Landscape Architecture and Infrastructure of the Twentieth Century

Selections from the Docomomo Chapters

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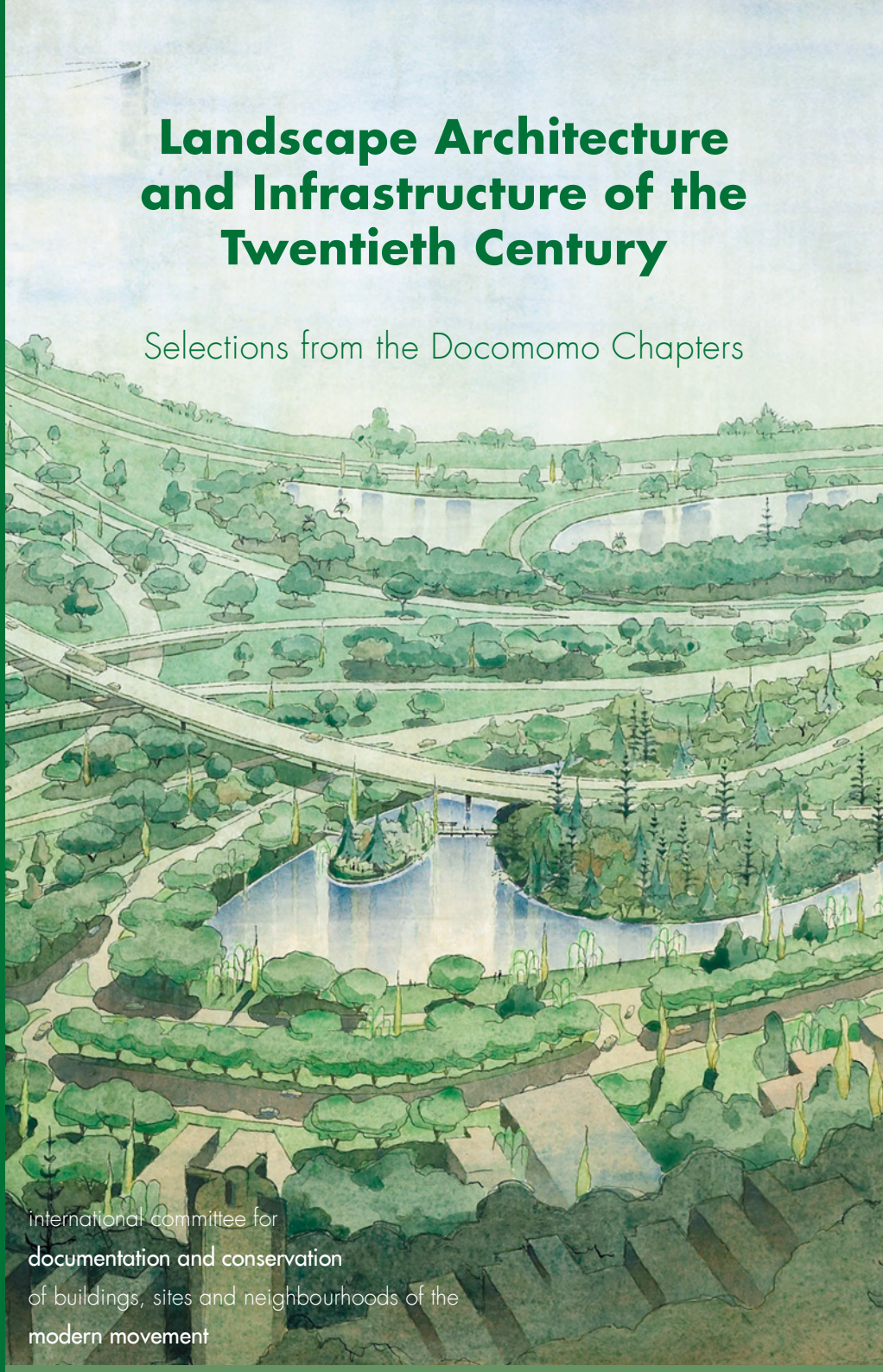

international committee for
documentation and conservation
of buildings, sites and neighbourhoods of the
modern movement

editors: Jan Haenraets, Andrew Saniga, Gulnur Cengiz

LANDSCAPE ARCHITECTURE AND INFRASTRUCTURE OF THE TWENTIETH CENTURY

Selections from the Docomomo Chapters

Jan Haenraets
Andrew Saniga
Gulnur Cengiz
(editors)

2024

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© John Oldham, watercolour, 1966.

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CONTENTS

ACKNOWLEDGEMENTS

This book presents landscapes of the Modern Movement era in order to raise awareness of the role of landscape architecture among the wider public and within the International Committee for Documentation and Conservation of Buildings, Sites and Neighbourhoods of the Modern Movement, referred to as Docomomo. It seeks to broaden understanding of a diversity of landscapes beyond the more well-known, drawing attention to places that may previously have been marginally understood, dislocated or beyond categorisation.

The conversations with the authors attuned us to how landscapes are thought about in the context of Docomomo, and its pursuit of the conservation and documentation of significant places. This has demanded an enormous amount of dedication and energy by all authors and Docomomo members, but the results are worthy of the effort, as it now represents the geographical diversity and complexity of the landscapes of this movement. The eighty-six sites found in this publication represent landscapes in thirty-eight countries and have been divided into five themes within which the sites are ordered alphabetically under sub themes.

On behalf of the Docomomo International Specialist Committee on Urbanism and Landscape and the editors, we extend our thanks to all contributing authors and Docomomo chapters. The Docomomo chapters and their members played a crucial role in the selection and preparation of the texts, and in many cases authors relied on earlier writing and documentation that had been developed by members of the chapters. In some countries, such as those that did not have a Docomomo chapter at the time of the book's preparation, independent authors assisted.

We wish to thank the coordinators in all countries—many of whom were not authors of entries—who committed their time and efforts to streamline the preparation of the texts and to lead the correspondence with the editors: Carolina Quiroga for the Docomomo Argentina entries; Scott Robertson and Andrew Saniga for Docomomo Australia; Lilli Lička for Docomomo Austria; Jean-Marc Basyn for Docomomo Belgium; Renato Gama-Rosa for Docomomo Brazil; Ljubinka Stoilova and Mariya Badeva for Docomomo Bulgaria; Nicole Valois and France Vanlaethem for Docomomo Québec, in Canada; Nataša Koselj for Docomomo Slovenia and for the Croatia entry; Eduardo Luis Rodríguez for Docomomo Cuba; Petros Phokaides for Docomomo Cyprus; Petr Vorlík for Docomomo Czech Republic; Petteri Kummala and Joona Rantasalo for Docomomo Finland; Bernadette Blanchon for Docomomo France; Ola Uduku for Docomomo Ghana; Kostas Tsiambaos for Docomomo Greece; Sonia Fuentes for Docomomo Guatemala; Jan Haenraets and Nishant Upadhyay for the India entries; Hadi Naderi for Docomomo Iran; Inbal Ben-Asher Gitler for Docomomo Israel; Mateo Abita for Docomomo Italy; Sumiko Ebara for Docomomo Japan; Adonis El Hussein for the Lebanon entry; Giedrė Laukaitytė-Malžinskienė for the Lithuanian entries; Louise Noelle Gras for Docomomo Mexico; Marlies Brinkhuijsen for Docomomo Netherlands; Ana Tostões for the Portuguese entries

of Docomomo Iberia; Fernando Pabón and Ivonne Marcial for Docomomo Puerto Rico; Carrie H. Pavel for Docomomo Romania; Carsten Hermann for Docomomo Scotland; Jelica Jovanović for Serbia; Katarína Haberlandová for Slovakia; Nataša Koselj for Slovenia; Susana Landrove for the Spanish entries of Docomomo Iberia; Anas Soufan for the Syria entry; Suphawadee Ratanamart for Docomomo Thailand; Nilüfer Yöney for Docomomo Turkey; Ann Komara for the Colorado regional chapter of Docomomo United States; and Hannia Gomez and Elias Gonzalez Sanavia for Docomomo Venezuela. For all the names of the authors we refer to the individual entries.

Important contributions were made by the organizations, institutes and supporters during the process of developing the entries, including the libraries, depositories and archives that provided access to their records. The publication could not have achieved its objective without the visual records and images. We thank the authors and owners of all images for the permissions to include these in the publication.

The book has greatly benefited from the input and editorial assistance by Katti Williams of the University of Melbourne whose many hours of copy editing helped resolve coherence over a great breadth of writings. Miles Glendinning at the University of Edinburgh, of the Docomomo International Specialist Committee on Urbanism and Landscape, who sets out the Docomomo context of the project in the Preface and provided the idea for the book's title, gave advice and contributed as assisting editor. We are grateful for the support by the Docomomo International Secretariat at the Tecnico-Arquitectura in Lisbon and the communication and encouragements by Silvio Alves, Beatriz Agostinho and Joana Coutinho. We thank Ana Tostões, Chair of Docomomo International (2010–21) and the Docomomo International Head Office, for her perspective in the introduction, which also contextualises the project in terms of the wider activities of Docomomo International. In 2022 the Docomomo International Secretariat relocated to to the Faculty of Architecture and the Built Environment at Delft University of Technology in the Netherlands, with Uta Pottgiesser, Chair, and Wido Quist, Secretary General of Docomomo International. We are indebted to the new Secreteriat for their continued support, and for Docomomo International acting as our publisher. We wish to thank Karen Knols for graphic design, typesetting and layout.

In editing this book, we have emphasised a great breadth of cultural input. In subtle ways we have attempted to permit the distinctive voices of the contributors' cultures to co-exist with the English language. This required a fine balance between achieving clarity and readability while also retaining nuances in expression that we felt gave voice to the individual contributor's way of expressing their ideas. It also needs to be acknowledged that the project entries' text and images are the responsibility of the project entry authors. We, the editors of this book, take full responsibility only for the parts of the book we have co-authored. The five thematic introductions go some way to synthesise some key dimensions brought out across the collections of project entries, but it is left to readers to pursue their own forms of analysis on the basis of the rich sets of data that the project entries jointly represent.

The Editors

PREFACE

Miles Glendinning, Vice-Convener (Convener 2006–22) of the Docomomo International Specialist Committee on Urbanism and Landscape
Docomomo ISC/U+L: https://sites.eca.ed.ac.uk/docomomoiscul

The activities of Docomomo, throughout its more than three decades of existence, have been marked by a strong creative tension between the 'local', represented by the over seventy national and territorial working parties, and the 'universal' themes of modernism, covered chiefly by a range of international specialist committees (ISCs) established to explore key problem areas or transnational issues. These include ISCs on Registers and Documentation, Technology, Education and Theory, and Sustainability—and finally also our own ISC on Urbanism and Landscape (ISC/U+L), which was set up in the late 1990s with the task of promoting the documentation and protection of modern ensembles, landscapes and environments, as opposed to individual 'setpiece' buildings. Its remit stemmed from a growing realization that the traditional heritage concept of the 'individual monument' had hitherto been too dominant in Docomomo's work, and in any case flew in the face of the Modern Movement's original emphasis on the planning of large ensembles and landscapes, and their integration into broader frameworks of social and economic modernity.

In practice, our work has focused almost exclusively on research and documentation—not least because of the extra challenges of actually achieving 'activist' preservation of entire urban or landscape ensembles—and our ISC website lays out a wide range of resources resulting from these activities. For instance, a succession of thematic conferences and seminars has been documented through e-proceedings, including the 2011 landscape heritage conference, Landscapes of the Recent Future.

This new book, however, takes Docomomo's engagement with international modernist landscape heritage to an unprecedented level of ambition and complexity, while continuing to reflect our organization's 'creative tension' between the national and transnational, in its thematic arrangement of a wide range of individual case studies prepared and submitted by thirty-eight national and local working parties—ultimately amounting to eighty-six case studies submitted by individual chapters, representing over half of the total number of working parties (see Introduction below for more detailed exposition of the arrangement rationale).

As the Convener of the ISC/U+L, I am delighted that this ambitious project has now reached fruition, and hope that its combination of geographical comprehensiveness and thematic incisiveness will exert a wide influence in setting new standards of landscape heritage documentation and analysis at both a local and global level.

FOREWORD

Modernist Landscapes as a Key to Environmental Well-being

Ana Tostões, Chair of the Docomomo International Specialists Committee on Publications, and former President of Docomomo International (2010–21)

To the memory of Gonçalo Ribeiro Telles (1922–2020)

'The landscape garden, in its original forms, was made in reflection, and not in imitation, of the landscape'.

Roberto Burle Marx (Doherty, 2020)

If the architecture of the Modern Movement triggered a revolution in ways of living and of using the city, approaches to territory and to landscape design have undergone a radical transformation towards an ecological philosophy. From both an aesthetic and philosophical point of view, the way they are thought about has changed enormously, heavily influenced by both the visual arts and the science of ecology.

This book constitutes an attempt to gather a worldwide twentieth-century vision from within the Docomomo network. Until recently, Docomomo registers have predominantly focused on architecture. As a first step towards 'Making Twentieth-Century Landscapes Visible', the editors Jan Haenraets, Andrew Saniga and Gulnur Cengiz (Haenraets, 2011a; Haenraets, 2011b; Saniga, 2012), challenged all Docomomo chapters to share their records and increase vital knowledge of landscape design. International Specialist Committee on Urbanism and Landscape (ISC/U+L) activities were already striving to increase awareness of the significance of landscapes and urban planning. As the editors of this book argue, 'there is still much to be done to elevate the importance of landscape architecture and urban planning'. This volume is the result of a formal call by the ISC/U+L in 2018 for submissions from every Docomomo chapter.

This research aims to capture the rich diversity of cultures that characterizes Docomomo's DNA, and to show how gardens, parks, industrial zones, and public spaces have been conceived and used. The compilation of this book represents an extraordinary attempt to not only register modernist landscapes, but also to characterize the diversity of concepts and gather different visions from a variety of places, thus making connections between landscapes all around the world through the Docomomo network. The ambition is for landscapes and gardens to receive greater emphasis and deeper study in Docomomo's activities and knowledge.

Docomomo is a worldwide network of professionals, architects and town planners, practitioners and researchers, historians and theoreticians, who share a strong conviction in the importance and current relevance of Modern Movement architecture. Through this affinity with modernity, we all wish to draw on a worldwide heritage as a sustainable design tool, as a method for thinking about projects, and finally as a key for the future of architectonic production and cultural debate.

Docomomo was founded on the belief that the challenges of forthcoming decades must be faced using a twofold strategy: on the one hand, the utilization of usage, change and transformation processes, i.e. skilful, sustainable and exemplary interventions in Modern Movement buildings, neighbourhoods and landscapes; and on the other, the pursuit of greater territorial scope, investigating new cultural and geographical territories where modern architecture has played a significant role. In this call for new geographies and notable interventions, I have no doubt that our goal will remain the demonstration of the longevity of the thought process underlying modern architecture, ensuring the recognition of modern culturally diverse identities worldwide.

During its three decades of existence, Docomomo has created an international network of researchers, experts and supporters currently organized into more than seventy chapters across all five continents. The importance of Docomomo as an internationally recognized organization, as well as its capacity to develop initiatives related to the exchange of ideas and experience, and raise public awareness, will continue to grow. However, this depends on the institution's ability to arise the interest of individuals involved in processes of heritage conservation, ranging from researchers to administrators, and to win over public opinion, which still tends to regard the twentieth-century's architectural heritage with a certain degree of indifference. In this sense, this heritage needs to be understood as a model, a manifesto or a symbol for sustainable development, redefining the legacy of modernity in globalized societies.

As we know, the conservation and transmission of this heritage is a complex task whose success is dependent on the extent to which society, as a whole, can understand and appreciate the value of Modern Movement architecture and landscape concepts.

In this attempt to make modern landscapes visible, the editors divided this overview into five core themes. The first, 'From Domesticity to Urban Vision', considers the revolutionary shifts that occurred in the private garden and the public city, expressed in the 'spatial integration of architecture and landscape' as a unitary concept crucial to the contemporary approach to territory. This chapter features specific cases on different scales, such as the garden at the Huarte House (1965–67) with its specific Mediterranean roots based in the Hispano–Muslim garden, linking the cultures of the east and west, or the large-scale plan for the new Punjab and Haryana Capital (1950–60), Chandigarh. The second chapter introduces 'New Parks and Places of Leisure' as spaces of recreation designed to meet the need for leisure facilities, identified as one of the main democratic principles of modernism. In a range of examples, from Flamengo Park (1961–65) in Rio de Janeiro to the Gulbenkian Foundation Gardens (1963–69) in Lisbon. Thailand's Lumphini Park (1925) and as well as the Garden of the Provinces and Territories (1960–62) in Canada, the intimate relationship between architecture and garden is analysed, revealing the modern values underpinning this fruitful symbiosis. The chapter devoted to 'Institutions, Education and Health' approaches

campus plans around the world, specifically those of universities from Ghana (1951–59) to Australia (1972–75) and Iran (1934–66). 'Landscapes of Infrastructure and Production' are presented in the fourth chapter, combining analyses of places such as the Brenner Motorway (1966–74) in Italy, Israeli Road No. 90 (1967–71) in Israel, the Narrows Interchange (1963–74) in Perth, Australia, and the Atatürk Forest Farm (1925–38) in Turkey. Finally, 'Memory, Commemoration, Provocation' is the theme for the fifth chapter which brings together the Turku Cemetery (1964–83) in Finland, the Rab Memorial Cemetery (1953) in Croatia, and the Žale Cemetery (1938–40) in Ljubljana, as well as the spectacular Kaunas Ninth Fort Memorial Complex (1976–84) in Lithuania, the Little Sparta Garden (1967–97) in Scotland, and the Chillida Plaza del Peine del Viento (1975–77) in Spain.

The volume resulting from this inspiring challenge is astonishing and beautiful. It represents the foundation of an in-depth study of this major chapter of our modernity, which will shed new light on built environments created within the complexity of contemporary life, as the fascinating landscape types boldly identified by the authors clearly show. The examples extend from private to communal gardens within the scope of domestic and residential landscapes; transport landscapes, including airports, motorways and streets in the sky; and from industrial and commercial landscapes, to public amenities and leisure landscapes, while also considering the main conservation and ecological questions for the future. I would venture to say that this book sets a fresh challenge to the whole Docomomo community, and will inspire all of us to contribute further and extend the knowledge gathered in this initial endeavour.

During the twentieth century the contributions of several authors around the world have had an impact on the welfare of society and the environment. Christopher Tunnard's (1910–79) manifesto, first published in *The Architectural Review*, and later as the book *Gardens in the Modern Landscape* (1938), remains an essential reference, stressing the importance of the profession of landscape architecture. Tunnard described the gardens surrounding a building as being in perfect harmony with it, thus challenging prevailing views and commonly accepted styles of landscape architecture. He saw his book as an introduction 'to the brave new world of landscape', as it challenged current conventions, setting out a new approach to nature, and breaking apart most widely accepted conventions such as symmetry, the garden envisioned as a picture, and the separation between architecture and garden. Its most enduring idea is that 'A garden is a work of art, and it remains a vision for guidance as one tries to extend the garden's benefits of rest, recreation, and aesthetic pleasure to a wider public, in the larger landscape' (Tunnard, 1938). The book's impact in the English-speaking world was substantial. In reviewing it, Geoffrey Jellicoe (1900–96), an important figure in the field, heaped praise on Tunnard's work. For Lawrence Halprin (1916–2009), it acted as a revelation for him and his future career. Tunnard's work was regarded by another key figure, Garrett Eckbo (1910–2000), as an inspiration to defy the strict rules of landscape education, and became a major influence on subsequent work. Inspired by Thomas Church (1902–78), widely regarded as the father of modern landscape architecture, Eckbo saw landscape design as a vehicle for social change. His seminal book *Landscape for Living* (1950) essentially defined modern landscape architecture, and his influence on generations of designers continues today. Disenchanted with traditional landscape design, he began linking the roles of architecture and art to landscape architecture. Roberto Burle Marx (1909–94) exemplified this approach when,

in his own words, he 'decided to use natural topography as a surface for composition and the elements of nature, mineral and vegetable, as materials for the plastic organization, the very thing which other artists try to do on canvas with paint and brush' (Doherty, 2020).

When awarded the Fine Arts Medal of the American Institute of Architects in 1965, Burle Marx was hailed as the 'real creator of the modern garden' (Doherty, 2020). His texts and lectures confirm he saw himself not just 'as a gardener, artist, and botanist, but as a landscape architect whose ambition was to bring radical change to cities and society' (Doherty, 2020). In fact, in 1954 Burle Marx made this very clear by saying that 'to build a garden means to act ethically and aesthetically.' The understanding he had then acquired through his work—building and maintaining gardens, parks, and town areas since the 1930s—helped him to formulate a concept of the garden as the application of adequate knowledge of the ecological environment to meet the requirements of civilization. Burle Marx realized the richness of crossing cultures and the influence of one culture interacting with another. As he argued, 'It is true that the West has a different landscape history than the East. Different and poorer, and also more recent. On the other hand, it is well known the extent to which Western landscape has owed a debt to Eastern influence since the fourteenth century in Italy, and even earlier on the Iberian Peninsula' (Doherty, 2020).

As landscape design is rooted in site and society, it emerges from and addresses a rich interdisciplinarity, encompassing environmental, social and even artistic issues which inform its making and give form to the spaces in which we live our lives. As Burle Marx explained, 'The garden is, must be, an integral part of civilized life: a deeply-felt, deeply-rooted, spiritual, and emotional necessity' (Doherty, 2020). In fact, the design strategy involves an interdisciplinary team—landscape architects act in close and active cooperation with building architects and the engineers responsible for structures and infrastructure. The continuity between interior and exterior space, and the exchanges between nature and Modern Movement architecture that are incorporated through a formula-free relationship, reveal intense formal, technical and spatial experimentation. This way of thinking and designing open space, based on ecological processes, is well described in the work *Design with Nature* (1969) by Ian McHarg (1920–2001). One of the themes that currently inform the design of contemporary landscape is the concept of landscape urbanism, championed since the end of the twentieth century by Charles Waldheim. The affirmation of the landscape architecture profession has manifested globally in the realization of innumerable attractive, equitable and sustainable environments. Gonçalo Ribeiro Telles (1922–2020) is a key exemplar: he envisioned and gave voice to the development of landscape policy in Portugal, from large region-wide landscape projects to planning small parks and gardens, including the development of the Green Plan for the City of Lisbon.

This book approaches environmental planning without forgetting to include issues related to urbanism. As the authors argue in a previous work, 'during the Modern Movement, design approaches and attitudes to the city explored optimistic, ecologically-connected, and multi-disciplinary visions … A new appreciation for the value of "landscape" played a fundamental role in contributing to the quality of lifestyles, environmental well-being, and the social and cultural identities of our cities' (Haenraets and Saniga, 2016).

The vision of landscape as an ecological system is one of the points in the construction of our shared process of modernization that has shifted the most: at the turn of the twentieth century, a park was seen as the 'lungs of the city'; in the 1960s, it became classified as 'ecology'; and today, it has taken its place within the larger concept of 'sustainability' (Treib, 1993; 2011), linked to climate changes considered by current scientific understanding of planetary problems as a worldwide emergency.

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ESSAY

MAKING TWENTIETH-CENTURY LANDSCAPES VISIBLE

Jan Haenraets, Andrew Saniga and Gulnur Cengiz

The twentieth century saw designed landscapes evolve against a backdrop of change and revolution. The post-World War II era saw the type and number of designed landscapes grow, challenging the narrow definition of parks or domestic gardens. This came largely in response to rapidly expanding urban development and pressures for planners and designers to be more responsive to site and context. Environmental quality became a key driver in the establishment of institutional landscapes such as university campuses, commercial sites such as shopping malls and centres, and infrastructure such as freeways, reservoirs, powerplants and so on. Suburbia and residential development sprawled, claiming vast tracts of land and placing new pressures on the environment. Correspondingly, the built environment professions were in a state of flux, jostling for position, being delivered new types of work, or going through sometimes troubling periods of redefinition in response to the public's increasing environmental consciousness. In many contexts, particularly European, South American, Australasian, and indeed most places other than America (where the profession of landscape architecture formally emerged in the nineteenth century), the twentieth century saw parallels between the evolution of ideas and the establishment of the profession of landscape architecture. This adds a layer of complexity to the way we identify and define the modern landscape as a product of an emerging discipline, making it important also to clarify landscape architecture's role and significance in the context Docomomo.

Initiatives: reviewed and renewed

Landscape architecture is embedded within the organization of Docomomo in complex ways that to date have not been fully explored or appreciated. Docomomo's full name is complex in itself: the International Committee for Documentation and Conservation of Buildings, Sites and Neighbourhoods of the Modern Movement. Like its associated disciplines of architecture and planning, landscape architecture is enveloped within the acronym Docomomo, and likewise within the organization's remit. Yet if architecture arguably holds a relatively direct association with the 'Buildings' part of Docomomo's title, landscape architecture's pairing with 'Site'—or even 'Neighbourhoods', for that matter—is comparatively less direct. To an extent, the same could be said for planning. Collectively, however, Docomomo International's Mission Statement (reproduced at the end of this book) revolves around the claim that towards 'the end of the 1980s, many modern masterpieces had already been demolished or had changed beyond recognition' and initiatives that championed safeguarding of architectural heritage from this era began to emerge (Docomomo International, n.d.). In 1988 Docomomo International was established with its Eindhoven Statement published in 1990 (Docomomo International, 1990), underlining the need to 'Identify and promote recording of works of the modern movement,' and to 'bring the significance of the modern movement to the attention of the public, the authorities, the professions and the educational community' (Docomomo International, 1990).

The 1990s certainly saw a wave of new initiatives on twentieth-century architecture and heritage (Slaton et al., 1995; Stalon et al., 2000) yet in terms of the 'Sites and Neighbourhoods' part of Docomomo's title, the advances were comparatively small. The first significant conferences that emphasized the recognition and conservation of landscapes included the 1995 Preserving Modern Landscape Architecture conference at Wave Hill, New York (Birnbaum, 1999), and the 1998 conference on the theory of post-war gardens and landscapes in the United Kingdom (Woudstra and Ratti, 2000). Docomomo International and its chapters regularly launched events and publications, and started the development of its own registers (Haenraets, 2010). In 1996 Docomomo also launched its International Specialist Committee on Gardens and Landscapes (Panzani, 1996), which would evolve into the International Specialist Committee on Urbanism and Landscape (ISC/U+L —see mission statement at the end of this book). Docomomo's bi-annual international conferences and its journal would also start to feature occasional landscape-themed papers.

The ISC/U+L's activities illustrate the fact that persistent efforts have been made to increase awareness of the significance of landscapes and urban planning, but its initiatives still remain modest. The ISC/U+L has taken up the role as a point of contact for landscape advice to international chapters and to respond to inquiries from outside the Docomomo membership, and occasionally has organized themed events, such as the 2011 Landscapes of the Recent Future conference (Haenraets, 2011b). Nevertheless, in the 2000s there was a marked stagnation of momentum in the championing and safeguarding of the landscapes of the Modern Movement (Haenraets, 2011a). Samples of commendable progress can be seen in the work by The Cultural Landscape Foundation in the United States, while the Approaches for the Conservation of Twentieth-Century Architectural Heritage: Madrid Document 2014, and its developing committee, the International Council on Monuments and Sites (ICOMOS) International Scientific Committee on Twentieth-Century Heritage, still illustrate how landscape architecture remains largely overlooked (ICOMOS ISC, 2014).

Figure 1
Flamengo Park, Rio de Janeiro, Brazil, 1961–65, by Roberto Burle Marx. © Jan Haenraets, 2005.

The general impression remains within Docomomo that its focus is predominantly on architecture, and that there is still much work to be done to elevate the importance of landscape architecture and urban planning. A significant task involves defining and clarifying the breadth of sites across a range of contexts, geographically and typologically. In many contexts, and indeed across a large number of the project entries in this book, planning and landscape architecture share professional territory. Furthermore, collaborative efforts between all the professions appear symptomatic of how landscape architecture tends to be positioned, often with remarkably innovative results. But it has sometimes, too, taken on a subordinate role beneath architecture and engineering, a situation often lamented by landscape architects through time, even stretching back to the regrets of those who formulated the profession in the first instance.

One point of definition needs to be emphasized from the start: crucially, landscape architecture and 'site' are not the same thing as 'gardens' or the 'garden', even though some of the most progressive modernist sites are unique ensembles of domestic architecture and landscape. The integration of indoor and outdoor space, and the application of modernist ideas for domestic architecture as applied to the organization of domestic garden spaces, are distinctive products of mid-twentieth-century design. However, in a bid to broaden appreciation of how modern landscape architecture came to be defined as a discipline and profession, a far wider array of project types has emerged, from the domestic garden to parks, to infrastructural and institutional landscapes, and indeed to whole neighbourhoods or settlements. This book has set out from the beginning, and as a matter of principle, to assemble an expansive and inclusive collection of landscapes, with the aim of building understanding, enabling comparative analysis and promoting the need for further research. However, the book does not aim to chart a comprehensive overview of landscape history in the twentieth century or to key Modernist landscape architecture. Instead, it attempts to contribute examples of sites from diverse regional backgrounds that are worthy of consideration, including examples from countries that at times have received less attention, such as Lithuania. In that sense it is hoped that the book assists in provoking reflection and widening understanding.

In January 2018 the ISC/U+L formally began to develop a thematic book on designed landscapes based on submissions from Docomomo chapters (Haenraets et al., 2018). The initiative had several objectives based upon broadening knowledge and appreciation of salient issues concerning modern landscapes worldwide: identification, documentation, categorization, conservation, management and dissemination. With such a book, Docomomo and the ISC/U+L hoped to potentially enhance the presence and visibility of landscapes in the broader field of twentieth-century historical and theoretical research, and to exert a wider influence beyond academic circles, within heritage and conservation more generally.

Geographical representations and types

Past publications by Docomomo, such as The Modern Movement in Architecture: Selections from the Docomomo Registers (Cooke and Sharp, 2000: thirty-two participating chapters), and Other Modernisms: A Selection from the Docomomo Registers (Docomomo, 2007: thirty-four participating chapters), organized project entries by countries. Through dissemination of the information these publications helped raise awareness of sites of the Modern Movement, while contributing towards the documentation and widening of theoretical understanding. In this book it was decided to take a thematic approach, with the objective of assisting in documentation and dissemination while raising aspects of conservation challenges and allowing comparisons within individual landscape types.

The ISC/U+L's formal call for submissions was developed in 2018 with all Docomomo chapters being contacted in January 2019. The ISC/U+L requested up to three landscape sites of the Modern Movement era that could represent a range of types and be defined by function, style, regional expression or context in the broadest sense (climatic, technical, fragility, management, etc.). Attention was drawn to places that may previously have been marginally understood—'invisible', in a sense—and were thus worthy of being appreciated in new ways.

The call for submissions went out to Docomomo International's seventy-one chapters but this number eventually increased to seventy-four, including some countries that had not had a Docomomo chapter. By August 2020 final entries located in thirty-eight countries had been received, a participation rate of about 51%, which represented eight from Asia, one from Africa, nineteen from Europe, two from North America, seven from Latin America and the Carribbean, one from Oceania (Fig. 2). A total of eighty-six sites were selected from the submissions: sixteen sites in Asia (18.60%), two in Africa (2.32%), forty-nine in Europe (56.98%), three in North America (3.49%), thirteen in Latin America and the Caribbean

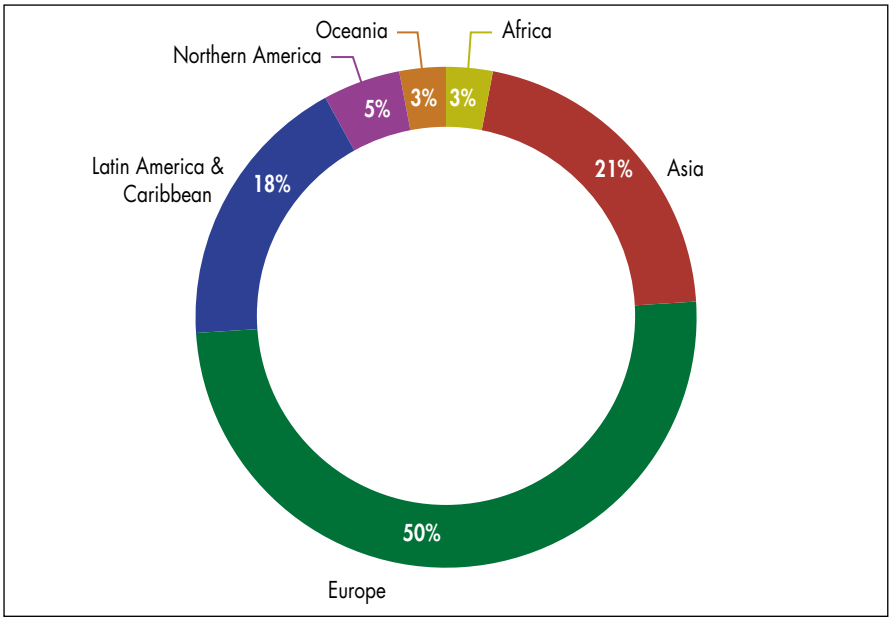

Figure 2
Geographical representation by continent for participating countries. © Jan Haenraets, Gulnur Cengiz and Andrew Saniga, 2021.

