere Memorandum. Although not specifically conceived for this purpose, it played a crucial role in redefining the meanings attached to landscape heritage and its connection with the cultural heritage domain. Indeed, this program had as primary goal the introduction of cultural history as a ‘determining factor in the future spatial design of the Netherlands’.⁴⁵⁵ As expressed in the commitment letter to the Chairman of the Lower House of the States-General, the four Ministries involved became spokesmen of the need for a ‘careful assimilation’ of the cultural-historic qualities of the contemporary environment in its future developments, thus, addressing the government’s concern about the scarce consideration and involvement of cultural heritage in the national spatial planning strategies.⁴⁵⁶

⁴⁵⁴ See: paragraph 2.1.

⁴⁵⁵ Cit. Feddes, F. and Wilkens C.S. (1999). The Belvedere Memorandum: a policy document examining the relationship between cultural history and spatial planning (Ser. Belvedere reeks). Nieuwegein: Distributiecentrum VROM, 7.

⁴⁵⁶ Cf. *Ibid.*, The Belvedere Memorandum was the result of the cooperation between four Ministries: the Ministry of Education, Culture and Science, the Ministry of Housing, Spatial Planning and the Environment, the Ministry of Agriculture, Nature Management and Fisheries, the Ministry of Transport, Public Works and Water Management (cf. *Ibid.*,3-4).

This vision aimed at complementing the existing sectoral policies.⁴⁵⁷

In the Memorandum, cultural history encompassed the ‘archaeological, architectural and topographical heritage’ – namely, the material and immovable traces of the past, the significance of which was mainly acknowledged in their being essential features for keeping the identity of a place and people’s feeling of belonging.⁴⁵⁸ The Belvedere policy promoted a concept of future spatial quality not only centred on ‘merely finding room for the necessary utilitarian functions’.⁴⁵⁹ Rather, the search for a balance between the ‘retention of existing historic values and the creation of new spatial values’ was seen as fundamental for avoiding what had now started to be considered as the main obstacle to a successful spatial development: the erosion of diversity.⁴⁶⁰ Maintaining the variety of the landscape was seen as the most appropriate means to counteract the loss of local identity, which represented a negative side effect of the ‘economically-welcome globalization in Europe’.⁴⁶¹ As a result, the cultural heritage domain could integrate spatial quality, landscape variety and local identity – although since the beginning criticized for its too-vague definition – and could become a mandatory step for planning the future developments of the country.⁴⁶² Thus, together with fostering a greater attention to the cultural qualities of the national landscape, the program also suggested an approach to cultural heritage as a landscape issue.

457 In particular, this issue had been already raised in different sectoral policies not only by the Ministry of Education, Culture and Science – like the cultural policy (1996) and the architectural policy (1996) – but also in the rural areas policy (1993) and the urban renewal report (1997), respectively issued by Ministry of Agriculture, Nature Management and Fisheries, and the Ministry of Housing, Spatial Planning and the Environment; all together, they were aimed at offering a contribution to the forthcoming Fifth national planning report (2001) (cf. Ministerie van Onderwijs, Cultuur en Wetenschappen (1996). *Cultuurnota 1997-2000*. Den Haag: Ministerie van Onderwijs, Cultuur en Wetenschappen; Feddes, F. and Platform Architectuurbeleid (1996). *De architectuur van de ruimte: nota over het architectuurbeleid 1997-2000*. Zoetermeer: Ministerie van Onderwijs, Cultuur en Wetenschappen; Ministerie van Landbouw, Natuurbeheer en Visserij (1993). *Structuurschema groene ruimte: het landelijk gebied de moeite waard*. Den Haag: Ministerie van Landbouw, Natuurbeheer en Visserij; Ministerie van Volkshuisvesting Ruimtelijke Ordening en Milieubeheer (1997). *Nota stedelijke vernieuwing*. Den Haag: Ministerie van Volkshuisvesting Ruimtelijke Ordening en Milieubeheer, Centrale Directie Voorlichting en Externe Betrekkingen).

458 Clearly expressed is that ‘the “chattels” – i.e. collections of museums and archives – fall outside the scope of this document’ (cit. Feddes, F. and Wilkens C.S. (1999). *The Belvedere Memorandum, op.cit.*, 16).

459 Cit. *Ibid.*, 15.

460 Cit. *Ibid.*, 16.

461 Cit. Kuipers, M. J. and Ashworth, G. J. (2001). Conservation and Identity: A New Vision of Pasts and Futures in the Netherlands, *European Spatial Research and Policy: interdisciplinary studies on environment, society and economy*, 2001, nr. 2, 56.

462 Cf. *Ibid.*, 58-59.

This turning point stemmed from developments within the spatial planning domain, the field which had led the national discourse on landscape appreciation and protection since the 1920s. As has been pointed out, the Belvedere Memorandum was more in line with the tradition of spatial planning documents than with previous heritage policies.⁴⁶³ Indeed, if looking at the cultural-historic features considered in the *Nota Landschap* (1992), it was clearly stated that their identification had been driven by purely 'historic-geographical considerations' and that 'by including archaeological, historic-architectural and visual-spatial criteria, changes may occur'.⁴⁶⁴ Thus, from this perspective, the Belvedere Memorandum appears to have been an attempt to fill this gap in the spatial planning framework for landscape protection.⁴⁶⁵ Consequently, what had been until that moment an exclusive competence of the *Rijksdienst voor de Monumentenzorg* (RDMZ – National Agency for Historic Buildings and Monuments) now entered the field of other major Ministries besides that of Education, Culture and Science.⁴⁶⁶ This was not only intended as a one-sided opening towards a better integration of cultural history in the future spatial developments of the country by means of a so-called 'cultural planning', but it also implied a profound reform of the cultural heritage field itself.⁴⁶⁷ From the perspective of spatial planning, the field of cultural heritage had so far been conceived as a secluded 'sector', mainly focused on protecting major monuments through their isolation from the future development strategies envisaged within the national planning system.⁴⁶⁸

⁴⁶³ Schoorl, F. F. J. (2005). On Authenticity and Artificiality in Heritage Policies in the Netherlands, *Museum International*, 57(3), 83.

⁴⁶⁴ Ministerie van Landbouw, Natuurbeheer en Visserij, Directie Natuur, Bos, Landschap en Fauna (1992). *Nota landschap*, *op.cit.*, 24.

⁴⁶⁵ In relation to the influence of the 'planning protection' framework on the Belvedere conservation-through-development approach, evident is the echo of concepts like *behoud en vernieuwing in het landelijk gebied* (conservation and renewal in rural areas) and *behoud en versterking van de diversiteit van het landschap* (preserving and enhancing the diversity of the landscape), which were promoted in the context of the *Structuurschema Groene Ruimte* (Green Space Structure Scheme)(cf. Ministerie van Landbouw, Natuurbeheer en Visserij (LNV) (1995). *Structuurschema Groene Ruimte*, *op.cit.*, 16, 36).

⁴⁶⁶ Cf. Kuipers, M. J. and Ashworth, G. J. (2001). Conservation and Identity, *op.cit.*, 56-57.

⁴⁶⁷ Cf. Valk, van der, A. and Bloemers, J. H. F. (2006). Multiple and Sustainable Landscapes: Linking Heritage Management and Spatial Planning in the Netherlands, in *Multiple Landscape. Merging Past and Present*, Knaap, van der, W. and Valk, van der, A. (eds.). Wageningen: Nwo/wur-Land Use Planning Group, 27-28; Vervloet, J. A. J., Nijman, J.-H. and Somsen, A. J. (2005). Planning for the Future; Towards a Sustainable Design and Land Use of an Ancient Flooded Military Defence Line, *Landscape and Urban Planning*, 70(1-2), 154.

⁴⁶⁸ Cf. Janssen, J., Luiten, E. and Renes, H. (2014). Heritage planning and spatial development in the Netherlands: changing policies and perspectives, *International Journal of Heritage Studies*, 20(1), 3-6; Renes, J., Janssen, J., Luiten, E., and Stegmeijer, E. (2017). Heritage as sector, factor and vector: conceptualizing the shifting relationship between heritage management and spatial planning, *European Planning Studies*, 25(9), 1660-1661.

The 'culture of loss' underlying such a 'positivistic' approach to cultural heritage protection had been not only applied to monuments in the strict sense, but had been also re-proposed in the 1970s failed attempt to set the national landscape parks.⁴⁶⁹ However, it was no longer viable to face, on the one hand, the considerable extension of the monument status to include an ever-increasing range of heritage categories,⁴⁷⁰ as well as the envisaged large-scale spatial developments of the upcoming years.⁴⁷¹ Accordingly, the Belvedere vision was summarized in a watchword:

'Conservation through development is the motto. By seeking new uses, old landscapes and buildings can be saved. However, it is just as much a question of development through conservation. By using our cultural heritage in a frugal and responsible manner, we are investing in the development and strengthening of our identity, knowledge, comfort, business climate and potential for tourism'.⁴⁷²

Cultural heritage was not only worth saving for its intrinsic values. Its preservation found a new reason in the opportunities it could offer to sustainable future developments. This vision perfectly matched the switch to an 'interpretative' approach to cultural heritage, in which local identity and people's sense of belonging was now the driving force 'in determining what qualifies as heritage and how it should be dealt with'.⁴⁷³ This paradigm shift in the ethics of conservation was already felt in the field of architectural heritage as affecting the meaning attributed to authenticity – a concept that, in turn, was moving away from that of material

⁴⁶⁹ Cf. Valk, van der, A. and Bloemers, J. H. F. (2006). Multiple and Sustainable Landscapes, *op.cit.*, 23-25.

⁴⁷⁰ In particular, industrial and post-war buildings and sites are the categories that, starting from the 1980s, mostly have asked for a 'rejuvenation of the concept of heritage' in the Netherlands (cf. Janssen, J., Luiten, E. and Renes, H. (2014). Heritage planning and spatial development, *op.cit.*, 11-12; Renes, J., Janssen, J., Luiten, E., and Stegmeijer, E. (2017). Heritage as sector, factor and vector, *op.cit.*, 1660-1661. For an overview of revitalization projects on industrial heritage within the Belvedere program, see: Marulo, F. (2020). Industrial heritage and urban development: the Dutch experience, in *Conservation / Demolition. EAAE Transactions on Architectural Education no.67*, Crisan, R., Fiorani, D., Franco, G. Kealy, L., Musso, S. F. and Vorlik, P. (eds.). Prague: CTU Faculty of Architecture, 188-199).

⁴⁷¹ Within the Belvedere Memorandum, to be considered as future spatial challenges – for the solution of which cultural heritage could serve as a 'basic factor' – are 'the development of new residential areas, business parks and nature conservation areas; design of agricultural areas; the layout, alignment and design of infrastructures and other structures – that will result in dramatic changes in the appearance of the Netherlands over the next decade' (cit. Feddes, F. and Wilkens C.S. (1999). *The Belvedere Memorandum*, *op.cit.*, 4).

⁴⁷² Cit. *Ibid.*, 33.

⁴⁷³ Cit. Valk, van der, A. and Bloemers, J. H. F. (2006). Multiple and Sustainable Landscapes, *op.cit.*, 23-25; Janssen, J., Luiten, E. and Renes, H. (2014). Heritage planning and spatial development, *op.cit.*, 12.

integrity.⁴⁷⁴ Through the interpretation of historic architecture as a landscape feature implicitly suggested by the Belvedere vision, it would find an additional validation in the professed 'inauthenticity' of the Dutch historical landscape that, by virtue of its dynamic and man-made character, had change rather than continuity as its distinguishing quality.⁴⁷⁵

In Italy, a relevant advancement was marked in 2004, when a new legislative measure was passed: the *Codice dei Beni Culturali e del Paesaggio* (The Cultural Goods and Landscape Act).⁴⁷⁶ Drafted by the then *Ministero dei Beni e delle Attività Culturali* (Ministry of Cultural Goods and Activities), it represented a significant update to the legislation in the field of cultural heritage, in which landscape protection is included. Indeed, in the Act, cultural heritage is defined as 'composed by cultural goods and landscape goods';⁴⁷⁷ the latter significantly replaced the definition of 'environmental goods' used until that moment, and their protection was addressed with a dedicated part of the new legislative text.⁴⁷⁸ In it, landscape is defined as 'the territory expressive of identity, the character of which derives

⁴⁷⁴ Cf. Woud, van der, A. (1996). De Ethiek Van De Onthouding: De Beoefening Van Het Niets-Doen Bij Restauraties, *Archis*, n.6 (jun. 1996), 32-36. The Nara document on Authenticity (1994) had already made it clear, in article 13, that 'authenticity judgements may be linked to the worth of a great variety of sources of information. Aspects of these sources may include form and design, materials and substance, use and function, traditions and techniques, location and setting, and spirit and feeling, and other internal and external factors. The use of these sources permits elaboration of the specific artistic, historic, social and scientific dimensions of the cultural heritage being examined'. For an early reflection on the broadened meaning of authenticity and its impact on the preservation of historic buildings, see: Starn, R. (2002). Authenticity and historic preservation: towards an authentic history, *History of the Human Sciences*, 15(1), 1-16.

⁴⁷⁵ Schoorl, F. F. J. (2005). On Authenticity and Artificiality, *op.cit.*, 79-80. See also: Thoor, M. T., van (2020). Authenticiteit, een geloofwaardig begrip?, *Bulletin K.N.O.B.*, 119(4), 51-56; Nijhuis, S. (2020). Landschappelijke authenticiteit. Het landschap als levend system, geschiedenis en ruimtelijke beleving, *Bulletin K.N.O.B.*, 119(4), 32-37.

⁴⁷⁶ It entered into force with the D. Lgs. n.42/2004. The latter, in turn, represented the application of the law n.137/2002 (*Delega per la riforma dell'organizzazione del Governo e della Presidenza del Consiglio dei ministri, nonché di enti pubblici* - Delegation for the reform of the organization of the Government and of the Presidency of the Council of Ministers, as well as of public bodies), in which the Ministry for Cultural Heritage and Activities was called to reorganize the legislative provisions for cultural and environmental goods (art. 10).

⁴⁷⁷ Cit. *Codice dei Beni Culturali e del Paesaggio* (2004). *Parte prima: disposizioni generali, Art. 2: Patrimonio Culturale, comma 1* (Cultural Heritage and Landscape Act. First part: general provisions, Art. 2: Cultural Heritage, comma 1).

⁴⁷⁸ Cf. *Ibid.*, *Parte terza: beni paesaggistici* (Third part: landscape goods).

from the action of natural and human factors and their interrelationships'.⁴⁷⁹ The centrality given to the notion of identity in the definition of the landscape to be protected is significant. However, as specified in the Act, in this context reference is made to 'national' identity and it is limited to its 'material' and 'visible' manifestations.⁴⁸⁰ Based on this definition, landscape protection – which is 'aimed at recognizing, safeguarding and, where necessary, recovering the cultural values' that the landscape expresses – is primarily entrusted to the State, which exercises it through the Ministry of Cultural Goods.⁴⁸¹ In connection with this, the Act introduced for the first time a distinction between protection and the concept of 'enhancement'. The latter encompasses all those activities aimed at 'promoting the knowledge of cultural heritage and guaranteeing the best conditions for its public use and fruition',⁴⁸² and it is entrusted to regional authorities.⁴⁸³ In relation to landscape goods, their enhancement specifically means promoting 'activities of knowledge, information and training, of requalification and fruition of the landscape'. Additionally, reference is made to 'the creation of new landscape values' as long as they are 'coherent and integrated' and 'in compliance with the protection requirements'.⁴⁸⁴

⁴⁷⁹ Cf. *Ibid.*, Parte terza: beni paesaggistici, Titolo I: protezione e valorizzazione, Capo I: disposizioni generali, Art. 131: Paesaggio, comma 1 (Third part: landscape goods, Title I: protection and enhancement, Chapter I: general provisions, Art. 131: Landscape, comma 1). The definition of landscape as here proposed is the result of the modification of the article 131 occurred in 2008 (D.Lgs. n.63), after the ratification of the European Landscape Convention (2006). However, already in the original version (2004) – 'by landscape we mean a homogeneous part of the territory whose characteristics derive from nature, from human history or from reciprocal interrelationships' – and in a slight subsequent modification (D.Lgs. n. 157/2006) the influence of the ELC is already visible.

⁴⁸⁰ Indeed, clearly stated is that the Act 'protects the landscape in relation to those aspects and characters that constitute a material and visible representation of national identity, as an expression of cultural values' (cit. *Ibid.*, comma 2).

⁴⁸¹ In agreement with the principles set in the Italian Constitution (see. paragraph 3.3), the priority role of the State in the exercise of protection is inherent to cultural heritage at broad – thus, concerning both cultural and landscape goods – to which the regions and other territorial authorities (i.e. provinces, municipalities, metropolitan cities) can cooperate (cf. *Codice dei Beni Culturali e del Paesaggio* (2004). *Parte prima: disposizioni generali, Art. 3: Tutela del patrimonio culturale & Art. 4: Funzione dello Stato in materia di tutela del patrimonio culturale, Art. 5: Cooperazione delle regioni e degli altri enti pubblici territoriali in materia di tutela del patrimonio culturale* - Cultural Heritage and Landscape Act (2004). Part One: General Provisions, Art. 3: Protection of Cultural Heritage & Art. 4: Function of the State in the Protection of Cultural Heritage, Art. 5: Cooperation of the regions and other territorial public bodies in the field of cultural heritage protection).

⁴⁸² Cit. *Ibid.*, Art. 6: *Valorizzazione del patrimonio culturale* (Enhancement of cultural heritage).

⁴⁸³ The regions have legislative power on enhancement matters, to the implementation of which the local authorities also contribute (cf. *Ibid.*, Art. 7: *Funzioni e compiti in materia di valorizzazione del patrimonio culturale* (Functions and tasks relating to the enhancement of cultural heritage)).

⁴⁸⁴ Cit. *Ibid.*, Art. 131: *Paesaggio* (Landscape), comma 5.

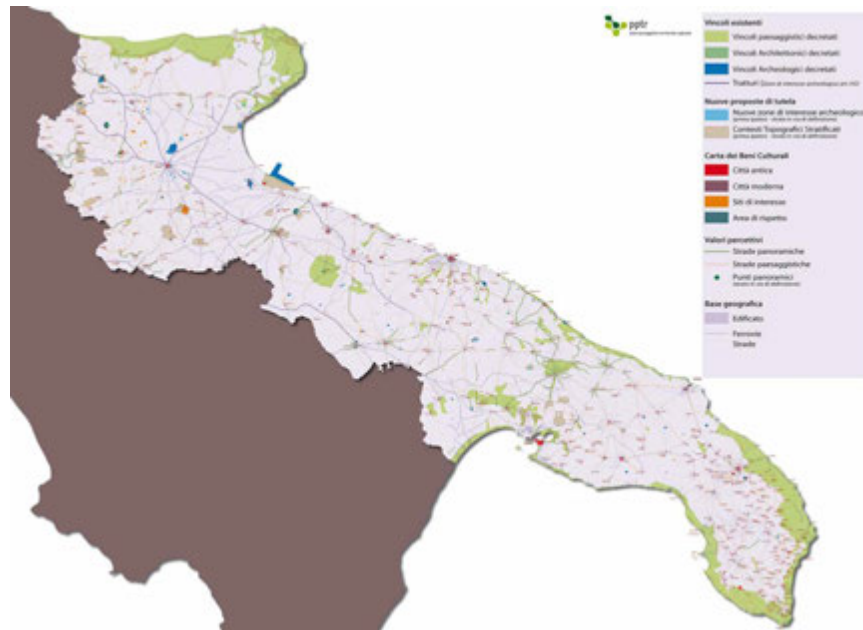


FIG. 3.23 Puglia region (IT), *Piano Paesaggistico Territoriale Regionale* (Regional Landscape Plan): *Carta del sistema paesaggistico, percettivo e storico-culturale* (Map of the landscape, perceptive and historic-cultural system) (2010) (Regione Puglia, retrieved at: <https://pugliacon.regione.puglia.it/web/sit-puglia-sit/pptr-piano-paesaggistico-territoriale-regionale> [10.06.2022])

Within this framework, 'landscape goods' encompass 'properties and areas of considerable public interest' – mostly covering the kind of areas already identified by the Bottai law (n.1497/1939)⁴⁸⁵ – for which a 'declaration of considerable public interest' is needed.⁴⁸⁶ In relation to this, the Act introduced the institution of 'regional

⁴⁸⁵ Reference is made to 'immovable things that have conspicuous characters of natural beauty, geological singularity or historical memory, including monumental trees', 'the villas, gardens and parks' not protected as cultural goods but which in any case 'stand out for their uncommon beauty', the 'complexes of immovable things that make up a characteristic appearance with an aesthetic and traditional value, including historic centres and cores', and finally the 'panoramic beauties and also those points of view or belvedere, accessible to the public, from which one can enjoy the spectacle of such beauties' (cit. *Ibid.*, Art. 136: *Immobili ed aree di notevole interesse pubblico* – properties and areas of considerable public interest). On the relationship between the Cultural Goods and Landscape Act and the European Landscape Convention, and the retention of concepts from the previous Italian protection tradition, see: Cartei, G.F. (2008). *Codice dei beni culturali e del paesaggio e Convenzione europea: un raffronto*, *Aedon*, 3(2008).

⁴⁸⁶ Cf. *Ibid.*, Art. 137: *Commissioni regionali* (Regional commissions), Art. 138: *Avvio del procedimento di dichiarazione di notevole interesse pubblico* (Start of the declaration procedure of considerable public interest), Art. 139: *Procedimento di dichiarazione di notevole interesse pubblico* (Declaration procedure of considerable public interest), Art. 140: *Dichiarazione di notevole interesse pubblico e relative misure di conoscenza* (Declaration of considerable public interest and related knowledge measures).

commissions' with the task of making proposals on the possible areas in their territory requiring the starting of a declaration procedure.⁴⁸⁷ Alongside these, the range of properties addressed by the Act also includes 'areas protected by law', which mostly refer to sites of a more environmental relevance, as already identified by the Galasso law (n.431/1985).⁴⁸⁸ Nevertheless, they fall within the definition of 'landscape goods' and are to be protected 'as an expression of cultural values'.⁴⁸⁹ Finally, the possibility is foreseen to extend protection to properties and areas identified as valuable in the 'landscape plans'. The Act, indeed, proposed this planning instrument once again in a new and updated version. In the wake of a long tradition, the scope of this last generation of landscape plans is still to 'recognize peculiar aspects and characters, as well as landscape characteristics' – 'impressed by nature, history and their interrelations' – in their territory of influence.⁴⁹⁰ Through the identification of so-called *ambiti paesaggistici* (landscape areas), these plans can provide specific use regulations, prescriptions and quality objectives.⁴⁹¹ Their elaboration is entrusted to the regional authorities in mandatory consultation with the Ministry of Cultural Goods, and are to be extended to the overall regional territory (FIG. 3.23).⁴⁹²

⁴⁸⁷ Cf. *Ibid.*, Art. 137: *Commissioni regionali* (Regional committees).

⁴⁸⁸ Reference is made to the 'coastal territories' and the 'territories bordering the lakes' within 300 meters from the shoreline; 'rivers, streams, watercourses', included in a special list, with the relative banks; the 'mountains for the part exceeding 1,600 meters above sea level for the Alpine chain and 1,200 meters above sea level for the Apennine chain and the islands'; 'glaciers and glacial cirques'; 'national or regional parks and reserves, as well as the external protection territories of the parks'; 'territories covered by forests and woods, even if crossed or damaged by fire, and those subject to reforestation restrictions'; 'the areas assigned to agricultural universities and the areas burdened by civic uses'; 'wetlands' included in a specific list; the 'volcanoes'; the 'areas of archaeological interest' (cf. *Ibid.*, Art. 142: *Aree tutelate per legge* (Areas protected by law)).

⁴⁸⁹ Cf. *Ibid.*, Art. 131: *Paesaggio* (Landscape), comma 2.

⁴⁹⁰ This includes the recognition, delimitation and adequate representation of both the afore-mentioned 'properties and areas of considerable public interest' and the 'areas protected by law', as well as that of further areas considered as significant in the mapping of the landscape characteristics of the regional territory (cf. *Ibid.*, Art. 143: *Piano paesaggistico* (Landscape plan)).

⁴⁹¹ Cf. *Ibid.*, Art. 135: *Pianificazione paesaggistica* (Landscape planning).

⁴⁹² The possibility to involve also the then *Ministero dell'ambiente e della tutela del territorio e del mare* (Ministry of the Environment and Land and Sea Protection) is also contemplated (cf. *Ibid.*, Art. 143: *Piano paesaggistico* (Landscape plan), comma 2). On the methodological and practical issues connected to the elaboration of landscape plans in Italy, see: AA.VV. (2014). A che punto siamo con la pianificazione territoriale regionale e paesaggistica? (Parte prima), *Urbanistica (INU)*, Anno XXXXI (Novembre-Dicembre), 7-43; AA.VV. (2014). Dossier Piani Paesaggistici Italiani: alcuni casi emblematici regionali, *Annali di storia dell'urbanistica e del paesaggio*, 2014(2), 231-277; AA.VV. (2014). A che punto siamo con la pianificazione territoriale regionale e paesaggistica? (Parte seconda), *Urbanistica (INU)*, Anno XXXXI (Novembre-Dicembre), 10-37; Orlandin, E. (2015). *Tra paesaggio e piani paesaggistici: questioni di metodo e paradigmi indeterminate*. Trento: Edizioni del Faro; Breganze, M. (2018). *L'adeguamento degli strumenti urbanistici e territoriali ai piani paesaggistici*. Napoli: Editoriale scientifica; Vettori, N. (2017). Il piano paesaggistico alla prova. I modelli della Toscana e della Puglia, *Aedon*, 2017(1).

A significant advancement is represented by the 'coordination measures with territorial and sector planning tools', and in the superordination of the landscape plans to any other 'plan, program and project' of national or regional nature.⁴⁹³ The prescriptions set by such plans include the 'identification of the recovery interventions of compromised and degraded areas', as well as those 'measures necessary for the correct insertion in the landscape context of transformations of the territory'. In relation to the latter – based on the prohibition of destroying or making changes 'that prejudice the landscape values subject to protection'⁴⁹⁴ – any intervention on 'landscape goods' is subject, within the Act, to a 'landscape authorization' which consists in the 'assessment of compatibility between landscape interest and planned intervention'.⁴⁹⁵

As prescribed within the Act, the necessary documentation for this authorization – i.e., the 'landscape report' – was shortly after addressed with a special decree at the proposal of the Minister of Cultural Goods.⁴⁹⁶ The regions were identified as the competent authority for granting this authorization upon binding opinion of the local Superintendencies within the Ministry of Cultural Goods.⁴⁹⁷

⁴⁹³ Cf. *Ibid.*, Art. 145: *Coordinamento della pianificazione paesaggistica con altri strumenti di pianificazione* (Coordination of landscape planning with other planning tools).

⁴⁹⁴ Cf. *Ibid.*, Art. 146: *Autorizzazione* (Authorization), comma 1.

⁴⁹⁵ Cf. *Ibid.*, Art. 146: *Autorizzazione* (Authorization), comma 3.

⁴⁹⁶ Reference is made to the D.P.C.M. of 12 December 2005 – concerning the Individuazione della documentazione necessaria alla verifica della compatibilità paesaggistica degli interventi proposti, ai sensi dell'articolo 146, comma 3, del Codice dei beni culturali del paesaggio di cui al D.Lgs. 22 gennaio 2004, n. 42 (Identification of the documentation necessary to verify the landscape compatibility of the proposed interventions, pursuant to article 146, comma 3, of the Cultural heritage and Landscape Act referred to in Legislative Decree 22 January 2004, n. 42). About the development of the 'landscape report', its contents and applications, see: Scazzosi, L., Di Bene, A. (Eds.) (2006). *La relazione paesaggistica: finalità e contenuti*: Decreto del Presidente del Consiglio dei Ministri, 12 dicembre 2005. Roma: Gangemi; Banchini, R. (2009, 2011). *La relazione paesaggistica: analisi e valutazione per la redazione degli elaborati*. Roma: DEI Tipografia del Genio Civile; Gurrieri, F. (2011). *Guasto e restauro del paesaggio: fenomenologia del guasto, il restauro del paesaggio, la Convenzione Europea del paesaggio, il Codice dei beni culturali e del paesaggio, la relazione paesaggistica*. Firenze: Polistampa, 221-244; Angrilli, M., Baricchi, W. and Boschi, F. (Eds.) (2011). *Progetto e paesaggio: guida pratica per l'autorizzazione e la relazione paesaggistica*. Santarcangelo di Romagna: Maggioli; Scazzosi, L. and Branduini, P. (2014). *Paesaggio e fabbricati rurali: suggerimenti per la progettazione e la valutazione paesaggistica*. Santarcangelo di Romagna: Maggioli; Trovò, F. (2016). *La relazione paesaggistica ai sensi del D.P.C.M. 12 dicembre 2005, in Paesaggi delle acque: un percorso formativo*, Reho, M., Lancerini, E. and Magni, F. (eds.). Padova: Il poligrafo, 89-95; Tugnoli, A. (2019). *Paesaggi svelati: linee guida per elaborare la relazione paesaggistica*. Bologna: Format; Breganze, M. (2019). *La relazione paesaggistica e la sua evoluzione giuridica, Rivista giuridica di urbanistica: diritto e territorio*, 1(2019), 79-90.

⁴⁹⁷ Cf. *Codice dei culturali e del paesaggio, op.cit.*, Art. 146: *Autorizzazione* (Authorization), comma 5.

By comparing these two initiatives, it is possible to see the different ways of dealing with the new challenge of integrating nature and culture in the Netherlands and Italy. In the first case, there is a greater openness towards the cultural dimension, which is less represented in the tradition of Dutch landscape policies. In the Italian case, the effort takes shape through the subversion of the balance between landscape and environment – in favour of the former – while remaining in the domain of cultural heritage, and in a greater openness and an improved relationship with spatial planning. However – apart from the different interpretation of what is to be considered as ‘sectoral’ in the overall balance of interests at stake – it is necessary to highlight the different nature of the two initiatives: on the one hand, an incentive program which, as such, is limited to promoting a change by means of state subsidies, on the other a legislative text of a prescriptive nature. Nonetheless, the substantial start of a process for integrating different approaches – which necessarily moved along two different directions – is the symptom of a desired trend reversal, which in turn has its roots in the contemporary interdisciplinary debate developed in both contexts within landscape studies.

Indeed, in order to concretely support the Belvedere vision, the different approaches embodied by cultural history and spatial planning called for a change in methods and attitudes in the Netherlands. The two domains traditionally worked with different dynamics, languages and values, resulting in a relationship that often was under stress.⁴⁹⁸ Consequently, the policy document suggested integration in terms of a mutual expansion of their ordinary perspectives in each other’s field.⁴⁹⁹ At the same time, the disciplinary fields traditionally inscribed in the domain of cultural history – each with its own theoretical background, methods and tools – had already initiated what in the Belvedere policy was a desirable internal integration.⁵⁰⁰

⁴⁹⁸ ‘One is concerned with the past, the other with the future. But the basic starting point is the present. Nevertheless, their relationship is often characterized by a blind spot between historic values and future perspectives’ (cit. Feddes, F. and Wilkens C.S. (1999). *The Belvedere Memorandum, op.cit.*, 31).

⁴⁹⁹ From a practical point of view, changing working methods and attitudes meant that the two disciplines had to broaden their perspectives. If cultural history was seen as traditionally characterized by a ‘reflective approach’, while spatial planning by an ‘anticipatory approach’, broadening the vision would have resulted in the two disciplines ‘being complemented by their converse: an anticipatory approach to cultural history, and a reflective approach to spatial planning’. In other words, while keeping the existing sectoral policy for the protection of cultural heritage, cultural history had to, however, ‘take into account spatial developments and the opportunities for such developments, in order to anticipate them without regarding them as a threat’. At the same time, ‘the horizons of spatial policy must also be widened. It must reflect on the historic processes more than has hitherto been the case, and must recognize and accept existing elements and a rich source of inspiration for the future’ (cit. Feddes, F. and Wilkens C.S. (1999). *The Belvedere Memorandum, op.cit.*, 33).

⁵⁰⁰ Within the memorandum, reference is made to a ‘intrinsic interrelationship between archaeology, the conservation of listed buildings and that of historic landscapes’ (cit. *Ibid.*).

Starting from the 1990s, the disciplines of archaeology, history of architecture and cultural geography had, indeed, found in the landscape a unifying concept to develop a historical research method enabling interdisciplinary cooperation: the landscape biography. In it, the historical landscape is considered as the result of a long and complex process of sedimentation, in which archaeological, architectural and geographical structures have mingled and overlapped, together with the ideologies and cultural representations attached to them.⁵⁰¹ Like a 'text book', the landscape therefore lends itself for a biographical approach, in which its evolution is faced from a diachronic perspective, going beyond the traditional separations between the historical-archaeological disciplines.⁵⁰² Additionally, the landscape biography was not only conceived for contributing to scientific knowledge through the interdisciplinary exchange between the historic-archaeological disciplines, but – in line with the Belvedere objectives – it was also intended as a versatile tool for facilitating the external integration with non-historic disciplines and, as an 'action research' method, the trans-disciplinary dialogue with non-academic stakeholders.⁵⁰³

⁵⁰¹ Cf. Renes, J., Beek, R. van, Bloemers, T., Keunen, L., Kolen, J., and Londen, H. van (2008). The Netherlands, in *Landscape as Heritage. The Management and Protection of Landscape in Europe*, a summary by the COST A27 project "LANDMARKS", G. Fairclough and P. Grau Møller (eds.), Berne: Geographica Bernesia, 177-178.

⁵⁰² Cf. *Ibid.*, 177. A biographical approach to landscape historical studies is, at first, proposed in human geography at the end of the 1970s (cf. Samuels, M.S. (1979). The biography of landscape: cause and culpability, in *The interpretation of ordinary landscapes*, Meinig, D. W. (ed.). New York and Oxford: Oxford University Press, 51-88). However, it would be the 1980s' anthropological theories in the field of material culture studies (cf. Appadurai, A. (1986). Introduction: commodities and the politics of value, in *The social life of things. Commodities in cultural perspective*, Appadurai, A. (ed.). Cambridge: Cambridge University Press, 3-63; Kopytoff, I. (1986). The cultural biography of things: commodisation as process, in *The social life of things, op.cit.*, 64-91) to influence the first applications of biography to landscape archaeological research (cf. Roymans, N. (1995). The cultural biography of unrefields and the long-term history of a mythical landscape, *Archeological Dialogues* 2. Assen, 2-24; Theuvs, F. (2001). Maastricht as a centre of power in the early Middle Ages, in *Topographies of power in the early Middle Ages*, Jong, de, M., Theuvs, M. and Rijn, van, F. (eds.). Leiden, Boston and Köln: Brill, 155-216). For the latest advancements with landscape biography, see: Kolen, J., Renes, J. and Hermans, R. (eds) (2015). *Landscape biographies: geographical, historical and archaeological perspectives on the production and transmission of landscapes*. Amsterdam: Amsterdam University Press; Kolen, J., Renes, J. and Bosma, K. (2018). The landscape biography approach to landscape characterization: Dutch perspectives, in *Routledge Handbook of Landscape Character Assessment: Current Approaches to Characterisation and Assessment*, Fairclough, G. J., Sarlööv Herlin, I. and Swanwick, C. (eds). Abingdon, Oxon: Routledge, 168-184.

⁵⁰³ In parallel with the Belvedere program, a national research program of the Dutch Organization for Scientific Research (NWO) was started – *Bodemarchief in Behoud en Ontwikkeling* (Protection and development of the Dutch archaeological-historical landscape) – in which the landscape biography research method was widely used as a tool for exploring the internal and external integrations fostered by the Belvedere memorandum (cf. Bloemers, J. H. F., Wijnen, M. H. J. M. N. and During, R. (2001). *Bodemarchief in behoud en ontwikkeling: de conceptuele grondslagen*. Den Haag: NWO). The outcomes of the research program (2000-2008) were published in: Bloemers, J. H. F. and Alders, G. P. (2010). *The cultural landscape & heritage paradox: protection and development of the Dutch archaeological-historical landscape and its European dimension*. Amsterdam: Amsterdam University Press.

In Italy there has been a substantial strengthening of the interactions between the historical disciplines in the field of landscape studies. In this regard, the opening of archaeology to landscape research has represented an important evolution, according to a process – started as early as in the 1980s – aimed at overcoming the rigid periodizations to which the discipline is traditionally linked.⁵⁰⁴ In parallel, the field of architectural history has also seen the development of new methodological advancements for the adaptation of the tools and methods of historical research to the study of historical landscapes, with an opening towards the neighbouring domains of geography and ecology.⁵⁰⁵ On the other hand, the fields of human and cultural geography have strengthened their contribution and position in landscape studies with an emphasis on the possible interlinkages with the cultural heritage domain.⁵⁰⁶ Finally, the recent scientific production in the field of architectural restoration is important. In line of a long-standing opening towards the landscape dimension of built heritage in its study and appreciation,⁵⁰⁷ this field has broadened its research lines, encompassing the study of historical landscapes according to

⁵⁰⁴ Following the seminal contribution of R. Francovich in the field of medieval archaeology (cf. Francovich, R. and Cherubini, G. (1973). *Forme e vicende degli insediamenti nella campagna Toscana dei secoli 13-15*, *Quaderni storici*, settembre-dicembre 1973, pp. 878-904; Francovich, R. and Piccinni, G. (1976). *Aspetti del popolamento e del paesaggio nelle campagne senesi bassomedioevali*. In: *I castelli del senese: strutture fortificate dell'area senese-grossetana*, vol. 2. Milano: Electa; Francovich, R., Gelichi, S. and Parenti, R. (1980). *Aspetti e problemi di forme abitative minori attraverso la documentazione materiale nella Toscana medievale*. Firenze: All'insegna del Giglio; Francovich, R. (1984). *Per la storia della metallurgia e dell'insediamento medievale sulla costa toscana: lo scavo del villaggio minerario di San Silvestro*, *Rassegna di Archeologia*, 1984-1985(4); Id. (1991). *Rocca San Silvestro*. Roma: Leonardo de Luca; Id. and Mellini, M. (1997). *San Silvestro: guida al parco archeominerario*. Piombino: Parchi Val di Cornia; Id. (1997). *A proposito dei parchi minerari della Toscana: riflessioni irriverenti di un archeologo medievale*, *ANANKE*, 20(1997), 42-49; Id. and Valenti, M. (Eds.) (2005). *Archeologia dei paesaggi medievali: avanzamento di progetto anni 2000-2004*. Siena: Università degli Studi di Siena; Patitucci Uggeri, S. (Ed.) (2007). *Archeologia del paesaggio medievale: studi in memoria di Riccardo Francovich*. Firenze: All'insegna del Giglio; AA.VV. (2008). *Una sola moltitudine: scritti e ricordi per Riccardo Francovich*. Firenze: All'insegna del Giglio), in recent years the field of landscape archaeology has reached a significant methodological systematization (cf. Cambi, F. and Terenato, N. (1994, 1997, 1998, 1999, 2002). *Introduzione all'archeologia dei paesaggi*. Roma: Carocci; Cambi, F. (2003). *Archeologia dei paesaggi antichi: fonti e diagnostica*. Roma: Carocci; Id. (Ed.) (2011). *Manuale di archeologia dei paesaggi: metodi, fonti, contesti*. Roma: Carocci).

⁵⁰⁵ Cf. Tosco, C. (2007, 2017). *Il paesaggio come storia*. Bologna: Il mulino; Id. (2009). *Il paesaggio storico: le fonti e i metodi di ricerca tra Medioevo ed età moderna*. Roma-Bari: Laterza.

⁵⁰⁶ Cf. Andreotti, G. (1992). *Ipotesi sul paesaggio in geografia*. Trento: Università degli studi di Trento; Id. (1996). *Paesaggi culturali: teoria e casi studio*. Milano: Unicopli; Id. (1998). *Alle origini del paesaggio culturale: aspetti di filologia e genealogia del paesaggio*; Vallega, A. (2001). *Il paesaggio: rappresentazione e prassi*, *Bollettino della Società Geografica Italiana*, v.6, f.4, 553-587; Mazzanti, R. (2006). *Geografia del paesaggio*. San Giuliano Terme: Felici; Vallega, A. (2008). *Indicatori per il paesaggio*. Milano: Franco Angeli; Andreotti, G. (2021). *Nobiltà del paesaggio*. Trento: Valentina Trentini Editore.

⁵⁰⁷ See: paragraph 3.3.

different periods and thematic declinations,⁵⁰⁸ the analysis of landscape policies in a diachronic and comparative perspective,⁵⁰⁹ and often playing a mediating role among the other fields involved in multi-disciplinary experiences in both theoretical reflections⁵¹⁰ and applied research.⁵¹¹ Finally, the more delicate opening towards transdisciplinary connections between spatial planning and historical disciplines, which has seen efforts in both directions, should be mentioned.⁵¹²

In both contexts, the impact of these advancements in the fields of policy making and science has been confirmed in the last initiatives on a national scale, which represent the last step of a still on-going dialectical process between tradition and innovation in the new generation of landscape policies.

In the Netherlands, the shift towards an integrated approach to cultural history, which was promoted by the Belvedere program, led to some institutional changes. In particular, in 2006 the *Rijksdienst voor Archeologie, Cultuurlandschap en Monumenten* (National Agency for Archaeology, Cultural Landscape and Monuments)

⁵⁰⁸ Cf. For an overview on the state of the art in research on rural landscapes, see: Scazzosi, L. (2017). Il paesaggio, sfida e risorsa materiale, immateriale e disciplinare. In: *RICerca/REStauo, Sezione 3a: Progetto e cantiere: orizzonti operativi*, Fiorani, D. (Ed.). Roma: Quasar, pp. 644-655. For military landscapes, see: Damiani, G. and Fiorino, D. R. (Eds.) (2017). *Military landscapes: scenari per il futuro del patrimonio militare: un confronto internazionale in occasione del 150. Anniversario della dismissione delle piazzaforti in Italia / A future for military heritage: an international overview event celebrating the 150th anniversary of the decommissioning of Italian fortresses*. Milano: Skira.

⁵⁰⁹ Cf. Scazzosi, L. (Ed.) (1999). *Politiche e culture del paesaggio: esperienze internazionali a confronto*. Roma: Gangemi; Id. (Ed.) (2001). *Politiche e culture del paesaggio: nuovi confronti*. Roma: Gangemi; Picone, R. (2017). Restauro architettonico e tutela del paesaggio in Italia. Prospettive di un dialogo storico, in *RICerca/REStauo, op.cit.*, 656-667; Banchini, R. and Scazzosi, L. (2018). *Rapporto sullo stato delle politiche per il paesaggio*. Roma: Ministero per i Beni e delle Attività Culturali e del Turismo.

⁵¹⁰ Cf. Fiorino, D. R. (2017). Il restauro incontra altre discipline: dalla conservazione dell'architettura un modello per la tutela del paesaggio, in *RICerca/REStauo, op.cit.*, 668-678; Russo, V. and Marino, B. (2017). Iconografia e Restauro. Letture, intrecci ed esperienze nel progetto per l'architettura storica e il paesaggio, *Eikonocity*, 2(2017), 7-8.

⁵¹¹ Cf. Musso, S. F. and Franco, G. (2006). Guida agli interventi di recupero dell'edilizia diffusa nel Parco nazionale delle Cinque Terre. Venezia: Marsilio; Russo, V. (Ed.). (2014). Landscape as architecture: Identity and conservation of Crapolla cultural site. Firenze: Nardini Editore; Id. (2020). La tutela attraverso la ricerca. Il sito di Crapolla da patrimonio culturale a 'bene comune' (2008-2018), in *Restauro: Conoscenza, Progetto, Cantiere, Gestione*, Musso, S. F. and Pretelli, M. (Eds.). Roma: Quasar, 167-176; Marino, B.G. (Ed.) (2019). *Across the Stones: Immagini, paesaggi e memoria. La conoscenza interdisciplinare per la conservazione e la valorizzazione della Fortezza di Girifaco*. Roma: Paparo.

⁵¹² Carta, M. (1999). *L'armatura culturale del territorio: il patrimonio culturale come matrice di identità e strumento di sviluppo*. Milano: Franco Angeli; Della Torre, S. (2018). The management process for built cultural heritage: preventive systems and decision making, in *Innovative Built Heritage Models*, Van Balen, K. and Vandesande, A. (Eds.). Balkema: Taylor and Francis Group, 13-20; Russo, M. (2019). Il palinsesto del paesaggio come progetto del territorio, in *Across the Stones, op.cit.*, 101-107.

was introduced, representing an important step for the reintegration of fields that had been covered by different agencies for a long time, and for the introduction of cultural landscapes among the competences of the Dutch cultural heritage agency.⁵¹³ After three years, in 2009, the name of the office was changed into *Rijksdienst voor het Cultureel Erfgoed* (National Agency for Cultural Heritage).⁵¹⁴ This broader definition was maintained when, in 2016, a new law was issued: the *Erfgoedwet* (Heritage Act). This legislative measure aimed at updating the national legal framework for cultural heritage, in the light of the evolution that this field had undergone in the last thirty years.⁵¹⁵ In it, cultural heritage encompasses both ‘material and immaterial resources inherited from the past’, resulting from human work and creativity as well as from ‘the interaction between man and the environment’.⁵¹⁶ With reference to tangible heritage, it mentions movable and immovable properties – defined, respectively, as *cultuurgoed* (cultural good) and *monument* (monument) – and their combinations,⁵¹⁷ as well as to the possible actions for their protection.⁵¹⁸ However, surprisingly, landscape protection is not directly addressed in any of the provisions enacted by this law, which also saw the suppression of *stads- en dorpsgezichten* (urban and village conservation areas) from

⁵¹³ Reference is made to the *Rijksdienst voor de Monumentenzorg* (National Agency for the Preservation of Monuments) and the *Rijksdienst voor het Oudheidkundig Bodemonderzoek* (National Agency for Archaeological Soil Research). These two agencies – originally belonging to the former *Rijksbureau voor de Monumentenzorg* (National Agency for the Preservation of Monuments) (1918) had been split since 1947 (cf. Een omgekeerde stamboom. 100 jaar Rijksdienst voor het Cultureel Erfgoed, *Tijdschrift van de Rijksdienst voor het Cultureel Erfgoed*, 2018(4), 8–9).

⁵¹⁴ In 2011, the National Agency for Cultural Heritage will also incorporate the *Instituut Collectie Nederland* (Netherlands Institute for Collections). The latter was, in turn, the result of the unification of the different offices previously involved in the field of artistic heritage (cf. *Ibid.*).

⁵¹⁵ *Beleidsbrief Modernisering Monumentenzorg* (MOMO - Policy letter Modernization Monument Care) (2009)

⁵¹⁶ Cit. *Erfgoedwet* (2016). Chapter 1: General Provisions, Art. 1.1: Definitions.

⁵¹⁷ In particular, the law addresses groups of cultural goods as ‘collections’ (cf. *Ibid.*), while the combination of a national monument and cultural goods that ‘in conjunction with each other are of special cultural-historical or scientific significance’ are defined as ‘ensembles’ (cf. *Erfgoedwet* (2016). Chapter 3: Designation as protected heritage, Art. 3.13: Designation as ensemble). Moreover, specific attention is paid to ‘archaeological monuments’, defined as ‘land which is part of cultural heritage because of its remains, objects or other traces of human presence in the past’ (cit. *Erfgoedwet* (2016). Chapter 1: General Provisions, Art. 1.1: Definitions). Previously included in the *Monumentenwet* from 1988, following the signing of the Malta Convention archaeological heritage was given an independent legislative framework with the *Wet op de archeologische monumentenzorg* (Archaeological Conservation Act) in 2006; the latter was eventually abrogated by the Heritage Act (2016), in which archaeological heritage conservation is specifically addressed in a dedicated chapter of the law (cf. *Erfgoedwet* (2016). Chapter 5: Archaeological monument conservation).

⁵¹⁸ In particular, reference is made to *normaal onderhoud* (maintenance) – including the ‘necessary regular work aimed at preserving the monumental value’ – and *restauratie* (restoration) – defined as ‘work that exceeds normal maintenance and is necessary for repair’ (cf. *Erfgoedwet* (2016). Chapter 1: General Provisions, Art. 1.1: Definitions).

the range of cultural heritage categories to be protected.⁵¹⁹ A reason for that can be found in the parallel development of the new *Omgevingswet* (Environment and Planning Act). The draft of this law – initiated in 2016 – aimed at bringing together all previous laws in the field of spatial planning and environmental management, thus constituting an organic set of regulations for the overall physical environment of the Netherlands.⁵²⁰ Together with promoting its ‘sustainable development’ and ‘habitability’, the ‘protection’ of the physical environment – which encompasses its preservation as well as its improvement⁵²¹ – played a fundamental role in order to keep it in ‘safe and healthy’ conditions, and to provide for its effective management, use and development ‘to fulfil societal needs’.⁵²² Within this framework, landscapes – the definition of which clearly echoes that of the European Landscape Convention⁵²³ – find their place in the law as one of the components of the physical environment, at the side of cultural heritage and the natural environment.⁵²⁴ This testifies its recognized interdependence with the natural and cultural spheres but, at the same time, it also exceeds the two domains. However, ‘cultural landscapes’ are also included in the definition of cultural heritage.⁵²⁵ Moreover, the ‘duties and

⁵¹⁹ The latter is the end result of a long debate, started already at the time of the new *Monumentenwet* (1988) and then continued with the *Beleidsbrief Modernisering Monumentenzorg* (MOMO - Policy letter Modernization Monument Care) (2009) (cf. Niemeijer, F. (2012). Bescherming van stads- en dorpsgezichten. Van beeld naar inhoud, *Bulletin KNOB*, 2012-1, pp. 26-35).

⁵²⁰ Cf. Minister of Interiors and Kingdom Relations (2021). *The Environment and Planning Act of the Netherlands: consolidated version June 2021*. Chapter 1: General provisions, Art. 1.2: the physical environment, 8.

⁵²¹ Cf. *Ibid.*, Annex to the Article 1.1 of this Act, 190.

⁵²² Cit. *Ibid.*, Chapter 1: General provisions, Art. 1.3: objectives of the Act in relation to society, 8.

⁵²³ Within the law, landscapes are defined as ‘areas in the form in which they are perceived by human beings, the character of which is determined by natural and human factors and the interaction between the two’ (cit. *Ibid.*, Annex to the Article 1.1 of this Act, p. 193). In the Netherlands, the European Landscape Convention has been signed and ratified in 2005.

⁵²⁴ Cf. *Ibid.*, Chapter 1: General provisions, Art. 1.2: the physical environment, 8. The notion of ‘natural environment’ mentioned in the scope of the Environment and Planning Act is, however, not addressed with a specific definition in the appendix to the law. In turn, several other neighbouring concepts are defined, like that of ‘natural habitat’ (cf. *Ibid.*, Annex to the Article 1.1 of this Act, p. 194) and ‘natural resources’ (cf. *Ibid.*), as well as the different degrees of protection for natural areas, like in the definitions of ‘national park’ (cf. *Ibid.*), ‘special national nature conservation area’ (cf. *Ibid.*, p. 191) and ‘Natura 2000 site’ (cf. *Ibid.*, 194).

⁵²⁵ Cultural heritage is here defined as composed by ‘monuments, archaeological monuments, urban and village conservation areas, cultural landscapes and, insofar as this is or may be the subject of a balanced assignment of function to sites in the physical environment plan, other cultural heritage as referred to in Article 1.1 of the Heritage Act’ (cit. *Ibid.*, p. 191). With ‘other cultural heritage’ reference is made to movable cultural heritage that, even if falling out the specific scope of the Environment and Planning Act, is, however, to be considered when implementing substantive transformations on the physical environment (cf. Rijksdienst voor het Cultureel Erfgoed (2020). *Handreiking begrippenkader cultureel erfgoed onder de Omgevingswet. Hoe gemeenten cultureel erfgoed beter kunnen beschermen, door wettelijke begrippen eenduidig toe te passen (in het omgevingsplan)*, 5).

powers' defined by the Environment and Planning Act have been outsourced to the municipalities.⁵²⁶ Therefore, the protection of landscapes is mainly provided by the local authorities through the so-called 'physical environmental plan'.⁵²⁷ This instrument consists in the allocation of functions in the territory of the municipality and in the setting of rules for keeping its 'environmental values' that, in particular, concern the identification of those activities requiring an 'environmental permit';⁵²⁸ among the latter, all the 'activities involving nationally listed monuments', 'Natura 2000 activities' and 'environmentally harmful activities' are identified as requiring the this permit.⁵²⁹ Thus, in the light of decentralization, the legal protection of landscapes in the Netherlands will only be provided if local authorities recognize and introduce them in their environmental plans.⁵³⁰

⁵²⁶ Cf. Minister of Interiors and Kingdom Relations (2021). *The Environment and Planning Act of the Netherlands, op.cit.*, Chapter 2: Duties and powers of administrative bodies, Art. 2.3: general criteria for the distribution of duties and powers, 11).

⁵²⁷ However, superordinate authorities – i.e. water boards, provinces, the State – can exercise their power in specific circumstances by means of regulations – 'environmental regulations' in the case of provinces, 'water board regulations' for water boards – instruction rules and instructions. In some cases, their involvement is mandatory, like for the outline of instruction rules for the definition of cultural heritage (including world heritage) and on maintenance of natural resources within the environmental plans, which must be provided by the State through its competent ministries. In relation to cultural heritage, see: Rijksdienst voor het Cultureel Erfgoed (2020). *Handreiking begrippenkader cultureel erfgoed onder de Omgevingswet, op.cit.*.

⁵²⁸ About the 'physical environmental plan', see: Minister of Interiors and Kingdom Relations (2021). *The Environment and Planning Act of the Netherlands, op.cit.*, Chapter 4: General rules regarding activities in the physical environment. About the 'environmental values', the law prescribes for them to be defined by means of 'measurable or calculable units or in otherwise objective terms' (cf. *Ibid.*, Chapter 2: Duties and powers of administrative bodies, Art. 2.9: environmental values).

⁵²⁹ Cf. *Ibid.*, Chapter 5: the environmental permit and the project decision, Art. 5.1: activities subject to the environmental permit under this act, p. 44. In the case of 'nationally-listed monument activities related to an archaeological monument', 'environmentally harmful activity', 'Natura 2000 activities and flora and fauna activities of national interest' the State is identified as the competent authority for granting or refusing the environmental permit (cf. *Ibid.*, Chapter 5: the environmental permit and the project decision, Art. 5.11: the State as the competent authority in the case of an application for an activity other than referred in Article 5.9, 48); accordingly, the definition of assessment rules specific for each of the afore-mentioned categories of activities is envisaged (cf. *Ibid.*, Chapter 5: the environmental permit and the project decision, Section 5.1.3: The assessment of the application, 49-51).

⁵³⁰ Apart from the notion of cultural heritage, when then looking at the individual definitions provided in the Environment and Planning Act, that of 'monument' (cf. *Ibid.*, p. 194) and 'archaeological monument' (cf. *Ibid.*, p. 189) can rely on the definitions given in the Heritage Act, while that of 'urban and village conservation area' (*Ibid.*, p. 196) and 'landscape' as previously described do not make reference to any other national policy; therefore, when the Environment and Planning Act will come into force (2023), it will represent the main legislative framework on these matters. Until then, the *Monumentenwet* (1988) is still valid for what the 'urban and village conservation areas' are concerned (cf. *Erfgoedwet* (2016). Chapter 9: Transitional Law, Art. 9.1: Environment and Planning Act).

In Italy, the last decade has not seen substantial transformations in the landscape field – apart from minor ministerial reorganizations⁵³¹ – on the institutional and legislative level. However, if compared to the years immediately following the passing of the Cultural Heritage and Landscape Act, there has been an intensification of activities aimed at facilitating the implementation of the principles embedded in the Italian law for cultural heritage and the European Landscape Convention. Within this framework, the institution of the *Osservatorio Nazionale per la qualità del paesaggio* (National Observatory for the Quality of the Landscape) (2013) is worth mentioning. It was established by the then Ministry of Cultural Goods and Activities and Tourism as a support structure for ministerial activities with the goal of promoting preparatory initiatives and proposals relating to the protection and enhancement of the national landscape.⁵³² Among the latter, the observatory promoted the drafting of the *Rapporto sullo stato delle politiche per il paesaggio* (Report on the state of landscape policies),⁵³³ and the organization of the *Stati Generali del paesaggio* (States General of the landscape) (2017), an event that attracted the major national figures for a reflection on the future of landscape policies in Italy.⁵³⁴ The latter event led to the drafting of the *Carta Nazionale del paesaggio* (National Landscape Charter) (2018), which sets as a fundamental principle that of ‘assuming the quality of the landscape as the foundation of the strategic scenario for the development’ of the country, to be achieved through three strategic objectives.⁵³⁵ First of all, that of promoting new strategies to manage the complexity of the landscape, e.g. through a long-term vision and widespread attention to the landscape in all the policies that, at different scales, affect the territory, while reconfirming the centrality of the

⁵³¹ In recent years, the Ministry of Culture has changed its denomination: *Ministero per i Beni e le Attività Culturali* (Ministry for Cultural Goods and Activities) (1998), *Ministero dei Beni e delle Attività Culturali e del Turismo* (Ministry of Cultural Goods and Activities and Tourism) (2013), *Ministero per i Beni e le Attività Culturali* (Ministry for Cultural Goods and Activities) (2018), *Ministero della Cultura* (Ministry of Culture) (2021). From the point of view of internal organization, the previous division of *Soprintendenze* (local protection departments) for archaeology, on one hand, and architecture and landscape, on the other, were unified in the *Soprintendenza per l'Archeologia, le Belle Arti e il Paesaggio* (Superintendence for Archaeology, Fine Arts and Landscape) (2016) (cf. <https://cultura.gov.it/ministero> [16.05.2022]). Cf. <http://paesaggioitaliano.beniculturali.it/index.html> [16.05.2022].

⁵³² The observatory was established by ministerial decree of 03 December 2013. However, the first activities got started in 2015 (cf. Di Francesco, C. (2018). Dalla nascita dell'Osservatorio Nazionale per la qualità del Paesaggio verso la redazione del Rapporto. In: *Rapporto sullo stato delle politiche per il paesaggio*, Banchini, R. and Scazzosi, L. (Eds.). Roma: Ministero dei Beni e delle Attività Culturali e del Turismo, 19-20.

⁵³³ Banchini, R. and Scazzosi, L. (Eds.) (2018). *Rapporto sullo stato delle politiche per il paesaggio*, *op.cit.*

⁵³⁴ Cf. <http://paesaggioitaliano.beniculturali.it/index.html> [16.05.2022].

⁵³⁵ Cf. Osservatorio nazionale per la qualità del paesaggio (2018). *Carta nazionale del paesaggio: Elementi per una Strategia per il paesaggio italiano*. Roma: Gangemi Editore., 5.

landscape plan as a ‘Constitution of the territory’;⁵³⁶ secondly, to promote education and training on the culture and knowledge of the landscape;⁵³⁷ thirdly, to promote a vision of landscape protection and enhancement as an instrument of cohesion, legality, sustainable development and well-being.⁵³⁸ Finally, in 2016 the Ministry for Cultural Heritage and Activities established the *Giornata Nazionale del Paesaggio* (National Landscape Day) – every 14 March – and, at the same time, launched the *Premio Nazionale del Paesaggio* (National Landscape Award). This last initiative aimed at identifying worthy local projects in the field of conservation, management or sustainable planning of landscapes, in order to identify the Italian candidate to be submitted to the international award established by the Council of Europe.⁵³⁹

In conclusion, the last developments in the field of landscape policies in Italy and the Netherlands saw the emergence of new interactions with the neighbouring domains of cultural heritage, nature and the environment (FIG. 3.24). In the Netherlands, landscape studies and programs have led to the beginning of a new dialogue within the historical disciplines encompassing the broader spectrum of cultural history, as well as within the latter and the spatial planning field. This has determined a stronger acknowledgement of the landscape’s cultural dimension; however, apart from some institutional changes, this shift was not translated into the latest law for cultural heritage. At the same time, this was compensated by the structural inclusion of landscape and cultural heritage in the to-be Environmental and Planning Act, according to a renewed balance among the forces at stake but still in line with the long-standing tradition of spatial planning dominance – now reinforced by its environmental ‘ally’ – on the Dutch landscape policies. Similarly, also in the Italian context a renewed equilibrium has been reached between the different disciplinary approaches to the landscape, which is now strengthened in its position on the conceptual level as well as in the tools envisaged for its protection. In relation to this,

⁵³⁶ Cf. *Ibid.*, pp. 8-10.

⁵³⁷ Cf. *Ibid.*, pp. 11-12.

⁵³⁸ Cf. *Ibid.*, pp. 13-14.

⁵³⁹ Before the institution of the Italian award, the selection of projects to be submitted to the Landscape Award of the Council of Europe already started in 2008. Since then, the following projects have been selected: *Sistema dei Parchi della Val di Cornia* (2008-2009), *Carbonia città del Novecento. Riqualificazione socio-economica, culturale e ambientale* (2010-2011: winner of the European Award), *La rinascita dell’Alto Belice Corleone dal recupero delle terre confiscate alla mafia* (2012-2013), *Parco Agricolo dei Paduli* (2014-2015), *AgriRentum: Landscape Regeneration* (2016-2017), *Tra terra e acqua, “un altro modo di possedere”*. *Agricoltura, impresa sociale, paesaggio e sostenibilità per uno spazio identitario in continuo divenire: l’esperienza del Consorzio Uomini di Massenzatica* (2018-2019), *La biodiversità dentro la città: la Val d’Astino di Bergamo* (2020-2021) (cf. <https://www.premiopaesaggio.beniculturali.it/il-premio-nazionale-del-paesaggio/> [16.05.2022]).

cultural heritage is reconfirmed as the dominant sphere in which this new balance is inscribed. Inevitably, the new ‘environmental era’ we are living in⁵⁴⁰ – sensibly boosted by the European policies on this issue in the most recent recovery measures from the Covid-19 pandemic – will call for further refinements, the first signs of which can already be observed.⁵⁴¹

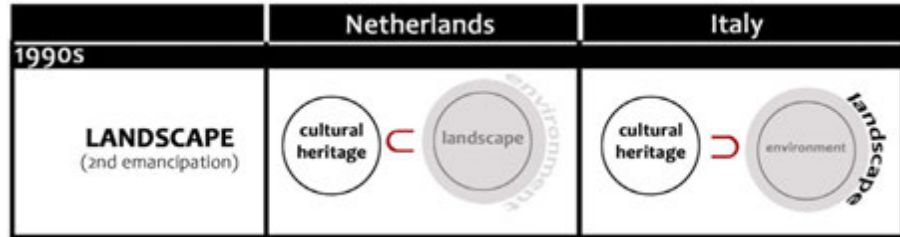


FIG. 3.24 Comparative scheme (NL/IT) for the fifth stage of landscape protection (2000-2022) (F. Marulo 2022)

3.5 Conclusions

The evolving interpretation of landscape *heritage* in the two contexts is characterized by a similar path, in which the landscape notion went through an evolution in relation to the neighbouring domains of cultural heritage, nature and environment (FIG. 3.25). Indeed, both in Italy and the Netherlands the discourse on landscape protection started with the rise of conservationist concerns aimed at securing

⁵⁴⁰ Cf. Fatorić S. and Seekamp, E. (2017). Are Cultural Heritage and Resources Threatened by Climate Change? A Systematic Literature Review, *Climatic Change: An Interdisciplinary, International Journal Devoted to the Description, Causes and Implications of Climatic Change*, 142(1-2), 227–254; Zeldin-O'Neill, (2019). 'It's a crisis, not a change': the six Guardian language changes on climate matters', *The Guardian*: 'It's a crisis, not a change': the six Guardian language changes on climate matters | Environment | The Guardian [08.06.2022].

⁵⁴¹ In relation to the boosted environmental dimension – and its relationship with nature, culture and landscape heritage – interesting will be to compare the outcomes of the initiatives recently launched by the Dutch and Italian governments within their recovery plans as an answer to the pillar 'green transition': the Dutch *Programma Natuur* (cf. 1e concept voor een Nederlands Herstel- en Veerkrachtplan | Kamerstuk | Rijksoverheid.nl [06.06.2022], 68–69) and the programs launched by the Italian Ministry of Culture – in particular that concerning 'historic parks and gardens', 'villages and heritage of inland areas', and the 'rural landscape architectural heritage' (cf. PNRR Bandi in corso - Ministero della cultura [06.06.2022]).

threatened natural areas. Subsequently, the increasing aesthetic appreciation of human interactions in nature led to extend the protection measures also to manmade areas, which coincided with the first emancipation of the landscape concept from the nature domain. Finally, the brand-new challenges posed by post-war reconstruction first and then by the growing environmental consciousness, led to a weakening of the landscape concept in the national protection discourse, which saw its central position reconfirmed only from the end of the century.

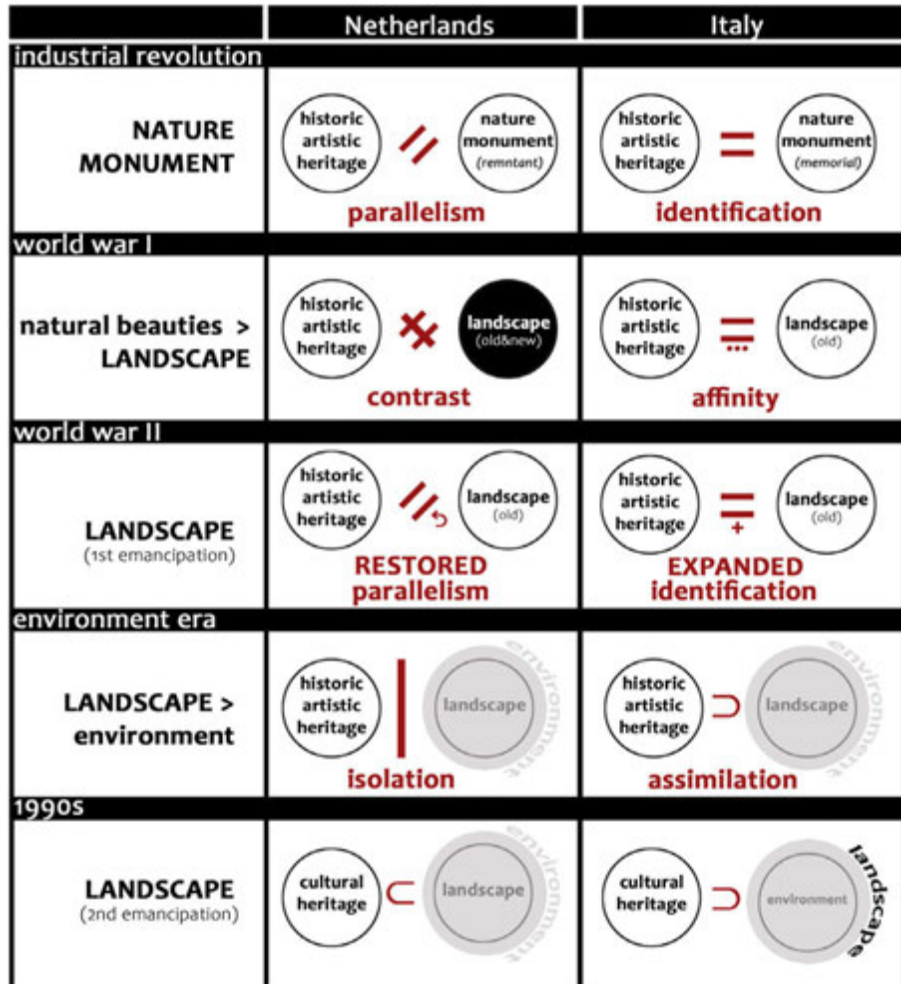


FIG. 3.25 Comparative scheme (NL/IT) summarizing all the stages of landscape protection (F. Marulo 2022)

Although the landscape concept underwent a similar emancipation in the two contexts, the *values* involved in its patrimonialization process are different. In the first stage, nature 'remnants' were to be secured for their main scientific value in the Netherlands, while in Italy the first attempts concerned nature 'memorials' with historic-artistic value – a fundamental distinction which also involved a different interpretation of their historical dimension: that coming from natural history in the first case, and the one stemming from human ('civil') history in the other. Subsequently, the second stage was characterized by a similar acknowledgement, in both contexts, of the aesthetic value characterizing both natural and manmade areas. The latter were gradually identified with the landscape domain and deserved specific attention. This shift went hand in hand with the recognized anthropocentric dimension of landscape protection, expressed in terms of an ethical matter related to man's recreation in the Netherlands, and to a moral issue connected to the survival of art for future generations in Italy. This change had a different impact in the two countries: it was more a confirmation of existing practices in Italy, while it represented a turning point in the Netherlands. Finally, the following stage saw the gradual overcoming of the purely aesthetic parameters. This process meant the acknowledgement of a nature value in the Dutch agricultural landscape. In Italy, it went through the affirmation of a strong link between historical architecture and the rural landscape. But a more decisive shift was marked by the emergence of the notion of the environment and the related discourse. Also in this case, this concept had a different 'perturbing' effect in the two contexts: in the Netherlands, it meant temporarily putting aside the landscape-related issues, while in Italy it turned into an attempt to merge the landscape and environment domains within the cultural heritage sphere. The end of the 20th century then saw the reaffirmation of the landscape domain in a common cultural dimension for both contexts, which was, however, still strongly influenced by the interpretations matured throughout the century.

The different values involved in the landscape patrimonialization process are the visible signs of a more profound difference in the way of interpreting the relationship between landscape and cultural heritage at large in the two contexts. Indeed, both the two European tendencies highlighted in literature (i.e., separation or integration of landscape and cultural protection policies) that the Dutch and Italian contexts embody show the same reference point in the cultural heritage domain. But the way of interpreting this common ground is different. In the Netherlands, this development was centred on the recognized parallelism between the two separated but analogous fields, which accompanied the whole landscape process of emancipation, albeit in the alternation of affinity and contrast phases with respect to the starting model and opening to a greater interaction only at the end of the 20th century. In the Italian context, this relationship was, instead, interpreted in terms

of an identification between these two domains, which has evolved hand in hand with the emancipation of the landscape concept from that of natural beauty, and gradually strengthening alliances with some specific sectors within the cultural heritage sphere; in particular, reference is made to architectural heritage, which was progressively identified as the main manmade component of the landscape to be protected. This represents a substantial difference with the Dutch context. The appreciation of human interventions is, here, equally pivotal in the acknowledgment of the national landscape, but the attention is more focused on the agro-technical and hydraulic works aimed at making land suitable for agriculture. Consequently, a different development of strategies and tools for landscape protection occurred. In turn, this aspect was strongly connected with the peculiar relationship established between landscape heritage and planning in the two contexts. Following the strategy of integral protection of nature monuments in the starting phase, this relationship became crucial in the Netherlands, and had a decisive role in the emancipation of the landscape from the nature domain. The Dutch pre-war strategy was mainly based on the possibility to combine protection and future developments, as expressed in the notion of landscape care inspiring the main envisaged tool of the time: the landscape plan. However, the resulting deterioration of the existing landscape led to the post-war attempt of extending the conservation strategy adopted for natural reserves in the so-called landscape parks, conceived as areas isolated from future development but still integrated in the overall national planning system. Once even such strategy proved to be too restrictive for the diminished role that the landscape assumed in the environment era, it was only at the end of the 20th century that a new approach emerged, suggesting a possible alliance between cultural and planning issues in the protection of the landscape. In Italy, the integration of protection and development measures has, instead, been a critical point since the beginning. Despite the interest shown by the planning discipline, the stronger inclusion of the landscape within the cultural heritage sphere has led to avoiding this relationship in the pre-war phase. The landscape plan conceived in this frame was mainly a preventive-protection tool detached from the overall development of the national planning system. This omission proved to be no longer sustainable in the rapidly changing scenario of post-war reconstruction. Attempts to provide a better integration did not immediately lead to a redefined strategy for landscape protection, which eventually occurred at the beginning of the 21st century.

PART 2

Case studies

Following the first part of the research – aimed at analysing the Italian and Dutch landscape policies and their relation with architectural heritage and spatial planning – this second section focuses on the analysis of the two case studies selected for the comparison. Within the research aim of fostering nature-culture interlinkages in the inter-scale preservation strategies for historic military systems, the main questions for this section are:

- What are the current approaches to the preservation of historic military systems?
- How is their inter-scale character addressed?
- What kind of nature-culture interlinkages are considered at each scale?
- What is the influence of inter-scale approaches (or their lack) on nature-culture interlinkages?

The Dutch *Nieuwe Hollandse Waterlinie* (New Dutch Waterline) and the Italian *Campo Trincerato di Mestre* (Entrenched Field of Mestre) have been selected as significant cases for a comparison on this topic. They are analysed according to three main scales: the overall system, the local artefacts, the built heritage. With the term local artefacts, reference is made to the isolated objects (forts or other works), conceived to function together to compose the military system. They do not always correspond to a single building or construction, but they may also present a system character, consisting of a sophisticated combination of interrelated synthetic (buildings and constructions) and natural components (earthworks, vegetation, water ditches and canals). Ultimately, these (synthetic and natural) components embody the scale of built heritage.

The reason for the choice of the two case studies stems from two main aspects:

- the intrinsic qualities of the historic military systems
- the contemporary strategies put in place for their revitalization

In relation to these, some considerations are needed to highlight analogies and differences between the case studies. Ultimately, the combination of the two cases – more than their individual relevance/uniqueness – and the potentialities of their cross reading in this research is what justifies this selection.

Historic military systems: intrinsic qualities

The New Dutch Waterline represents a unique 19th-century military system for many reasons. First of all, the territorial extension (85 km long, 5 km wide) – to which corresponds a high number of local artefacts (48 forts) – is quite outstanding if compared to other coeval military systems of the same kind. The reason can be

found in its strategic scope to defend an area (the contemporary Randstad) of which extension exceed that of a single urban settlement – as it was commonly the case for 19th century permanent fortifications. This represents a first difference with the Italian case of the Entrenched Field of Mestre, although in terms of territorial extension (24 km long, 8 km wide) and number of local artefacts (12 forts) it was the second entrenched field in Italy after that of Rome.⁵⁴² The choice for this second case was also determined by another relevant aspect for the comparison with the Dutch military system: the landscape features and, in particular, the relation with water. Both the Italian and Dutch cases are, indeed, embedded in a context with a special relationship with water, which is reflected in the strategies put in place for defending these territories. However, if the New Dutch Waterline – primarily conceived as a water machine – can be considered as the peak in the Dutch history of water use for military purposes, the Entrenched Field of Mestre can, instead, be considered as a trend reversal in the historical water-based defence trend of Venice. Consequently, the role of the local artefacts in the two military systems is different: an appendix to waterworks in the Dutch waterline, the first line of defence in the Italian entrenched field.

The preservation strategies: Top-down / bottom up processes

The intrinsic qualities of these historic military systems have had an influence on the strategies developed for their revitalization/reuse. In relation to this, a central aspect can be found in the top-down (Dutch case) / bottom-up (Italian case) character of the processes put in place. This consideration firstly refers to the different starting points of the initiatives analysed: a governmental program of national relevance (Dutch case), a local initiative from voluntary associations of citizens (Italian case). This is reflected in the way of interpreting the inter-scale relationships between the system and its components in the actual revitalization strategy: from the system to the local artefacts (Dutch case), from the local artefacts to the system (Italian case). In relation to local artefacts and the consequent analysis of the strategies at the scale of built heritage, some specifications are needed, especially in relation to the Dutch case. The latter is characterized by a great variety of local artefacts, which can be summarized in the two main categories of water works and military works, the latter further varied (fortified towns, forts, concrete works). The choice to focus

⁵⁴² Cf. Cajano, E. (Ed.) (2006). *Il sistema dei forti militari di Roma*. Gangemi: Roma; Ferretti, S., Guarini, P., Giovannelli, A., Grimaldi, A. and Tamborrino, L. (Eds.) (2009). *Operare i forti. Per un progetto di riconversione dei forti militari di Roma*. Gangemi: Roma; Chiri, G. M., Fiorino, D. R., Morezzi, E. and Novelli, F. (Eds.) (2020). *Paesaggi militari del Campo Trincerato di Roma: Progetti per Forte Aurelia*. Torino: Politecnico di Torino.

on the forts (the size of which can range between 2 and 32 ha) primarily stems from their level of complexity: unlike the concrete works, these local artefacts do not coincide with a single building and, thus, effectively play the role of an intermediate scale; at the same time, they still represent well-defined and self-contained entities, not significantly affected, like in the case of fortified towns, by the parallel dynamics of the urban settlements. Moreover, the priority given to the fort sites – at least in a starting phase – within the Dutch revitalization process, together with the need to match the Italian case study – which lacks this variety of local artefacts – has further supported this choice.

4 The Dutch National Project for the New Dutch Waterline

Aspirations and effects of a system lens on the revitalization of historical architecture and landscape

4.1 The New Dutch Waterline: a water defence machine in the lowlands landscape⁵⁴³

4.1.1 Historical background

The *Nieuwe Hollandse Waterlinie* (New Dutch Waterline) is a 19th-century military system embedded in the peculiar landscape of the south-western part of the Netherlands. The geomorphological and hydraulic setting of this area, which is under the sea level in the delta of three of the major rivers in western Europe, has seen its inhabitants involved in a centuries-old struggle to keep it dry and safe from flooding.⁵⁴⁴ It was from this challenge that the principle stemmed to turn these odd conditions into a resource for defending the hearth of the country: the province of Holland. Indeed, the military system was conceived to work as a water machine: by inundating a vast surface of land – 85 km long and with a variable width of about 5 km – enemy attacks coming from east could be stopped by a water barrier, the depth of which – between 30 and 50 cm – made it difficult to cross it on foot or boat. But if its main water-based functioning made it an integral part of the typically-Dutch landscape from which it drew its purpose, an important role in the military system was also played by its architectural components. A series of military artefacts were built to secure the so-called ‘access points’ – namely, those spots where the water machine could not be activated, like at the intersection of roads or rivers – the architectural, typological and constructive characters of which evolved hand in hand with changes in political and military strategies, as dowels organically linked in the overall defence system.

⁵⁴³ Part of this paragraph was published in Conference Proceedings: F. Marulo (2020). Between nature and culture. From Italy and the Netherlands new perspectives towards a sustainable use of historical landscapes, in *Proceedings of the International LDE Heritage Conference on Heritage and the Sustainable Development Goals* (Delft, 26-28 November 2019), Pottgiesser, U., Fatoric, S., Hein, C. Maaker, E. de and A. Pereira Roders (Eds.). TU Delft Open: Delft, 410-411.

⁵⁴⁴ The three referenced rivers are the Rhine, the Meuse and the Scheldt.

The first implementation of a territorial defence structure in the Netherlands involving local water resources dates back to the Roman times (FIG. 4.1). Between the 10 BC and the 50 AD, the Rhine river was used as a water barrier in the setting of the *limes*, the northern border of the Roman empire falling in the Dutch territory. It involved the construction of a network of watchtowers, fortresses (the so-called *castella*) and military roads on its south bank, and the definition of a buffer zone – where any construction was banned – on the north bank. Additionally, the first water management works connected to the roman military district took place during that period.⁵⁴⁵

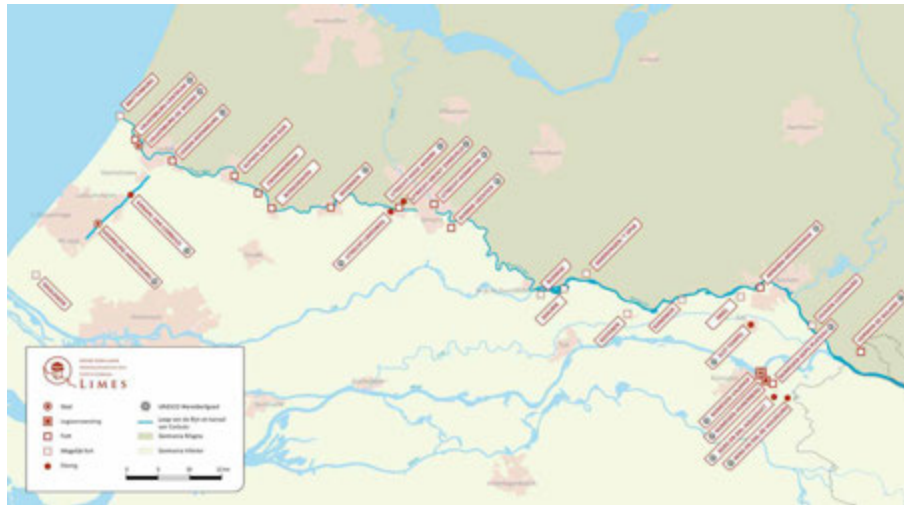


FIG. 4.1 Portion of the Roman limes in the territory of the Netherlands (Image retrieved at: <https://www.limeswerelderfgoed.nl/bibliotheek/publieksbereik/kaarten> [20.10.2022])

⁵⁴⁵ Reference is made to the hydraulic interventions promoted by the general Drusus (38-9 BC), mainly consisting in a dam – the so-called *Drususdam* – aimed at controlling the Rhine water course and making it more suitable for military and transport purposes, and in the excavation of a waterway connected to the Rhine – the *fossa drusiana* or *Drususgracht* – probably coinciding with the course of the current river Vecht in the Utrecht region (cf. Will, C. and Nationaal Project Nieuwe Hollandse Waterlinie (2019). *Sterk water: De Nieuwe Hollandse Waterlinie*. Utrecht: Uitgeverij Matrijs, 15-16). About the *limes*, see also: Colenbrander, B. et al. (2005). *Limes atlas*. Rotterdam: Uitgeverij O10; Heijden, P. van der and Ginkel, E. van (2020). *Romeinen langs Rijn en Noordzee: de limes in Nederland*. Utrecht: Stichting Matrijs.