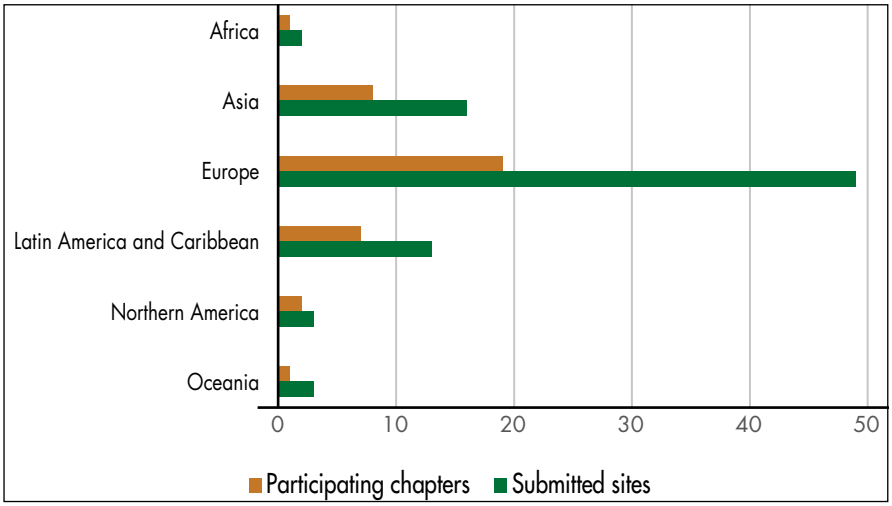

Figure 3
Overview of the geographical spread of the entries by region, together with the number of participating Docomomo chapters and non-chapters for these regions. © Jan Haenraets, Gulnur Cengiz and Andrew Saniga, 2021.

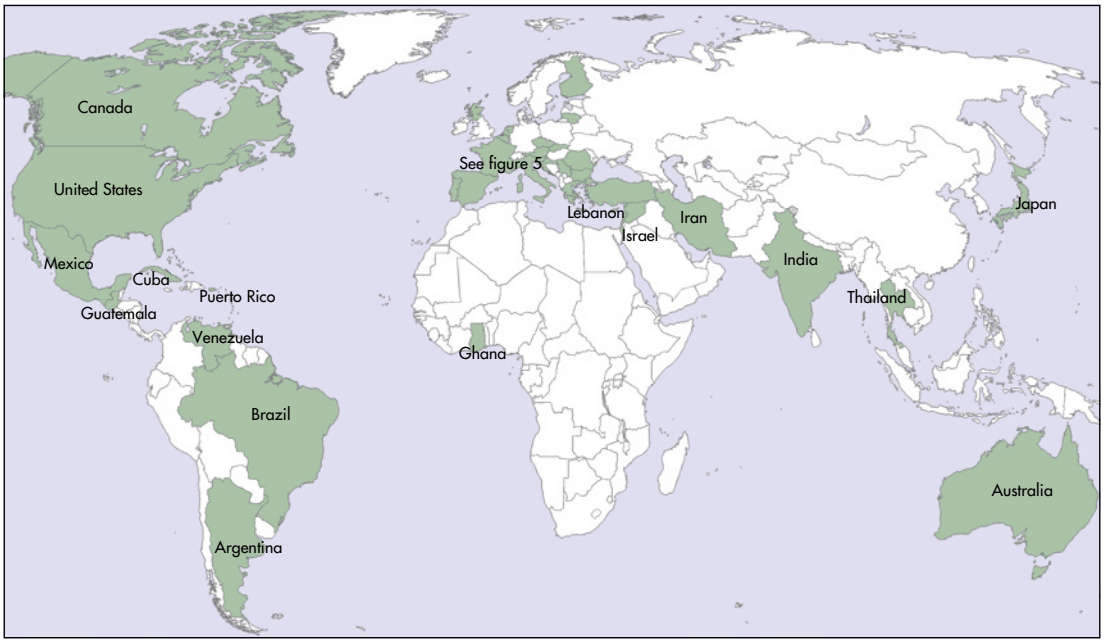

Figure 4
Global map of countries with landscape entries. © Jan Haenraets, Gulnur Cengiz and Andrew Saniga, 2021.

Figure 5
Map of Europe and part of the Middle East with countries that submitted landscape entries. © Jan Haenraets, Gulnur Cengiz and Andrew Saniga, 2021.

(15.12%), and three in Oceania (3.49%) (Fig. 3). The global map and map of Europe of countries from were sites were selected (Fig. 4 and 5), together with the overview list by countries in the appendices (Country List of Landscapes), well illustrate the geographical spread. In terms of geographic representation Europe still predominated in absolute numbers of sites and as a proportion of responses. This bias is significant because as the entries were subject to comparative analysis it became clear that for mid-twentieth-century European landscapes the impacts of socio-political change related to World War II were often critical to how a site was defined. Clearly other parts of the world were also influenced by World War II, indirectly as a result of post-war development boom, but the scale of change often played

out more centrally in the 'fate' of sites in the European context. A notable example was the impact of communism for the Soviet Union, where landscapes often became a canvas for expressing social engineering and reform.

In this sense, period became an important factor. Several of the project entries went through extended periods of design and construction, often spanning multiple periods of social, political and cultural change or upheaval. The highest number of project entries fell under the 1930s, 1950s, and 1960s—with the latter the most strongly represented period (Fig. 6). The timeline in the appendices provides an overview of the entries by region (Timeline of Landscapes). The fact that some projects from the 1990s and later were submitted offered the opportunity to increase awareness of what some chapters defined as 'modern', providing the opportunity to illustrate a level of continuity and reinvention through time.

Within the call for submissions a list of types of designed landscapes was distributed, which has been included at the end of the book (Landscape Types). This list included ten overarching types, with corresponding examples. The authors of the submissions were asked to list up to three applicable types for their landscape. The number of times that a category was mentioned across each of the ten types demonstrated variabilities in emphases and questions of definition (Fig. 8). What stands out from the entries is that public amenity landscapes and urbanism; leisure landscape; domestic and residential landscapes; and institu-

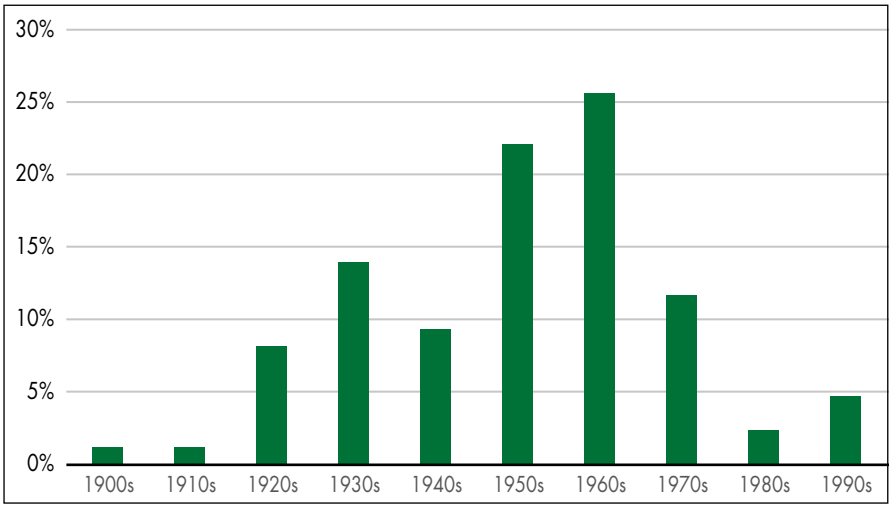

Figure 6
Overview of the landscape entries by their earliest period of development. © Jan Haenraets, Gulnur Cengiz and Andrew Saniga, 2021.

Figure 7
Little Sparta, the garden of Ian Hamilton Finlay, Scotland. © Jan Haenraets, 2006.

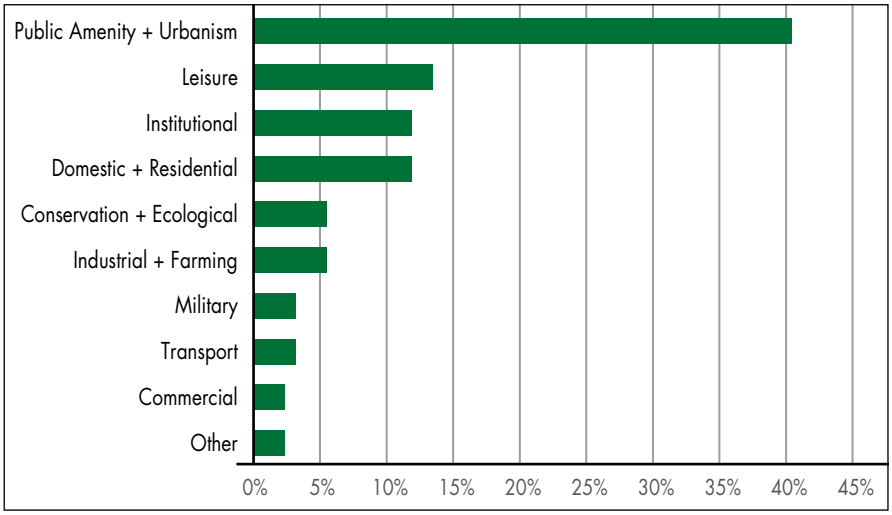

Figure 8
Overview of the main categories of landscape types mentioned under the entries. © Jan Haenraets, Gulnur Cengiz and Andrew Saniga, 2021.

tional landscapes dominated the entries, which reflects the thematic chapters of the book. The less dominant were transport landscapes; industrial and farming landscapes; military landscapes; commercial landscapes, and those relating to conservation and ecological oriented landscapes.

Combined with the restrictions to the geographical spread of entries, this underlines that the book can not be interpreted as a comprehensive historical overview of twentieth-century landscape architecture, which as explained was neither the objective of the book. Rather, it provides a valuable catalogue, the formation of which has enabled the editors to use their broad expertise in the history of landscape architecture to: coordinate the selection of projects; work with contributors to refine descriptions and analyses; synthesize types by way of the editors' thematic essays and their distillation of groupings; and, assemble a carefully constructed record of the process of international engagement in order to produce a survey that should be measured as much by its inclusivity as by the valuable information it has amassed.

Based on the entries received it was decided to group the entries under five themes that best reflected these types. Within each theme, project entries have been organized chronologically under sub-themes. The thematic chapters have short introductions with key reflections and findings, with indicative examples sampled directly from the authors of the project entries. For each project entry, general information is provided: location, relevant dates concerning design and developments, main designers, project type and key words. This is followed by a brief description of the site with an emphasis on aspects such as the context and background of its creation, design characteristics and significant features, and in some cases, the challenges of current conservation and of recognition of the site's heritage value in terms of existing conditions. Selected references provide information for further reading and a background to the current studies of these sites. To assist with placing the individual sites within the wider context of the century's landscape design history, the two lists at the end of the publication provide overviews of the scope and significance of the project entries. The first overview, Country List of Landscapes, illustrates the book's geographic diversity, and can be read together with the global map (Fig. 4) and map of Europe (Fig. 5) of countries represented by participating authors. The second, Timeline of Landscapes, provides a tool to visualize all landscapes in a chronological arrangement of the twentieth century by decades.

From documentation to management and beyond

This book brings together landscapes from the different regions of the world in a bid to promote a comparative analysis that to date has not yet occurred within Docomomo, other than via tacit recognition of landscapes as curtilage to buildings. To prepare the submissions some chapters had the advantage of being able to rely on existing local or national registers. Other chapters had to develop completely new material, a situation sometimes made more difficult due to a lack of skilled professionals to engage in the stewardship of landscape heritage of the Modern Movement. Some chapters appeared not to have had a list of significant sites, meaning that a first challenge was to decide which sites would be suitable. In these ways, the preparation of this book may have initiated a moment of reflection in Docomomo's chapters regarding their current status in terms of documenting and understanding significant sites in their regions.

Significant gaps in information extend to the existing conditions of sites and likewise the challenges faced in their ongoing viability and management. This book raises the need for stewardship, in order to progress protection, revitalization and adaptive reuse while respecting the cultural significance of landscapes' intangible and tangible layers. It also highlights the need to keep heritage landscapes relevant in rapidly evolving societies. Issues of conservation and management are addressed unevenly across the collection of project entries. Some submissions strongly emphasize the current challenges, the lessons learned from conservation, and—in some cases—the urgent risks posed to the sites. An important observation was that many of the entries did not address intangible layers and instead focused predominantly on the tangible aspects of the landscapes and their developments.

The preparation and assembling of this book has acted as a catalyst in raising interest in 'landscape', in the broadest possible sense, amongst Docomomo chapters. It has already sparked dialogue and action. For example, in March 2018 Docomomo's Israel chapter proceeded to organize a conference on Landscapes of the Modern Movement to increase awareness and assist in the development of the submissions. Furthermore, countries not previously associated with Docomomo have participated in the initiative, having been sought out by the editors for their involvement. It also appears that the role of the ISC/U+L became a prime driving force, despite the committee's small scale relative to the total collective membership of Docomomo International.

In conclusion, this book decisively underlines the need for Docomomo International and the ISC/U+L to continue to develop strategic actions that can attract multi-disciplinary audiences to the organization and to its activities. Additional calls to chapters should invite them to submit database fiches on landscape architectural and planning sites and neighbourhoods to Docomomo's registers, or to organize activities with landscape topics, as well as regularly invite landscape-themed contributions to its Docomomo Journal or to the Technology Dossiers.

The presence and visibility of the practice of landscape architecture within Docomomo and the research community, as well as the general public, should be significantly enhanced in the formulation of the collection of projects presented in this book. It sheds further light on the origins of the profession and its contributions to the built environment during some of its most formative years—an epoch of revolutionary change across the world. In broadening understanding there is potential for landscapes that had previously been 'dislocated' to instead become 'integrated', as legacies, both good and bad, of designed landscapes of the twentieth century, and beyond.

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1 FROM DOMESTICITY TO URBAN VISION

Andrew Saniga, Jan Haenraets and Gulnur Cengiz

Revolutionary shifts in the domestic garden and the city at large are characteristically expressed in the spatial integration of architecture and landscape, an ambition that to an extent transcends geographic, political and climatic boundaries. Domestically, internal spaces reach out to outdoor living spaces, beyond which a natural frame often encloses the garden. Geometry becomes an integrative device, establishing an interrelationship between the ground plane and vegetative frame. Other characteristics include: asymmetrical compositional arrangement; the inclusion of sculpture within garden spaces; and the tactful deployment of plants in compositions often employing bold colour and form. Such attributes are captured well in a commanding oblique aerial view of the De Schulthess Residence in Cuba (1955–56), a collaboration between Richard Neutra and Roberto Burle Marx.

This chapter presents gardens that span the globe yet demonstrate the far-reaching impact of some of the most well-known of designers of the pre-World War II and post-war era—Caneel-Claes, Neutra, Loos, Le Corbusier, and Burle Marx. For example, in the project entry for the Müller Garden in Prague, Czech Republic (1929–32, 1996–2000), the authors cite research suggesting that the design of the garden was analogous to Loos's 'Raumplan'.

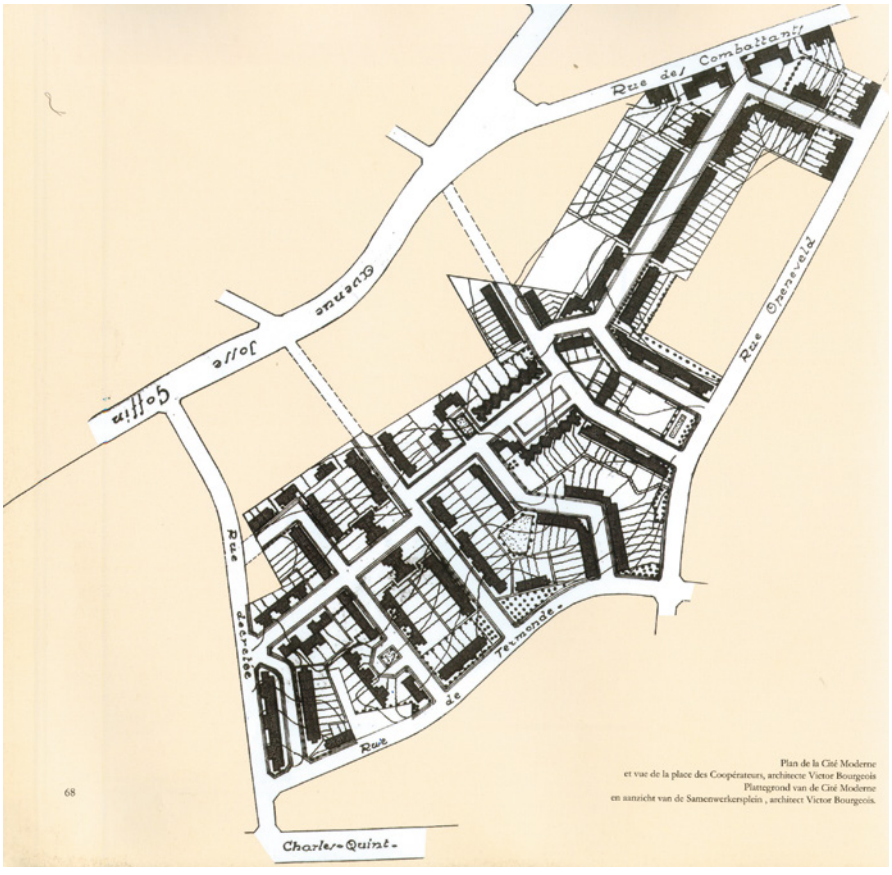

Figure 9
General urban plan of the garden city La Cité Moderne, Berchem-Sainte-Agathe, Brussels, Belgium. © Collection CIVA, Brussels, funds Victor Bourgeois. From Maurice Culot, *100 Ans d'Urbanisme à Bruxelles, 1910–2010: Une Capitale en Quête d'Identité*. Brussels: Archives d'Architecture Moderne Editions, 2013, 68.

Roberto Burle Marx is often cited as setting a precedent from which others across the globe sought inspiration, a finding that reveals the reach of Burle Marx's oeuvre. Cultural specificities are also influential: the gardens for Huarte House in Spain (1965–67), a series of courtyard spaces where the building defines the site boundary, are described by Alberto Sanz Hernando and Patricia Hernández Lamas as a blend of Hispano-Muslim garden influences, impacting on the house's arrangement on the site whilst balancing considerations of aspect, practicality and, ultimately, climate control. In terms of heritage, the project entries reveal that conserving the modern garden has been an uneven project, perhaps the result of the garden being a less valued counterpart to the architecture of the house. Given the significant design interdependency of house and garden, this represents a missed opportunity in conserving rich ensembles of heritage fabric.

The integration of architecture and landscape, too, finds expression in the city. New and comprehensive city-scale interventions reveal the prevalence of functional planning, rational designation of land use and circulatory systems, new boulevards, and the pragmatic use of vegetation to achieve visual harmony, amenity and climatic-responsive design. Visionary urban projects are accompanied by complex narratives of change, as the authors reveal the design and planning concepts for the project entries from the pre-World War II era at La Butte Rouge in Châtenay-Malabry, France (1931–65), or the post-World War II era developments of Novi Beograd in Serbia (1957–61, 1962–71, 1972–90), and Tapiola Garden City in Finland (1953–69). The role of bureaucratic processes and the multi-dimensional nature of city planning are inextricably linked, yet despite such complexity, the essential value and amenity of landscape is omnipresent. Jan Haenraets and Nishant Upadhyay explain how Le Corbusier's Chandigarh (1950–60) saw a two-tiered application of open space—as a green belt surrounding the city, and as open space within—forming internal parks and linkages that distribute evenly the advantages of parks to all sectors of the city.

The visionary nature of these projects is accompanied by degrees of experimentation that in some instances has fared unevenly through time. The authors reveal criticisms pitched at questions of cultural relevance and meaning, and the ability to respond to pressures

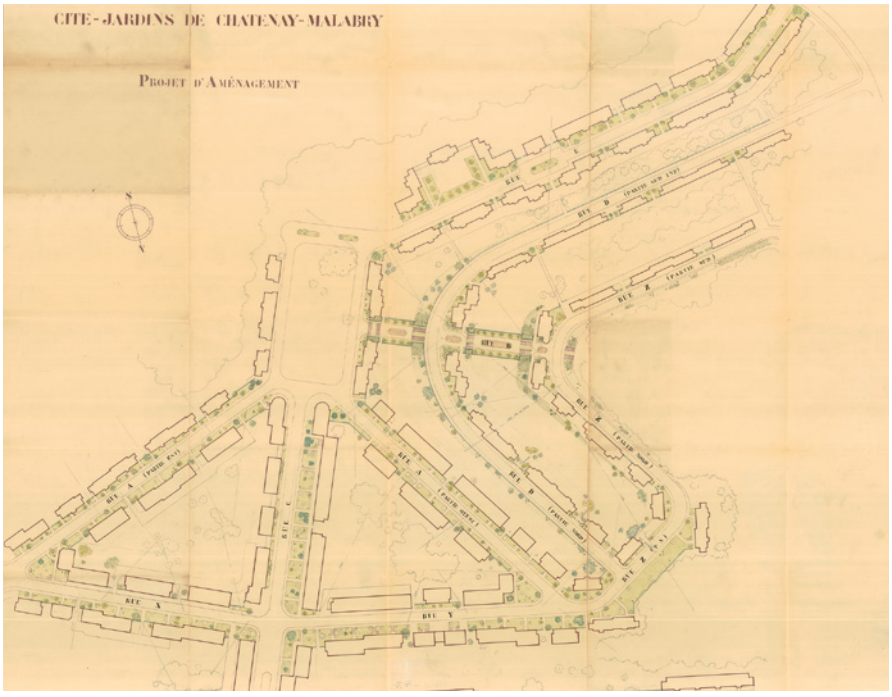

Figure 10
Plan of the first stage of the district, including Rue Lucien Herr, La Butte Rouge, Châtenay-Malabry, France, by André Riousse, with views indicated by dotted lines. © Private archives Sirvin.

Figure 11
The landscaped streetscape at Chandigarh, India. © Jan Haenraets, 2009.

of expansion and remain dynamic enough to mature into distinctive places in their own right. The evolution of urban space in the wake of shifts and changes in commerce and socio-economic forces, and the incessant attempts to remodel and refresh urban space, have eroded the visionary bases for which some of these projects were distinctive. Yet the emergence and establishment of the profession of landscape architecture, in some instances, has been a co-related aspect in countries that had not previously recognized the profession as distinct from architecture or horticulture. The authors of La Butte Rouge and Tapiola Garden City reveal how these project entries heralded the profession via social ambitions that were dependent on specialist skills at a large scale. The impact was catalytic, extending to smaller-scale interventions and more thoughtful provision of open spaces, courtyards, and forecourts.

The reinvigoration of urban centres, as places to inhabit and live, has continued unabated as landscape architecture has become increasingly critical in the urbanizing world of the twenty-first century.

INTER-WAR TO POST-WAR GARDENS: PICTURESQUE TO MODERNISM

PICTURESQUE GARDEN OF THE VAN BUUREN MUSEUM, BELGIUM

41 Avenue Léo Errera, 1180 Brussels
1927–28, 1930–35, 1948

Jules Buyssens (landscape architect)
Domestic and residential, conservation and ecological conservation, rehabilitation

Keywords: picturesque, fragility of landscape, restoration

David van Buuren, a Dutch banker who had settled in Brussels, commissioned Jules Buyssens (1872–1958) to design the gardens of his future Art Deco villa which was to be erected on a sloping plot of twenty-six acres, subsequently enlarged to fifty-six acres. The plans for the gardens were drawn up between 1927 and 1935 (the year of the last plan that has recently surfaced). Buyssens was fifty-two years old at the time. He had been Inspector of Plantations of Parks and Promenades of the City of Brussels since 1904, but he also had a private practice on the side, working for aristocratic and business clients. He had received a traditional training in horticulture, followed by an initial six-year stint in the office of Édouard André in Paris. Upon returning to Brussels in 1903, he set up a plant nursery, a garden company, and developed his projects.

Influenced by the English *Wild Garden* by William Robinson (1870), Buyssens set out to reinvent the art of the Belgian garden by moving away from the aesthetic trends of the nineteenth-century landscape garden and the traditionalist current based on updating regular layouts. He was radically opposed to the modernist movement, reproaching the characteristic simplicity of the layouts and monochrome plant pallets featured in the *Nouveau Jardin* (*New Garden*) published by André Vera in Paris in 1912. Surrounded by other naturalists, professors of botany and a geologist, Jules Buyssens created a movement called Le Nouveau Jardin Pittoresque (The New Picturesque Garden). The movement's manifesto was published in Brussels in 1913. In addition to expressing an aesthetic approach to the art of subsponta-

Figure 12
First cover of the inaugural issue of the association *Le Nouveau Jardin Pittoresque*, 1913. © Collection CIVA, Brussels.

neous gardens already present in England, one of the fundamentals of the New Picturesque Garden was the attachment to and popularization (beyond scientific circles) of a totally new interest in, and view of, nature that focused on the fragility of landscapes under the onslaught of industry. The local flora was rediscovered in its natural setting.

The garden created for the van Buurens attests to a perfect mastery of the topography: a pretext to produce multiple scenes with particular plant environments to be discovered along more or less formalized paths. Heather earth plants, a humid valley with a rivulet, a flowerbed of mixed perennials, a flowering wall and rockeries (reminiscent of the alpine garden widely popularized by the movement) are arranged in clever combinations of perennials, cultivated native plants, exotic plants and naturalized bulbs. The garden was replanted in 1948.

The initial modernity of the intersecting perspective of the arts and sciences on nature which gave rise to the movement subsided after World War I. Geometric layouts were adopted around houses, as exemplified by the terraced rose garden near the Villa van Buuren. The garden has been listed since 1997. Sizeable public aid has been provided for the restoration work carried out from 2009 to 2014, which was awarded the Europa Nostra Award in 2015. This restoration helped save this last testament, which can be considered a manifesto of a break with a long tradition of horticultural practices. Its current difficulties and challenges lie in the very high level of continuous maintenance required by the many skilfully planted picturesque scenes.

Author: Anne-Marie Sauvat

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Figure 13
View of the valley, showing the subtle mixture of native and exotic plants. © Atelier Eole sprl Landscape Architect Brussels, 2016.

VILLA MÜLLER GARDEN, CZECH REPUBLIC

Nad Hradním vodojemem 14, Prague 6, Střešovice
1929–32, 1996–2000

Camillo Schneider, Adolf Loos (concept, 1929–30), Karl Förster, Hermann Mattern (1931–32), Václav Girsa, Miloslav Hanzl, Petr Urlich, Vítězslava Ondřejová (conservation and reconstruction, 1998–2000)
Domestic and residential, conservation and ecological

Keywords: garden, reconstruction, conservation

Villa Müller is one of the most remarkable works of modern architecture in Europe. Designed by Adolf Loos for Dr František Müller, the co-owner of a successful building company, the house is situated on a pentagonal plot of the total area of 1,270 square metres (555 square metres are occupied by the house and 715 square metres by the garden) which runs down an eleven-metre-long north-facing slope. The house is an excellent example of Loos´s original spatial concept, 'Raumplan', which the architect himself described as '…not conceived in plans, but in spaces (cubes). I do not design floor plans, façades, sections. I design spaces. For me, there is no ground floor, first floor etc. For me, there are only contiguous, continual spaces, rooms, anterooms, terraces etc. Stories merge and spaces relate to each other' (Ksandr and Urlich, 2000).

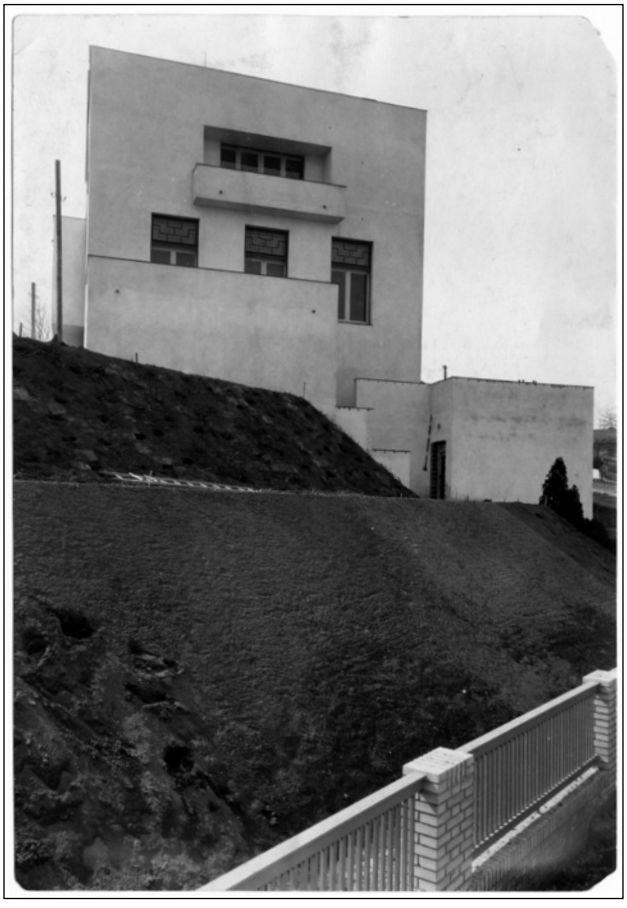

Figure 14
Terrain shaping for the future garden of Villa Müller, c.1931. © The Museum of Decorative Arts, Prague.

The garden, designed at the same time as the villa, is a joint work of three landscape architects or landscape gardeners: Camillo Schneider (1876–1951), co-designer of the park at Průhonice, and Karl Förster (1874–1970) and Hermann Mattern (1902–71) from Potsdam, and the garden now is part of the UNESCO World Heritage listing for the Historic Centre of Prague. The original plans for the garden are kept in the estate of Mrs Milada Müllerová in the Museum of Decorative Arts in Prague. In a study of the plans, Božena Pacáková-Hošťálková has found analogies between the approaches employed in the solution of the living areas of the garden and the residential spaces within the house, which manifest themselves in particular in repeated colour schemes (Pacáková-Hošťálková, 2017).

The garden, situated on a relatively small plot and on a northern slope, overcomes its disadvantageous location by being conceived as a unique three-dimensional sequence of spaces, terraces, stairs and paths. The modelling of the terrain, including the retaining walls and steps, has been preserved in its entirety and restored to the original state of the 1930s during the reconstruction of the house around the year 2000. The Competition for its reconstruction was held in 1996 and implementated in 1998–2000. The garden was laid out and planted according to the original plans. In several cases, however, the assortment of plants had to be altered as the originally specified varieties are no longer cultivated. In these cases, they were replaced with newer cultivars while strictly retaining the same colours, growth heights and flowering seasons.

The exemplary restoration of the garden was awarded the European Landscape Contractors Association (ELCA) Trend award in 2010. The house and the garden are managed by the City of Prague Museum and are accessible to the public by prior reservation.

Authors: Jana Tichá and Petra Boudová

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Figure 15
Detail of the terraced garden of Villa Müller after reconstruction. © The City of Prague Museum.

MODERNIST GARDEN IN LIEDEKERKE, BELGIUM

Houtmarktstraat 45, 1770 Liedekerke
1938–39

Jean Canneel-Claes (garden architect), Huib Hoste (architect)
Domestic, residential

Keywords: CIAM, modular structure, modernist manifesto

The Belgian garden architect Jean Canneel-Claes (1909–89) was an indefatigable supporter of modernist ideas from the outset. Fellow landscape and garden architects who were willing or able to participate in this outspoken avant-garde movement were not large in number, but Canneel-Claes himself managed to connect with contemporaries and convince colleagues within architectural circles. His presence at CIAM congresses, where he assumed the task of secretary, brought him into contact with the most important architects and urban planners of the time. There he met and got to know Christopher Tunnard (1910–79), with whom he founded the Association Internationale des Architectes Jardinistes Modernistes (International Association of Modernist Garden Architects) in 1938. At the pinnacle of his career, he worked with the architects Huib Hoste, Victor Bourgeois and Louis-Herman De Koninck. De Koninck designed the more than progressive private house of Canneel-Claes in 1933.

Those who become acquainted with the work of Jean Canneel-Claes through publications of his time, or better yet, who have the opportunity to visit gardens he designed, become immersed in a world of sheer beauty. The result of Canneel-Claes' quest for the perfect marriage between architecture, the plot of land and the landscape is art—or garden art, in fact. The mathematical structure of the design is reflected in the dissection of the gardens and reveals the modular structure which Canneel-Claes used, which he actually showed without

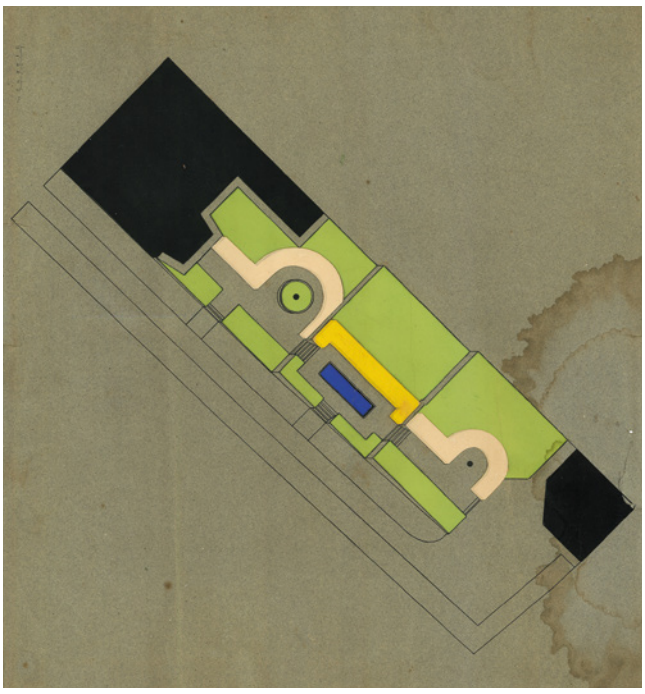

Figure 16
Undated collage by Jean Canneel-Claes, representing a private garden constructed before 1931, Place de Jamblinne de Meux, garden demolished late-twentieth century. © Private archive Ann Voets.

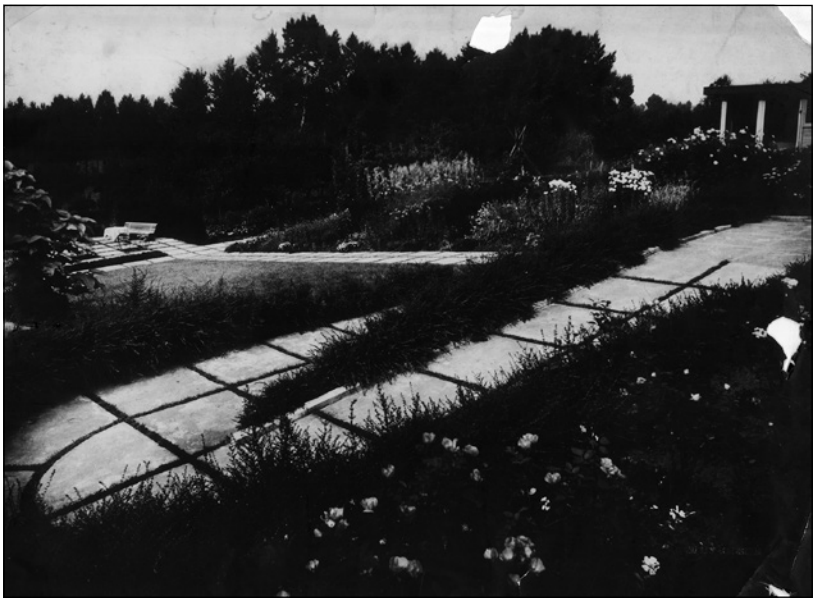

Figure 17
Undated picture of the sloping garden with railing and two terraces forming the exterior extension of the living rooms of the dwelling. © Private archive Ann Voets; also published in *L'Art de Bâtir* 3–4, 1944, 57.

hesitation. The master's hand, however, turns this taut plan into an oasis where mind and body find peace. The balance between horizontal and vertical, between open spaces and closed volumes, and the use of geometric shapes, colour contrasts and the studied flow make each walk a garden experience that is bound to delight both the seasoned garden critic and the garden lover.

Hidden behind the house of architect Huib Hoste (1881–1957) lies the garden that Canneel-Claes designed for Doctor Emiel Heeremans at the end of the 1930s. The garden and house have been listed as a monument since 25 January 2006. The plot that lies on the gently sloping eastern bank of the River Dender offered many opportunities to bring the landscape into the garden. By dividing the garden into a number of horizontal planes, Canneel-Claes drew the surroundings inside and gradually transformed the natural landscape into a garden that extends up to the house. The terraces laid out on the various levels embody the transition from nature to architecture. From the highest terrace, viewers look out over the valley from their vantage point. In the garden, Canneel-Claes used sheared hedges to design a frame to look through and to create a mental connection with the landscape.

The use of materials, namely the large-format concrete tiles that became his signature of sorts, is very much ahead of its time. He preferred custom-made tiles, poured on site if necessary, both on account of the new aesthetic and for the technical possibilities. The path that leads from one terrace to another in a zigzag movement and takes the visitor through the garden towards the landscape is of exceptional beauty. It is the compressed manifesto, as it were, of Canneel-Claes's interpretation of modernism in the garden where form, content, aesthetics and functionality strike perfect harmony and balance.

Author: Ann Voets

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GARDENS OF THE GOMIS HOUSE, SPAIN

Camí de l´Albufera, El Prat de Llobregat, Barcelona
1949–63

Antoni Bonet Castellana (architect)
Domestic and residential

Keywords: abstract, natural landscape, remoteness

The Gomis House (La Ricarda) is sited in a unique place with a strong character—a pine forest next to the sea. Though the site preserves an appearance of peaceful remoteness, its true situation is quite the opposite. It is located only 200 metres away from one of Barcelona's airport landing tracks and two kilometres away from the industrial port of the city. Although it is in a precarious spot and the house is no longer inhabited, the garden has been very well maintained and preserves its original features.

The garden is located in the delta of the river Llobregat near the sea. The neutral character of the territory is the factor upon which the intervention is based and constitutes one of the most interesting models of modern Spanish landscape architecture. Antonio Bonet Castellana's (1913–1989) proposal for the laying out of the garden in 1949 was based on an artificialization of the environment, by introducing a geometric structure which gives rise to both the house and the garden. This intense formalization, although not allowing views towards the sea, creates a new landscape.

Bonet introduces an orthogonal grid, flexible and continuous, that colonizes the site, and organizes the large plot of land that contains the garden and the house. The gardens are thus arranged on a large artificial platform of grass, like an agricultural terrace, with paths, furniture and a pool adapting to the geometry.

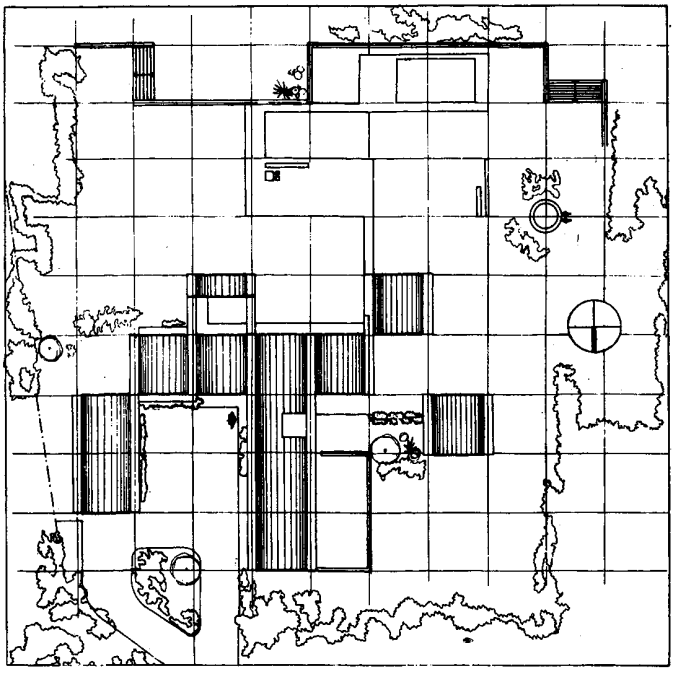

Figure 18
Site plan of the gardens of the Gomis House with outdoor space modulation.
© *Arquitectura* 309, 1997, 41.

Figure 19
The pool and garden at the Gomis House, with the pine forest in the background. © José Hevia, Fundación Docomomo Ibérico, 2009.

This horizontal surface allows for a very loose and permeable transition between the house's architecture and the nature outside—pine forest, beach and the sea. This gradual process starts at the access patio and continues through the house, with numerous porches and open courtyards. This light architecture opens to the garden and anchors the house in its surroundings, and in the large lawn platform which extends to the pine forest as prelude to the beach.

The outline of the house seemingly melts into nature and progressively disappears into the intact environment. 'This internal law imposed on the territory', as architect Felipe Pich-Aguilera called it (Álvarez et al., 1996), is a formal arrangement and an exercise of systematization capable of transforming the territory into an anthropized landscape, going from the most artificial to the most natural.

This perfect classical arrangement between architecture and nature, which is integrated in the fluid Modern Movement space of the house designed by Bonet for the Gomis family, does not have a closed perimeter, but introduces subtle limits and then blurs them. A maximum interpenetration between the interior and the exterior and between the garden and intact nature is achieved. The gardens link to the pine forest by projecting their lines into trees, and in turn, the tall pine trees colonize the platform, marking the passage between the house and the pool. The contrast generated between this pine belt, perched on the abstract lawn surface, and the house geometry, together with the one created between the lawn platform's Cartesian lines and the twisted pines behind, is one of the great compositional successes of the gardens of the Gomis House. They create a landscape of their own, intervening geometrically in a neutral, abstract territory—a common pine forest, without references.

Authors: Alberto Sanz Hernando and Patricia Hernández Lamas

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GARDEN OF THE DE SCHULTHESS RESIDENCE, CUBA

19A No. 15012 between 150 and 190, Cubanacán, Havana
1955–56

Roberto Burle Marx (landscape architect), Raúl Álvarez (construction supervision)
Domestic and residential

Keywords: tropicalism, integration, rehabilitation

Richard Neutra designed and built the Alfred de Schulthess Residence in Havana between 1954 and 1956. The participation in the project of Roberto Burle Marx as landscape designer contributed greatly to the success of the endeavour. It was Neutra himself who wrote to De Schulthess on June 9, 1955 and proposed to hire the Brazilian master, stating: 'In relation to Burle-Marx, I would like to tell you he is undoubtedly the most famous and most highly qualified landscape designer, and he is considered as such not only in Brazil, but also in Europe and America' (Rodríguez, 2016).

In the initial considerations sent by Burle Marx to De Schulthess about the design of the garden, the first states: 'I know Havana's climate and also its flora… Counting on the correct distribution and planting of every designed area, the compound will provide a visual rhythm that will create a constant pleasure when moving along the garden as much as when contemplating it' (Rodríguez, 2016).

The garden that was finally built has accents of compositional mastery, such as the planters arranged as a regular orthogonal reticula located next to the swimming pool, each devoted to a different species and colour, thus creating a kind a vegetal canvas reminiscent of works by Neoplasticist painters. Other solutions offer touches of sensual lyricism, such as the sinuous sidewalk that runs all along the perimeter of the garden as a concrete serpentine. The great variety of plants as well as the general compositional freedom create a welcome, enriching counterpoint to the minimalistic orthogonality of the house.

Figure 20
General view from above of the Garden of the De Schulthess Residence. © Eduardo Luis Rodríguez Archive, 2006.

Figure 21
View from the Garden of the De Schulthess Residence towards the house. © Eduardo Luis Rodríguez Archive, 2006.

Without Burle Marx's garden, Neutra's De Schulthess Residence would not have reached the excellence that was achieved by the wise integration of the designs by the two Masters. Both house and garden complement each other sensitively, and conform to a unique singularity of exceptional value, and a perfect response to the tropical conditions of the place.

Cuban architect Sergio Ferro developed a project for the recovery of the garden in 2004. Little remained by then of the initial vegetation. Ferro's attempt aimed 'to recuperate as much as possible the image and concepts by Burle Marx, and to adapt them to current local conditions, to the present-day use as a diplomatic residence, and to the personal criteria of the family living in the house nowadays' (Rodríguez, 2016). Unfortunately, the original project was not used as the main reference for the redesign, and only vintage black and white photographs were available as referential material. This meant that it was impossible to achieve an absolute certainty concerning the selection of plants included by the Brazilian master and the Cuban architect in charge of the construction, Raúl Álvarez. Therefore, the current garden is not the result of the exhaustive restoration of the aesthetic, cultural and heritage values of the original design. Nevertheless, what was accomplished recovers the richness of colours and textures, and the dynamism, sensuality and vitality of the design by Burle Marx. It could be considered as an initial step toward the full restoration this landscape masterpiece requires.

Author: Eduardo Luis Rodríguez

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GARDENS OF THE HUARTE HOUSE, SPAIN

Calle Turégano, 1, Madrid
1965–67

José Antonio Corrales and Ramón Vázquez Molezún (architects)
Domestic and residential

Keywords: sustainability, abstract, at risk

The Huarte House and its gardens were created between 1965 and 1967 and are one of the most representative Spanish examples of twentieth-century landscape architecture: a fusion of the principles of the Modern Movement and the Hispano–Muslim garden tradition, where architecture and gardens are perfectly integrated in a single unit. The first cannot be separated from the second. This Spanish garden model, still in use, was developed due to the need to adapt, through composition, to a physical environment that is not suitable to the implementation of gardens. Its main resources are: the maximum control of climatic impact—aridity, strong sunlight, wind—and the complete fusion between exterior and interior spaces that are interwoven in order to take advantage of outdoor life in a reduced area.

The site is located in a flat suburban residential area. The lack of any interesting views, as well as the family's desire to isolate themselves from the exterior, led the architects José Antonio Corrales (1921–2010) and Ramón Vázquez Molezún (1922–93) to create an interior landscape. Three landscaped courtyards with defined functions and character are generated: a main patio, associated to the living room and dining room, with representative character; the family patio, connected to the living area, the pool and with a domestic function, and finally, the private patio, open to the bedrooms with a solarium.

These patios are connected by an upper walk—a fusion of the Hispano-Muslim promenade and the 'promenade architecturale' of the twentieth century—placed on the service wing, to prevent the enclosure walls of the plot from blocking the sun from the terraced landscape, which was once filled with sculptures from renowned artists.

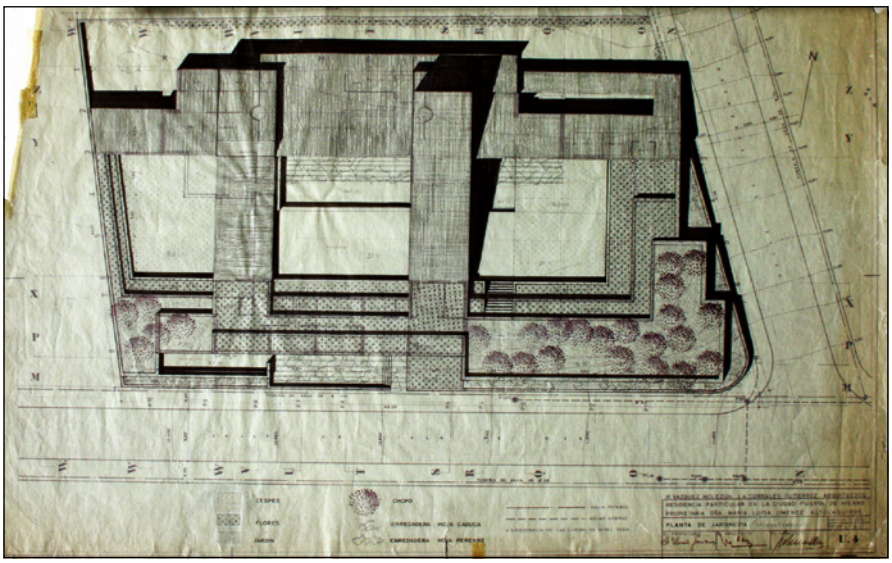

Figure 22
The plan of the garden at the Huarte House shows the different garden areas and how the geometry of the house and the roofs are interwoven with the gardens. © ASH COAM, Vázquez Molezún Fund, J. A. Corrales and R. Vázquez Molezún, 1965.

Figure 23
View of the main patio at the Huarte House from the terraced topography. © José Hevia, Fundación Docomomo Ibérico, 2008.

The representative garden stretches out in several terraces in the first courtyard, before it reaches the upper promenade, where a deciduous tree belt prevents the passage of the sun during the summer but allows it to penetrate in the winter. A large stoneware-paved surface allows the garden to be used as a resting area. The terraces are covered with lawn and bushes, arranged in different heights, that reach the wooded upper promenade. The sculptures are scattered on the terraces that act as exhibition plinths. A brick staircase allows communication between the paved area, the different terraces and the upper space.

The central patio, enclosed by the house and the tree-lined upper promenade, is fully paved and presents a material and physical continuity with the main patio. A large raised swimming pool can only be reached by climbing on the side benches. The large windows in the living room are protected from the sun by parasols and climbing plants.

The last and most private garden area has a less formal character. Without terracing, a paved area serves as an outdoor living room for the main bedroom. A wide wooded lawn with granite fountains and a solarium completes the set.

The garden of the Huarte House reflects main themes of twentieth-century gardening, from the recovery of the courtyard house, the fluid space, the abstract garden of early Rationalism, and the sculpture garden or Le Corbusier´s roof garden. The garden is in a good condition although the house has been uninhabited in recent years.

Authors: Alberto Sanz Hernando and Patricia Hernández Lamas

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NEW URBAN ENSEMBLES IN INTER-WAR EUROPE

LE LOGIS AND FLORÉAL, AND LA CITÉ MODERNE, BELGIUM

Le Logis and Floréal, 1170 Watermael-Boitsfort, Brussels; La Cité Moderne, 1082 Berchem-Sainte-Agathe, Brussels
1922–59 (Le Logis and Floréal), 1923–25 (La Cité Moderne)

Louis Van der Swaelmen (urban planner, landscape architect), Jean-Jules Eggericx (principal architect, Le Logis and Floréal), Victor Bourgeois (architect, La Cité Moderne)

Domestic and residential, public amenity and urbanism

Keywords: socio-biological approach, garden city, community, picturesque, Modern Movement

Louis Van der Swaelmen (1883–1929), urban planner, landscape architect and leading theoretician of the Reconstruction of Belgium after World War I, was the son of Louis-Léopold Van der Swaelmen, landscape architect, Inspector of the State Parks and Gardens, with whom he trained. He initially committed himself to the protection of monuments and landscapes. During the war, Van der Swaelmen took refuge in the Netherlands, where he headed the Dutch–Belgian Civic Art Committee, founded in 1915 in Amsterdam following the London conference at the initiative of the International Union of Cities and the Garden Cities and Town Planning Association to prepare for the reconstruction of Belgium. He published his treatise *Préliminaires d'Art Civique: Mis en Relation avec le 'Cas Clinique' de la Belgique* (*Preliminaries of Civic Art: In Relation with the 'Clinical Case' of Belgium*) in 1916.

This treatise has exerted considerable influence on the formation of modernist thought. It is one of the most comprehensive texts preceding the Athens Charter of 1933, expanding on the philanthropic hygienism of Ebenezer Howard (Howard, 1902) and the historicist and aestheticizing approach of Camillo Sitte (Sitte, 1889), and taking up the zoning system to which they gave rise. Van der Swaelmen relied on a socio-biological approach and attempted a global systematization of urban problems based on 'principles of functional

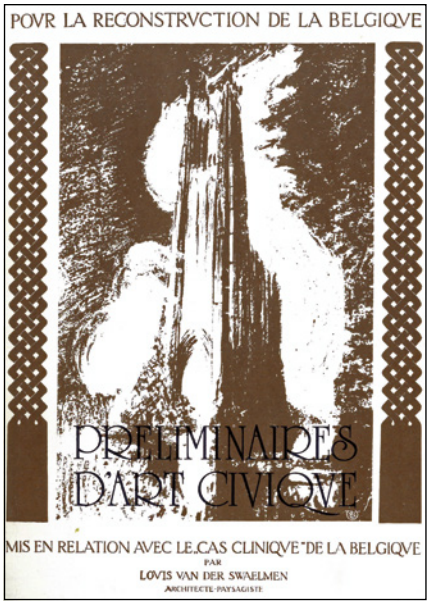

Figure 24
The original cover of Louis Van der Swaelmen's treatise. © Louis Van der Swaelmen, *Préliminaires d'Art Civique: Mise en Relation avec le 'Cas Clinique' de la Belgique*. Leyde: L. W. Sithoff, 1916; repub. Brussels: CIAUD/ICASD, 1980.

localization' (Van der Swaelmen, 1916). By way of an appendix to the *Préliminaires*, the management of the data for the analysis and proposed solutions portends the CIAM Urban Planning Grid drawn up in 1947–48 by Le Corbusier. As founder of the modernist magazine *La Cité* and of the Society of Belgian Urban Planners, Van der Swaelmen collaborated with the best representatives of the avant-garde in many garden city projects. The death of Van der Swaelmen, the CIAM III in Brussels in 1930 and the cooperative movement on the backburner made people forget the contribution of the *Préliminaires* to the theories that were to codify all post-war town planning against the background of a hyper-liberal economy.

In 1922, Van der Swaelmen and Jean-Jules Eggericx (1884–1963) were commissioned by the cooperative societies Le Logis and Floréal to build two adjoining garden cities on Watermael-Boitsfort. The two picturesque complexes on an undulating site comprise some 1,700 dwellings on more than eighty hectares. Van der Swaelmen was entrusted with the design of the neighbourhoods and the layout for the houses and plantations, while Eggericx worked on the houses. The terrain's irregular shape and relief, which starts at Trois Tilleuls, determined the urban planning based on the prioritization of roads. Van der Swaelmen created avenues twelve metres wide to allow traffic and public transport, then residential layouts that were narrower, and finally, alleyways: pedestrian paths intended to create a network between the private gardens, leading to squares and interior common gardens. The landscape setting was meticulous: the species were chosen according to the cost and rate of growth, and to enhance the picturesque architecture, without screening it. All species create a successful link between nature and habitat.

For La Cité Moderne, Van der Swaelmen collaborated with architect Victor Bourgeois (1897–1962), future Secretary of CIAM, on a housing project of uncompromisingly Modern Movement character. The plot that hosts the 270 cubist dwellings (from 500 planned)

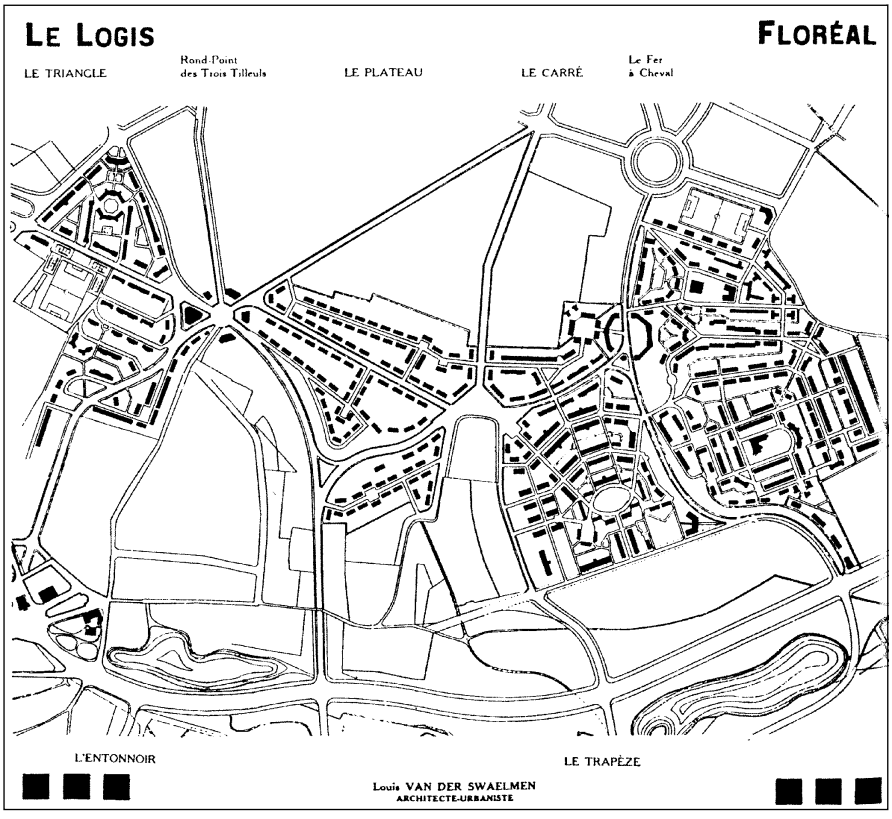

Figure 25
General urban plan of the garden cities Le Logis and Floréal. © Herman Stynen, *Urbanisme et Société: Louis Van der Swaelmen (1883–1929), Animateur du Moderne en Belgique*. Pierre Mardaga Editions, Brussels–Liège, 1979, 96.

assumes the shape of a narrow irregular polygon with its main axis running east to west. This axis is intersected by a series of fragmented streets for local use, which multiply the vantage points by creating a succession of differentiated spaces. A minimum number of houses are arranged directly on the main axis, most of them oriented along the secondary north-south roads for optimal sunlight. The overall plan showcases the Place des Coopérateurs, conceived as the centre of social life and treated differently from an architectural point of view (with houses arranged in a sawtooth pattern). The centre of this square is the main public space designed by Van der Swaelmen: yew hedges pruned in a straight line interlock in clear volumes like a set of overlapping cubes and tetrahedrons, perfectly integrated with the surrounding cubist architecture. The public gardens are delimited by private hedges and punctuated by hawthorns that are pruned into balls. La Cité Moderne received the Grand Prix at the Paris Decorative Arts Exhibition in 1925. La Cité Moderne, listed in 2000, and Le Logis-Floréal, listed in 2001, are the only protected of the twenty-two garden-cities in Brussels. They are currently in restoration following a heritage oriented masterplan.

Author: Jean-Marc Basyn

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LA BUTTE ROUGE, FRANCE

Avenue de la Division Leclerc, avenue Albert Thomas, Châtenay-Malabry
1931–65

André Riousse (c.1929–52)
Residential, public housing district

Keywords: history, at risk, sustainability

The garden city of La Butte Rouge, covering seventy hectares, 3700 housing units, and built in seven stages from 1931 to 1939 and 1945 to 1965, sets a key precedent in twentieth-century French architectural, urban and landscape history. Its landscape is recognized as being inseparable from the architectural elements, but still too little is known about this significant aspect of the work. Firstly, it is an essential landmark in the landscape profession, as it was one of the first times a landscape architect was involved in the design of a social housing project.

André Riousse (1895–1952) graduated in 1922 from the *École des Beaux-Arts* in Paris. He took over his father's gardening business and started out as a landscape architect. Due to the dual nature of his skills, Riousse is an important link between architecture and landscape architecture, practising at a time when the two disciplines became distinct. He was also the first professor of landscape design at the Section du Paysage et de l'Art des Jardins, created in 1945 at the National School of Horticulture in Versailles. A pioneer in contemporary landscape architecture, he nevertheless remains little known by French landscape architects today.

The project of La Butte Rouge is a prime example of how the art of landscape design can contribute to a housing scheme, while remaining consistent with the fundamentals of the principal periods that marked its design, from the masterplan composed in a Beaux-Arts style to the plateau sections (the Aviateurs and Peintres districts) designed during the post-war period when the project became hybridized with a moderate degree of modernity. Riousse demonstrated his expertise at every level of intervention, using simple means to transform the rugged site. Located on the edge of the forest, sometimes even within the forest, the project

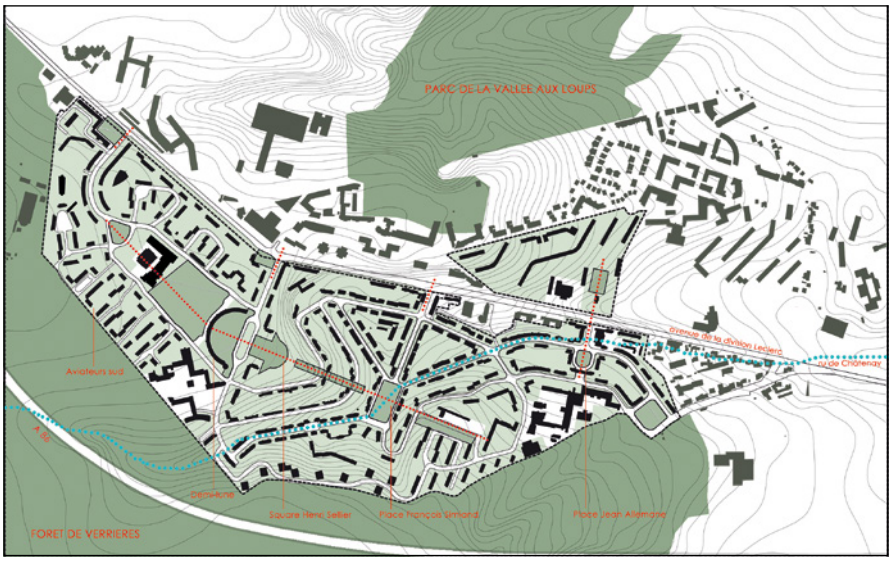

Figure 26
Masterplan of the garden city of La Butte Rouge. The design takes into consideration the hilly topography and local features of the site, such as woodlands, across all the stages of the work. © ENSP, LAREP–Alder, 2011.

Figure 27
Rue Lucien Herr in La Butte Rouge in 2009, showing the catalpas which were replaced around 2015 by flowering cherry trees and cypresses.
© Bernadette Blanchon, 2009.

includes existing oak and chestnut trees and preserves the woodland horizon and the rustic character of the place.

A major pedestrian axis, a magnificent planted stepped mall (rue Lucien Herr), crosses the garden city, providing views and perspectives through twin blocks and dividing up the main public spaces. A number of design details—squares with ponds lined with low stone walls and framed by covered seating arrangements, open blocks introduced by trellis screens, and signal trees (pines, birches and chestnut trees)—belie the German Siedlung influence, establishing connections between spaces and features of the site, and teaming up with the pink ochre colour of the buildings to bring unity in a diversity of situations.

Many features of the landscape are still present, although in need of restoration, while others have been erased by the invasion of traffic signs. Only one square with its pond was renovated around 2006. Important structuring plantations have disappeared; others have been severely cut back and replaced by species which do not match the rustic aspect of the district (palm and cypress trees). These interventions reflect a lack of understanding on the part of the site owners and managers about the reasons behind the original project, as site maintenance is now entrusted to outside contractors where cost is the only concern.