However, it was only during the Eighty Years' War (1568-1648) – in which an alliance of seven Dutch provinces freed themselves from the Spanish domination – that the principle of inundation was used for the first time in several, but still sparse and non-systematic, defensive and offensive military operations.⁵⁴⁶ This was made possible by the polder-based structure of the western part of the country, the original functioning and purpose of which – to keep the land dry – could be easily reversed for military reasons.⁵⁴⁷

From the moment that the Republic of the Seven United Netherlands began to take shape, a territorial defence system was gradually set up. The latter took advantage of existing natural barriers, which were then complemented by more than twenty frontier towns or artificial lines.⁵⁴⁸ Indeed, based on the experience gained against the Spaniards, already by the end of the 16th century the two provinces of Utrecht and Holland started to consider the possibility to jointly defend their territories through a line combining both fortifications and inundations. This idea was implemented in 1629, forcing the Spanish troops to retreat. This inundation line – known as the *Utrechtse linie* (Utrecht line) – followed the course of the Vecht and Vaartse Rijn rivers and covered an area going from Muiden to Vreeswijk, which was flooded with the salty water of the Zuiderzee (north) and that of the river Lek (south).⁵⁴⁹ But even though it proved to be effective, conflicts between the provinces of Utrecht and Holland led the latter to plan its own water defence line.⁵⁵⁰

⁵⁴⁶ The so-called 'Union of Utrecht' (1579) was composed by the historic provinces of Groningen, Frisia, Overijssel, Guelders, Utrecht, Holland and Zeeland; it was turned into the Republic of the Seven United Netherlands (in short: Dutch Republic) after the independence from Spain. The sieges of Brielle (1572), Alkmaar (1573), Leiden (1574), Woerden (1575) are some of the cases in which the local 'rebels' managed to prevail on the royal troops by means of inundations (cf. Will, C. and Nationaal Project Nieuwe Hollandse Waterlinie (2019). *Sterk water, op.cit.*, 18-20).

⁵⁴⁷ Starting from the 10th-century *Grote Ontginning* (Great Reclamation) – promoted by the bishop of Utrecht and the count of Holland in response to the massive population growth of the time – the historic province of Holland was gradually made suitable for living and farming through a complex series of reclamation and drainage works (cf. *Ibid.*, 17).

⁵⁴⁸ The frontier towns were fortified urban settlements located in those spots where no natural obstacle was available (cf. *Ibid.*, 20-23).

⁵⁴⁹ Together with inundation, the implementation of the *Utrechtse linie* also involved the strengthening of the Muiden and Vreeswijk fortifications, together with the construction of new fortified posts – i.e. at the Klop (north of Utrecht), at Jutphaas (south of Utrecht), at Nieuwersluis, and at the Hinderdam – consisting of simple earth works surrounded by a moat and located in the most vulnerable spots (e.g. the accesses of rivers, roads, dykes, or other places where inundation was not feasible). There were also plans to build a line wall with moat on the eastern flank of Utrecht city, which were, however, abandoned due to its constructive and financial complexity (cf. *Ibid.*, 28).

⁵⁵⁰ The debate was about which of the two provinces should have had the sovereignty on the other's territory in case of war (cf. *Ibid.*, 29).

This was the (*oude*) *Hollandse Waterlinie* (old Dutch Waterline), which overlapped with the Utrecht line between Muiden and Nieuwersluis – namely, that part falling in the territory of the province of Holland – and then followed the Woerden-Oudewater-Schoonhoven axis. Significantly, the city of Utrecht was left out of the defended area.⁵⁵¹ It was in 1672 – after little more than two decades from becoming independent from Spain – that the Dutch Waterline was actually used. Indeed, that year – went down in history as *Raampjaar* (Disaster Year) – the Dutch Republic was attacked by the French army (FIG. 4.2).



FIG. 4.2 *Kaart van de Verdedigingslinie van de Provincie Holland in de jaren 1672 en 1673* (Map of the Defense Line of the Province of Holland in the years 1672 and 1673) (Nationaal Archief Den Haag)

⁵⁵¹ Apart from the *Utrechtse* and the *Hollandse Waterlinies*, the Republican defence system included also other inundation lines, like the *IJssellinie*, the *Grebbeinie* and the to-be *Zuiderwaterlinie* (cf. *Ibid.*, 20-22). See also: Bureau Beek en Kooiman (2003). *Het post-militaire landschap. Een overzicht van linies en stellingen in Nederlands*.

Despite several difficulties (e.g., logistic issues, shortage of money and materials, the obstruction of locals) and the severe winter frost – which had turned the water barrier into a traversable ice field – the waterline succeeded in blocking the enemy advance by turning the province of Holland into an unassailable fortress. However, what was a narrow escape turned out to be fatal a century later. Indeed, it was precisely because of the winter frost that the French troops succeeded in penetrating and taking the heart of the Dutch Republic in 1794.

Consequently, already during the period of the Batavian Republic plans were made for an improvement of the country's defence system.⁵⁵² Within this frame, the then Director of Dutch Fortifications, Cornelis R. T. Krayenhoff (1758-1840), for the first time proposed, in 1797, an update of the *Hollandse Waterlinie*.⁵⁵³ Together with some innovative solutions for an improved defence at Naarden⁵⁵⁴ and Amsterdam,⁵⁵⁵ the main transformation recommended was that of including once again the city of Utrecht in the defended area. When the Kingdom of the Netherlands was annexed to the French Empire these plans got a new impulse. After consultation and a field visit with Krayenhoff (1811) – who had, in the meantime, been appointed as Commissioner of Defense for the Dutch territory (1805) – Napoleon saw the potential to make this waterline an integral part of the overall French defence system – Amsterdam being Europe's financial hub – as the *vraie ligne de l'Empire*.⁵⁵⁶ However, it would be only after the fall of Napoleon and the establishment of the United Kingdom of the Netherlands (1815-1830) that this vision began to be realized.

⁵⁵² The Batavian Republic (1895-1806) was the first of the so-called 'sister republics' established by the First French Republic in Europe.

⁵⁵³ This proposal was the subject of his *Memorie betreffende de eerste of capitale Waterlinie dezer Provincie* (Memorandum concerning the first or capital Waterline of this Province) of January 16, 1797, written on behalf of the province of Holland (cf. Will, C. and Nationaal Project Nieuwe Hollandse Waterlinie (2019). *Sterk water, op.cit.*, 47).

⁵⁵⁴ For solving the existing difficulties in inundating the area surrounding the fortification of Naarden – namely, that spot in the *Hollandse Waterlinie* which had already proved to be a weak point during the 17th-century French invasion (cf. *Ibid.*, 33) – Krayenhoff proposed the introduction of an innovative steam engine to facilitate the flooding process (cf. *Ibid.*, 47-49).

⁵⁵⁵ In the case of Amsterdam, in 1805 – when the Netherlands had already become a client state of the French empire ruled by King Louis Napoleon – Krayenhoff proposed to provide the capital with an independent fortification which, following the waterline principle, combined inundation areas with military works; known as the *Posten van Krayenhoff*, they were completed between 1806 and 1810 (cf. *Ibid.*, 49).

⁵⁵⁶ It was within this frame that the Emperor set a committee for drafting a plan (1811), which was composed by Krayenhoff, Jan Blanken (1755-1838) in the role of General Inspector of Water Management, and the French Director of Fortifications, E. Paris; a map describing part of the outcomes was also realized (cf. *Ibid.*, 52).

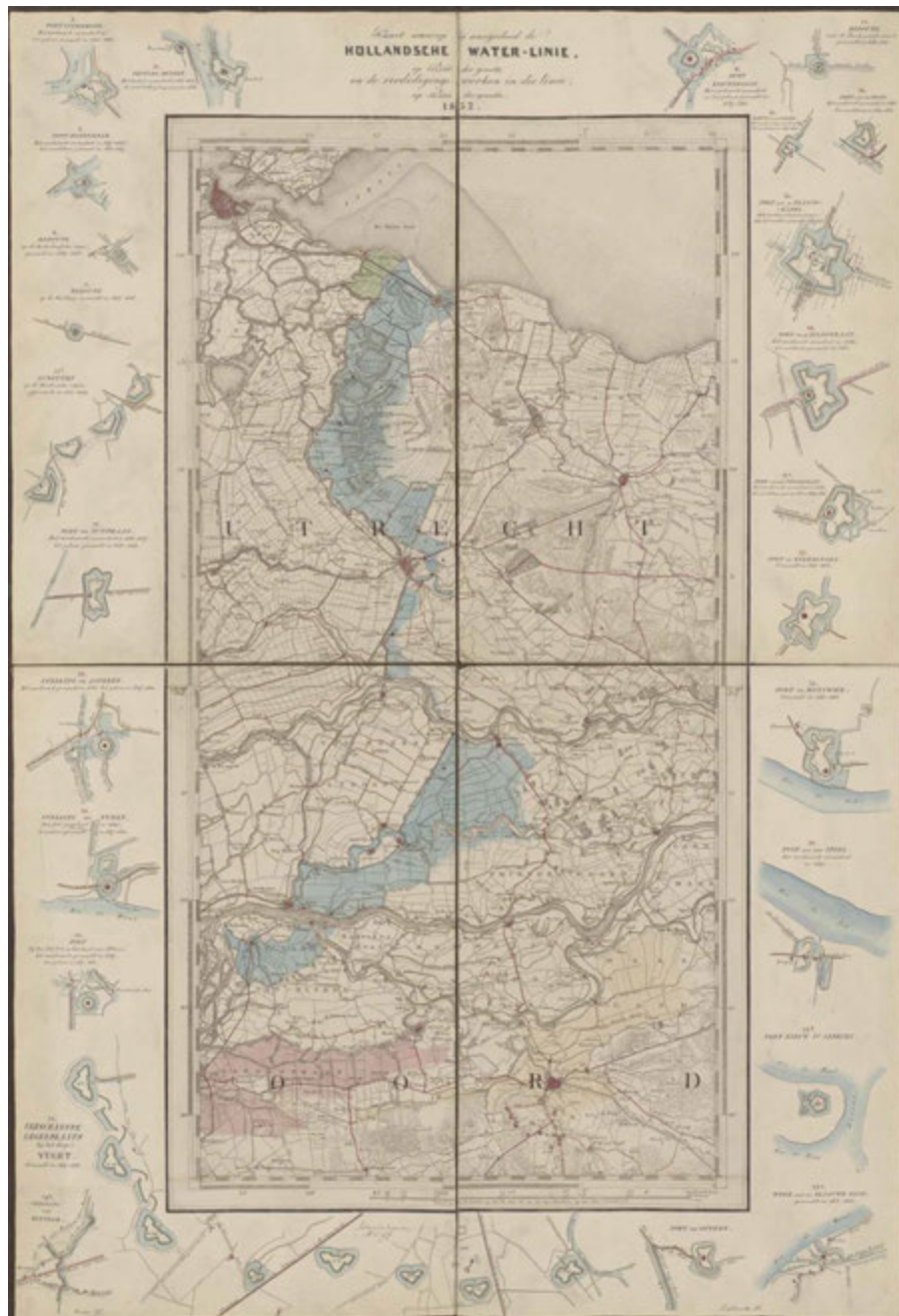


FIG. 4.3 Ministerie van Oorlog, Kaart waarop is aangeduid de Hollandsche Waterlinie en de verdedigingswerken in de linie (Ministry of War, Map indicating the Dutch Waterline and the defense works in the line) (1852) (Nationaal Archief Den Haag)

Despite major investments in the construction of a frontier at the southern border of the new-born kingdom,⁵⁵⁷ in 1815 king William I decided to support the plans of Krayenhoff, now General Inspector of the Fortifications and the Corps of Engineers. According to his memorandum of 1814 – which updated the 1797's and 1811's projects – this *Nieuwe Hollandse Waterlinie* was included between the Zuiderzee and the Waal river and mainly coincided with the 17th-century *Utrechtse linie*.⁵⁵⁸ However, its profile had to bend east to include Utrecht and, from Vreeswijk it was extended towards the Gorinchem fortress (FIG. 4.3).⁵⁵⁹

Given the large scale of this new waterline, obtaining the desired inundation surface necessarily involved considering the existing differences in height throughout the 85-km stretch of land – approximately going from Muiden to Gorinchem – that it covered. Accordingly, the military engineers in charge with its design answered to this condition by breaking this huge surface into nine inundation basins – namely, smaller portions of land composed by a group of polders the height of which was roughly at the same level – each one confined by means of embankments or dykes. From an organizational point of view, the waterline was also divided in flood stations, each with a 'inundation leader'.⁵⁶⁰ Within this main structure, the process of inundation was made possible by exploiting already-existing water works – the civil use of which could be occasionally reversed for military purposes – combined with the addition of tailor-made water management devices (FIG. 4.4). The *waaiersluis* (fan-sluice gate), conceived by Jan Blanken in 1808 to accelerate and keep the inundation level, and the so-called *coupures* – openable cuts in the dykes to occasionally speed up the inundation process – are part of the system.⁵⁶¹

⁵⁵⁷ Reference is made to the Wellington Barrier, which included 21 fortifications designed by Krayenhoff under the supervision of the British General Wellington, falling in the territory of present-day Belgium (cf. *Ibid.*, 53; see also: Nelson, C. (1964). 'The Duke of Wellington and the Barrier Fortresses After Waterloo', *Journal of the Society for Army Historical Research*, 42 (169): 36-43; Gils, R. (2005). *De versterkingen van de Wellingtonbarrière in Oost-Vlaanderen: de Vesting Dendermonde, de Gentse citadel en de vesting Oudenaarde*. Gent: Provincie Oost-Vlaanderen, Dienst Monumentenzorg en Cultuurpatrimonium.

⁵⁵⁸ At that specific time, the new waterline was, however, referred to as *Utrechtse Linie* (cf. Will, C. and Nationaal Project Nieuwe Hollandse Waterlinie (2019). *Sterk water, op.cit.*, 53).

⁵⁵⁹ Cf. *Ibid.*, 55.

⁵⁶⁰ The flood stations were arranged in six groups, according to the origin of the inundation water. In 1940, the waterline could count on 19 of such stations (cf. Will, C. (2009). 'Water resistance: how the Water Defence Line works', in *Atlas of the New Dutch Water Defence Line*, Steenbergen, C., Zwart, J. van der, Grootens, J., Brons, R. and Colebrander, B. (eds.). Rotterdam: 010 Publishers, 103).

⁵⁶¹ Five fan-sluice gates were built in 1815 – three of which at the Diefdijk at the Spoel and in the Lingedijken at Asperen, the other two at Woudrinchem and at the Bakkerskil – shortly after followed by another one in Vreeswijk (1817); they will reach the maximum number of 18 in 1940 (cf. *Ibid.*, 9; Will, C. and Nationaal Project Nieuwe Hollandse Waterlinie (2019). *Sterk water, op.cit.*, 54-55).



FIG. 4.4 Houten (NL): inundation sluice near Fort Honswijk (1961) (Collectie Nederlands Instituut voor Militaire Historie)

In this way, water could be let in the polders from the main rivers, the polder canals and other water storage facilities, sometimes complemented by specifically-dug inundation canals. The complete flooding of the waterline area was gradually achieved in five steps: after two preparatory phases – in which sluice gates and other waterworks were prepared (1), and the fields to be inundated were impounded by the Ministry of war (2) – the inundation was at first brought to a ‘preparatory level’ (3), in which the water stored in polder basins was raised, the rivers were brimmed to their maximum capacity, and the fields’ low-lying parts were partially inundated, thus, requiring the evacuation of farmers;⁵⁶² at the subsequent ‘provisional level’ (4), the whole area was then flooded except for the road connections, which were, at this stage, still necessary for the transport of troops, armaments and the

⁵⁶² In 1896, the *Inundatiewet* (Defensive Flooding Operations Act) was passed for setting the legal framework and the necessary compensations for farmers damaged by the military inundations (cf. Will, C. (2009). *Water resistance, op.cit.*, 101).

complete mobilization of the inhabitants before reaching the final phase of ‘full level’ (5).⁵⁶³ Krayenhoff had foreseen that 14 days were needed for getting a complete inundation.⁵⁶⁴ The calculations made in 1859 brought this estimation to a period of 26 days, thus, stimulating the realization of several adjustments to refine the functioning of the water machine and reduce the number of inundation days to a range between four and twelve (FIG. 4.5).⁵⁶⁵



FIG. 4.5 Loosdrecht (NL), Fort Spion: aerial picture (Collectie Nederlands Instituut voor Militaire Historie)

⁵⁶³ Cf. *Ibid.*, 101-102.

⁵⁶⁴ Cf. *Ibid.*, 97.

⁵⁶⁵ These works, occurred between the 1860s and the 1880s, included the introduction of new military inlets upstream of the main river courses, the bed of which was in some cases widened, and the building of new inundation canals (cf. *Ibid.*, 102-103).

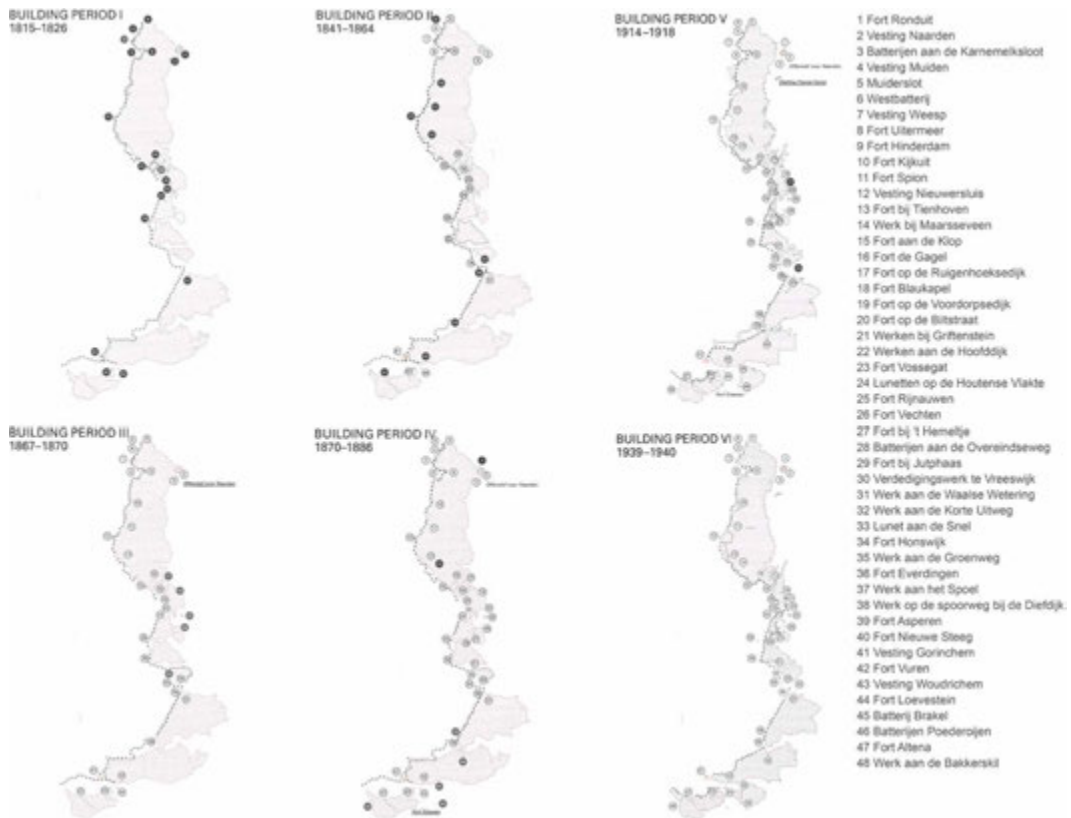


FIG. 4.6 New Dutch Waterline (NL): scheme of the six phases of construction (Steenbergen et al. 2009: 25)

The constant need to test, keep track and eventually update the components of the water system was also reflected in the genesis, architecture, and transformation of the military works at a local scale. In particular, the evolution of the waterline's fortifications has been described through six phases of construction (FIG. 4.6).⁵⁶⁶ Within this framework, an evolution can also be observed in the use and function of vegetation, which ran in parallel with the construction of the forts, but followed

⁵⁶⁶ Cf. Zwart, J. van der and Steenbergen, C. (2009). Historical development, in *Atlas of the New Dutch Water Defence Line*, op.cit., 28-29, 32-35. A different description with seven phases can also be found when considering the construction of the *Stelling van Amsterdam* (1880-1914) (cf. Project Office for the Defence Line of Amsterdam and New Dutch Waterline programme office (2018). *Dutch Water Defence Lines UNESCO. Significant Boundary Modification of the Defence Line of Amsterdam (WHS 759) and proposal for change of the property name to Dutch Water Defence Lines*, 155-193; Will, C. and Nationaal Project Nieuwe Hollandse Waterlinie (2019). *Sterk water*, op.cit., 66-67).

a different development. From this point of view, the New Dutch Waterline marked a new stage in planting for military purposes.⁵⁶⁷ Given the presence of several pre-existing fortifications already belonging to the Old Dutch Waterline in the northern and southern regions of the waterline,⁵⁶⁸ the first construction period (1815-1826) was mainly concentrated on building a ring of forts around the city of Utrecht.⁵⁶⁹ Indeed, due to the difficulties in inundating the high-lying western surroundings, which were also affected by the presence of many road connections, this city needed extra protection. At this stage, the forts around Utrecht mainly consisted of a simple earthen structure surrounded by a moat, with a removable bridge on their throat side.⁵⁷⁰ As the 'hardware' associated to the main water machine, the design of these military works was delegated by Krayenhoff to the military engineer Willem Offerhaus, who was also in charge of supervising their construction.⁵⁷¹ In relation to vegetation, in this first construction phase the planting of new and existing military works also played an important role.⁵⁷² At this stage, the use and function of vegetal components was still in line with the centuries-old tradition of military planting: namely, that of barrier against the attacker, as well as of protection against the erosion of canal banks and earthworks, and that of wood supply for both construction and fire during sieges (FIG. 4.7).⁵⁷³

⁵⁶⁷ Cf. Boosten, M., Jansen, P. and Borkent, I. (2012). *Beplantingen op verdedigingswerken*. Utrecht: Matrijs, 53.

⁵⁶⁸ Reference is made to the fortresses of Naarden, Muiden, Weesp and Nieuwersluis, Fort Uitermeer and the Muiderslot in the northern Vecht area, and the fortresses of Gorinchem, Woudrichem and the Loevestein castle in the southern rivers' area (cf. Zwart, J. van der and Steenbergen, C. (2009). Historical development, *op.cit.*, 33).

⁵⁶⁹ The Fort op de Biltstraat (1816-1819), Fort Blaukapel (1817-1819), Fort Vossegat (1817-1819), Fort aan de Klop (1819-1821), Fort Gagel (1819-1821), Fort Jutphaas (1819-1820) and the four Lunetten op de *Houtense Vlake* (1821-1828) belong to this phase (cf. Will, C. and Nationaal Project Nieuwe Hollandse Waterlinie (2019). *Sterk water*, *op.cit.*, 55). Apart from the ring of Utrecht, a few other military works were also built in the Vecht area (Batterijen aan de Karnemelksloot, Fort Uitermeer, Fort Hinderdam) and in the rivers' region (Werk aan het Spoel) (cf. Zwart, J. van der and Steenbergen, C. (2009). Historical development, *op.cit.*, 33).

⁵⁷⁰ Only the four lunettes were given ramparts with brick cladding walls (cf. Will, C. and Nationaal Project Nieuwe Hollandse Waterlinie (2019). *Sterk water*, *op.cit.*, 55).

⁵⁷¹ Cf. *Ibid.*

⁵⁷² Contracts for the extensive planting of the forts around Utrecht (1821) and of Fort Nieuwersluis (1825) are stipulated in those years; moreover, to testify the width of such planting activities, a tree nursery was set near Fort Vossegat to provide the plants necessary for this purpose (cf. Boosten, M., Jansen, P. and Borkent, I. (2012). *Beplantingen op verdedigingswerken*, *op.cit.*, 53-54).

⁵⁷³ Cf. *Ibid.*, 55. For an overview on the evolution of military planting since ancient times in the Netherlands, see: Belonje, J. (1971). 'Beplantingen Op Vestingwerken', *Bulletin KNOB*, 70(4), 91-97; Boosten, M., Jansen, P. and Borkent, I. (2012). *Beplantingen op verdedigingswerken*, *op.cit.*, 34-68.

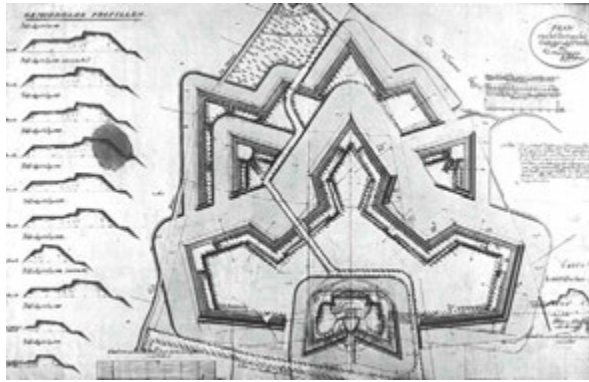


FIG. 4.7 Utrecht (NL), plant nursery near Fort Vossegeat (1817) (Boosten et al. 2012: 54)

After a standstill following structural political-administrative changes in the borders of the Kingdom,⁵⁷⁴ the second construction phase (1841-1864) aimed at securing the dykes along the Vecht and the other southern rivers (i.e. Lek, Linge, Waal).⁵⁷⁵ It saw the construction of brick redoubts with casemated batteries to improve the previously-built works, as well as of *fortentoren* (tower forts) in both new and already-existing fort sites (FIG. 4.8).⁵⁷⁶ Already foreseen by Napoleon in his *Notes sur la défense de la Hollande* (Notes on the defence of Holland) of 1811 and then developed into detailed designs by the French military engineers, this kind of constructions consisted of a circular brick tower surrounded by a ditch and made of one up to four floors – the top of which was usually equipped with a cannon – serving as a bomb-proof post.⁵⁷⁷

⁵⁷⁴ Reference is made to the poor financial disposability as a consequence of, at first, the massive investments for building the fortifications at the southern border of the country, and then for facing the secession revolt that preceded the independence of Belgium in 1839 (cf. Taverne, E. (2009). 'Only Holland can be made unassailably strong through nature and engineering. The conflict surrounding the New Dutch Water Defence Line', in: Steenbergen, C., Zwart, J. van der, Grootens, J., Brons, R. and Colebrander, B. (eds.), *Atlas of the New Dutch Water Defence Line*, *op.cit.*, 16; Will, C. and Nationaal Project Nieuwe Hollandse Waterlinie (2019). *Sterk water*, *op.cit.*, 55). The slowdown in the construction of military works is also reflected in the planting activities, although the maintenance of the vegetation continued (cf. Boosten, M., Jansen, P. and Borkent, I. (2012). *Beplantingen op verdedigingswerken*, *op.cit.*, 55).

⁵⁷⁵ To be responsible for the construction of forts in this second phase was the engineer officer Merkes van Gendt (cf. *Ibid.*, 57).

⁵⁷⁶ Along the Vecht, the Weestbatterij at Muiden, Fort Ossenmarkt at Weesp, the Fort Kijkuit, Fort Spion and Fort Tienhoven, the towers of Fort Uitermeer and Fort Nieuwersluis belong to this phase. Also Fort aan de Klop – belonging to the afore-mentioned ring of Utrecht – was equipped with a tower. Fort Honswijk and Fort Everdigen were, instead, the newly-built tower forts on the Lek, together with the Lunet aan de Snel. Finally, tower forts also appeared on the Linge (Fort Asperen) and the Waal (Fort Vuren), together with Fort Altena (cf. Zwart, J. van der and Steenbergen, C. (2009). Historical development, in *Atlas of the New Dutch Water Defence Line*, *op.cit.*, 28-29, 32-33).

⁵⁷⁷ Cf. Taverne, E. (2009). Only Holland can be made unassailably strong, *op.cit.*, 13-16.

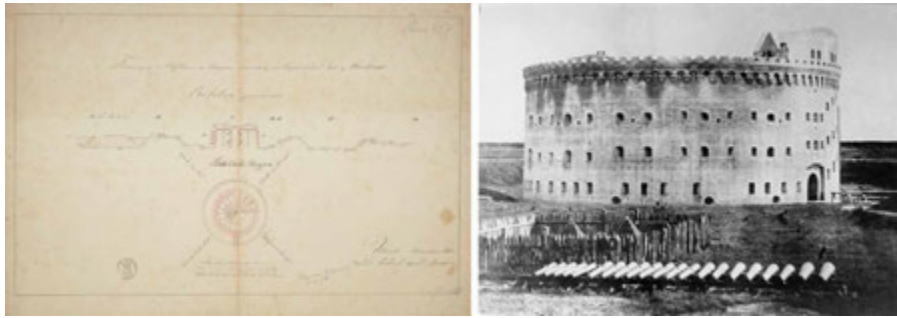


FIG. 4.8 Houten (NL), Fort Honswijk: *Tekening van de Profilen en den Donjon, behoorende bij het Project Gebast.de Fort bij Hondswijk* (Drawing of the Profiles and the Donjon, belonging to the Project Bastioned Fort near Hondswijk) (1840) (Nationaal Archief Den Haag) (left); bombproof tower before the demolition of the top floor (ca. 1870) (Stichting Menno van Coehoorn) (right)



FIG. 4.9 Bunnik (NL): aerial picture of Fort Rij nauwen (left) and Fort bij Vechten (right) (1920-1940) (Stichting Menno van Coehoorn)

But if the New Dutch Waterline now appeared to be completed, the advancements in military strategies that followed the introduction of rifled artillery (1860s) required further updating the system of military works in order to effectively support the functioning of the water machine. In this third construction period (1867-1870), attention again focused on the Utrecht fortifications: a second and outer ring of forts was conceived to complement the already-existing ring and move the defence line at a greater distance from the city centre.⁵⁷⁸ The discussion in these years mostly turned around the construction of Fort Rijnauwen and Fort bij Vechten (FIG. 4.9).⁵⁷⁹ After screening six different projects by a special committee, the final design included bomb-proof barracks covered with a thick layer of earth, a redoubt and defensive walls with masonry vaults surrounded by a wet moat.

The main reference was found in the forts of Antwerp.⁵⁸⁰ However, they showed the first signs of weakness as offensive posts already during the mobilization of 1870 (FIG. 4.10).⁵⁸¹ Nevertheless, the fourth construction period (1870-1886) also saw a lot of building activity.⁵⁸² This phase corresponded to what has been defined as a 'planting boom' for the New Dutch Waterline.⁵⁸³ Indeed, following a circular from the Department of War (1879) aimed at stimulating planting activities throughout the waterline,⁵⁸⁴ the period 1880-1887 saw a general restructuring of

⁵⁷⁸ The second ring around Utrecht was composed by Fort Rijnauwen, Fort bij Vechten, Fort Ruigenhoek and Fort Voordorp. Additionally, the fortifications of Naarden were updated with the construction of five batteries south of the city (cf. Zwart, J. van der and Steenbergen, C. (2009). Historical development, in *Atlas of the New Dutch Water Defence Line*, *op.cit.*, 28-29, 32-33).

⁵⁷⁹ In 1864, the idea was to build three forts, but it was later abandoned (cf. Taverne, E. (2009). Only Holland can be made unassailably strong, *op.cit.*, 21).

⁵⁸⁰ The forts of Antwerp had been recently built within the modernization of the city fortifications (1860-1864), according to the design of A.H. Brialmont (1821-1903). The Belgian military engineer – author of a study dedicated to the Dutch defence system (cf. Brialmont, A. H. (1866). *Le système défensive Néerlandais*. Bruxelles: Muquardt) – was also involved in the assessment of the projects for Fort Rijnauwen and Fort bij Vechten (cf. Bevaart, W. (1993) *De Nederlandse defensie, (1839-1874)*. 's-Gravenhage: Sectie Militaire Geschiedenis, 365-371; Taverne, E. (2009). Only Holland can be made unassailably strong, *op.cit.*, 21).

⁵⁸¹ Cf. *Ibid.*, 20-21.

⁵⁸² Belong to this phase: Fort Ronduit and Fort Maarsseveen, in the Vecht area; Fort 't Hemeltje and the Batterijen aan de Vereindseweg, in the second ring around Utrecht; Werk aan de Waalse Wetering, Fort Nieuwe Steeg and Fort Steurgat in the river's area (cf. Zwart, J. van der and Steenbergen, C. (2009). Historical development, in *Atlas of the New Dutch Water Defence Line*, *op.cit.*, 28-29, 32-33).

⁵⁸³ Cf. Boosten, M., Jansen, P. and Borkent, I. (2012). *Beplantingen op verdedigingswerken*, *op.cit.*, 55.

⁵⁸⁴ In particular, with this document the engineers commanders were asked to outline an overview of the needed planting activities with related costs. Consequently, specific guidelines were provided for the three main positions (Naarden, Utrecht, Gorinchem) in 1880 (cf. *Ibid.*).

the vegetal cover in the military works.⁵⁸⁵ This structural intervention, which involved the whole military system, is connected to a change in the function of vegetation. In addition to the previous ways of using plants on defence sites, their primary aim was now that of masking the fortifications.⁵⁸⁶ As a result, this overall camouflage operation amplified the character of secret military landscape of the waterline.⁵⁸⁷

Nevertheless, new artillery improvements in the 1880s started to diminish the strategic function of the forts, the role of which was gradually reduced to supporting the infantry.⁵⁸⁸ While most attention was focused on the construction of the *Stelling van Amsterdam* (Defence Line of Amsterdam) (1880-1914),⁵⁸⁹ the planting and maintenance of vegetation in and around the forts of the New Dutch Waterline remained a primary concern. Indeed, in 1908 a memorandum regarding the *Algemeen stelsel van beplanting voor de permanente verdedigingswerken in de Nieuwe Hollandsche Waterlinie* (General planting system for the permanent defences in the New Dutch Waterline) was issued with the aim of setting clear guidelines for planting and maintenance works.⁵⁹⁰

⁵⁸⁵ Cf. Ibid. Moreover, starting from 1872, the Algemeene Voorwaarden voor de uitvoering van werken en leveringen voor den dienst der Genie, vastgesteld bij besikking van den Minister van Oorlog van 3 Augustus 1872 (General Conditions for the execution of works and supplies for the service of the Engineers, established by order of the Minister of War of August 3, 1872) – which set general guidelines for the construction of fortifications in the Netherlands – included a specific section for planting activities (cf. Nationaal Militair Museum (NMM), obj.nrs. 00098969 (1872), 47-53; 00098949 (1879), 49-56; 00179348 (1893), 49-56; 88857795 (1899); 00057794 (1906), 62-70; 00040707 (1922)).

⁵⁸⁶ Bushes and trees were planted in and around the forts for this purpose, as well as to create a dark background to cannons (and, thus, reduce their visibility from a distance); at the same time, the height of plants had to be controlled, in order to avoid a striking effect in the surrounding plane landscape (cf. Boosten, M., Jansen, P. and Borkent, I. (2012). *Beplantingen op verdedigingswerken*, op.cit., 55-58).

⁵⁸⁷ Indeed, the intention to blend with the surrounding landscape has been compared to that promoted by the English landscape style in garden design, of which the *Nieuwe Hollandse Waterlinie* could be considered as a big-scale military application (cf. Hessen, W. and Winden, W. van (1986). *Het strategisch landschap, in De Hollandse Waterlinie*, Brand, H. and Brand, J. (Eds.). Utrecht: Uitgeverij Veen, 123).

⁵⁸⁸ Reference is made to the high-explosive grenade, which was introduced worldwide in 1885 (cf. Will, C. and Nationaal Project Nieuwe Hollandse Waterlinie (2019). *Sterk water*, op.cit., 72-73).

⁵⁸⁹ The *Stelling van Amsterdam* was a defence system conceived around the city of Amsterdam and based on the same functioning of the *Nieuwe Hollandse Waterlinie*. For an overview on its layout and historical development, see: Bruijn, S. de, Rijksdienst voor de Monumentenzorg (Zeist) and Oeffelt, T. van (1999). *Stelling van Amsterdam*. Zeist: Rijksdienst voor de Monumentenzorg; Baas, H. and Vesters, P. (2003). *De stelling van Amsterdam: harnas voor de hoofdstad*. Utrecht: Matrijs (Cultuurhistorische reeks wereldrfgoed in Nederland, 1); Rieven, O. van (2007). *Stelling van Amsterdam*. Rotterdam: Hogeschool Rotterdam; Fabriek, J. (2013). *De stelling van Amsterdam*. Utrecht: Uitgeverij Matrijs.

⁵⁹⁰ Cf. Boosten, M., Jansen, P. and Borkent, I. (2012). *Beplantingen op verdedigingswerken*, op.cit., 58-60).



FIG. 4.10 Bunnik (NL): Fort Rijnauwen (1880) (Nationaal Archief Den Haag)

Subsequently, in the fifth construction phase (1914-1918) resources and efforts were mainly spent on building concrete shelters and trenches in the space between the forts, and mostly concentrated along the main defence line: the border of the *Nieuwe Hollandse Waterlinie* on its west side.⁵⁹¹ In parallel, this stage also marked a decline in the attention on planting and maintaining the vegetation in and around the fortifications. Partially, it was related to the obstruction that the tall trees determined in the field of fire,⁵⁹² but also to the profound change in the sight-based concealing strategy that the introduction of aircraft warfare entailed (FIG. 4.11).⁵⁹³ Finally, the short sixth phase (1939-1940) was focused on the reinforcement of the already-existing works through the addition of new group shelters and machine gun nests (FIG. 4.12).⁵⁹⁴

⁵⁹¹ An example can be found in the Werk aan de Groeneweg and Werk Griffenstein (cf. Zwart, J. van der and Steenbergen, C. (2009). Historical development, in *Atlas of the New Dutch Water Defence Line*, *op.cit.*, 28-29, 32-33).

⁵⁹² The issue of finding a better balance between camouflage and the nuisance effect of vegetation in the military operations was already pointed out in the General planting system outlined in 1908 (cf. Boosten, M., Jansen, P. and Borkent, I. (2012). *Beplantingen op verdedigingswerken*, *op.cit.*, 60).

⁵⁹³ For example, the masking of moats surrounding the fortifications by means of floating-leaf plants became an issue of great concern when facing the threat of aerial conflict (cf. *Ibid.*, 60-61).

⁵⁹⁴ Cf. Zwart, J. van der and Steenbergen, C. (2009). Historical development, *Atlas of the New Dutch Water Defence Line*, *op.cit.*, 28.



FIG. 4.11 Houten (NL): aerial picture of Lunet aan de Snel (left) and Fort Honswijk (right) showing the bare configuration of the forts with no plants in the period between the two World Wars (1920-1940) (Collectie Nederlands Instituut voor Militaire Historie)



FIG. 4.12 Bunnik (NL): bunkers between Fort Rijnauwen and Fort bij Vechten (2018) (J. van der Werf)

Following this succession of phases, the forts and other works in the New Dutch Waterline can be interpreted as the traces left, at the local scale, by the diachronic evolution of a wider military landscape. At the same time, the presence and configuration of these local artefacts also had a tangible impact not only on the overall military system, but also on the landscape at large in which it was embedded. In relation to this, a relevant example can be found in the three concentric zones, defined with the *Kringenwet* (Circles Law) (1854) around each one of these military works for regulating the admissible activities in their surroundings. Within the first zone (300 metres), only the building of wooden structures was allowed, providing the possibility of setting them on fire in case of attack threats; in the intermediate ring (300-600 meters), buildings could have masonry foundations up to a maximum depth of 50 cm; finally, in the outer band (600-1000 meters), all construction materials were allowed but, if needed, the demolition of any type of obstacle – either constructions or plantations – should be possible (FIG. 4.13).⁵⁹⁵

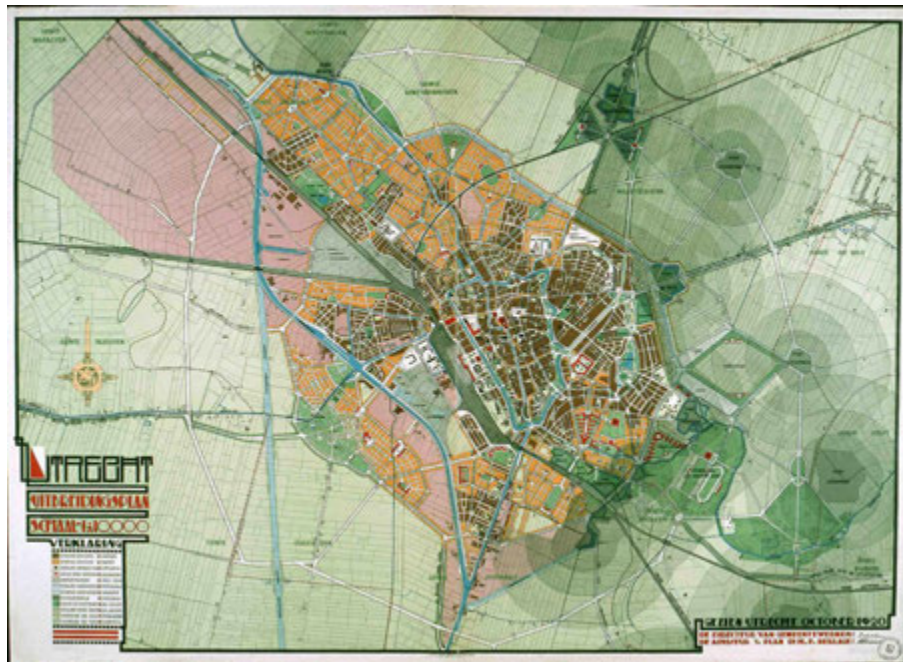


FIG. 4.13 Utrecht (NL), *Uitbreidingsplan* (Expansion Plan) (1920): the map shows the influence of the *Kringenwet* in the urban expansion of Utrecht (Universiteitsbibliotheek Utrecht)

595 Cf. Boosten, M., Jansen, P. and Borkent, I. (2012). *Beplantingen op verdedigingswerken*, *op.cit.*, 60.

As noted by G.A. Verschuure-Stuip, the New Dutch Waterline can be considered as one of the first 'protected' landscapes in the Netherlands, albeit at that time only for military and not for historic-cultural reasons.⁵⁹⁶ The extraordinary influence of the overall military system on a wider territorial scale is also evident from the demilitarization of several fortified cities – with the following radical transformation or demolition of their fortifications – following the recognition of the New Dutch Waterline as the main defence of the country.⁵⁹⁷ This phenomenon – in which the expansion needs of urban settlements also played a role – went through a substantial intensification after, at first, the enactment of the *Kringenwet*, in which only twenty-five cities were required to remain fortified; this number was, subsequently, reduced to eleven with the passing of the *Vestingwet* (Fortification Act) of 1874, with which the needed improvements at the New Dutch Waterline were given maximum priority.⁵⁹⁸

4.1.2 Decline of the military system

Despite the considerable efforts spent in its construction, the New Dutch Waterline gradually became obsolete as a defence machine well before its demilitarization. As a matter of fact, excluding the three mobilizations – in which the full inundation level was, however, never reached – the waterline was never used (FIG. 4.14).⁵⁹⁹

⁵⁹⁶ Indeed, having the *Kringenwet* been abolished only in 1951 and the areas adjoining the fortifications been subject to restrictions until 1963, the rural landscape in which the waterline falls could be preserved almost untouched from urban extension and building speculation for more than a century (cf. Verschuure-Stuip, G.A. (2014). Project New Dutch Waterline and project Arcadian Landscapes: Guidelines for new spatial development based on heritage, in *Proceedings of the AESOP Annual Conference "From control to co-evolution"*, Utrecht/Delft, The Netherlands, 9-12 July 2014).

⁵⁹⁷ Cf. Verschuure-Stuip, G.A. and Labuhn, B. (2014). Urbanization of former city fortifications in the Netherlands between 1805 and 2013, in: *WIT Transactions on The Built Environment*, Brebbia, C.A. and Clark, C. (eds.), vol. 143, 248-249).

⁵⁹⁸ Cf. The complete demilitarization of the fortified towns definitely took place between 1900 and 1951 (cf. *Ibid.*, 249; Will, C. and Nationaal Project Nieuwe Hollandse Waterlinie (2019). *Sterk water*, *op.cit.*, 71).

⁵⁹⁹ At first, the water machine was put into motion for a short period during the Franco-Prussian war (1870); subsequently, in the WWI there was a longer mobilization period (1915-1918), then followed by that occurred during the WWII (September 1939-May 1940) (cf. Will, C. (2009). *Water resistance*, *op.cit.*, 102).



FIG. 4.14 Soldiers on skates demonstrate the dangers of freezing in flooded terrain near Asschat (1940) (Collectie Nederlands Instituut voor Militaire Historie)

Subsequently, the sudden and drastic warfare changes that took place throughout the first half of the 20th century clearly exposed the weaknesses of this inundation-based military system.⁶⁰⁰ As a consequence, the New Dutch Waterline – which had already lost part of its importance as a ‘national redoubt’ when the Defence Line of Amsterdam was built – definitively lost its military strategic function after WWII (FIG. 4.15). However, all the military protection measures (i.e. those introduced with the *Kringenwet*) were maintained, and only repealed in 1963.⁶⁰¹ Nevertheless, the water defence machine with its hydraulic works – temporarily ‘borrowed’ from the already-existing water-

⁶⁰⁰ The bombing of the city of Rotterdam by the German army in May 1940 can be assumed as a tangible sign of the ineffectiveness of the New Dutch Waterline. Indeed, following the German invasion of Poland in 1939, the Dutch army mobilized its troops east of the waterline in order to slow the enemy advance and provide the needed time for inundations. Nevertheless, the German troops managed to overcome the obstacle with paratroopers, to which the aerial bombardment of Rotterdam followed. On war damages and post-war reconstruction in the Netherlands, see: Wagenaar, C. (1993). *Welvaartsstad in wording: de wederopbouw van Rotterdam, 1940-1952*. Rotterdam: NAi Uitgevers; Blom, A. (Ed.) (2013). *Atlas van de wederopbouw Nederland 1940-1965: ontwerpen aan stad en land*. Rotterdam: Nai010 uitgevers.

⁶⁰¹ Cf. Will, C. and Nationaal Project Nieuwe Hollandse Waterlinie (2019). *Sterk water, op.cit.*, 113-116.

management and agricultural system – were smoothly given back to their centuries-old functions, and the end of the military ‘episode’ did not lead to any interruption in the landscape history of this area. The fate of the military works, specifically built for defence and now left without their original strategic function, was, however, rather different.



FIG. 4.15 Rotterdam (NL): the Laurenskerk and its surroundings after the bombardment of 1940 (Rijksdienst Cultureel Erfgoed Beeldbank)

In the first place, the Ministry of War kept most of the fortified sites formerly belonging to the waterline as logistic bases.⁶⁰² Nevertheless, the attention on their maintenance decreased, and several transformations took place for adapting the sites to their secondary military functions.⁶⁰³ Starting from the 1980s, the ministry of Defence

⁶⁰² Cf. Ibid.

⁶⁰³ In relation to this, the transformations occurred during the use of the forts by the *Explosieven Opruimingsdienst* (EOD - Explosive Ordnance Disposal Agency) – widely illustrated in paragraph 4.3 of this chapter – can serve as a reference.

transferred parts of the system to *Staatsbosbeheer* (SBB – State Forestry Service).⁶⁰⁴ In a phase in which the military artefacts were being individually recognized as monuments, the choice of SBB as the most eligible body to which the forts could be entrusted can be interpreted as a clear sign of their significance of their green heritage.⁶⁰⁵ However, if the military works were getting a second life as single entities, the significance and memory of the overall military system – as the expression of the centuries-old and typically-Dutch tradition of military defence based on water – diminished. This situation changed with the inclusion of the New Dutch Waterline as a national pilot project within the Belvedere governmental program (1999).

4.2 The National New Dutch Waterline Project: a top-down approach for the military system

4.2.1 The Belvedere Memorandum: definitions, aspirations and goals

Together with the overall change in attitude towards landscape, cultural heritage and their interconnection, the Belvedere Memorandum introduced an implementation framework for turning its underlying ideas into practice. Indeed, the program's goals offered technical and financial support to local projects, experimenting with the conservation-through-development approach in both urban and rural areas. Accordingly, even if cultural-historic values throughout the whole national territory were taken into account, the choice was made to focus attention and efforts on those areas that could be designated as of 'exceptional value'.⁶⁰⁶ The selection methodology involved a first step of sectoral evaluation, in which the cultural-historic qualities of the country were separately assessed in the three main fields of

⁶⁰⁴ Of all the fort sites, about half of them (22) were registered as national monuments before 2002, three were in the process of being registered, and three were recognized as monuments at a local (municipal) scale (cf. Luiten, E. (2004). *Panorama Krayenhoff: Linioperspectief*. Utrecht: Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie, 68).

⁶⁰⁵ By 2002, thirteen forts were owned by *Staatsbosbeheer* (*Ibid.*, 69).

⁶⁰⁶ Cit. Feddes, F. & Wilkens C.S. (1999). *The Belvedere Memorandum, op.cit.*, 42.

archaeology, historic architecture and urban planning, and historic geography. Taking ‘rarity, condition and representativeness’ as basic criteria, the sectoral screenings were largely grounded on the systematization of the already-existing thematic or regional cultural-historic inventories, which were then jointly discussed by experts, the interested national agencies and provinces.⁶⁰⁷ Through the subsequent overlap of the sectoral maps, the final selection of the Belvedere areas – ‘areas with high combined cultural-historic values’ – then focused on those sites where ‘exceptional features from more than one sector’ had been identified (FIG. 4.16).⁶⁰⁸



FIG. 4.16 Belvedere program (1999): Cultural-historic values Map of the Netherlands. Identification of Belvedere areas (Feddes & Wilkens 1999: 27)

⁶⁰⁷ Reference is made to the *Rijksdienst voor Oudheidkundig Bodemonderzoek* (ROB – National Agency for Archaeological Research), the *Rijksdienst voor de Monumentenzorg* (RDMZ – National Agency for Historic Buildings and Monuments) and the *Informatie- en Kenniscentrum Natuurbeheer* (Information and Knowledge Centre for Nature Management). Cf. *Ibid.*

⁶⁰⁸ Cit. *Ibid.*

As the first nation-wide integrated overview of this kind, the resulting 'Cultural-Historic Value Map of the Netherlands' represented, together with the innovative policy vision, a great contribution for the knowledge of the cultural heritage of the country.⁶⁰⁹ However, the expert-driven selection procedure has been considered as deviating from the new democratized and identity-centred approach to cultural heritage.⁶¹⁰

In order to provide concrete operational guidelines for the draft of projects involving these valuable sites, the analysis of the envisaged development dynamics in the near future was crucial. Water management, urban expansion and the restructuring of the countryside were identified as the three main fields in which the country's most influential spatial trends were likely to take place in the coming years. Accordingly, another classification was made between areas with expected high or low spatial dynamics. Crossing these results with that of the cultural-historic assessment, each type of possible situation was then specifically addressed.⁶¹¹ But if for sites with low spatial dynamic some general guidance could be provided, the condition of high spatial dynamics in Belvedere areas represented a challenge. In these cases, the definition of a specific design assignment was highly recommended so as to arrive at the desired 'unique solution' for these particular conditions.⁶¹² It was within this framework that the New Dutch Waterline was designated as a national Belvedere pilot project.

Although generally considered as the starting point for the revitalization of this historic military system, it is necessary to highlight that, back then, the interest in the waterlines on the national territory was not completely new, and can be traced back to previous spatial planning documents. Indeed, already in 1988, the *Vierde Nota Ruimtelijke Ordening* (Fourth Memorandum on Spatial Planning) mentioned the waterlines, the functional significance of which was attributed to their possible

⁶⁰⁹ In total, 76 areas and 105 towns were designated as 'Belvedere Areas' (cf. *Ibid.*, 42-47).

⁶¹⁰ In particular, to be criticized was the fact that 'such local identity will be imposed by a national government operating one of the most top-down systems of government and planning in the western world' (cit. Kuipers, M. J. and Ashworth, G. J. (2001). *Conservation and Identity: A New Vision of Pasts and Futures in the Netherlands*, *European Spatial Research and Policy: interdisciplinary studies on environment, society and economy*, nr. 2, 63). In relation to this, it is considered that 'the word identity should almost everywhere in the report have been pluralized [...] the same physical places have changing identities through time and for different people at the same time. Therefore the interesting topic is this process of identification of people with places. To miss the question "how is this done?" [...] "by whom, for whom and for what purpose?" is to miss the most relevant points' (cit. *Ibid.*, 58-59).

⁶¹¹ At this stage, four types of areas are addressed: 1) areas with sectorial cultural-historic values and low spatial dynamic; 2) Belvedere areas with a low spatial dynamic; 3) areas with sectorial cultural-historic values and high spatial dynamic; 4) Belvedere areas with a high spatial dynamic. Cf. Feddes, F. & Wilkens C.S. (1999). *The Belvedere Memorandum*, *op.cit.*, 49-52.

⁶¹² Cf. *Ibid.*, 52.

contribution in ‘protecting and reserving strategic water resources’.⁶¹³ Subsequently, the *Nota Landschap* (1992) and the *Structuurschema Groene Ruimte* (1994) confirmed their national significance. Indeed, the ‘waterlines (Defence Line of Amsterdam, the Dutch Waterline)’ are already identified as part of those cultural-historical patterns and features that, according to historical-geographic criteria, contributed to the identity of the Dutch landscape (FIG. 4.17).⁶¹⁴ Therefore, attention to their ‘landscape significance’ had already been recognized as necessary, and it was recommended to protect it by means of ‘low-dynamic functions (recreational shared use, water extraction and conservation, nature development and forest development)’.⁶¹⁵



FIG. 4.17 *Nota Landschap* (1992): the defence lines are already identified as cultural-historical elements of landscape relevance (LNV 1992: 53)

613 Cf. Patijn, W. & Projectgroep Architectuurnota (2000). *Ontwerpen aan Nederland. Architectuurbeleid 2001-2004*. Den Haag: Sdu Uitgevers, 95.

614 Cf. Ministerie van Landbouw, Natuurbeheer en Visserij, Directie Natuur, Bos, Landschap en Fauna (1992). *Nota landschap, op.cit.*, 95.

615 Cit. *Ibid.*, 105.

Accordingly, in 1993 a research project was commissioned by the *Rijksplanologische Dienst* (National Planning Agency) and the RDMZ to the *Vakgroep Ruimtelijke Planvorming, Sectie Landschapsarchitectuur* (Department of Spatial Planning, Landscape Architecture Section) at Wageningen University.⁶¹⁶ The motive behind this research was the process started by the Ministry of Defence for transferring the forts still in its possession to the Ministry of Finance.⁶¹⁷ Fearing the ‘fragmentation of the Waterline’ by selling parts to private investors thus triggered the search for ‘new forms of use’ to be ‘combined with the natural, recreational and cultural-historical significance’.⁶¹⁸ In the light of these precedents, the selection of the New Dutch Waterline as a national pilot project within the Belvedere program gave the revitalization process that followed an even more pivotal role. In the Belvedere’s original intentions, its selection was mainly attributed to the high level of administrative complexity in the revitalization of this vast military structure in the Delta metropolis. However, the relevance of this choice goes far beyond its role of *exemplum* for the conservation-through-development approach. In line with the conceptual level, it represented a crystallization point for the redefinition and cross fertilization of the domains of cultural – and, more specifically, architectural – heritage and landscape, of which the waterline would have become an exceptional test case. In this sense, the *Derde Architectuurnota Ontwerpen aan Nederland* (Third Architectural Memorandum) (2000) was also significant. It presented ten big projects, five of which were ‘of an explicit landscape scale and significance’.⁶¹⁹ It included the New Dutch Waterline,⁶²⁰ testifying the importance of ‘landscape architecture as a design discipline’ in the revitalization of the historic military system.⁶²¹

⁶¹⁶ Cf. Bolhuis, P. van, Vrijlandt, P. (1993). *Waterlijn: Ideeën voor de toekomst van de Stelling van Amsterdam en de Nieuwe Hollandse Waterlinie*. Wageningen: Vakgroep Ruimtelijke Planvorming, Sectie Landschapsarchitectuur, Landbouwuniversiteit Wageningen, 8.

⁶¹⁷ Cf. *Ibid.*

⁶¹⁸ Cit. *Ibid.* An account on the results of this research project is provided in the next paragraph.

⁶¹⁹ Cf. Patijn, W. & Projectgroep architectuurnota (2000). *Ontwerpen aan Nederland, op.cit.*, 95-98.

⁶²⁰ Apart from the *Nieuwe Hollandse Waterlinie*, the other projects with a landscape character are: 1) the redevelopment of the sandy areas in the east and south of the Netherlands; 2) the design of the *Zuiderzee* line (later on cancelled); 3) the development of the Delta Metropolis (Randstad and the Green Heart); 4) the spatial integration and anchoring of national highways. Cf. Luiten, E. (2011). Gereanimeerd erfgoed. Nationaal Project Nieuwe Hollandse Waterlinie als format voor het landschapsbeleid, *Bulletin KNOB*, 110(6), 225.

⁶²¹ Cf. Luiten, E. (2004). *Panorama Krayenhoff, op.cit.*, 13.

Given the non-prescriptive nature of these memoranda, the inclusion of the New Dutch Waterline was not enough to guarantee its protection. Therefore, when the National Spatial Strategy (2004) brought back the national landscapes policy with the nomination of twenty sites, both the New Dutch Waterline and the Defence Line of Amsterdam were included (FIG. 4.18).⁶²² As already introduced in the *Nota Landschap* (1992), the 'National Landscape Pattern' aimed at identifying those areas of national interest because of their significance for the identity of the Dutch landscape, and where the direct involvement of the central government was deemed necessary through 'planning protection'.⁶²³



FIG. 4.18 The National Landscapes identified in the National Spatial Strategy (2004) (Renes 2011: 4)

In the case of the New Dutch Waterline, its inclusion in the national landscape framework was considered as beneficial also for the military architecture of the forts at a local scale.⁶²⁴ This choice was also influenced by the parallel acknowledgement of its significance as World Heritage, which in fact preceded the national recognition as

⁶²² Apart from the two military systems, the other national landscapes were also Belvedere areas. They included the Waterland region – already present in the 1975's list, but now extended to include the Beemster Lake World Heritage site – the Green Heart, and the Hoeksche Waard (cf. Renes, J. (2011). The Dutch national landscapes 1975-2010: Policies, aims and results. *Tijdschrift Voor Economische En Sociale Geografie*, 102(2), 4).

⁶²³ Ministerie van Landbouw, Natuurbeheer en Visserij, Directie Natuur, Bos, Landschap en Fauna (1992). *Nota landschap, op.cit.*, 142-144.

⁶²⁴ Cf. *Ibid.*, 91.

national landscape. Indeed, following the identification of the three most representative themes for the Dutch heritage on a global scale – namely, the Dutch Golden Age, the struggle against water, and the Modernist movement in architecture – a number of cultural landscapes were nominated as World Heritage in the Netherlands.⁶²⁵ Within this framework, the New Dutch Waterline was included in the UNESCO Tentative List together with the designation of the Defence Line of Amsterdam as World Heritage Site (1996).⁶²⁶

The significance of the New Dutch Waterline on both the national and international level was based on studies on its historic-cultural significance within the national boundaries. Already in 1986, a first seminal book by H. & J. Brand – *De Hollandse Waterlinie* (The Dutch Waterline) – shed light on its historical functioning and layout,⁶²⁷ which together with the subsequent contributions of C. Will (2002), represented the main references for all those involved in the following revitalization process.⁶²⁸ Moreover, studies on specific parts of the military system and, in particular, that of the Utrecht area provided additional information.⁶²⁹ Finally, publications on specific forts also contributed to the knowledge base, in which the deepening of historic-cultural qualities is often combined with their natural and ecological

⁶²⁵ Out of ten properties designed as World Heritage sites in the Netherlands, four nominations involved cultural landscapes: the Island of Schockland (1995), the Stelling van Amsterdam (1996), the Mill network at Kinderdijk-Elshout (1997), and the Beemster Lake (1999).

⁶²⁶ Apart from the Belvedere Memorandum, the influence of the World Heritage recognition on national policies is already evident in the *Nota Landschap* (1992), where the question ‘which parts of the landscape are not unique from an international perspective?’ is already posed (cf. Ministerie van Landbouw, Natuurbeheer en Visserij, Directie Natuur, Bos, Landschap en Fauna (1992). *Nota landschap, op.cit.*, 24). More detailed account on the World Heritage nomination of the New Dutch Waterline as an extension of the Defence Line of Amsterdam is given in the conclusion of the case studies section.

⁶²⁷ The book followed the initiative of the Stichting Fort Asperen to have an exhibition on the New Dutch Waterline in 1985 (cf. Brand, H. and Brand, J. (Eds.). *De Hollandse Waterlinie*. Utrecht/Antwerpen: Uitgeverij L.G. Veen B.V., 3).

⁶²⁸ Will, C. (2002, 1st ed.). *Sterk water. De Hollandse Waterlinie*. Utrecht: Matrijs.

⁶²⁹ Already in 1978, Staatsbosbeheer commissioned a research on ‘the old fortifications in the Province of Utrecht’ with a specific focus on nature conservation. Although the forts of the New Dutch Waterline are not specifically tackled, they represent the most consistent part of the fortifications analysed (cf. Littel, A. (1978). *De oude vestingwerken in de provincie Utrecht: verslag van een onderzoek naar hun waarde voor het natuurbehoud. Deel A*. Utrecht: Staatsbosbeheer, Consulentenschap voor Natuurbehoud in de provincie Utrecht). Starting from the 1980s, the first studies on the Utrecht’s forts as part of the New Dutch Waterline were published (cf. Koppert, G. (1985). *De forten rond Utrecht: verdedigingswerken in de Nieuwe Hollandse Waterlinie*. Utrecht: Matrijs (Historische reeks Utrecht, dl. 1; Koen, D. T., Blijdenstijn, R. and Provincie Utrecht (1993). *De Hollandse Waterlinie: provincie Utrecht*. Amsterdam: Buijten & Schipperheijn (Cultuurhistorische routes in de provincie Utrecht, 3). Finally, the New Dutch Waterline is also included in more general works on the fortifications of Utrecht city (cf. Koen, D. T. (1990) *Utrecht verdedigd: fortificatie en mobilisatie 1914-1940*. Utrecht: Matrijs (Historische reeks Utrecht, dl. 14).

potential.⁶³⁰ As a result, these early years – already defined as a ‘reflective phase’ – created a valuable starting point for the revitalization process that followed.⁶³¹

In conclusion, the redefinition of the relationship between cultural heritage and spatial planning promoted by the Belvedere Memorandum had a significant impact on the appreciation of landscape heritage in the Netherlands. If the emancipation of the landscape notion from that of nature had been marked by the gradual acknowledgement of its manmade character, the range of human interventions to be considered as landscape features had not included those traces of the past before – i.e., archaeological, architectural or topographical structures – which were traditionally seen as belonging to the domain of cultural heritage. The latter had followed an independent path, to which the actors leading the process of landscape patrimonialization had constantly referred to, but as a parallel world. Considering the influence of spatial planning on the appreciation and protection of the national landscape throughout the 20th century, the opening towards cultural history implicitly created a brand-new bridge between landscape and cultural heritage, which could also benefit of the efforts of historic-archaeological disciplines to join their forces in the name of the landscape. In these favourable conditions, the New Dutch Waterline represented a heritage at the crossroads of historical architecture and landscape and an extraordinary test case for this mutual dialogue.

4.2.2 The Panorama Krayenhoff: a pars pro toto approach for the military artefacts

Following the identification of the New Dutch Waterline as the first national pilot project within the context of the Belvedere program (1999), a project office was set up in order to define a clear strategy for its revitalization. After a three-years preparation phase, the effort of this team led to the publication of a masterplan

⁶³⁰ Together with the afore-mentioned research commissioned by *Staatsbosbeheer*, that of fort Rijnauwen is the case where the combination of historic-cultural and nature-ecological values is most evident (cf. Arnolds, E. (1970). Het fort bij Rijnauwen, *De Levende Natuur*, 73 (2), 49-57; Oostendorp, P. J. (1975). *Het fytoplankton van het fort bij Rijnauwen (gem. Bunnik): een vergelijking van vijf monsterpunten: een studie van de planktonfluctuaties*. dissertation. s.n.; Gaag, A. van der (1990). *Fort bij Rijnauwen: middelpunt van de Nieuwe Hollandse Waterlinie*. Edited by H. Reinders. Bunnik; Leegwater, D. C. (1995). *Fort bij Rijnauwen: van artilleriesteunpunt tot infanteriesteunpunt*. Zutphen: Walburg Pers; Voute, A.M, Bruijn, Z and Ommen, F. van (1997). Vleermuizen in Het Fort Bij Rijnauwen, *De Levende Natuur*, 98 (2), 56-60).

⁶³¹ Cf. Verschuure-Stuip, G.A. (2016). Military brownfields in the Netherlands: The revitalization of the New Dutch Waterline (1980-2014), in *Sustainable Regeneration of Former Military Sites*, Clark, C. and Bagaeen, S. (Eds.). Georgetown: Taylor and Francis, 144.

in 2004: the *Panorama Krayenhoff*.⁶³² More than a detailed design plan, it was conceived as a 'vision', requiring the active participation of the provinces and municipalities involved.⁶³³ This had to do with the 'national' – rather than 'governmental' – nature of the project: indeed, beyond the government initiative, the nation-wide 'social' significance of the New Dutch Waterline called for a broad consultation with several parties in the elaboration phase,⁶³⁴ as well as an equally crucial contribution in the implementation phase, during which the Panorama Krayenhoff could serve as a steering tool for assuring the compliance of local interventions to the main vision.⁶³⁵

The choice to name this document after the 19th-century military engineer who had originally conceived the defence system was based on the idea 'to act in the spirit of the whole structure, as it was once designed by Cornelis Krayenhoff'.⁶³⁶ Indeed, the main goal of this operation was to make the New Dutch Waterline, as a whole, a 'recognizable spatial unity'.⁶³⁷ The contemporary need to enhance the visibility of the waterline was due to the historical character of this military system, which had been conceived to be 'as hidden as possible' in the surrounding landscape, but also to the loss of an overarching site administration by the national government, which had resulted in a fragmented management and, consequently, in a social invisibility of the system with negligence and scarce maintenance as main negative outcomes.⁶³⁸ In line with the Belvedere motto – 'conservation through development' – this main goal could only be pursued by reinterpreting the historical features and significance of the New Dutch Waterline in a contemporary way. Accordingly, within

⁶³² Luiten, E. (2004). *Panorama Krayenhoff: Linieperspectief*. Utrecht: Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie. Two intermediate versions were published in 2002 and 2003. Cf. Luiten, E. (2002). *Panorama Krayenhoff: voorontwerp linieperspectief, ruimtelijk perspectief Nieuwe Hollandse Waterlinie*. Utrecht: Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie; Luiten, E. (2003). *Panorama Krayenhoff II: ontwerp linieperspectief: aangepaste teksten en karten*. Utrecht: Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie.

⁶³³ Already in 2002, the provinces of Gelderland, Nord-Brabant and South-Holland had stipulated a cooperation agreement with the *Pact van Loevestein* (cf. Provincies Gelderland, Noord-Brabant en Zuid-Holland (2002). *De Nieuwe Hollandse Waterlinie: Gebiedsvisie-Zuid: Pact van Loevestein*. Arnhem, Juni 2002).

⁶³⁴ Cf. Luiten, E. (2003). *Panorama Krayenhoff II: ontwerp linieperspectief: bijlage – commentaar van de Stuurgroep op de ontvangen reacties*. Utrecht: Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie.

⁶³⁵ Indeed, given the regional scale of the *Nieuwe Hollandse Waterlinie*, the concertation of such a large number of parties that the drafting of the *Panorama Krayenhoff* involved made it a unique experience in the Netherlands. Cf. Luiten, E. (2004). *Panorama Krayenhoff*, *op.cit.*, 5.

⁶³⁶ Cit. Luiten, E. (2004). *Panorama Krayenhoff*, *op.cit.*, 7.

⁶³⁷ Cit. *Ibid.*, 5.

⁶³⁸ Cit. *Ibid.*, 21-22.

the Panorama Krayenhoff the military system was given three new meanings: that of collective memory testimony, of *megasingel* adjoining the Delta Metropolis, and of contemporary water machine.

The acknowledgment of the waterline as a 'collective memory testimony' primarily stemmed from the multiple facets of its historical significance: recalling the importance of local identity in a globalizing culture already stressed in the Belvedere policy, the waterline represented a 'typically Dutch way of defence';⁶³⁹ as the tangible testimony of 150 years of military history, it also referred to the contemporary Dutch people of the country's gradual transition from a cities' league to a nation state.⁶⁴⁰ But its historical functioning also bore witness of a much older cultural landscape, the waterline being a sophisticated adaptation of the already-existing geomorphological and hydraulic features of the central Netherlands for military purposes.⁶⁴¹ Accordingly, the *ruimtelijk monument* (territorial monument) was a significant 'example of engineering art' and 'military architecture', the material traces of which had been left almost untouched.⁶⁴² However, the cultural-historic significance of the New Dutch Waterline could by no means be translated in the 'intention to reconstruct everything to a historical situation in the past'.⁶⁴³ Although the restoration of specific local artefacts was contemplated, the primary concern for an enhanced 'recognizability' had to be addressed by spatial and landscape development 'inspired' to the waterline's historical features.

Recalling 'the beautiful city canals' often built on former defensive moats surrounding historic urban centres, the New Dutch Waterline was also reinterpreted as a 'mega-canal in the Deltametropolis' – namely, the conurbation of west-Netherlands cities which had started to be considered as one metropolitan area, and which corresponded to the area once defended by the waterline.⁶⁴⁴ As a 'landscape connection' between urban and rural contexts, the revitalization of the waterline had a strong recreational potential for citizens and tourists and the local artefacts – as 'stopping places along the route' – played a central role in the transition from a hidden to an 'attractive landscape'.⁶⁴⁵

⁶³⁹ Cit. *Ibid.*

⁶⁴⁰ Cf. *Ibid.*, 13; Luiten, E. (2011). Gereanimeerd erfgoed. Nationaal Project Nieuwe Hollandse Waterlinie als format voor het landschapsbeleid, *Bulletin KNOB*, 110(6), 226.

⁶⁴¹ Cf. *Ibid.*

⁶⁴² Cit. *Ibid.*; Luiten, E. (2004). *Panorama Krayenhoff*, *op.cit.*, 22.

⁶⁴³ Cit. *Ibid.*

⁶⁴⁴ Cit. *Ibid.*, 23.

⁶⁴⁵ Cit. Luiten, E. (2011). Gereanimeerd erfgoed, *op.cit.*, 223.

Finally, the New Dutch Waterline – located ‘on the transition between the high and low lands’– could now serve as a ‘macro gradient’, which offered opportunities for enhancing the ecological and hydrogeological setting of the area.⁶⁴⁶ In relation to this, the third meaning given to the New Dutch Waterline stemmed from it being an inundation machine, the historic functioning of which could benefit the modernization of the contemporary water management system.

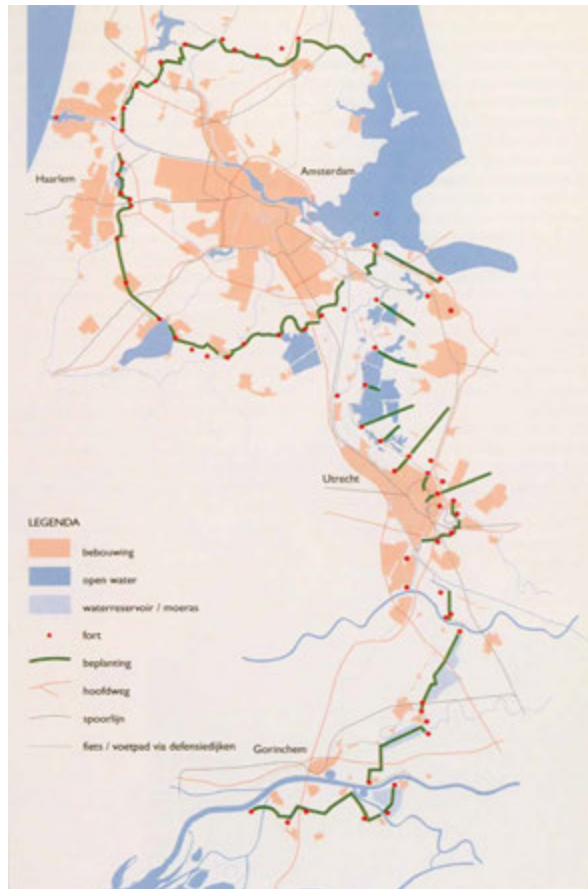


FIG. 4.19 Wageningen University (Department of Spatial Planning, Section Landscape Architecture), map from the research project *Waterlijn*: the idea to turn the military water basins in water reservoirs is already present (Bolhuis & Vrijlandt 1993: 33)

646 Cit. Luiten, E. (2004). *Panorama Krayenhoff*, op.cit., 23.

Following the option already suggested in the research carried out at Wageningen University in 1993 (FIG. 4.19),⁶⁴⁷ the significance of water as a tool for the national defence, as exemplified by the waterline, could be given a contemporary variant, in which the enemy to be stopped was now the flooding risk, curbed by means of controlled inundations.⁶⁴⁸

In order to turn these ambitions into concrete guidelines, the revitalization of the waterline called for an inter-scale approach, in which the 'typical ordering and arrangement of the components relative to each other' had a key role.⁶⁴⁹ Accordingly, 'three levels or scales' were distinguished – the overall system, the regional complexes and the local artefacts – top-down connected to each other. This approach served as the backbone for combining the need to preserve the waterline with the three main development trends in this area – namely, the modernization of water management, the enhancement of the ecological connection, and the containment of the rising urban pressure – which were addressed in three maps (blue, green, red).

The first scale to be considered was that of the overall system: the main defence line with its nine inundation basins, as a watershed between the dense defended area on the west and the open fields on the east. The use for water storage for both seasonal rain peak or emergency situations, as shown on the blue map at the system scale, re-activated the water machine to serve contemporary water management (FIG. 4.20). If this choice can be interpreted as a quotation of the waterline's functioning in case of war, the indications given in the green and red maps, instead, aimed at keeping the character of the inundation fields in time of peace 'by providing room for densification to the west of the main defence line and ensuring peace and openness to the east.'⁶⁵⁰ Within the main task of matching the broader interests of rural land use with the protection and development of the waterline landscape, the green map explored the possibility to turn the line into an ecological corridor ('robust ecological connecting zone') through the development of a 'dry network' (forests, grasslands)

⁶⁴⁷ Cf. Bolhuis, P. van, Vrijlandt, P. (1993). *Waterlijn, op.cit.*, 31-32.

⁶⁴⁸ Cf. Luiten, E. (2004). *Panorama Krayenhoff, op.cit.*, 23. The idea of the water reservoirs is also connected to the broader national efforts to improve the relationship between spatial planning and water policy for flooding prevention, as in the program *Ruimte voor de Rivier* (Space for the River) (2000-2019) (cf. Directoraat-Generaal Rijkswaterstaat. Hoofdkantoor van de Waterstaat (Den Haag) (2000). *Ruimte voor de rivier*. Den Haag: Ministerie van Verkeer en Waterstaat; Sijmons, D., Feddes, Y.C., Luiten, E., Feddes, F., Bosch, J. and Harsema, H. (2017). *Ruimte voor de rivier: veilig en mooi landschap*. Wageningen: Blauwdruk).

⁶⁴⁹ Cit. Luiten, E. (2004). *Panorama Krayenhoff, op.cit.*, 27.

⁶⁵⁰ Cit. *Ibid.*, 28.

and a 'wet network' (swamps, open waters).⁶⁵¹ This had the additional effect to increase the 'recognizability of the line in the landscape'.⁶⁵² However, a balance had to be found with its historical invisibility in order to highlight its presence 'in a way that is not imposing in the landscape, but it is striking enough to serve as a logo of the New Dutch Waterline' (FIG. 4.21).⁶⁵³

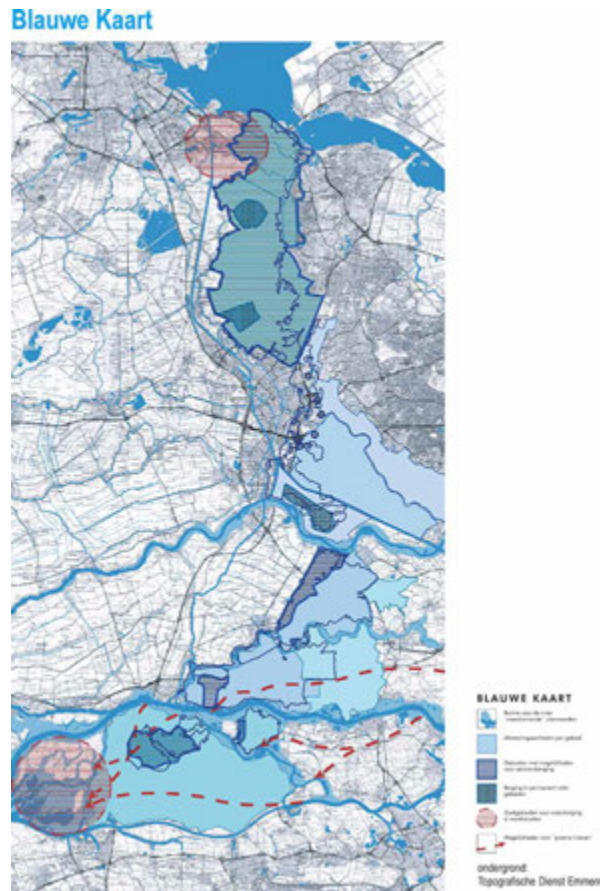


FIG. 4.20 Panorama Krayenhoff (2004): *Blauwe kaart* (Blue map) (Luiten 2004: 27)

651 Cit. *Ibid.* 34.

652 Cit. *Ibid.*

653 Cit., *Ibid.*, 35.

Finally, the red map highlighted the ‘contrast quality of the Line landscape’ – given by the density of the defended area in comparison with the openness of the inundation field; it did so by means of ‘landscape densification’. Indeed, the future demand of ‘space for living and working’ could be addressed by concentrating the building activities in a number of selected ‘landscape densification zones’ located at west of the main defence line (FIG. 4.22).⁶⁵⁴

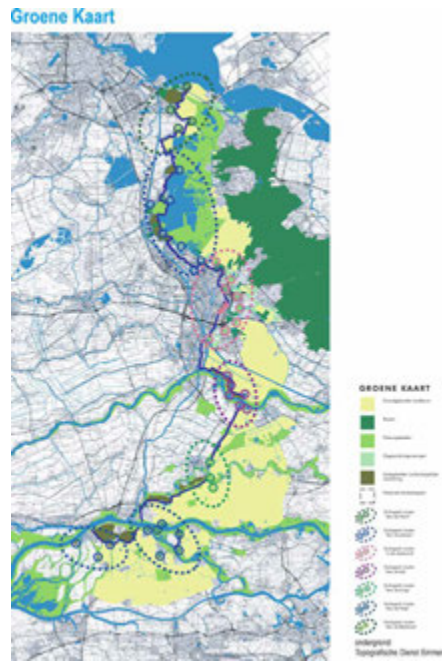


FIG. 4.21 Panorama Krayenhoff (2004): *Groene kaart* (Green map) (Luiten 2004: 35)

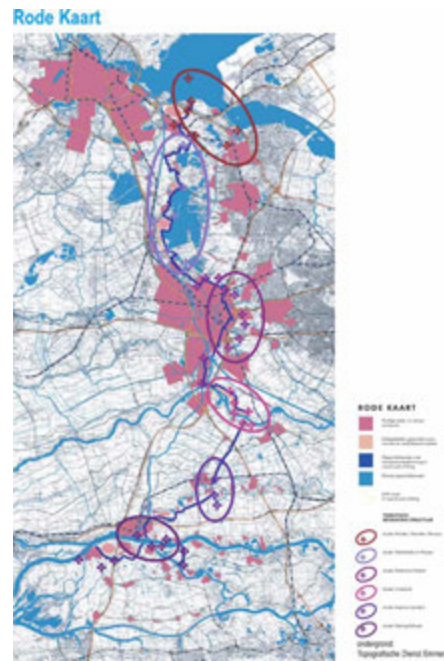


FIG. 4.22 Panorama Krayenhoff (2004): *Rode kaart* (Red map) (Luiten 2004: 40)

⁶⁵⁴ The criteria for selecting the ‘landscape densification zones’ included: the proximity to existing infrastructures; the expected spatial dynamics; the possibility to give such areas a ‘natural’ limit (e.g. canals, natural areas). Cf. Luiten, E. (2004). *Panorama Krayenhoff, op.cit.*, 36.

If the main revitalization strategy at the system level consisted of general indications, the latter were given a more concrete answer at the scale of the regional complexes.⁶⁵⁵ Reference was made to the 'system of inundation areas and water management works, accesses, forts, batteries and group shelters' which, according to the 'regional topographic characteristics and the origin of inundation water', could assume a different and sometimes peculiar character within the overall historic structure.⁶⁵⁶

In relation to this, three 'regional landscapes' were identified as north-south crossed by the whole waterline: the *Vechtstreek* (Vecht area), the *Kraag van Utrecht* (Collar of Utrecht), and the *Riviergebied* (Rivers area).⁶⁵⁷ Limited by the Vecht banks on the west, defence in the peaty *Vechtstreek* could rely on inundation, and the water management works were characterized by an east-west orientation perpendicular to the river. A similar condition could be observed in the *Riviergebied*, with the only exception of dikes that had been here mainly conceived with north-south orientation. Instead, the *Kraag van Utrecht* had a peculiar character: coinciding with a high-lying region where inundation was difficult, defense in this area was mostly assured through the double ring of forts around Utrecht. Consequently, these local artefacts represented the landscape features with 'the highest information value'.⁶⁵⁸ Additionally, the processes of urban expansion and infrastructure construction that occurred since the second half of the 20th century had even more accentuated the punctual and fragmented character of the military landscape in this area,⁶⁵⁹ thus, standing out in the comparison with the *Vechtstreek* and the *Riviergebied*, which could still be experienced as 'landscape units'.⁶⁶⁰ Accordingly, the main aims defined at the system level in the blue, green and red maps were translated in detailed guidelines tailored on the features of the regional landscapes. This also applies to the water storage facilities, which were given a dispersed configuration in the *Vechtstreek* as a counterbalance to the widespread agricultural dewatering of soils, that of punctual storage ponds for city water in the *Kraag van Utrecht* to reduce the load on the drainage system caused by the hardening surface of the urban settlement, and that of selected storage areas close to the main defence line in the *Riviergebied*

⁶⁵⁵ Also on the identification of the regional complexes, an anticipation can be found in the research carried out at Wageningen University (cf. Bolhuis, P. van, Vrijlandt, P. (1993). *Waterlijn*, 37-41).