Today, the area is under threat of demolition and densification, despite having received governmental heritage designation as 'twentieth-century heritage' in 2008, and upgraded to the category of 'Outstanding Contemporary Architecture' in 2017: this label, extending over a period of 100 years, does not provide protection but requires that any transformation should be subject to a works notification. Although the landscape component is part of the designation process, it is considered to play only a marginal role, whereas it is a major asset for the district, not only due to its capacity to address environmental concerns (permeable soils, no heat islands), but also because of the quality of its design which expresses a 'beauty for all' ideal and provides shared outdoor spaces. As a trailblazing 'eco-neighbourhood', its transformation into a gentrified, mundane residential area would be regrettable. The ongoing battle to obtain a listing as part of a remarkable heritage site (site patrimonial remarquable) is only just beginning to bear fruit, thanks to the massive mobilization of public figures and associations.

Author: Bernadette Blanchon

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NOVI BEOGRAD, SERBIA

New Belgrade municipality, Belgrade
1936–40, 1948–84, 1984–

Rajko Tatić, Milivoj Tričković, Đorđe Lukić (planners and designers, 1936–40), Nikola Dobrović, Milorad Macura, Stanko Mandić, Miloš Somborski, Vido Vrbanić, Branko Petričić, Aleksandar Đorđević, Uroš Martinović, Milutin Glavički (main planners, 1962)

Public amenity and urbanism, new town, urbanism, city planning

Keywords: new capital, urban planning and design, laboratory

Novi Beograd (New Belgrade) is the newest part of the urban territory of Belgrade, between the historical towns of Belgrade and Zemun. The urban area for 240,000 residents holds around 2,000 hectares of new, mainly greenfield and some brownfield land, today almost all developed. It has been ameliorated by building embankments, draining and raising the levels of the marshland surrounding the confluence of the Sava into the Danube, which had served for centuries as a natural barrier of the no-man's-land, at first between the Ottoman and Habsburg Empires, and later in the nineteenth and twentieth centuries between the Kingdom of Serbia and the Austro-Hungarian Empire.

This territory became a part of Belgrade in the Kingdom of Serbs, Croats and Slovenes (Yugoslavia) only in 1918, but saw its greatest expansion after 1945. It stood empty for two decades until in 1936 a concession was given to the Fair-Trading Association, while a new airport was built near Zemun. The (Old) Fairground opened in 1937 and was used until 1941. From 28 October 1941 until October 1944 it served as a concentration camp, a burden leading to the Fair's repurposing after the war into artists' ateliers and the office of the Construction Directorate of (New) Belgrade.

By January 1947, the first sketches of New Belgrade were introduced by Nikola Dobrović, featuring grand boulevards and representative buildings, aiming at planning the development of New Belgrade to become the capital of the Federal People's Republic of Yugoslavia

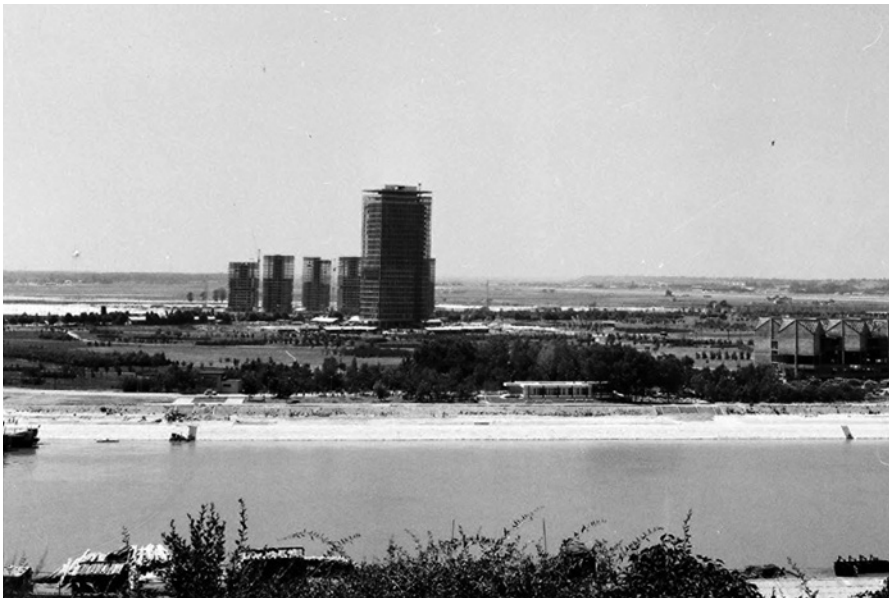

Figure 28
View of New Belgrade from Belgrade Fortress. © Collection of the Urban Planning Institute of Belgrade, Branibor Debeljković, c.1962.

Figure 29
Modular working model as per the plan of 1962 on display in the Institute for Construction of (New) Belgrade.
© Collection of the Urban Planning Institute of Belgrade.

(from 1963 Socialist Federal Republic of Yugoslavia). During 1947 a competition was held for the representative buildings of the Federal Executive Council, Hotel Jugoslavija and the Central Committee of the Communist Party. On 11 April 1948 the official construction of New Belgrade began, but was delayed into the 1950s due to the crisis caused by the Cominform resolution on Yugoslavia. Consequently, the concept of the capital changed, mirroring these events and losing the features of socialist realism, instead turning back to the Athens Charter and modernism: rectangular blocks full of greenery, public spaces and playgrounds, zoned traffic, four urban functions (housing, industry, central functions, recreation) and three architectural forms—tower, slab, meander—with flat roofs. The public competitions were a planning tool, used to plan and design the area block by block. The development process started with the embankment construction and creation of the vast, linear recreation zone tangential to the rivers Sava and Danube. The second step was the displacement of the industrial zone, railway and airport, which freed up the access to the river for the residents of New Belgrade and Zemun.

From the 1950s New Belgrade's development was oriented mostly towards alleviating the housing crisis of the city, coinciding with the industrialization of the housing production and competitions for housing typologies and prefabricated structures. The competitions that took place in the 1960s and 1970s were wide in scope, ranging from a single block to rayons, developing the area as a veritable review of the Yugoslav architecture. Based on the proposals of the 1959 competition for the Central zone, a masterplan was developed and adopted in 1962, serving as a foundation for further development. The plan conceived New Belgrade to be a laboratory of planning, urban, architectural and landscaping design and technology application, and it was followed until the middle of the 1980s, when fragmentation and deregulation commenced, followed by heavy postmodern critique of the endeavour and political crisis in Yugoslavia. Today, efforts to protect the most valuable buildings and areas of New Belgrade are taking place, many of them already listed or under tentative protection (Federal Executive Council, Friendship Park, Old Fairground, Old Airport Hangar, Central zone), while facing pressure to develop and repurpose the industry and recreation zones as potential construction land.

Author: Jelica Jovanović

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SUNILA RESIDENTIAL AREA, FINLAND

City of Kotka
1936–53

Alvar Aalto (architect, 1936–53), Paul Olsson (garden architect, 1937–40)
Residential

Keywords: factory housing, forest city, topographical planning

Alvar Aalto (1898–1976), internationally regarded as a pioneer of modern Finnish architecture, was chosen as the chief designer for a new sulphate cellulose factory in Sunila in 1936. The choice was reasoned. At that time, Finnish large-scale industry declared its aim to modernize the country and to use architecture as a visible tool. Aalto had free rein to design everything from the city plan to the details. As a result, Sunila became an internationally appreciated architectural entity. The factory was completed in 1938 and the residential area was built to its side. The building groups were completed in phases during 1936–53, as were the gardens, courtyards and common park areas.

Besides the principle to combine nature and architecture, there rose an aspiration for social reform and a classless society. It was progressive to place all factory workers—irrespective of professions and social classes—in the same residential area. The specificity of Sunila is based on the relationship of buildings to the environment and landscape, and the smooth and fan-shaped placement of buildings upon the gradual slope, in the middle of a pinewood forest. The scenery is dominated by extensive grass surfaces, from which straight-trunked pines rise. These, together with the plastered white buildings, create the special identity of the area.

Figure 30
Masterplan by Alvar Aalto's office, dated 11 November 1937, depicting the factory area on the south and the scale of the housing diminishing towards the north. © Alvar Aalto Museum, sign. 13–107.

Figure 31
The engineers' row house, as well as the other housing, was carefully situated according to the topography of the landscape and orientation, as seen in this photograph from the 1930s. Privacy to the gardens was provided by the shape of the building and the fan-shaped opening towards the south-west. © Alvar Aalto Museum, Foto Roos, sign. 81–002–019.

Aalto's design for the city plan follows the contours. Organized centralism was avoided in every way. The borderline between the courtyards and the parks was very subtle. Sunila was ahead of its time. Later, in the forest cities of the 1950s, designers and planners attempted to dissolve the strict distinction between public and private by placing the buildings in the middle of nature as freely as possible. Aalto had a special relationship with nature and biology. Garden architect Paul Olsson (1890–1973) was also involved in planning Sunila's setting. Olsson's company drew and implemented the garden plans. Aalto handled the setting more freely than Olsson. Aalto's vision was closer to what was implemented.

Sunila, Finland's pride, flourished between 1937 and 1962. The golden age of its environment was between 1950 and 1960. The plantings were thriving, and the whole residential area was completed. The Sunila factory had even its own personnel to take care of the parks, courtyards and gardens. The connection between the Sunila factory and the residential area started to weaken in the 1960s when part of the services offered by the factory was transferred to the public sector. In the middle of the 1980s the factory sold the buildings of the residential area and most of the land it owned. At the same time the condition and the social reputation of the area started to decline.

Regardless, Sunila has been preserved quite well over the decades. The remoteness of the area, and the outsourcing and the nearness of the factory, have had good as well as bad effects. Today the appreciation of the area is again on the rise. There are, however, challenges, especially in landscaping. The 'Pro Sunila' association, founded in 2000, does valuable work. It is involved in modernizing the area to current standards in a respectful way.

Author: Milla Koskivirta

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POST-WAR GARDEN CITIES AND NEW TOWNS

CHANDIGARH, INDIA

Chandigarh, Punjab and Haryana
1950–60

Le Corbusier (architect), Pierre Jeanneret (site architect), Maxwell Fry and Jane Drew (architects), Albert Mayer and Matthew Nowicki (architects' preliminary plan, 1949–50)

Domestic and residential, public amenity and urbanism

Keywords: urban planning, new town, at risk

Chandigarh was planned between 1950 and 1960 and became one of the most important works by Le Corbusier, (Charles-Édouard Jeanneret, 1887–1965). He further developed the preliminary fan-shaped masterplan (1949–50) by American architect Albert Mayer (1897–1981) and Polish architect Matthew (Maciej) Nowicki (1910–50) into his grid plan. The green infrastructure was implemented through the Chandigarh Government. It was the first fully planned city in India during its post-independence period and can be seen as a pilot project that allowed for levels of experimental planning in the manner in which it aimed to incorporate landscape architecture, architecture and town planning.

The city is situated on an open and fertile alluvial plain with the Shiwalik hills as a backdrop, set within the natural boundaries of the monsoon rivers of Patiala ki Rao and the Sukhna Choe (Randhawa, 1968; Bhatt, 2008). Le Corbusier employed human scale and nature as a tool to shape the urban environment, with his concept for the open spaces functioning at two main levels, namely the city surrounded by a green belt that assists with containing growth, and the open spaces within the city (Bhatt, 2008). The open space network and greenery is used as a connective tissue between the city's different components and functions, such as neighbourhoods, governing, urban life, education and recreation.

Le Corbusier arranged the urban functions along separate layers, implementing several concepts of the Congrès Internationaux d'Architecture Moderne (CIAM, 1928–59). This resulted in a city that is composed of sectors (Bos et al., 1992), and of layers that include the

Figure 32
View of the landscape at the capitol complex at Chandigarh, India. © Jan Haenraets, 2009.

Figure 33
The plaza at the Civic Centre at Chandigarh, India. © Jan Haenraets, 2009.

circulation network, named the 'Seven Vs', the linear green strips or open spaces, the capitol complex, Civic Centre and the business district. The open space structure and the circulation system provide Chandigarh with a recognizable landscape identity (Bhatt, 2008).

The Civic Centre, incorporating the local government and business districts, was strategically placed on the two main axial roads of the urban plan, the Jan Marg or People's Avenue, and the Madhya Marg or Central Avenue. The main roads follow the hierarchy of the Seven Vs, from the V1 comprising the largest roads that can be inter-city connectors, to the V7 that consists of the footpaths and cycle tracks (Bos et al., 1992). The hierarchical system allowed for the separation of vehicular and pedestrian movement. The city centre and plaza was designed traffic-free, making the complex a pedestrians' paradise. The capitol complex now includes the Punjab and Haryana High Court, the Assembly buildings, the Secretariat, and the Open Hand Monument. Since 2016, the complex has been included in the UNESCO World Heritage list as part of the transnational nomination of 'The Architectural Work of Le Corbusier', for representing a masterpiece of human creative genius and exhibiting an unprecedented interchange of human values in relation to the Modern Movement. It is situated in the northeast of the city, and initially no urban development was allowed to its north, which has since occurred.

Le Corbusier's use of sunlight and open space stand out in his architecture at Chandigarh. In the landscape vision the role of trees has been most crucial, with the successful 'marriage of the tree and the building', and it gaining a reputation as the City of Flowers due to the many flowering trees (Randhawa, 1968). Tree selection and positioning was carefully based on architectural qualities, shape, colour and flowering, and shading and dust sheltering benefits. Ornamental planting emphasized Indian varieties, with plant material gathered throughout India (Randhawa, 1968).

A criticism has been that Chandigarh could be seen as a postcolonial vision, but nevertheless it has been embraced as one of the greenest and livable cities in India, with Indian identity finding its place in daily life, especially in the neighbourhood units. Chandigarh was designed for a population of half a million and it has managed to accommodate adaptation and development. Nevertheless, with its population exceeding one million, its open space framework has been eroding. Road widening affected green spaces and the plan's pedestrian-friendliness, with increasing quantities of paved surfaces damaging the characteristics of

the urban landscape, and enhancing climate change impacts. Chandigarh's challenge will be to balance progress with safeguarding the characteristics, values and significance of its visionary historic urban landscape.

Authors: Jan Haenraets and Nishant Upadhyay

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GUATEMALA CIVIC CENTRE, GUATEMALA

Zone 1, Guatemala City
1952–76

Jorge Montes, Carlos Haeussler, Raúl Minondo, Pelayo Llarena and Roberto Aycinena (architects), Carlos Heussler and Roberto Aycinena (site architects), Carlos Mérida, Guillermo Grajeda Mena, Dagoberto Vásquez, Roberto González Goyri and Efraín Recinos (artists)

Domestic and residential, public amenity and urbanism

Keywords: urban planning, civic centre, at risk

The end of the 1950s set the pace for the growth of Guatemala City through the consolidation of the first phase of the Civic Centre that commenced in 1952. The demolition of the ancient Penitentiary and construction of a set of buildings formed part of the modernization of the city and the decentralization of the old city centre. The site chosen for the location of the new 'Heart of the City' precisely occupies an area between the southern limits of the original historical centre and the beginning of the elitist suburbs.

The Guatemala Civic Centre´s main function was to decentralize the administration offices of the State of Guatemala. For that purpose, it houses the City Hall building, the Bank of Guatemala and National Mortgage Bank buildings, the Social Security building, the National Court building and the Public Finance building. The Sixth and Seventh Avenues are a very important component of the Civic Centre, being both the most dominant streets as well as the longest, going across the whole city from north to south.

This urban complex not only produced changes in the urban grid imposed by colonial cities, but at the same time introduced the use of large boulevards, green areas and plazas to promote citizen co-existence. The open spaces are articulated with walkways that make it possible to protect and give importance to the pedestrian. The site was also impacted by the skyline, and reinforced concrete and Venetian mosaic were introduced as 'new' materials

Figure 34
View of the Guatemala Civic Centre walkways and Seventh Avenue. © Sonia Fuentes, 2019.

Figure 35
The current condition of the Guatemala Civic Centre. © Sonia Fuentes, 2019.

for the epoch. These materials, as well as the incorporation of reflecting pools, changed the colour, texture and character of the urban landscape in direct contrast to the old colonial city.

At the Civic Centre, professional intervention occurred for the first time in Guatemala in a multidisciplinary fashion, when architects, engineers and artists came together for the execution of the buildings of the new heart of the city. This group of professionals was led by architects Roberto Aycinena (1917–2006) and Jorge Montes (1927–2018). The Civic Centre of Guatemala was the first urban project designed in the country by Guatemalans, and is of vital importance to the history of Guatemala because it marked the modernization of the state, not only at the urban and architectural level, but also economically and socially. With the construction of the Civic Centre, new construction systems began to be used for buildings with more than three levels, in contrast with the old historic centre, where the constructions did not exceed two levels.

After the construction of the Civic Centre the city began to expand to the south, promoting new residential areas. The zoning plans suggested by the Congrès Internationaux d'Architecture Moderne (CIAM, 1928–59), especially the Eighth Congress, The Heart of the City, as well as some of Le Corbusian principles, were taken as the main reference for designing buildings at that time. The architects worked as a team and together they designed the new urban grid, as well as the landscape. Unfortunately, this urban complex remains unfinished: some proposed open spaces and urban furniture could not be completed and the respective vegetation prevents users from staying for longer periods of time and enjoying the open space. The architectural complex is currently under threat due to the lack of awareness of its significance by some influential sectors of the country, who see the potential to generate real estate projects in the space.

Author: Sonia Fuentes

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TAPIOLA GARDEN CITY, FINLAND

Espoo
1953–69

Nils Orénto (1953–55), Jussi Jännes (1955–67) (landscape architects), Carl-Johan Gottberg (head gardener, 1954–92)

Domestic and residential, public amenity and urbanism

Keywords: community, post-war model garden city, restoration

Tapiola Garden City was developed in post-war Finland as a model for a pleasant residential environment in which outdoor spaces had an important social function: to provide residents' comfort and wellbeing in addition to meeting aesthetic goals. Tapiola evokes an image of a harmonious interlinking of modern architecture, human-made landscape and the Finnish forest landscape.

Tapiola opened the doors for landscape architecture in Finland. The Finnish Association of Garden Architects was founded as early as 1946 with no more than ten members, all educated abroad. University-level education of landscape architects was established during the 1960s, but the independent study programme was founded only in 1989. In the late 1960s a Nordic Symposium of landscape architects was held in Finland.

The role of the Finnish Housing Foundation as Tapiola's landowner, planning coordinator and developer was central. Its managing director, Heikki von Hertzen (1913–85), invited Nils Orénto (1922–2010), a Finnish-born garden architect living in Stockholm, to join Tapiola's planning team in 1953. Later, a new generation of garden architects, with Jussi Jännes (1922–67) in the forefront, participated in the landscape design. Jännes had studied in Denmark and had embraced influences representing international modernism. He wanted to create an interesting dialogue between Finnish natural vegetation and ornamental flora. Groupings of shrubs formed strong motifs, which stood out next to open lawns. The purpose here was to create a marked contrast between the original natural features and the gardens. The bare bedrock sites and forest provided an understated background to the verdant lawn valleys. The highlights of

Figure 36
Planting at Leimuniitty Park by Jussi Jännes, Tapiola Garden City. © Museum of Finnish Architecture, Teuvo Kanerva, c.1960s.

Figure 37
Aerial view of Silkkiniitty Park, Tapiola Garden City.
© Museum of Finnish Architecture, P. Harala, 1974.

the landscape were accentuated with extensive mass plantings in different colours.

Jännes was a virtuoso designer of landscape space, terrain and vegetation. In many cases, however, the refined details were only discovered at the actual building sites. Carl-Johan Gottberg (1928–2022), the senior gardener of the Finnish Housing Foundation, was responsible for the final shaping of the landscape.

Leimuniitty was the first park to be developed in Tapiola. It is an internationally recognized example of a modernist garden design. The plan, drawn by Jännes, was completed in 1959. The aim of Leimuniitty was to operate as a symbol and an advertisement for the new garden city. The central motif was a roundabout, and the park was designed particularly with visitors in mind. The aim was a spatial composition to be admired from different directions. On the uphill slope, the existing valuable pine trees determined the elevation. The terracing on the slope hides the cars but opens a view from the road to Otsolahti bay. Distinctive plants are an important feature for the park. The groups of phloxes in shades of magenta and lilac blazed in the half-hectare flower beds originally planted in accordance with Jännes' plan. The flower arrangement, also referred to as the 'shocking display', served as a signature of the new garden city.

The starting point for the park's comprehensive redesign in 2015 was the restoration of the historical landscape structure and its subtle renewal. The new design was based on the continuation of Tapiola's clean-lined modernism. Materials characteristic of Tapiola—concrete, wood and steel—have been used. The large groups of perennials that had been removed in the 1990s have been restored in accordance with the original theme. The landscape, a spatial composition of 10 hectares, again plays an important role in the appearance of the garden city's centre.

Author: Ria Ruokonen

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MAJDANPEK, SERBIA

Majdanpek
1957–61, 1962–71, 1972–90

Velimir Ostojić, Dobrosav Đurković, Olga Ostojić, Aleksandar Niklić, Lazar Pribić, Aleksandar Milosavljević (landscape architects)

Public amenity and urbanism**,** industrial and farming, mining and smelting, land reclamation

Keywords: new town, urban planning, industry

Majdanpek is a new town in eastern Serbia, built in the valley of the Pek river next to a pyrite and copper mine. It stretches over fifty hectares of mountainous land, the difference in the elevation being 170 metres between the centre and the periphery of the town. The mine existed since the medieval period, but the modern type of industrial production started in 1835, with the establishment of the State Smelting Company. However, the miners' settlements in its vicinity were always provisional, since the mine had problems stabilizing production. The mine and the smelting company worked low-capacity until 1947, when it was nationalized and continued working with old equipment. Due to the lack of consensus regarding the quality of ore, it was only in 1954 that a new company formed, funded by the Federal Investment Fund, making Majdanpek a top state priority.

The development of the town can be divided into three phases, coinciding with the development of mining and correlated industry. The first phase happened from 1954 to 1962 after the experts confirmed that the ore could be mined and smelted with new technology. The preparation of the land in the Lower Town started in 1957, and construction started in 1958 and lasted until 25 June 1961, when the first copper anodes were produced. The famous construction companies Trudbenik, Rad, Partizanski put, Žegrap, and Stig, supervised by engineer Radojica Jelovac, built both the mine and the town. The broader surroundings of the mine were also planned with aforestation as a two-fold project—to regenerate the land and to provide timber for the mine. The construction started according to the modernist concept plan, a sketch done early in the 1950s by the Urban Planning Institute of the People's Republic of Serbia's Aleksandar Milosavljević, and later developed by Belgrade-

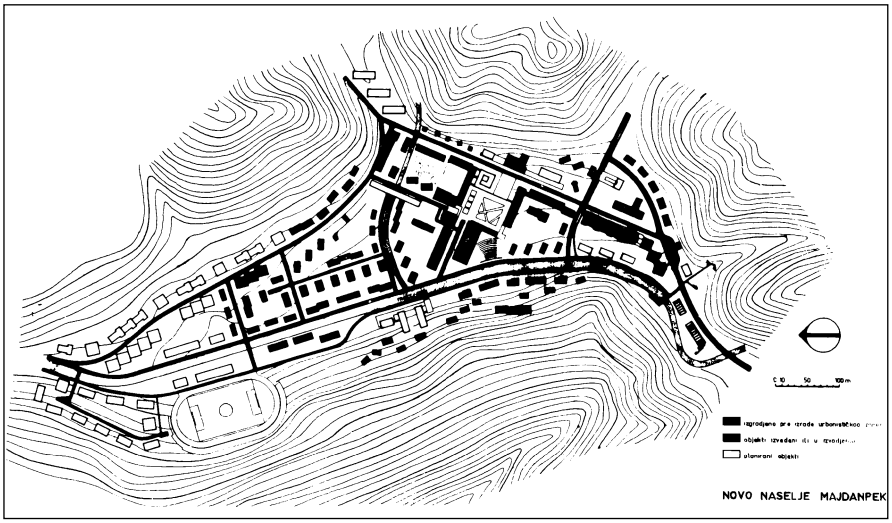

Figure 38
Plan of Majdanpek from 1962. © Urban Planning Institute FR Serbia. *Arhitektura urbanizam* 13, 1962, 29. Belgrade: Savez društava arhitekata Srbije, Savez društava urbanista Jugoslavije.

Figure 39
View of Majdanpek in the mid-1980s.
© *Rudnik Bakra Majdanpek 1961–1986*, 35.

based office Prostor, led by Velimir Ostojić. The town's centre is a linear urban structure, starting at the gates of the mine and following the valley of the Pek, and surrounded by free-standing buildings and greenery. Besides the mine and the housing with services (schools with sports facilities, kindergartens, and ambulance), the Culture House, hospital, workers' housing, hotel and shops were built, and the Pek was regulated and flanked by pedestrian paths. The town of 2,000 inhabitants hosted 4,000 construction workers during this period.

The second phase of construction followed the growth of the mine and started with the 1969 decision of the Workers' Council to double production. By 1971 new equipment was installed, and a new goldsmithing company and copper tube factory were built, leading to the construction of an additional 986 new apartments on the slope of the hill, as well as a new hospital, post office and a sports and recreational centre on the hilltop. Furthermore, a forty-four kilometre long railway to Bor and three new roads to nearby towns were built while another was reconstructed, all in very demanding sections due to the configuration of the terrain. The third phase of construction was marked by difficulties caused by the international financial crisis in the 1970s and the internal political crisis in the 1980s, but nevertheless the eleventh flotation line opened in 1976. The town continued to grow by building housing on the hill slopes, following the isolines of the terrain, and offering spectacular views and vast public spaces with greenery, playgrounds and basketball courts to the new residents. The population of the town grew from around 2,000 in 1947 to around 12,000 in 1991, and declined to 7,636 (3,137 households, 4,037 apartments) in 2011 due to the production crisis and overall depopulation of the region.

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SHUSHTAR NEW TOWN, IRAN

Shushtar New Town, Khuzestan Province
1974–80

Kamran Diba—DAZ Architects, Planners, and Engineers (architects)
Domestic and residential, public amenity and urbanism

Keywords: vernacular urban design, third space, climatic constraint

Building new towns to accommodate the workforce of industrial zones was a result of the development and industrialization of Iran in the 1960–70s. In the 1970s, the central government of Iran constructed the Dez Dam in Khuzestan Province to develop the agricultural production sector. This led to the establishment of a major sugar cane production and refinery industry in 1974, Kesht o Sanat-e Karoun (Karoun Agro-industry), as one of the most important industries in the Southern region of Iran. The planning of a residential and urban complex to house its technical, administrative and working staff provided two major opportunities to the inhabitants of Shushtar and its neighbouring villages: useful and well remunerated productive employment, and dwelling houses with all sorts of urban and infrastructural facilities. In 1975, DAZ Architecture Bureau, headed by Kamran Diba (1937–), was commissioned for the planning of this project to accommodate 6,500 families comprising 25,000–30,000 inhabitants. The location of the site was chosen in its relation to the industrial complex, and eighteen kilometres from the historic city of Shushtar on the other side of the riverbank.

The urban plan of Shushtar New Town was based on the four-fold pattern taken from Persian gardens and the urban design of the historic cities of Shushtar and Dezful in its vicinity. To design a lively urban atmosphere, the designers planned spaces for social gathering of the local community in the centre of the complex, the most important of which is the central shopping area that is designed as a five-floor building at the intersection of two main green boulevards.

Figure 40
A neighbourhood in Shushtar New Town. © Golnoosh Mozafari, 2016.

Figure 41
A neighbourhood in Shushtar New Town. © Golnoosh Mozafari, 2016.

The general layout of the town was formed around a main axis, starting from the western end and continuing to the south east which leads to a bridge on the river. This main axis acts as the main public space, gathering all the collective activities: a shopping centre and an open food market, a covered bazaar, green spaces, a local mosque and a local bath, then a cultural centre and a park that continues to the Friday mosque. The residential area was designed for pedestrian use: only vehicles that provided necessary services to the centre of the town were allowed on the main axis. The axis then leads to a pedestrian square with some shops before finally ending in the town centre, which was designed in the form of a plaza by the river. The planned connection to the historic centre of Shushtar from this point was to be a pedestrian bridge on the river. The public green spaces were also designed on this axis to simplify their maintenance and gardening management.

While the public greenery in this complex is limited mainly to the main axis, some semi-public green spaces in the forms of gardens were designed in front of the apartment buildings to create community engagement (Diba, 1980).

Based on its innovative design in accordance with the vernacular regional architecture, with the use of bricks similar to the historic city's materials, and in response to climatic constraints, Shushtar New Town won the Aga Khan Award in Architecture in 1986. The design principles of this project consisted of: introverted architecture; the consideration of human scale, the employment of narrow streets to avoid daily heat, the inclusion of neighbourhoods and open spaces for socializing; and the creation of a sense of community and belonging (Mozafari, 2016).

In 1979, due to the political and managerial instability of the country, only the first phase of the town construction was completed, and the greater project partially continued after the Islamic Republic Revolution. Shortly after the Iran–Iraq war in 1980, the town was inhabited by war refugees, resulting in a population of about three times more than the town was initially designed for. After the war, some of the previous residents returned to their home towns, while the town's poor condition led to lower rents, attracting new inhabitants who migrated from neighbouring villages. Hence the process of overpopulation, the mix of eclectic local culture, and the subsequent lack of belonging to this urban area has never stopped. This has resulted in the current disastrous, and tragic, urban condition where many house renovations do not comply with the original design in any way: the materials, design, techniques and the sense of security in the New Town is pretty low. To stop the aforementioned undesirable changes, Docomomo Iran supported the registration of this urban landscape on the National Heritage List in June 2020.

Authors: Golnoosh Mozafari and Hadi Naderi

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2 NEW PARKS AND PLACES OF LEISURE

Andrew Saniga, Jan Haenraets and Gulnur Cengiz

The years post-World War II saw an expansion in the provision of spaces for recreation. Reasserting the value of landscape as a respite in the expanding city was complicit in improving lifestyles. The provision of open space was as much a product of functional planning's negation of the impact of the boom years—the car, infrastructure, commerce, and even the expansion of civic and institutional buildings or ensembles—as it was a bid to create aesthetically considered 'whole cloth' new parklands indelibly linked to the urban fabric in which they were situated.

The enormous seven-kilometre-long, 120-hectare Flamengo Park in Rio de Janeiro, Brazil (1961–65) is at once symptomatic of the demands for open space and indicative of the awareness of the precariousness of open space in cities. Paulo Eduardo Vidal Leite Ribeiro tells how the park's formation was not only significant because of the calibre of its designers, Alfonso Eduardo Reidy and Roberto Burle Marx, but also for the fact that even before the park was inaugurated in October 1965, it was given a form of heritage protection in order to ensure that it would remain intact in perpetuity rather than succumb to piecemeal erosion at its boundaries. As a feat of defiance, Flamengo Park also signals the ways in which individuals within bureaucracy and institutions attempted to inculcate a role for landscape architecture and its concomitant application to the city's fabric.

A commitment to upholding environmental values became symptomatic of professional relationships between engineers, landscape architects, architects and others, often combining efforts to achieve more favorable outcomes in the face of development pressure. Emblematic of change, the Gulbenkian Foundation Gardens in Lisbon, Portugal (1963–69) saw the imperative to unify landscape, architecture and engineering, despite the potential impact of the introduction of a major new building in the former Parque de Santa Gertrudes. Ana Tostões's extensive research into the Gardens reveals how trees were transplanted, view lines carefully considered, and—in a dramatic if 'invisible' example of engineering and landscape—a large new ornamental lake was constructed atop an underground car park. The authors of project

Figure 42
Construction of the lake in Parque de Santa Gertrudes, 1963–69, Gulbenkian Foundation, Lisbon, Portugal.

Figure 43
Current view of Mamaia Resort, Romania. © Daniela Calciu, 2012.

entries for the Parque del Este in Caracas, Venezuela (1956–61), Boyana Residence Park in Sofia, Bulgaria (1971–74), and the Park Andreja Hlinku in Bratislava, Slovakia (1978), all demonstrate that environmental quality underpinned aspirations for the new parks of the modern era.

A related endeavour was the tripartite connection between designed landscape, an emerging ecological consciousness, and national identity. The incorporation of indigenous vegetation and the interpretation of indigenous landscapes materialized through reconstructed ecological ensembles. The culture and nature of the site, often conceptualised as representative of a nation, surfaces in the authors' descriptions of sites such as at the Parque de las Americas in Mexico (1942, 1943–45), the Parque del Este in Venezuela (1956–61), and Ayia Varvara Urban Park in Greece (1984–87). The search for new and relevant forms was expressed through geometry and innovative materiality and method, often standing in stark contrast to previous traditions in park-making. That the results of experimentation were sometimes viewed with bemusement, as Marlies Brinkhuijsen explains of the public's response to novel landscape ideas developed at Gijsbrecht van Aemstelpark in the Netherlands (1959–73), further demonstrates the revolutionary spirit of the times.

In parallel with the reinvention of public parks, changes in lifestyle reinvigorated the pursuit of landscapes of leisure in the form of resorts, hotels and holiday villages. A common concern

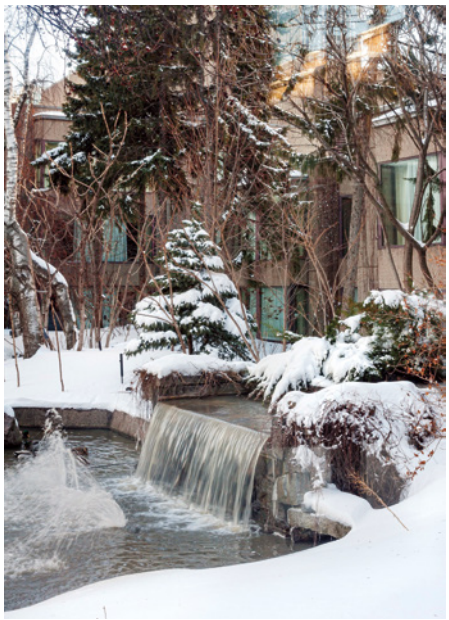

Figure 44
The rooftop garden in Montréal, Québec, Canada, in winter. © Hotel Bonaventure Montréal.

Figure 45
View of the Vale do Silêncio Park, Lisbon, Portugal. © Ana Tostões, 2020.

was the attempt not to 'kill' the thing that one 'loves': that is, the avoidance of degradation or sanitization of a site's 'natural' qualities that often comes as collateral damage inherent to the tourism industry, as noted by the authors for the project entry for Veerse Meer in the Netherlands (1961–97). A union between architecture and landscape sometimes came with the imperative to build with sensitivity to natural and environmental value. However, as revealed in Petros Phokaides's analysis of the Golden Sands Hotel in Cyprus (1970–73), the idyllic shapes and forms of tourist developments sometimes could not escape falling victim to ethnic and military tensions. The modern landscape of leisure afforded innovation in the pursuit of a marketable commodity, as Nicole Valois and France Vanlaethem demonstrate in the design of the Rooftop Garden at Hotel Bonaventure in Montréal, Québec, Canada (1963–67).

The ongoing viability of landscapes of leisure as profitable ventures generates specific heritage concerns that come with the need to stay ahead in the competitive market generated by tourists' desires.

Figure 46
Aerial view of the Garden of the Provinces and Territories, Ottowa, Ontaria, Canada. © *Ottawa Journal*, 25 September 1962, 17. National Capital Commission.

EARLY-TWENTIETH-CENTURY RECREATIONAL PARKS

LUMPHINI PARK, THAILAND

Rama IV Road, Bangkok
1925

Chao Phraya Yommarat (landscape architect)
Public amenity and urbanism, leisure

Keywords: public park, flora and fauna refuge, Lumphini Happy Centre

Lumphini (Lumbini) Park, a major and historic public park, lies in the heart of downtown Bangkok. The park occupies an area of 360 rai (58 hectares). In 1925, King Rama VI donated his personal land holding of a large allotment called Saladaeng, located opposite King Chulalongkorn Memorial Hospital, as the site for a large trade exhibition which was organized by the government to solve the problems of economic depression. The king made it known that after the fair the venue should be turned into a botanical garden displaying a diversity of plants, for the purpose of educating the people about their properties and value. In 1942, the King Rama VI Monument was built in front of it. Later, the land was developed to become the large public park in the centre of the city, and was named Lumphini. The park is named after the birthplace of the Lord Buddha in Nepal. Lumphini Park has been remodelled continually to fulfill its intentionally multi-purpose character, simultaneously serving diverse needs. The busiest time of Lumphini Park is the late afternoon when it is thronged with people jogging and walking, and with children playing on the lawns and by the lakes. Its grounds cater for a combination of relaxation and recreational activities, and social welfare services.

Established on the premises are various associations and clubs, which operate from the overall vantage point of a cool, green park featuring extensive woods of very old age. Two connected green lakes give the eye a welcome break from the concrete surroundings outside; the flowering and foliage plants beckon visitors to admire their shapes and colours. Visitors loiter lightheartedly through a dark, emerald forest, a graciously swaying palm grove, and a bamboo grove blowing in the wind.

Figure 47
View beyond a green forest and lake in Lumphini Park.
© Noppawan Ratanamart, 2019.

The view one obtains on looking beyond the park perimeter provides a stark contrast between park tranquility and the jumble of high-rises, traffic jams, and fast living. Lumphini Park performs its ecologically counterbalancing act to its environs by providing a refuge for birds of diverse kinds, and squirrels and other smaller animals. For nature-lovers, an on-site bird-watching class is offered annually.

The park is also a Hyde Park of sorts, with activists and politicos engaged in self-promotion with the crowd. The Music in the Garden event is held in the palm grove from February to April. Lumphini Public Library houses a decent collection of useful titles. Grouped in the same category of services, Lumphini Youth Centre (now Lumphini Happy Centre) offers a compact arena of sports venues, equipment and training for both young and aged people in such pursuits as tennis, swimming and ballroom dancing. Another major facility in Lumphini Park is Lumphini Sathan Building. The spacious and multi-purpose building can be used to hold conferences and exhibitions.

Authors: Suphawadee Ratanamart, Narathip Thubthun and Noppawan Ratanamart

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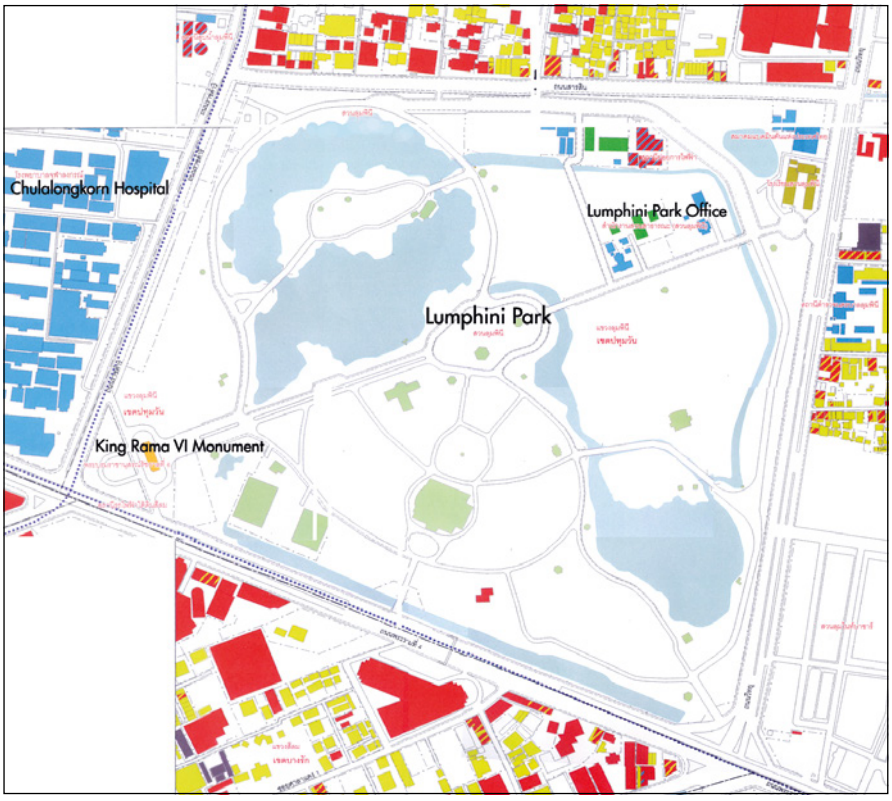

Figure 48
Map of Lumphini Park. © Department of City Planning and Urban Development, Bangkok Metropolitan Administration, 2019.

PARQUE MÉXICO, MEXICO

Avenue México and Avenue Michoacán, Colonia Hipodromo Condesa, Mexico City
1926–28

José Luis Cuevas and Leonardo Noriega (architects), José Gómez Echevarría (architect: streetlights and benches), Roberto Montenegro (murals), José María Fernández Urbina (sculptures), Javier Stávoli (radio engineering)

Public amenity and urbanism

Keywords: history, community, Art Deco

The Parque México, originally called Parque General San Martín, is a meaningful Art Deco work located in Mexico City, being one of the first public spaces of the Modern Movement in the city. Situated at the centre of the Colonia Hipodromo Condesa, then a new urban development that occupied the former Hippodrome of La Condesa, the park acquired the oval layout of the racetrack. The urban plan of the park was established between 1926 and 1928 by José Luis Cuevas (1904–61), with Carlos Contreras Elizondo as an advisor. Leonardo Noriega (1903–70) designed an open-air theatre named after Colonel Charles Lindbergh in order to celebrate the latter's 1927 flight to Mexico. The theatre also boasts sculptures by José María Fernández Urbina (1898–1975) and mural reliefs by Roberto Montenegro (1885–1968). Noriega also designed an architectural ensemble with a clock-tower that included a radio installed by Javier Stávoli. The novel street lamps and decorative benches were designed by José Gómez Echevarría.

Since it was located in a new neighbourhood with an innovative design, the park was publicized by the developers as one of the principal attractions for potential residents. This importance was reflected in the size of the green area and its central position in the layout of the

Figure 49
Aerial view of the Colonia Hipodromo Condesa urban development in the 1930s, showing the park at the centre.
© Acervo Histórico Fundación ICA, A. C. Fondo Aerofotográfico Oblicuas, FAO_01_00021A, 1932.

Figure 50
The Parque México radio clocktower by Leonard Noriega, with radio engineering by Javier Stavoli. © Photographic Archive IIE–UNAM. 08.730618 DGPU–DBAC UNAM, Luis Márquez Romay.

neighbourhood, and especially in the novelty of a modern landscape and its infrastructure. An open-air theatre, a public radio-clocktower, original benches and streetlights, and an artificial lake, gave the park its particular atmosphere. The urban furniture alongside the gardens and the sinuous design of the footpaths broke with tradition, creating the sensation of a mysterious and unpredictable garden; the idea was to envelop the passerby in the vegetation.

The park is divided by Avenue Michoacán, with a larger section to the north, where the lake and the theatre are located. The theatre, named Lindbergh Forum, acts as a focal point, a meeting place and a symbol of the development: a pergola flanks both sides of the spectator space and five tall pillars act as a backdrop for the stage. Here we find the mural reliefs by Roberto Montenegro and a fountain that highlights the entrance, with a powerful sculpture of indigenous inspiration by Fernández Urbina, all in Art Deco style. The much smaller south side contains a public garden, adorned with the arrangement of the radio-clocktower, a circular bench, and very interesting lamps that have now been lost. This facility, a symbol of modernity, was one of the attractions of the stylish neighbourhood from its onset and appeared in the real estate publicity during the 1920s and 1930s.

Today, the park is lush and densely wooded, with jacarandas along its perimeter, and palm, cypress, mimosa and ahuehuete (Montezuma bald cypress) trees in the interior as well as smaller plants including azaleas and lilies; an irrigation system has been installed. Recently the theatre and walkways underwent restoration and free wifi was installed. The park remains one of the most popular open spaces of the city, in an urban surrounding that has undergone a rapid process of gentrification in the past two decades.

Authors: Louise Noelle and Aldo Solano, with the support of Catherine Ettinger

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İZMİR CULTUREPARK, TURKEY

Alsancak, İzmir
1936

Henri Prost, Raymond and René Danger (planners), Mesut Özok (architect, İzmir Municipality Planning and Construction Office)

Public amenity and urbanism, leisure

Keywords: urban landscape, public space, recreation, exhibition

İzmir Culturepark, designed as representative of the modernization ideals of the newly established Turkish Republic, has played a significant role in socio-economic, cultural, ideological and spatial terms. Constructed in the centrally located empty land left by the 1922 fire during the Independence War years, and replanned by French urban planners Henri Prost and Raymond and René Danger in 1925, the area was designed by municipality architect Mesut Özok (1895-1990). It was opened as a park in 1936 by the initiative of Vice Mayor Suad Yurdkoru, who took Gorki Culture and Recreation Park in Moscow as a model. It also started to host an international fair on the initiative of Mayor Behçet Uz, who envisioned an annual event in İzmir. Initially planned as an area of 360,000 square metres, it was later enlarged to 421,000 square metres including 156,000 square metres of green areas and an artificial lake, and incorporated spaces of culture, entertainment and sports, and display. The land was reserved for these initial purposes in later city plans, and the fair was moved to another site in the early 2000s.

The park area is defined by the main axes that lead to the five gates opening to the city on all sides, together with the main internal avenue of a cascaded pool with fountains. The permanent buildings of the Culturepark included the Parachute Tower (Tümay and Algrandi, 1936), the Museum of Health (Saylam, 1937), the Lake Casino and Island Casino (1938; replanned, Aşkan, 1958), the Exhibition Hall (Örel and Çeçen, 1939), tennis courts, a shooting range, a zoo, and a fun fair. Each year, the most attractive parts of the area were fair pavilions that were constructed to represent foreign countries such as the Soviet Union

Figure 51
Aerial view of İzmir Culturepark in the 1950s. © *Hayat* 5, August 22, 1958, 16–17.

Figure 52
View of the artificial lake, Lake Casino and Exhibition Hall at İzmir Culturepark in the 1960s. © *Hayat* 38, September 13, 1962, poster insert.

(USSR) (Özok, 1936) and the United States (Fuller, 1960), as well as national and foreign institutions and firms, such as the Pavilion of State Monopolies (Uzman, 1936), the Pavilion of Pious Foundations (Hotan, 1937), the Sümerbank Pavilions (Arkan, 1937–44; Türkmen, Kırımlı and Giray, 1948), and the Ministry of Education's Pavilion of Culture (Taut, 1938), which was also known as the Museum of Revolution, and which became the Museum of Archeology in 1951 and the İzmir Museum of History and Art in 2004.

During the 1930s and 1940s, the Culturepark and the International Fair provided spaces of leisure and sports for modern families. In the post-war decades, international fair organization continued, and the construction of the Celal Atik Sports Hall (Aşkan, 1953) and the Wedding Hall (Hotan and Aşkan, 1954) in the area increased its daily use for recreational purposes. The area was registered as a second-grade natural and historical site in 1992; however, the beginning of the 2000s witnessed new constructions that decreased the share of its green lands. The removal of the zoo and the fair to other places prompted discussions about a total transformation of the area by demolishing the existing buildings and constructing new ones. Although this project has not been realized, and the area continues its function as the largest public green area in the centre of İzmir, and as a space that incorporates provision for leisure and sports, there is still the need for a conservation project to rehabilitate the Culturepark by taking into consideration its values as modern heritage, a cultural landscape, and a space of memory.

Authors: T. Elvan Altan, Nilüfer Baturayoğlu Yöney, Ebru Omay Polat and Yıldız Salman

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GEZİ PARK, İNÖNÜ PROMENADE, TURKEY

(İnönü Promenade) Taksim, İstanbul
1939–43

Henri Prost (planner), Aron Angel for İstanbul Municipality Urban Planning Office (architect)
Public amenity and urbanism, leisure

Keywords: urban landscape, public space, recreation

Located between Taksim Cumhuriyet Square and Park No. 2, the İnönü Promenade (initially named after the national President of the period and later renamed Gezi Park) is a component of one of the initial urban landscape projects in İstanbul.

French urban planner Henri Prost (1874–1959) developed his proposal for the largest recreational green area in İstanbul, 30 hectares in size, and named Park No. 2 in his 1937 masterplan of the city, surrounding the newly planned Taksim Cumhuriyet Square to the north and east where the Monument of Independence was located. İnönü Promenade was designed by municipality architect Aron Angel (1916–2010) as part of this process, and was connected to the park by a pedestrian bridge and defining the northern side of the square. The design process took place from 1939 to 1942, with construction in 1942–43.

The 1.5- kilometre-long promenade was designed on the sites of the late-eighteenth-century Taksim Artillery Barracks and the late-nineteenth-century Taksim Garden. The promenade has a geometrically planned layout which contrasts with the free design of the former garden: it starts with a terrace that steps down to Taksim Square, providing a view to the square and creating a monumental entrance to Park No. 2. It has thus become a significant urban green space in connection to the square, and one of the most central public open spaces in the city. Leading to a walk under the porticoes of modern housing and office blocks in Talimhane and Harbiye, the promenade has also become a recreational centre for the residential neighbourhoods that developed on the edges of Park No. 2. With the erection of public buildings designed by well-known Turkish and foreign architects in and around the promenade, the

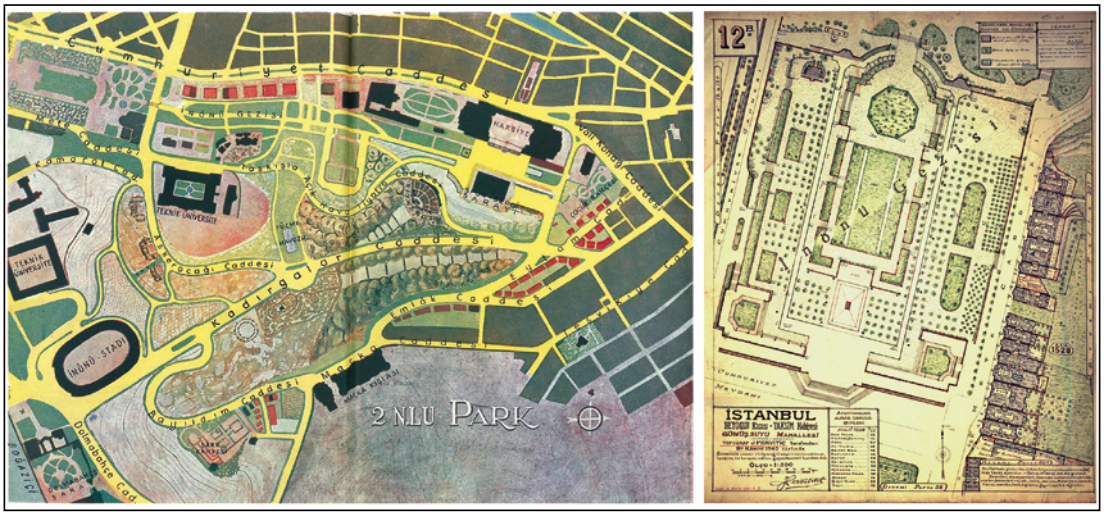

Figure 53
(left) Plan of Park No. 2 by Henri Prost. © İstanbul Belediyesi, *Cumhuriyet Devrinde İstanbul*, İstanbul: Milli Eğitim Basımevi, 1949, 120–21. (right) Gezi Park, plan, 1943. © Atatürk Library Archive, Document No: Hrt_000620.

Figure 54
Daily life in Gezi Park in the mid-1940s. © F. Cana Bilsel and P. Pinon, *From the Imperial Capital to the Republican Modern City: Henri Prost's Planning of Istanbul (1936–1951)*. İstanbul: İstanbul Araştırmaları Enstitüsü Katalogları 7, 2010, 361

area has turned into a large-scale urban landscape and a 'culture valley' of the city. Taksim Municipal Casino was designed in a modernist style (Güney, 1938) and built on the site of Taksim Garden in the northeastern corner of the promenade; it was demolished in 1965, to be replaced by the Sheraton Hotel in 1968. Taksim Art Gallery (Tümertekin, 1992) was built on the north-western corner of the low-rise commercial block added to the promenade in the 1960s. Other buildings constructed from the late 1930s onwards around the area that are iconic examples of modern heritage in İstanbul include the Opera House/Atatürk Cultural Centre to the east of the Taksim Square; the Radio Hall to the northwest and Dolmabahçe Stadium to the south of Park No. 2; and an Open Air Theatre, Taşlık Café, Palace of Sports and Exhibition, and Hilton Hotel in Park No. 2.

In 2013, the government's attempt to rebuild Taksim Barracks as a multi-functional centre including a shopping mall, a five-star hotel and residences, resulted in civic resistance. As a result of country-wide protests that turned into a general reaction against the government, the destruction of Gezi Park was prevented. Nonetheless, since 2013, the pedestrian bridge and the building block in the western part of the park have been demolished, and the reorganization of Taksim Square has damaged its relationship with the park.

Gezi Park is a public symbol of modern Istanbul. With its collective memory value, and the aesthetic and architectural values of its design, it needs to be protected as part of the historical urban landscape of the city.

Authors: T. Elvan Altan, Nilüfer Baturayoğlu Yöney, Ebru Omay Polat and Yıldız Salman

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PARQUE DE LAS AMÉRICAS, MEXICO

Avenue Colón and Streets 19, 23, 18 and 20, Colonia García Ginerés, Mérida, Yucatan
1942, 1943–45

Manuel Amábilis and Max Amábilis (architects), Enrique Aragón Echegaray (Kindergarten, architect)
Public amenity and urbanism

Keywords: community, Neo-Mayan, endemic vegetation

Located in what was a new urban development at the time, the Parque de las Américas is one of the most important existing works of Manuel Amábilis (1883–1966), here designed in collaboration with his son Max Amábilis. Amábilis senior was a scholar of Mayan architecture who published various books on the subject and used his knowledge to develop a personal Neo-Mayan Art Deco aesthetic throughout his proposals. In this case, the project manages to conciliate national regionalist and international landscape trends.

The governor of the state of Yucatan, Ernesto Novelo Torres, placed the first stone in March 1943, and the project was concluded two years later. The ensemble takes up four blocks separated by streets. One of the blocks already contained the Felipe Carrillo Puerto Kindergarten designed by Enrique Aragón Echegaray, which had opened in January 1942. The park was thus located on the other three blocks but manages to show great cohesion, unified both by the choice of vegetation and the use of a similar pattern focused on the intersection of the streets. The main features—a library, an open-air theatre and a fountain—all face a diagonal axis that originates in the central corners; these elements are surrounded by a similar circular path where votive columns or stelae are located. Through this scheme, powerful perspectives were achieved that foster the understanding of the ensemble at a quick glance.

The Neo-Mayan style of the various structures makes specific references to such archaeological sites as Chichen Itzá, Uxmal and Bonampak. The José Marti library follows these

Figure 55
The monumental fountain with seven serpentine columns in Parque de las Américas. © Louise Noelle, 2019.

Figure 56
The open-air theatre faces a depressed parterre, and is framed by a pergola. © Aldo Solano, 2018.

citations with a two-storey interior and two attached pergolas for reading in a serene atmosphere. The open-air theatre has a functioning acoustic shell and faces a depressed parterre derived from a former lake situated in that area and is framed with a pergola. In the third area, there is a monumental fountain with seven serpentine columns—allusive to the serpent god of the rain, Kukulkán—and two masks of the rain god, Chaac, done in *Puuc* style. Some of the most novel features are the votive columns or stelae bearing the names of all the American countries in innovative Maya-inspired lettering; the theme derives from the idea of an America unified against the threat of fascism during World War II. Sculptures and relief decorations on the various constructions, as well as the benches and other features, are inspired by elements from the pre-Hispanic past.

The park has been kept in a very good condition, with vegetation that has grown and matured achieving a harmonious relation with the buildings. The vegetation is tropical, integrating local flora, some unfortunately lost in hurricanes: it includes laurel, royal palm, flamboyan and fruit trees as sapodilla, orange, lemon and tamarind, with murraya for the borders. The site is a much-sought oasis that attracts visitors from the area as well as from the city in general. The José Martí Library is now a cultural centre and the theatre is still in use, as are the rest of the amenities.

Authors: Louise Noelle and Aldo Solano, with the support of Catherine Ettinger and Josefina Campos, Marco Díaz, Elvia González and Marco Peraza

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FROM POST-WAR FUNCTIONALISM TO ENVIRONMENTAL WELL-BEING

VALE DO SILÊNCIO PARK, PORTUGAL

Avenida Cidade de Lourenço Marques, Olivais 1800–093, Lisboa
1955–68

Manuel Sousa da Câmara and Álvaro Dentinho (landscape architects)
Domestic and residential, public amenity

Keywords: urban planning, new town and urbanism, leisure

Created in the late 1950s, the neighbourhoods of Olivais—both North and South— represent the consolidation of the urban expansion into East Lisbon using expropriated land. Exceptional in its scale and ambition, the development provided an opportunity to respond to the housing crisis/deficit of the mid-twentieth century through a new housing programme. As this area bore no significant marks of urban pre-existence, it did not share the immediate continuity with its urban area that had structured the avenues of Alvalade. This discontinuity contributed to the Olivais neighbourhoods having the configuration of an urbanization separated from the rest of the city. Although urban interventions informed by the ideas of the Modern Movement had already been carried out in Lisbon, namely in Alvalade and Avenida Infante Santo, they had consisted of small residential neighbourhoods resulting from the revision of parts of a plan that, in its genesis, foresaw a formal urban system of streets and blocks embedded in the traditional city. The Olivais plan was an opportunity to put into practice several modern concepts, consequently influencing several Portuguese architects who, through this experience, gained a new understanding of urbanism. The first plan completed, Olivais North (with forty hectares and 8,500 inhabitants) reflected the urban thinking expressed in the Athens Charter (1933) and served as a laboratory for the Olivais South development (with 186 hectares and 40,000 inhabitants). The latter plan reflected changes resulting from its revised, more organic vision of the city, incorporating concepts of the 'Garden City' movement.

Figure 57
View of the Vale do Silêncio Park. © Ana Tostões, 2020.

Figure 58
Cell structure of Olivais Neighbourhood South, 1959. © Arquivo Municipal de Lisboa, Ref PT–AMLSB–CMLSBAH–PURB–002–05193—Folha 631.

In 1955, four parks were planned for Olivais. However, only the 5.2 hectare Vale do Silêncio Park (Valley of Silence Park) was built. This park, also known as Olivais Woods, was designed by two members of the recently-qualified first generation of modern landscape architects, Manuel Sousa da Câmara (1929–92) and Álvaro Dentinho (1924–2014), and was based on ecological systems and social concerns. Located in the geographic centre and intersection of the West–East axis, and following a pronounced valley, the Vale do Silêncio Park is the 'heart of the neighbourhood', located between Avenida de Berlin, Avenida Cidade de Lourenço Marques, Rua Cidade de Nova Lisboa and Rua Cidade de Malange.

Insulation from the pollution produced by industrial activity—such as fumes, odors, and noise—was one of the main design concerns, as Gonçalo Ribeiro Telles mentioned in the *Plano de Urbanização dos Olivais. Estudo-Base [Urbanization Plan for Olivais. Base Study]*: 'as is evident, these ruralized areas can separate urban areas from manufacturing areas and, with their compartmentalization, protect housing blocks from the winds … which, as has already been emphasized, in its cultural, educational and human aspect, is of great value' (Telles, 1955).

The objectives were not only to mitigate the effects of the industrial strip along the Tagus River, but also to contribute to re-establishing contact with nature for its residents, many of them factory workers. The park was treated as a large collective street surrounded by evergreen trees that formed a curtain perpendicular to the prevailing winds, within which a natural meadow occupied a large central clearing. At the same time, the project tried 'to maintain some of the more important characteristics of the local landscape, avoiding a complete rupture between the existing rural landscape and the new urban structure' (Telles, 1955).

As very few spaces were private, and the majority were managed by Lisbon City Council, during the planning of the Vale do Silêncio Park there was a concern to avoid excessive maintenance budgets. To ensure low conservation costs, durability was an important factor in the selection of materials (paving, retaining walls, playground equipment, garden surfaces, garden benches, etc.). Native plant species were selected and positioned according to their ecological suitability, taking into account the topography and solar exposure of the terrain.

Over the following years, trees, shrubs, and herbaceous perennials were planted, paths were opened, garden benches were installed, and playgrounds were completed.

Currently, the Vale do Silêncio Park is an important green space for Olivais South and Lisbon. As the heart of the neighbourhood, it is a meeting point for residents and visitors, and provides a fantastic environment with good air quality and tranquillity—essential for communal unity and for leisure activities, like sports, reading or meditating. The topographical qualities of 'Silence Valley' also form a natural amphitheatre that has recently been used for concerts.

Authors: Zara Ferreira and Ana Tostões

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GIJSBRECHT VAN AEMSTELPARK, THE NETHERLANDS

Van Nijenrodeweg, Amsterdam
1959–73

Wim Boer (original design, 1959–62), Hans Petri (redesign of central plaza, 1971)
Rosalie Begeer and Ferry Theunisse (renovation, 2010–12)
Public park

Keywords: functionalism, clean lines

The twenty-seven-hectare Gijsbrecht van Aemstelpark is the green core of Buitenveldert, a spacious neighbourhood dating from the 1950s that was developed according to guidelines laid down in the famous 1934 Amsterdam Urban Extension Plan. The approximately two-kilometre-long green strip, which is only 100 to 150 metres wide, connects the Amsterdamse Bos and the wedge of the river Amstel. Landscape architect Wim Boer (1922–2000) designed the winning entry for a competition held by the Netherlands Association of Landscape Architects and the municipality of Amsterdam from 1959 to 1962. It was constructed from 1966 to 1973. It is a highlight of Dutch modernist park architecture from the post-World War II period.

Wim Boer was averse to landscape style clichés and romanticism. His park did not represent a sublimated 'false' nature. It was related to a broader urban vision and paid attention to functional uses: playing, walking, sitting, and sunbathing. His park was undeniably urban.

The main north–south thoroughfares through the district divided the park into different parts, which were held together by the heavily planted Van Nijenrodeweg on the south side. The central part consisted of three rectangular islands surrounded by a rectangular water feature: an open play area, a tree-lined central square, and a flower garden with square flower beds and a tea garden. Rhythmically placed benches designed by Aldo van Eyck, an elevated platform, a sculpture and a kiosk were supposed to activate the central square as a meeting place. The orthogonal path pattern connected the islands with the rectangular street pattern of the neighbourhood.

The clean lines and functionalist design were also represented in the park's materialization. The application of concrete and asphalt was a complete novelty at the time. Main roads such as the Van Nijenrodeweg and the meeting square were planted with plane trees. Poplars were used for the play areas and sunbathing field. Ash and willows were used as informal planting along the edges of the park.