⁶⁵⁶ Cit. Luiten, E. (2004). *Panorama Krayenhoff*, op.cit., 27.

⁶⁵⁷ Cf. *Ibid.*, 28.

⁶⁵⁸ Cit. *Ibid.*

⁶⁵⁹ Cf. *Ibid.*, 33.

⁶⁶⁰ Cit. *Ibid.*

with the additional benefit of highlighting the line profile.⁶⁶¹ Also in the green map, the choice was made to tie the envisaged ecological corridor with ‘the landscape ecological variation on a regional scale’; in relation to this, seven ecological clusters were identified, in which ‘both the forts and the natural environment occupy a relevant position’.⁶⁶² Finally, the recreational demand of the Delta metropolis – the other form of urban pressure on the rural area addressed in the red map – was also channelled on a regional base. Indeed, seven touristic-recreational clusters were identified according to different target groups (e.g. duration of the stay, intensity of the activities) the choice of which directly stemmed from the regional and sub-regional peculiarities.⁶⁶³ Within this frame, ‘three poles for intensive recreation’ were selected in each one of the regional landscapes, through which a decisive link was established between the mid-regional level and the scale of the local artefacts.⁶⁶⁴

Within the New Dutch Waterline, two main types of local artefacts were distinguished: the military works – forts, ramps, casemates and other works with their shoot and vision fields – and the water management works.⁶⁶⁵ In relation to these, a relevant aspect stands up in which the way of addressing the interconnection between landscape and historical architecture – as the result of the top-down inter-scale approach adopted in the Panorama Krayenhoff – is made explicit (FIG. 4.23). In the setting of the overall revitalization process, the choice was made to give a special role to one sample per each type of local artefacts – a fort and an area – the acknowledgement of which went beyond their intrinsic values: as *a pars pro toto*, their revitalization rather took on the task of expressing and passing on the historical significance of the whole military system at the local scale.⁶⁶⁶ Reference is made to Fort bij Vechten, representative for military works and significantly belonging to the *Kraag van Utrecht*,⁶⁶⁷ and the Schalkwijk Eiland, an area at the northern edge of the *Riviergebied* considered as emblematic for the water works.⁶⁶⁸

⁶⁶¹ Cf. *Ibid.*, 29.

⁶⁶² Cit. *Ibid.*, 35.

⁶⁶³ Cf. *Ibid.*, 39.

⁶⁶⁴ Cf. *Ibid.*, 40.

⁶⁶⁵ Cf. *Ibid.*, 28.

⁶⁶⁶ Cf. *Ibid.*, 59.

⁶⁶⁷ Cf. *Ibid.*, 39–40.

⁶⁶⁸ Cit. *Ibid.*, 59.

Ontwikkelingskoersen forten en werken

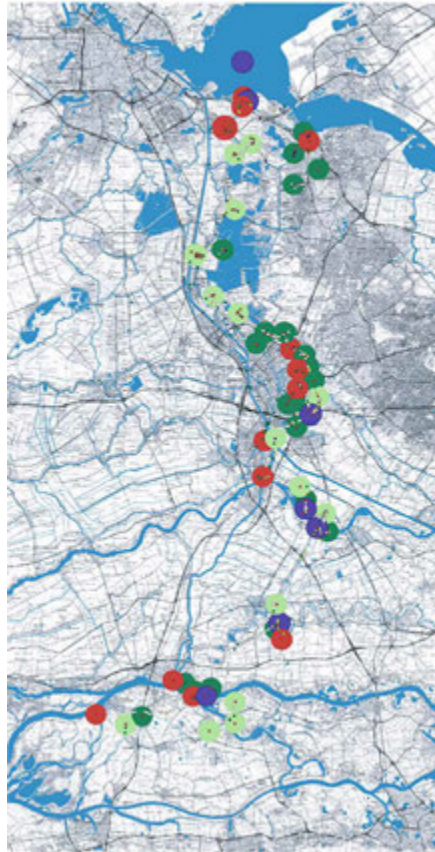


FIG. 4.23 Panorama Krayenhoff (2004): strategy for local artefacts (Luiten 2004: 48)

Although aware of the differences between the various local artefacts as a result of the shift occurred throughout the construction phases of the waterline,⁶⁶⁹ the possibility was explored to condense ‘the essence of the line landscape’ in these exemplary cases, for which the revitalization strategies were oriented towards a museum perspective.⁶⁷⁰ Indeed, a visitor and information centre about the Nieuwe Hollandse Waterlinie (*Liniecentrum*) was envisaged in the case of Fort bij Vechten.⁶⁷¹

⁶⁶⁹ The waterline is defined as a ‘step by step structure’, in which the architecture of military artifacts evolved with defence tactics (cf. *Ibid.*, 28).

⁶⁷⁰ Cf. *Ibid.*, 43.

⁶⁷¹ Cf. *Ibid.*, 39–40.

For the Schalkwijk Eiland, the idea was to turn the area into an open-air museum (*Linieland*) where inundation could be re-enacted in some specific parts with a didactic function.⁶⁷² Together, these two cases were meant to give life to one of the three ‘poles for intensive recreation’ identified at the core of the historic system. However, their significance went beyond that of regional ‘stops’ along the waterline, as well as requiring more extensive interventions.⁶⁷³

Apart from these two cases, the guidelines for the rest of the military works were summarized in a matrix, in which – based on several parameters (i.e. property, historical value, architectural quality, landscape location, current condition and development potential) – a possible future destination for each fort was outlined. Four possibilities were identified: the museum fort, the inhabited or heavily visited fort, the recreational fort, and the ecological fort.⁶⁷⁴ These indications were intended as a ‘reasoned suggestion’.⁶⁷⁵ A leading role was envisaged for owners and managers in the making of the actual choices, in which they could have counted on a *ontwerpgrammatica* (design grammar): the envisaged tool for offering ‘qualitative guidance for the design of the physical interventions’; this idea however, never came to fruition.⁶⁷⁶

In conclusion, the Panorama Krayenhoff can be considered as an exceptional ‘cultural planning’ project in which not only the conservation-through-development vision is put into practice, but the area involved has a ‘historically founded boundary’.⁶⁷⁷ Indeed, the historic military system of the New Dutch Waterline is at the centre of this operation, defining the spatial perimeter of the masterplan. In line with this, the inter-scale approach of the masterplan reflects the historical character of this military system, in which landscape and architecture are linked. In doing so, a top-down approach can be observed in the way in which the different scales are interconnected within the masterplan. In this sense, the choices made at the scale of the local artefacts are emblematic. At this stage, the forts are considered as the most representative

⁶⁷² Cf. *Ibid.*, 31.

⁶⁷³ The other two poles were composed by the ‘northern fortress triangle’ (Narden, Muiden, Weesp, and Pampus) and that of the ‘southern fortress triangle’ (Loevestein, Woudrichem-Gorinchem, Fort Vueren). Compared to the other monumental complexes identified as the core of the other two regional ‘poles for intensive recreation’ – namely, the Muiderslot and the Slot Loevestein – which were already in use as museums when the *Panorama Krayenhoff* was published, the envisaged intervention to turn Fort bij Vechten in the *Liniencentrum* required a radical transformation of the site after several decades of abandonment (cf. *Ibid.* 40).

⁶⁷⁴ Cf. *Ibid.*, 43.

⁶⁷⁵ Cit. *Ibid.*

⁶⁷⁶ Cit. *Ibid.*, 10.

⁶⁷⁷ Cit. Luiten, E. (2011). *Gereanimeerd erfgoed*, *op.cit.*, 227.

type of military architecture within the waterline.⁶⁷⁸ They are tackled as the essential features of a military landscape, and their role in the revitalization process stems from their potential to express the essence of the historic military system on a local scale.

4.2.3 From ambitions to implementation

In order to turn the vision into practical actions, a development plan was outlined within the Panorama Krakenhoff. In it, projects on three different levels were envisaged: those involving the reconstruction, renovation or transformation of the waterline's material parts, those aimed at making the waterline visible in the landscape by enhancing the contrast between defended and non-defended areas, and a number of supporting projects in the field of tourism, housing and employment.⁶⁷⁹ Starting from this main classification, the development plan was brought to an operational level through the identification of project envelopes. With an area-oriented approach, the whole waterline was divided into seven sub-areas (FIG. 4.24).⁶⁸⁰ For each one of them, a preliminary program and an invitation letter was addressed to the interested provinces, the latter being the actual responsible parties in the implementation phase. Following the agreement between the ministries and the provincial executives involved regarding their respective duties and financial responsibilities,⁶⁸¹ an implementation program was defined for the timespan 2007-2020.⁶⁸² In it, the provincial authorities provided an overview of the activities planned for giving substance to the vision outlined in the Panorama Krakenhoff. In the first implementation phase (2007-2013), the actions aimed at achieving a 'recognizable waterline profile' were given a pivotal role.⁶⁸³

⁶⁷⁸ Luiten, E. (2009). Voorwoord, in *Versteende ridders: De Nieuwe Hollandse Waterlinie.*, Koen, D., Rietveld, R. and Rijkenberg. Wageningen: Blauwdruk, 13.

⁶⁷⁹ Cf. Luiten, E. (2004). *Panorama Krakenhoff, op.cit.*, 53.

⁶⁸⁰ The seven sub-areas are: Vechtstreek-Noord (1) and Vechtstreek-Zuid (2) (regional landscape: Vechtstreek), Kraag van Utrecht (3) and Rijnauwen-Vechten (4) (regional landscape: Kraag van Utrecht), Linieland (5), Diefdijk (6) and Loevestein (7) (regional landscape: Rivierengebied). In this way, the prior sub-division in three regional landscapes was taken to a further level of detail (cf. *Ibid.*, 56-61).

⁶⁸¹ Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie (2005). *Bestuursvereenkomst Nieuwe Hollandse Waterlinie*. Utrecht: Uitgave van Projectbureau NHW.

⁶⁸² Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie (2006). *Eén linie, samen sterk in de uitvoering: overkoepelend uitvoeringsprogramma nationaal landschap Nieuwe Hollandse Waterlinie*. Utrecht: Uitgave van Projectbureau NHW.

⁶⁸³ The other general ambitions were that to strengthen the presence of the 'waterline in the heads and hearths' through the knowledge and communication strategy, and that to foster its 'socially and economically sustainable use' through economic measures and the financial strategy (cf. *Ibid.*, 8-18).

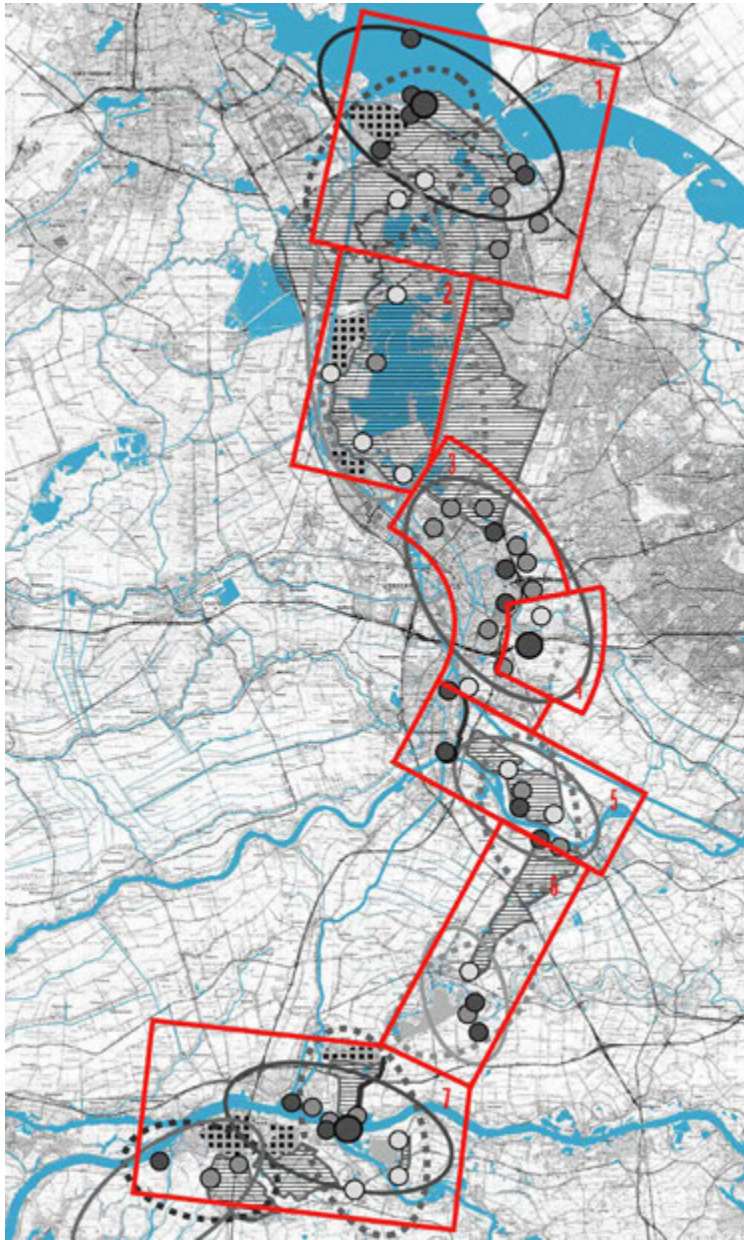


FIG. 4.24 Panorama Krayenhoff (2004), project envelopes: Vechtstreek-Noord (1), Vechtstreek-Zuid (2), Kraag van Utrecht (3), Rijnauwen-Vechten (4), Linieland (5), Diefdijk (6), Loevestein (7) (Luiten 2004: 68)

Within this framework, the restoration, reuse and management of forts, military works and shooting fields got a great impulse in the envisaged strategy, in which a number of 'iconic objects' per envelope were identified as a priority in the short term.⁶⁸⁴ With the *Pact van Rijnauwen*, a further 'implementing impulse' was given for the period 2008-2011. In it, the central government and the provinces confirmed the priorities formulated in the implementation program, and made further agreements about the financing and organization of the envisaged projects.⁶⁸⁵

Given the ample opportunities for local initiatives in the practical elaboration and execution of this broad range of projects, the central coordination and preventive assessment of the interventions on the waterline's physical structures was crucial to avoid the fragmentation and weakening of the overall vision. Indeed, a *Liniecommissie* (Line Committee) was settled by the Ministry of *Landbouw, Natuur en Voedselkwaliteit* (LNV – Agriculture, Nature and Food Quality) as the actual administrative client of the National Project, with the role of directing the implementation process at the 'line level'.⁶⁸⁶ The latter could, in turn, rely on a *Kwaliteitsteam* (Quality Team) for solicited or unsolicited professional advice and the quality assessment of the projects.⁶⁸⁷ Following the original intentions to define an *ontwerpgrammatica* (design grammar) in order to provide guidance in the outline of design proposals, an *inspiratieboek* (book of examples) (2007) was realized as a source of inspiration for future plans.⁶⁸⁸ Moreover, Quality Guidelines (2007) were issued to assure transparency in the phase of project assessment.⁶⁸⁹

⁶⁸⁴ Cf. *Ibid.*, 18-24, 28-31.

⁶⁸⁵ In particular, stressed is the 'feasibility of projects' as an important criterion for prioritization. Within this frame, some projects are then given priority 'because of their importance for the entire NHW' (cf. Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie (2008). *Pact van Rijnauwen: afspraken tussen Rijk en provincies verenigd in de Liniecommissie over uitvoeringsimpuls Nieuwe Hollandse Waterlinie voor de periode 2008-2011*. Utrecht: Uitgave van Projectbureau NHW, 8). Also in the mid-term evaluation realized in 2007, the efficient setting of priorities is seen as a crucial aspect for the success of the national project, together with the achieving of some 'quick wins' so as to promote the enthusiasm of those involved (cf. Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie and Lysias Advies (2007). *De linie in werking: tussentijdse evaluatie nationaal project Nieuwe Hollandse Waterlinie*. Utrecht: Uitgave van Projectbureau NHW, 46).

⁶⁸⁶ Settled in 2004, it was composed by representatives of the different ministerial departments involved (OC&W, LNV, VROM, V&W, Defense) and board members of the five provinces (Noord-Holland, Zuid-Holland, Utrecht, Gelderland, and Noord-Brabant) (cf. Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie (2005). *Bestuursvereenkomst, op.cit.*, 6-10).

⁶⁸⁷ It is composed by independent experts from various disciplines, nominated by the Line Committee (cf. *Ibid.*, 13-14).

⁶⁸⁸ Feddes/Olthof landschapsarchitecten (2007). *Inspiratieboek Linie-vormgeving*. Utrecht: Uitgave van Projectbureau NHW.

⁶⁸⁹ Kwaliteitsteam Nieuwe Hollandse Waterlinie (2007). *Nieuwe Hollandse Waterlinie / Leidraad plankwaliteit*. Utrecht: Uitgave van Projectbureau NHW, 2-3.

Given the status of National Landscape then recognized to the military system, the guidelines primarily aimed at fostering a 'respectful attitude' and a 'critical, careful approach', as well as the enhancement of the 'touristic-recreational significance' of the waterline, with an accent on 'public openness' and 'possible ecological values'.⁶⁹⁰ Therefore, the 'vigilant attitude' of the Quality Team was confirmed, but proportioned to the waterline's components involved and their 'different degrees of vulnerability to spatial changes'.⁶⁹¹ According to this logic, the landscape of the inundation fields is considered as more exposed to irreversible transformations than the military works, but in any case a certain degree of openness towards the possible transformations is considered necessary.⁶⁹² At the same time, inspiration from their military history was highly recommended, so as to avoid too-imaginative reinterpretations of this 'relatively recent military heritage', which might make them unrecognizable for the locals.⁶⁹³ Consequently, a 'sustainable survival and revitalization' could be achieved through different design approaches – ranging 'from matching to seeking contrast' – as far as a 'meaningful relationship' with the historical sites was provided.⁶⁹⁴ Compatibility with the pre-existing structures was defined in more detail as connected to the functional, morphological and constructive features – the latter referring to both building and cultivation techniques – of the physical components, as well as to their location in the landscape.⁶⁹⁵ The survey for new forms of use could be achieved both in and outside the perimeter of the historical constructions, but always in the form of a 'balanced act' between the most 'profitable' and 'architecturally or landscape compatible' operation.⁶⁹⁶ Accordingly, preserving the documentary value embedded in the material components and the visual characteristics of the sites was seen as crucial. At the same time, replicas and literal imitations, as well as the relocation of objects, were considered as highly undesirable.⁶⁹⁷

⁶⁹⁰ Cit. *Ibid.*, 6, 11.

⁶⁹¹ Cit. *Ibid.* 7.

⁶⁹² Clearly stated is the non-prescriptive nature of the guidelines, as well as the 'curious' attitude of the Quality Team towards the possible way in which 'historical buildings, waterworks and inundation fields will change in appearance' (cf. *Ibid.*, 2-3). See also: Labuhn, B. and Luiten, E. (2010). *Ontwerpen met erfgoed: design with heritage: the Dutch Belvedere experience*. Blauwdruk.

⁶⁹³ Cf. Kwaliteitsteam Nieuwe Hollandse Waterlinie (2007). *Nieuwe Hollandse Waterlinie / Leidraad plankwaliteit*, op.cit., 8.

⁶⁹⁴ Cf. *Ibid.*, 13.

⁶⁹⁵ Cf. *Ibid.*, 13-15.

⁶⁹⁶ Cf. *Ibid.*, 15.

⁶⁹⁷ Cf. *Ibid.*

For the sake of the desired ‘development-oriented and flexible approach’ in the implementation of the revitalization vision, the program of 2006 did not provide any specific indication about the second phase (2014-2020).⁶⁹⁸ Eventually, in 2014 a relevant change occurred in the management of the implementation program. While keeping the general ambitions of the Panorama Krayenhoff, the *Pact van Altena* (2014) officially ratified the end of the government involvement in the national project, transferring all its responsibility to the provinces.⁶⁹⁹ The main reason was in the positive results achieved in terms of ‘quality, accessibility and recognisability’ of the waterline during the first implementation phase.⁷⁰⁰ Alongside this, it is necessary to consider the shift occurred in 2009, when the process began to have the New Dutch Waterline recognized as national monument.⁷⁰¹ Consequently, the emphasis on ‘restoration and renovation’, which had strongly characterized the first phase, gave way to ‘social utilization and management’ in the second season of the national project.⁷⁰² Following the concept of ‘horizontal governance’, this shift also aimed at paving the way towards a greater involvement of private parties in the revitalization process, which implied a change from the previous phase, mostly grounded on public subsidies.⁷⁰³ Ultimately, the latter efforts were aimed at reaching

⁶⁹⁸ To be provided is only a rough indication of the envisaged investments in the second phase, based on what had been already foreseen for the first phase (cf. Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie (2006). *Eén linie, samen sterk in de uitvoering*, op.cit., 30).

⁶⁹⁹ Within this frame, the province of South-Holland also ended its involvement in the national project (cf. Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie (2014). *Pact van Altena: Bestuursvereenkomst Nieuwe Hollandse Waterlinie 2014-2020*. Utrecht: Uitgave van Projectbureau NHW, 4). Moreover, in order to strengthen the interprovincial cooperation, the *Team Interprovinciaal Programma* (TIP) was introduced, with the additional role of being the future site-holder of the UNESCO site (cf. Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie (2014). *Nieuwe Hollandse Waterlinie tot 2020: Naar Waterlinie(s) in gebruik*. Utrecht: Uitgave van Projectbureau NHW, 27). Finally, this change also required a reorganization of the seven project envelopes, with the Vechstreek enveloped absorbed in the project organization of the Defence Line of Amsterdam, and the merging of the envelopes falling in the Utrecht province (cf. *Ibid.*, 20).

⁷⁰⁰ Cf. Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie (2014). *Pact van Altena*, op.cit., 4; Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie (2014). *Nieuwe Hollandse Waterlinie tot 2020*, op.cit., 15-16.

⁷⁰¹ Detailed account on the designation of the New Dutch Waterline as national monument is given in the section’s conclusions.

⁷⁰² However, the completion of on-going implementation projects is still considered as a core objective, as well as that to ‘create the conditions to give the fortresses contemporary functions in such a way that authenticity and integrity of the exceptional, universal values as described in the UNESCO nomination are not or hardly affected’ (cf. Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie (2014). *Pact van Altena*, op.cit., 5).

⁷⁰³ Cf. Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie (2014). *Nieuwe Hollandse Waterlinie tot 2020*, op.cit., 20- 21. In this sense, significant is the inclusion of the *Stichting Liniebreed Ondernemen* (Liniebreed Entrepreneurship Foundation) among the stakeholders responsible for governance in the second implementation phase (cf. *Ibid.*, 28-29).

what had now become a primary goal: the World Heritage nomination. In order to steer the ambitions set in Panorama Krayenhoff towards the UNESCO designation, management and maintenance of what had been already achieved in the first phase were now given a central role.⁷⁰⁴

4.3 The revitalization of the forts: selected projects

In the present paragraph, the actual implementation of the main vision for the revitalization of the New Dutch Waterline is analysed. In particular, attention is given to the local artefacts: as the last components in the top-down inter-scale approach proposed for the interpretation of the military system in the Panorama Krayenhoff, they represent a relevant observatory for understanding the combined preservation strategy for both architecture and landscape that this approach entangles. Given the number of available cases, a selection was made the criteria for which directly stem from the guidelines and interpretative keys provided in the Panorama Krayenhoff.

Identified as *pars pro toto* for military and water works in the master plan, the plans made for the revitalization of Fort bij Vechten and the Schalkwijk Eiland (including Lunet aan de Snel) require attention. Additionally, their different location in the New Dutch Waterline (*Kraag van Utrecht/Linieland*), the different ownership situation (Staatsbosbeheer/Municipality Houten) and their implementation at different stages of the whole revitalization process (national/provincial phase) give to the comparison between these two cases an additional relevance (FIG. 4.25).

Apart from the *pars pro toto* approach, in the Panorama Krayenhoff a greater autonomy is left to owners and their aspirations in the revitalization of the other forts. In relation to this, an overview has been made about the current ownership situation, from which three main categories have been identified: nature and landscape associations (with Staatsbosbeheer as main owner), municipalities (with Utrecht municipality as main owner), and private owners (FIG. 4.26).

⁷⁰⁴ *Ibid.*, 18.

Pars pro toto approach

WATERLINIE FORT Fort bij Vechten



Kraag van Utrecht

Staatsbosbeheer

National phase

LINIELAND Schalkwijk Eiland



Riviersgebied

Municipality of Houten

Provincial phase

REGIONAL LANDSCAPE

OWNER

NDW PROJECT PHASE

FIG. 4.25 National Project New Dutch Waterline. The revitalization of the forts: projects selected as representative of the *pars pro toto* approach (F. Marulo 2019)

OWNERSHIP

48 military fortifications

21
nature/landscape organizations
Staatsbosbeheer (16)
Brabants-Landschap (3)
Natuurmonumenten (1)
Gois Natuur Reservaat (1)

12
municipalities
Utrecht (5)
Nieuwegein (2)
Houten (2)
Gooise Meren (1)
De Bilt (1)
Culemborg (1)

4
privates

11
others
Various owners (5)
University of Utrecht (2)
Waternet (2)
Fort Loevstein (1)
Township Lingewal (1)

FIG. 4.26 National Project New Dutch Waterline. Overview on the ownership of the forts (F. Marulo 2019)

Accordingly, a first selection has been made to identify the relevant projects in each one of these categories. Subsequently, the selection has been refined by focusing the investigation in the two areas with the most peculiar character: the *Kraag van Utrecht*⁷⁰⁵ – the region where the memory of the New Dutch Waterline is in the forts – and the so-called *Linieland* – considered as a ‘pearl’ for the well-preserved waterworks. Finally, the selection aimed at guaranteeing a variety in terms of size of the analysed forts per each ownership category. As a result, the final selection is outlined in the following scheme (FIG. 4.27).

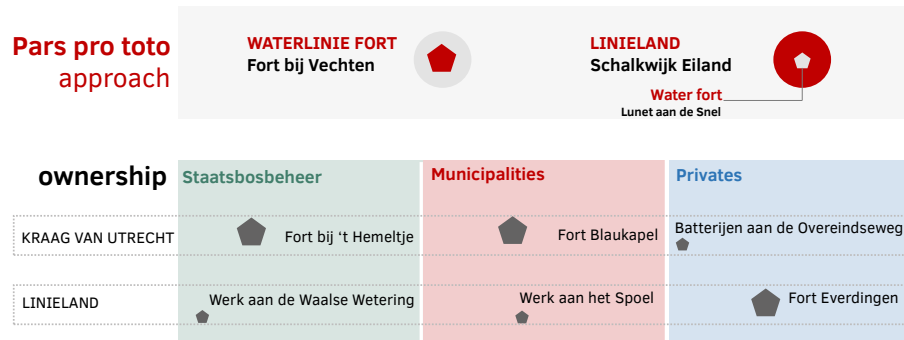


FIG. 4.27 National Project New Dutch Waterline. The revitalization of the forts: final selection of the projects (F. Marulo 2019)

⁷⁰⁵ To be considered are the historical boundaries of the region, which was divided in Panorama Krayenhoff in two envelopes (Kraag van Utrecht, Rijnauwen-Vechten).

Historical background

Fort bij Vechten was one of the six forts that, starting from the third construction phase of the New Dutch Waterline (1867-1870), were built to create a second line of defence around Utrecht.⁷⁰⁷ Indeed, the introduction of more far-reaching artillery weapons made the first ring of forts lose their strategic function.⁷⁰⁸ In this way, the new forts could give support to the old-generation ring in covering the *Houtense Vlakte*, an area in which inundation was not feasible.

Located along the Marsdijk, Fort bij Vechten was built in a place with a military history of a thousand years.⁷⁰⁹ The 19th-century polygonal fort – the second largest fortress of the whole New Dutch Waterline, after Fort Rijnauwen – was realized in several phases. First (1867-1869), the earthworks, eight batteries and a guardhouse were built. Subsequently (1869-1871), the bomb-free redoubt with annexed canal and drawbridge were added, followed, shortly after, by two outer bridges and two access buildings. Finally, the fort was given a bomb-proof barracks and additional depots between 1879 and 1881 (FIG. 4.28). All the buildings were covered with a thick layer of soil and visible only from their façade; this solution, due to camouflage reasons, was also strongly connected to the rainwater collection system.⁷¹⁰

⁷⁰⁶ Part of this paragraph was published in Conference Proceedings: F. Marulo (2020). Between nature and culture. From Italy and the Netherlands new perspectives towards a sustainable use of historical landscapes, in *Proceedings of the International LDE Heritage Conference on Heritage and the Sustainable Development Goals* (Delft, 26-28 November 2019), Pottgiesser, U., Fatoric, S., Hein, C. Maaker, E. de and A. Pereira Roders (Eds.). TU Delft Open: Delft, 410-411.

⁷⁰⁷ The other five forts are Fort Ruigenhoek, Fort Voordorp, Fort Rijnauwen, Fort 't Hemeltje and Werk aan de Hoofddijk (cf. Koppert, G. (1985). *De forten rond Utrecht, op.cit.*; Will, C. and Groot, D. de (2018). *Castellum Fectio: Fort bij Vechten: Waterliniemuseum*. Amsterdam: Stokerkade (Hollandse Waterlinie Erfgoedreeks), 35-36).

⁷⁰⁸ Starting from the 1820s, Fort aan de Klop, Fort Gagel, Fort Blaukapel, Fort de Bilt, Fort Vossegat and the four Lunetten on the Houtense Vlakte were built to create a ring around the city of Utrecht (*Ibid.*).

⁷⁰⁹ In this area, a Roman camp site called *Castellum Fectio* was settled as one of the oldest and largest of the *limes*. During the Middle Ages, the name Fectio was transformed in Fethna and, finally, in Vechten, which also has a relation with the current name of the river Vecht (cf. *Ibid.*, 16-30).

⁷¹⁰ Cf. *Ibid.*, 31-34.

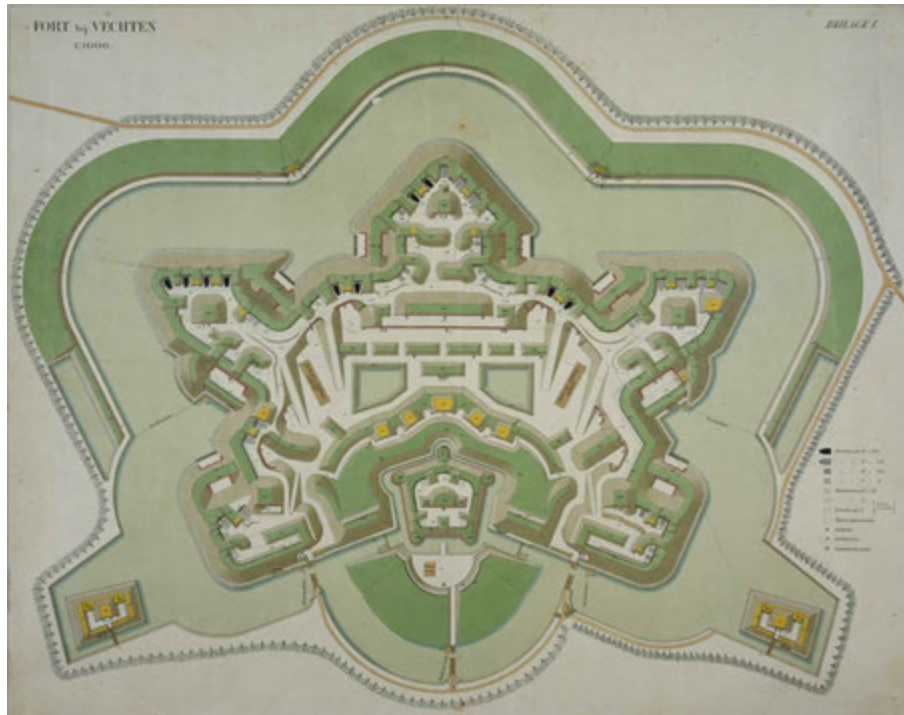


FIG. 4.28 Bunnik (NL), Fort bij Vechten (1880) (Nationaal Archief Den Haag)

After losing its military function, Fort bij Vechten was kept for more than four decades as a storage site by the Ministry of Defence. During this period, the lack of maintenance led to significant alterations of the architectural and environmental features of the fort (FIG. 4.29). Subsequently, in 1996 Staatsbosbeheer became the owner of the fort and, from 1998, the foundation *Werk aan de Linie* was founded for managing the exploitation activities.⁷¹¹ However, it was only after its identification as one of the three main recreational hubs of the New Dutch Waterline within the Panorama Krayenhoff that the revitalization of fort bij Vechten really got started.

⁷¹¹ Cf. *Ibid.*, 62-64.



FIG. 4.29 Bunnik (NL), Fort bij Vechten: the state of the site before the interventions realized between 2011 and 2015 (1999) (Stichting Menno van Coehoorn)

The revitalization project

Following the guidelines given by the Panorama Krayenhoff, Fort bij Vechten was identified as the ideal place for telling the story of the whole waterline in its cultural-historical significance (FIG. 4.30). As part of the project envelope Rijnauwen-Vechten – for which the province of Utrecht was responsible – it was supposed to be turned into a ‘national centre for information about the New Dutch Waterline and other lines’.⁷¹² Consequently, the *Stuurgroep Fort bij Vechten* (Steering Group Fort bij Vechten) was set up to join all the interested parties involved and formulate a shared view on the revitalization process.⁷¹³ In parallel, the architecture firms Rapp+Rapp

⁷¹² Cf. Luiten, E. (2004). *Panorama Krayenhoff*, op.cit., 39–40.

⁷¹³ The parties involved were the province of Utrecht, the municipality of Bunnik, Staatsbosbeheer, and the Projectbureau New Dutch Waterline. A letter of intent was signed by all parties on July 4, 2007, then followed by the *Bestuursafspraken Liniecentrum Fort bij Vechten* (Management Agreement Liniecentrum Fort bij Vechten), signed on June 4, 2009 (cf. Dienst Landelijk Gebied Archief (digital) (Archive of Rural Area Agency (Ministry of Economic Affairs); from now on: DLGA), Folder: 10.3.4 (*Financiering en uitvoering; Enveloppen; Rijnauwen en Vechten*), Document: Gemeente Bunnik, *Bestemmingsplan Fort bij Vechten*, opdrachtnummer: 75.11, versie 6 (6 januari 2011), 6).

and West 8 were assigned to draw up a preliminary master plan,⁷¹⁴ which represented the basis for discussion within the Steering Group and for embedding the envisaged transformations into the existing municipal planning regulations for this area.⁷¹⁵



FIG. 4.30 Bunnik (NL), Fort bij Vechten in the Kraag van Utrecht (aerial image retrieved at: <https://app.pdok.nl/viewer/> [28.10.2022]) (F. Marulo 2022)

⁷¹⁴ A competition was held among four invited parties, two of which were Rapp+Rapp and West 8 architectural firms. The latter then decided to join forces into a combined proposal (Interview P. Hangelbroek (West 8) (August 2019).

⁷¹⁵ Based on the preliminary masterplan, the municipality of Bunnik drafted a new zoning plan (2011), which replaced previous regulations; reference is made to the 'Bunnik 6' zoning plan (1967) – in which the fort was still intended with military functions – and the 'Buitengebied' zoning plan (2009) – which included the areas immediately outside the fort, here classified for agricultural purposes (cf. DLGA, Folder: 10.3.4 (*Financiering en uitvoering; Enveloppen; Rijnauwen en Vechten*), Document: Gemeente Bunnik, *Bestemmingsplan, op.cit.*, (6 januari 2011), 7).

At first, the Steering Group identified a number of vantage points and common principles, complemented by specific requirements and conditions for the development of Fort bij Vechten.⁷¹⁶ Following the original intentions, it was clearly stated that the scope of the operation had to go beyond the intrinsic qualities and significance of that specific site: ‘as a centre of the Line’, the revitalization of the fort was primarily finalized at ‘promoting and making the New Dutch Waterline visible’. In doing so, fort bij Vechten could play an educational function – as a ‘national icon’ of the entire military water system – as well as serving as a recreational location on a regional base. Accordingly, the designers in charge of the masterplan proposed the concept of a ‘museum’ with no labels, in which the main features of both the fort and the waterline could be highlighted by simulating their direct spatial experience.⁷¹⁷ In relation to this, through the consultation with the Projectbureau, eight clusters of content were identified for channelling the attention of visitors to specific aspects,⁷¹⁸ as ‘scenes’ put in place along an experiential *promenade*.⁷¹⁹ These conceptual premises were then translated into design solutions, in which the practical needs connected to the revitalization of the site for contemporary uses were turned into an opportunity for an ‘augmented’ experience of its multi-layered values.

Among the specific requirements for turning Fort bij Vechten into a visitor centre, the one connected to the identification of ‘sustainable solutions for access and parking’ got priority.⁷²⁰ Indeed, one of the reasons which had led to the selection of this

⁷¹⁶ This common understanding was the result of two meetings on October 10, 2006 and February 28, 2007 (cf. DLGA, Folder: 05.01.b (*Kwaliteit, Algemeen, Gebieden en ontwerpvoorbeelden, Fort bij Vechten*), Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan: Besluiten stuurgroepvergaderingen 10 oktober en 28 februari 2007, versie 4* (28 March 2007), 3).

⁷¹⁷ In the interview, the designer Penne Hangelbroek (West8) said: ‘From this process, we wanted people to start asking questions. We wanted the museum with no boards or tags, nor augmented reality. Just walking outdoor, things happen to you and, then, things start happening in your mind. Through experience. “Experience” was the key word all the time’ (Interview P. Hangelbroek (West 8) (August 2019)).

⁷¹⁸ The experience clusters were: 1. The New Dutch Waterline; 2. Artillery; 3. Defence; 4. Attack; 5. Life on the fortress; 6. Military architecture; 7. Roman Limes; 8. Nature (cf. DLGA, Folder: 10.3.4 (*Financiering en uitvoering; Enveloppen; Rijnauwen en Vechten*), Document: Provincie Utrecht, *Toelichting Bestuurovereenkomst Fort bij Vechten, concept 1.0* (28 May 2008)).

⁷¹⁹ ‘Like in 19th-century parks [...] we had the notion of creating a stroll – the *promenade* – through the fortress, and on the stroll to create events, or specific scenes, so we could direct the eye, movement and position of the beholder to introduce specific characteristics of either the fortress or nature, or the landscape. This was a central part in the design, and it is a landscape idea’ (Interview P. Hangelbroek (West 8) (August 2019)).

⁷²⁰ Cf. DLGA, Folder: 05.01.b (*Kwaliteit, Algemeen, Gebieden en ontwerpvoorbeelden, Fort bij Vechten*), Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan, op.cit.*, (28 March 2007), 7.

specific fort as the *Liniecentrum* in the Panorama Krayenhoff was actually related to its location, which – apart from being at the centre of the New Dutch Waterline – offered the additional advantage of being close to the A12 highway.⁷²¹ However, there was no direct access from the highway.⁷²² In order to solve this issue, three possibilities were considered (FIG. 4.31). The first scenario – in which the parking space was placed next to the Vechten lake – offered the advantage to reuse one of the existing entrances to the fort, but it required the expensive operation of digging a tunnel under the highway. A similar condition applied for the second scenario, in which the reuse of an existing underpass was proposed. In the end, the third scenario was preferred, in which the parking space was located in the vicinity of the north side of the fort, the direct access to which could, however, only be made possible by making a new entrance.⁷²³ Additionally, the new parking lot had to be designed so as to guarantee a good 'landscape integration'.⁷²⁴ This intervention (2012) drew inspiration from its representing a contemporary addition to a centuries-old hidden landscape.⁷²⁵ When there are no cars, the parking lot is almost invisible, because it was realized with a grid made of greenery and reused concrete, which has also the advantage to facilitate the infiltration of rain water. The parking area was then connected to the new entrance through a rust-coloured concrete path, in which the experience of the military landscape is prompted by the WWI concrete shelters surrounding it (FIG. 4.32).⁷²⁶

The path leads to the fort moat, the width of which can be experienced from the new 60-meters-long steel bridge (FIG. 4.33).⁷²⁷ The actual entrance was then conceived in the masterplan as a 50-meters-long 'gap' with 8-meter-high concrete walls, dug in the the original fort's earth walls, with the idea to recreate the experience of how difficult it was for enemies to enter this impregnable fortress (FIG. 4.34).⁷²⁸

⁷²¹ Interview E. Luiten (October 2019).

⁷²² Additionally, the intention was to limit the entrance through the Marsdijk only to cyclists (cf. DLGA, Folder: 10.3.4 (*Financiering en uitvoering; Enveloppen; Rijnauwen en Vechten*), Document: Gemeente Bunnik, *Bestemmingsplan, op.cit.*, (6 januari 2011), 41).

⁷²³ Cf. DLGA, Folder: 05.01.b (*Kwaliteit, Algemeen, Gebieden en ontwerpvoorbeelden, Fort bij Vechten*), Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan, op.cit.*, (28 March 2007), 8-9.

⁷²⁴ Cf. DLGA, Folder: 10.3.4 (*Financiering en uitvoering; Enveloppen; Rijnauwen en Vechten*), Document: Gemeente Bunnik, *Bestemmingsplan, op.cit.*, (6 januari 2011), 41.

⁷²⁵ Designers: PARKLAAN Landscape Architects. See: https://www.parklaan.nl/?page_id=1854 [05.08.2021].

⁷²⁶ In particular, it connected with the cluster of content n. 8 (Defence), serving to enhance the experience of what was the life of the Dutch infantry when defending the fort.

⁷²⁷ Designers: K2 Architects. See: https://www.architectenbureau-k2.nl/projecten/publiek/fort_vechten.html [05.08.2021].

⁷²⁸ Interview P. Hangelbroek (West 8) (August 2019).



FIG. 4.31 Bunnik (NL), Fort bij Vechten. Preliminary masterplan: three scenarios for parking space and entrance (DLGA, Folder: 05.01.b, Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan*, op.cit., (28 March 2007), 8)



FIG. 4.32 Bunnik (NL), Fort bij Vechten: entrance path (F. Marulo 2019)



FIG. 4.33 Bunnik (NL), Fort bij Vechten: entrance bridge and cut in the earthwalls (F. Marulo 2019)



FIG. 4.34 Bunnik (NL), Fort bij Vechten: entrance cut in the earthwalls (F. Marulo 2019)

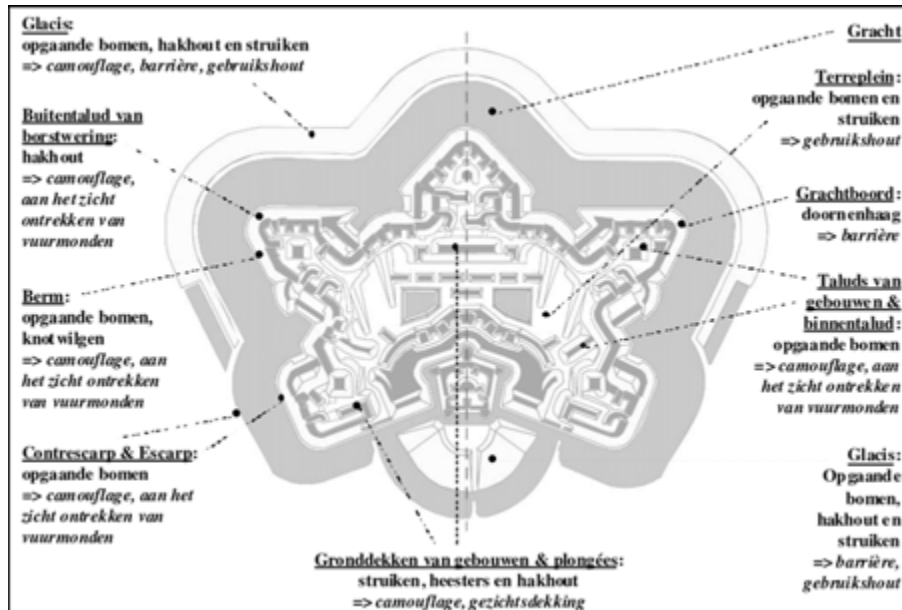


FIG. 4.35 Bunnik (NL), Fort bij Vechten. Study of historic vegetation (Boosten & Jansen 2007: 14)

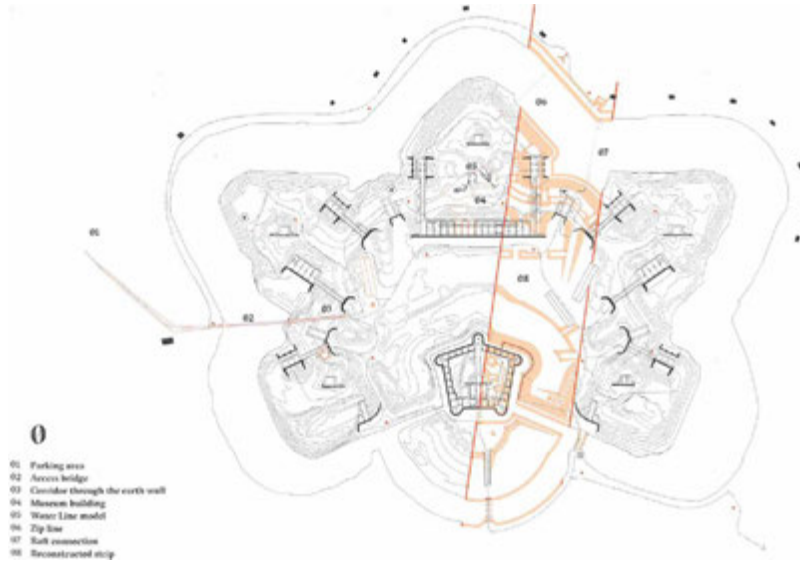


FIG. 4.36 Bunnik (NL), Fort bij Vechten. Masterplan: the *strook* (strip) (design: West8 & Rapp+Rapp) (Hannema 2016: 131)

Once a solution was found for the entrance and the parking facilities, the main task for the designers was to reach a balance between the historic-cultural, natural-ecologic and economic arguments of the different actors involved in the revitalization process.⁷²⁹ In particular, a crucial discussion was related to the current state of conservation of the fort site: after several decades after it lost its military function as part of the New Dutch Waterline, the original configuration of Fort bij Vechten had given way to the undisturbed development of a rich flora and fauna (FIG. 4.35); this meant that it had become impossible to completely restore the fort to its 19th century layout, despite its historic-cultural relevance. The ecological significance and animal life, as well as the need to preserve the traces of the fort's more recent history prevented this.⁷³⁰ The designers escaped from this dilemma – between the 'virgin' fortress and the 'forest' fortress – by proposing a land-art intervention, which turned out to be the ordering principle of the whole masterplan (FIG. 4.36).

⁷²⁹ 'There were four clients: the *Projectbureau NHW*, protecting the historical values; *Staatsbosbeheer*, which had become the owner of the fort and wanted to keep the natural value of this property; then, we had the Province of Utrecht, which had to finance the whole operation. These were very diverging forces. Before we entered the stage, they were not able to find a way to combine all the three wishes into one concept' (Interview P. Hangelbroek (West 8) (August 2019).

⁷³⁰ Cf. DLGA, Folder: 05.01.b (*Kwaliteit, Algemeen, Gebieden en ontwerpvoorbeelden, Fort bij Vechten*), Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan, op.cit.*, (28 March 2007), 6.

It consisted in making a strip – the so-called *Strook* (strip) – in which the fortress, cleared from ‘non-original’ vegetation and trees and reshaped in its earthworks, could be returned to its historical situation, while leaving the rest of the site in its current state (FIG. 4.37).⁷³¹ In particular, the 1880’s configuration is assumed as the period in which the fort had reached its maximum development, related to the ‘planting boom’ for camouflage reasons.⁷³²



FIG. 4.37 Bunnik (NL), Fort bij Vechten. Masterplan: the *strook* (strip) (design: West8 & Rapp+Rapp) (2015) (Will & Groot 2018: 12)

⁷³¹ ‘There was a question from the *Projectbureau NHW* to show the whole fortress, while *Staatsbosbeheer* was asking to preserve its ecological value [...] the debate was between the “virgin” fortress and the “forest” fortress [...] From this, it came out the design of the big *Strook* – we called it – of 90 meters wide and 450 meters long, perfectly restored into the historical situation, while the rest of the fortress was kept as it was.’ (Hangelbroek, 2019).

⁷³² See: paragraph 4.1.1. An analysis of the historical (military) vegetation was carried out at Fort bij Vechten, as part of broader studies on this topic (cf. Boosten, M. and Jansen, P. A. G. (2007). *Quick scan: historische waarde van de beplanting op de Nieuwe Hollandse Waterlinie*. Wageningen: Stichting Probos; Boosten, M and Jansen, P (2008) “Bomen in Dienst Van Defensie: De Historische Beplanting Van De Nieuwe Hollandse Waterlinie,” *Vakblad natuur bos landschap / Stichting Vakblad Natuur Bos Landschap*, 5 (3): 22-24; Boosten, M. (2009). De oorspronkelijke beplanting van de Nieuwe Hollandse Waterlinie en de Grebbelinie, *Saillant*, n. I, 16-21; Boosten, M., Jansen, P. and Borkent, I. (2012). *Beplantingen op verdedigingswerken*, op.cit., 66-67).

This solution was approved as a valid compromise for addressing the peculiar mix of natural-ecologic and cultural-historical features characterizing Fort bij Vechten, the combined preservation and development of which respected the common principles initially identified by the Steering Group.⁷³³

The implementation of this concept then required further detail. In particular, the size and position of the *Strook* – 90 meters wide and 450 meters long – were carefully designed according to the symmetry of the fort, in order to show a sample with no repetitions. However, the choice was made to slightly deviate it from the central axis, in order to avoid that this intervention could be mistaken with an original feature of the fort in the next future.⁷³⁴ Additionally, this cut was conceived for making the fortress visible from the highway,⁷³⁵ thus fulfilling one of the specific requirements set for this design assignment.⁷³⁶

Within the definitive masterplan, the *Strook* was divided into four sub-areas. For each one of them, the current state was compared to the 1880's layout through on-site surveys and the screening of the available historical sources.⁷³⁷ In this way, detailed solutions for both trees and ground-level grass surfaces were provided (FIG. 4.38). Although the focus was on restoring the original situation, the removal of the existing vegetation in the *Strook* was the subject of a careful evaluation.

⁷³³ Cf. DLGA, Folder: 05.01.b (*Kwaliteit, Algemeen, Gebieden en ontwerpvoorbeelden, Fort bij Vechten*), Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan, op.cit.*, (28 March 2007), 5.

⁷³⁴ 'The biggest step was the decision on where to position the *Strook*. The fortress is symmetrical, and if you do it wrong, you hit aspects that you see two or three times, but if you do it right you hit an aspect only one time [...] Then, we decided to not position it exactly to the heart of the symmetry, because we wanted to avoid that in 50-year time people would think that the *Strook* has always been there [...] So, we were able to keep the most important trees, show the most interesting aspects of the *relief* and geometry of the fort, and to make it visible from the highway' (Interview P. Hangelbroek (West 8) (August 2019).

⁷³⁵ 'This fortress was chosen because you can see it from the highway [...] with the *Strook*, we opened up the fortress by taking away all the trees; and we positioned the *Strook* in such a way that, when you are on the highway, you are able to see the fortress by exactly looking into the *Strook*. It was another trick to make the fortress itself visible from the highway, instead of a big bush and an icon next to it' (Interview P. Hangelbroek (West 8) (August 2019).

⁷³⁶ Indeed, it was stipulated that '(a part of) the fort is visible from the highway' (cf. DLGA, Folder: 05.01.b (*Kwaliteit, Algemeen, Gebieden en ontwerpvoorbeelden, Fort bij Vechten*), Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan, op.cit.*, (28 March 2007), 6).

⁷³⁷ Within the definitive masterplan, reference is made to historical photos and text materials, as well as to the 'Quick Scan Historical value of the vegetation on the NHW' (Probos 2007), the 'VTA Inspection of trees within the Strip' (2010), and a number of site visits with the ecologists from *Staatsbosbeheer* (cf. DLGA, Folder: 05.01.b (*Kwaliteit, Algemeen, Gebieden en ontwerpvoorbeelden, Fort bij Vechten*), Document: West 8 & Rapp+Rapp, *Nationaal Waterlinie Centrum: Fort bij Vechten: DO Inrichtingsplan* (April 2012), 9).

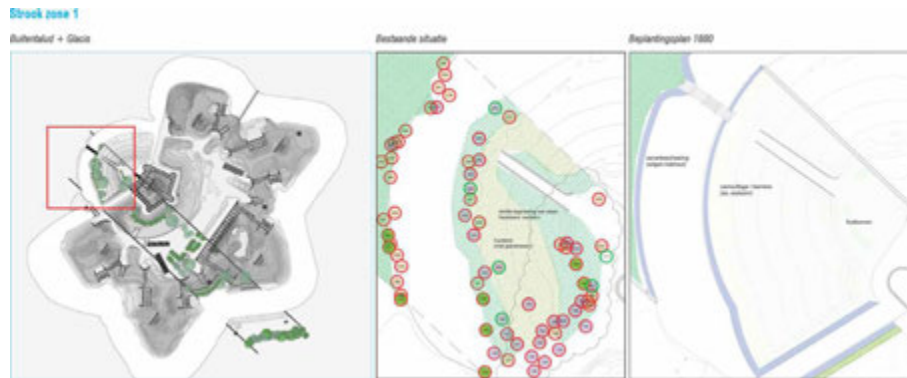


FIG. 4.38 Bunnik (NL), Fort bij Vechten. Masterplan: trees within the *strook* (strip). Sample: sub-area 1 (left), with comparison between current situation (centre) and 1880's situation (right) (design: West8 & Rapp+Rapp) (DLGA, Folder: 05.01.b, Document: West8 & Rapp+Rapp, *Nationaal Waterlinie Centrum: Fort bij Vechten: DO Inrichtingsplan* (April 2012),16&19)



FIG. 4.39 Bunnik (NL), Fort bij Vechten: the concrete slabs defining the perimeter of the *strook* (strip) (F. Marulo 2019)

Indeed, some exceptions were made by virtue of the ecological or aesthetic significance of some specific tree specimens.⁷³⁸ Additionally, a ribbon of concrete slabs was added in order to emphasize the contrast with the reconstructed area, and to bridge the height differences (FIG. 4.39). As pointed out before, this design solution represents a clear answer to the need of finding a balance between the various and colliding values embedded in the fort's vegetal and earth components.⁷³⁹ However, it also impacted the choices made for the preservation and reuse of the historical buildings on the fort site.

According to the agreement reached by the Steering Group, a 'sustainable use of a substantial part of the historic buildings' had to be promoted.⁷⁴⁰ Thus, also in this case, a balanced solution had to be outlined so as to combine the different functional demands represented by the revitalization process. Not only the public functions connected to the museum route had to be considered: on the one hand, a number of buildings had to be reserved for bats – the protected species that, following the demilitarization phase, hibernated and mated at Fort bij Vechten; on the other hand, a mix of commercial functions had to be accommodated in order to support the museum facilities and the maintenance costs as economic carriers. After the evaluation of three different exploitation scenarios,⁷⁴¹ the Steering Group agreed on a balanced distribution of the three functional categories (FIG. 4.40).⁷⁴² This choice had a considerable influence on the kind of interventions envisaged for preserving the fort's built heritage. Indeed, the functional outline represented the main input for defining three intervention categories: consolidation in the case of buildings reserved for flora and fauna, restoration for the buildings included in the museum route, and transformation for those to be exploited for commercial uses.⁷⁴³ Significantly, the structures destined to 'restoration' partially coincided with those falling within the *Strook*.

⁷³⁸ Cf. *Ibid.*

⁷³⁹ Cf. Hannema, K. (2016). The New Hollandic Water Line is an ingenious, 18th-century defence system that has had new life breathed into it by the Waterliniemuseum Fort bij Vechten, *Mark: another architecture*, n. 60, 128-135; Kegge, B. (2016). Nieuwe Hollandse Waterlinie afgedrukt in beton: Nationaal Waterliniemuseum Fort bij Vechten in Bunnik door Studio Anne Holtorp, *De Architect*, n. 47, 56-61; Molteni, E. (2016). Anne Holtorp – 'Things can always be seen as architecture', *Casabella*, n. 860, 49-59.

⁷⁴⁰ Cf. DLGA, Folder: 05.01.b (*Kwaliteit, Algemeen, Gebieden en ontwerpvoorbeelden, Fort bij Vechten*), Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan, op.cit.*, (28 March 2007), 4.

⁷⁴¹ Assuming a fixed 30% to be reserved for flora and fauna, in the first scenario (A) public functions (50%) had priority on commercial functions (20%); in the second scenario (B), the two categories were on an equal balance (35%); in the third scenario (C), the commercial exploitation (50%) was, instead, assumed as paramount in relation to the museum facilities (20%) (cf. *Ibid.*, 10).

⁷⁴² Cf. *Ibid.*, 10-11.

⁷⁴³ Cf. *Ibid.*, 10.



FIG. 4.40 Bunnik (NL), Fort bij Vechten: Preliminary masterplan, (left): three functional categories for the reuse of the historical buildings with related intervention categories: consolidation (red-white shaded), restoration (red), transformation (purple); (right): the functional outline of the central redoubt, mixing museum use (red) and bats' shelter (red-white shaded) (DLGA, Folder: 05.01.b, Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan, op.cit.*, (28 March 2007), 10&17)



FIG. 4.41 Bunnik (NL), Fort bij Vechten. Central redoubt: exterior (front) after the intervention (F. Marulo 2019)

This is the case of the central redoubt: originally conceived to give a last shelter to soldiers in case of attack, it represented the building with the 'greatest monumental value of all existing structures on the site'.⁷⁴⁴ However, due to the settling of bats in its interior, it was also protected under the Flora and Fauna Act.⁷⁴⁵ Consequently, a compromise solution was found in a mixed preservation and reuse strategy (FIG. 4.41). The choice was made to split the building in two independent sectors. In this way, a part could be consolidated and reserved for bats, while the other could be restored and given a museum use.⁷⁴⁶ However, the restorations were marginalized in the implementation phase due to financial matters (FIG. 4.42). Instead, priority was given to the earth and vegetal cover of the building, which was brought back to its 1880's configuration in that part falling within the *Strook*, and enhanced through the design of a surrounding path (FIG. 4.43).⁷⁴⁷



FIG. 4.42 Bunnik (NL), Fort bij Vechten. Central redoubt: exterior (back) after the intervention (F. Marulo 2019)

⁷⁴⁴ Cf. *Ibid.*, 17.

⁷⁴⁵ Cf. *Ibid.*

⁷⁴⁶ Within the fort's overall museum route, the exhibition conceived for the *reduit* is directly connected to the cluster of content n.5 (Life on the fortress), through which the visitors can experience how difficult it was for soldiers to live within these (dark and humid) buildings (Interview with P. Hangelbroek, August 2019).

⁷⁴⁷ 'There is one exception: the *reduit*. There, we only restored the earthwork on top of it, but not the building; because that building is very special, but also very big that we would have consumed almost the entire budget if we would have restored it. Thus, together with the province of Utrecht and *Staatsbosbeheer*, we made a risky decision; we said: "let's create a nice path all around the *reduit* so that people will start asking for its restoration;" and, sooner or later, funds will come. [...] It was a financial matter, and we did all we could to show that there was a problem' (Interview with P. Hangelbroek, August 2019).



FIG. 4.43 Bunnik (NL), Fort bij Vechten. Central redoubt: external path (F. Marulo 2019)



FIG. 4.44 Bunnik (NL), Fort bij Vechten. Preliminary masterplan: the functional outline of the bombproof barracks, mixing museum use (red), bats' shelter (red-white shaded) and commercial functions (purple) (DLGA, Folder: 05.01.b, Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan, op.cit.*, (28 March 2007), 17)

Similarly, a mixed solution was envisaged for the bombproof barracks, which represented the second extensive building crossed by the *Strook* (FIG. 4.44). In this case, the preservation and reuse choices were also influenced by the need for an indoor exhibition space: the *Waterliniemuseum* (Waterline museum). Conceived as the main focal point of the overall museum route experience, the location of this intervention was the subject of a broad discussion within the Steering Group.⁷⁴⁸

⁷⁴⁸ DLGA, Folder: 05.01.b (*Kwaliteit, Algemeen, Gebieden en ontwerpvoorbeelden, Fort bij Vechten*), Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan, op.cit.*, (28 March 2007), 6.

Given the impossibility to fit an exhibition space within any of the historical buildings on the fort site, the option of a new construction was considered.⁷⁴⁹ This could be done by adding a new building in the vicinity of the new parking facility, or multiple buildings on the plateau in front of the bombproof barracks. To these options, the possibility to combine the reuse of an existing structure with a new construction was preferred. At first, the redoubt was considered, but due to its monumental and ecological significance, also this location was excluded. Instead, an underground addition excavated in the earth layer at the back of the bombproof barracks was preferred and further investigated in relation to its possible architectural layout (FIG. 4.45).⁷⁵⁰

Based on these agreements, the implemented design by Anne Holtrop (2015) aimed at harmoniously integrating this underground addition in the site's existing topography.⁷⁵¹ The designer shaped the exhibition space and other auxiliary facilities as an organic sculpture, the curve concrete surfaces of which aimed at recalling the rivers and waterways characterizing the waterline.⁷⁵²

In line with the other land-art interventions in the masterplan, also this intervention turned around an iconic element: reference is made to the museum's patio, hosting a 50-meter-long model of the waterline, in which the functioning of the water machine can be simulated (FIG. 4.46). Its narrative and experiential character makes this component the core of the *Waterliniemuseum*, the patio being the only visible part from the outside (FIG. 4.47). Also from the inside, the exhibition space is designed to embrace and look at the open-air model from multiple perspectives (FIG. 4.48).⁷⁵³

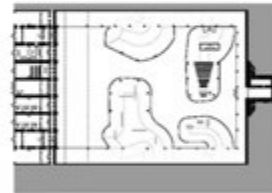
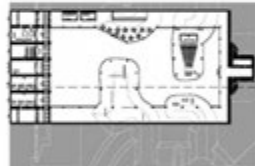
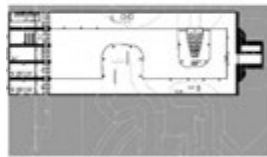
⁷⁴⁹ About the reason for excluding the possibility to reuse one of the historical buildings to allocate the exhibition space, the architect involved in the analysis of the thirteen buildings on the fort site – G. Meijer (BunkerQ architectural bureau) – said: 'It was functional, compared to the possibilities offered by the buildings on the fort site. [...] The problem with fortresses is that the average room is like 5 to 10 meters, maybe 6 to 12, that's it, they don't get bigger. So, if you want to accommodate a group of hundred people or more, you have a problem, you have to build something new, because it's not there, in the existing form' (Interview G. Meijer (BunkerQ) (August 2019).

⁷⁵⁰ Cf. DLGA, Folder: 05.01.b (*Kwaliteit, Algemeen, Gebieden en ontwerpvoorbeelden, Fort bij Veichten*), Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Veichten: Een gezamenlijk ontwikkelplan, op.cit.*, (28 March 2007), 18–23.

⁷⁵¹ It was the selected project among ten proposals in a competition held in 2010 (cf. Hannema, K. (2016). *The New Hollandic Water Line, op.cit.*, 132).

⁷⁵² Cf. Mortice, Z. (2016). How a Defensive Moat Became a Top Tourist Attraction: The new Waterline Museum near Utrecht reveals another side to the Netherlands' mastery of waterways and coastlines, *Bloomberg* (5 January 2016), Available at: <https://www.bloomberg.com/news/articles/2016-01-05/09.08.2021>).

⁷⁵³ Particularly expressive is the installation positioned at the end of the exhibition itinerary; by sitting on chairs suspended on steel cables and wearing virtual-reality glasses, the visitor can experience a parachute flight on the outdoor model, which gradually transforms into the real waterline.



Plattegronden van der verschillende varianten D1, D2 en D3

Bijlschrift kaartjes:
Plattegrond variant D1 Begane grond

Totaal Bruto: 1815m²
 Nieuwbouw: 1198,40m²

Bomvrije Kazerne Begane grond:
 154,40m²
 Bomvrije Kazerne 1e verdieping:
 162,45m²

Plattegrond variant D2 Begane grond

Totaal Bruto: 2474m²
 Nieuwbouw: 1610,10m²

Bomvrije Kazerne Begane Grond:
 636,30m²
 Bomvrije Kazerne 1e verdieping:
 227,75m²

Plattegrond variant D3 Begane grond

Totaal Bruto: 3300m²
 Nieuwbouw: 2189,60m²

Bomvrije Kazerne Begane Grond:
 818,10m²
 Bomvrije Kazerne 1e verdieping:
 292,50m²

FIG. 4.45 Bunnik (NL), Fort bij Vechten. Preliminary masterplan: study for the addition of the waterline museum to the bombproof barracks (DLGA, Folder: 05.01.b, Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan*, op.cit., (28 March 2007), 18)

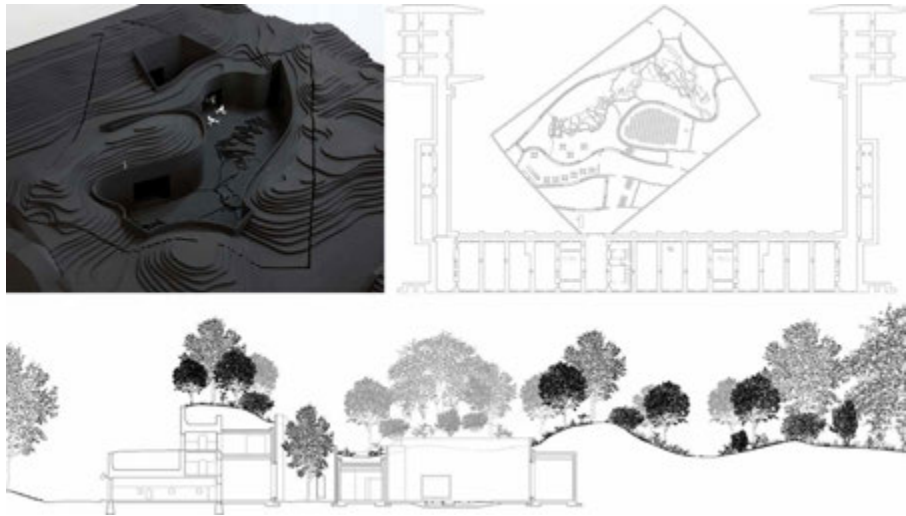


FIG. 4.46 Bunnik (NL), Fort bij Vechten. Waterline museum: model (top left); plan (top right); section (below) (design: A. Holtrop) (2011) (DLGA, Folder 21)



FIG. 4.47 Bunnik (NL), Fort bij Vechten. Bombproof barracks: façade (F. Marulo 2019)



FIG. 4.48 Bunnik (NL), Fort bij Vechten. Waterline museum: view on the patio with maquette of the New Dutch Waterline (F. Marulo 2020)

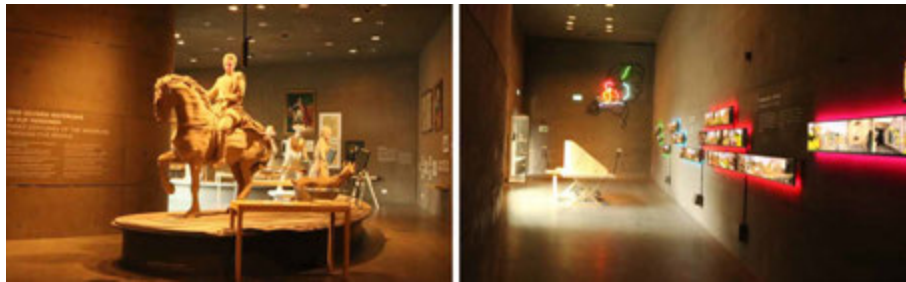


FIG. 4.49 Bunnik (NL), Fort bij Vechten. Waterline museum: interior (F. Marulo 2020)

The evocative contrast with the massive and dark interior – conceived as ‘a contemporary interpretation of a fortress’⁷⁵⁴ – was then enhanced by the material’s colour and texture,⁷⁵⁵ where the horizontal bands on the concrete surfaces aim at recalling the joints of the masonry façades of the historical buildings on the fort

⁷⁵⁴ Cit. Hannema, K. (2016). *The New Hollandic Water Line, op.cit.*, 132.

⁷⁵⁵ Supplemented with brown pigments, the sandblasted and undulating concrete surfaces were designed to react at the incidence of light, ranging from yellowish to blueish shades depending on the weather (cf. *Ibid.*, 134).

site (FIG. 4.49).⁷⁵⁶ Within this museum concept and layout, the central portion of the bomb-proof barracks serves as the entrance to the exhibition. The rest of the historic building is then reserved for bats and commercial activities. Apart from these functions, the setting of a small exhibition on the Roman occupation of the site in one of the premises of the bombproof barracks is important. As the point where the *limes* and the New Dutch Waterline overlap, the revitalization of Fort bij Vechten aimed at addressing the relationship with other historical layers.⁷⁵⁷ However, the focus of the masterplan was on the 19th-century military structure, 'so as to avoid confusion in the visitors'.⁷⁵⁸ Finally, the treatment of the barrack's external surfaces is significant since it concentrated only on that portion of façade within the *Strook*, thus confirming the landscape-based approach even at the most detailed architectural scale (FIG. 4.50).



FIG. 4.50 Bunnik (NL), Fort bij Vechten. Bombproof barracks: partial cleaning of the façade in the portion falling within the *strook* (strip) (F. Marulo 2020)

⁷⁵⁶ Cf. Mortice, Z. (2016). How a Defensive Moat Became a Top Tourist Attraction, *op.cit.*

⁷⁵⁷ (cf. DLGA, Folder: 05.01.b (*Kwaliteit, Algemeen, Gebieden en ontwerpvoorbeelden, Fort bij Vechten*), Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan, op.cit.*, (28 March 2007), 6). In relation to this, relevant is also the intervention realized in the immediate vicinity of the fort, at the site of the former *castellum Fectio*; the inspiring idea was to make the trace of the roman encampment visible by recreating its perimeter with a concrete plinth, which also serves as an exhibition space for telling the story of the Roman occupation based on the archaeological findings in this area (cf. https://www.parklaan.nl/?page_id=1644 [05.08.2021]).

⁷⁵⁸ Interview P. Hangelbroek (West 8) (August 2019).



FIG. 4.51 Bunnik (NL), Fort bij Vechten. Flank battery EL: façade (F. Marulo 2020)

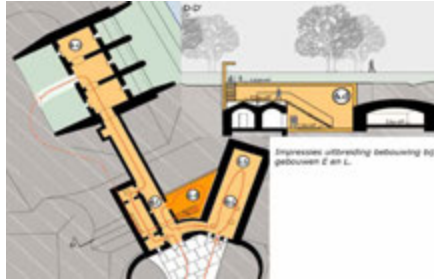


FIG. 4.52 Bunnik (NL), Fort bij Vechten. Flank battery EL: design of the roof opening with addition of new staircase (design: J. Penne Architecten) (Image retrieved at: <http://jonathanpenne.nl/project/gebouw-el/> [04.052021])



FIG. 4.53 Bunnik (NL), Fort bij Vechten. Flank battery EL: the opening on the roof seen from the outside (F. Marulo 2020)



FIG. 4.54 Bunnik (NL), Fort bij Vechten. Flank battery EL: the opening on the roof seen from the inside (F. Marulo 2020)

In addition to the redoubt and the *Waterliniemuseum*, the museum route at Fort bij Vechten also includes historical buildings outside the *Strook*. In particular, relevant is the intervention carried out at the flank battery EL, in which the building itself is exhibited as a sample of the military architecture on the fort site (FIG. 4.51-52).⁷⁵⁹ By opening a cut in the layer of soil covering the masonry construction, the visitor can directly experience an aspect in other way invisible of its roof structure. Not only conceived for camouflage reasons, the latter served as a filtering layer for the water collection system, which is here exposed and made observable, also thanks to the addition of a concrete staircase (FIG. 4.53-54).⁷⁶⁰

⁷⁵⁹ In particular, this exhibition was connected to the experience cluster 6 (Military architecture) Interview P. Hangelbroek (West 8) (August 2019).

⁷⁶⁰ Cf. DLGA, Folder: 10.3.4 (*Financiering en uitvoering; Enveloppen; Rijnauwen en Vechten*), Document: Gemeente Bunnik, *Bestemmingsplan, op.cit.*, (6 januari 2011), 50.



FIG. 4.55 Bunnik (NL), Fort bij Vechten. Solution to close the access to buildings while letting the transit of bats (design: BunkerQ) (F. Marulo 2020)

According to the exploitation strategy pursued within the masterplan, eight buildings – falling outside the museum route and the *Strook* narrative – were turned into bats shelters.⁷⁶¹ Together with the study of migration paths, this conversion implied architectural interventions to accommodate this new peculiar function and prevent as much as possible any future opportunity for human exploitation (FIG. 4.55).⁷⁶² Conversely, the transformation of buildings for commercial functions was aimed at improving the indoor living conditions.⁷⁶³ In this sense, the intervention carried out for turning the reverse battery H into an event location is exemplary, which implied the insertion of new doors and windows, and the installation of an indoor climate-control system in the above covering layer of soil (FIG. 4.56-58).⁷⁶⁴

⁷⁶¹ Apart from the buildings A (northern part of the *bombvrij kazerne*) and V (northern part of the *reduit*), reference is made to the buildings C, D, I, O, R and S (cf. *Ibid.*).

⁷⁶² In charge of such conversion was the architectural firm Bunker Q. About the interventions to accommodate the new function, G. Meijer explained that ‘forts form a perfect climate for bats, you don’t have to do big things, the building is already perfect. What we had to do was to close the buildings for people and avoid further use for humans. For example, every building had electricity meters; one of the things we did was to take them off in order to make more difficult to get a new human use. Then we also had to close the openings; for that, we designed precast concrete plates with three opening inside, which can be filled with a clay baked tablet, so as to allow the bats to go in and out and, at the same time, make it flexible for people taking care of the bats to choose which should be closed or open, depending on the type of bat that is inside’ (Interview G. Meijer (BunkerQ) (August 2019)).

⁷⁶³ Floor insulation, heating, lighting and air treatment systems are the main interventions promoted by the Steering Group (cf. DLGA, Folder: 05.01.b (*Kwaliteit, Algemeen, Gebieden en ontwerpvoorbeelden, Fort bij Vechten*), Document: Nationaal Projectbureau Nieuwe Hollandse Waterlinie, Staatsbosbeheer, Gemeente Bunnik, Provincie Utrecht, *Fort bij Vechten: Een gezamenlijk ontwikkelplan, op.cit.*, (28 March 2007), 10).

⁷⁶⁴ Cf. Also this intervention was realized by the architectural firm BunkerQ (Interview G. Meijer (BunkerQ), August 2019).



FIG. 4.56 Bunnik (NL), Fort bij Vechten. Flank battery H: façade (F. Marulo 2019)

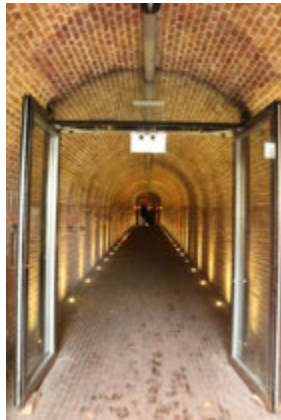


FIG. 4.57 Bunnik (NL), Fort bij Vechten. Flank battery H: entrance (design: BunkerQ) (F. Marulo 2019)



FIG. 4.58 Bunnik (NL), Fort bij Vechten. Flank battery H: interior (design: BunkerQ) (F. Marulo 2019)

In conclusion, the project implemented at Fort bij Vechten can give an example of a revitalization process in which, reproducing the *pars-pro-toto* approach of the Panorama Krayenhoff at the fort scale, the vegetal and earth components with their cultural and ecological values are the driving force.

4.3.2 Lunet aan de Snel in the Schalkwijk Eiland: the water fort

A museum landscape in the Schalkwijk Eiland



FIG. 4.59 Houten (NL), Lunet aan de Snel in the Schalkwijk Eiland (aerial image retrieved at: <https://app.pdok.nl/viewer/> [28.10.2022]) (F. Marulo 2022)

2013 can be considered as the starting point for the revitalization process of Lunet aan de Snel. Shortly after its disposal by the Ministry of Defence, this small fort was included in a broader development plan for the Blokhoven Polder, as the most representative part of the Schalkwijk Eiland (FIG. 4.59).⁷⁶⁵ The latter represents the outcome of an intense cooperation between the Linieland envelope committee and the local farm company Ujttewaal, which aimed at achieving the goals of the New Dutch Waterline project in this area. Indeed, this plan is a good example of fruitful exchange between the ‘engine’ set in motion by the Project Bureau New Dutch and new ownership. This vision is rooted in the guidelines given by the Panorama Krayenhoff, in which the Schalkwijk island is seen as ‘a pearl’, which should be ‘further expanded into a *pars pro toto* of the New Dutch Waterline’, so that ‘in this

⁷⁶⁵ Velden, van der K. and Commissie Linieland (2013). *Polder Blokhoven & Lunet aan de Snel. Ruimtelijk Ontwerp*. Dienst Landelijk Gebied.

Linieland the essence of the entire defence system can be simulated on the scale of an open-air museum'.⁷⁶⁶ Accordingly, the implementation program of the Linieland project envelope defined for the Schalkwijk Eiland proposed to make the waterline experienceable in its original landscape context.⁷⁶⁷ This vision met the aspirations of the municipality of Houten in which the area is inscribed.

Already in 2010, the municipality of Houten had outlined a vision for the Schalkwijk Eiland.⁷⁶⁸ In line with the general goals set by the Project Bureau New Dutch Waterline, this vision was a tool for triggering local entrepreneurs in making proposals in which the preservation of the waterline landscape – and, more specifically, the openness of the fields of fire – had to be combined with the agricultural vocation of the area, for a sustainable future development. Therefore, the *Polder Blokhoven & Lunet aan de Snel. Ruimtelijke Ontwerp* (Polder Blokhoven & Lunet on the Snel. Spatial Design) was originally based on the proposal and personal investment of the Uijtewaal local business. The Uijtewaal family has lived in the area of the Blokhoven Polder since the beginning of the 19th century, when the grandfather of the current entrepreneurs built a wooden house – in compliance with the *Kringenwet* – and started the farming activity which is still now in place. As noted by Mr. W. Uijtewaal, their attachment to the peculiar military history of the place,⁷⁶⁹ together with the risk of losing its character with urbanization,⁷⁷⁰ triggered their desire to actively engage in the redevelopment of this area. In the plan, the ambitions of the Uijtewaal family business – i.e. agriculture, recreation and water issues – and the goals set for the revitalization of the waterline are strongly connected. As evident from the plan's motto – 'crossing through Linieland' – the military structure is assumed as the main reading key for the area, even if put in a

⁷⁶⁶ Luiten, E. (2004). *Panorama Krayenhoff*, *op.cit.*, 27.

⁷⁶⁷ Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie (2006). *Eén linie, samen sterk in de uitvoering*, *op.cit.*, 22.

⁷⁶⁸ Reference is made to the *Structuurvisie Eiland van Schalkwijk (2010)* (cf. Velden, van der K. and Commissie Linieland (2013). *Polder Blokhoven*, *op.cit.*, 35).

⁷⁶⁹ In the interview, Mr. Uijtewaal said: 'If there is somebody that should do it, I think it should be us, because we have been living here for generations. I have relatives that experienced the WWII; an uncle of mine, he lived in the farm during that period and he has seen the whole area being inundated, and also how the Germans occupied it' (Interview W. Uijtewaal (August 2019)).

⁷⁷⁰ 'Before 2010, this part was in the process of being urbanized by the city of Houten with new housing. A lot of developers had already bought land from the farmers for speculation reasons. But, then, the Province [Utrecht] decided that it was not going to happen. So, what to do with this land? The developers had no idea for a different destination. Then my brothers and I, we said "we do have a destination to turn this area in something beautiful" (Interview W. Uijtewaal (August 2019)).

wider historical perspective.⁷⁷¹ Indeed, the waterline is presented as a layer of a more stratified water landscape.⁷⁷² Accordingly, the main components were shaped: sustainable openness, water storage, landscape construction, and reuse of waterline military objects.

The core value of openness, which characterizes the Polder Blokhoven, is seen as a fragile quality to be sustainably protected. Consequently, agriculture is identified as the guarantee for keeping the 'emptiness of the landscape', with the company Uijttewaal as the main economic carrier. Agricultural, farming and recreational activities are assumed as the best way to preserve the waterline's openness while assuring it a sustainable future.⁷⁷³

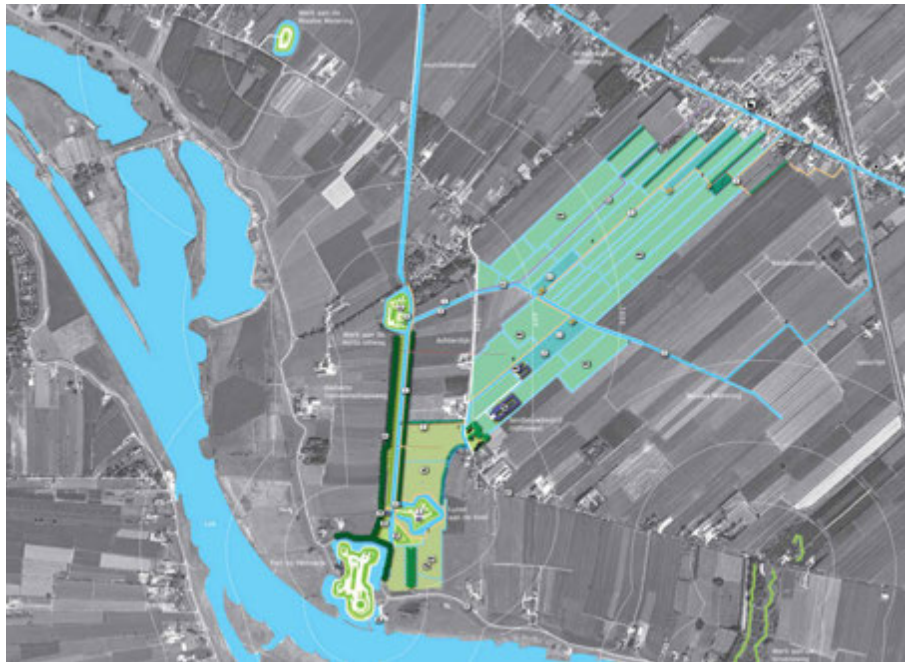


FIG. 4.60 Houten (NL), Lunet aan de Snel in the Schalkwijk Eiland: the retention pond in the Polder Blokhoven (Velden, van der 2013)

⁷⁷¹ As presented in the plan, the 'Linieland' represents a cross-section of the Waterline landscape, which offers the opportunity to experience the whole system in all its gradients and coherence (cf. Velden, van der K. and Commissie Linieland (2013). *Polder Blokhoven, op.cit.*, 43).