Deviating from mainstream naturalistic parks, its rectangular forms were controversial. The park was praised by some, and criticized by many others. In the first years, when the trees were still young, the park looked very open and somewhat bare. As a result, the open and rectangular layout was already adapted in the 1970s, with the addition of bushes for more intimacy and a redesign by Hans Petri (1919–96) of the central square. More changes further weakened the original design, and in combination with a lack of maintenance, the park and its use declined. A redesign was made in 2007 to improve the network of footpaths and cycle paths, reduce the greenery for the sake of visibility and social safety, and increase the park's

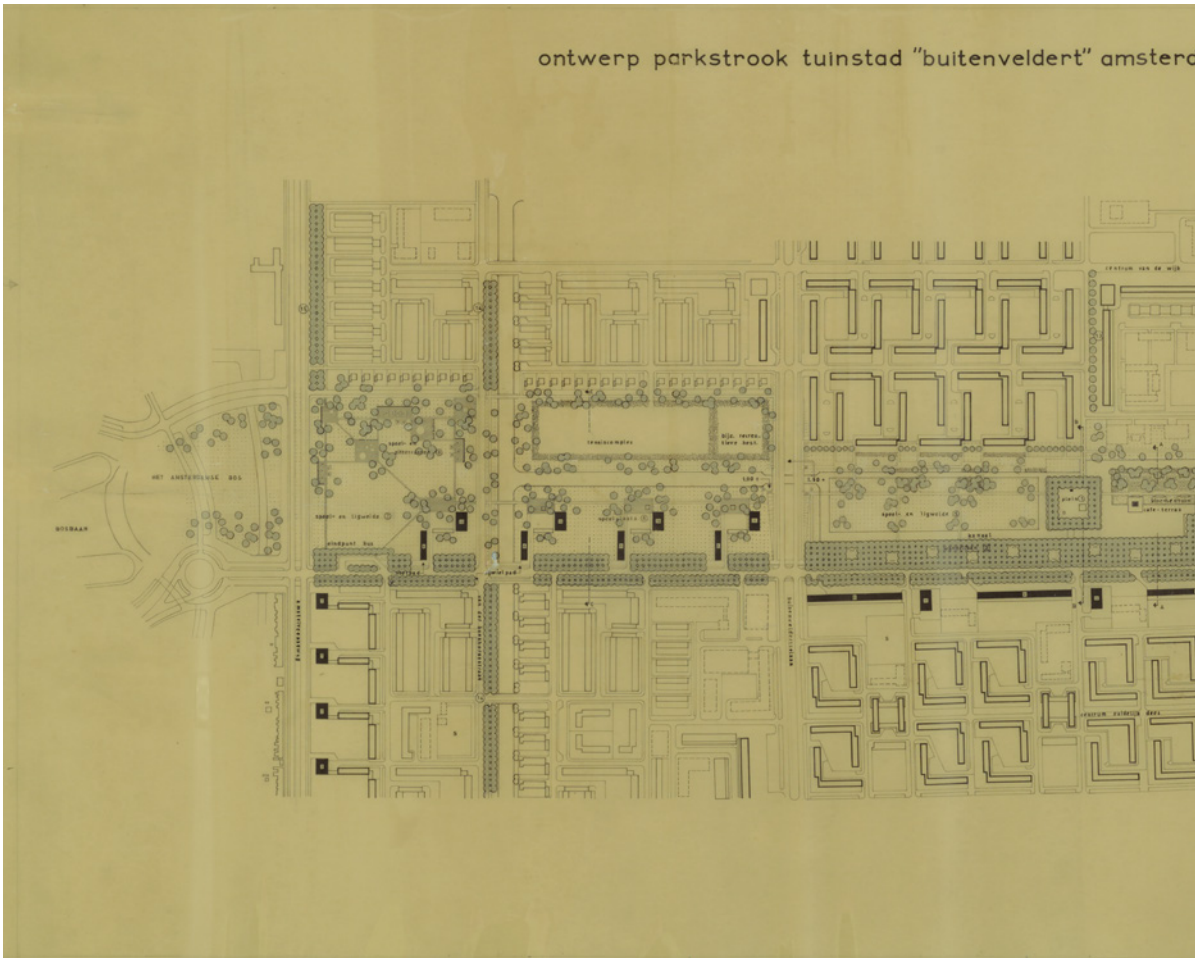

Figure 59
The winning design for the Gijsbrecht van Aemstelpark by Wim Boer, c. 1965. The central part is executed according to his plans; the other parts came from the Department of Public Works of the municipality.
© Special Collections Library Wageningen University.

options for use. However, the park was nominated as a National Monument and it became clear that the redesign was not in line with the original design, particularly in regard to the meeting square. In close consultation with the park's neighbours, the designers of the municipality made a renovation plan in 2012 for the square that paid as much respect as possible to Wim Boer's original plan from 1959. The park has been a National Monument since 2015.

Author: Marlies Brinkhuijsen

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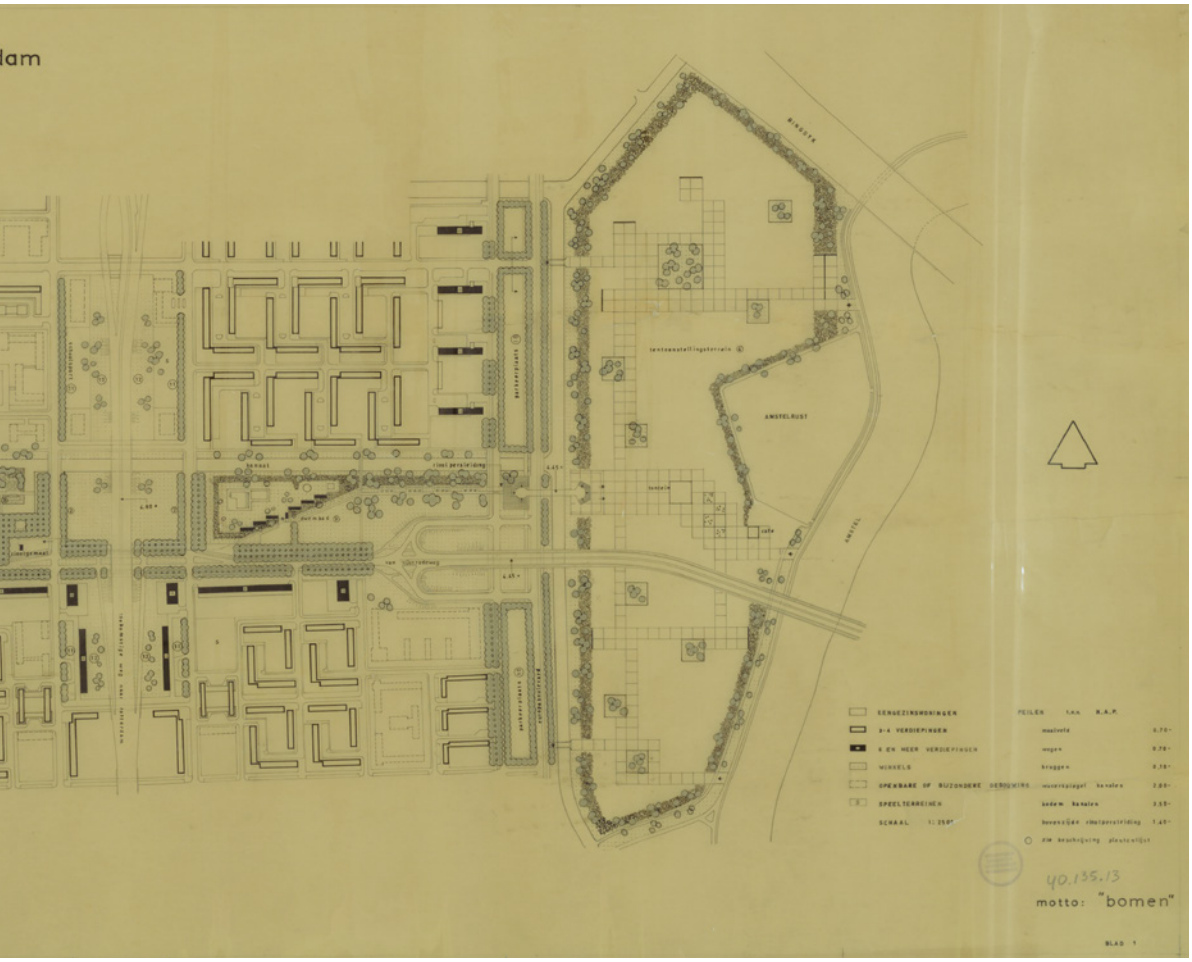

Figure 60
View of the Flower Island, Gijsbrecht van Aemstelpark.
© Beeldbank van de Rijksdienst voor het Cultureel Erfgoed, 555.182, 20535253, Chris Booms, 2010.

PAVILION AT TROFONIO, GREECE

Livadeia, Viotia
1960–62

Alexandros Papageorgiou-Venetas (architect)
Public amenity and urbanism, leisure

Keywords: cultural landscape, woods, waterfall

The project for a pavilion within the landscape of Livadeia was assigned to the twenty-seven-year-old Alexandros Papageorgiou-Venetas (1933–) by the Greek Tourism Organization (EOT) in December 1960. It was completed at the end of July 1961 and the site officially opened to the public in early 1962. The aim of the project was to build a pavilion near a creek in a plot of 1.5 hectares (150 metres in length and 100 metres in width). The location was of particular natural beauty, in an area in which many important sites and interesting constructions co-existed: the ancient Oracle of Trofonius (with the springs of 'Oblivion' and 'Intelligence'), the twenty-five-metre-high tower of the Medieval Catalan fortress of Livadeia (in perfect condition), a late Byzantine chapel, two Ottoman stone bridges, and a few old wooden watermills.

The main objective was to construct the pavilion as close to the waterfall as possible and to integrate the building—almost make it 'invisible'—with the landscape. Thus, the pavilion was placed under the ancient plane trees with its projecting concrete slab (a cantilever of 5.5 metres, eight metres wide) hanging over the small (four metre) waterfall; a form secretly inspired by Frank Lloyd Wright, as the architect himself admitted. Papageorgiou-Venetas also designed a secondary path so one could walk in a circular way around the pavilion, between the old trees, and in close contact with the water. In particular, he proposed to

Figure 61
The pavilion in the winter landscape.
© Alexandros Papageorgiou-Venetas.

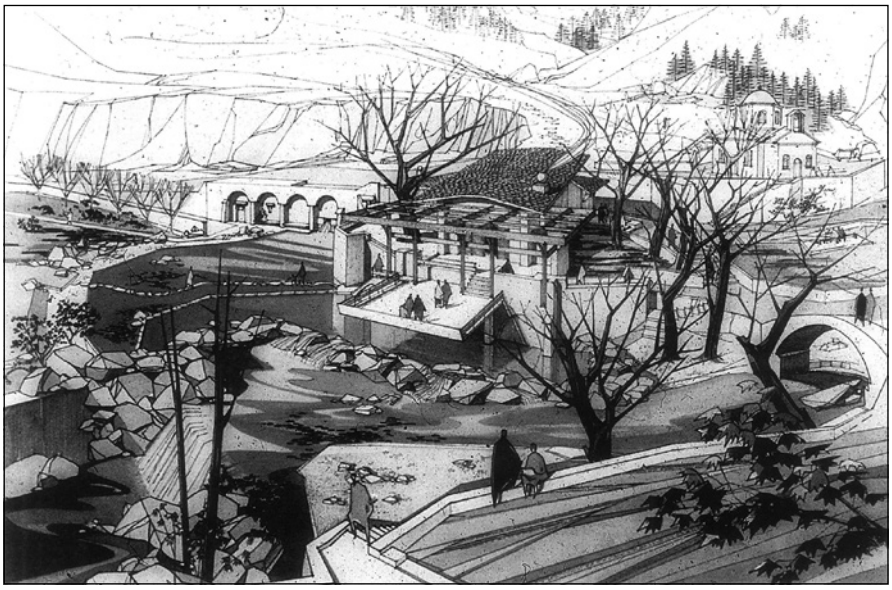

Figure 62
A 1961 rendering of the pavilion in its surrounding environment, by illustrator Margetidis. © Alexandros Papageorgiou-Venetas.

form two natural pools, one in front of the balcony, and one a bit further away. Large stone slabs were used to create a narrow pass through the waters that gathered right in front of the community shed.

Other interesting elements of the construction of the pavilion were the wooden pergola extending over the slab, and the curved wooden roof covered with stone tiles. These constructions were reinterpreting the vernacular architectural tradition of the region while adopting a modern formal language.

In the 1980s and 1990s the area was under-utilized and the pavilion was neglected. The cantilevered slab was cut in half as it was mistakenly considered not safe enough due to its slight oscillation. The wooden pergola was demolished and the pavilion's interior required intensive restoration. Fortunately, in 2011, the citizens of Livadeia decided to restore and reuse the pavilion as many people had fond memories of it. The restoration project took two years (the same as the initial construction) and it was supervised by the 78-year-old Papageorgiou-Venetas. The only element of the construction that was not reconstructed was the 5.5-metre cantilevered slab.

Author: Kostas Tsiambaos

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GARDEN OF THE PROVINCES AND TERRITORIES, CANADA

Ottawa, Ontario
1960–62

Donald W. Graham (landscape architect)

Works of art: Fountain of the Great Lakes, by Emil G. van der Meulen (designer), Adjeleian and Associated Engineers, 1962; Tree Fountain, by Norman Slater (industrial designer), 1961–62

Restoration: Robertson Martin Architects (fountain and masonry), Lalande + Doyle Architects (universal access ramp), 2002–05

Public amenity and urbanism

Keywords: public amenity and urbanism, National Capital Commission, modern Ottawa

The Garden of the Provinces and Territories is one of the most iconic achievements of the modern landscape architecture period in Canada and one of the first public places to be established during that period. Located in the heart of Canada's capital, Ottawa, on a sloped site near the Ottawa River, it is partly park, with lawns, copses, pathways and sculptures, and partly built, with two walled terraces linked by stairways. The built portion also boasts artworks, including two sculpture fountains and bas-relief in the walls representing the floral emblems of Canada's provinces and territories.

The garden was an important cog in the phenomenon of the affirmation of Canadian identity in the 1950s, which led to a massive transformation of central Ottawa to burnish the capital's image. Based on a plan developed by famous French urban architect Jacques Gréber, the former workers' and industrial districts were replaced with government buildings, parks and green spaces. At the western edge of this transformed area, flanked by two government buildings, the garden perfectly embodies this national movement, as witnessed by the representations of the floral emblems and flags of the ten provinces and three territories, and the Fountain of the Great Lakes, which symbolizes the lakes along the Canadian border with the United States.

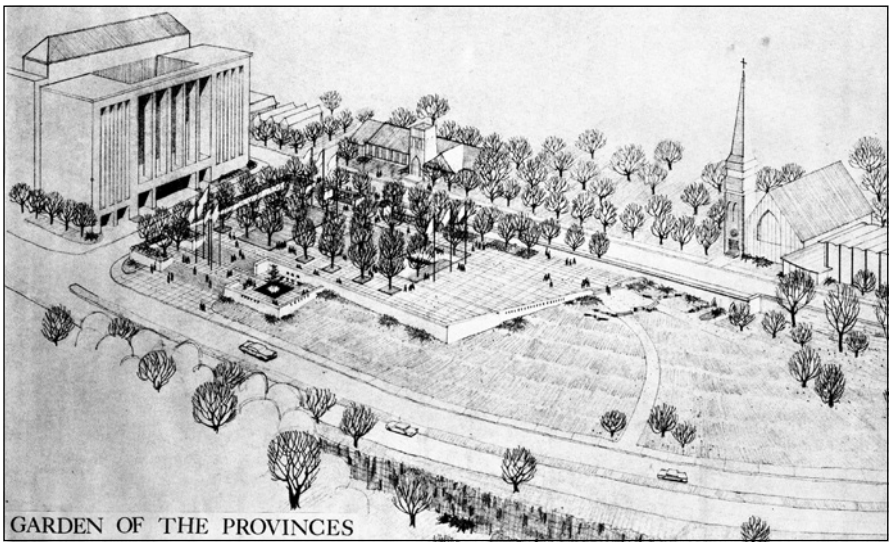

Figure 63
Aerial view rendering of the Garden of the Provinces and Territories. © Personal archive of Don Graham.

Figure 64
View of the Tree Fountain. © Nicole Valois, 2017.

The garden is one of the major works by renowned Canadian landscape architect Don Graham. Working in close collaboration with the artists and engineers, he designed this space when he was fresh out of Harvard and working for the National Capital of Canada. The architectural style attests to the influence of modern American landscape architecture, employing simple forms, orthogonal motifs and hard materials such as exposed concrete aggregate paired with limestone. Trees arranged at regular intervals in the rectangular planters provide shade on the upper terrace, while the lower, more mineral terrace features mainly the Tree Fountain and the flags. This type of composition, presenting sculptures in the public space with interdisciplinary cooperation, was later reprised in many public space projects in Canada.

Pressure from conservation experts in Ottawa earned the garden a reprieve from partial demolition in the early 2000s and led to its restoration in 2002–05. The work consisted primarily of restoring the fountains and walls and adding universal access ramps to the terraces. Originally known as the Garden of the Provinces, the renovated site was renamed the Garden of the Provinces and Territories.

This public property owned by the Canadian government is very popular with residents, workers and visitors, who come to contemplate the Ottawa River and find a quiet sanctum away from the surrounding urban bustle.

Author: Nicole Valois

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GULBENKIAN FOUNDATION GARDENS, PORTUGAL

Avenida de Berna, 45A, Lisbon, former Parque de Santa Gertrudes
1963–69

Pedro Cid, Alberto Pessoa, Ruy Jervis Athouguia (architects), António Facco Viana Barreto, Gonçalo Ribeiro Telles (landscape architects)

Public amenity and urbanism, leisure

Keywords: cultural area, diversity, community

The headquarters and park of the Calouste Gulbenkian Foundation in Lisbon represented the first Portuguese environment where the relation between exterior and interior led to an outstanding result. The design created a spatial continuum that shaped not only the inner spaces, but also established continuity between inside and outside. As such, it refused the more common conceptual attitude of interior plus exterior. Instead, this unitary system revealed a clear understanding of the proposed site and concretized Modern Movement ideals regarding the landscape design and architecture.

Through its design the park acts as a mediator between the buildings' superstructure, the urban context, and the human scale, and generates a unifying system established on complicity between natural and unnatural materials. From the first moment, this complicity results from a set of strategies that have been studied by the architects and landscape architects to meet communal programmatic guidelines, such as the inside–outside continuity, the approach to a new monumentality and the idea that this project should be seen as a fundamental element of the green structure of Lisbon.

Alberto Pessoa (1919–85), Pedro Cid (1925–83) and Ruy Jervis d'Athouguia (1917–2006), the architects of the building complex, together with the landscape architects António Viana Barreto (1924–2012) and Gonçalo Ribeiro Telles (1922–2020), created an integrated design

Figure 65
Aerial view of the Gulbenkian Foundation. © Gulbenkian Foundation, PT FCG FCG:SPO–S001–P0016/09–FOTO03611, Mário Oliveira, 1969.

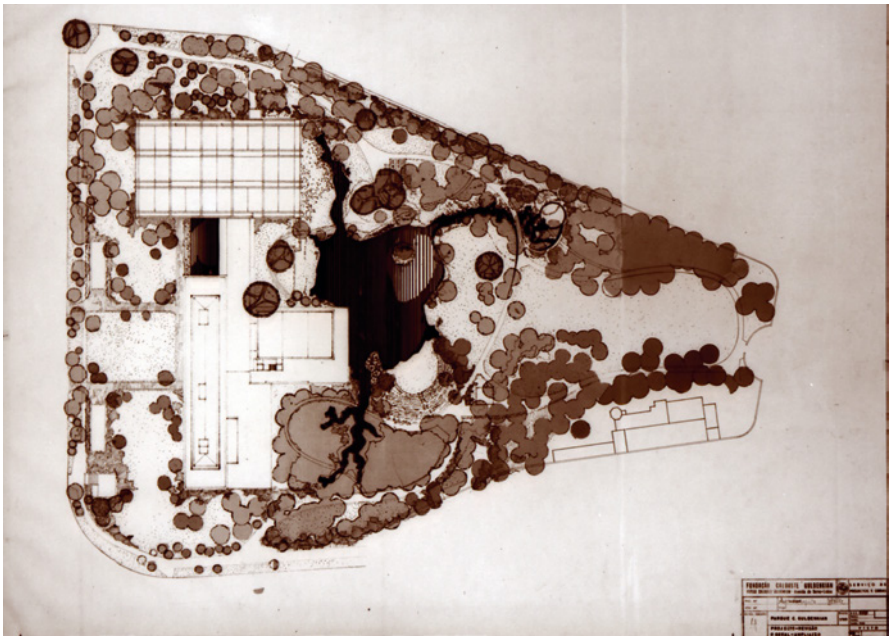

Figure 66
General plan of the gardens by Gonçalo Ribeiro Telles, 1966. © Gulbenkian Foundation, PT FCG FCG:SPO–S015/01–DES01181.

that embraced both building and park. Functioning as a whole, much like a site modified as a topographic sculpture, its horizontality and levels promote the spatial continuity that the designers sought. Values of transparency and opacity follow each other with graphic rigour, creating moments of transition from exterior to interior, forging a close connection between architecture and nature, and raising perspectives and points of view based on changing compositions of boundaries and clearings, and light and shadow (Tostões and Carapinha, 2016).

Landscape architecture began to be recognized clearly as a discipline and it was crucial that the landscape project resulted from a multidisciplinary collaboration considering agronomy engineering and landscape architectural skills. What was now necessary was to prepare the land and the plant-life, and to study the areas that were to be occupied by the buildings, which were cleared of all the recoverable plants for reuse. This life-cycle vision that included recycling and using existing plant life gives us an idea of the care that went into treating the park. The general ideas for the park's design were defined based on a 'naturalist conception in line with the Founder's interest in nature, generally based on contrasts, movement and the valorisation of the plants in certain points through the use of exotic elements' (Carapinha, 2006).

The relationship between the building and the garden included 'valorising the perspectives and viewpoints, considering aspects from the interior of the buildings to the outside and to the park itself' (Tostões, 2016). This confirmed that the interior–exterior relationship continued to be a priority objective. Patios were created within the building and different dynamics were established with openings and views.

The park had an important role to play in terms of protection of the building, namely: protection from disagreeable views, which would compromise the buildings and the park's environment and perspectives; protection from the wind, in particular the prevailing wind from the north in summer; and noise protection.

The landscaping of the park was based on a dichotomy of contrasts: firstly, tree/clearing, and secondly, shade/light. This dichotomy was the grand objective to be achieved. Characteristics of the site such as tranquility and sense of intimacy were to be kept; water surfaces were used for added aesthetic value and a large pond was planned which would touch the buildings in different points and be surrounded by differential vegetation.

The interpenetration achieved between the architectural and landscaping projects called for the work sequence to start with the construction of the underground car park so that space would later serve as a covered support space for the entire building site, including the planning of a pond.

Author: Ana Tostões

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VIENNA DONAUPARK, AUSTRIA

Arbeiterstrandbadstrasse, Donauturmstrasse, 1220 Vienna
1964

Alfred Auer, Karl Filipsky, Hans Grubbauer, Erich Ridky, Karl Schmidhammer, et al. (landscape architects)
Public Park

Keywords: post-war modernism, social green, urban park

Donaupark is a rare example of Vienna's green post-war modernism. In the early 1960s, the City of Vienna transformed a former landfill and an informal settlement into a large urban park. According to Vienna's social green program, the park would improve living conditions on the so-far neglected left bank of the Danube river as well as provide facilities for recreation. The latter gained importance as the working week had been reduced to forty-five hours in 1959. Expenses for constructing the park were to be covered by hosting an international garden exhibition, the Wiener Internationale Gartenschau in 1964 (WIG 64), on the site. Both the park and the garden show were a means to leave the aftermath of World War II behind and to demonstrate the success of the Wirtschaftswunder (Krippner et al., 2014). Thus, the city of Vienna as well as the newly constituted Austrian Republic celebrated the show as an event which eagerly looked into a bright and colourful future.

As a national design competition for the new park did not provide satisfying results, Alfred Auer (1922–2002), landscape architect and head of the Vienna garden department (Stadtgartenamt Wien), developed a masterplan for the 100-hectare site. He conceived a spacious, slightly modelled lawn and an artificial lake as core elements of the park, and integrated remnants of floodplain forests into the design. Auer commissioned young up-and-coming Austrian landscape architects to design the surrounding exhibition areas and themed gardens: Erich Ridky (1932–2018) formed the reading garden as chain of planted hills and hollows, Karl Schmidhammer (1935–71) designed the flower gardens in geometric patterns, and Karl Filipsky (1919–76) transferred the mandatory rock garden theme into a modern and simply terraced alpine garden. Renowned landscape architects from

Figure 67
Today, mature trees frame the slightly modelled lawn, which is overlooked by the outlook tower. © Klaus Pichler, 2014.

Figure 68
Two layers of time meet in this section of the park: the cascades designed by Karl Filipsky in 1964 and a modern interpretation of the rose garden theme by Auböck & Kárász in 2012. © Klaus Pichler, 2014.

abroad like Roberto Burle Marx (1900–94) and Willi Neukom (1917–83) were asked to show contemporary garden styles in the international gardens. All over the garden show, new materials like exposed aggregate and fibre-reinforced cement-products were used. Plantings and furniture were colourful. An outlook tower with a revolving restaurant was constructed as a new landmark for Vienna.

The garden show attracted more than 2.1 million visitors and was considered a great success. After the exhibition closed, the site was opened to the public. As a sound concept for subsequent use was missing, however, the park was reduced in size to sixty-four hectares and most of the theme gardens were removed in the following decades. The rose garden, originally designed by Hans Grubbauer (1900–74), was renewed by the atelier Auböck & Kárász in 2012. Today, the outlook tower and pavilions, as well as the built structure of the park, are listed as monuments, whereas the vegetal and landform structure of the park is not protected due to the deficient Austrian heritage legislation. However, Donaupark can still be recognized as a subtle post-World War II modernist creation. The park can cope with contemporary needs for recreation and urban nature, although the demand has enormously increased since a new housing quarter for 20,000 inhabitants was built next to the park in the 1990s and 2000s (Krippner et al., 2018). More than fifty years after construction, the functional and formal concept of Donaupark is still visible and resilient.

Authors: Ulrike Krippner and Lilli Lička

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CHIBA FOREST OF CULTURE, JAPAN

11-2 Ichibacyo, Chuo-ku, Chiba-shi, Chiba Prefecture
c.1967–70

Masato Otaka (architect)
Public amenity and urbanism

Keywords: group form, collaboration with artists, open space

Inohana in Chiba Prefecture is a small hill where a campus for the Department of Education at Chiba University was formerly located. In 1962, it moved to a new campus in the west Chiba area. The Inohana project started shortly after the relocation, which intended to renovate the Inohana area as 'the Chiba Forest of Culture', containing a music hall, a chapel for honourable people, and a library.

In 1960, Masato Otaka (1923–2010) had attended the World Design Conference held in Japan and formed the Metabolism Group with architects and designers. Together with Fumihiko Maki, he submitted an idea of 'Group Form' or 'Collective Form', stating that 'Collective form represents groups of buildings and quasi-buildings—the segment of our cities. Collective form is, however, not a collection of unrelated, separate buildings, but of buildings that have reasons to be together' (Maki, 1964).

As for the site planning for the Chiba Forest of Culture, Otaka divided the open area into a space for machines and a space for humans. In the space for machines, he arranged roadways for cars and service flows. The space for humans consists of steps and slopes of esplanade, entirely free from car traffic.

The design and structural method of construction of the three buildings intentionally differ from each other. The music hall (1967) is a hyperbolic shell-shaped structure that looks like a huge mountain. The chapel for honourable people (1967) is a rectangular shape made of latticed concrete beams. The library (1968) is made of precast concrete columns and

Figure 69
Entrance Area of the Chiba Forest of Culture. © Sumiko Ebara, 2018.

Figure 70
A Woman—Summer by Churyo Sato. © Sumiko Ebara, 2018.

beams, expanding horizontally, which is one of the most unique structures ever attempted during the 1960s. Although each building has a distinct shape, they maintain cohesion. They are all connected to open spaces at each level and their exterior designs are well-considered and sophisticated.

The most notable point of the Chiba Forest of Culture is its open space, spreading over the site. When Otaka worked on the Tokyo Metropolitan Festival Hall (1961) as the chief designer under Kunio Mayekawa, he became acquainted with some leading post-war sculptors such as Ryokichi Mukai and Masayuki Nagare. He encouraged artists to pop out from their atelier and have more contact with society. At the Chiba Forest of Culture, sculptures by Ryokichi Mukai, Yoshitatsu Yanagihara and Churyo Sato (amongst others) are harmoniously set in the site with Otaka's architecture.

Otaka was an architect who was seriously and practically committed to urban planning. He not only conducted large-scale housing projects such as Sakaide Artificial Ground and Hiroshima Motomachi Apartments, but also took part in town-city scale urban planning projects such as Minamitama New Town Natural Landscape-Based Development Plan, Yokohama City Centre Waterfront Redevelopment Project (Minato Mirai 21), and Town Planning Projects for Miharu—a hometown of Otaka in Fukushima Prefecture.

Otaka's philosophy of 'PAU' was his goal when he established his practice in 1962. PAU is an acronym of Prefabrication, Art & Architecture, and Urbanism. The Chiba Forest of Culture is certainly a memorable project in his lifelong pursuit of bridging architecture, urbanism, and art.

Author: Sumiko Ebara

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ANDRÉ MALRAUX PARK, FRANCE

Avenue Pablo Picasso, rue Salvador Allende, Nanterre
1967–81

Jacques Sgard (landscape architect, 1964–81)
Public amenity, public park

Keywords: history, at risk, sustainability

The André Malraux public park reflects the criticism of post-war functional urban planning. It is a major work of landscape architect Jacques Sgard (1929–), a prominent figure and promoter of landscape planning in France. The park establishes a transition between the business district of La Défense and the social housing estates of the town of Nanterre. Adjacent to the major western development axis of Paris, it provides a green haven that re-establishes a balance within a dense urban environment. It offers a flexible framework for a variety of activities within an area rich in landscape, botanical and ecological diversity much appreciated by its residents. Today it is at the heart of a larger area under transformation containing several (threatened) buildings of remarkable architectural modernity.

Commissioned in 1964, it was built in the middle of a former market-garden plain amid old quarries on the outskirts of the Nanterre slum district. It responded to the wish expressed by the Minister of Culture, André Malraux, to establish a vast cultural park on the site. Sgard, who graduated in 1947 from the Section du Paysage et de l'Art des Jardins at the École Nationale d'Horticulture de Versailles, was chosen to draw up the programme and the project. Born in 1929 and still working today, he completed his training at the Institut d'Urbanisme de Paris with an internship and a thesis in 1958 entitled 'Recreation and Green Spaces in the Netherlands', which introduced him to the large-scale approach of landscape planning. Sgard introduced in the park's design elements a renewal of the 'green space', inspired by his knowledge of Northern European landscapes, the German Bundesgartenschau (exhibition parks), and the work of the Brazilian landscape architect Roberto Burle Marx.

The masterplan adopted in 1971 maps out a 'naturalistic' urban landscape in which modelled surfaces alternate with large open areas, in deliberate contrast with the surrounding

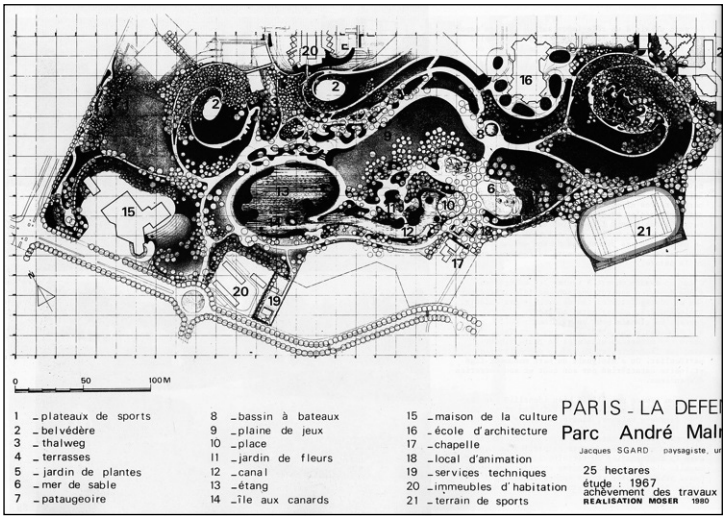

Figure 71
André Malraux Park masterplan. © Jacques Sgard, 1980.

Figure 72
A dense planted outer edge surrounds the André Malraux Park. In the foreground is the school of architecture designed by Kalisz; behind, the Cloud Towers designed by Aillaud reach skywards like 'plant stems'.
© Bernadette Blanchon, 2011.

dense urban environment, in order to preserve—in Sgard's words—'the park's power of evasion'. A dense wooded border ensures a transition between the park and the closest buildings; once out of this dense setting, the visitor is projected into another dimension. To the north, belvederes are formed by three hillocks made up of the rubble from the excavated foundations of the tower blocks of La Défense. The mastery of the planted elements and the simplicity of the design confer great clarity to the overall project, creating a diversity of atmospheres which change with the seasons. The park includes a playground area (a large sandy area and a paddling pool) and separate gardens (a rose garden and a botanical garden) connected by a range of edges and borders. The undulations of the ground continue under the canopy up to the Picasso district (1972–81) where they are mirrored by mineral hillocks at the foot of the Tours Nuages (Cloud Towers). These towers were designed by the architect Émile Aillaud (1902–88) in the prolongation of the park to resemble giant plant stems reaching up to the sky.