⁷⁷² Cf. *Ibid.*, 9&14.

⁷⁷³ Cf. *Ibid.*, 43.

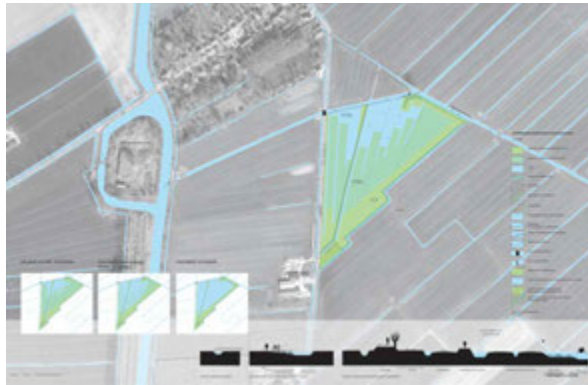


FIG. 4.61 Houten (NL), Lunet aan de Snel in the Schalkwijk Eiland: the retention pond in the Polder Blokhoven, detail (Velden, van der 2013)

As already considered in the Panorama Krayenhoff, part of the Blokhoven polder's development plan was to make the former inundation basin recognizable as part of the system of the New Dutch Waterline. In consultation with the *De Stichtse Rijnlanden Water Bord* (HDSR – Stichtse Rijnlanden Water Board), a solution has been explored to link the inundation recreational experience to the future water management of the Schalkwijk Eiland.⁷⁷⁴ The final solution, implemented in 2017, consisted in the creation of a retention pond. During the summer period, the area is flooded twice a month, making the principle of inundation clear, while playing an important role for water storage (FIG. 4.60–61).⁷⁷⁵

Therefore, the waterline as a coherent system is made visible and can be experienced through the military objects and the inundation basin, but investments were also to be made in strengthening the landscape gradients.⁷⁷⁶ Finally, the plan included some interventions for the reuse of the waterline military artefacts in this area, among which Lunet aan de Snel had a pivotal role.

⁷⁷⁴ About the link between water management and recreational experience, the plan gave some indications: 'The closer this image of inundated grassland can be approached, the better the story of the Line is illustrated [...] A water-rich situation is required throughout the year, also during the dry – recreationally attractive – periods. [...] Making the inundation principle perceptible is of greater importance than the pursuit of creating the exact inundation height. Let water depth be determined from technology, experience and management. The historical level can be made transparent with recreational elements' (cit. *Ibid.*, 49).

⁷⁷⁵ The area serves to cope with peak rainfall, reducing flooding in the Blokhoven polder, and therefore also facilitating agriculture. The retention pond also enhances ecological water quality and nature (cf- *Ibid.*).

⁷⁷⁶ Reference is made to interventions of 'landscape construction', concerning old orchards – that have been 'traditionally part of the land use of the higher, drier soils along the river' – to be 'supplemented by planting young fruit trees'. Moreover, 'to fit in the hard image of the greenhouses along the inundation canal, an edge of hawthorn bush is planted, combined with a walking path along the south side, between the Bokkenpad and the Achterdijk [...] Along the southern edge of the village of Schalkwijk, the aim is to make the landscape smaller in scale through the planting of knot trees, alder girths and a few polder forests. This small scale refers to the historic polder image, but is above all an investment in the spatial quality of the rear of the village ribbon to make it more attractive for recreation' (cf. *Ibid.*, 45).

Lunet aan de Snel: the water fort

The implementation of the reuse project for Lunet aan de Snel was influenced by some reductions at the development plan. Economic reasons led the private party involved to step back from the starting idea to purchase the fort site.⁷⁷⁷ Consequently, in 2016 the municipality of Houten became the owner of Lunet aan de Snel (FIG. 4.62-63). Nevertheless, the vision formulated in the *Blokhoven Polder & Lunet aan de Snel. Ruimtelijke Ontwerp* was still a valid solution for the new owner, which conferred to the Uijttewaal company a leasing contract for the following thirty years.⁷⁷⁸

Through the setting of the *Stichting Lunet aan de Snel* (Lunet aan de Snel Foundation), the Uijttewaal company succeeded in its starting intention of turning the fort into the gateway for the recreational experience of the Linieland landscape museum, in strong connection with the other actions envisaged in the development plan. The foundation has set up a program of educational and recreational activities, the main theme of which is water.⁷⁷⁹ In it, the Blokhoven polder is presented as a water landscape, of which the military landscape – the waterline – is a fundamental part, but contextualized in the broader history of the Dutch hydraulic management in this sample area. Within this range of initiatives, aimed at strengthening the public awareness, Lunet aan de Snel was assumed as the starting point of the *Linieland* experience: the Waterfort.⁷⁸⁰

⁷⁷⁷ In particular, the maintenance costs have been the main concern (Interview W. Uijttewaal (August 2019)).

⁷⁷⁸ "It is common for municipalities to have a competition for selecting the best proposal coming from privates or foundations. In this case, the municipality was so convinced that our proposal was a good idea, that there was no competition".(Interview W. Uijttewaal (August 2019)).

⁷⁷⁹ The foundation carries out three projects: 1. Lunet aan de Snel: defending with water; 2. Waterfort: working with water; 3. Schootsveld: living with water. See: <https://www.lunetaandesnel.nl/> [08.08.2021].

⁷⁸⁰ About the water theme and the narrative developed by the Stichting Lunet aan de Snel, Mr. Uijttewaal said: 'We are a low-lying country, and in the past water has been an integral part of whatever we did, including the defence system. So, the reason the fortress is here has also to do with the landscape and, in particular, the low-lying areas that cross the country. There's a very interesting link between hydraulic engineering and military engineering, which is almost coincidental. It's a story that I often explain to the participants'. Moreover: 'We address the Waterline history, because it's in the characteristics of the landscape – for example in relation to the inundation canal over here, that was specifically built for that purpose, and you can see that because it cuts through the fields pattern. And Lunet aan de Snel is called like this, because of a small stream called the Snel. So, there are all kinds of elements here relating to the military history; also about the inundations. The Blokhoven, that is a low-lying polder developed in the 11th century to drain a swamp and build the adjoining village, was used as an inundation area. But, as you can see, it's all very much linked. So, in our exposition we explain the whole water system and why it is as it is; the history starts in 1672, and from then until the beginning of the 20th century, that [hydraulic and military history] was very much connected. But we do not have here, as a team, the history of the Waterline. That is what distinguishes us from Fort bij Vechten' (Interview W. Uijttewaal (August 2019)).



FIG. 4.62 Houten (NL), Lunet aan de Snel: aerial picture (1920-1930) (Collectie Nederlands Instituut voor Militaire Historie)



FIG. 4.63 Houten (NL), Lunet aan de Snel: condition of the fort before the intervention of 2016-2018 (s.d.) (Velden, van der 2013: 28)

According to these intentions, a reuse project for Lunet aan de Snel has been outlined and realized between 2016 and 2018. The interventions involved the entire fort site, including both the outdoor space and the bombproof barracks. The final project is the result of an intense dialogue between the Uijttewaal family, the architect⁷⁸¹ and the supervising authorities,⁷⁸² which has led to the adjustment of some of the solutions proposed in the development plan.

Indeed, the starting idea to reshape the earthwork as it was in its 19th century layout was abandoned for a greater balance between cultural and ecological values (FIG. 4.64).⁷⁸³ Because of subsidence and lack of maintenance in the previous forty years, the fort site had lost its original shape and was overgrown with trees and shrubs.

After some discussions, a compromise was found: the arrow-shaped profile on the south-east flank – i.e., the part once facing the enemy and, nowadays, the most visible in the landscape – has been reconstructed in its main original volume, while the north-east flank and the whole protected side have been left untouched. Several reasons have led to this choice: firstly, reshaping the whole fort in its original shape would have meant removing all the new nature that arose on the site, which currently has an important ecological function for the Dutch ecological connection system;⁷⁸⁴ secondly, the impossibility to recreate the same detailed shape, together with the risk of falsifying the historical evolution of the site over time, also contributed to this solution; finally, the implemented version has the advantage to be ‘maintenance friendly’.⁷⁸⁵

⁷⁸¹ The architect is Mr. G. J. de Jong from Arc2 architecten (cf. Arc2 architecten (opdrachtgever: Gemeente Houten). *Herbestemming Lunet aan de Snel. Voorlopig Ontwerp* (22 June 2016); Arc2 architecten (opdrachtgever: Gemeente Houten). *Herbestemming Lunet aan de Snel. Definitief Ontwerp: tekeningen* (17 November 2016).

⁷⁸² Reference is made to both the Linieland envelope committee and the RCE. According to the information given by both Mr. Uijttewaal and the architect in the interviews, the Linieland envelope committee – representing the interest of the NHW in this area – had a saying on the aspects related to landscape qualities of the fort; the RCE mainly advised on the building, but also on some aspects of the outdoor interventions (Interview W. Uijttewaal (August 2019); Interview G. J. De Jong (Arc2 architecten) (July 2019)).

⁷⁸³ This was the solution proposed by the Linieland envelope committee, included in the *Blokhoven Polder & Lunet aan de Snel. Ruimtelijke Ontwerp* (cf. Velden, van der K. and Commissie Linieland (2013). *Polder Blokhoven, op.cit.*, 33).

⁷⁸⁴ In the interview, the architect said: ‘There was definitely a conflict [between cultural and natural values] because if you would like to bring back the original defence shape, then you would have to remove also the big trees and, thus, a lot of the habitat of the animals. So, it was more looking for a balance between those two’ (Interview G. J. De Jong (Arc2 architecten) (July 2019)).

⁷⁸⁵ In the interview, Mr. Uijttewaal said: ‘We were very much against it [the idea to reconstruct the original shape], not only because you lose the trees, but because basically what you do is to build something new, not including the experience and the history that this area has had during its lifetime. And also, you can never get it as it was. The other reason was that, for maintenance, it would have been a nightmare. If you have to do all the mowing, it is a nightmare; and all the character is gone (Interview W. Uijttewaal (August 2019)).



FIG. 4.64 Houten (NL), Lunet aan de Snel: project plan for earthworks and vegetation (design: Arc2 architecten) (Arc2 architecten, *Herbestemming Lunet aan de Snel. Definitief Ontwerp* (17 November 2016))



FIG. 4.65 Houten (NL), Lunet aan de Snel: pathway around the fort perimeter (design: Arc2 architecten) (F. Marulo 2019)



FIG. 4.66 Houten (NL), Lunet aan de Snel: new seats in the former guns positions (design: Arc2 architecten) (F. Marulo 2019)

The choice to intervene with minimal actions, together with the search for a balance between preservation and revitalization, also influenced the design of paths and connection elements, so as to guarantee the access and experience of the fort site. A pathway going just behind the fort perimeter was introduced as a new addition to the original circulation, realized with a simple gravel trace along the slopes (FIG. 4.65). It leads to the upper part of the fort site, where the former cannon holes in the earthworks have been reshaped, in a simplified version, to host wooden benches: small panoramic points, reinterpreting the military look on the open fields in a contemporary recreational way (FIG. 4.66).⁷⁸⁶ From the upper part of the fort site it is possible to reach the top of the barracks – conceived as an elevated belvedere – as well as the lower part of the courtyard, where the main entrance to the bomb-proof building is located.⁷⁸⁷

⁷⁸⁶ About the design of the path, the architect said: ‘We introduced this idea to walk around, just behind the defence perimeter of the slopes, making some holes in it with little benches to give this idea of the places where the cannons were. So, instead of the open shooting field for the cannons, you now have the view on the surrounding landscape for the visitors’ two’ (Interview G. J. De Jong (Arc2 architecten) (July 2019).

⁷⁸⁷ The lower part is not freely accessible to visitors on a daily basis; access there is possible only taking part to the events organized by the *Stichting Lunet aan de Snel*. The connection between upper and lower level are realized with steel staircases which – as well as the parapet on the barracks’ upper level – come from the *Handboek Meubilair Nieuwe Hollandse Waterlinie* (Handbook Furniture New Dutch Waterline) (cf. Studio Klarenbeek, *Handboek Meubilair Nieuwe Hollandse Waterlinie*. Available at: <https://www.programmanieuwehollandsewaterlinie.nl/download/liniemeubilair/liniemeubilair-2/> [09.08.2021]).



FIG. 4.67 Houten (NL), Lunet aan de Snel: the concrete shed in the courtyard before demolition (2002) (Collectie Nederlands Instituut voor Militaire Historie)



FIG. 4.68 Houten (NL), Lunet aan de Snel: view on the façade of the bombproof barracks before the intervention of 2016-2018 (2002)(Collectie Nederlands Instituut voor Militaire Historie)



FIG. 4.69 Houten (NL), Lunet aan de Snel: view on the façade of the bombproof barracks and courtyard after the intervention of 2016-2018 (F. Marulo 2019)

The access to the fort site was also the object of intervention. Of the three bridges originally in place, the central one had been replaced by a dam, while only one of the two lateral bridges had been reconstructed. Instead of the original idea to reconstruct just the central bridge, in the end it was decided to just adapt the dam with parapets and to reconstruct the other two, with a contemporary design inspired to the original layout.⁷⁸⁸ Entering the fort from the principal entrance, the courtyard in the lower level has been adapted to host the educational activities of the Lunet aan de Snel Foundation. A concrete shed, built during the Defence use of the fort for explosives storage, has been demolished (FIG. 4.67); the starting idea to replace with brickwork the concrete floor, still from the 1970s, has been abandoned, together with the intention to build a new shed, in the place and shape of the one originally located on the fort courtyard. Instead, a water basin has been realized, as part of the simulations run during the educational activities (FIG. 4.68-69).

⁷⁸⁸ Indeed, the floor of the two bridges was realized with the central part made in a different material – a steel net – so as to recall the original design, in which that part was movable (Interview G. J. De Jong (Arc2 architecten) (July 2019).

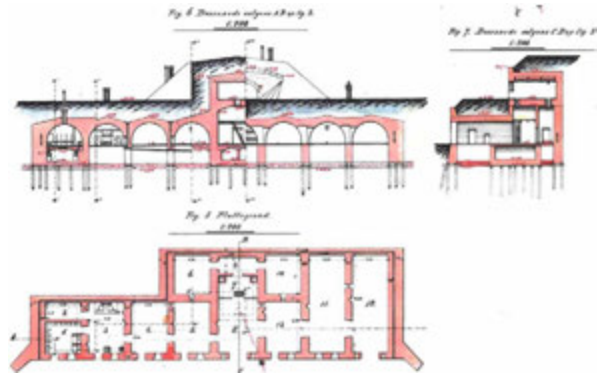


FIG. 4.70 Houten (NL), Lunet aan de Snel, bombproof barracks: historical situation interior spaces (1909) (Arc2 architecten, *Herbestemming Lunet aan de Snel. Voorlopig Ontwerp* (22 June 2016), 12)

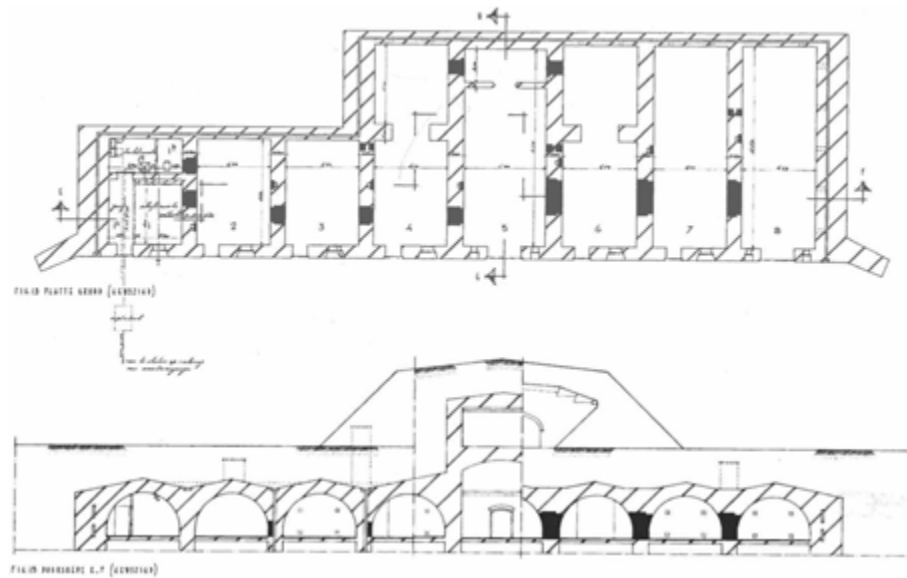


FIG. 4.71 Houten (NL), Lunet aan de Snel, bombproof barracks: transformations made by the EOD (1969) (Arc2 architecten, *Herbestemming Lunet aan de Snel. Voorlopig Ontwerp* (22 June 2016), 13)



FIG. 4.72 Houten (NL), Lunet aan de Snel, bombproof barracks: the new floor (design: Arc2 architecten) (F. Marulo 2019)

As for the bombproof barracks, several interventions have been done to adapt the historical building to the new function, which led to removing the additions made during the period in which the fort was used by the EOD department of the Ministry of Defence (FIG. 4.70–71).⁷⁸⁹ Firstly, the internal doorways, bricked up by during the 1970s, have been reopened and new doors have been installed. Secondly, the concrete floor has been removed together with the original brick one underneath and, after the installation of a heating system, a new concrete floor has been realized, except the parts among the doors, which have been realized with brickwork (FIG. 4.72). The original rooms layout has been left unchanged, adapting the spaces for a multi-functional use. Most of the spaces have been furnished for hosting the educational activities (FIG. 4.73); but since the barracks is occasionally rented for events, a kitchen, new toilets and a bedroom for the tenants have been put in place.

⁷⁸⁹ These solutions were supported by an historical research, mainly based on the comparison between historical maps and the drawings realized by the Defence for adapting the barracks to be used as an explosive depot Arc2 architecten (opdrachtgever: Gemeente Houten). *Herbestemming Lunet aan de Snel. Voorlopig Ontwerp* (22 June 2016).



FIG. 4.73 Houten (NL), Lunet aan de Snel, bombproof barracks: room reused for educational activities (F. Marulo 2019)



FIG. 4.74 Houten (NL), Lunet aan de Snel, bombproof barracks: the reuse of the water collection system (F. Marulo 2019)

Finally, the reuse of the historical water storage system and the storage cellar under the building is interesting. Through the addition of a pumping system, the collected rain water is currently used for supplying clean water to the toilets (FIG. 4.74).

4.3.3 Forts owned by Staatsbosbeheer

When the Ministry of Defence started the disposal of the forts formerly belonging to the New Dutch Waterline, *Staatsbosbeheer* (SBB – State Forestry Service) was identified as the most suitable institution to which they could be entrusted. Indeed, given its century-old engagement in nature and landscape management, this choice can be explained with the main ecological value acknowledged at that moment in the military works.⁷⁹⁰ Having become the owner of the major number of forts, in 2009 SBB commissioned an investigation aimed at analysing their distinctive qualities and potentials in order to define an appropriate revitalization vision.⁷⁹¹ In compliance to the guidelines given by the Panorama Krayenhoff – and, primarily, to the green map – the forts were first considered in relation to their ecological clusters of belonging.

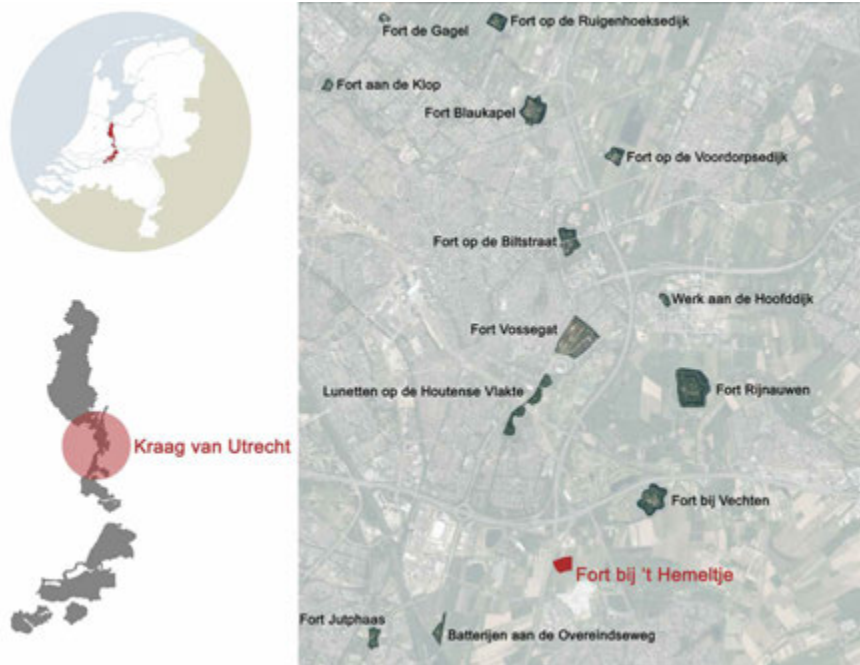


FIG. 4.75 Houten (NL), Fort 't Hemeltje in the Kraag van Utrecht (aerial image retrieved at: <https://app.pdok.nl/viewer/> [28.10.2022]) (F. Marulo 2022)

⁷⁹⁰ Cf. Buis, J. and Verkaik, J. (1999). *Staatsbosbeheer: 100 jaar werken aan groen Nederland*. Utrecht: Matrijs.

⁷⁹¹ Cf. REDscape. *De Forten van Staatsbosbeheer in de Nieuwe Hollandse Waterlinie: een ruimtelijke verkenning naar de onderscheidende kwaliteiten van de forten van Staatsbosbeheer* (26 February 2009).



FIG. 4.76 Houten (NL), Fort 't Hemeltje: aerial picture (1925) (Collectie Nederlands Instituut voor Militaire Historie)

As part of the second and outer line of the forts in the *Kraag van Utrecht*, Fort 't Hemeltje had been included in the cluster *In de stadsrand* (In the city's outskirts), in which – due to the occurred urban expansion of Utrecht and the other surrounding municipalities – the forts could have become part of an 'urban park in a larger urban landscape' (FIG. 4.75-76).⁷⁹² This main recreational potential was intended to be pursued at Fort bij Vechten and in the Gagelbos area. In the case of Fort 't Hemeltje the opportunity was seen to enrich the revitalization process with an ecological nuance, by setting a 'center of sustainability'.⁷⁹³

At that moment, this medium-sized fort (7,5 ha) – appreciated for its 'impressive earthworks' and 'sharp contrasts' between the seclusion at ground level and the view from the ramparts – was not open to the public, although easily reachable by car or bike.⁷⁹⁴

⁷⁹² Cf. *Ibid.*, 13.

⁷⁹³ Cf. *Ibid.*

⁷⁹⁴ Reconfirming the great importance attributed to the visual appreciation of the fort sites, such qualities – as in the case of Fort bij Vechten – were even more enhanced by its being highly visible and recognizable from the highway (cf. *Vision Ibid.*, 21).

Thus, a compromise solution had to be found in order to guarantee the preservation of its ecological and cultural values, the identification of a new compatible function for assuring the economic sustainability of its revitalization, and a certain degree of public access.⁷⁹⁵

Accordingly, in 2010 SBB started to plan, in consultation with the municipality of Houten and the province of Utrecht, the sustainable redevelopment of Fort 't Hemeltje. This process revolved around the idea to concentrate the efforts on the revitalization of one building – the main bombproof barracks – which could be reused as office space for companies active in the field of sustainability.⁷⁹⁶ This was made possible through an underground addition to the back of the historical building, which was meant to host the new entrance – thus, reversing, the original path – and other service facilities (i.e. a new staircase, toilets, kitchen) (FIG. 4.77). Compared to a previous concept (2008) in which these necessary additions were intended to be realized by transforming the outdated historical facilities,⁷⁹⁷ the implemented solution had the advantage to leave the historical building as untouched as possible.⁷⁹⁸ Indeed, it was the existing indoor structure of the building that determined the division of the office spaces, the access to which was made possible by reopening the passageway closed during the use of the fort as depot for explosives by the Defence.⁷⁹⁹ The only visible part from the outside is a skylight window opened in the rear earthen slope, which also hosts the climate control installation and was strengthened through a ground-retaining structure.⁸⁰⁰

⁷⁹⁵ As for many other forts, also in the case of Fort 't Hemeltje the new vegetation and the presence of bats represented ecological features of high significance; moreover, at that time the fort was already listed as a national monument. (cf. *Ibid.*).

⁷⁹⁶ Cf. DLGA, Folder: D.16.33 (*Verdedigingswerken van noord naar zuid; Het Fort bij 't Hemeltje*), Document: Gemeente Houten (2012). *Voorontwerpbestemmingsplan Fort 't Hemeltje. Planregels en verbeelding, vergezeld gaande van een toelichting*. Houten: Gemeente Houten, 16.

⁷⁹⁷ Cf. DLGA, Folder: D.16.33 (*Verdedigingswerken van noord naar zuid; Het Fort bij 't Hemeltje*), Document: INSID (2008). *Restauratie en herbestemming van Fort 't Hemeltje, Houten. Voorontwerp* (17 December 2008), 29.

⁷⁹⁸ The final design was made by the BunkerQ architectural firm. See: DLGA, Folder: D.16.33 (*Verdedigingswerken van noord naar zuid; Het Fort bij 't Hemeltje*), Document: BunkerQ (2014). *Restauratie en ontwerp, op.cit.*

⁷⁹⁹ Cf. *Ibid.*

⁸⁰⁰ Cf. *Ibid.*; Interview G. Meijer (BunkerQ) (August 2019).



FIG. 4.77 Houten (NL), Fort 't Hemeltje, bomb-proof barracks: back entrance (top), façade (below left) and access to the office spaces (design: BunkerQ) (F. Marulo 2019)



FIG. 4.78 Houten (NL), Fort 't Hemeltje: building E closed for bats (F. Marulo 2019)



FIG. 4.79 Houten (NL), Fort 't Hemeltje: building B used for the spyroute (F. Marulo 2019)

For the other buildings and the outdoor space, the revitalization was aimed at enhancing the recreational potential of the fort site for the general public, while respecting its ecological features. Indeed, instead of the starting idea of a limited public access in favour of a more-extensive – and more-profitable – office exploitation (2008),⁸⁰¹ the choice was made to reserve one building for bats hibernation, and open the rest of the historic structures – consolidated for this purpose⁸⁰² – within the frame of a ‘spy-route’, connected in the outdoor with the pathway settled for walking along the moat, on the outer perimeter of the fort site (FIG. 4.78-79).⁸⁰³



FIG. 4.80 Tull en 't Waal (NL), Werk aan de Waalse Wetering in the Linieland sub-area (aerial image retrieved at: <https://app.pdok.nl/viewer/> [28.10.2022]) (F. Marulo 2022)

⁸⁰¹ Initially, the building of new volumes for the creation of six office pavilions with contemporary materials and design was proposed (Cf DLGA, Folder: D.16.33 (*Verdedigingswerken van noord naar zuid; Het Fort bij 't Hemeltje*), Document: INSID (2008). *Restauratie en herbestemming, op.cit.*). However, this choice was criticized by the NDW Quality team during the evaluation phase, which advised to better address the delicate balance between the cultural and natural significance of the fort site (Cf. Folder: D.16.33 (*Verdedigingswerken van noord naar zuid; Het Fort bij 't Hemeltje*), Document: *Concept Verslaag eenendertigste vergadering Kwaliteitsteam NHW* (Y. Feddes, E. Taverne, G. Middelkoop, E. Luiten, V. Cerutti, A. van Vuurten (Projectbureau NHW): *Fort 't Hemeltje* (9 October 2008)).

⁸⁰² Interview G. Meijer (BunkerQ) (August 2019).

⁸⁰³ The ‘spy route’ consist of a treasure hunt the main theme of which is the history of the New Dutch Waterline.



FIG. 4.81 Tull en 't Waal (NL), Werk aan de Waalse Wetering: aerial picture (1920-1940) (Collectie Nederlands Instituut voor Militaire Historie)

Different considerations occurred in the case of Werk aan de Waalse Wetering. As part of the *Linieland* area, this fort had been included in the cluster *Aan de Lek* (On the Lek), in which the preservation of the landscape openness and the development of compatible recreational activities were central (FIG. 4.80-81).⁸⁰⁴

This small-size fortification (3 ha) had not been listed as a monument, but had a considerable ecological value as a wintering place for bats. Additionally, given the elevation generated by its underground bombproof barracks – which, as a ‘green hill’, represents its only historical building – SBB saw in this fort site a great potential as a stopping place and view point on the surrounding open landscape, also by virtue of its easy accessibility by cars or bikes (FIG. 4.82).⁸⁰⁵ Accordingly, already in 2002 a project was carried out to reshape its earthworks and vegetal cover, which had been highly altered after several decades of poor maintenance. Through an historically-grounded land-art intervention – based on the comparison of the original and current situation by means of 3D models – the massiveness of the 19th-century fortification was restored with the addition of a large amount of new soil and vegetal cover, the latter carefully designed in order to assure, with its root system, the groundwork’s necessary stability.⁸⁰⁶

⁸⁰⁴ Cf. REDscape. *De Forten van Staatsbosbeheer in de Nieuwe Hollandse Waterlinie: een ruimtelijke verkenning naar de onderscheidende kwaliteiten van de forten van Staatsbosbeheer* (26 February 2009), 25.

⁸⁰⁵ Cf. *Ibid.*

⁸⁰⁶ The designer of this intervention is G. Meijer (BunkerQ) (Interview G. Meijer (BunkerQ) (August 2019).

Since the historic building was reserved for the bats, the only additions made were primarily aiming at improving the accessibility to the fort (FIG. 4.83).⁸⁰⁷ They consisted in the replacement of the access bridge⁸⁰⁸ – the original was in a bad state – and building a new staircase through which the visitors can reach the top of the bombproof barracks, which was equipped with a bench and informative sign for enjoying the open view on the surroundings.⁸⁰⁹



FIG. 4.82 Tull en 't Waal (NL), Werk aan de Waalse Wetering: panoramic point on top of the bombproof barracks (F. Marulo 2019)



FIG. 4.83 Tull en 't Waal (NL), Werk aan de Waalse Wetering: entrance bridge and bombproof barracks (F. Marulo 2019)

⁸⁰⁷ However, more recently the possibility has been considered to open the building for small-scale events – an increase in the recreational exploitation of the fort site that would involve some necessary adaptations (e.g., bathrooms, sewage system) (cf. DLGA, Folder: 10.03.05 (*Financiering en uitvoering; Enveloppen; Linieland; Enveloppecommissie LL*), Document: Enveloppe Linieland, *Projectfiche Werk aan de Waalse Wetering* (2015-2016)).

⁸⁰⁸ Cf. *Ibid.*

⁸⁰⁹ Cf. Interview G. Meijer (BunkerQ) (August 2019).

In conclusion, the comparison between these two cases highlights the attention shown by SBB towards the ecological value of the forts' features. Nevertheless, a significant variety can be observed in the implemented interventions. In relation to this, the different regional landscapes in which the two forts are inscribed surely had an impact on the setting of a starting vision. However, the fort size seems to have had the highest relevance, determining the ranging from a minimal intervention to a more complex combination of functions in order to guarantee a sustainable maintenance of the site over time.

4.3.4 Forts owned by the municipalities



FIG. 4.84 Utrecht (NL), Fort Blaukapel in the Kraag van Utrecht (aerial image retrieved at: <https://app.pdok.nl/viewer/> [28.10.2022]) (F. Marulo 2022)

The second main ownership category to be investigated is represented by the municipalities. Among them, that of Utrecht is the one holding the larger number of forts in the New Dutch Waterline and the second major owner after SBB. Indeed, at the end of the 1990s the municipality started the purchase of the military works in

its territory, which formerly belonged to the first ring of the *Kraag van Utrecht*.⁸¹⁰ This was the final achievement of a decade-long expression of interest.⁸¹¹ Within this framework, it was from 2000 onwards that the redevelopment of Fort Blaukapel started to be discussed, leading to a definitive plan in 2002.



FIG. 4.85 Utrecht (NL), Fort Blaukapel: aerial picture (1960) (Collectie Nederlands Instituut voor Militaire Historie)

At the moment of its acquisition by the municipality (1997), Fort Blaukapel was already recognized as a national monument (1967) and as a *dorpsgezicht* (village conservation area) (1966) (FIG. 4.84-85).⁸¹² With reference to this second aspect, the choices made by the municipality of Utrecht for its redevelopment were linked to the unique character of this fort, which consisted in its being built around a pre-existing medieval hamlet with a characteristic blue-vaulted chapel, from which the

⁸¹⁰ Interview E. Kylstra (Municipality of Utrecht, Senior Advisor Heritage and Urban Planning) (May 2019).

⁸¹¹ Already in 1989, the municipality of Utrecht had joined the development of a vision for the revitalization of the forts of the New Dutch Waterline in the province of Utrecht (cf. Provinciale Vesting Utrecht (Afdeling Ruimtelijke Planning) (1989). *Ontwikkelingsplan voor het deel van de Nieuwe Hollandse Waterlinie in de provincie Utrecht* (June 1989). Houten/De Bilt: Grontmij).

⁸¹² Gaasbeek, F. (2018). *Dorp en fort Blaukapel, onlosmakelijk verbonden*. Amsterdam: Stokerkade (Hollandse Waterlinie Erfgoedreeks), 149.

village first and the fort then took their name.⁸¹³ Consequently, the starting point of the redevelopment plan was to keep as much as possible this peculiar balance between the 'military' and 'village' landscape (FIG. 4.86).⁸¹⁴



FIG. 4.86 Utrecht (NL), Fort Blaukapel: the redevelopment plan (2002) (Gemeente Utrecht 2002)

Indeed, through an extensive participatory process, the project group aimed at combining the preservation of this 'living monument' in all its distinctive features with the enhancement of its living environment for the local residents. Accordingly, the interventions included, on the one hand, the restoration of various military historic elements, among which, the redoubt – the isolated character of which was kept by limiting its access to visitors and for sporadic leasing activities – with its moat and historical plantings. On the other hand, the plan also consisted in the addition of new constructions for both residential and small-scale commercial buildings, implemented between 2002 and 2007. In particular, the housing program

⁸¹³ Cf. Kreek, M. de (1997). *Fortdorp Blaukapel: levende monument. Een cultuur-historische effect-rapportage van de Dienst Staatsbeheer, afdeling Gebouwen/Projectbureau Forten* (Augustus 1997), 7-18; Gaasbeek, F. (2018). *Dorp en fort Blaukapel, op.cit.*

⁸¹⁴ Cf. Gemeente Utrecht (2002). *Fort Blaukapel: definitief inrichtingsplan* (21 mei 2002).

consisted in the building of sixteen new residential units with related parking facilities in well-chosen development locations,⁸¹⁵ while the business program covered an area of circa 1550 m², the latter divided in both new construction and the reuse of former military buildings (FIG. 4.87).⁸¹⁶



FIG. 4.87 Utrecht (NL), Fort Blaukapel: reuse of historic buildings (left) and new constructions (right) (F. Marulo 2019)

When looking at the municipality-driven interventions in the *Linieland* area, the identification of a socially-useful new destination for Werk aan het Spoel was crucial (FIG. 4.88-89). Indeed, after the municipality of Culemborg had purchased the fort site in 2002, a group of local citizen gave rise to the *Stichting Werk aan het Spoel* (Werk aan het Spoel Foundation) (2003) with the primary goal to outline a vision for its revitalization.⁸¹⁷

⁸¹⁵ Among them, the housing unit designed by MONK architects (2007) was inspired, in its wooden structure, to the 19th-century *Kringenwet* military restrictions (cf. DLGA, Folder: 05.03.d (*Kwaliteit; Kwaliteitsteam; Adviezen 2009*), Document: Kwaliteitsteam NHW, *Gemeente Utrecht: Advies Blaukapel* (15 September 2009); see also: *Opgeleverde projecten - MONK Architecten* [10.08.2021]).

⁸¹⁶ For example, the bombproof barracks hosts the studios of several young entrepreneurs, mainly involved in the field of arts (cf. DLGA, Folder: 05.03.d (*Kwaliteit; Kwaliteitsteam; Adviezen 2007*), Document: Gemeente Utrecht (2007). *Restauratie Fort Blaukapel: Projectbeschrijving*).

⁸¹⁷ Cf. Interview G. van der Bijl (Stichting Werk aan het Spoel) (August 2019).



FIG. 4.88 Culemborg (NL), Werk aan het Spoel in the Linieland sub-area (aerial image retrieved at: <https://app.pdok.nl/viewer/> [28.10.2022]) (F. Marulo 2022)



FIG. 4.89 Culemborg (NL), Werk aan het Spoel: aerial picture (1962) (Collectie Nederlands Instituut voor Militaire Historie)

This intention was then conveyed in the drafting of a business plan, in which the core idea was to redevelop the fort into a meeting place for the Culemborg people.⁸¹⁸ Based on the peculiarities of the fort site – where *cultuur en natuur gaan samen* (culture and nature go together) – the plan included the running of culture, art and nature-related activities.⁸¹⁹ Accordingly, in 2007 the Ronald Rietveld Landscape Architecture firm and the artist Erick de Lyon were given the task to turn this ambition into coherent design solutions (FIG. 4.90).⁸²⁰ It revolved around the concept of a ‘grass sculpture’, in which both historically-inspired and contemporary interventions could find place.⁸²¹ It primarily involved the reshaping of the earthwork and its vegetal cover according to a balanced compromise between reconstruction of the consistently-altered original layout and the preservation of spontaneous vegetation.⁸²² Within this framework, the opening of cuts in the fort’s earthwalls at the place of the former gun holes served to combine the reference to the historical use of the site with the contemporary creation of so-called ‘super panoramas’ on the surroundings, enhancing the visual link with the Everdingen cluster to which the military work belonged and with the waterline landscape at broad. A similar approach can be found in the land-art intervention conceived by Erick de Lyon for evoking the presence of the fan sluice, which used to be in the immediate vicinity of the fort site and then demolished in 1978. As specifically formulated by the Quality Team in the design assignment, this operation was meant to highlight the inseparable link between the fort and the related inundation system.⁸²³

⁸¹⁸ Cf. DLGA, Folder: 6.02.G13 (Projecten; Restauratie en natuurcultuurcentrum Werk aan het Spoel); Document: Stichting Werk aan het Spoel (2004). *Cultuur en natuur op een historische locatie. Ondernemingsplan voor Werk aan het Spoel te Culemborg*, 7-16.

⁸¹⁹ Cf. *Ibid.*, 14.

⁸²⁰ For this, the Quality Team NDW and the municipality of Culemborg drafted a list of potential contractors (landscape architects) to participate at the tender. In April 2007, the design concept proposed by Rietveld and Lyon was selected out of four participants (cf. DLGA, Folder: 05.03.c (Kwaliteit; Kwaliteitsteam; vergaderingen en stukken KT; KT stukken 2007), Document: Kwaliteitsteam, *Opleg notitie Werk aan 't Spoel* (29 November 2007)).

⁸²¹ Cf. DLGA, Folder: 05.01.b (Kwaliteit; Kwaliteit Algemeen; Gebieden en ontwerpvoorbeelden; Culemborg; Werk aan het Spoel), Document: RAAAF, *Definitief ontwerp fort Werk aan het Spoel en kunstopdracht inundatiesluis* (20 November 2007).

⁸²² After the use as explosives depot by the Ministry of Defence following the demilitarization phase, the fort had been occupied by squatters until that moment (cf. DLGA, Folder: 6.02.G13 (Projecten; Restauratie en natuurcultuurcentrum Werk aan het Spoel); Document: Stichting Werk aan het Spoel (2004). *Cultuur en natuur op een historische locatie. Ondernemingsplan voor Werk aan het Spoel te Culemborg*, 12).

⁸²³ Cf. DLGA, Folder: 05.03.c (Kwaliteit; Kwaliteitsteam; vergaderingen en stukken KT; KT stukken 2007), Document: *Kwaliteitsteam, Opleg notitie Werk aan 't Spoel* (29 November 2007).

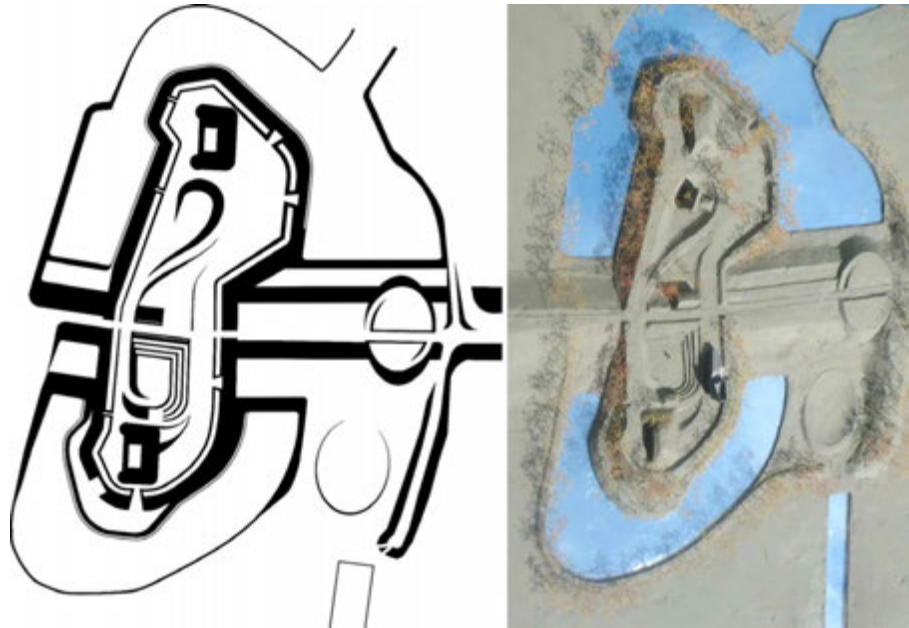


FIG. 4.90 Culemborg (NL), Werk aan het Spoen: design concept (left) and model (right) (design: RAAAF & Atelier Lyon) (DLGA, Folder: 05.01.b, Document: Ronald Rietveld Landschapsarchitectuur, Erick de Lyon, *Definitief ontwerp fort Werk aan 't Spoen en kunstopdracht inundatiesluis* (20 November 2007), 10&25)

Directly connected to the new recreational function was, instead, the creation of an amphitheatre – a contemporary addition integrated in the historical ‘grass sculpture’ – dug on the southern part of the fort site for hosting the various cultural and artistic events organized by the Werk aan het Spoen Foundation. This intervention required the removal of a wooden shed, which has been moved on the southern part of the fort – an operation justified with the finding of an historical map (1885) depicting this building at the place where it was relocated.⁸²⁴ Finally, a similar interlacement between old structures and new additions can also be found in the approach to the historical buildings on the fort site, which have been consolidated and repurposed for various contemporary functions.⁸²⁵ Moreover, a new construction – the *Forthuis*

⁸²⁴ DLGA, Folder: 05.01.b (*Kwaliteit; Kwaliteit Algemeen; Gebieden en ontwerpvoorbeelden; Culemborg; Werk aan het Spoen*), Document: RAAF, *Definitief ontwerp fort Werk aan het Spoen en kunstopdracht inundatiesluis* (20 November 2007).

⁸²⁵ In particular, the bombproof barracks on the north side is reused as a studio for artists' exhibitions and laboratories, while the guardhouse has been adapted to accommodate the residence of the current fort's keeper (Interview G. van der Bijl (Stichting Werk aan het Spoen) (August 2019).

(Fort House) – has been realized to host a restaurant and related facilities at the back of the amphitheatre (FIG. 4.91-93). Despite the massive presence of this contemporary addition, its wooden structure – inspired by the *Kringenwet* – was conceived to integrate with the other buildings in and around the fort site.⁸²⁶



FIG. 4.91 Culemborg (NL), Werk aan het Spoen: the green amphitheatre (design RAAAF) and the *Forthuis* (design: MONK Architecten) (F. Marulo 2019)



FIG. 4.92 Culemborg (NL), Werk aan het Spoen: the wooden shed replaced on the other side of the fort to realize the green amphitheatre (F. Marulo 2019)



FIG. 4.93 Culemborg (NL), Werk aan het Spoen: openings in the earthwalls connecting with the surrounding waterline landscape (F. Marulo 2019)

⁸²⁶ As for the wooden residence complex at Fort Blaukapel, the design of the *Forthuis* was realized by MONK architects. See: <https://www.monkarchitecten.nl/opgeleverd/#het-forthuis-culemborg> [10.08.2021].

In conclusion, the interventions run under municipal guidance show a common attention to the creation and enhancement of the social value connected to the revitalization of the fort sites. Indeed, in the two analysed cases the redevelopment plans have represented an opportunity of re-appropriation for local communities towards these heritage sites, historically foreclosed to the general public. This necessity seems to have priority, thus, strengthening the fort's local dimension more than their significance as nodes within the wider military system of the New Dutch Waterline. At the same time, the latter is never neglected but translated in historically inspired design solutions, and more readily accepting contemporary additions.

4.3.5 Forts owned by private parties

The third and last category to be analysed is that of private owners. For this purpose, two relevant cases have been identified in the revitalization of Fort Everdingen in the *Linieland* area, and the Batterijen aan de Overeindseweg in the *Kraag van Utrecht*.



FIG. 4.94 Vijfheerenlanden (NL), Fort Everdingen in the Linieland sub-area (aerial image retrieved at: <https://app.pdok.nl/viewer/> [28.10.2022]) (F. Marulo 2022)

In the case of Fort Everdigen, the choice of a new function directly stemmed from the reinterpretation of the water storage system of the historical buildings on the fort site (FIG. 4.94-95). In 2014, the *Dienst Landelijk Gebied* (DLG – Rural Area Agency) held a competition on behalf of the Ministry of Finance – to which, in 2012, the ownership of the fort site had been transferred by the Ministry of Defence – in order to find a new owner and initiator for the repurposing of this large-size military work (9 ha). Accordingly, a Spatial Quality Framework was drafted, in which the main selection criteria were set (FIG. 4.96).⁸²⁷



FIG. 4.95 Vijfheerenlanden (NL), Fort Everdigen: aerial picture (1920-1930) (Collectie Nederlands Instituut voor Militaire Historie)

⁸²⁷ Cf. DLGA, Folder: 05.03.c (*Kwaliteit; Kwaliteitsteam; Vergaderingen en stukken KT; Verslagen vergaderingen 2008*), Document: Kwaliteitsteam NHW, *Besprekingsverslag – Honswijk-Everdigen* (5 August 2008); DLGA, Folder: 13 (*Ruimtelijke Ontwerp, archief december 2014; Fort Everdigen; Herbestemming Everdigen*), Document: Ronden, M., Vrielink, J., Helde, A. van der, Struijker Boudier, N. and Velden, K. van der, *Fort Everdigen: wachter aan de Lek: Ruimtelijk Kwaliteitskader voor herontwikkeling* (Dienst Landelijk Gebied, Hollandse Waterlinie Nationaal Project) (February 2014), 11-16.



FIG. 4.96 Vijfheerenlanden (NL), Fort Everdingen:: Spatial Quality Framework for redevelopment (2014) (Ronden et al. 2014)

Together with the seek for an independent and fully-privately funded operation, the potential contractors were asked to combine the development of an economically-profitable proposal with the preservation of the fort's vulnerable core values. In particular, the cultural-historic significance of this national monument as part of the New Dutch Waterline and its natural-ecological relevance – especially for the intensive presence of bats – were identified as indispensable qualities to be preserved. Additionally, the public accessibility, the social responsibility and the needed cooperation with local residents and associations were crucial.⁸²⁸

828 *Ibid.*



FIG. 4.97 Vijfheerenlanden (NL), Fort Everdingen: the wooden warehouse reused as a testing room for the brewery (F. Marulo 2019)

Of the eighteen submitted proposals – of which only eight were judged as fulfilling the starting criteria – the plan for the setting of a brewery, proposed by the entrepreneurs Danielle Duits and Marco Lauret, was selected.⁸²⁹ As stated in the Spatial Quality Framework, the main tower building located at the heart of Fort Everdingen was characterized, together with its high historic and architectural qualities, by a great natural-ecological significance, it being the main hibernation place on the fort site. Consequently, a strong-impact reuse of the building was not allowed.⁸³⁰ The inspiring idea at the core of the repurposing plan was, thus, to reserve the building for bats, while reusing its historic water collection system within the brewing process.⁸³¹ Starting from this main concept, the plan also included the transformation of a wooden warehouse to host the brewery's testing room (FIG. 4.97).

⁸²⁹ Interview M. Lauret (owner Fort Everdingen) (July 2019).

⁸³⁰ DLGA, Folder: 13 (*Ruimtelijke Ontwerp, archief december 2014; Fort Everdingen; Herbestemming Everdingen*), Document: Ronden, M., Vrieling, J., Helde, A. van der, Struijker Boudier, N. and Velden, K. van der, *Fort Everdingen, op.cit.*, 33.

⁸³¹ Interview M. Lauret (owner Fort Everdingen) (July 2019).



FIG. 4.98 Vijfheerenlanden (NL), Fort Everdingen: the water collection system of the tower building is reused in the brewing process (F. Marulo 2019)



FIG. 4.99 Nieuwegein (NL), Batterijen aan de Overeindseweg in the Kraag van Utrecht (aerial image retrieved at: <https://app.pdok.nl/viewer/> [28.10.2022]) (F. Marulo 2022)

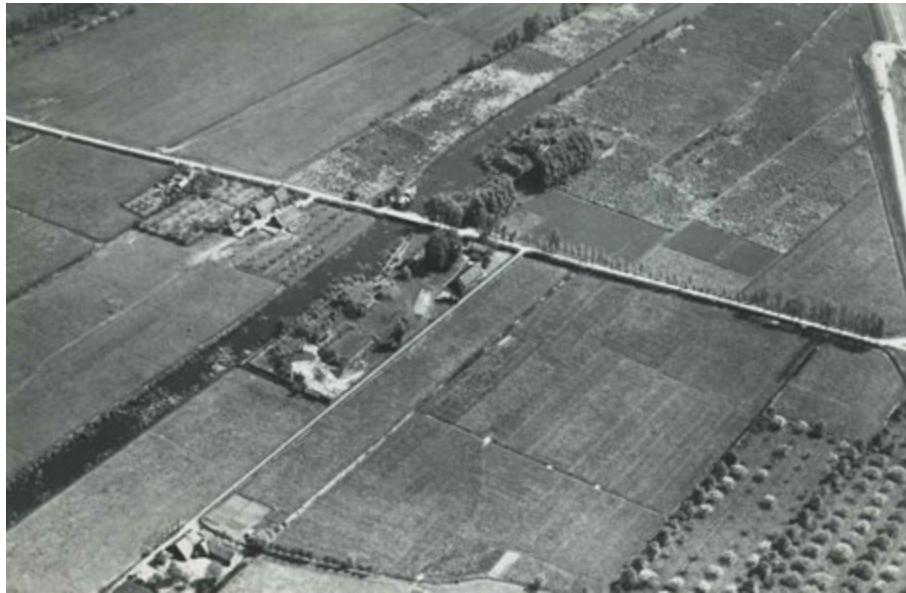


FIG. 4.100 Nieuwegein (NL), Batterijen aan de Overeindseweg: aerial picture before the opening of the Amsterdam-Rijnkanaal in the 1930s, when half of the fort was demolished (1920-1930) (Collectie Nederlands Instituut voor Militaire Historie)

Apart from its good conservation conditions, the choice to turn this specific building into the fort's primary public attractor was also due to its location in front of the main tower, thus, meeting the need set in the Spatial Quality Framework to enhance the sightlines towards this historical building (FIG. 4.98).⁸³² For what the other masonry bombproof buildings are concern, in this case the choice was made to reuse them as beer's storage place – in order to profit of their favourable hygrothermic indoor conditions – as shop or products' exhibition points. Finally, two other woodsheds on the fort site were repurposed as rentable event locations.

In the case of the Batterijen aan de Overeindseweg, a similar procedure was followed in order to identify a suitable private party to which the revitalization process of the military work could be entrusted (FIG. 4.99-101).

⁸³² DLGA, Folder: 13 (*Ruimtelijke Ontwerp, archief december 2014; Fort Everdingen; Herbestemming Everdingen*), Document: Ronden, M., Vrieling, J., Helde, A. van der, Struijker Boudier, N. and Velden, K. van der, *Fort Everdingen, op.cit.*, 33.



FIG. 4.101 Nieuwegein (NL), Batterijen aan de Overeindseweg: aerial picture after the opening of the Amsterdam-Rijnkanaal in the 1930s (2001) (Collectie Nederlands Instituut voor Militaire Historie)

In 2014, the municipality of Nieuwegein invited market parties to submit creative visions and ideas, the quality of which was assessed by an evaluation committee of experts. Out of more than twenty parties, the committee invited three tenderers to further detail and present their visions. The proposal of ID310, an event and communication agency from Houten, was selected.⁸³³ At the core of their business plan, the new owners of the Batterijen proposed to reuse the fort as the headquarters for their company. At the same time, the public access to the site was guaranteed although limited to weekend days. Accordingly, the implemented interventions on the fort's built heritage were primarily aimed at reusing the existing historic buildings in order to fit the functional program. A wooden shed was transformed in office and meeting spaces to be used by the company during the working days, while the concrete guard house and another shed were adapted for hosting a restaurant and event location to fit the presence of visitors and holidaymakers during the weekend (FIG. 4.102-104).

⁸³³ Cf. DLGA, Folder: 5.03.c (*Kwaliteit; Kwaliteitsteam; vergaderingen en stukken KT 2013-2015*), Document: H+N+S Landschapsarchitecten, *Werk aan de Overeindseweg. Ruimtelijk ontwikkelingskader – concept* (19 September 2013); DLGA, Folder: 20.3 (*Bedrijfsvoering; Inkomende post en Uitgaande brieven; 2014; Verzonden brieven*), Document: Letter of Quality Team NDW to Municipality Nieuwegein, *Reactie kwaliteitsteam ruimtelijk kwaliteitskader Werk aan de Overeindseweg* (24 February 2014).



FIG. 4.102 Nieuwegein (NL), Batterijen aan de Overeindseweg: the shed trasformed into office space, exterior (F. Marulo 2021)



FIG. 4.103 Nieuwegein (NL), Batterijen aan de Overeindseweg: the shed trasformed into office space, interior (F. Marulo 2021)



FIG. 4.104 Nieuwegein (NL), Batterijen aan de Overeindseweg: the concrete guardhouse reused as restaurant and event location (F. Marulo 2021)

In conclusion, in the revitalization processes run through private initiative the economic profitability of the operation was crucial. Nevertheless, as the analysed cases show, the formulation of limitations in the selection procedure aimed at guaranteeing the preservation of historic-cultural and natural-ecological qualities of the fort sites has proved to be an efficient tool for getting a balanced compromise between the different interests at stake, which can also provide – as in the case of fort Everdingen – the necessary inspiration for a fruitful reinterpretation of the historic military heritage in a contemporary perspective.

5 The Italian experience with the Entrenched Field of Mestre

A preservation strategy for a
military landscape through the
reuse of its historical architecture

5.1 The Entrenched field of Mestre: a system of fortifications on the mainland of the Venice Lagoon⁸³⁴



FIG. 5.1 Venice (IT), map showing the current distribution of fortifications built over the centuries for the defence of Venice. Already before the construction of the Entrenched Field of Mestre, the fortifications built in the lagoon had a punctual configuration (Scroccaro 2015: 1-2)

⁸³⁴ Part of this paragraph was published in Conference Proceedings: F. Marulo (2020). Between nature and culture. From Italy and the Netherlands new perspectives towards a sustainable use of historical landscapes, in *Proceedings of the International LDE Heritage Conference on Heritage and the Sustainable Development Goals* (Delft, 26–28 November 2019), Pottgiesser, U., Fatoric, S., Hein, C. Maaker, E. de and A. Pereira Roders (Eds.). TU Delft Open: Delft, 410–411.

5.1.1 Historical background

The *Campo Trincerato di Mestre* (Entrenched field of Mestre) is a defence system built from the second half of the 19th century on the mainland of the Venice lagoon. It was not only conceived for protecting the city and its port, but as a strategic point in the national military organization of the new-born Italian state.⁸³⁵ Its construction marks a fundamental reversal of the century-old defensive strategy of the city with its peculiar urban shape.⁸³⁶ Indeed, throughout the period of the Serenissima Republic, the defence of Venice was mostly based on the presence of water – which represented its ‘sacred walls’ – and the fortifications spread in the lagoon (FIG. 5.1). However, about a century before the establishment of the military system, the need to extend defence on the mainland had already started to be felt, leading to the settlement of what would later become the heart of the entrenched field: Forte Marghera.⁸³⁷

⁸³⁵ Cf. Brunello, P. (2009). La deterrenza impossibile: i campi trincerati in Europa (1870-1915), in *I forti di Mestre. Storia di un campo trincerato* (2ed.), Zanlorenzi, C. (Ed.). Sommacampagna: Cierre, 32-44.

⁸³⁶ Cf. Mancuso, F. (2016, 2ed.). *Venezia è una città. Come è stata costruita e come vive*. Venezia: Corte del Fontego, 5-42.

⁸³⁷ Cf. Scroccaro, M. (2015). *I forti di Venezia. I luoghi del sistema difensivo veneziano*. Fidenza: Mattioli, 9-14. In relation to the role of water in the defence of Venice, the warning that the Venetian Signoria had engraved in the office of the Water Magistrate in 1553 is illustrative: ‘The city of the Venetians by order of Divine Providence founded in the waters, surrounded by waters, such as walls, is protected. Therefore, anyone who dares in any way to cause damage to public waters is to be judged an enemy of the Fatherland and punished with a penalty no less than the one who violates the sacred walls of the Fatherland. The rules of this edict have perpetual validity’ (cf. Foffano, R. and Lugato, D. (1988). *Da Marghera a forte Marghera. Storia delle trasformazioni dell’antico borgo di Marghera da ambiente naturale ad area fortificata*. Spinea: Multigraf, 9). For a broader historical overview on the complex relationship between Venice and water, see: Zucchetta, G. (2000). *Storia dell’acqua alta a Venezia dal Medioevo all’Ottocento*. Venezia: Marsilio. About the defence of Venice at the time of the Serenissima Republic, see: Concina, E. (1983). *La macchina territoriale: la progettazione della difesa nel Cinquecento veneto*. Roma-Bari: Laterza; Mallett, M.E., & Hale, J.R. (1984). *The Military Organization of a Renaissance State: Venice c. 1400 to 1617*. Cambridge: Cambridge University Press; Concina, E. and Molteni, E. (2001). *La fabbrica della fortezza. L’architettura militare di Venezia*. Verona: Banca Popolare di Verona, Banco S. Geminiano e S. Prospero; Boscolo, A. and Antico, E. (2010). *Il forte San Felice e le fortificazioni della laguna meridionale di Venezia*. Sottomarina: Il Leggio, 25-57; Boni de Nobili, F., Rigo, M. and Zanchetta, M. (2016). *Fortezze e baluardi veneziani*. Vittorio Veneto: Dario de Bastiani; 7-17.



FIG. 5.2 Venice (IT), *Pianta di Marghera, sec. XVI* (Map of Marghera, 16th century) (Zanlorenzi 2009: 162)



FIG. 5.3 Venice (IT), *Plan du Fort de Marghera Et de ses Environs* (Plan of Forte Marghera and its Surroundings) (Zanlorenzi 2009: 167)

The construction of Forte Marghera took place in a location with a strategic character since its origins (FIG. 5.2).⁸³⁸ Indeed, the need to protect this key spot was already felt in the 14th century.⁸³⁹ But it was during the first French rule (1797) that the Marghera site was identified as a crucial point for protecting the city, being the mainland's closest place to the Venice island.⁸⁴⁰ Given the short life of the occupation, the French plans were put into practice by the Austrians, who started to build the fort in 1805.⁸⁴¹ It was then completed during the following Napoleonic era (1805-1814) (FIG. 5.3).⁸⁴²

The fort was structured with a concentric bastioned layout made of three earthwork rings, defined by canals and connected to each other through drawbridges (FIG. 5.4).⁸⁴³ The inner ring was the redoubt, a pentagonal earthwork with four bastions in its corners (I, II, III, IV) and a detached fifth bastion (X), separated from the main work on its south bank through an oval basin. The intermediate

⁸³⁸ Staging point along the *via Annia* in the roman period, during the Middle Ages the area was turned into a flourishing hamlet facing Venice and its lagoon, representing a lively exchange place for people and goods (cf. Foffano, R. and Lugato, D. (1988). *Da Marghera a forte Marghera*, *op.cit.*, 15-32; Vio, G. (Ed.) (2009). *Stella d'acqua: politiche e riflessioni per il recupero di Forte Marghera = policies and reflections on the regeneration of Forte Marghera in Venice*. Padova: CLEUP, 27; Gruppo di lavoro per Forte Marghera...terra d'acqua (2014). *Forte Marghera: cuore del campo trincerato*. Gorizia: Res, 7-8).

⁸³⁹ Two sighting towers, now disappeared, were built in 1359 to protect the border between the territories of Venice and Treviso (Foffano, R. and Lugato, D. (1988). *Da Marghera a forte Marghera*, *op.cit.*, 15-17; Gruppo di lavoro per Forte Marghera...terra d'acqua (2014). *Forte Marghera*, *op.cit.*, 8).

⁸⁴⁰ Between the 16th and 18th centuries, the mainland of Venice was the subject of profound river diversion and reclamation interventions. Although aimed at improving the conditions of the area, these works created a point of vulnerability for the defence of Venice: protected for centuries by the shallow waters of the lagoon, it could now also be attacked from the mainland (cf. Foffano, R. and Lugato, D. (1988). *Da Marghera a forte Marghera*, *op.cit.*, 33-54). However, at that time there was still no railway bridge connecting the mainland and the island of Venice. The latter was built by the Austrians in 1840, to which the road bridge was later added during the Fascist period (1933) (cf. Scroccaro, M. (2015). *I forti di Venezia*, *op.cit.*, 33).

⁸⁴¹ In particular, the Austrians began to expropriate the area and build the bastions, which in this phase still coexisted with the hamlet. Probably, the starting intention was to preserve part of it (cf. Foffano, R. and Lugato, D. (1988). *Da Marghera a forte Marghera*, *op.cit.*, 59; Vio, G. (Ed.) (2009). *Stella d'acqua*, *op.cit.*, 28; Gruppo di lavoro per Forte Marghera...terra d'acqua (2014). *Forte Marghera*, *op.cit.*, 12; Scroccaro, M. (2015). *I forti di Venezia*, *op.cit.*, 15-16).

⁸⁴² In this phase, the former Marghera hamlet was definitively cleared out, and the *Plan du Fort et Environs de Marghera* (Plan of the Fort and Surroundings of Marghera) – designed by the engineer Marescot – started to be implemented (cf. Vio, G. (Ed.) (2009). *Stella d'acqua*, *op.cit.*, 28; Brusò, F. (2009). Visitare Forte Marghera, in *I forti di Mestre*, *op.cit.*, 166-167; Scroccaro, M. (2015). *I forti di Venezia*, *op.cit.*, 15-18).

⁸⁴³ About the fort's canals and their setting in the wider hydrographic system of the area, it is important to consider that the construction of the fort involved the alteration of the *fossa Gradeniga* (then Salso canal): a pre-existing canal that, together with the road running parallel to it, connected the Marghera hamlet with Mestre. This canal was absorbed by the perimeter ditches of the fort. Moreover, the so-called 'military canal' (also known as the 'new canal') was also built to connect the fort to the island of S. Giuliano (cf. Brusò, F. (2009). Visitare Forte Marghera, in *I forti di Mestre*, *op.cit.*, 146-161; Scroccaro, M. (2015). *I forti di Venezia*, *op.cit.*, 16).

ring was the so-called external belt, embracing the redoubt on its north side; the earthwork was given four angular bastions (V, VI, VII, VIII) and was completed by two counterguards (IX, XI), surrounding the redoubt's southern bastions. Finally, the external line was composed by three isolated lunettes (XII, XIII, XIV): arrow-shaped bastions that, facing the mainland, represented the last outpost against the enemies' advance.⁸⁴⁴



FIG. 5.4 Venice (IT), schematic map of Forte Marghera in its current configuration, with indication of its major buildings (Zanlorenzi 2009: 150)



FIG. 5.5 Venice (IT), *Fortificatorische Detailbeschreibung von Venedig-Mestre, Beilage 32: Forte Marghera* (Fortificatory detailed description of Venice-Mestre, Attachment 32: Forte Marghera) (1900) (Moro 2001: 156-157)

⁸⁴⁴ Cf. Vio, G. (Ed.) (2009). *Stella d'acqua*, *op.cit.*, 28-29; Brusò, F. (2009). Visitare Forte Marghera, in *I forti di Mestre*, *op.cit.*, 150-160; Gruppo di lavoro per Forte Marghera...terra d'acqua (2014). *Forte Marghera*, *op.cit.*, 15-16.

Originally, only the pentagonal redoubt had buildings: the two so-called ‘Napoleonic barracks’ and two powder depots. The intermediate ring was given four ‘blokhaus’ casemates (1880) and a cannons battery (1906-1910) only after the inclusion of the fort in the entrenched field (FIG. 5.5). Moreover, a masonry bridge was kept in this area, which represents the only left trace of the former Marghera hamlet.⁸⁴⁵ Of the three isolated lunettes, only one was given logistic constructions during the 20th century, together with the redoubt and the intermediate ring. The architecture of the fort was complemented by the articulation of earthworks, canals and vegetal components, carefully designed to fulfil the military purpose.⁸⁴⁶

Additionally, Forte Marghera could count on a small redoubt, realized to protect its northern flank. Originally named Forte Eau, it was later renamed Forte Manin, after the patriot who led the revolution of Venice against the Austrian rule in 1848.⁸⁴⁷ On that occasion, Forte Marghera was also given a second redoubt by the Venetians – Forte Rizzardi – on its southern flank.⁸⁴⁸ Finally, together with these external outposts, the defence of Forte Marghera could also be enhanced, if necessary, by a ‘natural’ barrier. Indeed, the low and marshy ground to the right of the Salso Canal could be easily made inaccessible by flooding the land.⁸⁴⁹

⁸⁴⁵ During the second Austrian rule (1857), the bridge was given an upper level for hosting a powder depot (cf. Foffano, R. and Lugato, D. (1988). *Da Marghera a forte Marghera*, *op.cit.*, 37; Brusò, F. (2009). Visitare Forte Marghera, in *I forti di Mestre*, *op.cit.*, 154).

⁸⁴⁶ Already in 1810 – when the fort was almost completed – a contract was stipulated for the planting of trees within the fortified structure (cf. Foffano, R. and Lugato, D. (1988). *Da Marghera a forte Marghera*, *op.cit.*, 133). Indeed, as of 1997 – shortly after the abandonment of the fort from the militaries – there were 1,458 trees on the site (cf. Brusò, F. (2009). Visitare Forte Marghera, in *I forti di Mestre*, *op.cit.*, 152).

⁸⁴⁷ In that occasion, Forte Marghera was the place of a long siege (June 1848-May 1849), which went down in the local history as a symbol of Venetian pride (cf. Scroccaro, M. (2015). *I forti di Venezia*, *op.cit.*, 18-19). This event has represented one of the arguments used, since the 1960s, to demonstrate the historical-artistic value of Forte Marghera, and to claim for its protection (see: paragraph 5.3.1).

⁸⁴⁸ The latter had already been included in the French plan, but then it was not implemented. Eventually, Forte Rizzardi was demolished during the building of an industrial area in the second half of the 20th century (cf. Scroccaro, M. (2015). *I forti di Venezia*, *op.cit.*, 33).

⁸⁴⁹ This could be done with locks applied to the course of the Osellino canal, coming from Mestre (cf. Brunello L., La difesa del Forte di Marghera, *Quaderno di studi e notizie*, 9, Centro di studi storici di Mestre, 1966, 5; Gruppo di lavoro per Forte Marghera...terra d'acqua (2014). *Forte Marghera*, *op.cit.*, 12).

The topographic conditions of the Venice mainland and, specifically, the dense network of waterways that ran through its territory at the time surely represented an important conditioning element in the following conception of the entrenched field (FIG. 5.6).⁸⁵⁰ In particular, the need to have the forts surrounded by moats influenced the location of military artefacts near rivers, to which the ditches were connected by means of canals and locks.⁸⁵¹ Despite the favourable orographic conditions, the long history of overflows and consequent damage to the local population have represented, in this case, a deterrent to the application of inundation for defence purposes.⁸⁵² However, the latter was well known – albeit in the form of an auxiliary tool – in the theory of permanent fortification circulating in Italy at that time.⁸⁵³

⁸⁵⁰ In relation to this, a precious source is represented by a report made by the Austrians (printed in 1900) about the state of the fortifications of Venice, as a basis for a potential attack plan against the city. A substantial part of it is dedicated to the 'description of the attack ground', where the territory of the mainland and of the whole Venice is carefully reviewed – with its waterways, its woods and cultivated fields – and described with a military eye. Together with representing a significant document about the state of the analysed places at that time, this report provides an extraordinary written source on the peculiar way of the military to read the landscape (cf. Moro, P. (Ed.) (2001, trans.). *Il piano di attacco austriaco contro Venezia. Con le schede sulla storia e lo stato attuale delle fortificazioni veneziane*. Venezia: Marsilio). From that moment on, several landfills and rectifications have altered the hydrographic structure of the area (cf. Facca G. (2009). *Il campo trincerato di Mestre*, in *I forti di Mestre*, *op.cit.*, 59). For an overview on the historical evolution of the hydrographic conditions in the Venice area, see: Tiepolo, M.F. (Ed.) (1983). *Laguna, lidi, fiumi: cinque secoli di gestione delle acque. Mostra documentaria, 10 giugno-2 ottobre 1983*. Venezia: Helvetica. If water played an important role in the construction of the forts, the same cannot be said of wooded areas. A very effective example of this is represented by Forte Carpenedo, the construction of which involved the partial deforestation of the homonymous wood (see also: paragraph 5.3.2). For an overview on the historical forests in this area, see: Tiepolo, M. F. (Ed.) (1987). *Boschi della Serenissima, utilizzo e tutela. Mostra documentaria 25 luglio-4 ottobre 1987*. Venezia: Helvetia.

⁸⁵¹ Cf. Marcolin, R. and Zanlorenzi, C. (2004). *Il forte Mezzacapo a Zelarino*. Spinea: Tipografia Baldo, 19; Facca G. (2009). *Il campo trincerato di Mestre*, in *I forti di Mestre*, *op.cit.*, 59.

⁸⁵² Cf. *Ibid.*

⁸⁵³ Inundations – realized by means of both 'natural' or 'artificial basins' – and the related 'hydraulic works' are described as a 'tool suitable for providing the most powerful means to increase the strength of military outposts'. Their contribution consisted in slowing down the besieger, who would have also found it difficult to dig trenches (cf. Savart, P. (1831, trans.). *Corso elementare di fortificazione ad uso delle scuole militari compilato dal Professore Savart; versione italiana con aggiunte del tenente Ferdinando Biondi Perelli*. Livorno: Giulio Sardi. Tomo Terzo, Parte Prima, 55-57). References to early Dutch examples and, in particular, to the 'system of Coehorn' are frequent (cf. Dufour, G. H. (1851-52, trans.). *Fortificazione permanente del generale G.H. Dufour; voltata in italiano dalla seconda edizione francese*. Genova: Tip. A. Moretti. Vol. 2, 220) as well as to some famous applications, like in the case of 'Leiden, besieged by the Spaniards' in 1574 (cf. Sachero, C. (1861, 2ed.). *Corso di fortificazione permanente d'attacco e difesa delle piazze forti*. Torino: Tipografia V. Vercellino, 59).

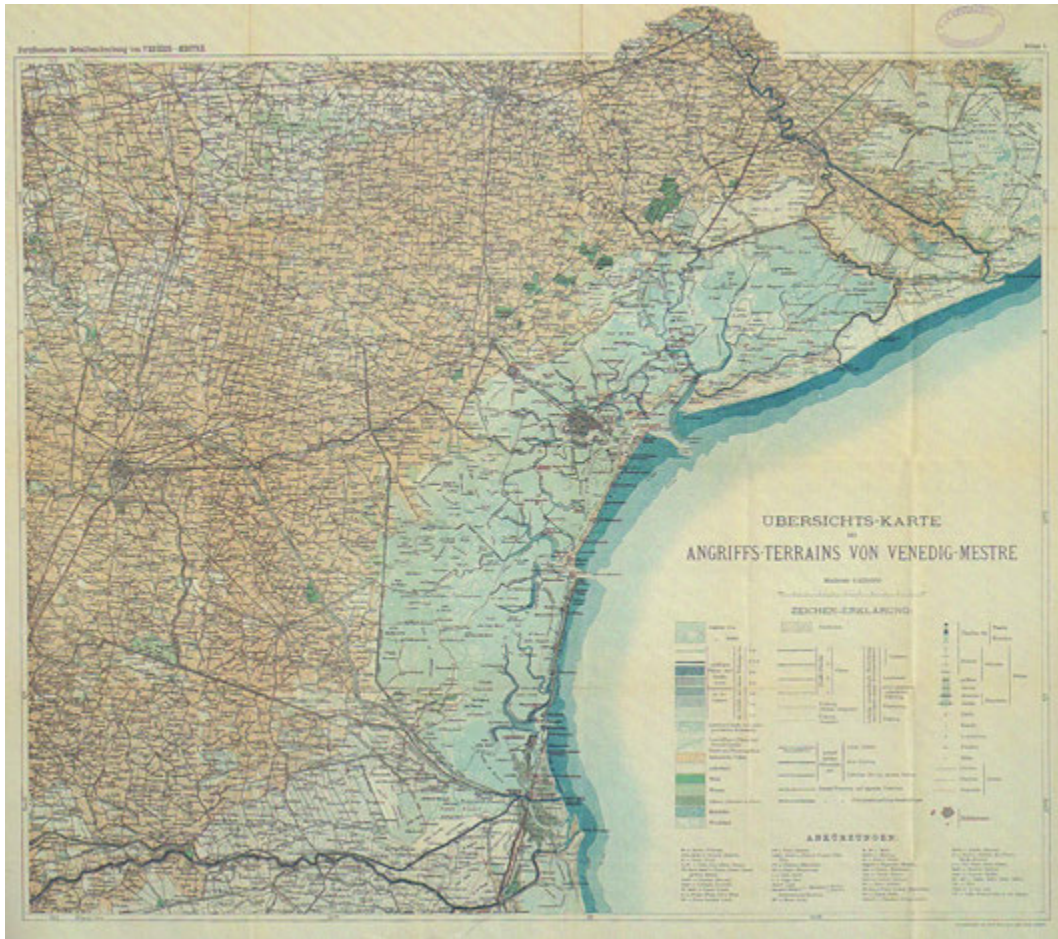


FIG. 5.6 Venice (IT), *Fortificatorische Detailbeschreibung von Venedig-Mestre, Beilage 2: Übersichts-Karte des Angriffs-Terrains von Venedig-Mestre* (Fortificatory detailed description of Venice-Mestre, Attachment 2: General Map of Venice-Mestre Attack Terrain) (1900) (Moro 2001: 96-97)

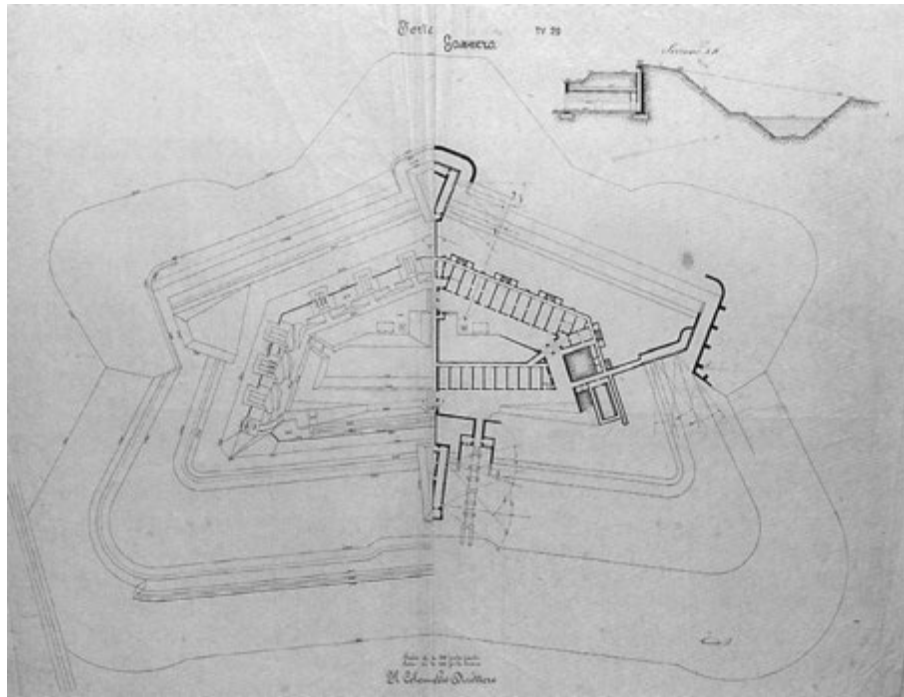


FIG. 5.7 Venice (IT), Forte Gazzera (1882): the map shows both the plan of the buildings (right) and the configuration of the earthworks above (left) (Zanlorenzi 2009: 65)



FIG. 5.8 Venice (IT), Genio Militare, Designazione delle Zone di Servitù Militare attorno al Forte Tron (Military Engineering Corps, Designation of the Areas of Military Easement around Forte Tron) (1887) (Zanlorenzi 2009: 116)

The conception of the Entrenched Field of Mestre really got started when, shortly after the unification of Italy, the first Italian General Committee for National Defence included Venice in its strategic plans (1871).⁸⁵⁴ Already in the late 1860s the coastal area going from Mestre to Ravenna, with its network of roads and canals, had started to be explored in order to assess the needed improvements for the defence of Veneto.⁸⁵⁵ Subsequently, a special commission was set up for this purpose (1874).⁸⁵⁶ The field observations depicted a situation of extreme vulnerability for this strategic place in the current state of its fortifications.⁸⁵⁷ Therefore, the decision was made to build three forts,⁸⁵⁸ which – as a bridgehead – could crown and make one system with the already-existing Forte Marghera, updated and elevated to the role of focus point in the entrenched field.⁸⁵⁹

In 1883, the construction of Forte Gazzera got started (FIG. 5.7).⁸⁶⁰ It was designed according to the ‘Tunkler’ type – also defined as ‘Prussian fort’ – with a hexagonal shape, surrounded by a deep moat. The latter was protected by caponiers: constructions stretched from both the attack and gorge fronts, as well as from the two lateral sides, and equipped with slits. After the drawbridge and the richly decorated portal, the access to the fort was possible through a bombproof tunnel, controlled by a guard house. In the inside, the fort followed a symmetrical development, with masonry buildings arranged along the perimeter line and covered

⁸⁵⁴ The Committee was constituted in 1862, but the discussion really got started only after the annexation of Rome and the Veneto region (1871). Albeit frequent reductions occurred to the starting plans for economic reasons, Venice was kept as a strategic point in the national military vision together with Rome and other port cities like Genoa, La Spezia and Messina (cf. Brunello, P. (2009). *La deterrenza impossibile*, *op.cit.*, 32). In 1873, the *Comitato di Artiglieria e Genio* (Committee of Artillery and Engineers) was settled. While the General Committee defined the main defence principles for the national defence, this second committee was in charge of coordinating the implementation of specific military works (cf. Facca G. (2009). *Il campo trincerato di Mestre*, *op.cit.*, 54).

⁸⁵⁵ Reference is made to the *Rapporto sulla difesa del Veneto* (Report on the defense of Veneto) made on the base of on-site explorations, started in 1867 by the captain De La Penne at the request of General Federico Menabrea, member of the Permanent Defense Commission of the State (cf. *Ibid.*, 51-52).

⁸⁵⁶ Reference is made to the *Commissione per gli sbarramenti dei porti e dei canali della laguna veneta e studi sulla difesa della medesima* (Commission for the barriers of ports and canals of the Venetian lagoon and studies on their defense), settled in 1874 (cf. *Ibid.*, 52 & 96).

⁸⁵⁷ Cf. *Ibid.*, 52-53.

⁸⁵⁸ Initially, the idea was to build five forts: Malcontenta, Tron, Brendole (or Gazzera), Carpenedo and Tessera, from the names of the places where they were supposed to be built (cf. *Ibid.*, 70).

⁸⁵⁹ Since its starting conception, the Entrenched Field of Mestre was conceived to strengthen the fortifications in the lagoon, for which some updates were also planned (cf. *Ibid.*, 54).

⁸⁶⁰ In 1882, the project had already been outlined, and was sent to Rome in March 1883 for the approval of the General Committee. After some discussions about the high costs involved, it was approved in July of that year without major changes (cf. *Ibid.*, 71-73).

by a thick layer of soil, the construction of which followed specific measures in order to contain the effects of humidity.⁸⁶¹ Moreover, they were connected by an internal corridor and stairs, which provided access to the batteries on the ramparts. Finally, in the middle of the internal square, there was a transversal structure about 130m long.⁸⁶² This central crosspiece (*traversone centrale*) had the side facing the attack front covered with earth, and communicated with the perimeter constructions by means of four arches.⁸⁶³ The design and construction of Forte Gazzera served as a model for the other two forts – Forte Carpenedo and Forte Tron – the construction of which started in 1886 (FIG. 5.8).⁸⁶⁴

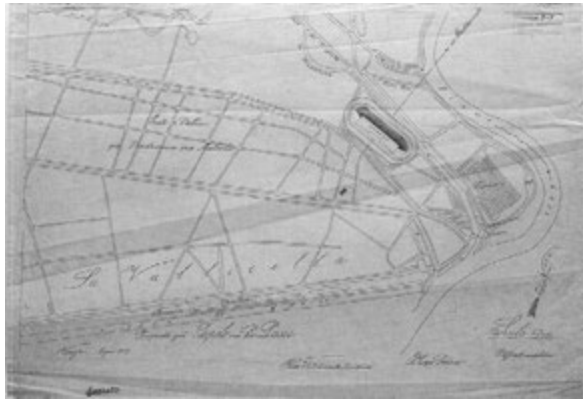


FIG. 5.9 Venice (IT), Forte Pepe: this drawing shows the attention of the military in representing the hydraulic setting of the area in which the fort is built (Zanlorenzi 2009: 82)

⁸⁶¹ To isolate the walls from direct contact with the earth, layers of crushed stone and sand were interposed as drainage, and the water was expelled by means of gargoyles. Alternatively, the internal premises were plastered with asphalt, or a second wall was built to create an isolation cavity. For the waterproofing of ceilings, a bituminous layer was placed over the bomb-proof vaults. This entailed the absolute prohibition – at least, in a first phase – of planting medium and tall trees, the roots of which could have damaged the protective layer (cf. *Ibid.*, 64-69).

⁸⁶² The command, the officers' rooms, the infirmary and the latrines were located there (cf. *Ibid.*, 71-72).

⁸⁶³ Cf. *Ibid.*

⁸⁶⁴ In the case of Forte Carpenedo, some adjustments to the starting design were needed as function of the different soil conditions, which led to a variation in the angle of the attack front, and to a longer development for both the central crosspiece and the gorge walls (of ten and eight meters, respectively). Moreover, higher costs were determined by the different depth of water. Finally, in both Forte Carpenedo and Forte Tron the four arches connecting the central crosspiece to the perimetral buildings were not realized, and the caponiers are shorter than the ones of Forte Gazzera (cf. *Ibid.*, 73-77).

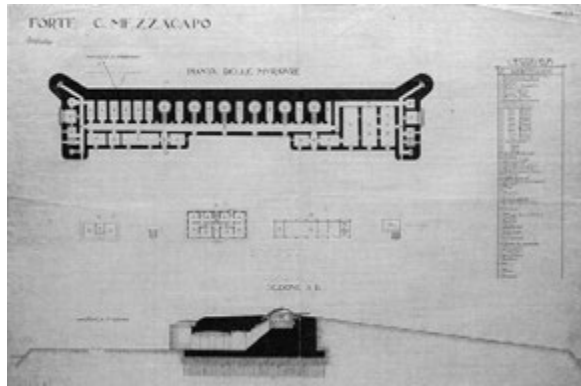


FIG. 5.10 Venice (IT), Forte C. Mezzacapo (s.d.) (Zanlorenzi 2009: 83)

Subsequently, the fear for a world conflict led to the strengthening of this system, with the addition of a second ring of forts (1907-1911).⁸⁶⁵ Conceived as the first line of defence, it included Forte G. Pepe (1909), Forte A. Poerio (1910), Forte C. Mezzacapo (1911), Forte G. Sirtori (1911) and Forte E. Cosenz (1911).⁸⁶⁶ Following the 'Rocchi type', they can be considered as an evolution of the central crosspiece of the Tunkler fort, but realized with a concrete structure surmounted by steel (Armstrong) domes, and covered – also in this case – with a soil slope on the side facing the attack front.⁸⁶⁷ Instead of a polygonal shape, these structures had a rectangular profile, but still surrounded by a moat (FIG. 5.9-11).⁸⁶⁸

⁸⁶⁵ Cf. *Ibid.*, p. 70.

⁸⁶⁶ Unlike Forte Gazzera, Forte Carpenedo and Forte Tron – named after the places where they were built – the second-generation forts were given the names of illustrious patriots. Within this frame, the Bazzera powder magazine was also realized to serve the military square of Venice (cf. *Ibid.*, 78).

⁸⁶⁷ The five forts, almost identical in their conception, differed in the length of the concrete structure, which depended on the number of cannons implanted on it: six in the case of Forte Pepe, Forte Mezzacapo and Forte Poerio, four for Forte Sirtori and Forte Cosenz (cf. Facca G. (2009). *Il campo trincerato di Mestre*, *op.cit.*, 81-87). For an overview on E. Rocchi, the military officer who theorized this fort typology, see: Spagnesi, P. (2007). Enrico Rocchi. Ingegnere militare e storico, in *Quaderni dell'Istituto di Storia dell'Architettura. Saggi in onore di Gaetano Miarelli Mariani*, Sette, M.P., Caperna, M, Docci, M. and Turco, M.G. (Eds.). Roma: Bonsignori Editore, 261-272.

⁸⁶⁸ Cf. Facca G. (2009). *Il campo trincerato di Mestre*, *op.cit.*, 81-82. About the military contribution to the evolution of concrete building in Italy, see: Turri, F., Zamperini, E. and Cappelletti, V. (2009). *Sperimentazione e diffusione del calcestruzzo armato in Italia: il contributo del genio militare*, in *The Building Techniques: I International Congress. Technological development of concrete. Traditions, actualities, prospects*, Catalano, A. and Sansone, C. (Eds.). Napoli: Luciano Editore, 647-654; Turri, F., Zamperini, E. and Cappelletti, V. (2009). *Military Contribution to Building Technical Evolution in Italy (1860-1940)*, in *Proceedings of the Third International Congress on Construction History, Cottbus, 20-24 May 2009*, Kurrer, K.E., Lorenz, W. and Wetzck, V. (Eds.). Cottbus: Brandenburg University of Technology.

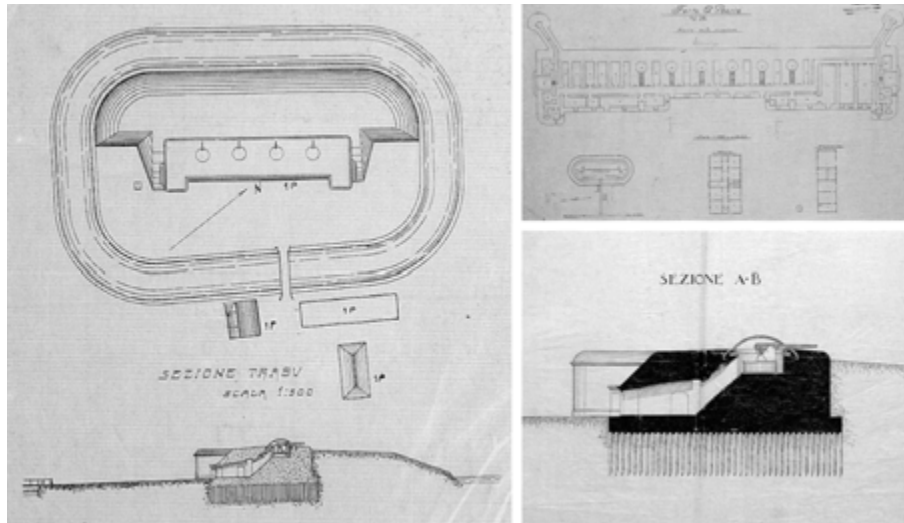


FIG. 5.11 Venice, IT). Forte Sirtori (s.d.) (left); Forte Poerio, *Pianta delle muraure* (Forte Poerio, Plan of the masonries) (1909); Forte Cosenz, *Postazione da 149 A* (Forte Cosenz, Station for 149 A) (s.d.) (Zanlorenzi 2009: 84-86)

The only exception to this model was represented by Forte C. Rossaroll (1907), built with a two-storey configuration, atypical if compared to that of the other contemporary forts (FIG. 5.12);⁸⁶⁹ moreover, it was meant to complement what now was the second line of defence, composed by the already-existing Forte Gazzera, Forte Carpenedo and Forte Tron.⁸⁷⁰ The latter underwent some modifications in order to comply with the technological advances in the field of artillery (FIG. 5.13).⁸⁷¹ Finally, Forte Marghera completed the new defence scheme in third line, with the role of central redoubt in the overall system and designed to protect the main bridge connecting the mainland to Venice island (FIG. 5.14).⁸⁷²

⁸⁶⁹ Facca G. (2009). *Il campo trincerato di Mestre*, *op.cit.*, 88.

⁸⁷⁰ Indeed, Forte Rossaroll was built in Tessera, in the place where the construction of another fort of first generation (not implemented) was already planned (cf. *Ibid.*, 78).

⁸⁷¹ In particular, the transformations concerned the installations of six gun emplacements with steel cover on the pre-existing crosspieces of Forte Gazzera, Forte Carpenedo and Forte Tron (cf. *Ibid.*, 79).

⁸⁷² Cf. *Ibid.*

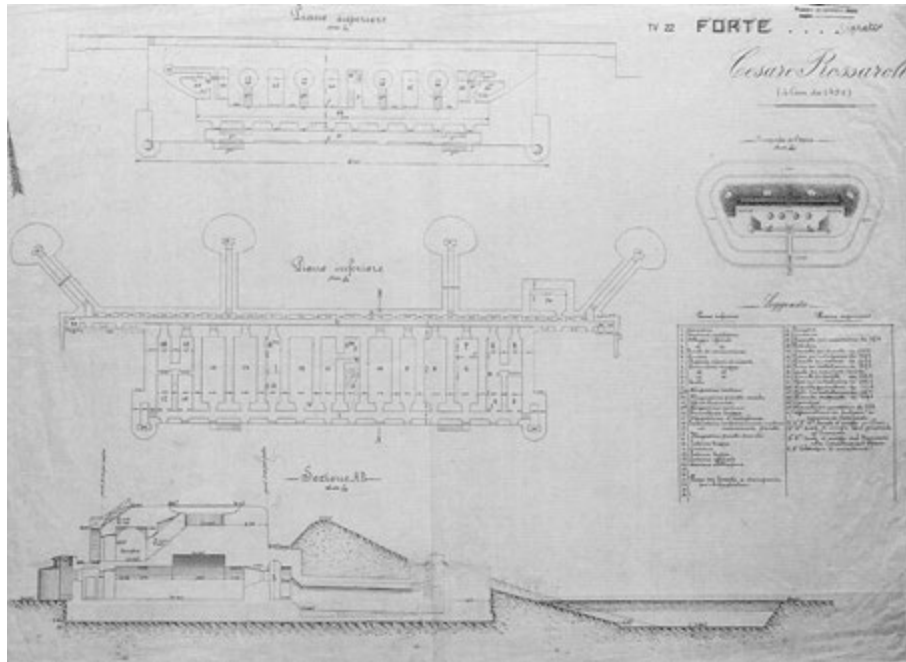


FIG. 5.12 Venice (IT), Forte C. Rossaroli (s.d.) (Zanlorenzi 2009: 88)

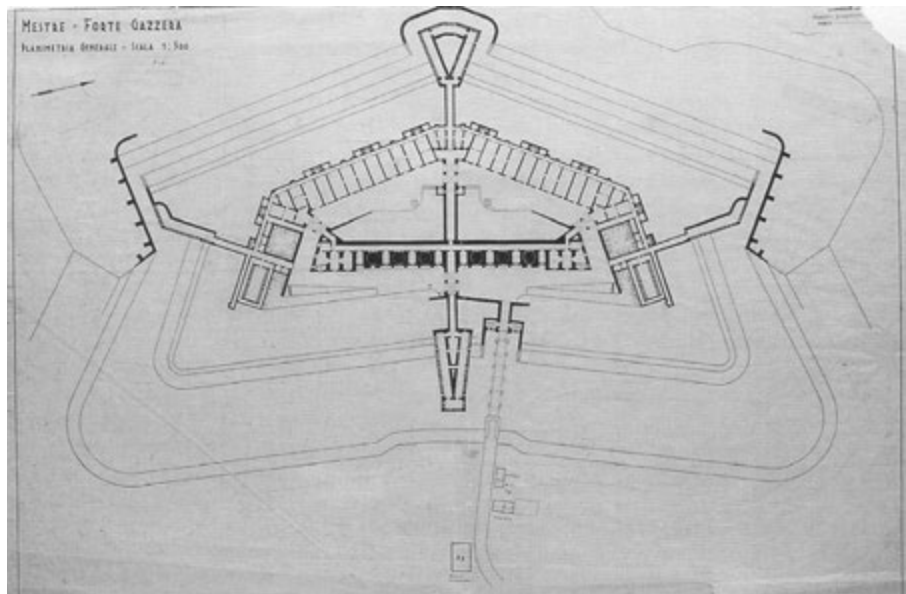


FIG. 5.13 Venice (IT), Mestre - Forte Gazzera, Planimetria Generale (Mestre - Forte Gazzera, General Plan) (s.d., but after the addition of cannons to the central crosspiece) (Zanlorenzi 2009: 80)



FIG. 5.14 Venice (IT), map showing the location of the forts of the Entrenched Field of Mestre in the current context of the mainland of Venice (aerial image retrieved at: <https://geoportale.comune.di.venezia.it> [05.06.2020]) (F. Marulo 2020)

5.1.2 Decline of the military system

Despite the great efforts to provide Venice with an adequate defence system, the fortifications – and the strategic vision behind them – proved to be outdated even before their completion. This condition was partially due to the extraordinary progress in the field of artillery and military tactic in the period from the mid-19th century and in the first decades of the 20th century. Additionally, already during the First World War, Venice military role in the national defence program deminished. Consequently, the forts of the entrenched field were gradually turned into ammunitions depots, serving as a transit station for soldiers on their way to the front.⁸⁷³ During the war, it was considered to rearm a part of them and to bring serious damage to the rest so as to be useless for enemies, which then did not happen.⁸⁷⁴

⁸⁷³ Facca G. (2009). Il campo trincerato di Mestre, *op.cit.*, 91-92.

⁸⁷⁴ The forts considered for rearm were Forte Mezzacapo, Forte Cosenz, Forte Rosaroli and Forte Poerio (cf. *Ibid.*, 92).



FIG. 5.15 Venice (IT), Forte Gazzera: one of the arches formerly connecting the central crosspiece to the perimeter structures and partially demolished during the German occupation (1943-1944) (F. Marulo 2020)



FIG. 5.16 Venice (IT), Forte Tron (1988): vegetation growth after the demilitarization (Brunello 1988: 56)

The entrenched field – as a system – was no longer considered valuable in the military strategies, and the forts started to be reused as individual elements by the military. During the German occupation in the Second World War (1943-1945) (FIG. 5.15),⁸⁷⁵ they were used as powder depots.⁸⁷⁶ Although targeted by the American bombing raids at the end of the conflict, and damaged by the Germans during the retreat, the military artefacts of the Entrenched Field of Mestre came out almost unscathed from what was their last war season.⁸⁷⁷ In the post-war period, also their secondary defence role came to an end. However, they were kept by the National Defence department as military logistic sites. Although they never reached their full desired usefulness, it is from this stage on that the forts – and, with them, the military system as a whole – set out towards a slow but inexorable decline. The gradual reduction of maintenance works, necessary to preserve the structures, would reach its peak around the 1980s, when the Defence started to definitively abandon the forts (FIG. 5.16). This condition triggered the beginning of a complex process that, over the last few decades, has led to the reuse of the forts in the Entrenched Field of Mestre.

⁸⁷⁵ A vivid example of the traces left during this phase of occupation can be found at Forte Mezzacapo (see: paragraph 5.3.3). Moreover, at Forte Gazzera, the Germans made a wide opening in the arches connecting the central crosspiece to the perimetral structures – resulting in their partial demolition – in order to allow the circulation of military trucks inside the fort (cf. *Ibid.* 93).

⁸⁷⁶ Cf. *Ibid.*

⁸⁷⁷ Cf. *Ibid.*

5.2 Military system or ensemble of forts? The bottom-up initiative for the reuse of the Entrenched Field of Mestre

5.2.1 Acknowledgements of heritage values and bottom-up re-appropriation of the forts

Following their almost complete demilitarization by the Ministry of Defence, the revitalization of the forts formerly belonging to the Entrenched Field of Mestre took off as a gradual journey, initially characterized by the two parallel processes of institutional and local acknowledgement. An aspect of great importance was represented by the beginning appreciation of their historic-architectural significance, which consequently led to their recognition with the monument status.⁸⁷⁸ As mainly centred on single forts, this process contributed to an interpretation of the military system as an ensemble of similar objects.⁸⁷⁹ The value assessment pursued at that time led to a strict hierarchization of the forts, based on their architectural typology and alleged quality. Accordingly, in 1992 only Forte Marghera, its appendix Forte Manin, and the forts of the first ring (Forte Gazzera, Forte Carpenedo, Forte Tron) were protected by law.⁸⁸⁰ As for the forts of the second ring, only Forte Rossaroll was considered as worthy of protection, being 'a prototype, in its particular typology, no longer imitated'.⁸⁸¹ The remaining five forts – Forte Poerio, Forte Mezzacapo, Forte Sirtori, Forte Cosenz, Forte

⁸⁷⁸ Within this frame, Forte Carpenedo represents an exception, because it was put under landscape protection (1985) before than for its historical-architectural significance (1988). For further details, see: paragraph 5.3.2.

⁸⁷⁹ The first fort to be put under legal protection (Bottai law: n.1089/1939) was fort Marghera (1966-1980), then followed by Forte Gazzera, Forte Carpenedo and Forte Tron (1988), and Forte Rossaroll (1990). For further details, see: paragraph 5.3.

⁸⁸⁰ At that time, these forts were 'to be preserved and protected for their peculiar typology, with respect to both public utility and public interest', but also 'in consideration of the large area of land surrounding them, an area that has remained intact over the decades and excluded from any building speculation because it was defended, until the moment of their disposal, through military constraints' (cf. *Archivio del Coordinamento per il Recupero del Campo Trincerato di Mestre* (Archive of the Group for the Recovery of the Entrenched Field of Mestre; from now on: ACCTM), Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 1 (*Storia dell'Ente di Gestione*), Document: *I forti del Campo Trincerato di Mestre* (27 February 1992).

⁸⁸¹ Cf. *Ibid.*

Pepe – were judged as a ‘repetition of the same military model’ and, therefore, of ‘limited interest’.⁸⁸² Although not put under legal protection, the preservation of just one of them was considered as enough to keep their memory (FIG. 5.17).

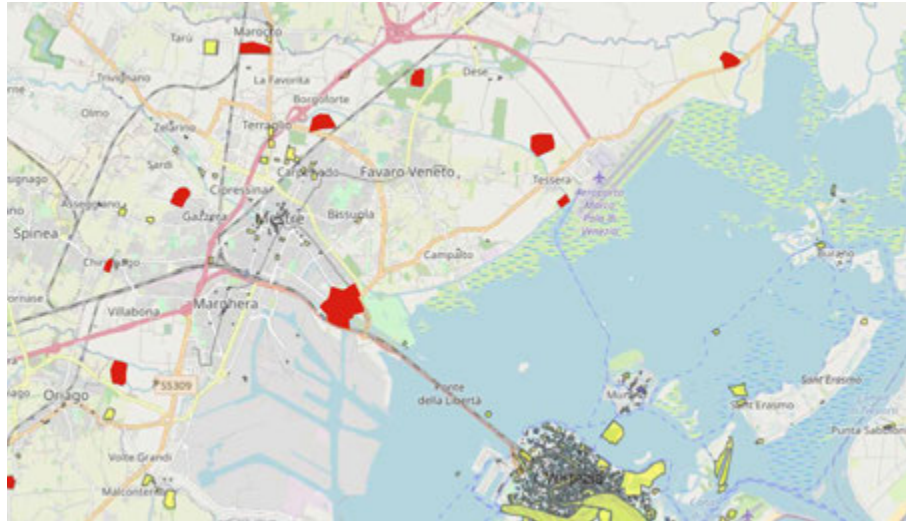


FIG. 5.17 Venice (IT), map showing the current incidence of the forts of the Entrenched Field of Mestre (red) on the overall protected heritage (yellow) on the mainland of Venice (elaboration of the map retrieved at: <http://venezia.gis.beniculturali.it/> [07.10.2021]) (F. Marulo 2021)

At a first glance, a similar pattern can also be observed in the activities of local associations that, in parallel with the first institutional recognitions, started a bottom-up process of re-appropriation.⁸⁸³ They were the *Comitato Forte Gazzera* (Forte Gazzera Committee) (1982), the *Cooperativa Limosa* (Cooperative Limosa) (1987) for Forte Tron, and the *Gruppo di Iniziativa per la Salvaguardia e l'Utilizzo Pubblico di Forte Carpenedo* (Initiative Group for the Protection and Public Use of Forte Carpenedo; from now on: GdI) (1995) – all associations founded by volunteers with

⁸⁸² Belonging to the ‘Rocchi’ type, such forts were considered as just ‘a block of concrete, raised from the ground, on which emerged the fire guns, installed inside the circular wells and protected by a metal dome’ (cf. *Ibid.*). Although derived from this same model, Forte Rossaroll was, instead, considered as special for its being conceived on two floors, and with a more elaborated internal distribution (cf. *Ibid.*).

⁸⁸³ The publications that started to appear in these years also confirm this early emphasis on Forte Marghera (cf. Brunello L., La difesa del Forte di Marghera, *Quaderno di studi e notizie*, 9, Centro di studi storici di Mestre, 1966; Foffano, R. and Lugato, D. (1988). *Da Marghera a forte Marghera, op.cit.*) and on the first-generation forts (cf. Brunello, P. (Ed.) (1988). *I forti del campo trincerato di Mestre: storia, ambiente, progetti di riuso*. Venezia: Libreria Utopia due).

the aim of safeguarding and giving back to local communities the forts of the first ring, which partially overlapped with those recognized as monuments (FIG. 5.18). Apart from Forte Marghera – at that time still in use by the military – the only exception was Forte Bazzera, the former powder storage site of the entrenched field. Its safeguard and civic reuse were seen as of great interest by the local community of the nearby neighbourhood of Tessera, which founded the *Comitato Culturale Ricreativo Tessera* (Cultural Recreational Committee Tessera) for this purpose (1995) (FIG. 5.19).⁸⁸⁴



FIG. 5.18 Venice (IT), Forte Gazzera: the monumental portal characterizing the three forts of first generation (left, F. Marulo 2020), used by the local associations as a symbol of the revitalization of the Entrenched Field of Mestre (right, 1984) (ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 2)



FIG. 5.19 Venice (IT), Forte Bazzera: the state of the fort after the abandonment of the military (1996) (ACCTM, Fond 1, Box *Forti di Terra*, File *Forte Bazzera*)

⁸⁸⁴ Initially, the group was interested in the nearby Forte Rossaroll, which was then given a different use (see: paragraph 5.3.3).

However, the possible correlation between institutional and local processes seems to be weakened by the meanings attached to the fort sites by local associations. Although not yet linked into a systematic vision, these local initiatives can be contextualized in a broader political ambition of reevaluating the mainland of Venice and were marked by much stronger social and ecological nuances rather than historic-architectural arguments.⁸⁸⁵

Although characterized by fragmented initiatives along the two parallel paths of the institutional and local acknowledgement, this first phase can be regarded as the starting point for the rediscovery of the Entrenched Field of Mestre. Already in 1991, the municipality of Venice had taken a concession for the forts no more used by the Defence.⁸⁸⁶ But despite the advanced state in the demilitarization of the forts, the local authority had not yet got actively involved in the definition of a preservation and reuse strategy for the military system and its local artefacts.⁸⁸⁷

⁸⁸⁵ In this sense, interesting is a booklet produced by the political party Democrazia Proletaria in 1984, in which the attention is concentrated on the forts belonging to the first ring, and the importance of their revitalization is presented in an ecological and socially-useful perspective (cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 2 (*Leggi demaniali, Analisi sul CTM, Strutture e mappe, Ricerche e proposte d'uso*), Document: (Democrazia Proletaria): *Gli ex forti di Mestre: tre oasi Verdi da salvaguardare e destinare all'utilizzo pubblico* (April 1984).

⁸⁸⁶ Reference is made to Forte Carpenedo, Forte Tron, Forte Gazzera, Forte Rossaroll, Forte Pepe and Forte Cosenz. About Forte Poerio and Forte Sirtori, they were not taken over because they fell into the territory of the municipalities of Mira and Spinea, respectively (cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 3 (*Attività e finanziamenti locali*), Document: *Comune di Venezia, Estratto del registro delle deliberazioni della Giunta Comunale, Seduta del 23 Luglio 2004. N. 394 – Affidamento a titolo non esclusivo e gratuito dei forti Marghera, Vallon, Tron, Gazzera, Rossaroll, Ridotto Lido e Polveriera Bazzera per lo svolgimento delle attività legate al programma Tudeslove II* (23 July 2004). At that time, only Forte Marghera and Forte Mezzacapo were still under military control (cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 1 (*Storia dell'Ente di Gestione*), Document: *I forti del Campo Trincerato di Mestre* (27 February 1992).

⁸⁸⁷ In a report from 1992, it is stated that the reuse possibilities for the forts already available for disposal were in the process of being handled by the municipality of Venice. At that time, Forte Gazzera was exploited by a company for mushroom cultivation and, therefore, required a new and more compatible function. Additionally, Forte Rossaroll was already hosting a rehabilitation community for drug addicts. Finally, the possibility was foreseen to allocate the new prison of Venice in Forte Pepe or Forte Cosenz (cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 1 (*Storia dell'Ente di Gestione*), Document: *I forti del Campo Trincerato di Mestre* (27 February 1992).

5.2.2 'Controlled self-management': the vision of the volunteers for the reuse of the military system

The shift from this first phase, made of fragmented initiatives, to a concrete involvement towards the reuse of the military system is marked by the institution of the *Coordinamento per il recupero del campo trincerato di Mestre* (Group for the recovery of the Entrenched Field of Mestre; from now on: *Coordinamento*) (1997).⁸⁸⁸ It resulted from the initiative of the different local associations founded in the previous phase, which decided to join their forces and work together to a project for the 'System of forts on the mainland'.⁸⁸⁹ Additionally, the social cooperative 'La Città del Sole' was founded shortly before in order to support the voluntary associations in their dialogue with the municipality and other public authorities, and was then included as a member in the *Coordinamento*.⁸⁹⁰ As specified in the establishment statute, the main aim of the new-born association was 'the safeguard, the environmental and historical recovery, and the social and cultural reuse' of the military structures formerly belonging to the Entrenched Field of Mestre.⁸⁹¹

⁸⁸⁸ Founded with an assembly held at Forte Gazzera on 6 March 1997, the group had informed the municipality of their intention to start a joint work already on 18 April 1996. The founding members were the afore-mentioned associations established for Forte Gazzera, Carpenedo and Bazzera. Apart from the founding members, also the *Cooperativa Limosa* for Forte Tron and the *Comitato Salvaguardia Museo Forte Marghera* (Safeguarding Committee Forte Marghera Museum) were part of the *Coordinamento*, then joined by the *Comitato Forte Sirtori* after its foundation in 1998 (cf. *Ibid.*, Document: Letter from *Coordinamento* to Municipality of Venice, *Progetto Forte Marghera e il sistema dei forti della terraferma* (18 April 1996); *Ibid.*, Document: *Assemblea Costituente del Coordinamento per il recupero del Campo Trincerato di Mestre* (06 March 1997). A synthetic overview on the foundation and activities of the *Coordinamento* can be found in: Gruppo di lavoro per Forte Marghera...terra d'acqua (2014). *Forte Marghera, op.cit.*, 19.

⁸⁸⁹ Cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 1 (Storia dell'Ente di Gestione), Document: 1996-2006. Il *Coordinamento per il recupero del Campo Trincerato di Mestre*. Dieci anni di volontariato per i forti della città (s.d.).

⁸⁹⁰ Established in February 1996, 'La città del Sole' was conceived as 'the economic tool able to provide work and technical-operational support to volunteering, creating a synergy between economic-social enterprise and associations'. Starting from June 1997, the cooperative was entitled to take care of the surveillance and reception at Forte Marghera, which had been left by the military in 1996 (cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 2 (*Leggi demaniali, Analisi sul CTM, Strutture e mappe, Ricerche e proposte d'uso*), Document: *I forti di Terra. I forti di Mare. Itinerari tra le fortificazioni della piazza militare marittima di Venezia* (20 March 2001).

⁸⁹¹ Cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 1 (Storia dell'Ente di Gestione), Document: *Coordinamento per il Recupero del Campo Trincerato di Mestre: Statuto* (06.03.1997).

While the role of the individual associations was made official through agreements for the use of the forts,⁸⁹² one of the first proposals made in 1998 by the *Coordinamento* to the municipality of Venice concerned the institution of a working group.⁸⁹³ In order to stimulate the attention and engagement of the local authority, the association asked if the working group could be coordinated by the town planning department of Venice municipality, which could then count on the cooperation with professionals and scholars already involved in the *Laboratorio progettuale sul campo trincerato di Mestre* (Design laboratory on the Entrenched Field of Mestre).⁸⁹⁴ Within this framework, the *Coordinamento* would have served as a catalyst between the municipality and the members of the laboratory, taking care of all the necessary formalities. By the end of that year, the municipality honored this request and established the working group with a resolution of the city council.⁸⁹⁵

With this step, the voluntary association managed to team up with the local authority on a shared goal: to define an organic plan for the reuse of the Entrenched Field of Mestre. This ambition involved a number of goals, with a starting point in the 'promotion of knowledge' about the military system, the 'original territorial structure' of which was considered as the 'ordering and regulating element' in the urban

⁸⁹² The first agreement signed by the municipality of Venice was with the *Gruppo di Iniziativa per Forte Carpenedo* (February 1995), then followed by that with the *Comitato Forte Gazzera* and the *Comitato Culturale Ricreativo Tessera* for Forte Bazzera (June 1997). In this way, the voluntary associations committed to maintain and open the forts to the public for guided tours or other events (cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 2 (*Leggi demaniali, Analisi sul CTM, Strutture e mappe, Ricerche e proposte d'uso*), Document: *I forti di Terra. I forti di Mare. Itinerari tra le fortificazioni della piazza militare marittima di Venezia* (20 March 2001).

⁸⁹³ Cf. *Ibid.*, Document: Letter from the *Coordinamento* to the town planning alderman of Venice municipality (arch. R. D'Agostino) (18 May 1998).

⁸⁹⁴ The design laboratory, headed by the architect D. Fiorotto, was composed by architects with a varied expertise (urban history, military architecture, architectural survey), academic advisors in the field of history (i.e., P. Brunello, University of Ca' Foscari) and urban history (i.e., G. Zucconi, IUAV), as well as botanical experts. At that time, this group had already been involved in a number of activities for the knowledge of the Entrenched Field of Mestre (i.e. a proposal for a catalogue of 'the buildings that form the entire entrenched field' to the Superintendence of Venice), with a special emphasis on the investigation and redesign of Forte Marghera (i.e., a project for the reuse of the fort, presented to the Superintendence of Venice; a redesign concept for some of the buildings on the fort site (n.19, 22, 23, 25, 54) to be turned into an hostel, drafted on behalf of the Ecology municipal department; survey and graphic representation of some of the buildings on the fort site (the Napoleonic barracks, the French and Austrian powder magazines, and the blockhaus barracks), made on behalf of the Superintendence of Venice) (cf. *Ibid.*, Document: Letter from the *Coordinamento* to the town planning alderman of Venice municipality (arch. R. D'Agostino) (15 September 1998).

⁸⁹⁵ Cf. *Ibid.*, Document: Resolution of the city council of Venice municipality, Campo Trincerato di Mestre – Istituzione gruppo di lavoro e approvazione progetto preliminare 1° stralcio (17 December 1998).

evolution of the Venice mainland.⁸⁹⁶ The study and identification of the ‘constitutive laws of the places’ was seen as fundamental to start thinking of a future vision for the overall system.⁸⁹⁷ The latter had to be conceived ‘as part of a general plan for the renovation of the mainland’, contributing to the ‘development of leisure, socio-cultural and recreational activities strictly connected and integrated with the urban fabric of the Mestre area’.⁸⁹⁸ Ultimately, the overarching ambition – as already expressed in previous proposals – was that to overcome the dichotomy between Venice and its mainland.⁸⁹⁹ Rather than the place where to relocate ‘Venetian’ activities, the latter could become a ‘non-competitive alternative to the historic island centre’ from the point of view of the touristic and recreational offer (FIG. 5.20).⁹⁰⁰

Alongside this, the aspiration to work on the ecological connection between the ‘green system of the forts’ and the wider environmental network of the mainland seems to have gradually lost its emphasis. The idea that the revitalization of the entrenched field could also benefit the ‘rearrangement of the naturalistic structure in the Mestre area’ was expressed in a first proposal for the recovery of Forte Carpenedo (1995),⁹⁰¹ and then addressed in the proposal for an ‘Urban park of the forts’ (1997).⁹⁰² In it, the forts represented strategic points in the plan for a ‘green belt’ around Mestre, aimed to ‘biotopically connect isolated or discontinuous

⁸⁹⁶ Cit. *Ibid.*, Document: Letter from the *Coordinamento* to the town planning alderman of Venice municipality (arch. R. D’Agostino) (15 September 1998). Some relevant publications took place in this period and the years that follow: Zanlorenzi, C. (Ed.). (1997, 1ed.). *I forti di Mestre, op.cit.*; Moro, P. (Ed.) (2001, trans.). *Il piano di attacco austriaco contro Venezia, op.cit.*

⁸⁹⁷ Cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 2 (*Leggi demaniali, Analisi sul CTM, Strutture e mappe, Ricerche e proposte d’uso*), Document: Letter from the *Coordinamento* to the town planning alderman of Venice municipality (arch. R. D’Agostino) (15 September 1998).

⁸⁹⁸ Cit. *Ibid.*, Document: Resolution of the city council of Venice municipality, *Campo Trincerato di Mestre – Istituzione gruppo di lavoro e approvazione progetto preliminare 1° stralcio* (17 December 1998).

⁸⁹⁹ Cf. *Ibid.*, Document: *Il forte Carpenedo e il sistema dei forti attorno a Mestre. Alcune idee per il loro recupero* (02.02.1995); *Ibid.*, Document: Letter from *Coordinamento* to the town planning alderman of Venice municipality (arch. R. D’Agostino), *Proposta di collaborazione per la progettazione di un “Parco urbano dei Forti” (Greenbelt di Mestre) basato sul recupero e riutilizzazione delle strutture e delle aree degli ex forti di Mestre* (07 April 1997).

⁹⁰⁰ Cf. *Ibid.*

⁹⁰¹ Cf. *Ibid.*, Document: *Il forte Carpenedo e il sistema dei forti attorno a Mestre. Alcune idee per il loro recupero* (02.02.1995).

⁹⁰² Cf. *Ibid.*; *Ibid.*, Document: Letter from *Coordinamento* to the town planning alderman of Venice municipality (arch. R. D’Agostino), *Proposta di collaborazione per la progettazione di un “Parco urbano dei Forti” (Greenbelt di Mestre) basato sul recupero e riutilizzazione delle strutture e delle aree degli ex forti di Mestre* (07 April 1997).

ecosystems', to limit all the 'negative effects deriving from the anthropization of the landscape', as well as to prevent the 'environmental degradation' of this peri-urban area threatened by uncontrolled urbanization.⁹⁰³ This perspective – still mentioned in the request made by the *Coordinamento* for the institution of the working group – was subsequently rephrased, but then completely omitted in the final resolution.⁹⁰⁴



FIG. 5.20 *Il giro dei forti* (The tour of the forts): promotion of a cycle-pedestrian itinerary to rediscover the forts (1996) (ACCTM, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 3)

The vision of the ecological potential of the revitalization echoes the major projects that, in these same years, were laying the foundations for the environmental restructuring of the Venice mainland.⁹⁰⁵ However, the only part kept in the goals shared with the municipality is that concerning the routes for alternative mobility. Indeed, the idea to realize a cycle-pedestrian pathway connecting the local artefacts was confirmed in the final resolution.⁹⁰⁶ Also in this case, its significance seems to be weakened if compared to the role of 'green channel' given to this connection in the

⁹⁰³ Cf. *Ibid.* See also: Sarto, G. (2004). Green belt: fiumi, forti e futuri boschi per una cintura verde a Mestre, in *Il forte Mezzacapo a Zelarino*, Marcolin, R. & Zanlorenzi, C. (Eds.). Spinea: Tipografia Baldo, 45-50.

⁹⁰⁴ In a following letter to the town planning alderman, the reference to the green belt has disappeared. However, this aspect seems to be expressed in terms of a more general connection between the forts and their 'specific context' (cf. *Ibid.*, Document: Letter from the *Coordinamento* to the town planning alderman of Venice municipality (arch. R. D'Agostino) (15 September 1998).

⁹⁰⁵ Reference is made to the projects for the *Bosco di Mestre* (Mestre Wood) and the *Parco di San Giuliano* (San Giuliano Park), on which extensive account is given in paragraph 5.3.

⁹⁰⁶ Cf. *Ibid.*

starting proposals for the green belt of Mestre.⁹⁰⁷ Instead, its potential to enhance the accessibility to the whole military system was emphasized, which – as a ‘free time network’⁹⁰⁸ – was more connected to the socio-cultural and recreational implications of the revitalization.⁹⁰⁹ At the same time, the influence of these environmental motives – although weakened at the level of the overall system – can be retraced in the actions implemented on some of the local artefacts.⁹¹⁰

Within this framework, priority was given to the definition of a ‘unitary project for the use of the forts in compliance with the indications of the Town Plan’.⁹¹¹ Treasuring the experience matured by the voluntary associations in the previous phase, the *Coordinamento* was aware of the several criticalities to be addressed when dealing with the transformation of these secluded sites into open and public spaces.⁹¹² Therefore, the idea of an ‘extended museum’ of the Entrenched Field of Mestre started to take shape in the initiatives promoted by the association.⁹¹³ The centrality given to the reuse of local artefacts in the definition of a general revitalization strategy for the whole military system represents a crucial aspect,

⁹⁰⁷ Cf. *Ibid.*, Document: *Il forte Carpenedo e il sistema dei forti attorno a Mestre. Alcune idee per il loro recupero* (02.02.1995); *Ibid.*, Document: Letter from *Coordinamento* to the town planning alderman of Venice municipality (arch. R. D’Agostino), *Proposta di collaborazione per la progettazione di un “Parco urbano dei Forti” (Greenbelt di Mestre) basato sul recupero e riutilizzazione delle strutture e delle aree degli ex forti di Mestre* (07 April 1997).

⁹⁰⁸ Cf. *Ibid.*, Document: Letter from the *Coordinamento* to Consorzio di Bonifica Dese-Sile, *Percorso ciclabile tra i forti di Mestre* (29 August 1996).

⁹⁰⁹ In this scenario, the initiatives started by the voluntary associations in those years aimed at stimulating social engagement – e.g., the organizations of *pedalate ecologiche* (ecological cycling tours) around the forts, the launch of the series of publications *Il Giro dei Forti* (The Tour of the Forts) – as well as more practical interventions, like the mapping of the road network and the solving of breaks in the path (cf. *Ibid.*).

⁹¹⁰ In relation to this, see the cases of Forte Carpenedo and Forte Mezzacapo in paragraph 5.3.

⁹¹¹ Cf. *Ibid.*, Document: Resolution of the city council of Venice municipality, *Campo Trincerato di Mestre – Istituzione gruppo di lavoro e approvazione progetto preliminare 1° stralcio* (17 December 1998). In relation to this, significant is that in the *Variante al Piano Regolatore Generale per la Terraferma* (Variant to the Town Plan for the Mainland) of 1997 a specific article is dedicated to the *verde urbano dei forti* (urban green of the forts), described in terms of a ‘park to be implemented through the recovery and reuse of the structures composing the fortified complex, the tree-lined areas, the stretches of water and the surrounding free areas’ (cf. *Archivio Soprintendenza Archeologia, Belle Arti e Paesaggio di Venezia e Laguna* (Archive of the Agency for Archaeology, Fine Arts and Landscape of Venice and Lagoon; from now on: ASABAPV), *Box Mestre: Forti, File Forti vari: pratiche miste*, Document: *Variante al Piano Regolatore Generale per la Terraferma (1997). Norme di Attuazione, art. 64, 85-86*).

⁹¹² Cf. ACCTM, Fond 1, *Box Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 2 (*Leggi demaniali, Analisi sul CTM, Strutture e mappe, Ricerche e proposte d’uso*), Document: Letter from the *Coordinamento* to the town planning alderman of Venice municipality (arch. R. D’Agostino) (15 September 1998).

⁹¹³ Cf. *Ibid.*, Document: Letter of the *Coordinamento* to Consorzio di Bonifica Dese-Sile, *Percorso ciclabile tra i forti di Mestre* (29 August 1996).

according to a tendency that will result in their complete overlap. Additionally, another pivotal aspect that is already observable in this phase is the gradual polarization of the attention on one specific military object: Forte Marghera. Following its demilitarization (1996), the possibility to turn this fort into a 'museum of the Entrenched Field of Mestre' started to be considered, elevating it to the role of focal point in the revitalization of the overall system.⁹¹⁴ In order to convey this main vision into concrete actions, the *Coordinamento* and the municipal authority agreed on the need to jointly develop a planning instrument, aimed at directing the 'subsequent elaboration of the executive plans for the architectural recovery of the forts'.⁹¹⁵ However, the process for turning these ambitions into practice was slowed down by the obstacles encountered in the acquisition of the fort sites by the municipality, which represented an essential step for the implementation of the vision. With the passing of the law n.662/1996 (Finance Act for 1997, art.3, p.112), the Italian government launched a program for selling military sites no longer in use, the revenues of which were to be used for the restructuring of the armed forces.⁹¹⁶ The official list of these properties, published with an implementing decree in 1997, also included the forts of the entrenched field.⁹¹⁷ Although the right of first refusal was guaranteed to local authorities, the valuation of the properties was entrusted to a real estate company (Consap) without taking into account the monumental value of the sites – nor the costs of restoration and maintenance associated with them – and their low profitability from an exploitation perspective, resulting in unaffordable

⁹¹⁴ Already in 1997, the *Coordinamento* proposed an exhibition in one of the buildings on the fort site about the history of the entrenched field and the ongoing activities for its revitalization. This initiative was considered as a first step towards 'that museum of the Fortifications, aimed at testifying the military significance of Mestre from an historical and social point of view' (cf. *Ibid.*, Document: Letter from *Coordinamento* to the Venice Municipality, *Iniziativa "I Forti di Mestre. Proposta per un museo del campo trincerato"* (September 1997).

⁹¹⁵ Cf. *Ibid.*, Document: Resolution of the city council of Venice municipality, *Campo Trincerato di Mestre – Istituzione gruppo di lavoro e approvazione progetto preliminare 1° stralcio* (17 December 1998).

⁹¹⁶ Already with the law n.579/1993 – *Norme per il trasferimento agli Enti Locali e alle Regioni di beni immobili demaniali e patrimoniali* (Rules for the transfer to Local Authorities and Regions of state-owned and patrimonial real estate) – the municipality of Venice missed an opportunity to acquire the fort sites at a controlled price, provided the draft of a reuse project to justify the public interest. Subsequently, the law n.127/1997 (Bassanini bis) introduced the free transfer of state properties that had not been used for at least ten years, but with the exception of those properties already included in the sale program of the law n.662/1996 (cf. *Ibid.*, Document: Municipality of Venice, *Interpellanza con risposta in Consiglio Comunale* (12.03.1997).

⁹¹⁷ Cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 2bis (*Leggi sul patrimonio immobiliare pubblico e sulle fortezze ex militari*), Document: *Decreto del Presidente del Consiglio dei Ministri, 11 agosto 1997. Individuazione dei beni immobili nella disponibilità del Ministero della difesa da inserire nel programma di dismissioni previsto dall' art.3, comma 112, della legge 23 dicembre 1996, n.662* (11.08.1997).

costs for the municipality. Consequently, the *Coordinamento* protested,⁹¹⁸ followed by formal requests to the national parliament,⁹¹⁹ about the anomalies of the sales program and the consequent delays it caused.⁹²⁰ The municipality also started to take action through the establishment of an interdepartmental working group with the task of following this complex procedure.⁹²¹ Eventually, the acquisition of some forts took place in 2003, followed by that of Forte Marghera in 2009, through a mixed solution including both the sale and the exchange of properties between the municipality and Ministry of Defence.⁹²²

⁹¹⁸ In particular, the *Coordinamento* organized a petition, presented to the Chiefs of Defence and to the Chamber of Deputies, 'for the overcoming of the rules of alienation of former military assets' provided by the law of 1996, as well as a call to the *Touring Club Italiano* for raising awareness on these matters (cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 2 (*Leggi demaniali, Analisi sul CTM, Strutture e mappe, Ricerche e proposte d'uso*), Document: Letter from *Coordinamento* to *Stato Maggiore della Difesa (Ufficio Speciale per le Dimissioni)*, *Forte Marghera ed i forti del Campo Trincerato di Mestre* (16.10.1998); ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 1 (*Storia dell'Ente di Gestione*), Document: Letter from *Coordinamento* to *Camera dei Deputati (Commissione Difesa)*, *Forte Marghera ed i forti del Campo Trincerato di Mestre* (31.05.1999); *Ibid.*, Document: Letter from *Coordinamento* to *Touring Club Italiano* (16.03.1999).

⁹¹⁹ Reference is made to the calls made by the senators F. Bonato and G. Sarto to the Ministry of Defence (cf. *Ibid.*, Document: (On. F. Bonato), *Camera dei Deputati, Il Ministero della Difesa intervenga per salvare i forti di Venezia. Interrogazione Parlamentare. Comunicato stampa* (18 March.2000); ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 2bis (*Leggi sul patrimonio immobiliare pubblico e sulle ex fortezze militare*), Document: (On. G. Sarto), *Senato della Repubblica, 828ma seduta. Interrogazione* (3 May 2000).

⁹²⁰ About that, the Army Chief of Staff also complained of the negative implications of this stalemate for the armed force (cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 2 (*Leggi demaniali, Analisi sul CTM, Strutture e mappe, Ricerche e proposte d'uso*), Document: Letter from *Stato Maggiore dell'Esercito* to *Stato Maggiore della Difesa, Venezia-Mestre – Richiesta di concessione aree demaniali facenti parte del complesso di Forte Marghera* (28 January 2000).

⁹²¹ Cf. *Ibid.*, Document: Municipality of Venice, VIII Commissione Consiliare, *Campo Trincerato di Venezia – acquisizione da parte del Comune di Venezia* (February 2002); ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*; *Ibid.*, File 1 (*Storia dell'Ente di Gestione*), Document: Letter from the Councilor for Culture and Tourism of the Municipality of Venice (M. Cortese) to the Ministry of Defence (S. Mattarella) (6 September 2002).

⁹²² Forte Tron, Forte Carpenedo and Forte Rossaroll – valued by Consap, respectively, for 1.830.000, 1.931.000, and 2.567.800 euro – were acquired through the exchange of 36 municipally-owned apartments located in Mestre and already in use as military housing; the exchange procedure had already started to be discussed in 1991, and then interrupted with the passing of the 1996's law. About Forte Gazzera, Forte Mezzacapo and Forte Pepe, they were purchased for a total sum of 2,9 mln euro (cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 2 (*Leggi demaniali, Analisi sul CTM, Strutture e mappe, Ricerche e proposte d'uso*), Document: Letter from *Soprintendenza per i beni ambientali e architettonici di Venezia* to *5° Direzione del Genio Militare di Padova, Venezia-Mestre – Permuta Forti Tron Rossaroll e Carpenedo con il Comune di Venezia – Legge 497/78 e 47/81* (22 May 1991); ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 1 (*Storia dell'Ente di Gestione*), Document: Municipality of Venice, *Esercizio del diritto di prelazione per l'acquisizione dei Forti Carpenedo, Tron, Gazzera, Pepe, Mezzacapo, Rossaroll – Variazione di bilancio* (12 September 2002). See also: Gruppo di lavoro per Forte Marghera...terra d'acqua (2014). *Forte Marghera, op.cit.*, 21.

5.2.3 Attempts of municipal control: from military system to ensemble of forts

Alongside the acquisition of the forts to the municipal property, a trend reversal occurred in 2000, when the 'GEIE Marco Polo System' was founded. As expressed in its statute, the aim of this society was broad: to 'promote transnational, cultural and touristic cooperation aimed at enhancing and sharing the historical and cultural heritage of the European Community, and at conserving the artistic and architectural heritage starting from that of the Venetian fortresses in the Mediterranean'.⁹²³ The municipality of Venice had its exponents in the board of this society, to which the Entrenched Field of Mestre was entrusted (2004) with the goal of carrying out 'entertainment and guarding activities'.⁹²⁴ Although conceived to coexist and cooperate with the voluntary associations, the founding of this new body gradually led to an ending for the *Coordinamento* and its activities. However, the latter still managed to see the partial accomplishment of one of its main goals: the drafting of a general plan for the recovery of the entrenched field.

Officially published in 2007, the *Linee guida al Piano per il riuso e la valorizzazione del Campo Trincerato di Mestre* (Guidelines to the Plan for the reuse and enhancement of the entrenched field Mestre; from now on: Guidelines) were intended as a steering tool for the subsequent planning phase (FIG. 5.21). Considering that an actual plan was never made, this document is of great importance to understand the reasons behind the implemented choices. The guidelines focus on the forts, regarded as 'single entities'.⁹²⁵ It is stated that 'the set of forts around Mestre must certainly be considered as a system rather than a mere group of individual elements', and that 'to take a step back' and start from the individual objects is presented as a 'methodological choice'.⁹²⁶ Accordingly, four 'analytical dimensions' are used to describe the local artefacts in their historical, architectural and environmental significance, together with their regulatory condition in the frame of existing policies.

⁹²³ Cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 3 (*Attività e finanziamenti locali*), Document: Municipality of Venice, *Impegno di spesa per il trasferimento di fondi a Marco Polo System (GEIE) relativamente all'attività a titolo non esclusivo presso i forti Marghera, Vallon, Tron, Gazzera, Rossaroll, Ridotto Lido e Polveriera Bazzera* (19 October 2004).

⁹²⁴ However, the involvement of the municipality in the society will come to an end in 2010 (cf. Gruppo di lavoro per Forte Marghera...terra d'acqua (2014). *Forte Marghera*, *op.cit.*, 22).

⁹²⁵ Cf. ACCTM, Fond 1, Box *Coordinamento per il Recupero del Campo Trincerato di Mestre*, File 2 (*Leggi demaniali, Analisi sul CTM, Strutture e mappe, Ricerche e proposte d'uso*), Document: Marco Polo System GEIE (2007). *Linee guida al Piano per il riuso e la valorizzazione del Campo Trincerato di Mestre. Relazione Illustrativa*, 8.

⁹²⁶ Cf. *Ibid.*

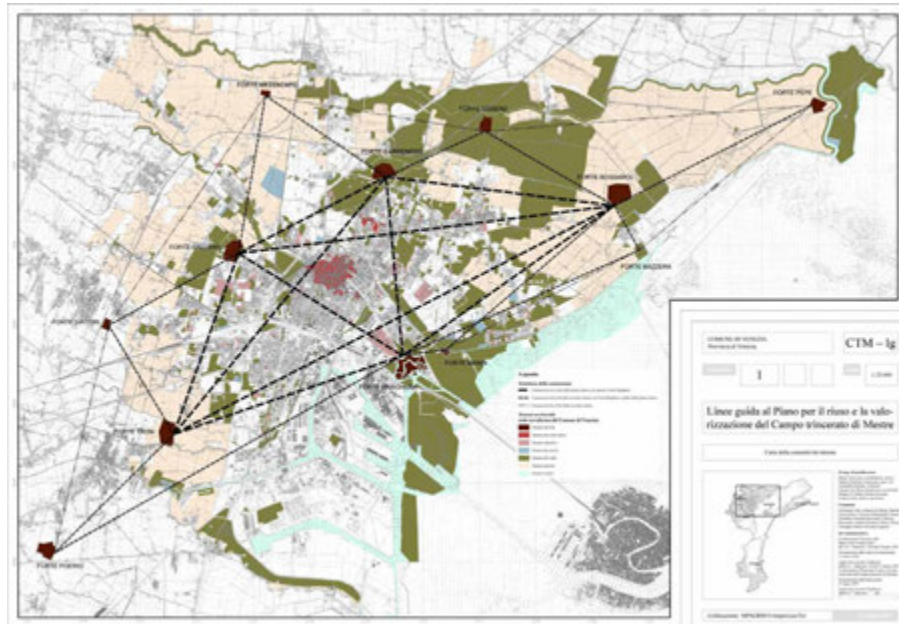


FIG. 5.21 *Linee guida al Piano per il riuso e la valorizzazione del Campo trincerato di Mestre* (Guidelines to the Plan for the reuse and enhancement of the Entrenched Field of Mestre): map of internal connectivity (Marco Polo System GEIE 2007: Tav. 1)

The history of the forts is described through the evolution of their uses, starting from the military function up to the recent reuse initiatives activated by the voluntary associations.⁹²⁷ About the architectural analysis, attention is paid to the qualities of the built heritage characterizing the local artefacts, analysing the different (pentagonal, hexagonal, rectangular) fort types of the three construction phases, and with an emphasis for the buildings on the fort sites. Their special 'combination with natural elements' is initially mentioned, but then only addressed in relation to the 'degradation effect' played by vegetation on the state of conservation of the architectural components.⁹²⁸ About the environmental characteristics of the fort sites, they are firstly addressed in relation to pollution and other negative impacts of the military presence, to be tackled in the following planning phase.⁹²⁹ Additionally, the broader 'environmental system' of the area in which the entrenched field is

⁹²⁷ Cf. Marco Polo System GEIE (2007). *Linee guida, op.cit., Schede dei singoli forti allegati alla relazione illustrativa*; Marco Polo System GEIE (2007). *Linee guida, op.cit., Allegati di approfondimento alla relazione illustrativa*.

⁹²⁸ Cit. Marco Polo System GEIE (2007). *Linee guida, op.cit., Relazione Illustrativa*, 12-14.

⁹²⁹ Cf. *Ibid.*

inscribed is considered.⁹³⁰ However, the historical relationship of the military with the natural resources and the landscape is not addressed; the forts were instead defined as 'a system that originally has nothing natural'.⁹³¹ With the exception of the moats – considered as 'now naturalized wetlands' to be recovered – the only natural elements considered as worthy of attention are, indeed, an accidental outcome, resulting from the lack of maintenance occurred during their gradual demilitarization.⁹³²

The end result of this analytical phase is in the acknowledgement that the 'original systemic character' of the entrenched field is now lost, and the forts are the only left traces.⁹³³ The main reason for that is identified in the 'alienation of the military function', considered as the main link assuring the 'system's internal cohesion' between its individual components.⁹³⁴ This condition was associated to two parallel processes, presented as opposite forces: the gradual 'renaturalization' of the forts and the 'dissolution of building and morphological structures'.⁹³⁵ Consequently, the need for a new function for the military system was considered as crucial, in order to mend the lost relationships and turn, once again, the entrenched field into a 'significant place' in its contemporary context.⁹³⁶ This intention was translated into a 'functional mix' for the local artefacts, to be carefully gauged according to the forts' individual – historical and contemporary – 'vocation', and in harmony with the voluntary management already in place.⁹³⁷

Within this frame, Forte Marghera was given a 'leading role' in showing the 'historical and naturalistic elements pertaining to the whole system'.⁹³⁸ The reason for this choice laid on its being 'the oldest of the forts in the Entrenched Field of Mestre', but also on its barycentric location, as the 'entrance gate' to the Venice lagoon.⁹³⁹

⁹³⁰ Cf. *Ibid.*, 15.

⁹³¹ Cf. Marco Polo System GEIE (2007). *Linee guida, op.cit., Relazione illustrativa*, 15. At the same time, except for Forte Carpenedo, the existing knowledge about the flora and fauna in the fortified sites is considered as very scarce (cf. Marco Polo System GEIE (2007). *Linee guida, op. cit., Allegati di approfondimento alla relazione illustrativa*, 40-41).

⁹³² Cf. *Ibid.*

⁹³³ Cf. Marco Polo System GEIE (2007). *Linee guida, op.cit., Relazione illustrativa*, 15.

⁹³⁴ Cf. *Ibid.*, 15-20

⁹³⁵ Cf. *Ibid.*, 16.

⁹³⁶ Cf. *Ibid.*, 20.

⁹³⁷ Cf. *Ibid.*, 35-36. For more details about the envisaged functions, see: paragraph 5.3.

⁹³⁸ About the leading role of Forte Marghera, reference was made not only to the reuse choices, but also to the management of the site, which through a mix public-private use could play a 'drag effect' and represent the economic carrier also for the revitalization of the other forts (cf. *Ibid.*, 60-61).

⁹³⁹ Cf. *Ibid.*, 35-36.



FIG. 5.22 Linee guida al Piano per il riuso e la valorizzazione del Campo trincerato di Mestre (Guidelines to the Plan for the reuse and enhancement of the Entrenched Field of Mestre): Forte Marghera, pre-feasibility study (Marco Polo System GEIE 2007, *Relazione illustrativa*: 62)

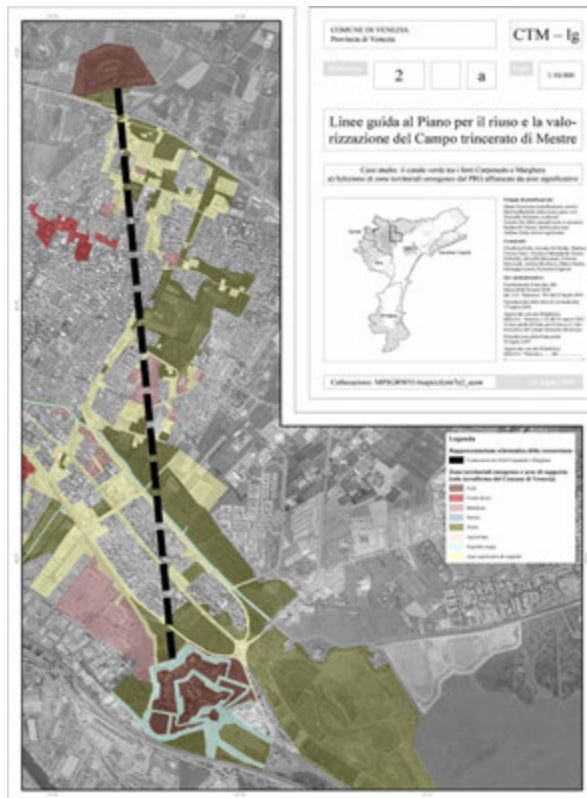


FIG. 5.23 Linee guida al Piano per il riuso e la valorizzazione del Campo trincerato di Mestre (Guidelines to the Plan for the reuse and enhancement of the Entrenched Field of Mestre): detail of the 'green channel' envisaged for connecting Forte Marghera and Forte Carpenedo (Marco Polo System GEIE 2007: Tav. 2a)



FIG. 5.24 Municipality of Venice, *Lavori di restauro, adeguamento funzionale, normativo e riordino dei forti Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossarol* (Restoration, functional and regulatory adaptation and reorganization of the forts Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossarol) (2017): map showing the forts involved in the interventions (ASABAPV, *Box Mestre: Forti, File Forti vari (pratiche in corso, 2020)*, Document: *Lavori di restauro, op.cit., Progetto definitivo. Relazione generale* (2017), 7).

Therefore, the preparation of a 'separate master plan' concerning this pivotal case was highly recommended (FIG. 5.22).⁹⁴⁰ Finally, together with the reuse of the forts, a following step was identified in their integration within the wider territorial context. In order to do so, the creation of 'green channels' connecting the single fortified structures was considered as crucial (FIG. 5.23).⁹⁴¹

The guidelines were conceived as a vision, but some design solutions were proposed on the base of the experience matured by the voluntary associations in the previous years.⁹⁴² Even if an actual plan has never followed, some of the indications proposed

⁹⁴⁰ At that time, a pre-feasibility study had already been carried out (cf. *Ibid.*, 58), which will be then conveyed in the following *Piano di Recupero* (Recovery Plan) (2012); about the latter, see: paragraph 5.3.1.

⁹⁴¹ In particular, some detailed considerations were provided for the connection between Forte Marghera and Forte Carpenedo, as an example to be then developed for all the other forts in the final plan (cf. *Ibid.*, 37-53).

⁹⁴² Apart from Forte Marghera, some detailed guidelines were also provided for the case of Forte Carpenedo, assumed as a sample for 'the 'recovery of the forts' (cf. *Ibid.*, 53-58); the latter are discussed in paragraph 5.3.2.

in the guidelines have found concrete application in the interventions carried out for the reuse of the fort sites.⁹⁴³ As a result, this long-awaited achievement – aimed at providing an instrument for the revitalization of the whole military system – was followed by a process of strong polarization on Forte Marghera. In line with the centrality conferred to this site within the guidelines, the municipality has concentrated a large part of its efforts on the ‘heart’ of the entrenched field in the years that followed its acquisition.

The initial emphasis on the revitalization of the system seems to have lost part of its strength, also as a consequence of its inclusion into initiatives aimed at recovering the larger complex of Venetian fortifications⁹⁴⁴ – a step that was beneficial for the individual artefacts, but with a disruptive effect on the military system. Starting from 2017, the municipal authority has resumed an integrated approach to the conservation of the Entrenched Field of Mestre in the context of a wide program (RE.MO.VE.) concerning the redevelopment of the Venice’s suburbs and financed by the Italian government.⁹⁴⁵

Within this frame, a project involving those forts currently owned by the municipality of Venice has been outlined (FIG. 5.24). While recognizing the coexistence of ‘historical-monumental’ and ‘naturalistic’ values, the poor state of conservation of the sites has led to the choice to prioritize interventions aiming at ‘the protection and conservation of the buildings, the material consistency of which [...] is seriously compromised’, including the clearing of ‘invasive vegetation’ that threatens these structures and

⁹⁴³ In this regard, please refer to paragraph 5.3.

⁹⁴⁴ In relation to this, see: Grigoletto, A., Manzini, A. & Boscolo Nata, A. (2015). *Piano strategico di sviluppo culturale Fortificazioni Veneziane* (art. 112, comma 4, Codice BB.CC. – art. 5, comma 5, D.Lgs. n. 85/2010). Available at: <https://www.italianostravenezia.org/forte-marghera-e-le-altre-fortificazioni-veneziane/> [15.03.2022].

⁹⁴⁵ The acronym RE.MO.VE. stands for *REcupero periferie e MOBilità sostenibile per la città metropolitana di VEnezia* (Recovery of the suburbs and Sustainable Mobility for the metropolitan city of Venice), a project proposed by the municipality of Venice for the *Programma straordinario d'intervento per la riqualificazione urbana e la sicurezza delle periferie delle città metropolitane* (Extraordinary intervention program for urban redevelopment and the safety of the suburbs of metropolitan cities), launched by the Italian government in 2016 (DPCM 25.05.2016). Within this wider program, the project involving the forts of the Entrenched Field of Mestre is titled: *Lavori di restauro, adeguamento funzionale, normativo e riordino dei forti Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossaroll* (Restoration, functional and regulatory adaptation and reorganization of the forts Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossaroll) (cf. ASABAPV, *Box Mestre: Forti, File Forti vari (pratiche in corso, 2020)*, Document: Municipality of Venice, *Lavori di restauro, adeguamento funzionale, normativo e riordino dei forti Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossaroll. Progetto definitivo. Relazione generale* (2017), 5).

compromises their visibility.⁹⁴⁶ This represents the last step of a long and still on-going process. Started as a bottom-up process, the contribution of voluntary associations – albeit weakened in the systemic vision that had characterized its rise – still survives in some of the forts, providing daily care and continued involvement in contributing, together with other users and the municipal authorities, to the revitalization of an ensemble of forts formerly composing the Entrenched Field of Mestre.

5.3 The reuse of the forts: selected projects

Among the revitalization experiences carried out on single forts, the selection of those cases relevant for this research has primarily stemmed from the principles set in the Guidelines (2007). A first consideration has concerned the implementation of the plan, for which two possibilities were identified: 1) limiting its application to that part of the Entrenched Field of Mestre in the territory of the municipality of Venice; or, alternatively, 2) establishing inter-municipal collaborations with the Mira and Spinea local authorities, in order to cover the whole extension of the military system.⁹⁴⁷ Since the draft of an actual plan did not follow, the second alternative was never further explored, while the municipality of Venice has carried out some integrated actions for the forts in its possession. Therefore, a first selection choice has been that to focus the study on the forts owned by the municipality of Venice, which makes it possible to analyse the systemic vision developed by this local authority, and to assess whether and in which way the principles set in the Guidelines have been applied.⁹⁴⁸

⁹⁴⁶ Cf. *Ibid.*, 5-6. The specific works envisaged – including a second block of interventions, which is not part of the RE.MO.VE. program, but represents its effective continuation – are discussed in paragraphs 5.3.2 and 5.3.3 (cf. ASABAPV, *Box Mestre: Forti, File Forti vari (pratiche in corso, 2020)*, Document: Municipality of Venice, *Lavori di messa in sicurezza e adeguamento dei forti della terraferma. Progetto definitivo. Relazione illustrativa* (2019).

⁹⁴⁷ In this way, also Forte Poerio (municipality of Mira) and Forte Sirtori (municipality of Spinea) would have been included in the plan (cf. Marco Polo System GEIE (2007). *Linee guida, op.cit., Relazione illustrativa*, 69-73).

⁹⁴⁸ The New Dutch Waterline was identified as an example of ‘good practice’ in the Guidelines and deepened in the annex to the general report. In it, specific reference is made to the *Panorama Krayenhoff* and, particularly, to the complex interprovincial organization involved for the drafting of the masterplan and the then-starting implementation phase (cf. Marco Polo System GEIE (2007). *Linee guida, op.cit., Allegati di approfondimento alla relazione illustrativa*, 68-74). Among the other examples explored, some Italian cases were mentioned (i.e. Verona complex of fortifications, Genoa urban park of the forts and city walls), as well as other international experiences (i.e. the castle of S. Ferdinando in Figueres and the system of Cartagena, both in Spain; the citadelle of Brouge, France; the forts of Komaron, Hungary) (cf. *Ibid.*, pp. 60-81). While representing valid revitalization experiences on military heritage, not all the cases involved can be considered as military systems.



FIG. 5.25 Venice (IT), the forts of the Entrenched Field of Mestre: current ownership (aerial image retrieved at: <https://geoportale.comune.di.venezia.it> [05.06.2020]) (F. Marulo 2020)

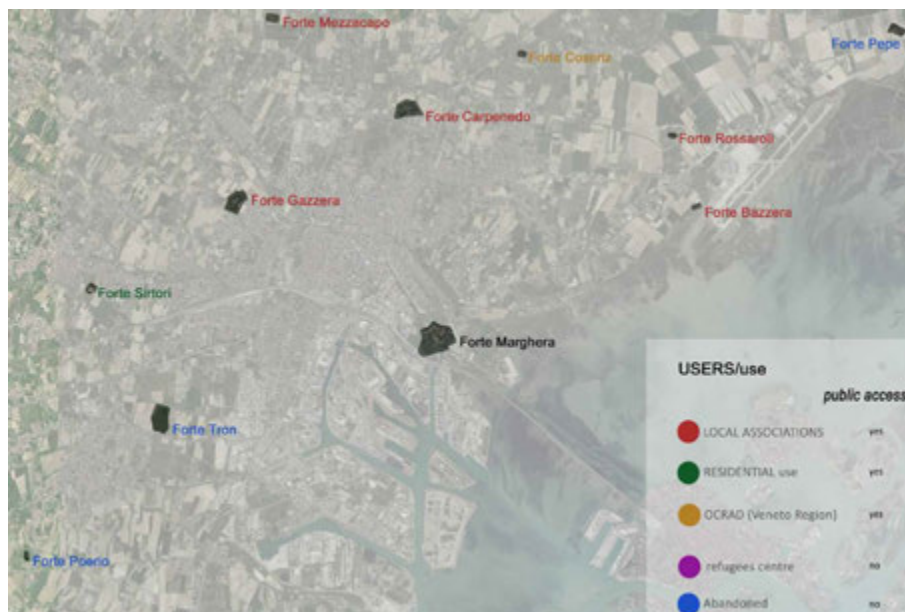


FIG. 5.26 Venice (IT), the forts of the Entrenched Filed of Mestre: current use (aerial image retrieved at: <https://geoportale.comune.di.venezia.it> [05.06.2020]) (F. Marulo 2020)

Within this framework, Forte Marghera has been selected as the first relevant case. As made clear since the starting intentions and then confirmed in the Guidelines, the actions carried out on this fort – the ‘heart’ of the Entrenched Field of Mestre – have followed a privileged and isolated track, asking for a specific inquiry. About the other forts, two considerations have guided the subsequent selection step: user’s categories and fort’s typologies. Unlike in the Dutch case, the forts of the Entrenched Field of Mestre are mostly owned by municipalities. Therefore, the focus has been shifted from the ownership to the actual users of the sites, which – together with the municipality – have played a significant role in the reuse choices (FIG. 5.25-26). Accordingly, a first category was identified in the forts used by voluntary associations. In relation to these, the final selection was driven by the need to assure variety in terms of fort’s typologies, finding in Forte Carpenedo (first generation of forts, Tunkler typology) and Forte Mezzacapo (second generation of forts, Rocchi typology) the most relevant cases to analyse. Subsequently, the forts Rossarol and Cosenz were selected as a counterpart to the well-defined user’s category of the voluntary associations, to which the majority of cases belong. More than just residual cases, these two cases share the choice made by the users involved of precluding the public access to the fort sites.⁹⁴⁹ This represents a distinctive trait from the vision pursued by the volunteers and interesting to compare. Although it was not possible to diversify in terms of fort’s typologies – being the three forts of first generation all run by voluntary associations – the peculiarities of Forte Rossaroll among the other forts of the second generation, ensured a certain degree of variety.

⁹⁴⁹ In the case of Forte Rossaroll, the user is the *Centro di Solidarietà ‘Don Lorenzo Milani’*, a centre for the recovery of drug addicts. About Forte Cosenz, reference is made to the Veneto Region, which from being just a user has then become the actual owner of the site in almost its entirety. However, the role played by the municipality of Venice was also relevant, justifying the inclusion of this case among the selected reuse experiences.

5.3.1 Forte Marghera: the hearth of the Entrenched Field of Mestre⁹⁵⁰

Early plans and actions for the protection of Forte Marghera

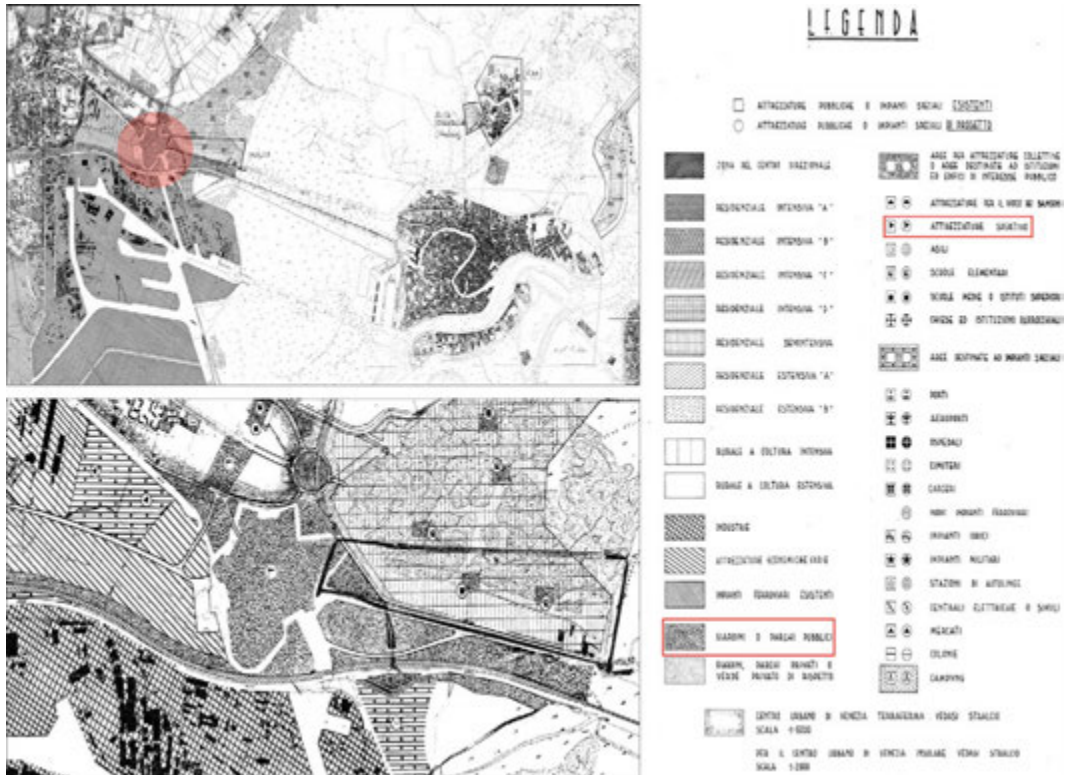


FIG. 5.27 Extract from the General Town Plan for the municipality of Venice (1959): Forte Marghera is identified as an area to be dedicated to 'public gardens or parks' and 'sport facilities' (Comune di Venezia 1959, available at: <https://www.comune.venezia.it/it/archivio/50614> [03.04.2022])

⁹⁵⁰ Part of this paragraph was published in Conference Proceedings: F. Marulo (2020). Between nature and culture. From Italy and the Netherlands new perspectives towards a sustainable use of historical landscapes, in *Proceedings of the International LDE Heritage Conference on Heritage and the Sustainable Development Goals* (Delft, 26–28 November 2019), Pottgiesser, U., Fatoric, S., Hein, C. Maaker, E. de and A. Pereira Roders (Eds.). TU Delft Open: Delft, 410–411.

Although still in military hands, by the end of the 1950s the future of Forte Marghera was already at the centre of a heated debate. While drafting a new town plan (1959-1962), the municipality of Venice proposed to turn the fort into a sport centre of regional significance (FIG. 5.27-28).⁹⁵¹ The main reason for this choice was in its strategic location, between Venice island and the other urban settlements on the mainland. Also in the wider frame of the Veneto region, the fort is in an area well-served by the road infrastructural network.⁹⁵² This condition was considered as of great importance, given the lack of a sport facility in this highly populated area, which should have been conceived to satisfy not only the municipal demand, but also as function of possible national and international events.⁹⁵³



FIG. 5.28 Venice (IT), Forte Marghera: aerial view (1996) (Archive Associazione dalla Guerra alla Pace)

⁹⁵¹ The General Town Plan for the Municipality of Venice was adopted on March 20, 1959 (resolution no. 15429) and approved by Presidential Decree of 12/17/1962 (cf. <https://www.comune.venezia.it/it/archivio/50614> [03.05.2022]).

⁹⁵² Moreover, the fort area was close to the railway line, and the possibility to establish a special stop was also contemplated (cf. Comune di Venezia (1959). *Piano Regolatore Generale. Relazione*, 137 & 177-178. Available at: <https://www.comune.venezia.it/it/archivio/50614> [03.05.2022]).

⁹⁵³ Cf. *Ibid.*, 177.

Consequently, Forte Marghera represented an ideal place, providing an isolated but well-connected location 'in a characteristic environment, surrounded by greenery and close to the lagoon'.⁹⁵⁴ The only preservation concern was related to the two French barracks, by virtue of their 'monumental' significance. The rest of the buildings were considered as having 'no particular character', as well as the overall fort, the entire surface of which was considered as 'usable' for hosting the envisioned sport centre.⁹⁵⁵ The latter should have consisted of 'a large Olympic stadium capable of about 80,000 spectators, a training ground, some tennis courts, an indoor swimming pool and a gym', to be complemented by the necessary parking facilities in the area surrounding the fort.⁹⁵⁶

Initially, this plan received the approval of the local Superintendence to Monuments. When asked to assess the proposal for a sport facility in 1957, the Superintendent A. Rusconi (1897-1975) recognized in Forte Marghera a 'considerable historical interest', but judged as 'limited' its 'architectural' relevance.⁹⁵⁷ Therefore, he only advised to keep the stadium 'invisible' from the outside – a goal that could be achieved by 'masking it with a grassy embankment' – and similar 'landscape criteria' for the other sport facilities.⁹⁵⁸ These considerations show the acknowledgement of what Rusconi would shortly after define as the 'landscape interest' of the fort site, taking a more cautious position about the intervention possibilities.⁹⁵⁹ However, at

⁹⁵⁴ Cf. *Ibid.*, 178.

⁹⁵⁵ Cf. *Ibid.*

⁹⁵⁶ In relation to this, the only parameters considered for the location of the stadium within the fort area – which should have been 'equipped to host football, rugby and athletics matches' – were aimed at providing the sport facility with an adequate 'orientation' and a 'convenient internal viability' (cf. *Ibid.*).

⁹⁵⁷ About the historical significance of the site, Rusconi referred to 'the siege of 1848-49' (cf. ASABAPV, Box *Forti: Forte Marghera: vol. 1, File Sistemazione impianti sportivi*, Document: Note from the Superintendent (ing. A. Rusconi) to the Municipality of Venice (03 September 1957)). The pride of the Venetians for this historical event is also at the centre of one of the first publications claiming for the protection of Forte Marghera (cf. Brunello, P. (1966). *La Difesa del Forte di Marghera, op.cit.*). For a biographic overview on Antonio Rusconi and its activity as Superintendent, see: Russo, V. (2011). Antonino Rusconi, in *Dizionario biografico dei soprintendenti architetti (1904-1974)*. Bononia University Press: Bologna, 523-529.

⁹⁵⁸ Cf. About the masking of the stadium, the intervention carried out for the so-called *Teatro Verde* (Green Theatre) in the San Giorgio island is mentioned as a possible reference (cf. ASABAPV, Box *Forti: Forte Marghera: vol. 1, File Sistemazione impianti sportivi*, Document: Note from the Superintendent (ing. A. Rusconi) to the Municipality of Venice (03 September 1957)).

⁹⁵⁹ Indeed, in answering to the Technical Tax Office about the presence of law limitations for the protection of Forte Marghera, he stated that 'the filling of the canals or the construction of houses or buildings of considerable size within the fort would bring such transformations to it as to nullify all its previous characteristics' (cf. ASABAPV, Box *Forti: Forte Marghera: vol. 1, File Dichiarazione di notevole interesse storico oltre che artistico e paesaggistico*, Document: Note from the Superintendent (ing. A. Rusconi) to the Technical Tax Office (12.11.1958)).

this stage the ‘filling of canals’ within the fort area was still contemplated, while the only buildings to be ‘integrally conserved’ were – as stated in the town plan – the two French barracks (FIG. 5.29).⁹⁶⁰ Finally, he gave indications to turn the rest of the site into a ‘public park’.⁹⁶¹

This situation changed when a new Superintendent, M. Guiotto (1903-1999), came in charge. He did not only see in Forte Marghera an ‘interesting and historic’ site, but also ‘one of the most characteristic in the series of defensive artefacts pertaining to the crown of fortifications implemented by the Venetian Republic around the lagoon city’.⁹⁶² Therefore – unlike his predecessor – he judged the plan for a sport centre as inadequate to the ‘conformation, appearance and morphology of the property’, nor did he see the possibility to implement this intervention ‘without compromising the appearance and fundamental character’ of the fort, which he already presented as subjected *de jure* to the law ‘for the protection of things of artistic and historical interest’ (Bottai Law, n.1089/1939).⁹⁶³ Nevertheless, the negotiations between the municipality and the ministry of Defence for the acquisition of the fort site continued.⁹⁶⁴ Consequently, Guiotto asked the *Direzione Generale Antichità e Belle Arti* (General Directorate for Antiquities and Fine Arts) to take action in order to prevent the acquisition of Forte Marghera by the local authority.⁹⁶⁵

⁹⁶⁰ Cf. ASABAPV, Box *Forti: Forte Marghera: vol. 1*, File *Sistemazione impianti sportivi*, Document: Note from the Superintendent (ing. A. Rusconi) to the Municipality of Venice (03 September 1957). Moreover, ‘the complex formed by the basin and the symmetrical constructions that flank it’ is at the basis of what Rusconi will define as the ‘artistic interest’ of Forte Marghera a year later, thus, explaining the only-apparent contradiction with the ‘limited architectural interest’ stated in its judgement for the sport centre (cf. ASABAPV, Box *Forti: Forte Marghera: vol. 1*, File *Dichiarazione di notevole interesse storico oltre che artistico e paesaggistico*, Document: Note from the Superintendent (ing. A. Rusconi) to the Technical Tax Office (12.11.1958).

⁹⁶¹ Cf. ASABAPV, Box *Forti: Forte Marghera: vol. 1*, File *Sistemazione impianti sportivi*, Document: Note from the Superintendent (ing. A. Rusconi) to the Municipality of Venice (03 September 1957).

⁹⁶² Cit. *Ibid.*, Document: Note from the Superintendent (arch. M. Guiotto) to the Mayor of Venice (04 July 1961).

⁹⁶³ Cit. *Ibid.*

⁹⁶⁴ For example, at end of July 1961 the General Inspector of the Technical Tax Office – in charge to estimate the value of the fort – asked the Superintendence to be updated on the decisions made about its future use (cf. *Ibid.*, Document: Letter from the General Inspector of the Technical Tax Office (dr.ing. G. Fagi) to the Superintendent (24 July 1961). In response, Guiotto stated that – since no project had yet been submitted by the municipality – his opinion on the impossibility to turn the fort into a sport facility had not changed. Therefore, any negotiation for the acquisition of the fort had to be arranged ‘through an agreement that specifies the limits and methods of use for a good conservation’ (cf. *Ibid.*, Document: Letter from the Superintendent (arch. M. Guiotto) to the General Inspector of the Technical Tax Office (dr.ing. G. Fagi) (01 August 1961).

⁹⁶⁵ Cf. *Ibid.*, Document: Letter from the Superintendent of Venice (arch. M. Guiotto) to the General Directorate for Antiquities and Fine Arts within the Ministry of Education (01 August 1961).