The redevelopment of the district now includes the demolition or transformation of some of Aillaud's towers, in connection with plans for the business district, and the takeover by a private university of the building which housed a former School of Architecture. The size of the park and its vast spaces have allowed the vegetation to mature without blocking out the views from the hillocks. However, increasing safety constraints have led to the poorly executed transformation of the paddling pool and renovation of the sandy area. As a place providing relaxation serving the adjacent residential and office areas, the park is very busy and has many points of access which remain open to the city both day and night. Today, its layout is considered insufficiently clear and not open enough to the surrounding environment, which is threatening its dense outer edge, contrary to the initial intentions of the designer. Associations are now mobilized to obtain inclusion of the André Malraux Park within an adjacent remarkable heritage site (site patrimonial remarquable), thus making it a federative element in the global regeneration of the area.

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PARK PŘÁTELSTVÍ, CZECH REPUBLIC

Vysočanská Street, Praha 9–Prosek
1968–83, 2007–08

Otakar Kuča (1968–2007), Pavlína Malíková, Martina Forejtová, Aleš Steiner/a05 landscape architects (revitalization 2007–08)

Public amenity and urbanism

Keywords: public park, public space, housing estate

The Park Přátelství (Friendship Park) is the central green area of the housing estate Prosek in the north of Prague, and is appreciated as perhaps the most outstanding example of modern public parkland in the Czech Republic. Designed by leading Czech landscape architect Otakar Kuča, the park was originally conceived to cover twenty-three hectares of land. The First Prize of the competition was awarded in 1968, with the draft plans developed in 1973-75, and the implementation in 1976-83. Five years after the competition, when the implementation of the award-winning scheme started, the site area was reduced to eight hectares. Despite such dramatic reduction the project retained its most significant feature: a waterway in a concrete bed forming an irregular zig-zag line with eleven overflows and a waterfall conceived as an abstract sculptural work. The water system includes two ponds: one in a more natural design, with huge stones and water plants at the base of the former gardener´s house (today a restaurant), and the other with a round island planted with trees along its perimeter. Quite interestingly, the zig-zag waterway was originally designed by Kuča in a more organic shape, with green shorelines. The contractor in the state-planned economy of 1970s Czechoslovakia was not able to deliver the commission according to the environmentally friendly design, and the author was thus forced to change the concept. However, as a modernist among landscape architects, he found an adequate solution which was in keeping with the abstract forms of his earlier modern designs.

In the 1990s, due to bad maintenance, the park became a neglected and dangerous area. The decay culminated when part of the park was destroyed during the construction of a new metro line. Paradoxically, it was exactly this damage that triggered an interest in the dilapidating park and ultimately led to its renewal. The revitalization of the park was completed in 2008 according to the project by a05 landscape architects, supervised by the author of the original design. The redesign added a new, contemporary layer to the original quality of the park: the network of paths was completed with new routes based on informal use patterns and a hierarchy was given to the pathways based on their frequency of use. New leisure areas were added, such as a rose garden with a pétanque playing field and an amphitheatre, wooden decks on the pond's shore and new seating furniture. The entire park was cleared of overgrown bushes, and new lawns opened views of the slightly sloping area of precious green in the urban landscape of the modernist housing estate.

Authors: Jana Tichá and Petra Boudová

Figure 74
Concept sketch for plan of Park Přátelství. © Otakar Kuča, 1974.

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Figure 73
View of the waterway within Park Přátelství, pictured after 2008. © Tomáš Balej.

SAINT-JOHN PERSE PARK, FRANCE

Avenue du Général Eisenhower, rue de Bezannes, Reims
1971

Jacques Simon (landscape architect, 1971), Association de Paysagistes et d'Ingénieurs (API) and Michel Viollet (landscape architects, 1972), Jacques Coulon (landscape architect, 1999)

Public amenity, public park

Keywords: history, sustainability, poetry

Saint-John Perse Park (7.5 hectares) is the major work of Jacques Simon (1929–2015), the forefather of contemporary French landscape architecture. It is also one of the most outstanding achievements of the post-war period, challenging the conventional park designs and breaking with customary design and commissioning practises of the period.

Jacques Simon graduated in 1959 from the Section du Paysage et de l'Art des Jardins, at the École Nationale d'Horticulture. He was soon invited to join the prestigious Atelier d'Architecture et d'Urbanisme (AUA), which he left in 1967 to pursue his own career as a landscape architect, teacher and publisher. In 1990 he was awarded the first Grand Prix du Paysage. Together with Michel Corajoud (1937–2014), whom he taught at the AUA and who succeeded him, he was at the origin of the revival of landscape architecture in France in the 1980s, developing the idea of landscape design as independent and separate from, yet inspired by, architecture.

The park was created in conjunction with the Croix Rouge district designed by the architect Claude Damery—a priority development zone ('Zone à Urbaniser en Priorité'; ZUP) developed in the 1960s, based on the idea of isolating traffic and covering car parks with concrete slabbing. Simon first installed a set of paths, low walls, playgrounds, stairways and passageways along a planted mall. Almost everything disappeared when the district underwent renovation in 2009. In 1971, Simon was called in to urgently free up a plot of land, intended for a Business School, where the 40,000 cubic metres of rubble from the housing estate had been deposited. Within ten days, he created what he called a 'sketch-park' linked to the Croix Rouge by a footbridge spanning the expressway which separated it from the rest of the neighbourhood. He also had the spaces around this thoroughfare planted extensively, creating a

Figure 75
Saint-John Perse Park in Reims. Collage by Jacques Simon, Espaces Verts, 1972. 'I hope they will leave it as it is!' On the right is the opening in the circular merlon. © Simon–ENSP.

Figure 76
Western part of Saint-John Perse Park in Reims, showing merlons (bund walls) and children's play areas. © Gérard Dufresne, c.1985.

reserved area which would later be used to build the tramway. He handed over the completion of the work to his young colleagues at the Association de Paysagistes et d'Ingénieurs (API, Michel Viollet, b. 1931), after being invited to teach in North America.

From the outset, Simon developed the notion of 'openness', to evoke the countryside neighbouring these new suburbs. His principal notions are masterfully applied at the Saint-John Perse Park: an economy of means to address the lack of budget; earthworks as the best way to structure open spaces; and a planted layer made only of trees and grass to safeguard the quality of these open spaces. Here, he used the rubble in a simple way, by erecting a three-metre-high circular peripheral merlon (bund wall) with an opening facing a neighbouring chapel, and surrounding a vast clearing of 120 metres in diameter bordered by a dense wooded edge planted with rustic species and some twisted rejects from horticultural nurseries. For Simon, this 'green room' was intended for open-air concerts and giant picnics. The park extends to the west including an area sectioned off by two merlons, initially equipped with children's games made of railway ties and metal sculptures which have now been replaced by standard playground furniture. This part of the park, sheltered under thick plant cover, provides appreciated shade; its link with the neighbouring campus was redesigned fittingly during the tramway works in 1999 by the landscape architect Jacques Coulon, himself a pupil of Corajoud and Simon.

The park maintenance is kept to a minimum and managed as a woodland area by the department of parks and gardens of the city of Reims. This simple, poetic, open 'void' is regularly threatened by additions which are out of scale, such as sports facilities, flower beds and playground installations which erode the ground. A regeneration of the vegetation will soon be required. Simon was little concerned with the preservation of his landscapes, believing that a site must evolve to meet the expectations of its inhabitants. Now cut off from the Croix Rouge district by the tramway and its safety barriers, this park is moderately frequented. It is one of the few examples of Simon's work to remain practically intact, and therefore it is all the more important that it should be preserved, visited and made known to the public.

Author: Bernadette Blanchon

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BOYANA RESIDENCE PARK, BULGARIA

16 Vitoshko Lale Street, 1000 Sofia
1971–74

Valentina Atanasova (landscape designer)
Institutional, leisure

Keywords: Bulgarian landscape design, socialist government architecture

Boyana Residence Park was formed in the 1970s as part of the architectural ensemble of the Residence of the State Council of the People's Republic of Bulgaria. It was located in the district of Boyana in southern Sofia at the foot of the nearby Vitosha Mount. The design team included several quite famous figures of the socialist period of Bulgarian architecture, such as the architects Alexander Barov and Stefka Georgieva, with whom the landscape designer Valentina Atanasova worked.

Lidia Fomina defined the composition of the park of the Residence as consisting of three extensive subparts, each with its own character and different functions. The first, and main, one was modelled on geometric forms, surrounding the major reception building. Since 2000, the edifice has hosted the collections of the National History Museum and is open to the public. The enclosed gardens consisted of central flower plantings in simple lines in the entrance zone of the complex, and a water cascade (with decorative pools made of Vratsa limestone) located on the mountain behind the building.

The second part was composed with landscape-like elements and accommodated around three smaller residences: it was alternated with deciduous broad-leaved vegetation, dense coniferous groups, and single volumes. The third part was in a flanking location, with the hotel and service buildings.

Figure 77
Northern geometric part of Boyana Residence Park. © Maria Davcheva, 2019.

Figure 78
Southern geometric part and forest park of Boyana Residence Park. © Maria Davcheva, 2019.

The entire park is perceived as a unified piece of art, and the available natural resources as well as the views and profile of the surrounding terrain have been skillfully used. Tranquil pedestrian walkways and grass 'carpets' were applied. These carpets outline the character of the new buildings and also create a visual link with Balkan architectural and garden heritage. The riverbed of the Perlovska, which—according to Aneta Vassileva—separates the areas of Building 2, passes through the park territory.

The concepts and decisions made in the Boyana Residence ensemble had been assessed as a new and positive phenomenon during the 1970s. 'The fluid merge of the complex and the terrain, the smart inclusion of Vitosha in the field of view, the design of water garden elements—that's the secret of the great success', Georgi Labov (Director of the office of Architecture and Urbanism of Sofia Municipality) explained as he presented this project as part of the new Sofian architecture of the 1970s (Labov, 1979). Some park elements and decorations have become highly popular, provoking similar landscape solutions in a number of green urban spaces in important Bulgarian cities.

Since the fall of the communist regime in 1989, the practices and management of the complex have changed more than once. The National History Museum (now hosted in Building 1) as well as some of the hotel structures gained public access, while the other buildings remained under governmental control, with only ceremonial functions. The lack of a uniform logic for the management of the park environment has led to some loss of authenticity, especially towards the functions of decorative garden elements such as sculptural figures and fountains. Still, the stylistics of the landscape design stayed recognizable, and the park atmosphere is nevertheless harmonious and impressive.

Authors: Maria Davcheva, Stela Tasheva and Tsvetelina Yordanova

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PARK ANDREJA HLINKU, SLOVAKIA

Ružinovská Street, Bratislava
1978

Ferdinand Milučký (landscape architect), Štefan Ďurkovič, Ferdinand Milučký (district planners), Jozef Vachálek, Ladislav Mandíček, Júlia Kunovská (artists)

Public amenity and urbanism

Keywords: park, public space, fountain

The concept of the Ružinov residential complex was created in the second half of the 1950s. A central part of the entire urban plan was an open area, conceived as green public spaces and parks. The construction of Ružinov as an autonomous city district took place in 1960–68, making use of prefabricated technologies for the construction of a total of 14,820 flats with various well-conceived floor plans in residential blocks. The central compositional and transport axis of the residential district is the urban boulevard Ružinovská, which links the estate with the centre of Bratislava. There are four separate residential sections (quadrants): Štrkovec, Ostredky, Trávniky and Pošeň.

In the southwest quadrant of Trávniky, the authors of the urban plan (Štefan Ďurkovič and Ferdinand Milučký) created a long open section of unbuilt land, the Park Andreja Hlinku, situated lengthwise towards the main urban boulevard. Here, they envisaged future construction of various urban amenities among natural vegetation.

In the following years, however, this area became a linear park, planned by Ferdinand Milučký in 1978. The architectonic and landscaping concept is grounded in a grouping of curves, circles and semi-circular forms that shape the ground into terrain reliefs, and thus visually enrich the surrounding orthogonal environment of rectangular residential blocks. Further underlining the identity of the park space are the capacious volumes of fountains and the morphology of the landscaping alterations. The 'Veil Fountain' (Závojová Fontána) was

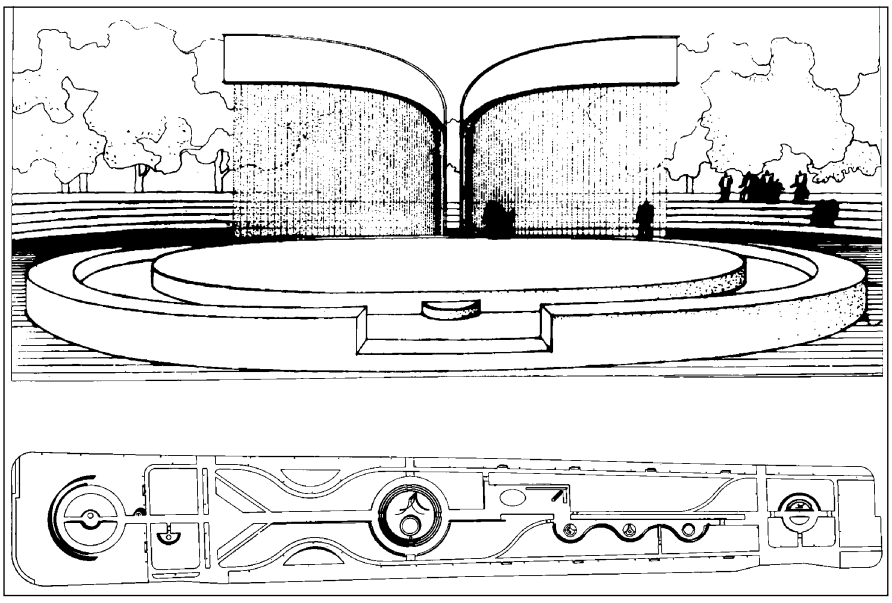

Figure 79
Perspective view of the Veil Fountain and Site plan of Park Andreja Hlinku. © Archive of Ferdinand Milučký, architect, Ferdinand Milučký, 1978.

Figure 80
The Veil Fountain within Park Andreja Hlinku with. © Archive of the studio Bogar Architekti, Mária Bogárová, 2019.

created by Ferdinand Milučký with sculptor Jozef Vachálek. The 'Fan Fountain' (Vejárová Fontána) was designed by artists Ladislav Mandíček and Júlia Kunovská in cooperation with the author of the park.

Park Andreja Hlinku is one of the few park spaces created on the basis of a late modernist architectonic conception in Slovakia. Today, it could be termed the central park for Ružinov and along its length. We also come across several additional areas of public vegetation that were created as part of the original urban concept.

No less deserving of our attention is another green space that the same authors designed at the centre of the residential complex Ostredky. Again, it is a space outlined by the hard right-angles of the surrounding buildings, contrasting it with a freer conception of a large area of trees with undulating terrain. This park space is supplemented with differentiated areas for sports and children's playgrounds.

Critical evaluations focusing on the excessive openness of the housing estate and the loss of an urban character led to the gradual densification of the urban structure of Ružinov. The idealistic original concept, which took up the principles of functionalist city planning, has been somewhat altered or even obscured by these additions, yet its spirit remains intact. Contributing significantly to the current positive evaluation is the landscaping and architectonic form of Park Andreja Hlinku and the entire system of other green public spaces that now—at a distance of several decades—have a consistent effect and give Ružinov its pleasant environment and specific identity.

Author: Michal Bogár

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POST-WAR LANDSCAPES FOR LEISURE AND HOLIDAYING

MOSTRA D'OLTREMARE, ITALY

Viale J. F. Kennedy, 54, Piazzale Tecchio, 1, 80125 Naples
1940–52

Marcello Canino (plan), Luigi Piccinato, Carlo Cocchia (landscape and garden architects), A. Calza Bini, M. Canino, C. Cocchia, G. De Luca, S. Filospeziale, B. Lapadula, L. Piccinat, V. Ventura, R. Pane, L. Racheli, M. Zanetti, P. Zelia Melillo, N. Berardi, G. Bosio, N. Barillà, V. Gentile, F. Mellia, G. Sambito, M. Capobianco, A. Sbriziolo, M. Nunziata, D. Maione, E. Mendia et al. (architects of pavilions, major buildings and features)

Leisure

Keywords: landscape, conservation, environmental design

The Mostra Triennale delle Terre Italiane d'Oltremare, or Overseas Exhibition, was a well-equipped exhibition park themed on the Italian Overseas Territories, included in the landscape and archaeological area of Campi Flegrei, on the border with the modern neighbourhood of Fuorigrotta. It was inaugurated on 9 May 1940 by the Fascist regime as a symbolic bridge between the modern state and its African colonies, and closed with the entry of Italy in World War II in June 1940. In 1948, the newly formed Republic of Italy reorganized the administration under the Agency for Overseas Exhibitions and of Italian Labour Around the World, which was charged with rebuilding and managing the exhibition facilities.

The original design was based on a renewed relationship between collective spaces and green areas. The pavilions, which in their style evoked the architecture of the country they represent, were surrounded by gardens with plants and shrubs reproducing their original habitat of the place: a sort of botanical garden with varieties of species typical of the Mediterranean and African area. Like the international great exhibitions, green areas' 'lungs' became a fundamental element of urban architecture. Another natural element employed in architectural design was water: the Esedra fountain was placed on a sloping ground and with its jets and light effects it resembled the majestic fountain of the Royal Palace in Caserta designed by Vanvitelli.

Figure 81
The Theatre and Tower at Impero Square, 1940. © Mostra d'Oltremare Archive.

Figure 82
Aerial view of Mostra d'Oltremare. © Paolo de Stefano, 2006.

In 1952, the restyling gained a new status as an emblem of the cultural and economic rebirth then underway. Some of the architecture was destroyed and other features were restored, such as the 'Restaurant at the Olympic Pool'. The cable-car service that connected the area with Posillipo Hill was closed, contributing to the further isolation of the park from the city.

From the early 1960s through to the 1990s, many factors led to a situation of slow decay: inappropriate use of various buildings; long-term leasing to private agencies; and damage due to use of the site as emergency 'container housing' following the 1980 earthquake. The degradation of green spaces and buildings has reached its peak with the abandonment of vast landscapes and features and dismantling of many architectural elements and the almost total demolition of the open air theatre Arena Flegrea. Later, the Mostra was rebuilt by the same author of the original project, but with some substantial modifications. In the 1990s, instead of restoring the existing components, it was decided to build new and larger pavilions in areas previously used as gardens.

The Mostra still maintains the original urban layout of the 1940s and has remained constant to its planned uses and functions in spite of the damage incurred. The Torre delle Nazioni, consisting of grounds and buildings in the western part of the Exhibition park, has been unused for many years and is still in a state of extreme degradation. Other buildings are in good condition, including the Latin American Pavilion, the swimming pool, tennis courts, some gardens, the Cabot Pavilion, the Theatre Mediterraneo, the Olympic Pool Restaurant, the Fontana dell'Esedra and the Palazzo degli Uffici (now converted into a hotel). Finally, the Naples Zoo and an Amusement Park, after years of abandonment, have been recently opened to the public.

Author: Paola Ascione

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MAMAIA SEASIDE RESORT, ROMANIA

Constanța
1958–61

Cezar Lăzărescu (lead architect), Lucian Popovici, Ludovic Staadecker , Adam Toma, Virginia Petrea, Mina Laurian, Violeta Constantinescu, Cristian Ionescu, Roxana Bernstein Katz, Anca Borgovan Ionescu, Cristina Kedzierska (architects), Niculae Laszlo, Mihai Barbaiani, Ion Neacșu, Vincențiu Haram, Anghel Stavrescu, Mircea Eustațiu, Boris Placicov, Traian Haschi, Gheorghe Gherghe, Emil Geiser, Mircea Oniga, Viorel Popescu, Mihai Atanasiu, Henri Navon, Stelian Toader, Ion Velicu, Victor Guțu (engineers)

Leisure, public amenity and urbanism

Keywords: history, at risk, revitalization

Situated near the harbour city of Constanța, presently included in the Municipality of Constanța, the Mamaia resort comprises the northern end of a continuous tourist development of the Black Sea waterfront, which today spans forty kilometres of coastline. The first modernising interventions in Mamaia go back to the beginning of the twentieth century, when seaside resorts became fashionable for well-off tourists. Eventually, Mamaia was considered a new town due to its explosive development after World War II, gaining its special status for democratic socialist tourism through its new facilities designed in the late 1950s.

Mamaia is a unique example of modernist landscapes in Romania due to its site, urban planning, architecture, and resilience over time. Firstly, the natural site is itself exemplary because of its siting between waters: the resort is built on an isthmus 300 metres wide and eight kilometres in length, between the Black Sea and Lake Siutghiol.

Secondly, through its purely modernist thinking regarding its general layout, Mamaia marks the beginning of large-scale modernist urban planning in Romania, and was envisioned as a '10,000-bed Mamaia Resort' after the Mamaia Seaside Masterplan. The planning project followed two principles: on the one hand, the unlimited belief in the domination of nature—Mamaia is a prime example of 'terraformation', as the soil was initially unsuitable for construction—and on the other hand, the free composition of high buildings in

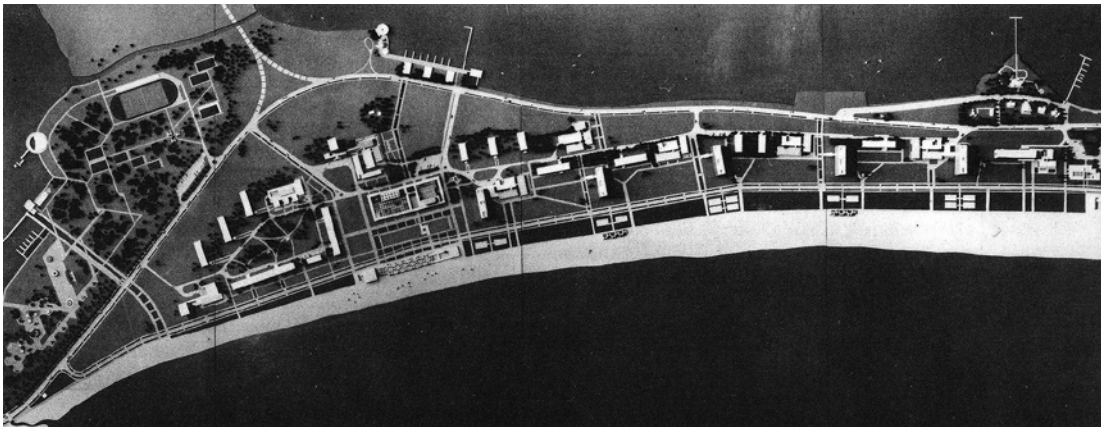

Figure 83
Scale model of the Mamaia Resort systematization plan of 1960. © The Union of Architects of Romania, Image Archive of *Arhitectura RPR* Nr. 4/1960, p.37–38.

Figure 84
Aerial view of the 10,000-bed Mamaia Resort. © The Union of Architects of Romania, Image Archive of *Arhitectura RPR* Nr. 4/1960, p. 37–38.

unlimited green space, according to the principles of the functionalist city. The project introduced a prominent skyline to the area, and imported an extremely clean, even antiseptic, image of simple east–west oriented volumes, floating in the abundant vegetation of the 'park resort'.

Thirdly, from an architectural point of view, Mamaia was one the first 'modernist laboratories'—the whole coast represented a field of modernist experiments—which became almost a modernist manifesto through its formal coherence. Thus, it marked the distance gained at the end of the 1950s from the aesthetic of socialist realism. The modernist architecture in Mamaia ranges from the pre-war modernist buildings preserved and included in the general layout, to the radical, austere, and elegant use of the modernist language in the design of hotels and other tourist amenities.

Finally, despite the political circumstances of the time, the efficiency of its project implementation was notable, as was the rhythm of construction. Four years after the ground was broken for Mamaia, seven hotels between twelve and fifteen storeys high, along with smaller rest houses (*case de odihnă*), lined the isthmus.

The development that followed the '10,000-bed Mamaia Resort' period (1966–72) moved towards a greater density. The introduction of prefabricated construction assemblies (considered more economical), ultimately perverted the initial design lines. At the same time, all buildings and landscapes suffered the absence of elementary maintenance during the 1980s.

However, the 1989 transition to a liberal economy has turned out to be totally inauspicious due to the unique qualities that characterize Mamaia's landscape. The present development is chaotic, exclusively profit oriented and escapes any architectural and urban control. Despite Mamaia retaining the title of the most popular seaside resort, its architectural values, outstanding urban landscape, and modern sensibilities are not cherished by tourists, investors or local authorities. For the moment, there is no strategy for the protection of this unique modernist landscape, with none of the post-war constructions being listed as architectural heritage.

Authors: Carrie Pavel, Irina Tulbure and Ana Maria Zahariade

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VEERSE MEER, THE NETHERLANDS

Province of Zeeland
1961–97

Nico de Jonge and Ellen Brandes-de Lestrieux Hendrichs (landscape architects)
Leisure

Keywords: wood, Delta Works, water recreation

In February 1953, the southwestern part of the Netherlands was severely damaged in a flood. To prevent future disasters, an ambitious plan—the Delta Works—was set up to close off the estuary. The Zandkreek was one of the first branches in the estuary that was dammed on both sides between 1957 and 1960, turning open sea and tides into an enclosed freshwater lake. The Veerse Meer (2,030 hectares) was to be developed as a national recreation area. In 1960, landscape architect Nico de Jonge (1920–97) of the State Forest Agency, later accompanied by Ellen Brandes (1928–2008), made the design for the transformation of the adjacent Veerse Meer. For De Jonge, the role of design was to enhance the cultural and aesthetic value of a functional and efficient landscape. The initial design evolved from 1961 to 1965, with additional designs until 1973, and the construction took place from 1967 to 1997.

The designers situated marinas and other water recreation facilities near the villages and the city of Veere, further inland from the shore of the lake. Camping grounds and holiday parks were clustered along the shores. Parking areas in cul-de-sacs provided day trippers access to the shores. The south-oriented shores of the island of Noord-Beveland were particularly favourable for recreation. The mudflats were sown with grass because the silty soil was not suited for beaches. Despite their recreational function, they would develop into highly valued meadowlands with orchids. Sandy flats and tidal marshes were designated as natural areas with limited recreational facilities, such as small jetties.

Spatially, the area was defined by a wooded belt along the northern and southern shores, behind the dikes and on the former mudflats. The woods separated agricultural land use from recreation both visually and functionally. Since fertile agricultural land was preserved for food production, the designers created an illusion of extensive woodlands by combining

Figure 85
The 'Schotsman', a former sandbank with mixed deciduous woods, brushwood and meadows. © Jan Janse, 2016.

Figure 86
Final design for Veerse Meer by Nico de Jonge and Ellen Brandes, c.1965. © Collectie Nieuwe Instituut/LAND, k102.

limited plots on less fertile soils into estate-like ensembles. The result was an intricate play of changing views over the long, stretched, winding lake.

Some of the larger islands in the lake were planted as well, creating a scenic experience for boat passengers. The mixed deciduous woods on Haringvreter island visually separated the main channel from the secondary channel. The design of the woods referred to the natural pattern of mudflats, gullies and inlets, but at the same time their sleek, geometrical design acted as a counterpart to the fluid lines created by wind and water. The designers chose species that were suited for the still briny soils. Fast-growing Canadian poplar and grey poplar were proposed as windbreaks and protected oak, ash, maple and Dutch elm from wind and salt spray.

Tourism development has been and is a serious threat to the exceptional landscape quality of the Veerse Meer and its environs. Initiatives for luxury holiday

resorts lead to privatization of public shorelines. Authorities and stakeholders are working on a recreation and tourism document that must guide and control future developments.

Authors: Marlies Brinkhuijsen and Jan Janse

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BALNEARIO EL TUQUE, PUERTO RICO

Carretera No. 2, Ponce
1962–65

Carrero, Ávila & González, Raúl Calderón Soria (landscape architects)
Leisure

Keywords: history, at risk, lost

In the 1960s, the growth of Puerto Rico's population, together with its increasing leisure time, presented an opportunity to foster internal tourism. The government agency tasked with this project was the Company for Recreational Development. It prepared a plan and commissioned designs for touristic beach destinations linked by highways to the main settlements. These would provide a place for the general population to spend significantly more modest vacations in otherwise state-of-the-art facilities. The seaside landscape, a main modern service building, and a vast parking lot were a standard formula: in the city of Ponce, variations included an Olympic-sized pool with a waterfall, a diving pool, a children's pool, and a soda stand. The designed spatial sequence took visitors from the main road to the giant parking lot, then on a walk through the building to reach a tranquil beach dotted with five hundred newly planted coconut palm trees.

The project became a significant landmark in the landscape, defining one of the main entry points to Ponce. Adding to the memorability of the landscape, the site has as a dramatic geological backdrop the central mountain range closing off the valley and meeting the Caribbean Sea. In tune with then-common tabula rasa practices, the new tourist destination replaced a former trash dump and marginal community. In the 1980s the grounds, main building, pool and supporting structures were remodelled, losing much of their original modern character. The remodelled pool area was recognized for outstanding postmodern design. Further transformations took place in the 1990s, including the construction of various car racecourses and a grandstand over the surrounding landscape.

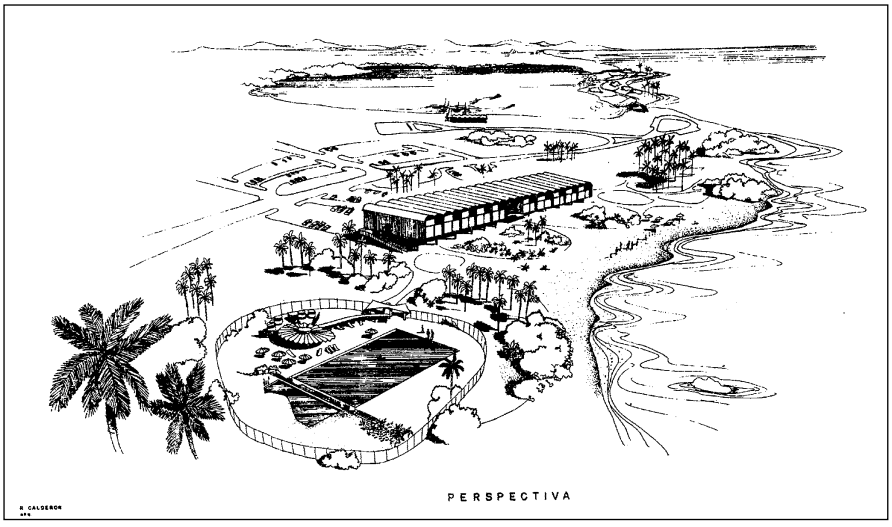

Figure 87
Bird's eye perspective of the recreational complex. © Carrero, Ávila & González, c.1961–62.

Figure 88
Aerial view of road No. 2 with El Tuque in the foreground and Ponce in the background. © Colección de Fotos del Periódico El Mundo, Universidad de Puerto Rico, unknown photographer, 1964.

The site was targeted for study by the United States Army Corps of Engineers and other scientists at the Department of Marine Sciences of the University of Puerto Rico because of shoreline erosion caused by the construction of the highway. This was addressed by means of beach sand replenishment and the construction of a groin breakwater. Although the net result has been the stabilization of the shoreline, the dark material used has rendered the beach unattractive for tourism both in the dry shoreline and the resulting murky waters. The lawns and drop-off that lead up to the building still retain some semblance of their original character.

Author: Fernando Pabón, with the support of various academic and archival institutions of Puerto Rico

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ROOFTOP GARDEN AT HOTEL BONAVENTURE, CANADA

Montréal, Québec
1963–67

Masao Kinoshita (chief landscape architect), Sasaki, Dawson, DeMay Associates (landscape architects), Affleck, Desbarts, Dimakopoulos, Lebensold, Sise (architects), Vincent Ponte (urban designer), Élise Beauregard (landscape architect, restoration plantings and surfaces at pool, 1995)

Commercial

Keywords: roof garden, Hotel Bonaventure, modern Montréal

The garden of the hotel that sits atop Place Bonaventure in Montréal was one of the first major rooftop terraces in North America, and one of the most formally and technically innovative. It is also one of the best-preserved modern gardens from this period in Québec. Located on the ninth floor of the imposing, multifunctional building constructed over the platforms of Montréal's Central Station, the garden offers an intimate landscape to the three levels of hotel rooms arranged in a crown surrounding it and to the central pavilion that houses the reception area, bars and restaurants.