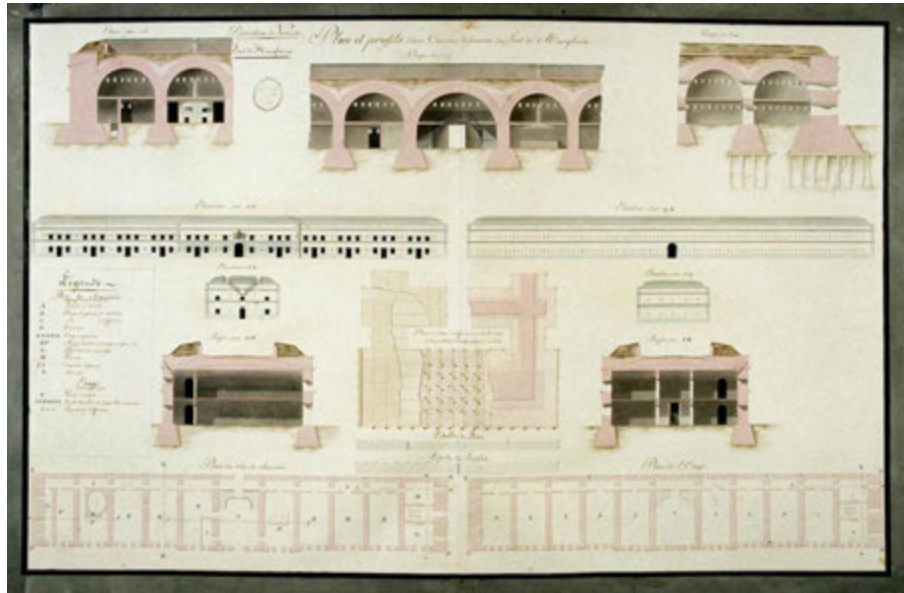


FIG. 5.29 Venice (IT), *Plan et profils d'une Caserne défensive du Fort de Marghera* (Plan and profiles of a defensive barracks of the Fort of Marghera) (1810) (ASABAPV, Box Mestre: *Forti: Forte Marghera*: vol. 9, File Comune di Venezia, *Piano di Recupero di iniziativa pubblica - Compendio 'Forte Marghera'* (2013), Elab. 19)

As a result, the Ministry of Education directly addressed this issue in a letter to the Ministry of Finances in November 1961.⁹⁶⁶ Although the local press kept on reporting about negotiations until 1963, the opposition of the Superintendence of Venice prevented the acquisition to the municipal property of Forte Marghera and its envisaged transformation.⁹⁶⁷ Although both Rusconi and Guiotto referred to the historic, artistic and landscape significance of the military site in their argumentations

⁹⁶⁶ Cf. *Ibid.*, Document: Letter from the Ministry of Education to the Ministry of Finances (02 November 1961).

⁹⁶⁷ Within the local press, reference is made to an alleged difference of opinions between the Superintendent of Venice and the ministerial control (cf. *Ibid.*, Document: Sarà superato il veto per lo stadio a Marghera? Un incaricato delle Belle Arti dovrà riesaminare la situazione, *il Gazzettino*, 24.01.1962; Roma ha dato torto al sovrintendente Per il nuovo stadio un veto è caduto, *Venezia Notte*, 17-18 May 1962). Moreover, some oppositions to the realization of the sport centre were also raised by exponents of the municipality itself, although the reasons were not connected to issues of heritage protection (cf. *Ibid.*, Document: Al Consiglio Comunale Respinte le osservazioni al Prg Lo stadio sorgerà a Forte Marghera, *il Gazzettino*, 21 March 1963). This tension is also reported in the correspondence of Guiotto with the General Director for Antiquities and Fine Arts (B. Molajoli) and the Ministry of Education (L. Gui) (cf. *Ibid.*, Document: Letter from the Superintendent of Venice (arch. M. Guiotto) to the General Director for Antiquities and Fine Arts within the Ministry of Education (B. Molajoli) (18 May 1962); *Ibid.*, Document: Letter from the Ministry of Education (L. Gui) to the Superintendent of Venice (arch. M. Guiotto) (14 June 1962); *Ibid.*, Document: Letter from the Superintendent of Venice (arch. M. Guiotto) to the Ministry of Education (L. Gui) (03 December 1962).

on the town plan, it was only on January 3, 1966 that Forte Marghera was officially recognized as of 'particular interest' under the law n.1089/1939, excluding its north-eastern lunette.⁹⁶⁸ The latter was included in the protected area on March 7, 1980, when it was also reconfirmed the significance of the fort as an 'exemplary form of Napoleonic military architecture, to which is also linked the memory of the resistance of the Venetians in the insurrection against the Austrian government (1848-1849)'.⁹⁶⁹

If in the 1960s the municipal ownership was seen as a threat for the preservation of Forte Marghera, this situation changed by the mid-1990s. This can be explained by the fact that the legal protection had proved to be beneficial in order to prevent interventions not compatible with the fort's significance (FIG. 5.30-31).⁹⁷⁰

As a result, in September 1995, the military authority communicated the imminent return of the fort to the Ministry of Finance, which would have sold it to the municipality of Venice.⁹⁷¹ The formalities for the implementation of this procedure were still in progress a year later.⁹⁷² In this occasion, the Superintendence of Venice gave its approval provided to avoid any 'use that is not compatible with the historical and artistic character' of the fort 'or such as to prejudice its conservation'.⁹⁷³

⁹⁶⁸ Cf. ASABAPV, Box *Forti: Forte Marghera: vol. 1*, File *Questioni vincolistiche*, Document: Communication of the General Directorate of the State Property to the Finance Office of Venice (09 March 1982). A possible reason for the exclusion of the north-eastern lunette can be found in the fact that it had been already isolated from the rest of the fort after the construction of the provincial road (via Forte Marghera).

⁹⁶⁹ Cf. ASABAPV, Box *Mestre: Forti: Forte Marghera: vol. 1*, File *Estensione del vincolo*, Document: Decree of the Ministry for Cultural and Environmental Goods declaring the 'historic and artistic interest' of Forte Marghera (07 March 1980).

⁹⁷⁰ For example, in 1978 a *piano di lottizzazione* (subdivision plan) was proposed by a private company to turn the north-western lunette into a warehouse for its beverage distribution business. This request was rejected by the Superintendent (R. Padoan) by virtue of the legal protection decree (cf. ASABAPV, Box *Forti: Forte Marghera: vol. 1*, File *Lottizzazione dei map. 19 e 20*, Document: Answer of the Superintendent (arch. R. Padoan) to the Ministry of Cultural and Environmental Goods (19 August 1980).

⁹⁷¹ Due to the suppression of the military department to which the fort site was entrusted, the Defence had no longer need to dispose of the property. In parallel, the armed forces needed a shooting range, so they agreed to give Forte Marghera to the municipality if the local authority would have covered the expenses for building this new infrastructure in Campalto (cf. ASABAPV, Box *Mestre: Forti: Forte Marghera: vol. 2*, Document: Request from Chief of Staff at the Northeast Military Regional Command (gen. F. Cipriani) to the Ministry of Finances for the approval of the exchange procedure of Forte Marghera with the municipality of Venice (14 November 1995); ASABAPV, Box *Mestre: Forti: Forte Marghera: vol. 1*, File *Avviso di futura sdemanializzazione (e impegno di recupero totale)*, Document: Communication of Chief of Staff (gen. A. Tobaldo) of the Northeast Military Region Command to the Superintendent (27 December 1995).

⁹⁷² Cf. *Ibid.*, Document: Communication of the Ministry of Finance to the North-East Military Regional Command (28 August 1996).

⁹⁷³ *Ibid.*, Document: Communication of the Superintendent of Venice (arch. L. Ricciardi) to the Ministry of Finances, the Northeast Military Regional Command, and the Technical Tax Office (24 October 1996).

It was also requested that any future intervention had to be included ‘in a unitary project relating to the entire protected complex’.⁹⁷⁴ Nevertheless, this process came to a standstill when, at the end of 1996, Forte Marghera and the other forts of the entrenched field were included in the sales program promoted in the 1997’s Financial Act.⁹⁷⁵ This had an impact on the projects that had already started to be developed in view of the imminent decommissioning of the fort by the military.

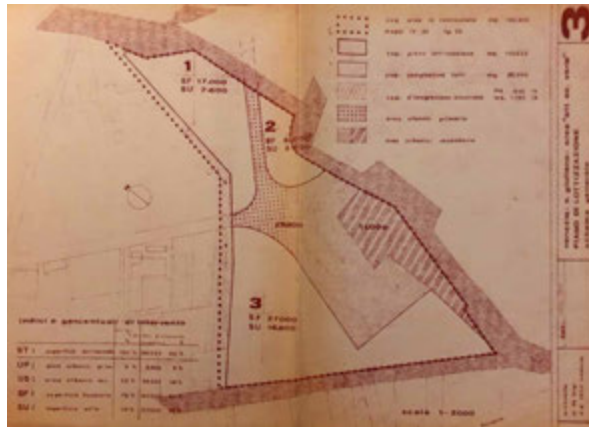


FIG. 5.30 Venice (IT), Forte Marghera: the subdivision plan proposed for the north-western lunette (1978) (ASABAPV, Box Mestre: Forti: Forte Marghera: vol. 1)



FIG. 5.31 Venice (IT), Forte Marghera: cadastral map attached to the decree extending the legal protection to the north-western lunette (1980) (ASABAPV, Box Mestre: Forti: Forte Marghera: vol. 1)

974 Ibid.

975 About the sale program, see: paragraph 5.2.3.



FIG. 5.32 Venice (IT), San Giuliano Park: plan of the winning project (design: Comunitas) (Comune di Venezia 1992: 28)

Indeed, already by the end of the 1980s Forte Marghera was included in urban plans aimed at redesigning the wider area in which it is inscribed. In particular, reference is made to the so-called *Parco San Giuliano* (San Giuliano Park). In 1989, the municipality of Venice launched an international competition to turn the area – namely, that going from the airport Marco Polo to the bridge connecting the mainland to Venice island – into an ‘environmental park’, which would have served as a ‘leisure system’ for the two municipal realities (island/mainland), playing the role of ‘hinge’ among them (FIG. 5.32).⁹⁷⁶

⁹⁷⁶ Cf. Comune di Venezia (1992). *Un parco per San Giuliano. Concorso internazionale di progettazione del sistema per il tempo libero di San Giuliano, Forte Marghera, Cavergnaghi*. Venezia: Tipo-Litografia Armena, 7-15. The issue of connecting island and mainland of Venice was part of a wider debate, in which the 20th century growth of the mainland – conceived as an appendix for compensating the island (e.g., Marghera: port and industry; Mestre: residential) – started now to be considered as no more sustainable for the future of the Venice metropolitan area. About this topic, see: Romanelli, G. (1977). *Mestre: storia, territorio, struttura della terraferma veneziana*. Venezia: Arsenale. Bruno, G. (1981). *Una storia per Mestre*. Mestre: Fidesarte, 7-11; StoriAmestre (1988). *La città invisibile: storie di Mestre, 25-26-27 marzo 1988*. Mestre: StoriAmestre, 46-106; StoriAmestre (1990). *Mestre infedele: confini comunali in terraferma e rapporti tra Mestre e Venezia*. Portogruaro: Nuova dimensione; Barizza, S. (1994). *Storia di Mestre*. Padova: Il poligrafo, 9-212; Roy Beretta, V. (2002). *Fare ordine nella città metropolitana: Mestre, Spinea, terraferma e il progetto di terza zona industriale (1950-1970)*. Verona: Cierre; Pasqual, C. (2003). *Mestre tra Ottocento e Novecento*. Treviso: Canova; Zanon, C. (2004). *Mestre: da periferia a città: un ruolo strategico per il futuro di Mestre*. Mestre: Centro culturale Santa Maria delle Grazie; Cesarin, M. (2009). *Alla scoperta di Mestre*. Venezia: Nuovadimensione, 52-65; Achilli, F., Dal Co, F. & Guerzoni, G. (Eds.) (2010). *M9. A new museum for a new city*. Milan: Electa, 10-24; Barizza, S. (2014). *Storia di Mestre: la prima età della città contemporanea*. Padova: Il poligrafo, 17-164, 257-328.

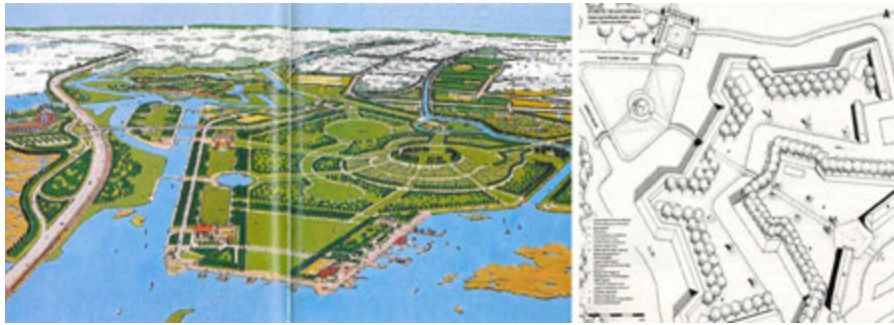


FIG. 5.33 Venice (IT), San Giuliano Park: view of the winning project (left) (design: Comunitas) (Comune di Venezia 1995: 24-25); plan of the project for Forte Marghera (right) (design: Comunitas) (Comune di Venezia 1992: 32)

As stated in the competition brief, Forte Marghera was considered as one of the main poles for this park. However, given its current unavailability, indications were given for the participants to propose interventions on the fort only in the last implementation phase.⁹⁷⁷ Accordingly, in the winning proposal Forte Marghera was given a role as ‘the central and visually dominant structure’ at the heart of the park, starting from which the ‘radial structuring of the main functions’ was organized.⁹⁷⁸ The fort site had to be turned into a ‘cultural pole’ hosting the *Osservatorio/Museo della Laguna* (Lagoon Observatory/Museum). The latter was conceived as composed by two main exhibitions spaces –to be located in the two French barracks – connected by an ‘open-air museum area’ in a subsequent elaboration phase of the project.⁹⁷⁹ Additionally, reference was made to educational and event facilities, new pedestrian bridges and an iconic entrance ‘monument’, which was then translated into a ‘observatory tower of the Lagoon’ (FIG. 5.33).⁹⁸⁰

⁹⁷⁷ Cf. Comune di Venezia (1992). *Un parco per San Giuliano*, *op.cit.*, 13.

⁹⁷⁸ Cit. Comune di Venezia (1992). *Un parco per San Giuliano*, *op.cit.*, 29. The awarded project was that proposed by the ‘Comunitas’ architectural firm (Boston, Massachusetts, USA) coordinated by arch. A. di Mambro, with the advice of three other Italian experts (biologist: Bruno dell’Era; history & restoration: Riccardo Mazza de’ Piccioli; reclamation: Roberto Carrara).

⁹⁷⁹ For the two exhibitions, reference is made to a *Museo Etnografico ed Antropologico* (Ethnographic and Anthropology Museum) and to a *Museo dei Trasporti, della Navigazione e delle Fortificazioni* (Transport, Navigation and Lagoon Fortifications Museum) (cf. Comune di Venezia (1992). *Un parco per San Giuliano*, *op.cit.* 35; Comune di Venezia (1995). *Il parco di San Giuliano*, *op.cit.*, 34-37).

⁹⁸⁰ Cf. Comune di Venezia (1995). *Il parco di San Giuliano*, *op.cit.*, 32-35. For an overview on the implementation of the overall park plan, see also: Comune di Venezia (1998). *Parco di San Giuliano: verso la realizzazione = moving forward: esposizione del progetto esecutivo: Sede Municipale di Mestre, Via Palazzo 1, 13 dicembre 1997-10 gennaio 1998*. Venezia: Comune di Venezia; Caprioglio, G. (2005). *Tra la terra e l’acqua: il Parco di San Giuliano a Mestre*. Venezia: Marsilio.

In line with this vision, in 1994 the municipality of Venice also applied for funds from the European Community in the frame of the 'Konver' project, aimed at financing the conversion of disused military areas and buildings. In this case, Forte Marghera was identified as one of the three 'military areas of historical-monumental importance' for which the 'reuse for civil purposes' was proposed.⁹⁸¹ Also in this case, the fort site was not considered as one of the nodes of the entrenched field, but as part of a network with the Certosa island (including Forte S. Andrea) and the Giudecca area (FIG. 5.34). The reason behind this choice is not only connected to their historical significance as 'cornerstones' of Venice's defence structure, but also to their present 'strategic importance for the territorial and socio-economic rebalancing of the city'.⁹⁸² Together with the reuse and modernization of their architectural heritage, the interventions aimed at the 'environmental remediation' of the sites, considered as 'severely damaged by the military activities'.⁹⁸³ Therefore, 'landscaping' (*riassetto del paesaggio*), as well as 'small interventions aimed at beautifying the built areas' and the 'construction of access roads' were considered.⁹⁸⁴ For Forte Marghera, this overall vision had to be translated in a reconversion for cultural and productive activities aimed at connecting the fort with the other facilities in its area of influence.⁹⁸⁵ The final project for the reuse of the site had to include the 'functional recovery' of the buildings according to their very diverse qualities and conditions.⁹⁸⁶ Alongside this, the 'enhancement of existing vegetation' was considered, as well as the 'restoration of the banks, margins and embankments of the ramparts along the internal canals'.⁹⁸⁷ Therefore, the 'demolition of buildings' was contemplated in the frame of a 'naturalistic restoration' (*ripristino naturalistico*) of the site.⁹⁸⁸

⁹⁸¹ Cf. ASABAPV, Box Mestre: Forti: *Forte Marghera*: vol. 2, Document: Comune di Venezia. *Progetto Konver (1994-1997)*, 18.

⁹⁸² Cit. *Ibid.*

⁹⁸³ Cit. *Ibid.*, 27.

⁹⁸⁴ Cit. *Ibid.*

⁹⁸⁵ Firstly, the afore-mentioned *Parco San Giuliano*, but also the *Parco Scientifico e Tecnologico di Venezia* (Venice Science and Technology Park) and the education and research centre of the University of Venice on the mainland (cf. *Ibid.*, 30).

⁹⁸⁶ Within the project, it was recognized that 'during the fort's life numerous buildings were built with very different constructive, dimensional and functional characteristics'; therefore, 'the building units that can be considered worthy of a recovery are 26 [...], among these the buildings with historical monumental characteristics are 10 [...]' (cf. *Ibid.*).

⁹⁸⁷ Cf. *Ibid.*

⁹⁸⁸ Cf. *Ibid.*



FIG. 5.34 Venice (IT), Map showing the military sites selected by the municipality of Venice for the Konver project (1994-1997), aimed at promoting the conversion of disused military building and sites (ASABAPV, Box Mestre: Forti: Forte Marghera: vol. 2)

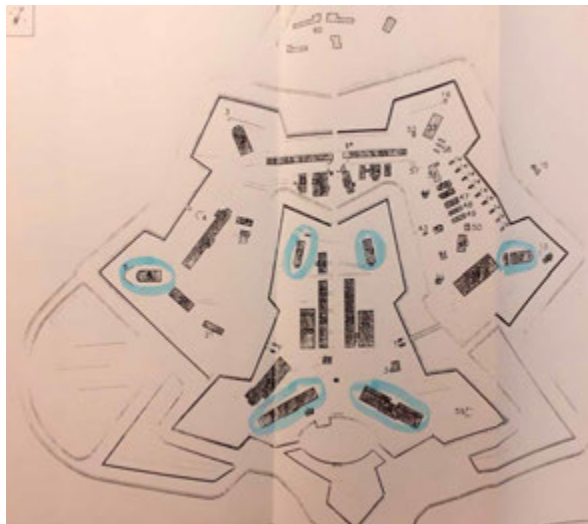


FIG. 5.35 Venice (IT), Forte Marghera: the six buildings involved in the project proposed by the Superintendence of Venice in 1997 (ASABAPV, Box Mestre: Forti: Forte Marghera: vol. 2)

Despite the adjustments and delays caused to these plans, the law n.662/1996 also provided the opportunity to invest in some interventions on Forte Marghera. Indeed, in art. 3, comma 83 of that legislative measure, a portion of the profits deriving from the national lottery was destined to the Ministry for Cultural and Environmental Goods, with the aim of promoting recovery and conservation activities. Therefore, the local Superintendence offices were invited to present projects in order to apply for this funding.⁹⁸⁹ Within this frame, the Superintendence of Venice proposed a project involving the restoration of six buildings at Forte Marghera,⁹⁹⁰ which never went beyond the realization of preparatory surveys (FIG. 5.35).⁹⁹¹

The acquisition by the municipality and the revitalization of Forte Marghera

The considerable attention raised by fort Marghera in these years and the overlapping of proposals for its revitalization were such as to require the establishment within the municipal offices of a working group aimed at the ‘harmonization’ of these multiple ambitions into an organic implementation program.⁹⁹² However, it was only after the municipality of Venice concluded the purchase of the site (2009) that a fruitful reflection about the future of the fort really got started. In line with the Guidelines for the recovery of the Entrenched Field of Mestre (2007), this process resulted in the elaboration of the *Piano di Recupero di iniziativa pubblica – Compendio “Forte Marghera”* (Public Initiative Recovery Plan of public initiative – Compendium “Forte Marghera”; from now on: PdR), a first plan specifically drafted for giving guidelines on the preservation and reuse of the historical fort site.⁹⁹³ In it, attention was given to the historical buildings of the fort in its present conditions. An in-depth analysis of all the constructions

⁹⁸⁹ Cf. ASABAPV, *Box Mestre: Forti: Forte Marghera: vol. 2*, Document: Communication from the Central Office for Archaeological, Architectural, Artistic and Historical Heritage of the Ministry for Cultural and Environmental Goods to the local Superintendents (04 April 1997).

⁹⁹⁰ Cf. *Ibid.*, Document: Communication from the Superintendent of Venice (arch. R. Cecchi) to the Central Office for Archaeological, Architectural, Artistic and Historical Heritage of the Ministry for Cultural and Environmental Goods (30 May 1997).

⁹⁹¹ Cf. *Ibid.*, Document: Communication from the Superintendent of Venice (arch. R. Cecchi) to the Central Office for Archaeological, Architectural, Artistic and Historical Heritage of the Ministry for Cultural and Environmental Goods (30 May 1997).

⁹⁹² Cf. *Ibid.*, Document: Municipality of Venice, Final report of the work group *Armonizzazione progetti di utilizzo su forte Marghera* (Harmonization reuse projects on fort Marghera) (December 1996).

⁹⁹³ ASABAPV, *Box Mestre: Forti: Forte Marghera: vol. 9 (Progetto di Recupero)*, File: Comune di Venezia: Direzione Sviluppo e Territorio: Ufficio Urbanistica di Mestre. *Piano di Recupero di iniziativa Pubblica – Compendio “Forte Marghera”* (2013).

was carried out, in which several aspects were investigated (i.e., period of construction, role in the fort site, construction homogeneity, architectural quality, state of conservation). These observations – complemented by drawings and a description of the constructive elements – have led to the definition of the allowed degree of transformation, with five grades ranging from conservation to demolition (FIG. 5.36).⁹⁹⁴ Finally, a detailed explanation of the allowed interventions for each building was provided.



FIG. 5.36 Venice (IT), Forte Marghera: PdR (2013), map showing the five degrees of trasformability envisaged for the historic buildings on the fort site: 1) conservation and maintenance of the whole building (red); 2) restoration of parts of the building (orange); 3) refurbishment of parts of the building (yellow); 4) refurbishment of the whole building (blue); 5) demolition (green) (ASABAPV, *Box Mestre: Forti: Forte Marghera: vol. 9 (Progetto di Recupero)*, File Comune di Venezia: Direzione Sviluppo e Territorio: Ufficio Urbanistica di Mestre. *Piano di Recupero di iniziativa Pubblica – Compendio “Forte Marghera”* (2013), Tav. 23)

Moreover, the PdR was the occasion for a careful investigation of all the vegetal components that, in a more or less spontaneous way, currently characterize the fort site.⁹⁹⁵ All the species were localized, catalogued and described in their ecological features, paying attention to those cases in which they represented a threat for the buildings or an obstacle to the fruition of the fort and its open spaces. However, no reflection can be reported on the cultural value of these elements (FIG. 5.37).

⁹⁹⁴ In order to define the degree of transformation, the five sectorial analyses have been crossed with a matrix. The five degrees are: 1) conservation and maintenance of the whole building; 2) restoration of parts of the building; 3) refurbishment of parts of the building; 4) refurbishment of the whole building; 5) demolition (cf. *Ibid.*, *Elaborato 32. Progetto: Relazione e preventivo sommario di spesa*, 9).

⁹⁹⁵ Cf. *Ibid.*, 11-14; *Ibid.*, *Elaborato 16. Stato di fatto: rilievo della vegetazione, censimento delle specie; Ibid.*, *Elaborato 10. Relazione storica*.



FIG. 5.37 Venice (IT), Forte Marghera: PdR (2013), map of the existing vegetation on the fort site (ASABAPV, Box Mestre: Forti: Forte Marghera: vol. 9 (Progetto di Recupero), File Comune di Venezia: Direzione Sviluppo e Territorio: Ufficio Urbanistica di Mestre. Piano di Recupero di iniziativa Pubblica – Compendio “Forte Marghera” (2013), Tav. 15)

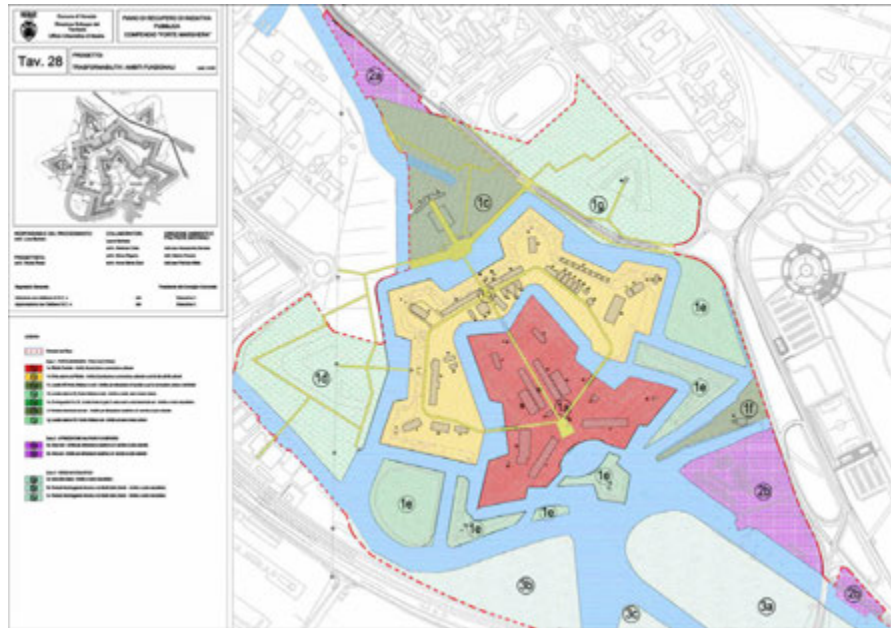


FIG. 5.38 Venice (IT), Forte Marghera: PdR (2013), map showing the functional areas envisaged for the reuse of the fort site: 1) cultural pole (red); 2) services (yellow); 3) naturalistic areas (green) (ASABAPV, Box Mestre: Forti: Forte Marghera: vol. 9 (Progetto di Recupero), File Comune di Venezia: Direzione Sviluppo e Territorio: Ufficio Urbanistica di Mestre. Piano di Recupero di iniziativa Pubblica – Compendio “Forte Marghera” (2013), Tav. 28)

Within the description of the environmental state of the site, the partial filling in of the canals and the landslide phenomena affecting the earthworks were also reported. Consequently, the analysis of the synthetic and biological components has led to the definition of guidelines for the future reuse of the fort as a centre for cultural production.⁹⁹⁶

In particular, three areas with specific functions have been identified (FIG. 5.38). The central redoubt, characterized by the presence of the most valuable buildings with low transformation degree has been defined as a high conservation area, suitable for cultural activities (e.g., museums and exhibitions). The external belt is foreseen as a functional regeneration area, with the combination of both cultural and recreational activities (e.g., shops and restaurants). Finally, the lunettes are conceived as urban ‘forests’, enhanced with park facilities or nature regeneration. An organic design and management plan of green and open spaces is envisaged for the whole fort site, to be conceived in connection with the definition of paths and infrastructures.

⁹⁹⁶ Cf. *Ibid.*, Elaborato 32. Progetto: Relazione e preventivo sommario di spesa, 15-22.

Even if the PdR was not officially adopted by the municipality, it represented the main reference in the first implemented actions, which mostly took place through a series of interventions on individual buildings.⁹⁹⁷ As late as in 2013, the municipality drew up a first plan of safety measures.⁹⁹⁸ Following the assessment of the most vulnerable situations, the choice was made to concentrate these first urgent interventions on building n.30⁹⁹⁹ and the access portal,¹⁰⁰⁰ together with some work on building n.36.¹⁰⁰¹ Additionally, a part of the first initiatives promoted by the municipality were related to the contamination issues in the area. Indeed, already in 2008, a *Piano di Caratterizzazione* (Characterization Plan) of the fort was realized and approved by the Municipality of Venice in direct consultation with the Italian Ministry of the Environment (*Conferenza di Servizi*).¹⁰⁰² Subsequently, several tests were made between 2011 and 2012 to check the presence of toxic substances in the soil (lead, mercury, etc.), and 41 'hot spots' – points in the soil where the concentration of poisoning and carcinogenic materials is ten times higher than the limit fixed by law (D.Lgs. n.152/06) – were identified.¹⁰⁰³ The origins of these pollutants cannot be exclusively ascribed to the military use of the site. Other factors

⁹⁹⁷ The PdR was only approved by the municipality of Venice on March 28, 2013.

⁹⁹⁸ Cf. ASABAPV, Box (*Mestre: Forti: Forte Marghera: vol. 12 (Lavori di messa in sicurezza)*, Document: Comune di Venezia. *Messa in sicurezza di forte Marghera. Progetto definitivo. Relazione generale* (November 2013).

⁹⁹⁹ For what the first building is concerned, the intervention on the twin shed (n.30) – realized in the first half of the 20th century (1920-1940) – involved the securing of the roof through punctual consolidation works on the wooden structural elements by means of wooden prostheses, bolted to the existing ones with the help of wooden or metal supports, and the improvement of the supports to the perimeter walls by means of metal pins. This intervention concerned the trusses and all the longitudinal beams, damaged by widespread water infiltrations. The intervention also included the replacement of the roof's covering planks with two rows of wooden boards nailed together, and the restoration of the rainwater drainage system by means of zinc-titanium downspouts. In parallel, the construction of skylights was also planned, which were placed on the central part of the building, so as not to be visible from the street and, thus, 'safeguard the exteriors.' Finally, the intervention involved the demolition of an internal non-load-bearing partition, in order to bring back its spatial unity (cf. *Ibid.*, 3-4; *Ibid.*, *Relazione tecnica-strutturale edificio 30* ((November 2013).

¹⁰⁰⁰ The retaining walls of the external embankment at the main access to the fort, given the high state of decay, have been the subject of consolidation and fixing works of the disconnected masonry elements (cf. *Ibid.*, *Relazione generale* (November 2013), 4).

¹⁰⁰¹ In this case, the intervention consisted in modifying a window hole to create a door opening at the head of the building, in order to favour its temporary use as support base for associations or other users (cf. *Ibid.*, 5).

¹⁰⁰² According to the Italian law (D.Lgs. n.152/2006: *Codice dell'Ambiente* / Environmental Law), the *Piano di Caratterizzazione* (Characterization Plan) is the first phase of a longer technical-administrative process aimed at assessing the contamination of a potentially polluted site and supporting decisions on temporary safety measures and/or proper remediation (cf. D.Lgs. n.152/2006, Annex 2, part IV, title V).

¹⁰⁰³ Cf. ASABAPV, Box *Mestre: Forti: Forte Marghera: vol. 5 (Dal 2012 al 2015)*, Document: *Piano di Caratterizzazione dell'Area "Forte Marghera". Adozione di misure di sicurezza. Verbale incontro tecnico tra Comune di Venezia, ULSS 12, Marco Polo Systeme GEIE, Veritas* (15 March 2013).

need to be considered, like its proximity to the industrial area of the Marghera's harbour, and the landfill once located in the place where the San Giuliano park was designed.¹⁰⁰⁴ Accordingly, the municipality defined some safety measures, which mostly consisted in banning public access in those points by means of fences.¹⁰⁰⁵



FIG. 5.39 Venice (IT), Forte Marghera: buildings involved in reuse and restoration projects after the drafting of the PdR (2015-present) (Elaboration of the map in FIG. 5.36, F. Marulo 2022)

¹⁰⁰⁴ Within the 2012's Protocollo sulle modalità di intervento di bonifica e messa in sicurezza dei suoli e delle acque di falda per il Sito d'Interesse Nazionale di Porto Marghera (Protocol on the procedures for remediation and safety of soils and groundwater for the Porto Marghera Site of National Interest), stated is that the area 'is characterized by a contamination deriving from the ways in which the area was created, with the reclamation of a portion of the Venice lagoon also through the use of waste deriving from the industrial activities carried out in the first industrial zone. To this "historical" pollution, that induced by the production activities carried out in the entire industrial area was then added' (cit. Ministero dell'Ambiente, Ministero delle Infrastrutture, Regione Veneto, Provincia di Venezia, Comune di Venezia, Autorità Portuale di Venezia (2012). Protocollo sulle modalità di intervento di bonifica e messa in sicurezza dei suoli e delle acque di falda per il Sito d'Interesse Nazionale di Porto Marghera. Available at: <https://www.politicheambientali.cittametropolitana.ve.it/rischio-idrogeologico/sin-venezias-porto-marghera> [03.04.2022]).

¹⁰⁰⁵ Cf. ASABAPV, Box Mestre: Forti: Forte Marghera: vol. 5 (Dal 2012 al 2015), Document: Piano di Caratterizzazione dell'Area "Forte Marghera". Adozione di misure di sicurezza. Verbale incontro tecnico tra Comune di Venezia, ULSS 12, Marco Polo Systeme GEIE, Veritas (15 March 2013). Like in the case of the French barracks (later on in this paragraph), the reclamation works on Forte Marghera are now included in one of the projects set by the municipality of Venice within the frame of the European funding related to the REACT-EU program (2021) (cf. <https://live.comune.venezia.it/2021/11/la-giunta-approva-il-piano-react-eu-che-assegna-venezias-investimenti-quasi-82-milioni-di> [03.04.2022]).



FIG. 5.40 Venice (IT), Forte Marghera: project for the *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi* (Study Centre for the enhancement of military architecture and defensive systems) (Design: INSULA S.p.A.), the two buildings (1, 53) involved in the intervention (2015-2017) (ASABAPV, *Box Mestre: Forti: Forte Marghera: vol. 10*)

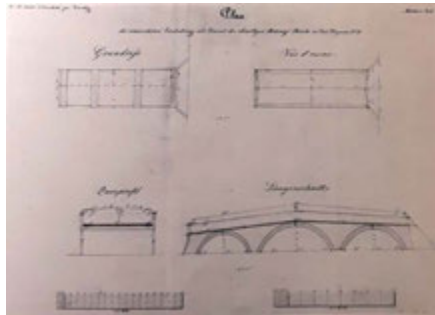


FIG. 5.41 Venice (IT), Forte Marghera: project developed by the Austrians to transform the former bridge of the Marghera hamlet into a powder depot (1837) (Foffano 1988: 37)

Within this framework, the revitalization of Forte Marghera really got started, in 2014, with the project for a *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi* (Study Centre for the enhancement of military architecture and defensive systems). It involved the conservation and reuse of two buildings of the external belt, located near the entrance to the fort (FIG. 5.39-40).¹⁰⁰⁶ Reference is made to the building incorporating the 16th-

¹⁰⁰⁶ The project, commissioned by the municipality of Venice, was concretely drafted by INSULA S.p.A., a public company that the municipality relies on for planning, design, procurement and execution of urban maintenance and building works and services; the latter was direct involved in all the interventions directly started by the municipality (cf. ASABAPV, *Box Mestre: Forti: Forte Marghera: vol. 10 (Progetto Centro Studi – Edificio 1)*, Document: *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi a forte Marghera. Stralcio 1: Edilizia Monumentale. Progetto Definitivo. Relazione Generale illustrativa* (December 2014), 2).

century bridge (n.1) and an early 20th-century barrack (n.53),¹⁰⁰⁷ for which mixed sources of public funding were used.¹⁰⁰⁸ In the first case, the 'significant historical and testimonial value' recognized in the building had a predominant role in leading the design choices, in which a balance was sought between the conservation of the existing structure and the contemporary adaptations required for hosting its new function as archive with related facilities for public consultation (FIG. 5.41).¹⁰⁰⁹ Indeed, the internal distribution of spaces was kept unchanged.¹⁰¹⁰ The only exception was in the reading room, for which the combination of some spaces was envisaged through the demolition of partitions with a non-structural function.¹⁰¹¹ The conservation choices also concerned internal and external surfaces, windows and doors, as well as the roof wooden structures.¹⁰¹² In spite of the variety of conditions leading choices for each of these elements, it is possible to highlight a general tendency to consider all the historical layers, while aiming at a balance between their current state of conservation and the fulfilment of contemporary use standards.

¹⁰⁰⁷ Reference is made to the identification numbers given to the buildings in the PdR. Moreover, the starting project – the original title of which was *Realizzazione di un centro regionale di restauro a Forte Marghera* (Realization of a regional restoration centre in Forte Marghera) – included also the building n. 56, which was then kept out in a consequent elaboration phase (cf. *Ibid.*).

¹⁰⁰⁸ The implementation of the project for building n.1 was divided in two parts, each funded with a different funding source: 1) Fondi Programma Comunitario IPA Adriatico, Progetto ADIFORT (Funds IPA Adriatic Community Program, ADIFORT Project); 2) *Programma Attuativo Regionale del Fondo per lo Sviluppo e la Coesione 2007-2013* (Regional Implementation Program of the Development and Cohesion Fund 2007-2013); the latter funded also the project for building n.53 (cf. *Ibid.*). See also: Trovò, F., De Martin, M., Dorigo, M. and Semenzato, D. (2017). Il Piano di Recupero di iniziativa pubblica di forte Marghera tra cantieri in corso e scenari future, in *Proceedings of the International Conference Military landscapes: A future for military heritage* (La Maddalena, 21-24 June 2016), Fiorino, D. R. (Ed.). Milano: Skirà, 1129-1140.

¹⁰⁰⁹ Indeed, the three-span bridge – built in 1589 to ensure the connection of the former Marghera hamlet across the Marzenego river – was turned, during the Austrian domination of the fort, into a gunpowder depot thanks to the filling of its arches; the latter were, subsequently, partially reopened, and an upper storey was built in the early 1900s on top of the pre-existing bridge, to be used as offices and canteen spaces (cf. ASABAPV, *Box Mestre: Forti: Forte Marghera: vol. 10 (Progetto Centro Studi – Edificio 1)*, Document: *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi a forte Marghera. Stralcio 1: Edilizia Monumentale. Progetto Definitivo. Relazione Generale illustrativa* (December 2014), 4).

¹⁰¹⁰ This goes also for the bathrooms, which were redesigned to fulfil contemporary standards, but kept in their original location (cf. *Ibid.*, 8).

¹⁰¹¹ The presence of the demolished walls was recalled in the design of floor and new furniture (cf. *Ibid.*, 10-11).

¹⁰¹² Cf. *Ibid.*, 7-12.

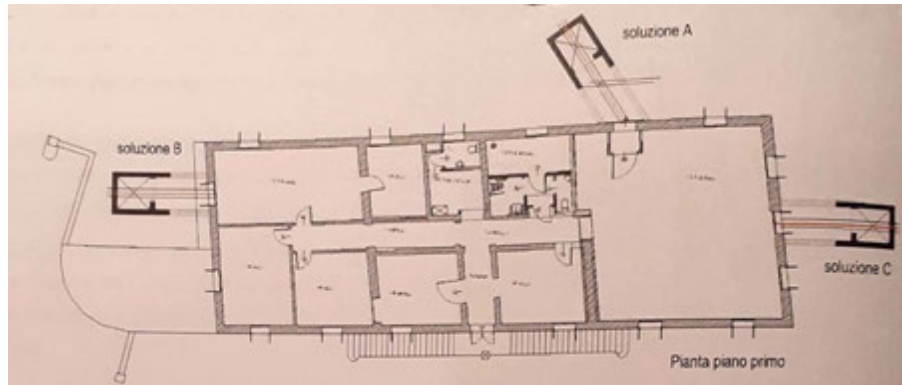


FIG. 5.42 Venice (IT), Forte Marghera: project for the *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi* (Study Centre for the enhancement of military architecture and defensive systems) (Design: INSULA S.p.A.), building 1: study for the location of the elevator (ASABAPV, *Box Mestre: Forti: Forte Marghera: vol. 10*)

Instead, the access to the historical building caused some issues (FIG. 5.42). The original entrance by means of a staircase was no longer suitable for a public audience which could include people with disabilities. Consequently, some possibilities were gauged in order to define the technological and material characteristics of a new vertical connection, together with its most favourable location (FIG. 5.43). Since the option of having this addition within the building was excluded for the impact of this transformation on the historic structure, the choice was made to locate it in outdoors. The options of a stair lift and of a lifting platform were both abandoned in favour of an elevator. It was located at the back of the historical building to avoid any interference with the main front, nor to alter the perception of the surrounding fort.¹⁰¹³ These considerations were addressed in the landscape report. In it, the choice of materials for this new element was also discussed; the original idea to use concrete – for recalling the functionality of military architecture – was then changed in favour of corten steel (FIG. 5.44).¹⁰¹⁴

¹⁰¹³ Cf. *Ibid.*, Document: *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi a forte Marghera. Stralcio 1: Edilizia Monumentale. Progetto Definitivo. Relazione Paesaggistica* (April 2015), 5-10.

¹⁰¹⁴ Cf. *Ibid.*, 11-12.



FIG. 5.43 Venice (IT), Forte Marghera: project for the *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi* (Study Centre for the enhancement of military architecture and defensive systems) (Design: INSULA S.p.A.), building 1: view on main façade after the intervention (2015-2017) (F.Marulo 2020)



FIG. 5.44 Venice (IT), Forte Marghera: project for the *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi* (Study Centre for the enhancement of military architecture and defensive systems) (Design: INSULA S.p.A.), building 1: view on the rear façade with the new external elevator after the intervention (2015-2017) (F.Marulo 2020)



FIG. 5.45 Venice (IT), Forte Marghera: project for the *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi* (Study Centre for the enhancement of military architecture and defensive systems) (Design: INSULA S.p.A.), building 53: southern façade after the intervention (2015-2017) (F.Marulo 2020)

Given the architectural qualities and state of conservation of building n.53, the project included a wider set of interventions aimed at both the structural strengthening of the historical construction and its adaptation to the new use.¹⁰¹⁵ Following the program of the documentary centre, the former shed was given a mix of functions – including conference rooms, translators’ and multimedia consultation rooms, entry hall and reception, offices, with related toilet facilities and technical areas – in support of the Study Centre for Military Architecture (FIG. 5.45). While keeping the original internal distribution as much as possible, the interiors were given additional partitions to create different spaces; their design and material composition – with non-plastered concrete blocks – served as a distinguishing feature from the existing structure, while improving its overall seismic behaviour (FIG. 5.46).¹⁰¹⁶

¹⁰¹⁵ The structure was composed by a single-storey masonry building, built by the military between 1900 and 1940 to house storage, changing rooms and offices. The structure was made of supporting brick pillars with isolated foundations, and with interposed masonry not linked to the structural elements; such a condition was ascribed to its being built as a ‘canopy’, then closed with perimeter walls (cf. ASABAPV, *Box Mestre: Forti: Forte Marghera: vol. 11 (Progetto Centro Studi – Edificio 53)*, Document: (INSULA S.p.A.) *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi a forte Marghera. Stralcio 2: Edilizia Monumentale. Progetto Definitivo. Relazione Generale* (April 2015), 5).

¹⁰¹⁶ Perpendicularly to the long sides of the building, seismic-resistant structural partitions made of concrete blocks were realized for stiffening the structure; additionally, they were given curbs at their top for an homogeneous distribution of horizontal forces; finally, the foundations of the existing pillars were connected along the two long sides (cf. *Ibid.*, 15-16).

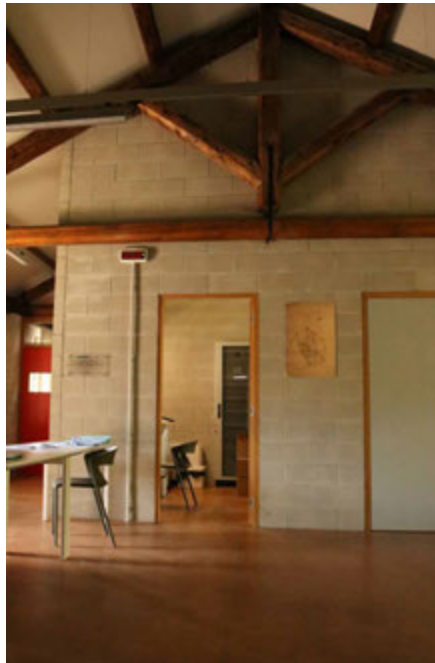


FIG. 5.46 Venice (IT), Forte Marghera: project for the *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi* (Study Centre for the enhancement of military architecture and defensive systems) (Design: INSULA S.p.A.), building 53: interiors after the intervention (2015-2017) (F.Marulo 2020)

The same applies for the roof covering, for which the project envisaged the replacement of the existing perforated brick slabs with a double wooden planking, complemented by a layer of thermal insulation. Additionally, skylights were realized for improving the natural lighting of offices and consultation rooms, as well as the ventilation of technical spaces.¹⁰¹⁷ In correspondence with the entry hall and the conference rooms, three bay-windows were then realized as projecting elements on the rear façade (FIG. 5.47). The latter is the one giving on the northern embankment, and the added elements were conceived as a connection between ‘the building and the surrounding natural context’, together with a more practical function as evacuation exits in case of emergency.¹⁰¹⁸ Although in a hidden position, the material characterization of these additions – to be realized in steel and glass – was the subject of careful consideration in the landscape report.¹⁰¹⁹

¹⁰¹⁷ Cf. *Ibid.*, 11-12.

¹⁰¹⁸ Cf. *Ibid.*, 10-11.

¹⁰¹⁹ Cf. *Ibid.*, Document: (INSULA S.p.A.) *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi a forte Marghera. Stralcio 2: Edilizia Monumentale. Progetto Definitivo. Relazione Paesaggistica* (April 2015), 12-13.



FIG. 5.47 Venice (IT), Forte Marghera: project for the *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi* (Study Centre for the enhancement of military architecture and defensive systems) (Design: INSULA S.p.A.), building 53: northern façade after the intervention (2015-2017) (F.Marulo 2020)

The external surfaces were considered as worthy of attention but limited to punctual interventions,¹⁰²⁰ while a number of changes in the size of the openings (windows, doors) were envisaged for both lighting and ventilation requirements. The interior plaster was, instead, preserved,¹⁰²¹ while the existing floors – considered as of lower quality and interest – were covered with a new plastic pavement. Finally, the choice was made to leave the roof trusses exposed, creating suspended ceilings only in those spaces where it was necessary to house the air treatment system.

¹⁰²⁰ Indeed, external plastered surfaces presented different finishes and colours; also their state of conservation was not homogeneous, with the rear northern façade in particularly bad conditions (rising damp); finally, the elevations presented several improper elements (i.e. metal brackets and profiles, plastic pipes, electrical cables). Therefore, the complete recovery and restoration of the external surfaces was postponed to a subsequent intervention (cf. *Ibid.*, Document: (INSULA S.p.A.) *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi a forte Marghera. Stralcio 2: Edilizia Monumentale. Progetto Definitivo. Relazione Generale* (April 2015), 12-13).

¹⁰²¹ The treatment included their cleaning, localized filling of gaps with compatible mortars, and the application of a protective glazing layer (cf. *Ibid.*, 18-19).



FIG. 5.48 Venice (IT), Forte Marghera, buildings 35-36: northern façade (F.Marulo, 2020)

Apart from projects started by the municipality and financed with public money, some initiatives originated with external parties such as the *Accademia di Belle Arti* (Academy of Fine Arts) of Venice. After signing a contract for the use of two buildings in the central redoubt (n. 35-36),¹⁰²² in 2018 the Academy proposed their restoration and plant adaptation, necessary for their reuse as didactic laboratories and exhibition spaces (FIG. 5.48).¹⁰²³

As in the case of building n.53, the interventions proposed for these coupled sheds aimed at improving their seismic response and the hygienic-sanitary conditions. Indeed, a relevant part of the project involved the roofs, and consisted in the removal of the existing layer located above the trusses and supporting the external finish

¹⁰²² Cf. ASABAPV, *Box Mestre: Forti, File Forti vari (pratiche in corso, 2020)*, Document: (Municipality of Venice) *Concessione amministrativa per l'uso di beni immobili di proprietà comunale* (Administrative concession for the use of municipal property between the municipality of Venice and the Academy of Fine Arts of Venice) (13 May 2016).

¹⁰²³ A draft of the project was presented to the Superintendence of Venice in 2018, which was then updated between 2019 and 2020 (cf. ASABAPV, *Box Mestre: Forti, File Forti vari (pratiche in corso, 2020)*, Document: *Intervento di restauro e adeguamento impiantistico dei padiglioni n.35 e n.36 all'interno dell'area di Forte Marghera a Venezia, per ospitare spazi per laboratori didattici. Relazione tecnica* (16 April 2018).

in tiles,¹⁰²⁴ which was replaced by a double wooden planking.¹⁰²⁵ Moreover, to improve the internal light and air conditions, this intervention also envisaged the insertion of skylights, located in correspondence with the roof pitch not exposed to the main road of the fort, and therefore less visible.¹⁰²⁶ About the strengthening of the vertical structures, the strategy proposed the construction of a steel bracing frame with cross pattern between the masonry pillars, which also supported tie rods connecting to the infill walls. This structure was hidden behind plasterboard false walls with thermic insulation, which were shaped to not cover the wooden roofing elements.¹⁰²⁷ The improvement of seismic conditions was then completed by the addition of foundation concrete slabs, transversal to the existing foundations, with the additional advantage of better distributing the loads to the ground. Although the project involved both the buildings, the limited funds available to the Academy led to the choice to intervene only in a part of building n.36. The other envisaged works – which involved internal floors, fixtures, and the realization of an additional volume between the two historical buildings – were postponed.¹⁰²⁸

Subsequently, a second public fund was concentrated on restoration and reuse interventions for the buildings of the central redoubt, together with a plan for the infrastructural improvement of the whole site.¹⁰²⁹ The two French Barracks were identified as a priority. As previously pointed out, these two historical buildings – with their monumental value and setting – had been at the centre of attention since

¹⁰²⁴ In the case of building n.35, the existing layer was made of a wooden plank, now irreversibly damaged by infiltrations, while in building n.36, it consisted of brick slabs (cf. ASABAPV, Box *Mestre: Forti*, File *Forti vari (pratiche in corso, 2020)*, Document: *Intervento di restauro e adeguamento impiantistico dei padiglioni n.35 e n.36 appartenenti al complesso di Forte Marghera a Venezia, per trasformarli da magazzini a laboratori e spazi espositivi. Relazione tecnica di integrazione* (23 December 2019).

¹⁰²⁵ The new planking was made of two multilayer wooden panels nailed together, and connected to the perimeter walls by means of metal strips, plates and pins (cf. *Ibid.*).

¹⁰²⁶ This was one of the issues addressed in the 'mitigation works' described in the landscape report (cf. *Ibid.*).

¹⁰²⁷ The shaping of the internal false walls was the subject of consultation with the Superintendence (cf. ASABAPV, Box *Mestre: Forti*, File *Forti vari (pratiche in corso, 2020)*, Document: Note from Superintendence of Venice to the Academy of Fine Arts of Venice for the authorization of the project (13 November 2019).

¹⁰²⁸ Cf. *Ibid.*, Document: *Intervento di restauro e adeguamento impiantistico dei padiglioni n.35 e n.36 appartenenti al complesso di Forte Marghera a Venezia, per trasformarli da magazzini a laboratori e spazi espositivi. Relazione tecnica di integrazione* (23 December 2019).

¹⁰²⁹ Reference is made to the fund made available by Italian Ministry for Cultural Heritage (MIBACT) *Grandi Progetti Beni Culturali, annualità 2017-2018. Fortezza Marghera: recupero museale nell'area di crisi ambientale* (Cultural Heritage Projects, 2017-2018. Marghera Fortress: museum in the environmental crisis area) (Segretariato Generale MIBACT, 2016).

the 1950s.¹⁰³⁰ Consequently, already in 1962 – when the site was still in military hands – their state of conservation was the subject of analysis. Following the request made by the military authority to the Superintendence of Venice,¹⁰³¹ a survey was made, highlighting that one of the two constructions (n. 9) presented a foundation subsidence and a rotation in one of the perimeter walls (FIG. 5.49).¹⁰³²

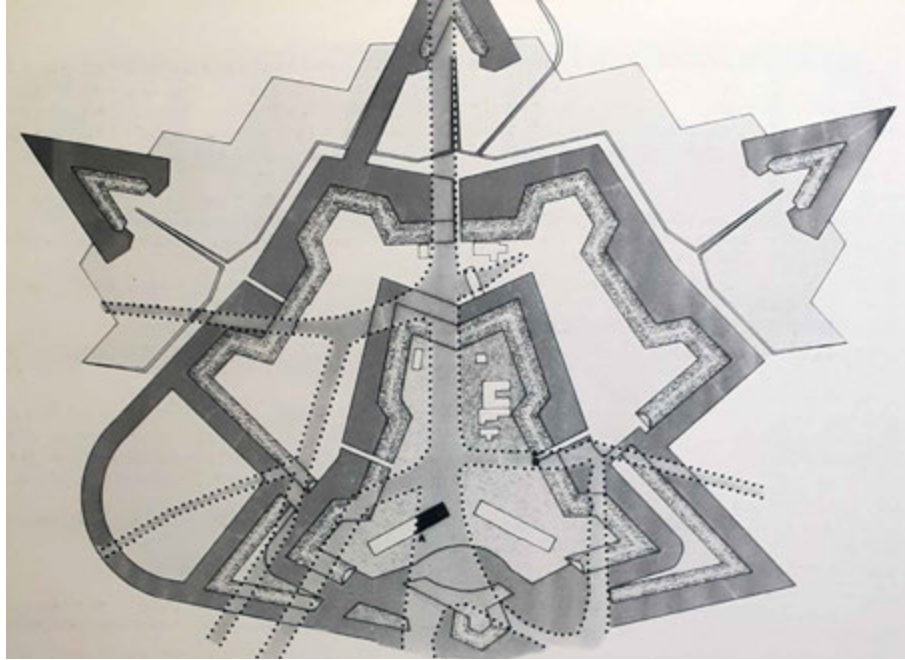


FIG. 5.49 Venice (IT), Forte Marghera: scheme highlighting the portion of the French barracks (A) built on top of the *fossa Gradeniga* (Gradeniga watercourse), which was filled during the construction of the fort (Foffano 1988: 126)

¹⁰³⁰ Together with the French barracks, also the building n.29 was included in the program (cf. ASABAPV, Box *Mestre: Forti*, File *Forti vari (pratiche in corso, 2020)*, Document: *Messa in sicurezza preliminare delle casermette francesi (edifici 8 e 9 del P.d.R.) con demolizione volumi aggiunti ed esecuzione indagini* (07 June 2018).

¹⁰³¹ According to the note sent to the architect of the Superintendence M. Asso, the military authority had reported that one of the two French barracks 'presents cracks in the central part with the lowering of the vaults and ceilings,' thus, requesting a survey from the Superintendence (cf. ASABAPV, Box *Mestre: Forti*, File 1, Document: *Casermette difensive. Sopralluogo inerente alle lesioni nella parte centrale* (06-09 September 1962).

¹⁰³² In particular, it was about the wall against which a new construction was added in the 1940s. The latter was considered as a possible cause of the rotation; alternatively, also the thrust coming from the imposing roof was also contemplated (cf. *Ibid.*).

Given the inaccessibility of attics and the uncertainties on the construction history of the building,¹⁰³³ the possibility of strengthening it with iron rods was subordinated to further investigations.¹⁰³⁴ Some 'tidying works' of the interiors were advised.¹⁰³⁵ After about a decade (1971), the problem had not been solved, which forced the military to stop using it.¹⁰³⁶ After that, the two French barracks were included in the plans for the San Giuliano park, and their restoration was discussed in 1996, but no intervention followed.

Consequently, when in 2017 new funds were made available, they were in an advanced state of decay. Thus, the choice was made to invest on surveys and diagnostic tests for improving the knowledge on these historical buildings and their current state of conservation,¹⁰³⁷ so as to provide a solid base for future restorations and reuse projects.¹⁰³⁸ However, given their precarious conditions,¹⁰³⁹ some preliminary operations were needed (FIG. 5.50-52). Reference is made to the demolition of volumes leaning against the East barracks (n.9), which were in a poor state of

¹⁰³³ In her report, the architect Asso noted to have learnt from the military that the 'hipped roof' of the building – which, as she says, 'has a much lower slope than normal for roofs in the Venetian plains' – was added after the WWI; in its original configuration, there was just a cover layer – made of sand and debris – on top of the barrel vaults (cf. *Ibid.*).

¹⁰³⁴ cf. *Ibid.* According to a later report, a crack meter was used to monitor the building's structural behaviour, which then significantly broke (cf. *Ibid.*, Document: *Ripristino delle casermette divensive* (18 November 1971)).

¹⁰³⁵ The latter concerned 'fixtures, floors, internal plasters, the replacement of corroded bricks' (cf. *Ibid.*, Document: *Casermette difensive. Sopralluogo inerente alle lesioni nella parte centrale* (06-09 September 1962)).

¹⁰³⁶ Used until that moment as a laboratory, in 1971 the military authority defined the building as 'not suitable for use and must be precluded from habitability for both people and materials,' considering that the needed work for its recovery 'appears impressive and does not allow immediate solutions.' About the other barracks (n.8), its static conditions still allowed at that time the use as canteen, provided to restore the façades' cornices, the disintegration of which could cause damage to users (cf. *Ibid.*, Document: *Ripristino delle casermette divensive* (15 December 1971)).

¹⁰³⁷ In particular, reference is made to: topographic, geometric and architectural surveys; survey of construction materials and mapping of the state of decay; geognostic tests and investigations aimed at the physical-mechanical characterization of the construction materials, with a specific reference to the roof structure and foundations (cf. ASABAPV, Box *Mestre: Forti*, File *Forti vari (pratiche in corso, 2020)*, Document: *Messa in sicurezza preliminare delle casermette francesi (edifici 8 e 9 del P.d.R.) con demolizione volumi aggiunti ed esecuzione indagini* (07 June 2018)).

¹⁰³⁸ Eventually, this scenario will be partially turned into reality thanks to funds coming from the European Community in the frame of the REACT-EU program (2021); based on that, the municipality of Venice has planned 17 projects, among which one is specifically aimed at the 'redevelopment and energy renovation' of one of the two French barracks (n.9) (cf. <https://live.comune.venezia.it/it/2021/11/la-giunta-approva-il-piano-react-eu-che-assegna-venezia-investimenti-quasi-82-milioni-di> [03.04.2022]).

¹⁰³⁹ In particular, due to the invasive presence of vegetation and the several collapses that had taken place over time, the interiors were partially inaccessible as well as the areas surrounding the buildings, making the conditions for performing the investigations very unsafe (cf. ASABAPV, Box *Mestre: Forti*, File *Forti vari (pratiche in corso, 2020)*, Document: *Messa in sicurezza preliminare delle casermette francesi (edifici 8 e 9 del P.d.R.) con demolizione volumi aggiunti ed esecuzione indagini* (07 June 2018)).

conservation (FIG. 5.53); the careful removal from the façades of those bricks that proved to be instable; the disinfection of the interiors and the complete removal of all spontaneous vegetation, which was considered as contributing to the state of decay of the buildings.¹⁰⁴⁰



FIG. 5.50 Venice (IT), Forte Marghera: French barracks (9), southern façade (F. Marulo, 2020)



FIG. 5.51 Venice (IT), Forte Marghera: French barracks (8), southern façade (F. Marulo, 2020)

¹⁰⁴⁰ (cf. *Ibid.*)



FIG. 5.52 Venice (IT), Forte Marghera: French barracks (8), western façade (F. Marulo, 2020)



FIG. 5.53 Venice (IT), Forte Marghera: volumes added to the French barracks (9) (F. Marulo, 2020)

Within the same funding, infrastructure works were also planned. These interventions have a direct impact on earth and vegetal components that, together with the historical architecture in the strict sense, constitute the built heritage of Forte Marghera. Indeed, it was acknowledged that these works ‘must aim at enhancing the naturalistic and landscape value inherent in the military site’.¹⁰⁴¹ Accordingly, the relevance of internal and external canals – and, more generally, the ‘relationship between land and water’ – was recognized as a distinguishing feature of the ‘Lagoon landscape’. Together with that, the ‘soil morphology’ was worth mentioning: the relief with its originally defensive scope could be directly considered – together with the historical buildings – as one of those ‘characteristics specific to military fortifications’ (FIG. 5.54).¹⁰⁴² However, in practice these works mostly concerned the recovery of pathways. In relation to this, the project made for the outdoor spaces of the Study Centre for Military Architecture – namely, that surrounding the buildings 1 and 53 – was assumed as a pilot for further elaborations (FIG. 5.55).¹⁰⁴³ Indeed, the choices made here – in consultation with the *Fondazione Forte Marghera* (Forte Marghera Foundation),¹⁰⁴⁴ and with the approval of the local Superintendence – were intended as a sample for materials and solutions, to be extended also in other sectors of the fort site in the near future. Accordingly, some general guidelines were defined. Part of them concerned the area inside the fort. First of all, it was planned to prohibiting car traffic – instead allowed during the last phase of military use of the fort – and limiting circulation to bikes and pedestrians only. Accordingly, it was decided to reduce the section of the current roadways (in bituminous asphalt) by creating new buffer zones around the buildings, intended for pedestrian traffic. These paths are to be paved with a draining conglomerate – recognizable by texture, colour and consistency – separated from the asphalt pavement by means of a concrete crease.¹⁰⁴⁵

¹⁰⁴¹ Cf. ASABAPV, *Box Mestre: Forti, File Forti vari (pratiche in corso, 2020)*, Document: *Forte Marghera. Verbale riunione e sopralluogo* (06 March 2018), 5.

¹⁰⁴² Cit. ASABAPV, *Box Mestre: Forti: Forte Marghera: vol. 6*, Document: (INSULA S.p.A.) *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi a forte Marghera. Stralcio 1: edificio 1; Stralcio 2: edificio 53. Progetto definitivo: Sistemazioni esterne. Relazione Paesaggistica* (June 2017), 6.

¹⁰⁴³ Cf. ASABAPV, *Box Mestre: Forti, File Forti vari (pratiche in corso, 2020)*, Document: *Forte Marghera. Verbale riunione e sopralluogo* (06 March 2018), 4. Such works were realized through regional funding, as an extension of the project for the restoration and reuse of the two buildings.

¹⁰⁴⁴ The Foundation was created in 2016 for taking care of the fort management, acting as an intermediary body between the municipality and possible leaseholders, according to a *Piano Generale degli Interventi* (General Plan for Interventions) – a document aimed at deepening the PdR’s guidelines on the future management and use of the fort site (cf. <http://fondazionefortemarghera.it/la-fondazione/> [03.04.2022]).

¹⁰⁴⁵ Cf. ASABAPV, *Box Mestre: Forti: Forte Marghera: vol. 6*, Document: (INSULA S.p.A.) *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi a forte Marghera. Stralcio 1: edificio 1; Stralcio 2: edificio 53. Progetto definitivo: Sistemazioni esterne. Relazione Generale* (June 2017), 12.



FIG. 5.54 Venice (IT), Forte Marghera: the canal between the external belt and the central redoubt (F. Marulo, 2020)



FIG. 5.55 Venice (IT), Forte Marghera: project for the *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi* (Study Centre for the enhancement of military architecture and defensive systems) (Design: INSULA S.p.A.), recovery of the outdoor spaces (2018) (F.Marulo 2020)

A second part of the guidelines were related to green areas. The main principles concerned the maintenance or extension of the grass surfaces – the latter, as a result of the decrease of the surfaces currently paved – and the maintenance, safety and enhancement of trees and shrubs in a good state, or ‘whose environmental and landscape value is recognized’.¹⁰⁴⁶ Finally, some considerations were made on the lighting system along the

1046 Cit. *Ibid.*

paths, for which the choice of elements in brass and copper were preferred, in harmony with the 'austere character of military buildings'.¹⁰⁴⁷ Starting from that, the infrastructural works covered by the 2017-2018 public funding were aimed at extending these principles to other sectors of the fort. However, based on the economic resources available, priority was given to infrastructuring the buildings of the central redoubt, and the buildings of the external belt located east and west of the main entrance (FIG. 5.56-57).¹⁰⁴⁸



FIG. 5.56 Venice (IT), Forte Marghera, central redoubt: recovery of pathways (F. Marulo, 2020)



FIG. 5.57 Venice (IT), Forte Marghera: recovery of pathways, detail (F. Marulo, 2020)

Moreover, some adjustments were made to the original principles. For example, the use of metal plates was preferred to concrete elements in the delimitation of paths and green areas from the main roads, in order to 'pursue the objective of safeguarding the landscape, enhancing the environmental and naturalistic components of the site'.¹⁰⁴⁹ About the colours of the draining conglomerate to be used for the paths, while reconfirming the choices made for the outdoors of the Study Centre, it was decided to carry out personalized assessments according to the specific site, in order to reach 'a low aesthetic impact'.¹⁰⁵⁰ In conclusion, the implemented and on-going interventions conceived for preserving and re-using the built heritage of fort Marghera can give a clear image of a revitalization process in which the historical buildings represent the driving force.

¹⁰⁴⁷ Cit. ASABAPV, *Box Mestre: Forti: Forte Marghera: vol. 6*, Document: (INSULA S.p.A.) *Centro Studi per la valorizzazione delle architetture militari e dei sistemi difensivi a forte Marghera. Stralcio 1: edificio 1; Stralcio 2: edificio 53. Progetto definitivo: Sistemazioni esterne. Relazione Paesaggistica* (June 2017), 17.

¹⁰⁴⁸ Cf. ASABAPV, *Box Mestre: Forti, File Forti vari (pratiche in corso, 2020)*, Document: *Forte Marghera. Verbale riunione e sopralluogo* (06 March 2018), 4.

¹⁰⁴⁹ Cf. *Ibid.*, Document: *Forte Marghera. Verbale riunione e sopralluogo* (11 March 2019 & 08 May 2019), 1.

¹⁰⁵⁰ Cit. *Ibid.*, 2.

5.3.2 The reuse of the forts by voluntary associations



FIG. 5.58 Venice (IT), Forte Carpenedo: location in the Entrenched Field of Mestre (aerial image retrieved at: <https://geoportale.comune.di.venezia.it> [05.06.2020]) (F. Marulo 2020)

Forte Carpenedo

The case of Forte Carpenedo is interesting because of the special combination of historic-architectural and nature-environmental issues characterizing its revitalization, in which the local voluntarism had a driving role (FIG. 5.58-59). From the environmental point of view, it is necessary to consider the location of this fort in the area of the Carpenedo wood, one of the few plain forests survived in the Venice mainland.¹⁰⁵¹

¹⁰⁵¹ During the design of the fort (1882), the clearing of the entire forest seems to have been considered as a potential obstacle to the performance of military operations. However, being 'composed by very thin and low-trunk trees (from five to seven meters) and normally being subjected to reductions due to cuts', this drastic measure was then abandoned (cf. Zanlorenzi, C. (Ed.) (2009). *I forti di Mestre, op.cit.*, 73).



FIG. 5.59 Venice (IT), Forte Carpenedo: aerial view (1996) (Archive Associazione dalla Guerra alla Pace)

Within the framework of protests against the construction of a hospital in such a valuable area – which led to the setting of the *Bosco di Mestre* (Mestre wood) program¹⁰⁵² – in 1985 Forte Carpenedo was put for the first time under legal landscape protection (Galasso law, n.431/1985) as part of the *Bosco di Carpenedo e l'ecosistema dei prati umidi circostanti nel comune di Venezia* (Carpenedo Wood and the ecosystem of the surrounding wet meadows in the municipality of Venice).¹⁰⁵³

Three years later (1988), the fort was also declared – together with the other two forts belonging to the first line of defence (Forte Gazzera, Forte Tron) of the Entrenched Field of Mestre – as worthy of protection from the point of view of architectural history (law n.1089/1939) for its belonging to a ‘characteristic typology of 19th-century military architecture’ (FIG. 5.60).¹⁰⁵⁴ In the historic-artistic report, the location of the fort in the former Carpenedo wood was highlighted, as well as the ‘botanic’ interest of its surrounding area, the fort, which – kept free from trees to assure a clear view on possible assaults by enemy troops – was now valued for its character of ‘wet meadow’.¹⁰⁵⁵

¹⁰⁵² Several associations took part to the 1980’s protest, among which the Venice Section of WWF (cf. Fondo Mondiale per la Natura WWF Sezione Venezia (1996). *Forte Vallon: Ipotesi di utilizzo: Proposta di conservazione e miglioramento ambientale*. Mestre/Venezia: Cetid, 1) and the association *Urbanistica Democratica* (Sarto, G. (1987). *Mezzo Millennio di boschi e qualche riflessione sull’area di Carpenedo, Tera e Aqua*, n.1, 2-4). Starting from such environmental movement, the idea was raised to develop a systematic vision for preserving and recovering the plain forests and rivers around Mestre, which was turned in the *Bosco di Mestre* (Mestre wood) program started by the municipality of Venice in 2001, then expanded with the *Istituzione Bosco e Grandi Parchi* (Wood and Large Parks Institution) in 2008 (cf. <https://www.comune.venezia.it/it/content/boschi> [03.04.2022]). For an overview on the Bosco di Mestre program, see also: Zanetti, M. (Ed.) (2007). *Il bosco di Mestre*. Portogruaro: Nuovadimensione.

¹⁰⁵³ Cf. <http://venezia.gis.beniculturali.it/vincoli/ambientali-0034> [03.04.2022].

¹⁰⁵⁴ Together with it, the other two forts belonging to the first ring (Gazzera, Tron) were put under protection (Box *Mestre: Forti*, File *Forti vari: pratiche miste*, Document: *Ministero per i Beni Culturali e Ambientali, Forte Vallon (o Carpenedo): Dichiarazione di vincolo* (18 May 1988).

¹⁰⁵⁵ Cit. *Ibid.*



FIG. 5.60 Venice (IT), Forte Carpenedo: cadastral map attached to the protection decree (ASABAPV, Box Mestre: Forti, File Forti vari: pratiche miste)



FIG. 5.61 Venice (IT), Forte Carpenedo: map showing the location of the fort in relation to the wood of Carpenedo (s.d.) (ACCTM, Fond 1, Box Forte Carpenedo, File 2)

These events represent the context in which the actions of the *Gruppo d'Iniziativa per la salvaguardia e l'utilizzo pubblico di forte Carpenedo* (Initiative Group for the Protection and Public Use of Forte Carpenedo; from now on: GdI) took place. Founded in 1994, this voluntary group had as primary goal 'the safeguard of the fort and its natural habitat, and its inclusion in the project of the large wood of Mestre' (FIG. 5.61).¹⁰⁵⁶ Additionally, the intention was to act as an eligible body to which the management of the complex could be entrusted. This could be achieved through the 'public use, compatible with the environmental and historical value of the site'. In order to do so, the GdI presented itself to the Municipality of Venice,¹⁰⁵⁷ which agreed on entrusting them the fort by the end of that year¹⁰⁵⁸ – a decision that was followed by the signing of an official agreement in 1995.¹⁰⁵⁹

However, even before its institutional recognition, the GdI had started to get involved with some concrete actions. Already in 1992, the then *Consiglio di Quartiere Carpenedo-Bissuola* (Neighbourhood Council Carpenedo-Bissuola) had foreseen activities aimed at deepening the knowledge about Forte Carpenedo from both the natural-environmental and historic-architectural point of view,¹⁰⁶⁰ a part of which was partially included in the budget planning in 1993.¹⁰⁶¹

¹⁰⁵⁶ Cit. ACCTM, Fond 1, Box *Forte Carpenedo*, File 1 (*Ente di Gestione e ricerche*), Document: *Gruppo d'Iniziativa per la salvaguardia e l'utilizzo pubblico di forte Carpenedo. Atto costitutivo e statuto* (25 January 1994), 30-31.

¹⁰⁵⁷ Cf. *Ibid.*, Document: Presentation letter from GdI to the councilor for cultural heritage of the Municipality of Venice (C. Orazio) (07 February 1994).

¹⁰⁵⁸ *Ibid.*, Document: Comune di Venezia, *Estratto dal registro delle deliberazioni della Giunta Comunale; Seduta del 15 dicembre 1994: Assegnazione al "Gruppo di Iniziativa..." dell'area di Forte Carpenedo* (15 December 1994).

¹⁰⁵⁹ *Ibid.*, Document: Comune di Venezia, *Convenzione per l'assegnazione dell'ex forte Carpenedo in Venezia-Carpenedo* (05 April 1995).

¹⁰⁶⁰ In particular, reference was made to 'the study and cataloguing of the flora and fauna existing in the area, in order to subsequently create an ecological itinerary-path for educational purposes', and 'the historical study of the former military structures that are part of the former entrenched camp of Mestre, with cartographic surveys, etc ..., in order to create an exhibition on this issue' (cit. *Ibid.*, Document: Letter from *Gruppo Consiliare di Rifondazione Comunista, Quartiere Carpenedo-Bissuola* to Municipality of Venice (*Commissioni Parchi, Cultura-Scuola, Urbanistica*), *Proposte di lavoro per l'area dell'ex forte Carpenedo di via Vallon* (10.03.1992)

¹⁰⁶¹ Cf. *Ibid.*, Document: Comune Venezia-CdQ Carpenedo/Bissuola, *Programmazione Culturale* (03.09.1993).

Within this framework, the GdI organized – in collaboration with other associations (Natura Viva, WWF) and citizens – a first ‘cleaning’ of the site, consisting in the liberation of the entrance and internal area of the fort from brambles and vegetation, which had grown luxuriantly after the abandonment of the site by the military.¹⁰⁶²



FIG. 5.62 Venice (IT), Forte Carpenedo: north-west side (F. Marulo 2020)



FIG. 5.63 Venice (IT), Forte Carpenedo: aerial view (s.d.) (Archive Associazione dalla Guerra alla Pace)

¹⁰⁶² Cf. Ibid., Document: Presentation letter from GdI to the councilor for cultural heritage of the Municipality of Venice (C. Orazio) (07 February 1994).

These operations – later on described as an ‘archaeological discovery’¹⁰⁶³ – were also the occasion to unveil hidden parts of the fort’s masonry structures, and to have a first assessment of their state of conservation.¹⁰⁶⁴ Within this framework, the presence of vegetation – and the lack of any maintenance – was considered as a cause of degradation, apparently without considering those parts presenting a green cover in their original military conception.¹⁰⁶⁵ However, in the process of carrying out these activities, a more strategic vision gradually developed.¹⁰⁶⁶ For example, it was decided to limit the clearing of vegetation to the north-west part of the fort (FIG. 5.62-63), where the ‘unveiling’ of military structures continued.¹⁰⁶⁷

¹⁰⁶³ In describing the activities of this starting phase, P. Morellini – involved in the work of the GdI since its foundation – said: ‘For a while we worked trying to deforest, bringing to light parts of the fort. It had been abandoned for ten years, since the mid-1980s [...] Outside there was still the marshal, who had the little house where he lived, but the fort was not used for any purpose. The last few years of use have been as a landfill, because when we arrived, we found an order in the disorder: in one corner there were filters and gas masks, in another the cages and hand grenades; they [the militaries] came here with the truck and unloaded all this disused material. At one point they didn’t even need to do this anymore, and the state property gave the structure to the municipality. We, as an association, asked to have a concession, in exchange for the opening of the fort on the first Sunday of each month – this was the agreement with the municipality – and carrying out maintenance work, or better, a real archaeological discovery; because as we cleared the site from vegetation, we unearthed materials and parts of the structure. For example, General Arvali, who was in charge of the north-east fortifications, was unaware of the presence of large-caliber batteries on the upper level, resting on a stone platform; over the years, the latter had been covered with earth due to the changed use in ammunition depot facility. So, we dug up, pulling this earth away, and we brought the fort back to light’ (cf. Interview to P. Morellini (GdI) (23 August 2020).

¹⁰⁶⁴ ‘The uncontained growth of vegetation is rapidly causing damage to the masonry structures [...] with the formation of cracks and lifting, and very serious infiltrations from the vaults with consequent flooding, particularly evident in the central crosspiece (*traversone centrale*) [...] in a good state of conservation is that part of the attack front covered by some non-original buildings and consisting of canopies and small covered rooms that prevented the growth of vegetation and the relative damage to the original premises below. [...] Particularly serious is the situation of the four ‘caponiere’, completely flooded and unusable, due to their very low level and the repeated raising of the level of the lake, with inevitable disastrous consequences also for the neighbouring premises’ (cf. *Ibid.*, Document: Presentation letter from GdI to the coucilor for cultural heritage of the Municipality of Venice (C. Orazio) (07 February 1994).

¹⁰⁶⁵ Indistinctively considered is the vegetation that ‘literally covered almost all the original structures, the “ramparts” of the external perimeter and the covering of the “central crosspiece”, burying not only the “patrol paths”, but the “shooting ranges” themselves with relative accesses (cf. *Ibid.*).

¹⁰⁶⁶ Reference is made to the activities carried out in the course of 1995, which included the redevelopment of the external area – through the planting of ‘native’ plants in order to foster the inclusion of the area in the Mestre wood – the implementation of a nursery garden in the vicinity of the entrance guardhouse, and the excavation of the fort ditch. Finally, an exhibition on both the ‘architectural’ and ‘naturalistic’ history of the site was settled in the internal guardhouse, located next to the entrance portal; the latter involved some interventions, including ‘the reclamation of the internal walls, the closure of some water infiltrations, the arrangement of the fixtures,’ for which no confirmation was found in the practices approved by the Superintendent of Venice (cf. *Ibid.*, Document: Letter from GdI to the coucilor for cultural heritage of the Municipality of Venice (C. Orazio), *Relazione sulle attività svolte nell’area di Forte Carpenedo e programma d’interventi per il 1995* (29 June 1995).

¹⁰⁶⁷ Reference is made to ‘one of the six main positions of the fort’, which was ‘cleared of the earth with which they were covered after the transformation of the original structure into a powder depot’, and ‘one of the six smaller pitches (*piazzola*) of which the fort was composed’ (cf. *Ibid.*).



FIG. 5.64 Venice (IT), Forte Carpenedo, model showing the approach followed for the maintenance of vegetation: the left side is brought back to its military appearance, the right side is left untouched (F. Marulo 2020)

Instead, the north-east part was left untouched, not only for 'a better conservation of the structures', but also 'to not disturb nesting and presence of animals'(FIG. 5.64).¹⁰⁶⁸

In this phase, the focus was on the 'native' nature of the Carpenedo wood. This can be observed in the contributions of other associations that, together with the GdI, were also actively involved in the revitalization of Forte Carpenedo. Reference is made to the Venice section of the World Wildlife Fund (WWF), which – based on previous activities¹⁰⁶⁹ – published, in 1996, a booklet containing a proposal for the reuse, conservation and environmental enhancement of the fort (FIG. 5.65).¹⁰⁷⁰ In it, Forte Carpenedo is considered as the most interesting of all the forts of the Entrenched Field of Mestre 'from an environmental and naturalistic point of view'.¹⁰⁷¹ Therefore, a 'strong but gradual environmental restoration project' was proposed to the Municipality of Venice.¹⁰⁷² It consisted in a set of interventions including reforestation

¹⁰⁶⁸ Cf. *Ibid.*

¹⁰⁶⁹ By virtue of an agreement with the Department of Ecology of the Municipality of Venice, in 1993 the WWF conducted a specific flora and fauna study on the area of Forte Carpenedo, with the collaboration of expert naturalists; the results of that study were shown in an exhibition at the municipality of Mestre in 1994, which was then turned into the already-mentioned permanent exhibition (see note n. 273) hosted in the fort's guardhouse (cf. Fondo Mondiale per la Natura WWF Sezione Venezia (1996). *Forte Vallon, op.cit.*, 1).

¹⁰⁷⁰ Cf. *Ibid.*

¹⁰⁷¹ Cit. *Ibid.*

¹⁰⁷² ACCTM, Fond 1, Box *Forte Carpenedo*, File 1 (*Ente di Gestione e ricerche*), Document: (WWF Fondo Mondiale per la Natura – Sezione Venezia), *FORTE VALLON – Ipotesi di utilizzo. Proposta di conservazione e miglioramento ambientale* (January 1996).

and/or targeted reduction of vegetation, the mowing of grassland areas and the identification of areas requiring integral protection. These choices were inspired not only by climatic and ecologic reasons, but also by historical considerations.¹⁰⁷³ However, reference was mainly made to the native wood species originally representing the land cover in the former wood area, being the military phase implicitly recognized as the cause of its only partial 'naturalness',¹⁰⁷⁴ and its resulting in an 'environment tampered by man'.¹⁰⁷⁵ Finally, suggestions were made on how to 'avoid new plantings on the areas above the buildings', in order to prevent the roots of trees and shrub species from undermining 'the stability of the masonry artefacts'.¹⁰⁷⁶

In the face of the considerable intervention needs raised by the GdI in this initial phase, starting from 1996 the attention shifted to the recovery of the external guardhouse, in order to transform this building into an environmental education centre. This intention had already been expressed in the course of previous initiatives,¹⁰⁷⁷ and stemmed from the will to create a welcoming place for visitors (in particular, schoolchildren) of the Mestre wood. The idea was to turn Forte Carpenedo into a stopping point within the surrounding environmental system. In parallel, the project was also aimed at solving the lighting problems inside the fort through the installation of a photovoltaic system on the guardhouse's roof, in order to provide for the fort's energy needs. In this way, not only the 'self-sufficiency that historically characterized the fort' could be restored, but the site could also be equipped with 'an important educational and cultural tool aimed at greater

¹⁰⁷³ Cf. Fondo Mondiale per la Natura WWF Sezione Venezia (1996). *Forte Vallon, op.cit.*, 8.

¹⁰⁷⁴ Cit. *Ibid.*, 1.

¹⁰⁷⁵ Cit. *Ibid.*, 3. In this sense, interesting is also the kind of narration used to describe the fort in one of the illustrative brochures drawn up by the GdI (cf. ACCTM, Fond 1, Box *Forte Carpenedo*, File 1 (*Ente di Gestione e ricerche*), Document: (GdI), *Incontro al forte. Nel cuore del bosco* (s.d.), where it is noted that – 'despite' the construction of the fortified area – some components of the original flora and fauna had survived to the partial demolition of the Carpenedo wood. Accordingly, the widespread presence of *Robinia* is described as the sign of an 'altered environment', for its being an 'infesting species' not belonging to the original wood flora; the latter, however, represents one of the plant species typically used in fortified sites with the dual function of preventing the erosion of embankments and hiding the military structures with their foliage (cf. Brunello, P. (Ed.) (1988). *I forti del campo trincerato di Mestre, op.cit.*, 87). Recognized to the military presence was, however, the merit of having created 'an artificial wetland' – namely, the moat that encloses the fort.

¹⁰⁷⁶ Cit. Fondo Mondiale per la Natura WWF Sezione Venezia (1996). *Forte Vallon, op.cit.*, 13.

¹⁰⁷⁷ Cf. ACCTM, Fond 1, Box *Forte Carpenedo*, File 1 (*Ente di Gestione e ricerche*), Document: Letter from GdI to the coucilor for cultural heritage of the Municipality of Venice (C. Orazio), *Relazione sulle attività svolte nell'area di Forte Carpenedo e programma d'interventi per il 1995* (29 June 1995).

knowledge on the use of renewable energy'.¹⁰⁷⁸ In addition to the latter, the works on the guardhouse – approved and financed by the municipality – included internal and external transformations. Presented to the Superintendence of Venice, the latter gave its approval to the project in consideration of the fact that the building involved was outside of the protected area (FIG. 5.66–67).¹⁰⁷⁹ Eventually, the environmental education centre was officially inaugurated in 1999,¹⁰⁸⁰ to complement the educational activities carried out in the nursery garden and the naturalistic path realized in the area surrounding the fort site.¹⁰⁸¹

This intervention and the activities of the GdI provided the fort with a new recognizable identity for the public, even before the definitive acquisition of the site to the municipal property (2003). This condition was acknowledged in the Guidelines (2007). Its acquired 'specificity linked to environmental education' was recognized. Moreover, it was considered as the fort 'best suited to be a museum of itself' together with Forte Marghera.¹⁰⁸² Therefore, Forte Carpenedo was identified as a pilot case for which detailed guidelines were outlined as a sample for the 'recovery of the fortified structures'.¹⁰⁸³ Starting from a classification of the fort's areas (FIG. 5.68), some indications were provided for the natural/vegetal, water, paved, and built surfaces.

¹⁰⁷⁸ Cit. *Ibid.*, Document: Letter from GdI to Municipality of Venice, *Progetto per il forte Carpenedo di utilizzo di fonte energetica rinnovabile* (1 October 1996). For the implementation of such intervention, a collaboration with ENEL was established; the latter provided the design of the photovoltaic system (cf. ASABAPV, Box *Mestre: Forti*, File *Forti vari: pratiche miste*, Document: (Enel) *Installazione di impianto fotovoltaico. Relazione tecnica* (29 December 1998).

¹⁰⁷⁹ Cf. *Ibid.*, Document: Communication from Superintendence to Municipality of Venice, *Ve-Mestre – Forte Carpenedo – Lavori di installazione impianto fotovoltaico* (13 May 1999).

¹⁰⁸⁰ Cf. ACCTM, Fond 1, Box Forte Carpenedo, File 1 (Ente di Gestione e ricerche), Document: Comune di Venezia, presentazione dei lavori per la realizzazione del Centro di Educazione Ambientale al Forte Carpenedo e del progetto "Tetto fotovoltaico" (20 June 1999). See also: Comune di Venezia (2008). Centro di Educazione Ambientale Forte Carpenedo: Proposte didattiche anno scolastico 2008/2009. CPM: Venezia.

¹⁰⁸¹ Cf. *Ibid.*, Document: Letter from GdI to the councilor for cultural heritage of the Municipality of Venice (C. Orazio), *Relazione sulle attività svolte nell'area di Forte Carpenedo e programma d'interventi per il 1995* (29 June 1995).

¹⁰⁸² Cf. Marco Polo System GEIE (2007). *Linee guida al Piano per il riuso*, op.cit., 36.

¹⁰⁸³ Cf. *Ibid.*, 53-58.



FIG. 5.65 Venice (IT), Forte Carpenedo: the plan proposed by WWF (1996) (ACCTM, Fond 1, Box Forte Carpenedo, File 1)



FIG. 5.66 Venice (IT), Forte Carpenedo: the external guardhouse (F. Marulo 2020)

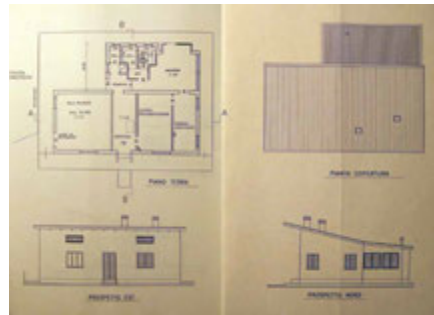


FIG. 5.67 Venice (IT), Forte Carpenedo, external guardhouse: project for the Centro di Educazione ambientale (Environmental Education Centre) (1996) (ASABAPV, Box Mestre: Forti, File Forti vari: pratiche miste)

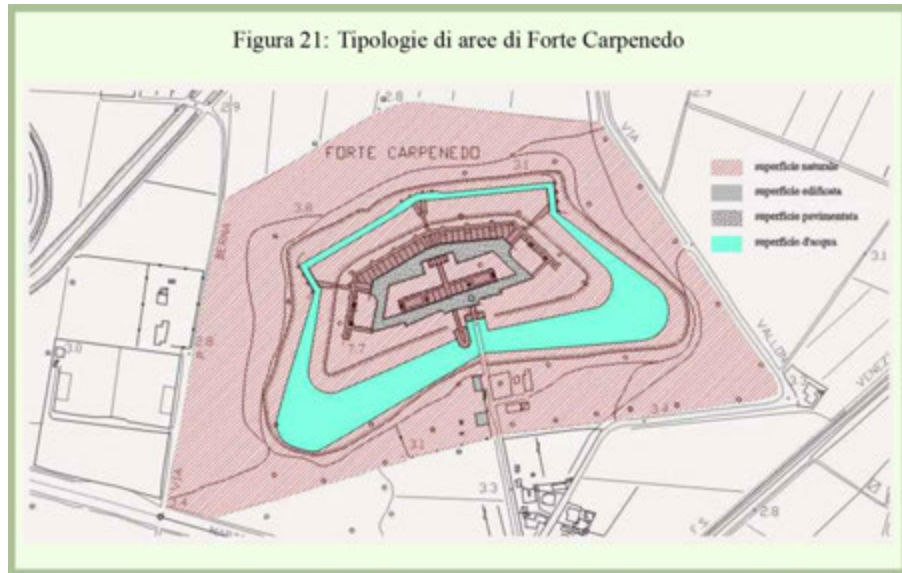


FIG. 5.68 *Linee guida al Piano per il riuso e la valorizzazione del Campo trincerato di Mestre* (Guidelines to the Plan for the reuse and enhancement of the Entrenched Field of Mestre): Forte Carpenedo, classification of the fort site in areas' typologies: natural surface (red), built surface (dark red), paved surface (grey), water (blue) (Marco Polo System GEIE 2007, *Relazione illustrativa*: 56)

About the green components, a selective approach was suggested, based on the assessment of those situations where the vegetation represented a threat for the buildings.¹⁰⁸⁴ For the red components, the interventions had to aim 'at an almost philological restoration of the buildings as they were originally conceived'.¹⁰⁸⁵ Finally, the paved and water surfaces were connected on the need to recover the rainwater collection system.¹⁰⁸⁶

¹⁰⁸⁴ Cf. *Ibid.*, 56-57.

¹⁰⁸⁵ Cit. *Ibid.*, 57.

¹⁰⁸⁶ Such need had already been expressed by the GdI in the report resulting from the first explorations and cleaning operations of the fort: 'The internal hydraulic structures, consisting of some interesting canalizations and relative bulkheads functional to the management, through wells and fountains, of the water supply of the garrison require a total recovery work. The structures are still present, but in an evident state of neglect, probably already dating back to the last period of military management' (cf. ACCTM, Fond 1, Box *Forte Carpenedo*, File 1 (*Ente di Gestione e ricerche*), Document: Presentation letter from GdI to the council for cultural heritage of the Municipality of Venice (C. Orazio) (07 February 1994). In relation to this, the poor state of conservation of the water system seems to date back to the early twentieth century, when the fort and the entrenched field were still in operation (cf. Zanlorenzi, C. (Ed.) (2009). *I forti di Mestre*, *op.cit.*, 98). Additionally, the Guidelines also suggested a consistent excavation work on the moat – in continuation of the intervention carried out by volunteers – aimed at a better regulation of the overall water system, and complemented by the strengthening of the embankments (cf. Marco Polo System GEIE (2007). *Linee guida al Piano per il riuso*, *op.cit.*, 58).

The indications coming from both the Guidelines and the decades-long experience of the GdI were partially included in the RE.MO.VE. program (2017), started by the municipality of Venice for the recovery of the forts on the mainland. Together with Forte Mezzacapo,¹⁰⁸⁷ Forte Carpenedo was one of the sites where the most of the interventions were envisaged. A first set of works were planned for the recovery of the access bridge,¹⁰⁸⁸ for which the demolition and complete reconstruction of the existing wooden deck, with removal of the underlying secondary planks, was planned (FIG. 5.69).¹⁰⁸⁹ Additionally, a second intervention was planned for the structures of the so-called *ex archivio militare* (former military archive): a sheet metal canopy on wooden beams supported by a brick structure, located above the attack crosspiece (*traversone d'attacco*) for about half of its length. This structure had been built when the fort was transformed into a powder depot¹⁰⁹⁰ (1910s). It had been the subject of attention since the first activities carried out by the GdI. Although praised for having preserved the underlying building from the undisturbed spread of vegetation, its demolition was seen as highly desirable (FIG. 5.70).¹⁰⁹¹

¹⁰⁸⁷ The interventions envisaged for Forte Mezzacapo are described later on in this paragraph.

¹⁰⁸⁸ The need for such intervention had been highlighted by the GdI, which had already replaced a part of the wooden flooring, and repainted the balustrades (cf. ACCTM, Fond 1, Box *Forte Carpenedo*, File 1 (*Ente di Gestione e ricerche*), Document: Letter from GdI to the councilor for cultural heritage of the Municipality of Venice (C. Orazio), *Relazione sulle attività svolte nell'area di Forte Carpenedo e programma d'interventi per il 1995* (29 June 1995).

¹⁰⁸⁹ The new deck had to be realized with a single layer of thicker planking. In addition, the parapets had to be repainted (cf. ASABAPV, Box *Mestre: Forti*, File *Forti vari (pratiche in corso, 2020)*, Document: Municipality of Venice, *Lavori di restauro, adeguamento funzionale, normativo e riordino dei forti Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossaroll. Progetto definitivo. Relazione generale* (2017), 21).

¹⁰⁹⁰ Cf. *Ibid.*

¹⁰⁹¹ Indeed, already in 1998, a request was made to the Superintendence of Venice about the demolition of this structure, at that time described as a simple 'tool shed,' and considered as an 'alienating element compared to the original construction of Forte Carpenedo, disturbing the natural harmony of the whole with its presence;' moreover, the precarious conditions of this structure – and the risks posed by it to the safety of visitors – constituted a further element in favour of its demolition. All this was then part of the 'stylistic conception' – further defined as 'reconstitution (*ripristino*) of the original conditions' – with which the volunteers imagined the restoration of the fort's structures. However, already in that occasion the Superintendence postponed this proposal to a subsequent evaluation, by virtue of the value of that structure as an 'interesting document of the recent history of military use of the fort' (cf. ASABAPV, Box *Mestre: Forti*, File *Forti vari: pratiche miste*, Document: *Venezia-Mestre – "Forte Carpenedo" – Rimozione Tettoia. Relazione* (6 May 1998).



FIG. 5.69 Venice (IT), Forte Carpenedo: the main portal and the access bridge (F. Marulo 2020)



FIG. 5.70 Venice (IT), Forte Carpenedo: the structures of the military archive on the attack crosspiece (F. Marulo 2020)



FIG. 5.71 Venice (IT), Forte Carpenedo: the central crosspiece (F. Marulo 2020)

Also in the Guidelines (2007), the intention to demolish the structures of the former military archive was reconfirmed.¹⁰⁹² Nevertheless, the intervention proposed by the municipality in 2017 aimed at its recovery and structural strengthening.¹⁰⁹³

Together with confirming the documental value already previously attributed to this structure by the Superintendence of Venice, it was additionally considered as an element of 'dialogue with the rigorous architecture of the interior and the exuberant nature on its back', thus, 'amplifying the spatial charm' in this part of the fort.¹⁰⁹⁴

Finally, together with some other minor interventions introduced in a following elaboration phase of the RE.MO.VE. program (2018),¹⁰⁹⁵ the municipality has proposed the structural strengthening of the central crosspiece (*traversone centrale*) by means of consolidating injections (2019) (FIG. 5.71).¹⁰⁹⁶

¹⁰⁹² Cf. Marco Polo System GEIE (2007). *Linee guida al Piano per il riuso, op.cit.*, 57.

¹⁰⁹³ In particular, it included the replacement of the sheet metal roof with a new one with corten effect treatment, connected to the underlying wooden structure and the masonry structures; in the semi-open part, corresponding to the so-called shooting ranges (*piazzole di tiro*), the reinforcement of the masonries was also planned, while in the closed rooms the elimination of the false ceilings, now seriously deteriorated, and the construction of new fixtures were foreseen; finally, a new concrete slab flooring is planned for the entire area (cf. ASABAPV, *Box Mestre: Forti, File Forti vari (pratiche in corso, 2020)*, Document: Municipality of Venice, *Lavori di restauro, adeguamento funzionale, normativo e riordino dei forti Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossaroll. Progetto definitivo. Relazione generale* (2017), 22-23; *Ibid.*, Document: Municipality of Venice, *Lavori di restauro, adeguamento funzionale, normativo e riordino dei forti Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossaroll. Progetto esecutivo. Relazione generale* (2018), 3).

¹⁰⁹⁴ *Cit. Ibid.*, Document: Municipality of Venice, *Lavori di restauro, adeguamento funzionale, normativo e riordino dei forti Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossaroll. Progetto definitivo. Relazione generale* (2017), 22.

¹⁰⁹⁵ Reference is made to the construction of toilets inside a recent concrete building already existing near the entrance, as well as the reorganization of the lighting system (cf. *Ibid.*, Document: Municipality of Venice, *Lavori di restauro, adeguamento funzionale, normativo e riordino dei forti Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossaroll. Progetto esecutivo. Relazione generale* (2018), 3).

¹⁰⁹⁶ Cf. *Ibid.*, Document: Municipality of Venice, *Lavori di messa in sicurezza e adeguamento dei forti della terraferma. Progetto definitivo. Relazione illustrativa* (2019), 7.

Forte Mezzacapo

Together with Forte Carpenedo, Forte Mezzacapo represents another relevant case, where the local voluntarism has proved to play a beneficial role in the revitalization of the military site (FIG. 5.72-73). Despite the delay in the institutional recognition of its heritage value,¹⁰⁹⁷ already in 1998 a first proposal was made to reuse Forte Mezzacapo for ‘environmentally-friendly accommodation’ and ‘organic farming’ activities, to be run by a consortium of local companies.¹⁰⁹⁸



FIG. 5.72 Venice (IT), Forte Mezzacapo: location in the Entrenched Field of Mestre (aerial image retrieved at: <https://geoportale.comune.di.venezia.it> [05.06.2020]) (F. Marulo 2020)

¹⁰⁹⁷ The fort was put under legal protection only on 03.09.2012.

¹⁰⁹⁸ Cf. ACCTM, Fond 1, Box *Forti di terra*, File 1 (*Forte Mezzacapo*), Document: (Comune di Venezia, Consiglio di Quartiere Zelarino-Cipressina), *Proposta per l'utilizzo di forte Mezzacapo: La migliore opportunità per realizzare un consorzio di imprese nel settore dell'agricoltura biologica e della ricettività ecocompatibile* (May 1998).

However, it was only after the acquisition of the fort by the municipality (2003) that the first revitalization activities really got started.¹⁰⁹⁹ In that year, the Association *Dalla Guerra alla Pace – Forte alla Gatta* (From War to Peace – Forte alla Gatta)¹¹⁰⁰ was founded, with the aim of promoting the ‘architectural and functional recovery’ as well as the ‘safeguard and improving of the environmental conditions’ for the public use of Forte Mezzacapo.¹¹⁰¹



FIG. 5.73 Venice (IT), Forte Mezzacapo: aerial view (Archive Associazione dalla Guerra alla Pace)

¹⁰⁹⁹ Unlike other forts, for which the municipality managed to get from the Defence a concession for using the sites already before their definitive acquisition, this did not happen in the case of forte Mezzacapo, despite the requests of the municipal authority (cf. *Ibid.*, Document: Letter from Municipality of Venice to Chief of Defence (Special Office for Disposals) and Venice military authorities, *Forte Mezzacapo – Località Zelarino – Richiesta consegna* (14 October 1999); *Ibid.*, Document: Letter from Municipality of Venice to Army Infrastructure Command (Padua), *Forte Mezzacapo – Comune di Venezia – Richiesta nulla-osta* (15 April 2002).

¹¹⁰⁰ The ‘alla Gatta’ denomination used to identify Forte Mezzacapo is referred to the name of the place – the locality ‘Gatta’ – where it is located.

¹¹⁰¹ Cf. *Statuto dell’Associazione di Promozione Sociale “Dalla Guerra alla Pace – Forte alla Gatta”* (cf. <https://www.fortemezzacapo.com/statuto> [03.04.2022]).



FIG. 5.74 Venice (IT), Forte Mezzacapo: entrance bridge (F. Marulo 2020)

Accordingly, the association planned a number of activities, ranging from the recovery of buildings,¹¹⁰² but also of historical features characterizing the military landscape (i.e. the obliterated water moat surrounding the fort, the earth embankments),¹¹⁰³ in the framework of a more general 'environmental restoration' of the site.¹¹⁰⁴ In parallel, the previous ideas concerning the running of organic farming activities – which are, in turn, connected to the setting of the fort in a well-preserved agricultural landscape – were also brought back in the association's program,¹¹⁰⁵ and then confirmed in the Guidelines (2007).¹¹⁰⁶

¹¹⁰² Cf. Associazione "Dalla Guerra alla Pace – Forte alla Gatta" (2004). Un forte per la città. Le proposte dell'associazione "Dalla Guerra alla Pace – Forte alla Gatta" per l'uso del forte Mezzacapo, in *Il forte Mezzacapo a Zelarino. Storia e progetti d'uso per una fortificazione del campo trincerato di Mestre*, Marcolin, R. and Zanlorenzi, C. (Eds.). Spinea: tipografia Baldo, 41-43.

¹¹⁰³ Cf. Cestaro, D. (2004). Il ripristino del fossato acqueo: recupero storico e fitodepurazione. Un'idea per il forte Mezzacapo, in *Il forte Mezzacapo a Zelarino, op.cit.*, 57-59.

¹¹⁰⁴ Cf. Associazione "Dalla Guerra alla Pace – Forte alla Gatta" (2004). Un forte per la città, *op.cit.*, 41-42.

¹¹⁰⁵ Cf. Pettenò, P. (2004). Agricoltura biologica per forte Mezzacapo nel "sistema dei forti di Mestre", in *Il forte Mezzacapo a Zelarino, op.cit.*, 61-62.

¹¹⁰⁶ Indeed, given its location – 'in an area that has remarkably preserved a significant presence of small agricultural activities' – the best revitalization possibilities for Forte Mezzacapo were identified in the mix of a 'meeting point' for the nearby neighbourhood and a 'farmhouse,' combining educational and small-scale productive activities (cf. Marco Polo System GEIE (2007). *Linee guida al Piano per il riuso, op.cit.*, 36).



FIG. 5.75 Venice (IT), Forte Mezzacapo, concrete battery: interior used as exhibition space (F. Marulo 2020)

About the recovery of buildings, the original idea focused on the concrete battery, representing the main building on the fort site, and on two other auxiliary structures.¹¹⁰⁷ The association wanted to open the concrete battery to the public.¹¹⁰⁸ After a general cleaning of the interiors, an exhibition was set into this building concerning both the history of fortifications and the local peasant tradition (FIG. 5.74-75).¹¹⁰⁹ Subsequently, an intervention was carried out in 2011 for preserving a 'difficult memory' embedded in the history of the site. Reference is made to the restoration of the nazi-fascist inscriptions located at different points of the fort and dating back to the occupation of the military site during the WWII (FIG. 5.76-77).¹¹¹⁰

¹¹⁰⁷ Reference is made to the so-called *casa del maresciallo* (marshal's house) and the *corpo di guardia* (guardhouse) (cf. Associazione "Dalla Guerra alla Pace – Forte alla Gatta" (2004). *Un forte per la città*, *op.cit.*, 42).

¹¹⁰⁸ Such a choice seems to be relevant in comparison to the tendency, emerged from the analysis of the other forts of the second generation – e.g., Forte Rossaroll and Forte Cosenz, described in the subsequent paragraph, but also at Forte Bazzera – to isolate the concrete batteries – and often also the overall historical fort perimeter – from the revitalization activities, which are, instead, frequently concentrated on the auxiliary buildings adjoining the fort site.

¹¹⁰⁹ Cf. Associazione "Dalla Guerra alla Pace – Forte alla Gatta" (2004). *Un forte per la città*, *op.cit.*, 42-43.

¹¹¹⁰ Associazione "Dalla Guerra alla Pace – Forte alla Gatta" (Ed.) (2011). *Il restauro delle scritte nazifasciste del forte Mezzacapo*. Padova: CLEUP.



FIG. 5.76 Venice (IT), Forte Mezzacapo, shed 2 (former projectile workshop): nazi-fascist inscription after restoration (2011). Since the building is used for theatre performances, curtains are occasionally used to hide this difficult memory (F. Marulo 2020)



FIG. 5.77 Venice (IT), Forte Mezzacapo, concrete battery: one of the nazi-fascist inscriptions after restoration (2011) (F. Marulo 2020)



FIG. 5.78 Venice (IT), Forte Mezzacapo, concrete battery: rear side (F. Marulo 2020)

In particular, the interventions concerned both the exterior and the interior wall surfaces of the concrete battery, as well as the interior of two sheds (former projectile workshops) located right in front of the battery's main façade. Following some sampling checks, they were the subject of a cleaning operation – tailored to the characteristics of the support and materials constituting each inscription.¹¹¹¹ The same buildings – together with the ones already identified by the association in its starting plan – were then included in the program started in 2017 by the municipality of Venice for the recovery of the forts on the mainland (RE.MO.VE.).¹¹¹² Within this framework, the envisaged interventions were focused on the preservation of the historical structures affected by severe degradation phenomena. In the case of the concrete battery, given the damages connected to the presence of gaps in the roof's waterproofing layer, the intervention consisted in the removal and replacement of the deteriorated roof sheath;¹¹¹³ subsequently, consolidating injections for filling the cracks on the external surfaces of the perimeter walls were envisaged (FIG. 5.78).¹¹¹⁴

¹¹¹¹ Cf. Gabrieli, G. & Chiolerio, M. (2011). Relazione conclusiva della pulitura e del restauro delle scritte interne ed esterne eseguite nel forte Mezzacapo a Zelarino (VE), in *Il restauro delle scritte nazifasciste del forte Mezzacapo, op.cit.*, 33–34.

¹¹¹² Apart of minor changes, the interventions described below were confirmed in the executive design phase (cf. ASABAPV, *Box Mestre: Forti, File Forti vari (pratiche in corso, 2020)*, Document: Municipality of Venice, *Lavori di restauro, adeguamento funzionale, normativo e riordino dei forti Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossaroll. Progetto esecutivo. Relazione generale* (2018).

¹¹¹³ This had to be done by laying a new rubber-bituminous sheath with continuous polyester reinforcement, after a base layer in bituminous primer (cf. *Ibid.*, Document: Municipality of Venice, *Lavori di restauro, adeguamento funzionale, normativo e riordino dei forti Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossaroll. Progetto definitivo. Relazione generale* (2017), 18–19).

¹¹¹⁴ The consolidating injections were included in a second block of interventions, which are not part of the RE.MO.VE. program, but which represent its effective continuation (cf. *Ibid.*, Document: Municipality of Venice, *Lavori di messa in sicurezza e adeguamento dei forti della terraferma. Progetto definitivo. Relazione illustrativa* (2019), 6).



FIG. 5.79 Venice (IT), Forte Mezzacapo, shed 1 (former projectile workshop): exterior (F. Marulo 2020)



FIG. 5.80 Venice (IT), Forte Mezzacapo, shed 1 (former projectile workshop): interior after the intervention (2017-2019) (F. Marulo 2020)



FIG. 5.81 Venice (IT), Forte Mezzacapo: aerial picture where the trace of the former moat surrounding the fort, now buried, is recognizable (Archive Associazione dalla Guerra alla Pace)

About the two sheds – already in use by the association for recreational activities (theatre, meetings) – the interventions aimed at their structural strengthening. Reference is made to the connection between roof trusses and the perimeter walls, and to the foundations.¹¹¹⁵ A guardhouse¹¹¹⁶ and the marshal's house¹¹¹⁷ were also recovered as logistic point for the association. (FIG. 5.79-80). Finally, a maintenance intervention was envisaged for the four concrete watchtowers existing along the former patrol walkway surrounding the fort site.¹¹¹⁸

For the outdoors of Forte Mezzacapo, the association – in line with its starting intentions – carried out some actions aimed at the 'environmental restoration' of the military site. Reference is made to the choice to unearth a portion of the moat – completely buried during the 1960s – in correspondence with the access bridge, in order to provide visitors with the experience of one of the most significant landscape features of this fortified site.¹¹¹⁹ This intervention is the only implemented part of a wider project aimed at, on the one hand, excavating the whole moat and filling it with water from the Bazzera stream, with the double goal of restoring the original situation and giving it the contemporary function of a phyto-purification circuit (FIG. 5.81). At the same time, the earth obtained from the excavation would have served to restore the embankment behind the concrete battery, which is also no longer present.¹¹²⁰

¹¹¹⁵ At this stage, the choice was made to intervene only on one of the two buildings (shed 1), postponing the strengthening of the second shed to a following phase (cf. *Ibid.*, Document: Municipality of Venice, *Lavori di restauro, adeguamento funzionale, normativo e riordino dei forti Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossaroll. Progetto definitivo. Relazione generale* (2017), 17-18).

¹¹¹⁶ For what the guardhouse is concerned, the building did not present severe damages, and the interventions consisted in the extension of the existing sanitation services, and the bettering of the accessibility to the building by means of ramps (cf. ASABAPV, *Box Mestre: Forti, File Forti vari (pratiche in corso, 2020)*, Document: Municipality of Venice, *Lavori di restauro, adeguamento funzionale, normativo e riordino dei forti Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossaroll. Progetto definitivo. Relazione generale* (2017), 19).

¹¹¹⁷ The intervention involved the partial reconstruction of the roof, the wooden structure of which was severely deteriorated and partially collapsed, and other minor transformations in the interiors to better accommodate the new use of logistic point for the association (Cf. *Ibid.*, 15-17).

¹¹¹⁸ Cf. *Ibid.*

¹¹¹⁹ This intervention was part of a wider project aimed at, on the one hand, excavating the whole moat, to be then filled with the water coming from the Bazzera stream and with the contemporary function of a phyto-purification circuit; at the same time, the earth obtained from the excavation would have served to restore the embankment behind the concrete battery, which is also no longer present (Interview A. Carnio (Associazione "Dalla Guerra alla Pace – Forte alla Gatta) (27.08.2020).

¹¹²⁰ Cf. Cestaro, D. (2004). Il ripristino del fossato acqueo: recupero storico e fitodepurazione. Un'idea per il forte Mezzacapo, in *Il forte Mezzacapo a Zelarino, op.cit.*, 57-59.



FIG. 5.82 Venice (IT), Forte Mezzacapo: the openair exhibition *Ronda dell'Arte* (Patrol of Art) in the former patrol walkway (2015) (F. Marulo 2020)

A similar attention to the historical features of the fort's military landscape, reinterpreted in a contemporary way for recreational purposes, can be found in the reuse of the original patrol walkway for an open-air contemporary art exhibition – significantly entitled *Ronda dell'Arte* (Patrol of Art) – interpreted as a 'pacific invasion' of the former military space. It was realized on the occasion of the centenary of the First World War.¹¹²¹ Together with other previous initiatives,¹¹²² the latter served to promote an image of the fort as a place of art for visitors (FIG. 5.82). Finally, some areas are used for small-scale agricultural and livestock activities. They represent a distinctive element of the vision implemented by the association and aimed at opening the fort to social activities compatible with its historical-military character. The initiatives undertaken by the association on the outdoors of the fort were also supported – albeit to a lesser extent than for the recovery of historic buildings – by those promoted by the municipality. For example, the realization of a driveway at the main access was envisaged, as well as the construction of a parking area, in order to improve the accessibility to the fort site.¹¹²³

¹¹²¹ It was, indeed, conceived as a temporary exhibition (2015–2018), which was then kept, and complemented with other art installations in other parts of the fort (cf. <https://www.fortemezzacapo.com/la-ronda-dell-arte/> [03.04.2022]).

¹¹²² For example, the temporary exhibitions hosted in the concrete battery (cf. Zennaro, A. (Ed) (2011). *Arte indifesa/In difesa dell'arte: artisti al forte* (1–20 October 2011). S.I.: s.n.).

¹¹²³ Cf. ASABAPV, *Box Mestre: Forti, File Forti vari (pratiche in corso, 2020)*, Document: Municipality of Venice, *Lavori di messa in sicurezza e adeguamento dei forti della terraferma. Progetto definitivo. Relazione illustrativa* (2019), 7).

Forte Rossaroll

Forte Rossaroll represents a peculiar case for different reasons (FIG. 5.83-84). First of all, its configuration. Built in the place where a fourth military object was planned – but not realized – as part of the first line of defence (Forte Gazzera, Forte Carpenedo, Forte Tron), it is an exception compared to the other forts of the second generation, since it represents a variation of the Rocchi type. By virtue of this distinctive character, Forte Rossaroll was the first of the second line's forts to be put under legal protection as early as 1990 (FIG. 5.85).¹¹²⁴ Besides this, the subsequent choices made for its reuse contribute to conferring it an exceptional character among the revitalization experiences of the forts of the Entrenched Field of Mestre. Even though one of the voluntary associations had shown an interest in reusing Forte Rossaroll,¹¹²⁵ shortly after the concession of the site to the municipality (1991)¹¹²⁶ the latter entrusted a part of the site to the *Centro di Solidarietà "Don Lorenzo Milani"* for hosting 'structures for the recovery and reintegration of drug addicts'.¹¹²⁷ The original idea of the municipality was to limit this concession to the period preceding the actual acquisition of the fort. However, it turned out to be permanent.¹¹²⁸

¹¹²⁴ Cf. ASABAPV, *Box Mestre: Forti: Forte Rossaroll: vol.1* (fino al 2006), Document: *Ministero per i Beni Culturali e Ambientali, Forte Rossaroll: Dichiarazione di vincolo* (28 March 1990).

¹¹²⁵ Reference is made to the CRT, composed by the inhabitants of Tessera, which then focused their interest on the nearby Forte Bazzera.

¹¹²⁶ In particular, the fort was taken over by the Municipality on 12 July 1991 (cf. *Ibid.*, Document: *Comune di Venezia, Convenzione relativa alla concessione a titolo di comodato gratuito di parte del forte "Rossaroll" in Venezia-Favaro Veneto* (20 February 1992), 3).

¹¹²⁷ The municipality accepted the request in 1991 (cf. *Ibid.*, Document: *Comune di Venezia, Assegnazione strutture appartenenti al compendio dell'ex Forte Rossaroll in località Tessera per realizzazione strutture per il recupero e reinserimento dei tossicodipendenti* (02 May 1991), which was then followed by the signing of an official agreement in 1992 (cf. *Ibid.*, Document: *Comune di Venezia, Convenzione relativa alla concessione a titolo di comodato gratuito di parte del forte "Rossaroll" in Venezia-Favaro Veneto* (20 February 1992).

¹¹²⁸ Even in the Guidelines (2007) no other option was foreseen, considering that its new use 'does not allow to think of other functions that can be connected in some way to an open and free use' (cf. Marco Polo System GEIE (2007). *Linee guida al Piano per il riuso, op.cit.*, 36). Finally, in 2013 the concession was renewed for the next thirty years (cf. ASABAPV, *Box Mestre: Forti: Forte Rossaroll: vol.3 (dal 2011)*, Document: *Forte Rossaroll – Richiesta concessione trentennale da parte del "Centro di Solidarietà Don Lorenzo Milani"* (27 February 2013).



FIG. 5.83 Venice (IT), Forte Rossaroll: location in the Entrenched Field of Mestre (aerial image retrieved at: <https://geoportale.comune.di.venezia.it> [05.06.2020]) (F. Marulo 2020)



FIG. 5.84 Venice (IT), Forte Rossaroll: aerial view (1996) (Archive Associazione dalla Guerra alla Pace)

Initially, only a part of the complex was given to the social centre, outside of the actual fort site but still included in the former military perimeter.¹¹²⁹ In this area the so-called *edificio dell'ex consignatario* (building of the former consignee) and the barracks (24-34) could be found. These buildings required several transformations to accommodate the new function (FIG. 5.86). As soon as in 1992, a project was presented to the local Superintendence, involving the renovation of the buildings,¹¹³⁰ as well as interventions on the open area adjoining them.¹¹³¹

Contrary to expectations, after the definitive acquisition of the fort by the municipality in 2003, the situation did not change. With a new agreement the concession was not only prolonged, but the entire fort complex was given to the social centre.¹¹³² Moreover, the purposes of the concession were also expanded, including the 'management of a receptive complex for low-cost youth tourism'.¹¹³³ Subsequently, the social centre could expand its activities to the whole complex, which was divided in functional clusters.

¹¹²⁹ With reference to the map attached to the declaration of cultural interest (FIG. 5.96), the interested cadastral parcels were: 52, 53, 49, 19 (cf. ASABAPV, Box Mestre: Forti: Forte Roszaroll: vol.1 (fino al 2006), Document: *Comune di Venezia, Convenzione relativa alla concessione a titolo di comodato gratuito di parte del forte "Roszaroll" in Venezia-Favaro Veneto* (20 February 1992). However, the barracks buildings did not figure in such map, although they were built by the Defence in the last period of military use of the fort.

¹¹³⁰ The new functions to be hosted were: a small church, laboratories, offices, dormitories, warehouses, a kitchen with a refectory, a meeting room (cf. *Ibid.*, Document: *Progetto di ristrutturazione delle riserve e alloggio demaniale del forte Cesare Roszaroll ad uso di comunità terapeutica diurna e serale per tossicodipendenti. Relazione tecnica illustrativa delle opere e delle attività svolte nella comunità* (25 February 1992). Being such works 'located outside of the historical structure of fort Roszaroll', they were approved by the local Superintendence (cf. *Ibid.*, Document: Communication from Superintendence to Don F. De Pieri, *Venezia-Mestre – Favaro Veneto – ex Forte Roszaroll – intervento di ristrutturazione* (13 April 1992). The original project – the works for the implementation of which started in 1995 – was subjected to some in-progress variations on the internal distribution of buildings in 1997 and 1999 (cf. *Ibid.*, Document: *Progetto di ristrutturazione delle riserve del forte militare Roszaroll di Tessera. Comunicazione Inizio Lavori* (01 June 1995); *Ibid.*, Document: *Progetto di ristrutturazione delle riserve del forte militare Roszaroll di Tessera. Variante in corso d'opera. Relazione tecnica* (17 October 1997); *Ibid.*, Document: *Progetto di ristrutturazione delle riserve del forte militare Roszaroll di Tessera. Richiesta ulteriori modifiche. Relazione tecnica* (30 September 1999).

¹¹³¹ Reference is made to excavation works and the realization of the needed infrastructures (water, gas, electricity, sewage systems), the improvement of internal roads, the realization of a parking lot and the planting of trees (cf. *Ibid.*, Document: Communication from Superintendence to Don F. De Pieri, *Venezia-Mestre – Favaro Veneto – ex Forte Roszaroll – intervento di ristrutturazione* (13 April 1992).

¹¹³² Cf. ASABAPV, Box Mestre: Forti: Forte Roszaroll: vol.2 (dal 2006 al 2010), Document: Comune di Venezia, Concessione dell'ex forte "Roszaroll" in Venezia – Favaro Veneto, 2 (31 December 2003). As stated in such agreement, the decision to extend the area given to the social centre dates back to 1999.

¹¹³³ Cf. *Ibid.* Such intention can be considered as a follow up to the choice of using the fort as a temporary accommodation during the Jubilee 2000. In that occasion, prefabricated housing units were realized (cf. ASABAPV, Box Mestre: Forti: Forte Roszaroll: vol.1 (fino al 2006), Document: (Milanese & Modena arch.) *Progetto di installazione alloggi prefabbricati a Tessera, Forte Roszaroll* (22 February 1999); *Ibid.*, Document: (Ditta AMAV), *Installazione alloggi prefabbricati per il pernottamento a basso costo. Tessera, Forte Roszaroll* (22 February 1999).



FIG. 5.85 Venice (IT), Forte Rossaroll: cadastral map attached to the protection decree (ASABAPV, Box Mestre: Forti: Forte Rossaroll: vol. 1)

Accordingly, in the time span from 2006 to 2010, the existing buildings underwent further renovations in order to comply with the structural standards set by the regional law (n. 22/2002) (FIG. 5.86).¹¹³⁴ Finally, between 2013 and 2018, new outdoor facilities were realized,¹¹³⁵ a new warehouse-pantry building was added,¹¹³⁶ together with a new 'restyling' of the barracks¹¹³⁷ and of the open spaces.¹¹³⁸

¹¹³⁴ Cf. ASABAPV, Box Mestre: Forti: Forte Rossaroll: vol.1 (fino al 2006); ASABAPV, Box Mestre: Forti: Forte Rossaroll: vol.2 (dal 2006 al 2010).

¹¹³⁵ Reference is made to two sports fields for basketball and volleyball (cf. ASABAPV, Box Mestre: Forti: Forte Rossaroll: vol.3 (dal 2011), Document: Forte Rossaroll – Realizzazione di campo da calcio e campo di basket/pallavolo (21 March 2013).

¹¹³⁶ Cf. *Ibid.*, Document: Forte Rossaroll – Realizzazione edificio magazzino-dispensa (19 July 2013).

¹¹³⁷ This time, the aim of the interventions on the buildings (lot 1, n. 1-11) was energy retrofit (cf. *Ibid.*, Document: Forte Rossaroll – Sistemazione area ex forte Rossaroll (24 January 2014).

¹¹³⁸ Cf. *Ibid.*, Document: Forte Rossaroll – Sistemazione spazi aperti di pertinenza (16 November 2016); *Ibid.*, Document: Forte Rossaroll – Realizzazione di padiglioni con struttura metallica posizionati nell'area verde in prossimità degli edifici del lotto occupati dalla struttura socio-sanitaria (28 July 2018).



FIG. 5.86 Venice (IT), Forte Rossaroll: refurbishment of one of the barracks (lot 1, n. 10) (2006) (ASABAPV, Box Mestre: Forti: Forte Rossaroll: vol. 2)

However, the actual fort was completely excluded from any conservation or reuse activity. Its historical value seems to have made it untouchable. At the same time, the conformation of its main concrete structure – which had represented the distinctive trait of this fort since its first heritage recognition – did not match the reuse choices pursued by the social centre. Like a wreck in the middle of the site, its abandonment seems to resist attempts to give a new life to the complex. As a response to this condition, the area of the historic fort was included in the more general program launched in 2017 by the municipality of Venice for the recovery of the forts on the mainland (RE.MO.VE.). In it, the peculiarities of the site are recognized, not only in relation to the concrete building, but also in the system of embankments, which unlike in other cases is exceptionally well preserved.¹¹³⁹ Nevertheless, the interventions were limited to the access bridge¹¹⁴⁰ and the main concrete battery.¹¹⁴¹ (FIG. 5.87) Even if this maintenance work represented a necessary starting point, no perspective for the revitalization of the historical fort site in its full extension was provided.

¹¹³⁹ Cf. ASABAPV, *Box Mestre: Forti, File Forti vari (pratiche in corso, 2020)*, Document: *Municipality of Venice, Lavori di restauro, adeguamento funzionale, normativo e riordino dei forti Manin, Carpenedo, Gazzera, Tron, Mezzacapo, Pepe, Rossaroll. Progetto definitivo. Relazione generale* (2017), 29.

¹¹⁴⁰ In particular, reference is made to the reintegration of the deteriorated wooden planks of the floor, and to the verification of the state of conservation of the piers with any 'targeted maintenance' (cf. *Ibid.*).

¹¹⁴¹ About the concrete battery, given the general decayed conditions of the building – characterized by the presence of 'infesting vegetation on the roof [...] with shrubs even of considerable size', 'widespread and deep cracks' on the facades, and 'rusty concretions' on metallic elements (external stairs, windows' grills) – the envisaged interventions concerned the primary cleaning from vegetation, then followed by the necessary reintegration in the concrete support where damaged by the radical apparatus, and the affixing of provisional works (shoring systems) where the stability of the building seems to be threatened (cf. *Ibid.*, 30).



FIG. 5.87 Venice (IT), Forte Rossaroll: concrete battery, exterior (2006) (Archive Associazione dalla Guerra alla Pace)

Forte Cosenz

In the case of Forte Cosenz, its location ‘almost at the centre of the to-be Mestre wood’ was identified as crucial in the 2007’s guidelines (FIG. 5.88).¹¹⁴² Its integration in ‘the largest multifunctional territorial object’ in the Venetian mainland was strongly promoted.¹¹⁴³ Accordingly, the function of ‘service center’ or ‘logistical support structure’ for the wood’s visitors was seen as the most appropriate for its revitalization.¹¹⁴⁴ Indeed, in the *piano guida del Bosco di Mestre* (guide plan of the Mestre Wood) (2004), one of the three buildings in the fort complex – namely, the so-called *casa del maresciallo* (marshal guardhouse) – was identified as the location where to host this facility (FIG. 5.89-90).¹¹⁴⁵

¹¹⁴² Marco Polo System GEIE (2007). *Linee guida al Piano per il riuso*, op.cit., 36.

¹¹⁴³ *Ibid.*, 30.

¹¹⁴⁴ *Ibid.*, 36.

¹¹⁴⁵ Cf. ASABAPV, *Box Mestre: Forti: Forte Cosenz*, Document: *Istituzione Bosco e Grandi Parchi* (Municipality of Venice), *Programma di valorizzazione Casa del Maresciallo presso Forte Cosenz a Favaro Veneto – Venezia. Il Centro Visitatori del Bosco di Mestre* (February 2015), 19. The piano guida del Bosco di Mestre (guide plan of the Mestre wood) was first approved in 2004, and then modified in 2009 (cf. <https://www.comune.venezia.it/it/content/piano-guida> [08.04.2022]).



FIG. 5.88 Venice (IT), Forte Cosenz: location in the Entrenched Field of Mestre (aerial image retrieved at: <https://geoportale.comune.di.venezia.it> [05.06.2020]) (F. Marulo 2020)



FIG. 5.89 Venice (IT), Forte Cosenz: aerial view (1996) (Archive Associazione dalla Guerra alla Pace)

In the meantime, in 2005 another building of the fort – the *fabbricato di truppa e ricovero mezzi* (troop building and tool shed) – was given in concession, together with the adjoining green area, to the Veneto region.¹¹⁴⁶ It was refurbished as a meeting place for its employees (FIG. 5.91).¹¹⁴⁷ Additionally, in the outdoor space a parking lot, an illuminated football field and vegetable gardens were created.¹¹⁴⁸

Subsequently, the Veneto Region presented a first proposal for an *Accordo di Valorizzazione* (Enhancement Agreement) in 2014, aimed at the free acquisition of the fort site on the base of a *Programma di Valorizzazione* (enhancement program).¹¹⁴⁹ The idea was to use the open spaces for civil protection activities.¹¹⁵⁰

¹¹⁴⁶ With resolution n.26/16.02.2005, the Regional Council in collaboration with its *Organismo Culturale Ricreativo Assistenza Dipendenti* (O.C.R.A.D. – Recreational Cultural Organization for Employee Assistance) committed to identifying spaces eligible for the development of cultural and socialization activities for the regional employees. Accordingly, the O.C.R.A.D managed to get a concession agreement from the *Agenzia del Demanio* (State Property Agency) for the use of a portion of Forte Cosenz: namely, the afore-mentioned building and the related area to the south-east of the complex (cf. ASABAPV, *Box Mestre: Forti: Forte Cosenz*, Document: *Regione Veneto, Associazione O.C.R.A.D. Forte Cosenz – Favaro Veneto. Risanamento e riqualificazione funzionale del fabbricato “A”. Progetto Definitivo. Relazione Tecnica* (29 June 2006), 3).

¹¹⁴⁷ Given the poor conditions of the building and the alterations it had undergone, the intervention involved several demolitions (i.e. the roof, the recently built internal partitions, the internal floors and plasters, the windows and doors' frames), as well as the reconfiguration of some of the openings to their original layout. Subsequently, the roof was reconstructed with a new wooden truss, thermal insulation and finishing coat in tiles and tiles, and plasterboard ceilings were realized; the new internal distribution – composed by changing rooms, toilets, kitchen, recreation room – was realized by means of counter-walls with interposed insulating panel; moreover, new electrical and hydro-thermo-sanitary systems were added, together with two technical mezzanines for housing them; construction of new smooth quartz flooring except for the changing rooms, bathrooms and kitchens, where ceramic tile flooring is envisaged; the plasters were refurbished in a colour similar to the existing one; construction of an external sidewalk along the perimeter of the building (cf. *Ibid.*, 4). The works as described in the report of 2006 – apart of some changes in progress – were concluded in 2010 (cf. *Ibid.*, Document: *Regione Veneto, Associazione O.C.R.A.D. Forte Cosenz – Favaro Veneto. Risanamento e riqualificazione funzionale del fabbricato “A”. Variante in corso d’opera* (23 January 2008); *Ibid.*, Document: *Regione Veneto, Associazione O.C.R.A.D. Forte Cosenz – Favaro Veneto. Risanamento e riqualificazione funzionale del fabbricato “A”. Variante n.2 in opera* (05 May 2010); *Ibid.*, Document: *Lavori di riqualificazione e risanamento del fabbricato “A” del compendio immobiliare di Forte Cosenz – Certificato esecuzione lavori* (28 July 2010).

¹¹⁴⁸ Cf. *Ibid.*, Document: *Regione Veneto, Associazione O.C.R.A.D. Forte Cosenz – Favaro Veneto. Risanamento e riqualificazione funzionale del fabbricato “A”. Progetto Definitivo. Relazione Tecnica* (29 June 2006), 5.

¹¹⁴⁹ From the enhancement agreement then actually signed (2018), we learn that the Region had already shown its interest in 2011 with a pre-feasibility study (cf. *Ibid.*, *Agenzia del Demanio (Direzione Regionale Veneto), Ministero Beni e Attività Culturali e Turismo (Segretario Regionale per il Veneto), Regione Veneto (Dipartimento Affari Generali Demanio), Comune Venezia. Accordo di Valorizzazione relativo a “Forte Cosenz”* (2018), 3).

¹¹⁵⁰ Cf. *Ibid.*, 4.



FIG. 5.90 Venice (IT), Forte Cosenz within the *Piano Guida del Bosco di Mestre* (Guide Plan of the Mestre Wood) (2009) (Map available at: <https://www.comune.venezia.it/pianoguida> [03.04.2022])

Almost simultaneously, a proposal was drafted by the municipality of Venice in 2015, the main goal of which was the enhancement of the fort complex, and its integration into the system of the Mestre wood.¹¹⁵¹ The city wanted to use the part of the fort not used by the Veneto region,¹¹⁵² and proposed to turn the marshal guardhouse and the surrounding green area into a visitor centre for the Mestre wood. Together with the restoration of the building to host the new function,¹¹⁵³ the 'naturalistic-didactic enhancement of rare herbaceous species present in the grassland habitats of the area' was contemplated.¹¹⁵⁴ The latter could be achieved

¹¹⁵¹ Cf. *Ibid.*, Document: *Istituzione Bosco e Grandi Parchi* (Municipality of Venice), *Programma di valorizzazione Casa del Maresciallo presso Forte Cosenz a Favaro Veneto – Venezia. Il Centro Visitatori del Bosco di Mestre* (February 2015), 19.

¹¹⁵² In particular, the document was drafted by the *Istituzione Bosco e Grandi Parchi* (Forest and Large Parks Institution) and it was addressed to the State Property Office (*Agenzia del Demanio*) and the Ministry of Cultural Goods and Activities and Tourism (cf. *Ibid.*, 4).

¹¹⁵³ The restoration of the building had to be inspired to the 'principles of bio-architecture', including 'the use of renewable energy sources' (cit. *Ibid.*, 19).

¹¹⁵⁴ *Ibid.*, 3. In particular, for the flora and fauna aspects reference is made to the report *Tutela delle zone umide minori del Comune di Venezia* (Protection of the minor wetlands of the Municipality of Venice) (cf. <https://www.comune.venezia.it/it/content/aree-protette> [08.04.2022]).

through a 'conservative management' of the peaty meadows, which would have contributed to the 'mosaic of plant landscapes' of the Mestre wood.¹¹⁵⁵ Therefore, a series of technical roundtables took place among the competent authorities in the course of 2016,¹¹⁵⁶ which resulted in the decision to split the site, giving to the regional authority the whole fort complex with the exception of that part requested by the municipality.¹¹⁵⁷ Eventually, the Veneto Region presented a revised version of the enhancement program in 2017, on the base of which the related agreement was signed in 2018 (FIG. 5.106).¹¹⁵⁸ Following the indications given in the roundtables – which also reflected the concern of local associations¹¹⁵⁹ – the scope of the final proposal of the Region for the enhancement of Forte Cosenz was broadened in order to have 'conservation and fruition' as its primary purposes.¹¹⁶⁰

¹¹⁵⁵ *Ibid.*, Document: Istituzione Bosco e Grandi Parchi (Municipality of Venice), Programma di valorizzazione Casa del Maresciallo presso Forte Cosenz a Favaro Veneto – Venezia. Il Centro Visitatori del Bosco di Mestre (February 2015), 19.

¹¹⁵⁶ Namely, the Ministero dei beni e delle attività culturali e del turismo, Segretariato Regionale per il Veneto (Ministry of Cultural Goods and Activities and Tourism, Regional Secretariat for Veneto), the Agenzia del Demanio, Direzione Regionale Veneto (State Property Agency, Veneto Regional Directorate) and the two proposing regional and municipal authorities (cf. *Ibid.*, Document: *Agenzia del Demanio (Direzione Regionale Veneto), Ministero Beni e Attività Culturali e Turismo (Segretario Regionale per il Veneto), Regione Veneto (Dipartimento Affari Generali Demanio), Comune Venezia, Soprintendenza di Venezia. "Forte Cosenz". Tavolo Tecnico Operativo. Verbale di seduta del 15 dicembre 2016* (15 December 2016).

¹¹⁵⁷ From the minutes of the technical roundtables we learn that the municipality of Venice also expressed its will to acquire, in alternative to the regional authority, the entire site of the fort, but that this intention was not followed by the presentation of a new enhancement program (cf. *Ibid.*).

¹¹⁵⁸ The agreement was signed on 27.02.2018 (cf. <https://bur.regione.veneto.it/BurVServices/pubblica/DettaglioDecreto> [03.04.2022]).

¹¹⁵⁹ In particular, the *Centro Studi Storici di Mestre* and the *Comitato Interclub* highlighted the importance to integrate the fort in the Mestre Wood system by virtue of its 'naturalistic-environmental significance' and, therefore, sustained the acquisition of the fort to the municipal authority (cf. ASABAPV, *Box Mestre: Forti: Forte Cosenz*, Document: Report from *Comitato Interclub* to Municipality of Venice, Veneto Region, Superintendence of Venice, *Importanza naturalistico-ambientale dei biotopi dell'area di FORTE COSENZ ricompresi tra gli immobili "Casa del Maresciallo" e "Forte Cosenz" (complesso edilizio in cemento armato) ed aree adiacenti alle strutture stesse* (06 March 2017). Additionally, also the *Istituto Italiano dei Castelli* expressed some perplexities about the activities planned in the regional enhancement program – which in their opinion had 'nothing to do with the cultural interest of the property (Civil Protection, Armed Forces, etc.) and which, on the contrary, risk to definitively compromise its historical-monumental and environmental values' – but also on the alleged intention to limit the access to the regional employees (cf. *Ibid.*, Document: Report from *Istituto Italiano dei Castelli* (A. Grigoletto) to Superintendence of Venice, *Forte Cosenz – Comune di Venezia – Interpello con Istanza ex art. 6, comma 3, D. Lgs. n.42/2004* (26 November 2017).

¹¹⁶⁰ Cf *Ibid.*, Document: Agenzia del Demanio (Direzione Regionale Veneto), Ministero Beni e Attività Culturali e Turismo (Segretario Regionale per il Veneto), Regione Veneto (Dipartimento Affari Generali Demanio), Comune Venezia, Soprintendenza di Venezia. *"Forte Cosenz". Tavolo Tecnico Operativo. Verbale di seduta del 15 dicembre 2016* (15 December 2016).



FIG. 5.91 Venice (IT), Forte Cosenz, tool shed: works in progress for the refurbishment of the building (2008) (ASABAPV, *Box Mestre: Forti: Forte Cosenz*)

Although confirming the occasional use of outdoor spaces ‘for civil protection activities in the event of natural disasters or exceptional events’, the enhancement program included ‘activities in connection with the Mestre wood’ and ‘social agricultural activities for people with disabilities’, as well as the recovery of the main concrete structure for museum and exhibitions.¹¹⁶¹ Moreover, the building previously refurbished as a meeting place for the regional employees was opened, together with the overall fort site, to the general public.¹¹⁶² With reference to the areas of naturalistic value, a specific report concerning the *Progetto di valorizzazione e miglioramento ambientale dell’area verde circostante il Forte Cosenz* (Environmental

¹¹⁶¹ *Ibid.*, Document: Regione Veneto, *Forte E. Cosenz: Programma di Valorizzazione. Aggiornamento* (April 2017).

¹¹⁶² Cf. *Ibid.*, Document: Agenzia del Demanio (Direzione Regionale Veneto), Ministero Beni e Attività Culturali e Turismo (Segretario Regionale per il Veneto), Regione Veneto (Dipartimento Affari Generali Demanio), Comune Venezia. *Accordo di Valorizzazione relativo a “Forte Cosenz”* (2018).

enhancement and improvement project of the green area surrounding Forte Cosenz) was drafted.¹¹⁶³ In it, the areas of greatest interest have been identified (wet meadows, orchid populations, reeds, ditches with surface water)¹¹⁶⁴ together with the main degradation phenomena affecting them,¹¹⁶⁵ and the necessary forms of management to preserve their 'landscape and cultural value' and,¹¹⁶⁶ at the same time, favouring their sustainable use and experience for visitors.¹¹⁶⁷



FIG. 5.92 Venice (IT), Forte Cosenz: the concrete barracks (1996) (Archive Associazione dalla Guerra alla Pace)

¹¹⁶³ Cf. *Ibid.*, Document: Regione Veneto (dott. M. Baldin), *Progetto di valorizzazione e miglioramento ambientale dell'area verde circostante il Forte Cosenz* (05 April 2017).

¹¹⁶⁴ Cf. *Ibid.*, 37-38.

¹¹⁶⁵ Cf. *Ibid.*, 40.

¹¹⁶⁶ Cf. *Ibid.*, 41.

¹¹⁶⁷ Cf. *Ibid.*, 44.

6 Discussion and conclusions

The aim of this chapter is to draw conclusions and provide a conceptual framework for fostering nature-culture interlinkages in the preservation strategies for historic military systems. Given the comparative nature of this research, a first ambition is to develop a transnational perspective: taking into account the existing differences between the two national contexts of the two case studies, with particular reference to landscape protection models. The goal is to provide a conceptual framework for fostering nature-culture interlinkages that can be applied in both contexts and, potentially, elsewhere. Another consideration is related to the specific character of historic military systems: they were designed and operated on different but interconnected scales. Consequently, a second ambition of this conceptual framework is to consider all the different scales and their interconnectedness in order to arrive at an integrated approach to nature-culture interlinkages across scales. In particular, in the analysis of the case studies, three main scales have been taken into account: the system, the local artefacts, and the built heritage. In relation to this, a common trait between the Dutch and Italian case studies has been identified in the lack of an integrated consideration of these three main scales. Moreover, the scale from which the revitalization/reuse process started is different. However, based on the cross-reading of these two experiences, it becomes clear that the scale of the local artefacts plays a crucial role for the achievement of an integrated approach (FIG. 6.1). The reason is twofold: it is the intermediate scale, with the role of a link between the landscape system and the built heritage, and the potential of facilitating the integration across scales; at the same time, it is the scale that the two analysed (Dutch and Italian) experiences have in common. Therefore, the local artefacts – and, in particular, the fort sites – are the focal point for the discussion of the case studies, according to their double reading key: 1) the forts as components of an historic military system; 2) the forts as built heritage.

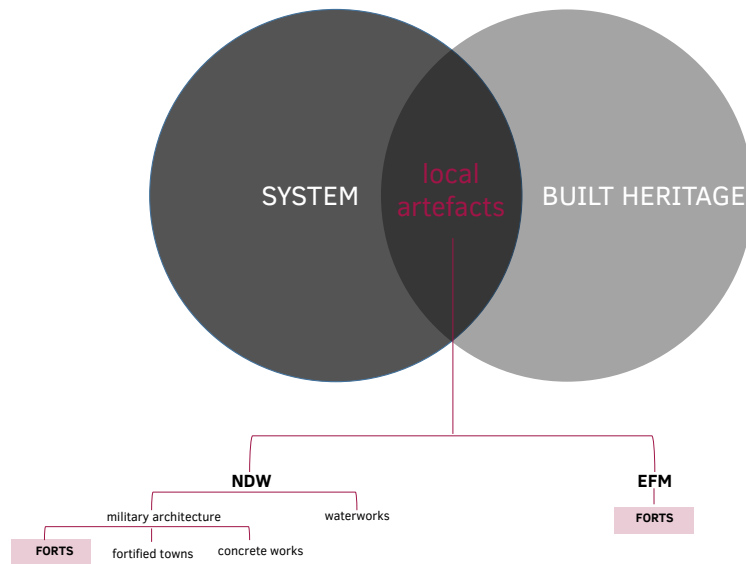


FIG. 6.1 The central role of local artefacts in inter-scale preservation strategies for historic military systems (F. Marulo 2022)

6.1 Top-down / Bottom-up: inter-scale approaches to the preservation of historic military systems

6.1.1 Forts as components of historic military system

In this paragraph, the way in which the role of the forts as components of an historic military system is addressed in the preservation strategies is discussed. This calls for a premise on the historical role of the fort sites within the overall system in its military conception and evolution. In relation to this, the two case studies show a major difference. As the components of a water machine with defence purposes, the forts of the New Dutch Waterline were conceived with the subordinate role of complementing the overall water-based defence system in those places where inundation was not feasible. On the other hand, the forts composing the Entrenched

Field of Mestre represented the main military device in the overall strategy underlying the conception of the military system.¹¹⁶⁸ Strongly related to this, the effects of the demilitarization also have had a different impact. In both cases, the loss of the military function has determined the loss of cohesion between the local artefacts and their gradual abandonment. However, the water machine at the base of the New Dutch Waterline, despite the loss of its historic military significance, was somehow reintegrated in the functioning of the centuries-old landscape in which it was embedded, and generated the dichotomous condition of a series of relicts (the forts) in an organically-evolved landscape. In the case of the Entrenched Field of Mestre, the loss of the common function of the forts has, instead, determined the loss of the military system and its more subtle presence in the landscape. These differences have conditioned, at first, the acknowledgement of the heritage values of the two military systems and, therefore, the preservation strategies put in place.

For the Entrenched Field of Mestre, the shift from military system to military heritage went through two parallel paths: on the one hand, the forts started to be recognized as monuments, on the other hand, local associations of volunteers started a process of re-appropriation. The different reasons animating these two processes created a fertile ground to start developing a preservation strategy for the military system, which assumed the character of a bottom-up process. It is primarily through the contribution of the voluntary associations that, in the early phases, the vision acquires a landscape dimension. The possible role of the Entrenched Field of Mestre, as a system, in the contemporary re-evaluation of the Venice mainland was explored from an environmental point of view. However, completely absent in the discussion are the historical connections of the military system with the landscape, often considered only for its negative environmental impact. Despite the considerable efforts of the municipality to acquire the majority of the fort sites, the development of a vision for the military structure has gradually shifted towards a strategy for the reuse of the fort sites, considered as an ensemble of similar objects rather than as a military landscape system. In the context of a massive environmental restructuring of the mainland, the significance of the Entrenched Field of Mestre is not strong enough to play a role as an organic landscape system. Therefore, conservation strategies focus on the reuse of the forts as single entities, which resulted in a further fragmentation.

In the case of the New Dutch Waterline, the first step is also marked by listing single forts as monuments. But the significance of the military system as a water machine is the main feature triggering the start of the national project for its

¹¹⁶⁸ Within the New Dutch Waterline, a comparable situation can be found only in the portion around Utrecht, where inundation was not feasible.

revitalization. Within this framework, the military system in its landscape dimension is recognized for both its historic-cultural significance and its contemporary role in the geomorphological and hydraulic conditions of its area of influence. However, the master plan developed for this purpose not only concerned the revitalization of the military water infrastructure for contemporary uses. Combining the point of view of the historic military engineer and the contemporary landscape architect, the historic military system is reinterpreted in a broader set of connections with the landscape in which it is inscribed, and its preservation is transformed into an opportunity for steering future developments. Accordingly, 'inundation fields' and 'fields of fire' are the conceptual dimensions borrowed from the historic military landscape and used for limiting the erosion of the agricultural landscape in the East, while the notion of 'defended area' serves to accommodate densification in the Randstad. In doing so, the sight-based character of the military 'way of seeing' the landscape is brought back in terms of visual integrity at the system scale. Through a top-down inter-scale approach, the system scale is connected to the intermediate level, which – given the extension and complexity of the waterline – is identified in the regional complexes. Their definition results from crossing their physical landscape characteristics with their different historical functions in the waterline. Accordingly, the emphasis on the forts in the Kraag van Utrecht directly stems from the landscape characteristics of the area, less prone to be inundated and with a greater concentration of local artefacts, now representing the main traces bearing the memory of the waterline. The switch from this intermediate scale to that of the local artefacts – here considered as the last level of detail – is mostly driven by their future recreational potential, as local stops along the waterline. The choice to select a fort and an area as a *pars pro toto* for military and water works is relevant: their revitalization takes on the meaning of expressing the memory of the waterline on a local scale.

Although characterized by different starting points, the reuse process of the Entrenched Field of Mestre is characterized by a similar polarization on one of the fort sites. Therefore, it is interesting to compare the reasons behind these choices. In the Italian case, the choice to focus on Forte Marghera is the result of a number of converging factors. On the one hand, the appreciation of its historic-architectural features, which made it stand out among the other local artefacts, is relevant. First of all, it is the older of the forts, with about a century of history as an independent military object before being integrated in the Entrenched Field of Mestre, in which it kept its role of fulcrum throughout the evolution of the military system. Moreover, its relevance as war memorial is one of its key features, for which it was the first of the forts to be recognized with the monument status. In relation to the latter, the appreciation of its architectural qualities was also significant, especially for some specific buildings on the fort site, considered since the beginning as highly valuable. Finally, its strategic location between mainland and lagoon also had a decisive role

for both its historical meaning and its potential for future developments. But the choice of prioritizing the efforts on the restoration and reuse of Forte Marghera had also a strategic component: as the biggest of the forts with the most recreational potential, it could have served as the economic carrier for supporting interventions on the other forts. Similarly, in the Dutch case the choice to give the revitalization of Fort bij Vechten a special meaning is also connected to strategic reasons: it is located at the centre of the historic military system and next to a major road connection, a determining factor in the choice of this fort as the national icon for the New Dutch Waterline. Moreover, the architectural qualities of the fort also played a role. It is the second biggest military object of this kind, built in the construction phase where the waterline reached one of its highest peaks in terms of military architecture. Alongside this, Fort bij Vechten is part of the Kraag van Utrecht: the 'pearl' for military architecture. Thus, this choice has the role of link between the regional and the local scale.

Whereas the results may be similar, their meaning differs. The choice of Forte Marghera is primarily determined by the intrinsic characteristics (of a part) of its built heritage. Although it is identified as the object of priority attention, the role of its restoration is not to make it a *pars pro toto* nor to express the essence of the historic military system on a local scale. Conversely, this choice has the practical meaning of facilitating the reuse of the ensemble of forts of which it is part. On the other hand, the choice of Fort bij Vechten has the clear purpose of expressing the memory of the waterline on a local scale, and the meaning of its revitalization is more than just addressing its intrinsic qualities. Therefore, the reasons behind these choices open the way for further considerations. Discussing the 'choice to choose' on a theoretical level seems to be only a rhetorical exercise: as the comparison between the two cases demonstrates, establishing priorities is a necessary operation in the shift from principles to the actual implementation, which requires a considerable strategic and financial effort.¹¹⁶⁹ But if in the Italian case the choice is mainly

¹¹⁶⁹ According to C. Di Biase, the 'quantity' of material traces left by the military landscapes of the past 'raises the issue of choice, which should be directly connected to the possibility of carefully documenting especially what appears more marginal and therefore weaker' (cf. Di Biase, C. (2017). *Paesaggi militari tra XIX e XX secolo: risorse per il tempo di pace*, in *Proceedings of the International Conference Military landscapes: A future for military heritage* (La Maddalena, 21-24 June 2016), Fiorino, D. R. (ed.). Milano: Skirà, 418). Also D.R. Fiorino criticizes the application of a 'hierarchical selective process' according to which the conservation of 'historical military networks' takes place through the 'conversion of a few cornerstones of larger military systems' and 'conservation is granted not so much to the most significant asset as to the most adaptable to change. Furthermore, major emergencies absorb huge resources without being able to activate virtuous processes in the direction of a more widespread conservation on the territory' (cf. Fiorino, D. R. (2017). *Paesaggi Militari. Scenari di ricerca*, in *Proceedings of the International Conference Military landscapes, op. cit.*, 71).

reduced to a practical issue, in the Dutch case there is a clear aim of bringing this choice to a conceptual level, which is what makes it extremely valuable, but also leaves room for further discussion. Indeed, if the choice in itself is out of discussion, the choice of 'what to choose' becomes here extremely relevant. Considering the architectural and constructive variety in the forts of the waterline – one of the features representing the added value of the New Dutch Waterline to the Defence Line of Amsterdam as World Heritage – the ambition to shed light on just one of them seems reductive. In the course of the implementation of this vision, the built heritage of the forts has surely been the subject of discussion, and not only in the case of Fort bij Vechten. However, if in the Italian case the lack of addressing the system scale can be identified as a weak point in the overall reuse experience, at the same time the lack of a deeper connection with the scale of the built heritage at the moment of identifying 'the' *pars pro toto* has surely weakened the power of the Dutch choice.

6.1.2 Forts as built heritage

When switching the focus in the interpretation of the fort sites – from components of a military system to built heritage – the interpretation of the nature-culture interlinkages at stake moves to different themes. Despite the peculiarities characterizing each of the local artefacts, the forts analysed in this thesis can be generally seen as a reproduction, at a lower scale, of the military systems to which they belong. Borrowing the classification made within the master plan for the New Dutch Waterline at the system and regional scale, blue (water ditches and canals, water collection systems), green (vegetation and earthworks) and red (historic buildings) components are indissolubly connected to each other in what can be considered as a sub-system within the overall military system. Assuming the systemic character as a common trait for both the Dutch and Italian fort sites, the ways of dealing with this complexity can be compared. First, the two cases of Forte Marghera and Fort bij Vechten are considered. For what the Italian experience is concerned, the implemented and on-going interventions conceived for the built heritage of Forte Marghera can give a clear image of a preservation and reuse process in which the red components are the driving force. Indeed, the historical buildings on the fort site are the main object of attention since the first protection actions up to the definition of a reuse strategy. In it, a starting point was in the research on the architectural and constructive history of the buildings, which has led to the assessment of their degree of transformability. The latter has represented the base on which the reuse strategy was defined, as well as for setting intervention priorities. The green components are the subject of attention but mostly for their current ecological potential, which is assessed in relation to the threats they may

pose to historic buildings. About their historic-cultural significance, the original bare configuration of the fort is taken for granted; however, it is not supported by any specific study, as was the case for the historic buildings. Conversely, the approach developed for the built heritage of fort bij Vechten is representative of a revitalization process in which the green components are the driving force. The land-art interventions on earthworks and vegetation of the fort represent the ordering principles for the overall strategy, in which the *pars pro toto* approach is applied at the fort scale. In particular, the choice to reproduce the historical conditions in a portion of the fort is grounded in the interest for a specific aspect in the history of the waterline, related to the evolution occurred in the use of vegetation for military purposes. In relation to this, Fort bij Vechten has represented an exploratory case for both historical research and its consequent design application. About the historic buildings on the fort site, they do not play a determining role in the main design narrative. Apart from the case of the flank battery EL – where the functioning of the water collection system of the building is exhibited – the rest of them are reused for contemporary ecological or recreational functions. Even in the case of buildings with the most monumental significance, their restoration is not prioritized in the overall strategy.

Based on this general outline, some common themes can be outlined. In particular, an aspect emerging from the comparison is the visual approach to the interventions carried out. However, the way of dealing with the figurative impact of the design choices differs, also for the different components considered. In the case of Forte Marghera, there is an effort to standardize interventions on historical buildings sharing similar conservation needs, especially those having an impact on the exterior, while for the interior a greater variety of solutions can be recognized as function of the new use. This tendency is evident also from the landscape reports associated to the architectural interventions on the historical buildings. These reports often repeat the general (architectural) report, except for the so-called *opere di mitigazione* (mitigation works): the set of considerations and related choices aiming at minimizing the visibility of the intervention from the outside. Accordingly, the conservation of the military landscape at the fort scale goes through the conservation of its material traces and, in particular, the historical buildings. The contemporary interventions mainly consist in a set of technical operations aimed at preserving the historical material in its current consistency, limiting as much as possible their figurative impact. Where the addition of visible elements is necessary, it is done in a contemporary way, in order to distinguish them from the existing. However, these added elements do not represent the components of a narrative about the site or the military system in its entirety. The material traces with their continued existence generate the narrative, supported by choices with non-physical implications (e.g. the choice of new functions, like the Study Centre on Military

Architecture). In the case of Fort bij Vechten, a similar attention can be recognized in minimizing additions and transformations so as not to alter the landscape at the fort scale. At the same time, a greater degree of openness towards contemporary interventions can be observed, which are tied together into a clear design narrative. Within this frame, the use of land-art interventions on both the green (entrance, the *strook*) and red (EL flank battery) components is significant. Land art is the main design tool through which the inter-scale character of the overall operation can take place. Indeed, the *strook*, the model of the waterline in the museum's patio, the entrance cut, the exhibition of the water collection system at flank battery EL, are all components of one design strategy aiming at making the role of the fort as *pars pro toto* of a military system visible and experienceable. In relation to this, the choices made here can be connected to the broad experience developed in the Netherlands on the integration of water heritage in land art, and the application of land-art interventions on heritage sites in and outside the waterline. But at Fort bij Vechten land art takes on the additional meaning of main design tool for addressing the connection across scales, between military system and fort site.

From such considerations, a major difference can be identified in the of the interventions on the fort sites. It is connected to the different use of concepts like 'revitalization' and 'restoration', and the way of intending 'reuse' in these two domains. In the case of Fort bij Vechten – and the waterline at broad – the overall aim of the intervention is the revitalization of the site. This includes reusing the historical buildings, but a sharp difference is made between reuse and restoration. In other words: a building can be reused, but not necessarily restored. Restoration is addressed, but only on some selected parts and, in particular, the green components. Moreover, when applied, restoration means bringing back to a specific moment in the past (e.g. the *strook*). In the case of Forte Marghera – and the Entrenched Field of Mestre – the overall aim of the intervention is the reuse of the site. In principle, this does not necessarily lead to restoration. However, the concept of reuse applied at Forte Marghera stems from the restoration domain. The latter is not intended to bring back a specific moment in the past, but as conservation of all the traces which have overlapped over time until the present moment. Therefore, through their reuse, the red components are restored (or *vice versa*). Even if this has not been specifically stated, restoration principles and methodology are used in both cases, but on different components – the green at Fort bij Vechten, the red at Forte Marghera – confirming the different ways of dealing with the forts' built heritage.

In relation to this, another difference is the way of dealing with material traces not directly connected with the military past. In the case of Forte Marghera, the intervention on the building incorporating the 16th century bridge is relevant. It represents the only trace left of the Marghera hamlet that was cleared to build the fort.

This trace of a previous layer in the history of the site is not only incorporated in the reuse strategy, but it is also given a major role as the building hosting the Study Centre on Military Architecture. Therefore, the comparison with the way of dealing with the traces of *castellum Fectio* at Fort bij Vechten is interesting. In this case, archaeological remnants are involved and not a historical building. A connection with these traces is provided by means of an exhibition, but with a secondary role in the overall design narrative of the waterline centre. Considering the role given to the revitalization of Fort bij Vechten in the masterplan (Panorama Krayenhoff), the overall design narrative draws more inspiration from the history of the military system than from that of this specific fort. Therefore, even when dealing with the built heritage of the fort, its role as a component of a military system is prioritized.

Beyond these two cases, the analysis of the revitalization and reuse experiences of other forts analysed here shows the repetition of a similar pattern, although with some specificities. In the case of the forts of the New Dutch Waterline, a general attention to the green components can be seen, although with a different degree of integration between their historic-cultural (military) and contemporary (ecological and recreational) significance. Some cases show an integration between these different dimensions (Lunet aan de Snel, Werk aan de Waalse Wetering), others a combination of contemporary ecological and recreational potential (Fort Everdingen, Werk aan de Overeindseweg, Fort 't Hemeltje), or the combination of historic-cultural and contemporary-recreational (Fort Blauwkapel, Werk aan het Spoel). Within this framework, the approach to the red components also shows a general pattern, where their cultural-historical significance is always an under-layer – a source of inspiration – in the combination with their contemporary ecological significance (Werk aan de Waalse Wetering), their potential for recreation/exploitation (Werk aan de Overeindseweg, Lunet aan de Snel, Fort Blauwkapel, Werk aan het Spoel) or a combination of these two (Fort Everdingen, Fort 't Hemeltje).

When looking at the reuse experiences of the forts of the Entrenched Field of Mestre, the poor conditions of earthworks and vegetation, particularly evident in the second generation of forts (Forte Rossarol, Forte Cosenz, Forte Mezzacapo), show a general neglect of the green components, and their subordination in the overall reuse strategy. In other cases, the historic-ecological significance of green components in relation to other landscape layers (the agricultural landscape at Forte Mezzacapo, the Mestre wood at Forte Cosenz, the Carpenedo wood at Forte Carpenedo) is prioritized. Within this framework, the case of Forte Carpenedo can be considered as an exception, for the search of a balance between historic-cultural (military) and contemporary-ecological significance of the site's green components, although mostly carried out to 'unveil' the historical buildings. In the case of Forte Mezzacapo, the attempt to address the cultural-historical (military) significance of the green components needs to be

highlighted, although not all the intentions have been implemented. Nevertheless, these two cases (Carpenedo, Mezzacapo) show the signs of an opening towards the historic-cultural dimension of the military green components in the activities carried out by the voluntary associations. On the other hand, the red components are the subject of primary attention in the conservative interventions promoted by the municipality of Venice. A general tendency can also be recognized to isolate the monumental buildings (especially the concrete works of the second generation of forts, with the only exception of Forte Mezzacapo) from the overall reuse strategies – which are, in turn, mostly ascribable to the users. As a result, the main fort buildings are often left out, as relicts, from the new life given to the fort complexes through the reuse of accessory buildings. In some cases, (Forte Rossarol, Forte Cosenz in a starting phase) the public access to the site is denied (FIG. 6.2).

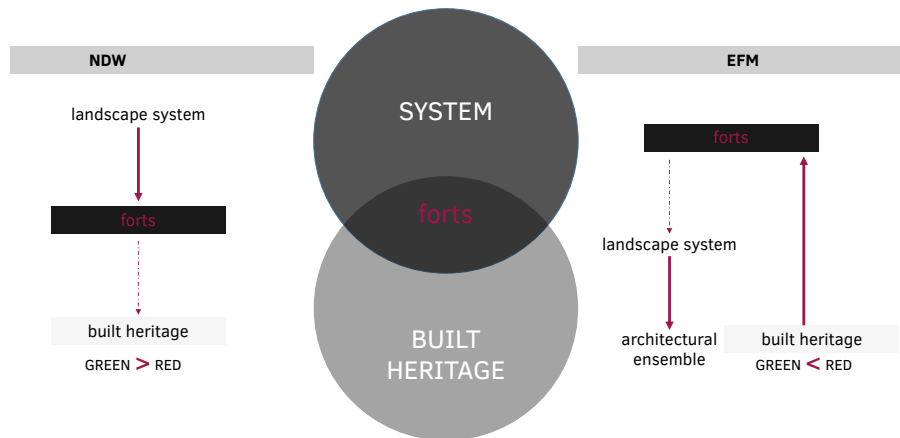


FIG. 6.2 The inter-scale approaches (top-down/bottom-up) applied in the preservation strategies for the New Dutch Waterline (NDW) and the Entrenched Field of Mestre (EFM) (F. Marulo 2022)

6.2 Exceptional / Ordinary Heritage: national and international significance of historic military systems

Based on the interpretation of the contemporary approaches to the revitalization and reuse of historic military systems, the present paragraph aims at zooming back and look at the two analysed cases in their national and international contexts. In particular, the exceptional or ordinary character attributed to historic military systems in national and international policies is discussed. Ultimately, this broader perspective is an indispensable step for discussing the role that these two experiences can play for an advancement on the topic of nature-culture interlinkages across scales, in and outside their context of reference.

6.2.1 Historic military systems and national landscape protection models

In relation to the Dutch case, when the Belvedere program came to an end (2009),¹¹⁷⁰ the work of the Project Bureau continued but two important changes took place. The first concerns the shift from national to provincial organization of the revitalization process.¹¹⁷¹ The second is connected to the change in the national protection framework for the New Dutch Waterline, from national landscape to national monument. As already pointed out, before the start of the New Dutch Waterline national project, only a part of the forts were listed monuments,¹¹⁷² while 'no adequate protection of the essence of the waterline system' was provided.¹¹⁷³ In relation to this, a significant development took place in 2009, when the New Dutch Waterline, as a system, was given the status of national monument, setting one of the most significant outcomes achieved by the process started with its inclusion as national project within the Belvedere program. Already in the Panorama Krayenhoff

¹¹⁷⁰ For an overview on the results achieved with the Belvedere program, see: Witsen, P. P. et al. (2009). *Belvedere.nu: praktijkboek cultuurhistorie en ruimtelijke ontwikkeling*. Utrecht: Matrijs.

¹¹⁷¹ This change and the implications associated with it are described in paragraph 4.2.3.

¹¹⁷² Cf. Luiten, E. (2004). *Panorama Krayenhoff, op.cit.*, 68.

¹¹⁷³ Rijksdienst voor het Cultureel Erfgoed (2009). *Nieuwe Hollandse Waterlinie: Aanwijzingsprogramma. Aanvullende aanwijzing en verfijning* (September 23, 2009), 8.

(2004) and in the Pact van Rijnauwen (2008), the commitment was made for the RDMZ to update the protection framework for this peculiar ‘monument’ under the *Monumentenwet* (1988). In 2009 this ambition was turned into practice. Within the *Beleidsregels aanwijzing beschermde monumenten* (Policy rules for designating protected monuments) the framework was set for the ‘expansion and refinement’ of the protection regime for the New Dutch Waterline,¹¹⁷⁴ which was followed by a designation program. A core concept was that the protection of individual local artefacts – however valuable from a cultural-historic perspective – was not considered as sufficient to do ‘justice to the essence’ of the waterline, which is based on the ‘cohesions between the various components’.¹¹⁷⁵ Therefore, the designation program consisted of the identification of clusters: substructures showing a ‘spatial and historical-functional relationship with each other’.¹¹⁷⁶ They were inscribed, as complexes, in the national monument register. In this way, local artefacts already inscribed as national monuments (e.g. the fort sites) were incorporated in the newly-defined clusters. Alongside this, the clustering process was beneficial for all that great number of small concrete works, like casemates and group shelters, which are scattered in and around the fort sites but, unlike the latter, had not been protected until that moment.¹¹⁷⁷

In general, the intention to broaden the objects eligible for protection as part of the New Dutch Waterline national monument was crucial in the definition of the clusters. In particular, the issue of whether assuming the original military function of the objects as a selection criterion was a matter of discussion. Proposed within the ‘Policy rules for designating protected monuments’ from 2009, this aspect was

¹¹⁷⁴ *Ibid.*, 7.

¹¹⁷⁵ *Ibid.*, 17-18.

¹¹⁷⁶ Although not bound to a legal definition, within the designation program the concept of ‘complex’ is used to ‘assign added value to a set of separate individually protected monuments’ and, therefore, different from that of *meervoudig monument* (multiple monument), where ‘several independent units included in the monument description have been given a single monument number and are jointly designed as one monument’ (cf. *Ibid.*, 19).

¹¹⁷⁷ Indeed, the overall clustering approach was inspired to a Belvedere research project started in 2006 for the study of the concrete works in the New Dutch Waterline and the shift occurred in the military strategy that they embodied, which resulted in the identification of clusters’ typologies (cf. Koen, D., Rietveld, R. and Rijkenberg, F. (2009). *Versteende ridders: De Nieuwe Hollandse Waterlinie*. Wageningen: Blauwdruk). As a result, the most of the clusters put for the first time under protection with the 2009’s designation program concern concrete works. Apart from few exceptions (i.e. the forts Kijkuit, de Bilt and Steurgat), the clusters concerning fort sites are all refinements of already-listed monuments. Finally, the inclusion of inundation canals and waterworks in the designation program has also contributed to broaden the types of local artefacts put under protection (cf. Rijksdienst voor het Cultureel Erfgoed (2009). Bijlage 1: Totaaloverzicht aanwijzingsprogramma, in Id., *Nieuwe Hollandse Waterlinie: Aanwijzingsprogramma*, op.cit., 31-43).

revised after the advice provided by the *Raad voor Cultuur* (Council for Culture).¹¹⁷⁸ As a result, civil waterworks – built for other scopes than defence, but that played a crucial role in the New Dutch Waterline – were considered as eligible objects to be included in the clusters.¹¹⁷⁹ Conversely, the wooden houses built in the inundation fields – influenced in their appearance and construction by the *Kringenwet* – were considered as ‘derivative objects’ falling outside the designation’s scope for the defence line.¹¹⁸⁰

Beyond the local artefacts and their selection, the choice to exclude the inundation fields from the designation program was significant. The need for a ‘responsible handling of these open spaces’ is acknowledged.¹¹⁸¹ However, the ‘intactness’ of the waterline’s landscape is considered as a matter for the Ministry of Housing, Spatial Planning and the Environment.¹¹⁸² The vision of the *planologische bescherming en actieve ontwikkeling* (planning protection and active development),¹¹⁸³ set with the recognition of the New Dutch Waterline as a National Landscape and put into motion through the Panorama Kraysenhoff and its implementation program, is confirmed. Therefore, the designation program is, assumed as a complementary measure aiming at keeping the ‘integrity and recognisability’ of the local artefacts.¹¹⁸⁴ Eventually, the protection of the open spaces has turned out to be a crucial point of discussion in the process leading to the recognition of the New Dutch Waterline as World Heritage.¹¹⁸⁵

¹¹⁷⁸ Cf. *Ibid.*, 25-27.

¹¹⁷⁹ Cf. *Ibid.*, 26.

¹¹⁸⁰ However, they were addressed in the *houten-huizen-project* (wooden houses project) of the Project Bureau New Dutch Waterline (cf. *Ibid.*, 27).

¹¹⁸¹ Cit. *Ibid.*, 22.

¹¹⁸² Cf. *Ibid.*, 9.

¹¹⁸³ Cit. Projectbureau Nationaal Project Nieuwe Hollandse Waterlinie (2005). *Bestuursvereenkomst, op.cit.*, 3. Already in the management agreement of 2005, then reconfirmed in 2014, the intention to protect the New Dutch Waterline ‘on the basis of – but not limited to – the *Monumentenwet*’ is stated, and the necessary connection with the *Nota Ruimte* is recognized (Spatial Planning Memorandum) and the *Wet op Ruimtelijke Ordening* (Spatial Planning Act) (cf. *Ibid.*, 4; Project Bureau Nieuwe Hollandse Waterlinie (2014). *De Nieuwe Hollandse Waterlinie: Van ontwikkeling naar gebruik. Samenvatting Kader NHW 2020*. Uitgave van Projectbureau NHW, 17).

¹¹⁸⁴ The main reason is in the assumption that spatial planning instruments are more effective than sectorial policies, and reflects the vision set with the *Modernisering van de Monumentenzorg* (MoMo – Modernization of Monuments Protection (cf. *Ibid.*, 22).

¹¹⁸⁵ The goal of having the New Dutch Waterline nominated as World Heritage is clearly expressed in the designation program, which is specifically intended as the tool to achieve the needed ‘national protection’ and, therefore, create ‘the basis for a nomination for the UNESCO World Heritage List’ (cf. *Ibid.*, 14).

In the Italian case, it is necessary to take into account the different paradigm for landscape protection. As the analysed experience shows, the Dutch framework lies on a selective approach of exceptional landscape structures, the protection of which is provided by the careful application of spatial planning tools, complemented – when necessary – by the sectorial tools of cultural heritage protection. Conversely, the Italian approach rests on the assumption that all the national territory is worthy of landscape protection, which is anchored in the cultural heritage legal framework and relies, for its application, on planning instruments. In the light of this, the influence of national protection systems on the differences between the case studies is evident. In the case of the Entrenched Field of Mestre, the protection of the military system is only provided by putting the single forts under legal (cultural heritage) protection, so that the historical and architectural qualities of the sites – as single objects – are, in principle, secured. On the other hand, their landscape qualities – as both military system and individual artefacts – are only sporadically acknowledged, and always in relation to other landscape layers than the military one. The cases of Forte Marghera and Forte Carpenedo – put under landscape protection as part, respectively, of the lagoon ecosystem (1987) and of the Carpenedo wood (1985) – are the most evident examples. This protection framework has triggered synergies with other historical or contemporary layers characterizing the complex reality of their local context – like that of the agricultural landscape in the case of Forte Mezzacapo, or the Mestre wood in the case of Forte Cosenz – with a considerable impact on the reuse choices. In principle, this has to do with the interpretation of the landscape as a palimpsest, where avoided is the hierarchization and selection among the layers characterizing the historical stratification of places. The case of the Entrenched Field of Mestre is considered as an ‘ordinary’ heritage in the stratified landscape in which it is inscribed. This has not facilitated its acknowledgement as military system and its landscape qualities. Moreover, this condition has exposed the military system and its forts in the confrontation with neighbouring World Heritage sites even more. The logic of exceptionality – here representing an element imported from outside – has had a considerable impact on the protection of the ordinary.

6.2.2 Historic military systems and World Heritage

In parallel to the nomination of the Defence Line of Amsterdam as World Heritage in 1996, the inclusion of the New Dutch Waterline in the UNESCO Tentative List was proposed, and then officialised in 2011.¹¹⁸⁶ From that moment, the process got started to merge the nomination of the two military systems as one World Heritage Site. At first, this change was framed as a ‘minor boundary modification’ of the already listed site, which did not meet the approval of ICOMOS in 2017.¹¹⁸⁷ Therefore, the joint work of the two project offices for the Defence Line of Amsterdam and the New Dutch Waterline continued. It led to the proposal of a ‘significant boundary modification’ and the change of the property’s name into ‘Dutch Water Defence Lines’, submitted in 2019.¹¹⁸⁸ Eventually, the extension was accepted, and the New Dutch Waterline was recognized as World Heritage in conjunction with the Defence Line of Amsterdam in 2021 (FIG. 6.3).¹¹⁸⁹

Within this process, it was crucial to find a balance in highlighting the added value of the New Dutch Waterline in comparison with the similar military system around Amsterdam, in order to justify its inclusion in the World Heritage List, but also the coherence of the two systems in relation to each other so as to be inscribed as one property. As a result, the inclusion of the New Dutch Waterline did not lead to the addition of other criteria for expressing the outstanding value of the World Heritage Site. Instead, the same criteria used for the inscription of the Defence Line of Amsterdam were rephrased to justify the

¹¹⁸⁶ Cf. Project Office for the Defence Line of Amsterdam and New Dutch Waterline Programme Office (2018). *Dutch Water Defence Lines: Significant Boundary Modification of the Defence Line of Amsterdam (WHS 795) and proposal for change of the property name to Dutch Water Defence Lines* (December 2018), VII. Available at: <https://www.programmanieuwehollandsewaterlinie.nl/bibliotheek/documenten/documenten-unesco/> [18.06.2022]; ICOMOS (2021). *Dutch Water Defence Lines (The Netherlands) No 759bis*. ICOMOS Advice (4 June 2021), 160. Available at: <https://www.programmanieuwehollandsewaterlinie.nl/bibliotheek/documenten/documenten-unesco/> [18.06.2022].

¹¹⁸⁷ Draft Decision: 41 COM 8B.46, in UNESCO (2017). *World Heritage Committee: Forty-first session. Item 8 of the Provisional Agenda: Establishment of the World Heritage List and of the List of World Heritage in Danger: 8B. Nominations to the World Heritage List (Krakow, Poland 2-12 July 2017)*, 8-9. Available at: <https://www.programmanieuwehollandsewaterlinie.nl/bibliotheek/documenten/documenten-unesco/> [18.06.2022]

¹¹⁸⁸ Cf. Project Office for the Defence Line of Amsterdam and New Dutch Waterline Programme Office (2018). *Dutch Water Defence Lines, op.cit.*; Letter of the Minister of Education, Culture and Science of the Netherlands (Ingrid van Engelshoven) to the World Heritage Centre for the submission of the Nomination file of the Dutch Water Defence Lines (21 January 2019). Available at: <https://www.programmanieuwehollandsewaterlinie.nl/bibliotheek/documenten/documenten-unesco/> [18.06.2022]

¹¹⁸⁹ Decision: 44 COM 8B.23, in UNESCO (2021). *World Heritage Committee: Extended forty-fourth session* (Fuzhou, China / Online meeting: 16-31 July 2021), 345-350. Available at: <https://whc.unesco.org/en/decisions/7942> [18.06.2022]

extension. According to criterion (ii), the New Dutch Waterline is seen as reinforcing the significance of the property as an extraordinary example of ‘developments in technology’ and ‘landscape design’: a ‘strategically deployed landscape’,¹¹⁹⁰ in which ‘the technology and arrangements that the Dutch developed to control inundation’ were translated into an exceptional military application.¹¹⁹¹



FIG. 6.3 Map of the World Heritage Site of the 'Dutch Water Defence Lines' with the proposed buffer zone (2018) (image retrieved at: <https://whc.unesco.org/en/list/759> [25.06.2022])

¹¹⁹⁰ Within the nomination dossier, the expression 'strategically deployed landscape' is used to describe the construction of the waterlines as the process giving to 'the existing human-made landscape a military-strategic function' (cit. Project Office for the Defence Line of Amsterdam and New Dutch Waterline Programme Office (2018). *Dutch Water Defence Lines*, *op.cit.*, 68).

¹¹⁹¹ Cf. ICOMOS (2021). *Dutch Water Defence Lines (The Netherlands) No 759bis*. ICOMOS Advice (4 June 2021), *op.cit.*, 167.

Within this framework, what is stressed is that the ‘landscape in which the New Dutch Waterline was constructed [...] offered more options for inundation than the landscape around Amsterdam’, substantiating its inclusion in the World Heritage Site.¹¹⁹² In line with criterion (iv), the waterlines are presented as a ‘type of architectural’ and ‘technological ensemble’, as well as of ‘landscape which illustrates significant stages in human history’. In connection with the previous criterion, the ‘water management system’ is highlighted in its relational value among the components of the military structure and the landscape, as the ordering principle in the ‘integrated use of landscape features, careful water management and control for inundation fields, and military fortifications’.¹¹⁹³ This ‘ingenious use of the topography and hydrology of the landscape for defence purposes’ classifies as an outstanding example of ‘land use’ representative of the Dutch culture, and as an exceptional ‘human interaction with the environment’, as expressed in criterion (v).¹¹⁹⁴ Also from this perspective, the New Dutch Waterline – ‘due to the very nature of the land morphology’ – offered ‘larger opportunities to harness the landscape characteristics’.¹¹⁹⁵ Finally, the ‘development of military architecture’ occurred in the construction of the New Dutch Waterline has also the potential to significantly enrich the property with a broader variety of architectural typologies and related construction techniques, realized over a time span of more than a century, and for the most part prior to the the Defence Line of Amsterdam.¹¹⁹⁶ However, only the evolution occurred on the architectural components in the strict sense – e.g. ‘the transition from brick to concrete construction’ – is stressed, but not that concerning vegetation and other ‘living’ components.¹¹⁹⁷

¹¹⁹² Cit. Project Office for the Defence Line of Amsterdam and New Dutch Waterline Programme Office (2018). *Dutch Water Defence Lines, op.cit.*, 68.

¹¹⁹³ Cit. *Ibid.*, 70–71; ICOMOS (2021). Dutch Water Defence Lines (The Netherlands) No 759bis. ICOMOS Advice (4 June 2021), *op.cit.*, 167.

¹¹⁹⁴ Cit. *Ibid.*, 168.

¹¹⁹⁵ Cit. *Ibid.*, 167.

¹¹⁹⁶ Cf. *Ibid.*, 168. See also: Project Office for the Defence Line of Amsterdam and New Dutch Waterline Programme Office (2018). *Dutch Water Defence Lines, op.cit.*, 71–72.

¹¹⁹⁷ Cf. ICOMOS (2021). Dutch Water Defence Lines (The Netherlands) No 759bis. ICOMOS Advice (4 June 2021), *op.cit.*, 168. Although addressed in the nomination dossier, the ‘living matter’ composing the architecture of the fortifications is, however, not highlighted as one of the features characterizing the outstanding value of the Dutch Water Defence Lines, nor the added value of the New Dutch Waterline when discussing its significance in relation to the UNESCO criteria. Probably, this is ascribable to the several alterations occurred for both human interventions (during and after the military function) and the natural growth/evolution process of the vegetal components, which fall out the integrity requirement at the basis of the World Heritage Convention (cf. Project Office for the Defence Line of Amsterdam and New Dutch Waterline Programme Office (2018). *Dutch Water Defence Lines, op.cit.*, 142–145).

Together with providing a substantial historical depth to the military system around Amsterdam, the process of extending this World Heritage Site gave an opportunity to reflect on the experience matured with the revitalization of the New Dutch Waterline. In particular, it offered the chance to discuss the ‘conservation-through-development’ national approach in the international scenario of the World Heritage Convention. Identified as a hot topic already in the International Expert Meeting organized in 2015, the issue of preserving historic military structures at different scales while leaving room for future developments represented a constant object of discussion with ICOMOS in the process leading to the actual nomination, and partially still in course of definition.¹¹⁹⁸ One of the main aspects to be questioned concerned the boundaries of the property and the identification of an appropriate buffer zone for the World Heritage Site in its revised extension. The lack of a buffer zone was one of the points highlighted in the recommendations substantiating the denial of the first proposal for ‘minor boundary modification’ in 2017.¹¹⁹⁹ Subsequently, a differentiated buffer zone – 100 km on the outer side of the waterlines, 50 m on the inner side – was proposed in the nomination dossier submitted in 2019. In line with the ‘Dutch Landscape Approach in Heritage Management’, of which the masterplan Panorama Krayenhoff had been an extraordinary application, the historic layout and functioning of the military landscape – originally characterized by the openness of the field of fire to the East, opposing the greater density of the defended urban area on the inside – was once again proposed as a source of inspiration.¹²⁰⁰ However, this rationale was judged as not appropriate by ICOMOS. Based on the occurred switch from a ‘military’ to a ‘heritage system’, a revision was required in order to extend the buffer zone on

¹¹⁹⁸ In the Expert Meeting organized in 2015, ‘Development and World Heritage: Threats and opportunities’ was identified as one of the main topics of discussion. In relation to this, it was pointed out that ‘the understanding of the Outstanding Universal Value is not the same for residents of the site and those who visit it’. In the light of the envisaged different views between ‘locals’ and ‘outsiders’, the need for a ‘realistic discussion about future development pressures’ was fostered in due time – namely, ‘before the time of nomination, afterwards is too late’ (cf. Nieuwe Hollandse Waterlinie National Project (2015). *Report International Expert Meeting on World Heritage Nominations New Dutch Waterline & Defence Line of Amsterdam* (25 June 2015), 19. Available at: <https://www.programmanieuwehollandsewaterlinie.nl/bibliotheek/documenten/documenten-unesco/> [18.06.2022]).

¹¹⁹⁹ Cf. Draft Decision: 41 COM 8B.46, in UNESCO (2017). *World Heritage Committee: Forty-first session*, *op.cit.*, 9.

¹²⁰⁰ This is how the Minister of Education, Culture and Science of the Netherlands presented the approach underlying the endeavours for preserving the New Dutch Waterline, in which to be considered are ‘the wider aspects of our landscapes and the challenges of dynamic urban areas’ in order ‘to reach an integral solution’ (cf. Letter of the Minister of Education, Culture and Science of the Netherlands (Ingrid van Engelshoven) to the World Heritage Centre, *op.cit.*).

the inner side, and to have a clearer definition of its borders on the outer side.¹²⁰¹ A similar tension animated the discussion on the boundaries of the property, like in the case of the Utrecht area. Here, the World Heritage Site had been minimized around the perimeter of the forts, with the advantage of not interfering with the current urban dynamics, which are particularly urgent in this portion of the New Dutch Waterline. Once again, the approach of grounding this choice in the historical configuration of this area was proposed again. However, also in this case, ICOMOS judged this approach as insufficient, and some adjustments were requested.¹²⁰² Similarly, the inclusion of three new areas within the perimeter of the World Heritage Site was accepted without particular resistance by ICOMOS, while the seven reductions proposed by the State Party required greater attention.¹²⁰³ Eventually, the exclusion of one of those areas – the Geniedijk and its surrounding – was denied, and compensative measures were required for the others.

In general, more than an actual validation, ICOMOS seemed to tolerate the Dutch approach where its results were considered as adequate. The shift – and, therefore, the separation – between the historical military system and the contemporary heritage system at the basis of the World Heritage Convention was denied in the Dutch approach, both before and during the nomination process. This is grounded in the singularity of the New Dutch Waterline. Unlike other defence systems, where the end of the military function overlaps with the extinction of their usefulness, it has in the water infrastructure an element of continuity between past and future: a fully-fledged ‘organically-evolved landscape’, according to the UNESCO definition. However, the fortifications at the local scale do not fit this logic, having the demilitarization determined their gradual abandonment. Unlike the Dutch

¹²⁰¹ Cf. ICOMOS (2021). *Dutch Water Defence Lines (The Netherlands) No 759bis. ICOMOS Advice* (4 June 2021), *op.cit.*, 164-165. The required modification of the buffer zone is, therefore, reported also in the final decision through which the extension of the World Heritage Site was officially approved (Cf. Decision: 44 COM 8B.23, in UNESCO (2021). *World Heritage Committee: Extended forty-fourth session, op.cit.*, 349).

¹²⁰² Open fields within the inner zone, along the city margins, and formerly related to the first ring of forts, are not included (162); ‘further reduction of the open land and isolation of the forts in this area are major threat

¹²⁰³ About the three added areas, reference is made to former inundation fields – namely, Starnmeerpolder, Spaarnwoude and an area in the proximity of the Voorstelling bij Vijfhuizen – which were approved by ICOMOS for their potential to ‘improve the visual integrity and coherence’ of the property (cf. ICOMOS (2021). *Dutch Water Defence Lines (The Netherlands) No 759bis. ICOMOS Advice* (4 June 2021), *op.cit.*, 163).

approach to the 'strategically deployed landscape' of the waterline,¹²⁰⁴ the revitalization of the forts was considered as satisfactory by ICOMOS, as expressed in the assessment of their state of conservation¹²⁰⁵ and authenticity.¹²⁰⁶ Indeed, the 'common practice' established in the Netherlands for the reuse of fortifications for recreational purposes is positively evaluated, and the results are described as 'interesting examples of the encounter between old military and contemporary civil architecture'.¹²⁰⁷ While acknowledging the large number of 'cases, situations and actors' involved, and the 'great variety of uses which have stimulated different arrangements and technical solutions', no detailed considerations can be found on the strategy put in place for the revitalization of the local artefacts – the *pars pro toto* approach – or the different nuances through which the preservation of the forts' built heritage in all its complexity is addressed in the different cases. Thus, if at the system level the Dutch approach to the preservation of military systems found in the UNESCO nomination process a beneficial counterbalance, the same cannot be said for the local artefacts. Consequently, the peculiar Dutch way to address the nature-culture interlinkages at the fort scale – an aspect already neglected in the value assessment of the military system in its historic configuration – is not given adequate attention.

Unlike the Dutch case, the Italian experience with the Entrenched field of Mestre is not directly tied to the UNESCO's logic of exceptionality and, therefore interesting to compare. However, although the Italian military system is not included, as a whole, in the World Heritage Sites involving Venice and its military heritage, it is still affected by their proximity. Indeed, it does not fall within the transnational serial property for the 'Venetian Works of Defence', which is focused on 16th and 17th century military works, considered of outstanding universal value for their being exceptional examples of the

¹²⁰⁴ ICOMOS noted that, unlike for the water management system and the fortified structures – for which 'active conservation measures are being put in place' (cit. *Ibid.*, 165) – the same cannot be fully said of the strategically deployed landscape, which is 'still well visible but its extension is notably reduced and its degree of integrity is uneven' (cit. *Ibid.*, 168), and therefore 'needs similar attention through careful planning and design' (cf. *Ibid.*, 165).

¹²⁰⁵ Cf. *Ibid.*

¹²⁰⁶ ICOMOS considered that 'restorations and repurposing of the forts have contributed to maintaining near the main military structures the spirit of the military past of the defence line territory' (cit. *Ibid.*, 169). Moreover, 'as a general positive effect, restorations have allowed conservation of the forts, have improved their condition and made them available to a large public' (cf. *Ibid.*, 170).

¹²⁰⁷ Cit. *Ibid.* 170.

alla moderna (bastioned) fortifications developed by the Serenissima Republic.¹²⁰⁸ Similarly, it is also excluded from the UNESCO site of 'Venice and its Lagoon', to which it is related through a more complex relationship (FIG. 6.4). Inscribed in the World Heritage List in 1987, the iconic character of this city is testified by its fulfilling all six cultural criteria for selection, then reconfirmed in 2013.¹²⁰⁹



FIG. 6.4 The World Heritage Site of 'Venice and its Lagoon' (2019) (image retrieved at: <https://whc.unesco.org/en/list/394> [25.06.2022])

¹²⁰⁸ This property includes six components in Italy (city fortress of Palmanova, fortified city of Peschiera del Garda, fortified city of Bergamo), Croatia (fort of St Nikola at Šibenik-Knin County, defensive system of Zadar) and Montenegro (city of Kotor). In the nomination dossier, the inclusion of four fortifications in the Venice lagoon (Arsenal of Venice, fort Sant'Andrea, Poveglia Octagon, Alberoni Octagon) was also proposed (cf. Ministry of Cultural Heritage and Activities and Tourism Italy, Ministry of Culture: Directorate for the Protection of Cultural Heritage Croatia, Ministry of Culture Montenegro (2017). *The Venetian Works of Defence between 15th and 17th centuries: UNESCO WHL Nomination Format*, 94-103. Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022]). However, under the guidance of ICOMOS, the latter were excluded for their being forerunners of the bastioned fortifications representing the core of the nomination (cf. ICOMOS (2017). *The Venetian Works of Defence between 15th and 17th Centuries (Italy, Croatia, Montenegro) No 1533*, 200. Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022]).

¹²⁰⁹ Cf. . ICOMOS (1987). *Insular Venice and its Lagoon: Advisory Body Evaluation n. 394*. Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022]; UNESCO (1987). *Report of the World Heritage Committee: Eleventh session* (Paris, 7-11 December 1987), 6. Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022]; Decision 37 COM 8E: Adoption of retrospective Statements of Outstanding Universal Value, in UNESCO (2013). *Report of the World Heritage Committee: Thirty-seventh session* (Phnom Penh-Cambodia, 16-27 June 2013), 224-227. Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022]

From that moment onwards, the concern and efforts to protect such an exceptional site have been aiming at relieving the touristic pressure, and to preserve as much as possible the lagoon ecosystem while managing the tides issue, between charm and threat.¹²¹⁰ Within this framework, the mainland is assumed as buffer zone, confirming its historical role as a place that needs to satisfy all demands of Venice, as a contemporary metropolis.¹²¹¹ Consequently, the Entrenched Field of Mestre

¹²¹⁰ For example, in 1989 the World Heritage Committee expressed its concern about a universal exhibition to be held in Venice, fearing the ‘the effects of mass events’ on the ‘fragile structures and limited space’ of the city (cf. Decision CONF 004 IX.22: SOC Venice (Italy), in UNESCO (1989). *Report of the World Heritage Committee: Thirteenth Session* (Paris, 11–15 December 1989). Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022]). From that moment on, UNESCO has kept on encouraging the development of a ‘sustainable tourism strategy’ in order to face the ‘exceptionally high tourism pressure on the city’, as well as the implementation of policies aimed at ruling the boat traffic in the lagoon up to the prohibition of large ships and tankers, because of their ‘negative environmental impacts’ (cf. Decision 38 COM 7B.27: Venice and its lagoon (Italy) (C 394), in UNESCO (2014). *Report of the World Heritage Committee: Thirty-eighth session* (Doha-Qatar, 15–25 June 2014), 79–81. Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022]; Decision 40 COM 7B.52: Venice and its lagoon (Italy) (C 394), in UNESCO (2016). *Report of the World Heritage Committee: Fortieth session* (Istanbul, 10–17 July 2016 / Paris, 24–26 October 2016), 121–122. Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022]). Accordingly, the Office of the World Heritage Site ‘Venice and its Lagoon’ has worked in these years to address such requests, the main outcomes of which have been channelled into policy and management documents, like the ‘Management Plan 2018–2018’, the ‘Climate Action Plan’, the ‘Water Plan for the City of Venice’ and the ‘Environmental and Morphological Plan for the Lagoon of Venice’ (cf. Decision 43 COM 7B.86: Venice and its lagoon (Italy) (C 394), in UNESCO (2019). *Report of the World Heritage Committee: Forty-third session* (Baku–Republic of Azerbaijan, 30 June–10 July 2019), 176–177. Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022]; Decision 44 COM 7B.50: Venice and its lagoon (Italy) (C 394), in UNESCO (2021). *Report of the World Heritage Committee: Forty-fourth session* (Fuzhou–China / online meeting, 16–31 July 2021), 141–143. Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022]).

¹²¹¹ In the ICOMOS evaluation from 1987, the ‘socio-economic changes’ threatening the ‘survival of Venice’ are described as ‘direct or indirect consequences of the industrialization of the zone of Mestre’ (cf. ICOMOS (1987). *Insular Venice and its Lagoon, op.cit.*, 2). No mercy seems to shine for the ‘ordinary landscape’ of the mainland, which is still the result of the inevitable process of modernization of the ‘museum city’ in the lagoon. More recently, there has been no lack in acknowledging the mainland and Mestre as the ‘city of contemporaneity’ – with the *Museo del Novecento*, the San Giuliano park and the beaches of the Riviera del Brenta among its strong points – and several efforts have been made to better the touristic and cultural offer in the hinterland (cf. Office of the World Heritage Site “Venice and its Lagoon” (2018). *World Heritage property Venice and its lagoon – (Italy) (C 394): Report on the State of Conservation according to the World Heritage Committee Decision 40 COM.7B.48*, 6 & 76–78. Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022]). Also in the report of the last advisory mission (2020), acknowledged is that ‘Venice and its Lagoon function in close symbiosis with its surrounding mainland areas, especially Mestre with its port Marghera’, as well as the municipality’s efforts of ‘greening’ the area to counterbalance its unregulated urban and industrial developments of the past. However, confirmed is the subordinated role of the mainland, where future changes and developments should follow ‘a joint management strategy that ensures the preservation and protection of the World Heritage property and its OUV’ (cit. UNESCO, ICOMOS and RAMSAR (2020). *Report of the joint UNESCO/ICOMOS/RAMSAR advisory mission to the World Heritage property ‘Venice and its Lagoon’ (Italy) (27–31 January 2020)*, 26. Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022]).

is not included, as a system, within the boundaries of this World Heritage Site. The historic military system and the mainland hold a weak position in the struggle of competing with the ‘Queen of the Seas’, with its ‘incomparable series of architectural ensembles’ (criterion iv), the barenes and its lagoon ecosystem (criterion v) and, ultimately, representing the highest expression of the ‘victorious struggle of mankind against the elements, and the mastery men and women have imposed upon hostile nature’ (criterion vi).¹²¹² The only exception is represented by Forte Marghera: its being the more ancient of the forts in the entrenched field, together with its strategic position along the lagoon eaves – namely, those same reasons leading to its predominance in the local process of reuse – earned it a place in the World Heritage Site.¹²¹³ If contextualized in the process started with the inclusion of ‘Venice and its lagoon’ in the UNESCO list in 1987, the efforts and investments made by the municipality for the acquisition, preservation and reuse of the fort sites have surely benefited from the fame and attention on the nearby World Heritage Site.¹²¹⁴ Similarly, the measures envisaged for protecting the visual integrity of Venice island and its lagoon have also been beneficial in protecting the military landscape of the Entrenched Field of Mestre, as part of the UNESCO buffer zone.¹²¹⁵ However, it is necessary to underline that these benefits are in any case side effects, and that the presence of the UNESCO site has not contributed to highlight the value of the Entrenched Field of Mestre as a military system and landscape. Its influence is limited to facilitating the already ongoing re-evaluation process for an ensemble of military sites, which – given their current protection regime – are still faced as single entities with the double pressure of Venice, as both metropolis and heritage site.

¹²¹² Cit. ICOMOS (1987). *Insular Venice and its Lagoon*, *op.cit.*, 3-4.

¹²¹³ Fort Marghera was included in the Management Plan of the World Heritage Site (2012-2018) with a project aimed at financing preparatory studies for defining the future restoration and reuse strategy, then resulted in the PdR (Cf. Office of the World Heritage Site “Venice and its Lagoon” (2012). *Venice and its Lagoon Unesco World Heritage Site: Management Plan 2012-2018*, 118. Available at: http://www.veniceandlagoon.net/web/piano_di_gestione/documenti/ [27.06.2022]). See also: Office of the World Heritage Site “Venice and its Lagoon” (2017). *World Heritage property Venice and its lagoon – (Italy) (C 394): Report on the State of Conservation according to the World Heritage Committee Decision 40 COM.7B.52*, 53. Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022]; Office of the World Heritage Site “Venice and its Lagoon” (2018). *World Heritage property Venice and its lagoon – (Italy) (C 394): Report on the State of Conservation*, *op.cit.*, 15 & 76; Office of the World Heritage Site “Venice and its Lagoon” (2020). *World Heritage property Venice and its lagoon – (Italy) (C 394): Report on the State of Conservation*, 23. Available at: <https://whc.unesco.org/en/list/394/documents/> [27.06.2022].

¹²¹⁴ Office of the World Heritage Site “Venice and its Lagoon” (2018). *World Heritage property Venice and its lagoon – (Italy) (C 394): Report on the State of Conservation*, *op.cit.*, 15 & 76.

¹²¹⁵ In particular, it is recommended to limit ‘buildings of important size’ on the mainland, which would ‘unavoidably have a major influence on the property even more since the flat topography allows to see them from far away’ (cit. UNESCO, ICOMOS and RAMSAR (2020). *Report of the joint UNESCO/ICOMOS/RAMSAR advisory mission*, *op.cit.*, 28).

Apart from the exceptional or ordinary character attached to historic military systems, looking at these two experiences through the lenses of the World Heritage Convention offers an interesting point of view on the national dynamics in the two contexts of reference. Even if carried out under the banner of an outstanding universal value, the imprint of the state parties in choosing the way in which to be represented on the world heritage stage is relevant. When looking at the properties on the Italian territory that are inscribed in the UNESCO list, military heritage is not among the highlights of Italy, the country with the greatest number of World Heritage Sites.¹²¹⁶ The same can be said of the Netherlands, although the lower number of Dutch properties on the UNESCO list still make the 'Dutch Water Defence Lines' stand out. However, this military heritage has gained momentum because of its link with water heritage and management, a peculiarity so expressive of the Dutch culture. The relationship with water is what makes this military system unique and, therefore, different from the Entrenched Field of Mestre. This also explains why the Italian military system – although also embedded in a context with a long-standing and exceptional water culture – did not make it to stand out as world heritage, nor at the local scale, creating a competing situation with the World Heritage Site of 'Venice and its Lagoon'. This consideration calls for a reflection on the relationship between historic military systems and the urban heritage in their area of influence. As the city 'with the unusualness of an archaeological site which still breathes life', Venice can be taken as one of the most expressive examples of the many Italian historic urban centres that, regardless of size and historic-cultural exceptionality, are acknowledged as a widespread national heritage and, therefore, highly represented on the World Heritage List.¹²¹⁷ On the other hand, the Dutch reluctance – already highlighted at the national level – to harness historical cities and the landscape within the tight meshes of heritage protection is equally evident on the World Heritage List. The only exception is in the city of Amsterdam, the 17th-century canal district having been included in the UNESCO list in 2011 (FIG. 6.5).¹²¹⁸ This World Heritage Site covers, together with the buffer zone, the historic urban core of the city almost in its entirety. The latter overlaps with the area of influence of the military systems analysed here. However, unlike the Italian case, the urban and heritage pressure on the military system surrounding the city is compensated

¹²¹⁶ Excluding the already-mentioned serial property of the 'Venetian Works of Defence between the 16th and 17th century' and that of 'Longobards in Italy. Places of the Power (568-774 A.D.)', military heritage is only to be found in the form of city fortifications as part of the numerous nominations concerning historic urban centres, and where, therefore, military heritage is not the object of specific attention.

¹²¹⁷ Cit. ICOMOS (1987). *Insular Venice and its Lagoon*, *op.cit.*, 3.

¹²¹⁸ Cf. Kingdom of the Netherlands (2009). *The seventeenth-century canal ring area of Amsterdam within the Singelgracht*. *UNESCO nomination document*. Available at: <https://whc.unesco.org/en/list/1349/documents/> [06.08.2022].

by its equivalent and earlier acknowledgement as World Heritage. As a result, the competition for space, in what is the most densely populated area of the Netherlands, is still there – probably even exacerbated by the UNESCO nominations – but at least the ‘Dutch Water Defence Lines’ can compete on equal terms.



FIG. 6.5 Map of the World Heritage Site of Amsterdam Canal District (2011) (image retrieved at: <https://whc.unesco.org/en/list/1349/> [25.06.2022])

6.3 **Historic Military Systems at the crossroads of Architecture & Landscape Heritage. A transnational conceptual framework for nature-culture interlinkages across scales**

As a result of the comparison between the two case studies in their contexts of reference, two main features have been identified as influencing the implementation of nature-culture interlinkages in preservation strategies for historic military systems across scales: 1) the application of a thematic approach; 2) the pursuit of visual integrity. These two features permeate both the Italian and Dutch experiences. However, they assume different connotations in the two cases and at the different scales considered. The latter are embedded in two landscape protection frameworks showing profound differences. Therefore, the identification of best practices that can be applied regardless of these specificities is not in line with the scope of this research. Instead, a conceptual framework is proposed in order to provide a tool for facilitating the decision-making process, while taking into account the peculiarities of each context. Ultimately, this theoretical background can also serve as a reference for other historic landscape systems sharing similar characteristics and preservation issues.

6.3.1 **Thematic approaches**

As the comparison between the two case studies shows, effective selection procedures are crucial in the definition of preservation strategies for historic military systems. In order to select, priorities must be set. This often goes through the identification of reading keys – or themes – that, if grounded in a solid historical knowledge of the heritage systems at stake, can offer a valid tool for guiding the decision-making process. Judging from the case studies of this research, the application of a thematic approach is evident in the Dutch experience. It starts with the centrality given to military heritage among the historic layers characterizing the landscape in which the system is inscribed. This aspect cannot be found in the Italian experience, where the historic military system is treated on an equal footing with other landscape layers. In general terms, the conclusion is justified that the application of a thematic (military) approach has surely facilitated the

acknowledgement of the New Dutch Waterline as a military landscape system, and therefore can be considered as an exemplary case. However, from the aim of this research to provide a conceptual framework that is generally applicable, the exceptionality characterizing the overall revitalization experience carried out in the Netherlands represents an important aspect. Indeed, the New Dutch Waterline has been the subject of great attention and it has gradually become an exceptional case. This process started within the national boundaries and has led, at first, to its identification as the first national project within the Belvedere Memorandum (1999), and then to its nomination as national landscape (2004) and national monument (2009) – the first of its kind. Consequently, its recognition as World Heritage (1996-2021) has even more accentuated its exceptional character. Moreover, the protection and management requirements of the World Heritage Site have had an influence on national policies. Indeed, if the general conditions for the protection of ‘ordinary’ cultural heritage and landscapes in the Netherlands remained almost unchanged, the *Environment and Planning Act* includes an article addressing the protection and management of World Heritage Sites.¹²¹⁹ As a result, the preservation of the New Dutch Waterline and the Defence System of Amsterdam – which, together, now represent the ‘apex of the defence system based on inundation’ on a global scale – can be considered, at least in principle, as guaranteed.¹²²⁰ However, less clear is if and how their ‘forerunners’ – the other waterlines on the national territory – can benefit, without the privileges of exceptionality, from the experience matured in the last twenty years. The special measures adopted for the Dutch Water Defence Lines make it difficult to extend the experience to other historic landscape systems than the military, even within the national boundaries. On the one hand, the implementation of measures for landscape protection is now mostly delegated to municipalities, with the *omgevingsplan* as primary tool; on the other hand, the extension of historic systems often exceed the local scale. Therefore, the main question is: what can be done for those historic landscape systems (military or not) that are not exceptional? Considering the Dutch landscape policy framework, the role of advisory and administrative bodies (Cultural Heritage Agency, Provinces) is crucial. After the Belvedere experience – where exceptional cases have been tackled – a follow up for ‘ordinary’ heritage on the national territory would benefit non-exceptional historic landscape systems. Even if leaving out the policy of public funding that had characterized the Belvedere program, a central direction is

¹²¹⁹ Cf. Minister of Interiors and Kingdom Relations (2021). *The Environment and Planning Act of the Netherlands: consolidated version June 2021*. Chapter 4: General rules regarding activities in the physical environment, Art. 4.29: Government regulations relating to world heritage, 42.

¹²²⁰ Cit. ICOMOS (2021). Dutch Water Defence Lines (The Netherlands) No 759bis. ICOMOS Advice (4 June 2021), op.cit., 167.

necessary to facilitate the acknowledgement of landscape structures that exceed the local scale, and to stimulate inter-municipal synergies in compliance with the current landscape policies.

Also from the perspective of transnational exchange, it is necessary to consider that the success of the Dutch experience is rooted in a landscape policy framework that is based on selective protection, and not always applicable in other contexts that do not share a similar background. As the comparison shows, the possibility to isolate a military landscape system from its context is questioned in Italy. A thematic (military) approach is here considered as viable only in those cases where 'the imprint of military structures is so evident that they can be identified as the main feature of the landscape'.¹²²¹ The latter, however, represent an exception if compared to the majority of situations in which historic military systems coexist with a wider network of 'artefacts, relationships, types, uses' not ascribable to the military presence but still not negligible.¹²²² What can be done in those cases to foster the acknowledgment of historic military systems in their landscape dimension? Considering the Italian landscape policy framework, enhancing their presence in regional landscape plans is of primary importance, so that the impossibility to make them the absolute centre of planning activities does not result in a total neglect of military systems in their historical and contemporary significance of 'landscaping agents'.¹²²³

Strongly related to this, the centrality given to 'water' is an extremely relevant feature of the Dutch experience. The water 'layer' is what has made the New Dutch Waterline unique as both historic 'military system' and contemporary 'heritage system'. The primacy of the Water Defence Lines – as the first historic military system to be recognized as cultural landscape in the World Heritage List – is strongly related to that. Among the historical features characterizing this military structure, the presence of water in its entirety is one of the most difficult to grasp. At the same time, it has proved to be the most powerful feature in the acknowledgement of the waterline as a landscape system, sensibly influencing the contemporary revitalization strategy. Therefore, more than just an historic military system, it can be considered as an historic water system. Unlike the pure military (functional) reading key, that of water is a theme with great potential since it does not divide but holds together multiple perspectives: the natural-environmental and historic-cultural characteristics

¹²²¹ Cit. Di Biase, C. (2017). *Paesaggi militari tra XIX e XX secolo*, *op. cit.*, 417.

¹²²² Cit. *Ibid.*

¹²²³ Cit. Fiorino, D. R. (2017). *Paesaggi Militari. Scenari di ricerca*, *op. cit.*, 64.

of the military landscape and, in turn, military and agricultural landscape. This is evident in the Dutch case study, where the interlacement between military and water infrastructure is objectively unique. In this sense, the lack of a similar attention in the Italian case can be ascribed to the intrinsic characteristics of this historic military system, which – although embedded in a context sharing an equally-unique water culture – does not present a similar water infrastructure for defence purposes. Does this mean that the validity of the water theme is limited to the exceptionality of the Dutch case? The answer is twofold. Firstly, the hydraulic setting of its area of influence played a non-secondary role in the conception of the Italian military system (e.g., in the location and mutual arrangement of the fort sites). Therefore, there is room for a reflection on this topic also in cases – like the Italian one – with a non-exceptional, yet relevant connection with water. Secondly, that of water can serve as an example for the identification of other themes – or a combination of themes – that may be more appropriate in other situations, and still useful to foster nature-culture interlinkages. For example, themes like ‘earth/soil’, ‘vegetation’, ‘air/sky’ can also play the role of transversal topics.¹²²⁴ Like water, they are physical (natural) features that are to be found in any landscape and to which are often associated symbolic (cultural) meanings, with the potential of bringing together multiple disciplinary interests and stimulating the cross-fertilization among disciplines. Moreover, they apply to historic military systems as well as to any other landscape structure beyond functional distinctions, and are therefore useful for establishing connections among different landscape layers.

But what is the impact of a themed landscape approach at the scales of local artefacts and built heritage? In the Dutch military system, given the exceptionality of the main water infrastructure, the role of local artefacts (forts) is in the background of the overall revitalization experience. The ‘water’ landscape theme hasn’t found systematic application at the scale of built heritage. However, the water theme can play a crucial role also at this scale. Water is the shared element between biologic and synthetic components, although according to a colliding relationship: while it keeps the biological components alive, it can cause serious damage on synthetic components. Some starting clues for an integration around the water theme can be found in the Dutch experience with the revitalization of fort sites. Here the historic hydraulic functioning of buildings (i.e. water collection systems) is often enhanced

¹²²⁴ Cf. Aultman, J., Chaatsmith, M. and Bartley, E. (2019). Water/Earth/Sky Journeys: Overcoming Serial Nomination Challenges with a Themed Landscape Approach, in *Proceedings of the 2018 US/ICOMOS Symposium. Forward Together: A Culture-Nature Journey Towards More Effective Conservation in a Changing World (The Presidio, San Francisco-California: 13-14 November 2018)*, Mitchell, N., St. Clair, A., Brown, J., Barrett, B. and, Rodriguez, A. (Eds). US/ICOMOS.

and reused for contemporary purposes. The water theme is addressed also in the Italian experience, especially in relation to the damages caused by water infiltrations to historic buildings, and to the importance of crossing the analysis of structural damages with the hydraulic setting of the fort sites. From these sparse hints in both the Dutch and Italian experiences, it is possible to conclude that an in-depth study of the historic water infrastructure at the fort scale, including the phases prior to the settlement of the forts, would represent a valuable base of knowledge to stimulate nature-culture interlinkages in the preservation strategies at the scale of built heritage. Both the Italian and Dutch contexts could benefit from a connecting topic like that of water to reach an holistic approach to the preservation of the forts' built heritage – beyond the green-red divide – in both design narratives and technical preservation choices. Research in the field of historic gardens and their preservation can represent a valid reference from a methodological point of view, especially in relation to the study of their hydraulic systems.¹²²⁵ From the perspective of biological components, fort sites can be interpreted as 'military gardens', characterized by a complex vegetal architecture, but designed to fulfil a military strategic purpose with hardly any aesthetic implications. However, even more than for historic gardens, the vegetal components are in a symbiotic relationship with historic buildings and other synthetic components on fort sites, and their combined preservation requires a mutual dialogue between natural sciences and humanities, as both historical and design disciplines. Also at the scale of built heritage, the water theme can efficiently serve as a catalyst, bringing together different disciplinary interests. Ultimately, the identification of a common theme like that of water – although differently interpreted at each of the scales considered – can foster a mutual exchange of issues and challenges across scales, overcoming the distortions and shortcomings determined by unidirectional (top-down/bottom-up) inter-scale approaches.

6.3.2 Visual approaches

Together with the discussion on the relevance of a thematic approach, another feature emerging from the comparison of the two case studies is related to the pursuit of visual integrity in the preservation strategies. Although visual integrity has not yet received a commonly shared definition, it was the subject of discussion

¹²²⁵ Cavagnero, P., Giusti, M.A. and Revelli, R. (2009). *Scienza idraulica e restauro dei giardini*. Torino: Celid.

in the UNESCO community.¹²²⁶ In it, its connection to the ‘capacity of heritage to maintain visual distinctiveness and visually demonstrate its relationship with its surroundings’ was generally accepted.¹²²⁷ Visual aspects are of great importance for increasing the recognisability of any landscape structure that, due to its wide and/or punctual configuration, is difficult to grasp in its entirety. In relation to the specific cases addressed in this research, the pursuit of visual integrity in preservation strategies has the powerful role of link between the two landscapes embedded in historic military systems: on the one hand, the physical landscape in its topographic, geomorphological, hydrological and environmental characteristics; on the other hand, the landscape of military perception – the military ‘way of seeing’ – expressive of the military culture and through which the physical landscape is observed, interpreted, tamed. The latter is translated in sight-based solutions, which encompass all the scales considered. The local artefacts are tied together through visual connections, as well as the overall military system plays an influence on the landscape by keeping open the visual on the surroundings. Finally, the need to hide from view the local artefacts has led to the development of camouflage techniques. Especially in the case of plain landscapes like the ones compared in this research, vegetal components have assumed the pivotal role of primary masking elements, generating that symbiotic relationship with military buildings in the forts’ built heritage.

All this considered, the principle of visual integrity is pursued differently in the two case studies and according to the scales considered. About the system scale, keeping the visual integrity of the New Dutch Waterline is of primary importance in the national project set for its revitalization, then confirmed in the management strategy defined in consultation with ICOMOS for the World Heritage Site.¹²²⁸ In the Italian case, given the poor consideration of the Entrenched Field of Mestre in its landscape dimension, visual integrity at the system scale was not a matter of attention. Beyond the specific case, this aspect is connected to the general

¹²²⁶ Cf. Recognized is its importance of visual qualities for different kind of sites (historic cities, single monumental buildings, archaeological sites, cultural landscapes, natural sites), but preferred is the definition as ‘visual impact’ (cf. UNESCO (2013). *Report of the International World Heritage Expert Meeting on Visual Integrity (6-9 March 2013; Agra, India)*. Paris: UNESCO, 2. Available at: <https://whc.unesco.org/en/events/992/> [06.08.2022].

¹²²⁷ Cit. UNESCO (2013). *International World Heritage Expert Meeting on Visual Integrity (6-9 March 2013; Agra, India)*. Background document prepared by the World Heritage Centre, with the inputs from ICOMOS, ICCROM and IUCN). Paris: UNESCO, 2. Available at: <https://whc.unesco.org/en/events/992/> [06.08.2022].

¹²²⁸ Cf. Witsen, P. P. and Quality management team New Dutch Waterline (2018). *On Visual Integrity – Dutch Waterlines*. Available at: <https://www.programmanieuwehollandsewaterlinie.nl/bibliotheek/documenten/documenten-unesco/> [06.08.2022].

reluctance in the Italian context to address historic military systems as isolated from the broader set of relations in their area of influence. On the one hand, acknowledged is the importance of their 'visual relationships, often compromised by the growth of urban agglomerations and the interference of new infrastructural elements that hinder their perception'.¹²²⁹ At the same time, the preservation of the military landscape – as an independent layer – is considered as better addressed on an intangible level (e.g. through the use of contemporary digital tools like GIS and virtual/augmented reality), and limiting provisions with a direct impact on physical traces and structures.¹²³⁰ While recognizing the validity of virtual reconstructions in supporting the recognisability of historic military systems, the visual relations they established in the physical landscape should be preserved as much as possible and addressed in regional landscape plans.

At the fort scale, the pursuit of visual integrity requires specific attention and adjustments, especially when it involves bringing back an historical situation no more visible in the present conditions. For historic buildings, the application of this principle has already received great attention in the field of architectural heritage preservation, in a way that replicas and anachronistic reconstructions are generally avoided. The same cannot be said for vegetal components – the 'skin' of fort sites – for which the application of a visual approach still asks for a reflection. As observed in the Dutch experience, the isolation of portions in which the state of vegetation is brought back to a specific moment of its past configuration, is a powerful and evocative choice for the design narrative, but also a valuable compromise solution between the historic-cultural and ecological significance of green components. However, this strategy needs to be assessed into a broader set of parameters than just its figurative impact. First of all, the 'living' character of vegetal components involves dealing with a much more fragile matter. If compared to synthetic components, it has a very different response to the test of time and is subject to faster changes of a cyclical nature. Moreover, it represents the vegetal cover protecting and containing the earthworks, for which its health is of vital importance. In turn, the state of earthworks can affect historic buildings, especially those designed to be underground. Therefore, a preservation strategy that only focuses on the conservation of historic buildings – where the interaction with organic materials is only addressed in terms of deterioration effects – represents only a partial answer, potentially harmful for green components. At the same time, a visual strategy only focused on the outer vegetal 'skin' in its historic-cultural and

¹²²⁹ Cit. Fiorino, D. R. (2017). *Paesaggi Militari. Scenari di ricerca*, *op. cit.*, 64-65.

¹²³⁰ Cf. Di Biase, C. (2017). *Paesaggi militari tra XIX e XX secolo*, *op. cit.*, 417.

current ecological significance can have a negative impact on historic buildings, as in cases where shrubs and trees have too invasive root systems. Additionally, it is necessary to consider the new conditions in which the forts can operate today; they differ substantially from the ones in which they were conceived and used as military outposts. First of all, the new recreational pressure on these sites, which is not comparable to that for which they were designed; secondly, new environmental conditions (e.g. climate change, drought) can also have a detrimental impact, especially on vegetal components. Also in this case, the recent advancements in research on the effects of climate change on other kinds of green heritage (e.g. that of country estates) can represent a valid reference.¹²³¹ A holistic approach to the protection and preservation of architectural and green heritage of the fort sites, in which all components – buildings, earthworks, vegetation – are treated as an ‘organism’ is crucial. It involves not only isolated interventions but a long-term maintenance process, especially for the green components, the image of which constantly changes according to their cyclical growth behaviour. In conclusion, visual integrity represents a central aspect in the preservation of historic military systems at all the scale considered, but as part of a broader strategy. Only by taking into account their specificities – as heritage at the crossroads of landscape and architecture – in the light of contemporary challenges (e.g., recreational pressure, climate change), historic military systems can be preserved towards a sustainable future.

¹²³¹ Nijhuis, S. (2021). Toekomstbestendige buitenplaatslandschappen: Een regionale ontwerpbenadering voor historische buitenverblijven in landschappelijke context, *Bulletin KNOB*, 120(4), 62-74.

Summary

In the context of rapid urban transformations, this thesis explores the possible preservation strategies for historic military systems that used to be embedded in extra-urban settings, but that now are absorbed in the development dynamics of complex metropolitan areas. Reference is made to structures with a wide territorial extension resulting from the military mastery in harnessing the available environmental resources for strategic purposes. They often rely on the combination of isolated artefacts (forts or other works), conceived to function together and fulfil a common military purpose. As the result of a peculiar 'way of seeing' the landscape, their construction relied on sight-based design solutions that transcend the local scale of the single military artefacts. Accordingly, they reflect the definition of landscape systems, as provided by the Council of Europe. In turn, the isolated and non-contiguous objects do not always correspond to a single building or construction, but they may also present a system character. Indeed, they often consist of a sophisticated combination of interrelated synthetic (buildings and constructions) and natural components (earthworks, vegetation, water ditches and canals), where the interaction with the environment is further developed to a local scale.

The research stems from the main peculiarity of these heritage systems: namely, the coexistence of cultural and natural values, and their being at the crossroads of the architecture and landscape domains. Although the need to address nature-culture interlinkages has gradually become a topical issue in the field of heritage preservation, military landscapes have been almost completely left out from this debate. Moreover, the lack of inter-scale strategies in current preservation practices for historic military systems further complicates the way nature-culture interlinkages are addressed and frustrates the much-needed cross-fertilization among various disciplines (spatial planning, landscape architecture, architectural heritage preservation). Considering this, my dissertation explores the possibility of improving the implementation of nature-culture interlinkages in the preservation strategies for historic military systems, which – given their intrinsic characteristics – involves an inter-scale approach.

The development of a conceptual framework on this topic has required taking into account the diversity of existing approaches to landscape, architectural heritage and their interconnection. In the European tradition of landscape appreciation and protection, two long-standing approaches can be distinguished, respectively

characterized by a naturalistic and a cultural approach. The result is the co-existence of two different attitudes towards the architectural heritage domain, and two distinct views on the relations with spatial planning policies. The latter is relevant for the development of preservation strategies that, as is the case of historic military systems, rely on a dialogue between these domains. Therefore, a transnational perspective was applied in order to effectively bridge the gap in both theory and practice. Italy and the Netherlands were selected as relevant contexts in Western Europe for a comparison on this topic. They exemplify the two main trends in the European evolution of landscape protection models (naturalistic/cultural approach), and a different degree in which heritage policies are integrated in spatial planning. In order to understand the historical roots which have led to the more recent approaches, a theoretical background has been outlined. At first, the latest advancements on the topic of nature-culture interlinkages as developed in the frame of international policies and programs (UNESCO and its auxiliary bodies, Council of Europe) have been analysed and interpreted in relation to historic military systems. Subsequently, the evolution of landscape protection and preservation strategies in the two contexts has been critically interpreted, highlighting the different influence played by the national discourse on architectural heritage and the relationship with spatial planning policies.

Linking archival research, interviews and field observations, the core of the research is based on the comparison between Italian and Dutch contemporary experiences with the revitalization and reuse of historic military systems. The New Dutch Waterline (NL) and the Entrenched Field of Mestre (IT) were selected as relevant case studies. Although embedded in contexts with a special water culture, the historical relationship of these two military systems with the hydraulic setting in their area of influence is different, as well as the role of the local artefacts in the overall military system. These intrinsic qualities have had an influence on the strategies developed for their revitalization and reuse, which are analysed according to three main scales – the overall system, the local artefacts, the built heritage – and their interconnection. Their historical construction and development, the demilitarization process and contemporary policies and practices for their protection and preservation were investigated, as well as international initiatives that were promoted in the frame of the World Heritage Convention.

The results of the cross-reading between case studies and the theoretical background are discussed in the thesis conclusions. It has led to the definition of a transnational conceptual framework for fostering nature-culture interlinkages in the preservation strategies for historic military systems. Two recurring features, which permeate both the Italian and Dutch experiences, have been identified in the application of a thematic approach and the pursuit of visual integrity. However,

they assume different connotations in the two cases and at the different scales considered. Therefore, the potential of a thematic approach and a visual approach is discussed by taking into account the different scales analysed as well as their interconnection, and in relation to the possibilities offered by the national policy frameworks considered. This conceptual framework provides a tool for facilitating the decision-making process, while considering the peculiarities of each context, and bringing historic military systems into the international discussion on this topic. Ultimately, it can serve as a reference for other historic landscape systems sharing similar characteristics and preservation issues.

Samenvatting

Binnen de context van snelle stedelijke transformaties, onderzoekt dit proefschrift de mogelijke conserveringsstrategieën voor historische militaire systemen, die vroeger waren ingebed in buitenstedelijke omgevingen, maar nu onderdeel zijn geworden van de ontwikkelingsdynamiek van complexe, grootstedelijke gebieden. Het gaat in dit geval om uitgestrekte systemen, die de omgevingsfactoren van grote gebieden wisten in te zetten voor militaire en strategische doeleinden. Ze bestaan veelal uit meerdere, individuele, door de mens gemaakte objecten (forten en andere bouwwerken) die ontworpen zijn om samen een gemeenschappelijk militair doel te vervullen. Als gevolg van een specifieke ‘manier van kijken’ naar het landschap, werden deze systemen ontworpen met op zicht-gebaseerde oplossingen, die de context en schaal van de individuele objecten overstijgen. Als zodanig weerspiegelen ze de definitie van landschapssystemen, zoals geformuleerd door de Raad van Europa. De geïsoleerde, niet aaneengesloten objecten bestaan niet altijd uit één gebouw of constructie, maar kunnen op hun beurt ook een systeemkarakter hebben. Ze bestaan immers vaak uit een uitgekende combinatie van onderling samenhangende kunstmatige componenten (gebouwen en constructies) en natuurlijke componenten (grondwerken, vegetatie, watersloten en kanalen), waarbij de interactie met de omgeving wordt ontwikkeld tot een lokale schaal.

Het onderzoek vloeit voort uit de belangrijkste karakteristiek van deze erfgoedssystemen: de co-existentie van culturele en natuurlijke waarden en de positie die zij daardoor krijgen op het kruispunt van het architectuur- en landschapsvakgebied. Hoewel de noodzaak voor een integrale aanpak van natuur en cultuur de laatste jaren, binnen het erfgoedbehoud steeds actueler is geworden, zijn militaire landschappen vrijwel volledig buiten dat debat gehouden. Bovendien bemoeilijkt het gebrek aan interdisciplinaire behoudsstrategieën voor historische militaire systemen, de manier waarop de onderlinge verbanden tussen natuur en cultuur worden aangepakt en frustreert het de broodnodige kruisbestuiving tussen verschillende disciplines (ruimtelijke planning, landschapsarchitectuur, behoud van architectonisch erfgoed). Dit in overweging nemend, onderzoekt dit proefschrift de mogelijkheden tot de verbetering van de implementatie van een samenhangende natuur-cultuur benadering in de conserveringsstrategieën voor historische militaire systemen. Iets dat gezien hun karakteristieken essentieel is.

Voor de ontwikkeling van een conceptueel kader voor dit onderwerp, is het noodzakelijk dat er rekening wordt gehouden met de diversiteit van de bestaande benaderingswijzen van landschap, architectonisch erfgoed en hun onderlinge samenhang. In de Europese traditie van landschapswaardering en -bescherming kunnen twee, al lang bestaande, benaderingen worden onderscheiden. Ze worden gekenmerkt door een op de natuur respectievelijk cultuur, gerichte benadering. Het resultaat is het naast elkaar bestaan van twee verschillende houdingen ten opzichte van het architectonisch erfgoed, en twee verschillende opvattingen over de relaties met het ruimtelijkeordeningsbeleid. Dit laatste is relevant voor de ontwikkeling van conserveringsstrategieën die, zoals het geval is bij historische militaire systemen, steunen op een dialoog tussen deze domeinen. Om de kloof tussen theorie en praktijk te overbruggen is er gekozen voor een transnationaal perspectief. In West-Europa bieden Italië en Nederland de relevante context voor een vergelijking. Ze illustreren de twee belangrijkste trends in de Europese evolutie van modellen voor landschapsbescherming (natuur/cultuur benadering), en de verschillende mate waarin erfgoedbeleid wordt geïntegreerd in ruimtelijke ordening.

Om de historische basis voor de huidige benadering te begrijpen, is een theoretische achtergrond geschetst. In eerste instantie zijn de nieuwste ontwikkelingen op het gebied van de onderlinge verbanden tussen natuur en cultuur, zoals ontwikkeld in het kader van internationale beleidslijnen en programma's (UNESCO en zijn hulporganen, Raad van Europa), geanalyseerd en geïnterpreteerd in relatie tot historische militaire systemen. Vervolgens is de evolutie van de strategieën voor landschapsbescherming en -behoud in de twee contexten kritisch geïnterpreteerd, waarbij de verschillende invloed van het nationale discours over architectonisch erfgoed en de relatie met het ruimtelijkeordeningsbeleid wordt benadrukt.

Door archiefonderzoek, interviews en veldobservaties te koppelen, wordt de kern van het onderzoek gevormd door de vergelijking tussen hedendaagse Italiaanse en Nederlandse ervaringen met de revitalisering en het hergebruik van historische militaire systemen. De Nieuwe Hollandse Waterlinie (NL) en het Entrenched Field of Mestre (IT) vormen de relevante casestudies. Hoewel beide ingebed in een speciale, op water gebaseerde context, is de historische relatie van deze twee militaire systemen met de hydraulische setting in hun invloedgebied verschillend, evenals de rol van de lokale artefacten in het algehele militaire systeem. Deze intrinsieke kwaliteiten hebben invloed gehad op de strategieën die zijn ontwikkeld voor hun revitalisering en hergebruik. Ze worden geanalyseerd volgens drie hoofdschalen – het totale systeem, de lokale artefacten, het gebouwde erfgoed – en hun onderlinge samenhang. Hun historische constructie en ontwikkeling, het demilitariseringsproces en het hedendaagse beleid voor hun bescherming en behoud werden onderzocht, evenals internationale initiatieven die werden gepromoot in het kader van de Werelderfgoedconventie.

De resultaten van de cross-reading tussen de casestudies en de theoretische achtergrond worden besproken in de conclusies van het proefschrift. Het heeft geleid tot de definitie van een transnationaal, conceptueel kader voor het bevorderen van onderlinge verbanden tussen natuur en cultuur in de conserveringsstrategieën voor historische militaire systemen. Twee terugkerende kenmerken, die zowel in de Italiaanse als de Nederlandse ervaringen doorklinken, zijn de toepassing van een thematische benadering en het streven naar visuele integriteit. Ze hebben echter in beide individuele gevallen een verschillende betekenis. Ook op de verschillende beschouwde niveaus. Daarom wordt het potentieel van een thematische benadering en een visuele benadering besproken door rekening te houden met de verschillende geanalyseerde niveaus en met hun onderlinge samenhang, en in relatie tot de mogelijkheden die de beschouwde nationale beleidskaders bieden. Dit conceptuele kader biedt een hulpmiddel om het besluitvormingsproces te vergemakkelijken, rekening houdend met de karakteristieken van elke context en om historische militaire systemen in de internationale discussie over dit onderwerp te betrekken. Uiteindelijk kan het dienen als referentie voor andere historische landschapssystemen met vergelijkbare kenmerken en behoudsproblemen.

Sommario

Nell'odierno contesto di rapide trasformazioni urbane, questa tesi esplora le possibili strategie di conservazione per sistemi militari storici un tempo integrati in contesti extraurbani, ma che ora sono assorbiti nelle dinamiche di sviluppo di aree metropolitane complesse. Si fa riferimento a strutture dall'ampia estensione territoriale, frutto della maestria militare nell'utilizzare le risorse ambientali disponibili per fini strategici. Spesso essi si articolano in una combinazione di manufatti isolati (forti o altre opere), concepiti per funzionare in maniera integrata e soddisfare uno scopo militare comune. Frutto di un peculiare 'modo di vedere' il paesaggio, la loro costruzione ha comportato l'impiego di soluzioni progettuali di tipo visuale che trascendono la scala locale dei singoli manufatti militari. Di conseguenza, essi riflettono la definizione di sistema paesaggistico, così come fornita dal Consiglio d'Europa. A loro volta, gli oggetti isolati e non contigui di cui tali sistemi si compongono non sempre corrispondono a un singolo edificio o costruzione, ma possono presentare un carattere *sistemico*. Infatti, questi ultimi sono spesso caratterizzati da una sofisticata combinazione di componenti sintetiche (edifici e costruzioni) e naturali (terrapieni, vegetazione, fossi e canali), in cui l'interazione con l'ambiente è ulteriormente sviluppata a scala locale.

La ricerca nasce dalla principale peculiarità di questi sistemi storici: la coesistenza di valori culturali e naturali e il loro essere al crocevia tra i domini dell'architettura e del paesaggio. Sebbene la necessità di superare la dicotomia natura-cultura sia diventata una questione primaria nel campo della conservazione del patrimonio culturale e naturale, i paesaggi militari sono stati fino ad ora quasi completamente esclusi da questo dibattito. Inoltre, la frequente mancanza di strategie interscalari nelle attuali pratiche di conservazione per i sistemi militari storici rappresenta un ulteriore elemento di criticità, ostacolando la necessaria fertilizzazione tra le varie discipline coinvolte (pianificazione territoriale, architettura del paesaggio, conservazione del patrimonio architettonico). Di conseguenza, la tesi esplora le possibili modalità per favorire l'implementazione di interconnessioni natura-cultura nelle strategie di conservazione per i sistemi militari storici, che – date le loro caratteristiche intrinseche – comporta un approccio interscalare.

Al fine di sviluppare un quadro concettuale su questo tema, si è reso necessario considerare la diversità di approcci esistenti a paesaggio, patrimonio architettonico e alla loro interconnessione. Nella tradizione europea di protezione del paesaggio si

possono distinguere due principali tendenze, caratterizzate rispettivamente da un approccio naturalistico o culturale. Il risultato è la coesistenza di due diversi modi d'intendere l'interazione tra paesaggio e patrimonio architettonico, nonché due punti di vista distinti sul rapporto con le politiche di pianificazione territoriale. Questo aspetto ha un'influenza decisiva sullo sviluppo di strategie di conservazione che, come nel caso dei sistemi militari storici, necessitano di un dialogo efficace tra questi ambiti. Pertanto, la tesi si pone in una prospettiva transnazionale al fine di colmare tale mancanza sia nella riflessione teoretica che nella prassi.

Italia e Paesi Bassi sono stati selezionati come contesti rilevanti nell'Europa occidentale per un confronto su questo tema. Essi esemplificano le due principali tendenze europee di protezione del paesaggio (approccio naturalistico/culturale) e presentano un diverso grado di integrazione delle politiche per il patrimonio costruito nella pianificazione territoriale. Per comprendere le radici storiche che hanno portato agli approcci più recenti, è stato delineato un background teorico. In primis, il tema delle interconnessioni natura-cultura così come sviluppato in recenti politiche e programmi internazionali (UNESCO e suoi organi ausiliari, Consiglio d'Europa) è stato analizzato e interpretato in relazione al caso dei sistemi militari storici. Successivamente, l'evoluzione delle politiche di tutela e conservazione del paesaggio nei due contesti di riferimento è stata oggetto di interpretazione critica, al fine di evidenziare la diversa influenza esercitata dal discorso nazionale sulla conservazione del patrimonio architettonico e dalle politiche di pianificazione del territorio.

Attraverso l'incrocio di ricerca archivistica, interviste e osservazione diretta, il fulcro della ricerca si basa sulla comparazione tra esperienze contemporanee, italiane e olandesi, con la rivitalizzazione e il riuso di sistemi militari storici. La New Dutch Waterline (NL) e il Campo trincerato di Mestre (IT) sono stati selezionati come casi studio rappresentativi. Benché entrambi inseriti in contesti con una peculiare cultura dell'acqua, diversa è la relazione storica di questi due sistemi militari con l'assetto idraulico nella loro area di influenza, così come diverso è il ruolo dei manufatti locali all'interno del sistema militare complessivo. Queste qualità intrinseche hanno influito sulle strategie sviluppate per la loro rivitalizzazione e riuso, che sono analizzate secondo tre scale principali – il sistema complessivo, i manufatti locali, il patrimonio costruito – e nella loro interconnessione. La loro costruzione e sviluppo storico, il processo di demilitarizzazione e le politiche e pratiche contemporanee per la loro protezione e conservazione sono state oggetto di analisi, nonché le iniziative internazionali promosse nel quadro della Convenzione UNESCO.

I risultati della lettura incrociata tra casi studio e il background teorico sono discussi nelle conclusioni della tesi, in cui si propone un quadro concettuale transnazionale finalizzato a promuovere le interconnessioni natura-cultura

nelle strategie di conservazione per sistemi militari storici. Due caratteristiche ricorrenti sia nell'esperienza italiana che in quella olandese sono state individuate nell'applicazione di un approccio tematico e nel perseguimento dell'integrità visiva. Tali costanti assumono, però, connotazioni diverse nei due casi e alle diverse scale considerate. Pertanto, il potenziale di un approccio tematico e di un approccio visivo è discusso tenendo conto delle diverse scale e della loro interconnessione, oltre che in relazione alle possibilità offerte dalle politiche nazionali di riferimento. Tale quadro concettuale si offre quale strumento per facilitare il processo decisionale nelle strategie di conservazione, tenendo conto delle peculiarità di ciascun contesto e portando i sistemi militari storici nella discussione internazionale sul tema delle interconnessioni natura-cultura. Infine, esso può fungere da riferimento per altri sistemi paesaggistici storici con analoghe caratteristiche e questioni conservative.

Curriculum Vitæ

Federica Marulo graduated in Architecture in January 2016 at the Department of Architecture of the University of Naples Federico II with a thesis in architectural restoration. After graduation she had an internship at the Superintendence for Archaeological, Landscape, Historical, Artistic and Ethno-anthropological heritage for the Province of Naples. In 2017, she was granted a scholarship by the University of Naples Federico II for conducting PhD research within a dual doctoral program with Delft University of Technology. Her research investigates the impact of nature-culture interlinkages on the relationship between architectural and landscape heritage, looking at the historical evolution of national and international protection frameworks, as well as to contemporary preservation practices, with a focus on historic military systems and water-related built heritage. During her PhD programme, she carried out teaching activities in both the universities she is affiliated with. In particular, between 2020 and 2021 she was involved in the course and design workshop 'Digital Naples. Adaptive design for historic churches', tutoring an international group of students from TU Delft and the University of Naples. Since 2022, she collaborates with Stichting Monumentenbezit in research and maintenance activities for the heritage site of Naarden's fortifications.

Research output

Publications in journals and edited volumes

- S. Pollone & **F. Marulo**, *Un patrimonio da conoscere e preservare: il vallone dei Mulini di Sorrento*, 'Terra delle Sirene' 40(2021), 9-38.
- F. Marulo, *Industrial heritage and urban development: the Dutch experience*, in: *Conservation/Demolition. Proceedings of the VII EAAE International Workshop* (Prague, 25-28 September 2019), R. Crisan, D. Fiorani, G. Franco, L. Kealy, S.F. Musso & P. Vorlik (Eds.), 'Transactions on Architectural Education', 67(2020), 186-197.
- V. Russo, L. Romano & **F. Marulo**, *Volte ad incannucciato nel cantiere storico napoletano. Risultati di una ricognizione in progress*, in: *Sulle rotte mediterranee della costruzione. Sistemi voltati tra Napoli e Valencia dal Medioevo all'Ottocento* (special issue), V. Russo & F. Vegas Lopez-Manzanares (eds.), 'Archeologia dell'Architettura', XXV(2020), 87-102.

- F. Marulo, *Esperienze costruttive in Penisola Sorrentina. Le cupole della Basilica di Santa Maria del Lauro a Meta di Sorrento*, in: *Cupole murarie tra XV e XVI secolo. Programmi, saperi costruttivi e restauri attraverso la Campania* (special issue), V. Russo & S. Pollone (eds.), 'Ananke', 91(2020), 202-205.

Papers in conference proceedings

- F. Marulo, *Between nature and culture. From Italy and the Netherlands new perspectives towards a sustainable use of historical landscapes*, in: *Proceedings of the International LDE Heritage Conference on Heritage and the Sustainable Development Goals* (Delft, 26-28 November 2019), U. Pottgiesser, S. Fatoric, C. Hein, E. de Maaker & A. Pereira Roders (eds.), TU Delft Open, Delft 2020, 408-418.
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Book review

- F. Marulo, review of the book: F. Delizia, C. Di Francesco, S. Di Resta, M. Pretelli (eds.), *La Casa del Fascio di Predappio nel panorama del restauro dell'architettura contemporanea. Contributi per aiutare a scegliere*, Bononia University Press, Bologna 2015, In: 'Eikonocity', 2017(2), pp. 139-141.

Presentations in conferences, seminars and symposia

- F. Marulo, *Historic Military Systems & the Faro Convention. Participation and Public Engagement in Dutch and Italian revitalization experiences*, Faro Convention International Conference / Warm-up Meeting/Faro Town Hall, TU Delft, 27 October 2021, Faro (online)
- F. Marulo, *La baia in difesa. Le torri costiere vicereali della Penisola sorrentina, da frammenti a monumento* (with V. Russo & S. Pollone), Study Day: Il patrimonio culturale costiero. Politiche e Progetti per la Tutela e la Valorizzazione/Università degli Studi 'Gabriele d'Annunzio', Università degli Studi di Napoli Federico II, Università Politecnica delle Marche, Politecnico di Bari, 24 October 2019, Chieti
- F. Marulo, *Industrial heritage in the context of urban development: the Dutch experience*, International Workshop: Conservation/Demolition/EAAE Thematic Network on Conservation, 25–28 September 2019, Prague
- F. Marulo, *Back from the Prix de Rome. The influence of the pensionnaires on the culture of conservation in the Netherlands*, International Study Day: Dopo il Grand Tour. Riferimenti, revisioni, ritorni/Rome Art History Network (RAHN), Accademia Nazionale di San Luca, Biblioteca Hertziana, 12 April 2019, Rome
- F. Marulo, *Restoring Architecture through the Landscape lens. A cross reading of Italian and Dutch experiences*, Peer Review Colloquium: Topics and territories on the edge/TU Delft, 12 April 2018, Delft
- F. Marulo, *Il rilievo come forma di pre-comprensione per la conservazione. La sperimentazione sul sito abbaziale di Crapolla* (with S. Pollone & M. Facchini), Study Day: La ricerca per il patrimonio culturale. Strategie pluridisciplinari per il restauro e la valorizzazione dell'Abbazia di San Pietro a Crapolla/Università degli Studi di Napoli Federico II, Dipartimento di Architettura, 14 March 2018, Naples
- F. Marulo, *The Nymphaeum of Massa Lubrense: conservation issues of an archaeological palimpsest in the coastal landscape*, International Conference: Conservation and promotion of architectural and landscape heritage of the Mediterranean coastal sites/RIPAM, University of Genoa, National Research Council, Institute for Cultural Heritage Conservation and Valorization of Florence, 20–22 September 2017, Genoa
- F. Marulo, *Tra forti e opere idrauliche. La Nieuwe Hollandse Waterlinie, da segno di difesa a simbolo della tutela del paesaggio nei Paesi Bassi*, International Conference: Military Landscapes. A future for military heritage/Università degli Studi di Cagliari, Polo Museale della Sardegna, Istituto Italiano dei Castelli, Edinburgh School of Architecture and Landscape Architecture, 21–24 June 2017, La Maddalena
- F. Marulo, *Stratification and metamorphosis of an urban landscape: the ancient fortification of Sorrento* (with S. Pollone), FORTMED: International Conference on Modern Age fortifications of the western Mediterranean coast/Università degli Studi di Firenze, 10–12 November 2016, Florence

Activities

Participation in research projects

- 2020-2021: *WARGAPS. Weaving the Narratives of Historic Urban Ruins from a Transcultural Perspective. Naples, Beirut, Izmir as observatory points for inclusive action*, (coordinators: prof. V. Russo, prof. H. Al-Harity, prof. H. Yüceer) / University of Naples Federico II, American University of Beirut, Izmir Institute of Technology
- 2017-2019: *iDOME. Invisible | Accessible. Masonry domes between 15th and 16th centuries in Campania. Innovative strategies for the inclusive and cross-thematic interpretation and use of vulnerable architecture* (original title: Italian) (coordinator: prof. V. Russo) / University of Naples Federico II
- 2016-2017: *Technical-scientific support to the program for conservation, improvement in use and enhancement of the St. Peter's Abbey in Crapolla*, Massa Lubrense (NA) (original title: Italian), (coordinator: prof. V. Russo) / University of Naples Federico II

Teaching activities

- **Tutor** in the B.Arch. course and design workshop 'Digital Naples. Adaptive design for historic churches' (prof. V.Russo, dr. M.T. van Thoor, dr. B. de Andrade, F. Marulo) / Delft University of Technology, Faculty of Architecture and the Built Environment & Università degli Studi di Napoli Federico II, Department of Architecture / Period: October 2020–February 2021
- **Supervisor** of B.Arch. thesis / University of Naples Federico II, Department of Architecture / Student: E. Butterazzi, thesis title: *La chiesa dei Santi Demetrio e Bonifacio in Napoli: un percorso di conoscenza per la conservazione e valorizzazione* (The church of Saints Demetrio and Bonifacio in Naples: a path of knowledge for conservation and enhancement) (with prof. V.Russo) / 2020
- **Supervisor** of MSc thesis / University of Naples Federico II, Department of Architecture / Student: A. Coppola, thesis title: *Fortificazioni, tra memoria e materia: il restauro del Fort Loyasse a Lione* (Fortifications, between memory and materiality: the restoration of Fort Loyasse in Lyon) (with prof. V.Russo, prof. P. Miano) / 2019-2020
- **Teaching assistant** in B.Arch. Honours course 'Research and Design: Workshop in Florence' (dr. M.T.A. van Thoor, ir. W. Willers) / Delft University of Technology, Faculty of Architecture and the Built Environment/ Period: September 2018-February 2019

- **Teaching assistant** in MSc course ‘Restoration Studio’ (prof. V. Russo) / University of Naples Federico II, Department of Architecture / Period: January 2017-December 2017; September 2019-January 2021
- **Teaching assistant** in B.Arch. course ‘History & Theories of Restoration’ course (prof. V. Russo) / University of Naples Federico II, Department of Architecture / Period: January 2017-December 2017; September 2019-July 2020

Invited lectures and reviews

- F. Marulo, *Dealing with religious complexes in Naples. Abandonment, conservation and reuse* / Lecture at TU Delft & University of Naples Federico II, Research and Design Workshop: ‘Adaptive design for historic churches and their context’ (prof. V. Russo, dr. M.T.A. van Thoor, ir. A.C. de Ridder, dr. S. Pollone), 7 November 2022
- F. Marulo, *Dealing with religious complexes in Naples. Abandonment, conservation and reuse* / Lecture at TU Delft & University of Naples Federico II, Research and Design Workshop: ‘Digital Naples. Adaptive design for historic churches’ (prof. V. Russo, dr. M.T. van Thoor, dr. B. de Andrade), 3 November 2021
- F. Marulo, *Mapping Deterioration Pathologies for Built Heritage Preservation* / Lecture at TU Delft, MSc course ‘Vacant Heritage Sustainable Future’ (dr.ir. H. Zijlstra, dr. J.M. Dos Santos Gonçalves), 2 March 2021
- F. Marulo, *Preservation of architecture and landscape in the Netherlands. The contemporary experience with the military system of the New Dutch Waterline* (Original title: Italian) / Lecture at University of Naples Federico II, MSc course ‘Crossing Europe. Esperienze europee nel dibattito contemporaneo sul restauro architettonico’ (dr. S. Pollone), 11 November 2020
- F. Marulo, *Archival Research in Built Heritage Preservation* / Lecture at Leiden University, Urban Studies Programme, ‘Archival Research Sources’ course (dr. F. Meissner), 10 October 2019
- External reviewer at final presentations of the MSc course ‘Religious Heritage’ (ir. A.C. de Ridder) / Delft University of Technology, Faculty of Architecture and the Built Environment, June 2019
- External reviewer at mid-term presentations of the MSc course ‘Durable Neighbourhoods’ (ir. L. Meijers) / Delft University of Technology, Faculty of Architecture and the Built Environment, February 2019

Organization of events and educational activities

- Technical-scientific support to the coordination Post-graduate Master 'Restauro e Progetto per l'Archeologia' (coordinator: prof. V. Russo) / University of Naples Federico II / Period: November 2019-September 2020
- International LDE Heritage Conference on Heritage and the Sustainable Development Goals / TU Delft, Leiden University, LDE-Center for Global Heritage and Development / 26-28 November 2019, Delft (member of the organizing committee)
- Seminar 'Landscape Biographies + Built Heritage Preservation. For an inter-scale design approach in a comparative perspective between Italy and the Netherlands', invited speakers: prof. H. Renes (VU Amsterdam), prof. C. Tosco (Politecnico di Torino) / University of Naples Federico II / 22 January 2019, Naples (curator)
- Exhibition & Study Day 'La valle dei Mulini. Conoscenza per la conservazione di un patrimonio culturale nel territorio di Gragnano' / University of Naples Federico II, Gragnano municipality / 10-20 March 2017, Gragnano (NA) (part of the organizing team with prof. V.Russo, G. Ceniccola, S. Pollone & L.Romano)

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At the crossroads of Architecture and Landscape

Preservation Strategies of Historic Military Systems:
a Comparison between Italy and the Netherlands

Federica Marulo

In the context of rapid urban transformations, this thesis explores the possible preservation strategies for historic military systems that used to be embedded in extra-urban settings, but that now are absorbed in the development dynamics of complex metropolitan areas. The research stems from the main peculiarity of these heritage systems: namely, the coexistence of cultural and natural values, and their being at the crossroads of the architecture and landscape domains. Although the need to address nature-culture interlinkages has become a topical issue in the field of heritage preservation, military landscapes have been almost completely left out of this debate. Moreover, the lack of inter-scale strategies in current preservation practices for historic military systems further complicates the way nature-culture interlinkages are addressed. The development of a conceptual framework on this topic has required considering the diversity of existing approaches to landscape, architectural heritage and their interconnection. Italy and the Netherlands were selected as relevant contexts in Western Europe for comparison on this topic. Linking archival research, interviews and field observations, Italian and Dutch contemporary experiences with the revitalization and reuse of historic military systems (NL: New Dutch Waterline; IT: Entrenched Field of Mestre) were compared. Both national and international initiatives promoted in the frame of the World Heritage Convention were analysed. To understand the historical roots of the recent approaches, the evolution of landscape protection in the two contexts has been investigated, highlighting the different influences played by the national discourse on architectural heritage and spatial planning. This historical background, together with the cross-reading of the case studies, has led to the definition of a transnational conceptual framework on the possible preservation strategies for historic military systems with an inter-scale approach. Taking into account the peculiarities of each context, it provides a tool for facilitating the decision-making process, bringing historic military systems into the international discussion on nature-culture interlinkages. Ultimately, it can serve as a reference for other historic landscape systems sharing similar characteristics and preservation issues.

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