A path and a narrow waterway interspersed with waterfalls wend their way through a ribbon of luxuriant vegetation, passing under glass walkways that connect the central public areas to the surrounding hotel corridors and demarcate the different quadrants. One quadrant holds an outdoor pool which is open all year round. The creation of this unique environment demanded enormous ingenuity to accommodate the location on the top of a massive building that takes up an entire super-sized city block with no setback, and to withstand the rigours of the Canadian winter.

The garden was created by the American landscape architecture firm Sasaki, Dawson, DeMay Associates, in collaboration with Affleck, Desbarats, Dimakopoulos, Lebensold, Sise, one of the biggest Canadian architecture firms of the mid-1960s, which was in charge

Figure 89
Aerial view of the rooftop garden.
© Hotel Bonaventure Montréal.

Figure 90
View of the garden under the walkway which links the central pavilion and the indoor corridors around the garden. © Michel Brunelle, 2012

of constructing the building. The intention of the chief landscape architect, Masao Kinoshita, was to design a garden that would surprise and delight visitors by recreating Québec's Laurentian landscape in the midst of the skyscrapers downtown. His design focused on indigenous plants, including a wide variety of deciduous and coniferous trees, red pines and Douglas firs, which also served to cut the wind. Typical of the times, many of the walls, planters and tiles are made of exposed concrete, a material that features widely in Place Bonaventure, which was one of the major works of Brutalism. Concrete is used in the finishings, the cladding and the bearing structure. To support the mature trees, the roof's concrete slab was configured to provide a thicker layer of growing medium in some places, and the medium used is lighter than regular earth to meet the particular demands of the garden. The technical engineering of the slab, with its inherent challenges in terms of bearing capacity,

drainage and watertightness, benefitted from the input of the National Research Council's Division of Building Research.

Time has been kind to the garden. The trees have grown so much that it is hard to believe the garden is so high off the ground. The original components, such as the waterways, waterfalls and planters, are still intact. Only plantings were overhauled in 1995, along with the perimeter of the swimming pool. When this work was underway, painstaking inspections were conducted to check the condition of the membrane and the mechanical systems. The project engineers were amazed at the quality of the construction and ruled that no restoration work was required.

The Hotel Bonaventure rooftop garden is privately owned, but it is accessible to the public through the hotel's foyer. It is used mainly by hotel guests and patrons of the terrace restaurant.

Authors: Nicole Valois, in collaboration with France Vanlaethem

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RUSSALKA HOLIDAY VILLAGE, BULGARIA

Nanaevska Tousla (Taukliman, Birds' Wharf), Kavarna
1967–68

Marin Marinov, Simeon Dimitrov (masterplan and architecture), Krastan Karakashev (landscape plan and design)

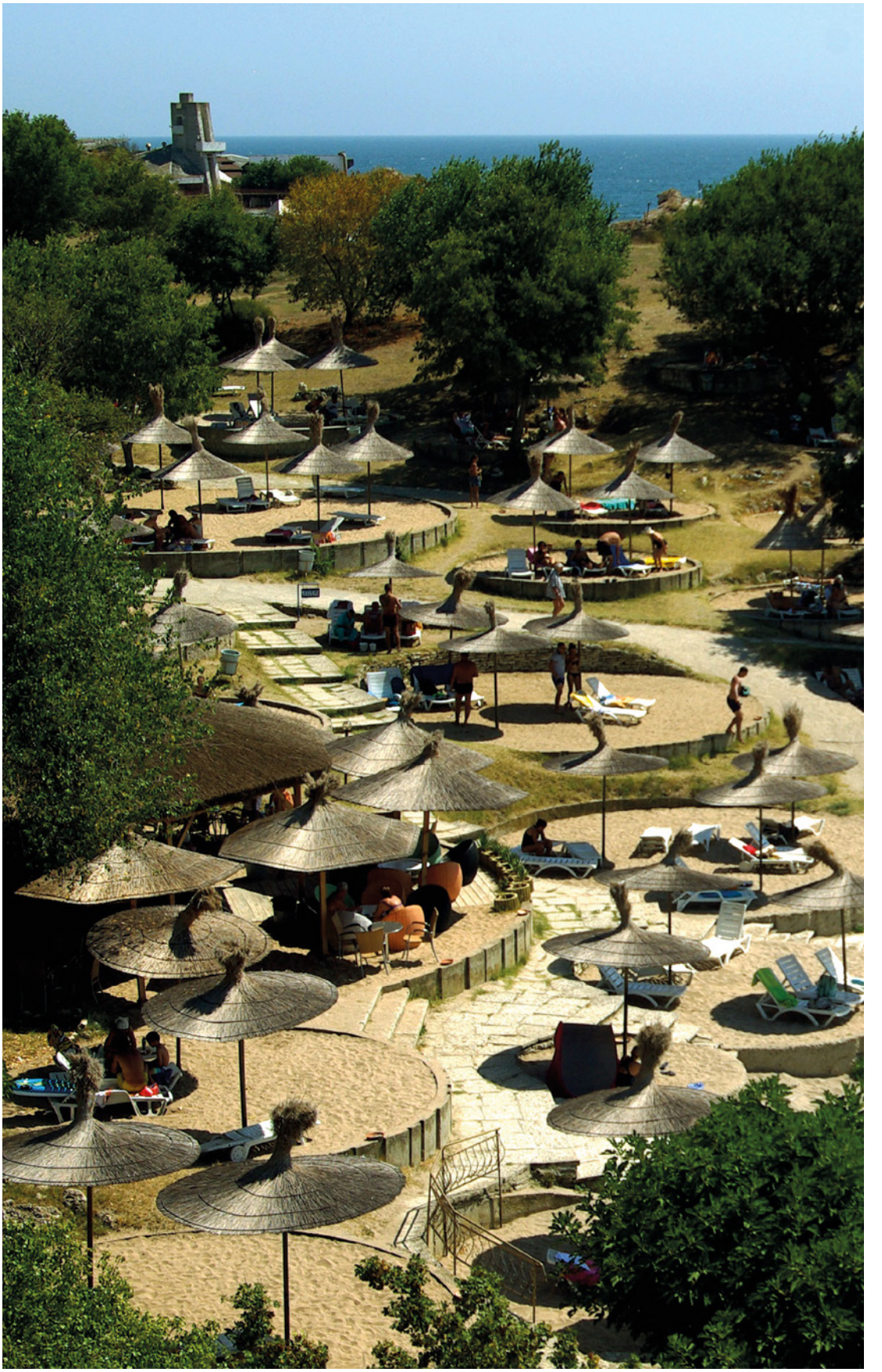
Public amenity and urbanism, leisure

Keywords: natural reserve, symbiotic landscape design and masterplan, at risk

Established in 1968 within the monopolistic Balkantourist state programme for attracting foreign tourists to Bulgaria, Russalka (Mermaid) pioneered the construction of the holiday villages Duni and Elenite in the mid-1980s. In contrast to the tourist concept of the other Bulgarian coetaneous seaside mega-resorts Druzhba, Golden Sands and Sunny Beach, the small-scale Russalka—situated in a wilderness area—followed the model of the all-inclusive vacation Club Méditerranée, which had its headquarters in France, and which used to serve exclusively foreign tourists until 1990.

The concept of symbiosis between architecture and nature incorporated in its masterplan and landscape design was preconditioned by its exceptional location within the Kaliakra natural reserve, with co-existing cliff and marine habitats, local mineral springs and peloid resources, ancient rock dwellings and Byzantine archaeological remains. Its secluded coastal spot of Mediterranean character features a rocky coastline, picturesque caves and small tucked away inlets and coves. The steppe grasses are important habitats. The wilderness of Nanevska Touzla, where Russalka is situated, is located on the Via Pontica bird migration route that provides feeding, nesting and wintering for numerous waterfowl. Due to careful urban and landscape interventions, the local ecosystem was minimally affected by the construction of the holiday village; protected species such as the ruddy shelduck (*Tadorna ferruginea*) and the monk seal (*Monachus monachus*), however, became extinct at this location (SDC et al., 1997).

Figure 91
The modular villas of various types at Russalka Holiday Village are placed within a forest setting. © Nedialko Mihalev, kilometric.bg, 2017.



The masterplan organically follows the steep terrain and consists of sea-facing bungalows, villas of different types grouped in mosaic patterns within the oak forest, sports facilities and a panoramic terrace restaurant on the coastal cliffs (Kovachev, 2003). The minimalist, human scale architecture by Marin Marinov (1928–2007) and Simeon Dimitrov (1924–97) features repetitive modular designs that mimic the rocky terrain and interprets in a modernistic way the terraced architectonics of the traditional settlements from the Bulgarian Revival period (Petkov et al., 2016).

The symbiotic landscape design by Krastan Karakashev (1934–2017) implements an afforestation of the bare seacoast with micro-interventions that are respectful of the native steppe and forest vegetation. Russalka's horticultural design introduces some typical Mediterranean seaside succulent and coniferous species. It is complemented by original art pieces and simple concrete benches. The resort area prohibits visitors' vehicles. The auxiliary pedestrian promenades, formed by stepping stones, lead to the villas and the seashore. The round beach terraces echo the steep coastline in order to enlarge the limited number and sizes of the beaches. They produce a remarkable graphic effect when seen from above.

The original masterplan still remains intact, except for the removal of the original breakwater of the central cove and several of the seashore terraces in 2010–11. While poorly managed and in deteriorating condition since its establishment over five decades ago, Russalka still attracts tourists due to its exuberant vegetation and exclusive location. While Russalka Holiday Village is the best preserved among the Balkantourist resorts, the safeguarding of its landscape design and symbiotic masterplan, as well as its architectural authenticity, is threatened by the inevitable overhaul and refurbishment of the resort (Kirova, 2019).

Author: Radosveta Kirova

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Figure 92
The characteristic round seashore terraces at Russalka Holiday Village enlarged the sand strips. © Radosveta Kirova, 2019.

RACHID KARAMEH INTERNATIONAL FAIR, LEBANON

El Maarad, Tripoli
1967–c.1997

Oscar Niemeyer (architect)
Leisure, public amenity and urbanism

Keywords: at risk, social modernization, public landscape

Lebanon's International and Permanent Fair in Tripoli (now named Rachid Karameh International Fair) was originally planned to host a temporary event. Its functional programme and urban vision, however, were of a more permanent nature. Designed in 1962 as a modern urban core (Niemeyer, 1962) for the historic city of Tripoli (eighty-five kilometres north of the capital Beirut), Oscar Niemeyer's unfinished and partially abandoned fairgrounds complex in Lebanon is a unique manifestation of modernist architecture, landscape and urban design in the Arab world, inscribed on the *UNESCO World Heritage List* and, simultaneously, on the *List of World Heritage in Danger* in January 2023. Generous public spaces in the oval-shaped layout of the complex did not only combat high density and rigidity of the historic core, but also introduced a new concept of civic space contrasting with the pre-existing gathering space typologies in Tripoli (El Hussein and Saadi, 2019). The 'negative' public space of the new urban core is both a functional and symbolic element that marks the process of decolonization, promotes social modernization in post-independence Lebanon and highlights a new national identity for citizens.

The project provided an immense secular landscape which took the form of dynamic pavilions of reinforced concrete and monumental modernist gardens. Being influenced by his previous work on Ibirapuera Park (1951–54) in São Paulo with Roberto Burle Marx, and his work on Brasilia (1956–60) with Lucio Costa, Niemeyer's overall design for the complex is a vivid manifestation of Brazilian modernism. The monumental public landscape is characterized

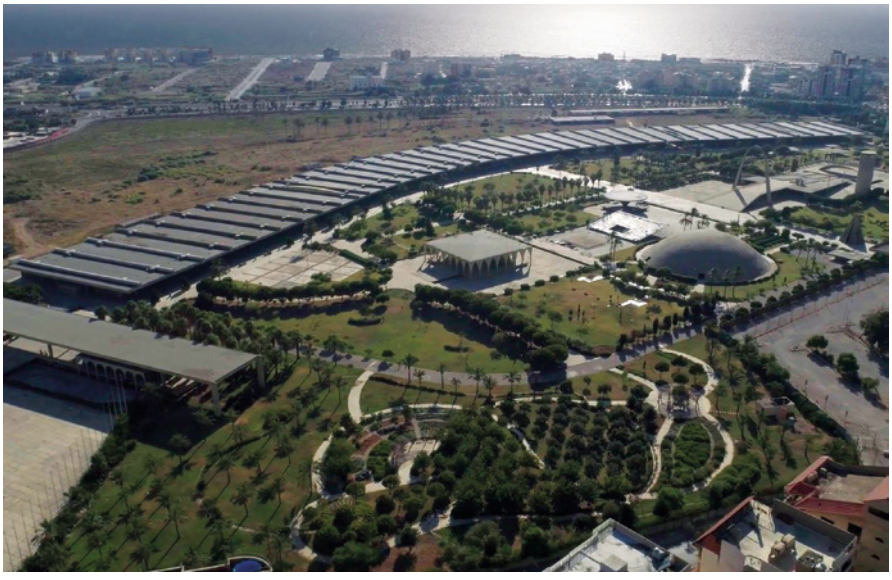

Figure 93
Rachid Karameh International Fair in Tripoli. © Chawki Fatfat, survey: drone footage and imagery taken in 2018; still photo created and edited by Adonis El Hussein, 2019.

Figure 94
The secondary entrance zone of the fair complex, indicating the transition from the residential neighbourhoods of Tripoli into the public landscape. © Adonis El Hussein, 2018.

by wide passageways paved with large concrete blocks, reflective mirror pools providing symmetric reflections of pavilions, imported tropical gardens and carefully designed vistas.

Construction works lasted between 1967 and 1975, after which they were interrupted by the start of a civil war in the country. After the end of the war in 1990, the landscape works were finally realized (with some deviation from original plans), but the complex could not play its intended urban role even after that. A boundary concrete fence, which Niemeyer was requested to design by authorities due to security concerns, was fully realized after 1995. Effectively, it made the public landscape accessible for citizens only through defined entrances and only on special occasions. At most times, entry is conditional upon holding a permit issued by the administration of the fair complex.

Despite its current isolation from the urban fabric and lack of proper maintenance, the implementation of partially redesigned plans in the 1990s helped to preserve the intended spirit of the place and its spatial qualities. Functionalizing the reflective pools would permit visitors to experience Niemeyer's tropical gardens as intended. However, the integrity of the overall landscape is still being threatened by potential development. The recent Knowledge and Innovation Centre competition, co-organized by the Lebanese government and the International Union of Architects in 2019, has been seeking an architectural intervention which would renovate two original structures and develop a significant part of the unbuilt landscape in the rear side of the fairgrounds (Harrouk, 2019). In the meantime, most of the originally designed structures are abandoned, left in a rapidly declining state of conservation and in need of urgent interventions.

Author: Adonis El Hussein

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GOLDEN SANDS HOTEL, CYPRUS

John F. Kennedy Avenue, Ammochostos
1970–73

Garnett, Cloughley and Blakemore Associates, J. & A. Philippou (architects)
Leisure, public amenity and urbanism, military

Keywords: at risk, abandoned, ruined

The Golden Sands Hotel was a tourist development project funded by the government of the Republic of Cyprus in the early 1970s. It was constructed mainly on state-owned land at the southern end of John F. Kennedy Avenue, of the city of Famagusta (Ammochostos in Greek and Mağusa in Turkish), Cyprus's leading tourist destination in the 1960s and 1970s (Kiessel, 2019). As part of the Cyprus government's goal to create an international hotel brand and insert the island 'on the tourist map of the Mediterranean' the project was commissioned to the British architects Garnett, Cloughley and Blakemore Associates, collaborating with the Cypriot firm J. & A. Philippou, and leased for twenty years to the international management firm Trust House Forte. Upon its inauguration on 8 July 1974, the Golden Sands Hotel further exemplified international economic agendas and practices that invested in the island's tourism development, while also serving as a strategy to lessen ethnic tensions between the Greek and Turkish Cypriot communities and emerging civil strife within the Greek Cypriot community (Pyla and Venizelos, 2022).

The project was envisioned as a tourist hub organizing upgraded hotel services for international visitors and public leisure activities for the local population. The hotel's main seven-floor volume acted as an interface between these different programs: a zone of public pool and sports facilities separated from the private spaces of the swimming pool and the secluded

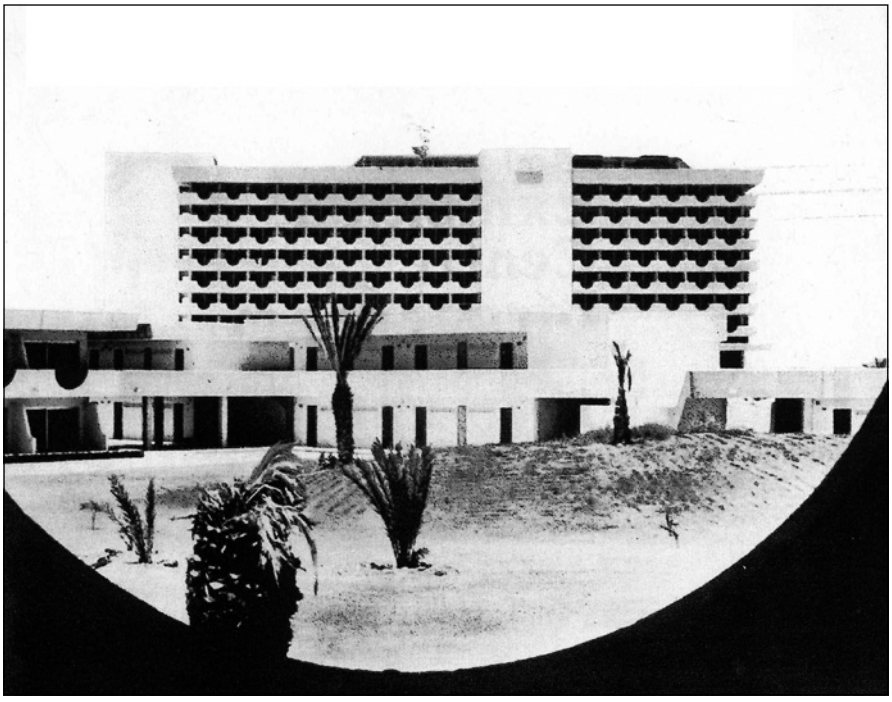

Figure 95
View of the main volume of the Golden Sands Hotel and the landscaped area. © Patrick B. Garnett, 'A View of the Sea', *Interior Design*, August 1977, 436

Figure 96
The public pool and sports facilities adjacent to the Golden Sands Hotel in 1973. © Press and Information Office (PIO), Republic of Cyprus, Collection Jack Iacovides.

low-rise bungalows reserved for its high-income clientele. The hotel's design employed modernist aesthetics, devoid of visible references to vernacular or local historical forms, while also distancing itself from colonial architectural legacies and divisive ethnic identities (Phokaides and Pyla, 2016). Any allusions made to the locale appeared through the design of the landscape. The repetitive use of the palm tree throughout the complex, appearing in most of the published photographs of the hotel, referenced an existing feature of the island's urban and rural landscapes that became part of shaping the hotel's 'exotic' setting and branding.

Overall, the hotel's architectural and landscape design strategies introduced new models for the booming tourism industry while contributing to the establishment of Varosha's beachfront as an exemplary destination of leisure and

emblematic modern landscape. After 1974, the project's typology became the model for colonising the southern shores of the island, albeit on a larger scale. In this light, the Golden Sands Hotel prefigured the complicity between the central state and the private sector. Soon after the island's division, the construction of new hotels was premised on the 'national' goal to rebuild the tourist infrastructure and to respond to the growing demands of mass-tourism, setting aside the emerging critiques for tourism's social, cultural and environmental impact.

At the end of July 1974, amid military conflicts and airstrikes by the Turkish air force, the hotel's first visitors fled along with the Greek Cypriot inhabitants of Famagusta. Since then, the hotel has been abandoned for over forty years, lying within a fenced-off area under Turkish military control—often referred to as the Varosha 'ghost town'—that remains inaccessible even to the Turkish Cypriots and the settlers from mainland Turkey which have since populated the city. To this day, the hotel expresses the crucial role of architectural and landscape design in shaping the cultural identity of the island as an international tourist destination, yet it also epitomizes the entanglement of Cyprus's modern landscapes with ethnic tensions and military conflicts. Abandoned, inaccessible and in decay, it forms a unique case of a modernist landscape at risk which poses significant documentation and preservation challenges. On these grounds, the architectural appreciation of the Golden Sands Hotel must rely on a better understanding of its complicated past and its equally contested future (Pyla and Phokaides, 2020).

Author: Petros Phokaides

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AMERICAN REGIONALISM IN POST-WAR URBAN PARKS

PARQUE LUIS BARRAGÁN, MEXICO

Avenida de las Fuentes and Calle Cráter, Jardines del Pedregal de San Ángel, Mexico City
1945–50

Luis Barragán Morfín (architect), Carlos Contreras Elizondo (urbanism architect)
Public amenity and urbanism

Keywords: community, regionalism, volcanic nature

Situated in a renowned urban development, Jardines del Pedregal de San Ángel, the park was designed by Luis Barragán (1902–88) with the support of urbanist Carlos Contreras (1892-1970) and input from the artists Diego Rivera (1886–1957) and Dr Atl (1875–1964). The Pedregal is a vast area to the south of Mexico City that was covered by lava from a volcano which erupted two thousand years ago; the National University built its new campus there between 1950 and 1952. The site's geological conditions required the development to offer novel planning, with streets following the rocky formations, generating an organic plan with meandering roads and very large lots. The main idea of the developers was to have an exclusive environment that would take advantage of and preserve the original landscape and the local flora; these ideas are manifest in the two public parks, the model garden with the sales offices, the avenues and the entrances to the originally gated community.

Unlike traditional parks, the recently named Luis Barragán Park is not in a detached section, but rather is an integral part of the urban design, and its location between two streets and placement in the centre of a large block is intended to act as a passageway. The plot has an irregular form and does not follow the customary design of parterres or symmetrical footpaths. It embodies not only a new approach to landscape architecture, but is also a statement of the fresh and enticing image that the developers endorsed; furthermore, it was also meant to show to potential clients the aesthetic possibilities of an apparently arid and inhospitable terrain, to be replicated in their own future homes.

Figure 97
General view of the park as it was conceived by Luis Barragán, shown in a vintage photograph. © Juan Guzmán, private archive Louise Noelle.

Figure 98
Local flora along one of the original trails at Parque Luis Barragán. © Juan Guzmán, private archive Louise Noelle.

Originally, the parcel was laid out with large grassy areas placed at various levels limited by lava rock outcrops, where local flora—mainly daisies, baby's breath and low-rise shrubs—was sensitively placed. The vegetation was complemented by larger endemic plants, such as izotes, agaves and pirules, some of which were already growing there. The garden followed the lava with trails that stretched through the crevasses, using pieces of the local volcanic rock to form steps that created a stark contrast between urbanity and virgin land. The paths were covered with sand of tezontle, a reddish volcanic rock that complemented the colour palette while reinforcing the regionalist vision.

The current aspect of the park is far from its original state, due to almost non-existent conservation coupled with various erroneous interventions with the design and the vegetation. Foreign species like jacarandas and eucalyptus have been introduced, the grassy patches have been lost and the footpaths lack the red sand covering. Additionally, two offensive structures to locate equipment for the water supply system were placed in the middle of the garden; this absence of sensitivity towards the renowned landscape design allowed for the installation of a grille, thus cancelling the original purpose of the space as a public park. Finally, a poorly planned playground on one end of the plot, alongside the transformation of the sidewalk into a makeshift parking area, have forced this famous park into a shameful situation.

Authors: Louise Noelle and Aldo Solano, with the support of Catherine Ettinger

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PARQUE DEL ESTE, VENEZUELA

Avenida Francisco de Miranda, Caracas
1956–61

Roberto Burle Marx (landscape architect), Carlos Guinand Sandoz (coordinating architect), John G. Stoddart, Fernando Tábora, Mauricio Monte, Julio Pessolani (landscape architects), Leandro Aristiguieta (botanist), Carlos Wendlinger, Luis Longchamps, Dante Bianchi (horticulturists)

Public amenity and urbanism, conservation and ecological

Keywords: park, at risk, abstract

Caracas's main modern park, the Parque del Este, is located at the east side of the city, on the land of the colonial Hacienda San José-La Ciénaga. The park was initiated by Venezuelan architect Carlos Guinand Sandoz (1889–1963) and it was built at the end of the 1950s on 77 hectares, where the International Caracas Exhibition was planned. Guinand, the landscape consultant for the fair, fearing for the event's incompletion, opted

Figure 99
Plan of Parque del Este, executed in gouache. © Sala Mendoza, 1958.

Figure 100
Lake No. 9 within Parque del Este. © Frank Alcock, 2009.

to promote the idea of a big public park on the site. The President of Venezuela, Rómulo Betancourt, decreed the construction of the park and Brazilian landscape architect Roberto Burle Marx (1909–94) was hired for the design.

Burle Marx achieved a high-quality environment with a functional infrastructure to serve the needs of mid-century Caracas's population. In the park's design, the vast array of species representing Venezuelan tropical flora turned the park into a botanical-ecological garden. Burle Marx showed an understanding of the land´s pre-existing natural conditions. He aimed to define 'ecological environments and gardens, incorporating the widest possible number of native ornamental species' (Aristeguieta, 1974). These species were placed through a process of adaptation, after being transplanted from distant regions following an exploration of the natural environment of Venezuela.

The park's site was marked by the creeks of El Avila Mountain, being a slightly inclined terrain leaning towards the riverbed dotted with open plains, where water was retained to form temporary lakes. This effect of gardens and open spaces gave shape to 'The Thirty Gardens of Parque del Este', a circular promenade that starts at the park's North Gate, encircling a series of green tropical environments that are thematically and botanically characterized (Gomez, 2015). Burle Marx deployed a more architectural and sculptural manner in the patios and a more biomorphic landscaping strategy for the lakes and the ecological gardens.

Parque del Este is primarily comprised of three spaces: 'an open, fluid, gently, wavy landscape of dispersed shade trees and grass fields of subtle topography; a forest landscape, spatially dense with winding roads; and a sequence of paved gardens with intimate patios that refer to the Venezuelan colonial past, and that expose plants, ceramic murals and fountains' (Berrizbeitia, 2004). In these spaces Burle Marx used topography, the variety and exuberance of tropical flora and the multiple presence of water as compositional elements.

The promenade begins with the ponds of the Patio of the Tiled Walls—a metaphor of El Avila mountain´s wells and cascades—followed by the monumental water jets of the Patio of the Circle-spotted Lawn. Southward beyond these geometric courtyards, the view opens up to the wide perspective of the more naturalistic Hygrophilous Garden (Lake No. 1 of the Aquatic Plants), a big bacteria-shaped lagoon spread among the grass. This first green-coloured lake sets the aesthetics for the next water spaces that as a *catena d´aqua* flow one

into the other, complexly mingling together to create a continuum of shadow and light over the bridges and under the trees: the so-called Lakes of the Animals, the central Lake No. 2 or Lake of the Herons, the Eastern Lake or Lake of the Ducks, and the Western Lake or Lake Carlos Guinand Sandoz.

Next come the woods of the former Hacienda, the park´s Arboretum, with towering trees, winding walkways, and architectural modern follies. More ahead, still under the forest, we encounter more lakes: the enclosed small pond of the Serpentarium; the clover leaf-shaped Otters Lake; the big Reptiles Lake, the island-filled pond of the Monkeys Lake and the sunken Tigers Lake. The circuit continues southward within the park´s domain. This is where all the waters accumulate when it rains hard, and where the neighbouring creeks originally emerged to flood the entire area. Burle Marx decided that this was the area to locate the park´s greatest lake, the Southern Lake for Small Boats, or Lake No. 9.

The park was designated a National Good of Cultural Interest in 1998. Regretfully, a replica of Christopher Columbus's ship, the *Santa María,* was introduced into the largest lake in the 1970s, against Burle Marx's will. Now that the park is already over half a century old, the city has abandoned the topic of its conservation and the park's integrity and original design is at risk.

Authors: Hannia Gomez and Elias Gonzalez Sanavia.

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FLAMENGO PARK, BRAZIL

Av. Infante Dom Henrique, Rio de Janeiro
1961–65

Maria Carlota Costallat de Macedo Soares (general coordinator), Affonso Eduardo Reidy, Jorge Machado Moreira (urbanists and architects' chiefs), Berta Leitchic (engineer), Ethel Bauzer Medeiros (recreation design), Carlos Werneck de Carvalho, Sergio Bernardes, Helio Mamede (designers development), Roberto Burle Marx and Architects Associated, Fernando Tábora, John Stoddart, Júlio César Pessolani Zavala, Maurício Monte (landscape designers), Richard Kelly (lighting designer), Maria Augusta Leão da Costa Ribeiro, Flávio de Britto Pereira (botanical advice), Alexandre Wollner (visual programming), Cláudio Marinho Cavalcanti, Maria Hanna Siedlikowski, Juan Derlis Scarpellini Ortega, Maria Laura Osser, Celso Paciello da Motta (architects), Sérgio Rodrigues e Silva, Mario Ferreira Sophia (draftsmen), Fernanda Abrantes Pinheiro, Swany Rodrigues e Silva (secretaries)

Public amenity and urbanism, recreational routes, parkway

Keywords: public park, urban landscape, historic garden

In 1960 Rio de Janeiro lost its status of Federal Capital of Brazil, and instead became the capital of what was then the State of Guanabara. Carlos Lacerda, the governor, committed himself to make a series of improvements in the new state. He invited his friend Maria Carlota Costallat de Macedo Soares, known simply as Lota, to join the government team. Lota convinced the governor to transform into a park a significant landfill area along Guanabara Bay that happened to be known as *Aterro do Flamengo* into a park, inspired by the parkways and Central Park of New York. As president of the Working Group, Lota invited Affonso Eduardo Reidy and Roberto Burle Marx to join the team. Reidy conceived the urban layout and several architectural elements, and Burle Marx envisaged the landscape project. To avoid the risks of future de-characterization of the project, on 27 October 1964 Carlos Lacerda asked the director of the National Historical and Artistic Patrimony Service (sphan/mec), Rodrigo Mello Franco de Andrade, to authorize the official historical preservation of the park while it was still under construction. The registration of the Landscape Complex in the Archaeological, Ethnographic and Landscape Book of National Historical and Artistic Patrimony on 28 July 1965, before its inauguration on 17 October 1965, concluded the federal protection with the following description: 'Flamengo Park area, with the lands and buildings represented in the

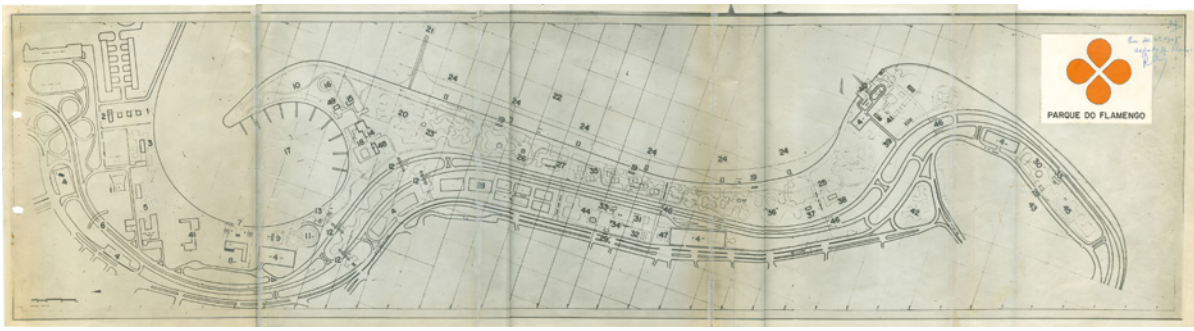

Figure 101
Original urban plan for Flamengo Park.
© IPHAN, Noronha Santos Archive.

Figure 102
General view of Flamengo Park. © IPHAN, Oscar Liberal do Brito e Cunha, 2018.

plant annexed to Process No. 748–T–64, including National Heritage Preservation of the maritime area throughout the entire Park, up to one hundred metres from the beach, to avoid future constructions that can sacrifice the beauty of the whole' (Brasil, 1964).

In 1965, at the end of the Lacerda government, Lota stepped down from the team command, having stated that: 'Flamengo Park will be protected from the greed that arises in an area of inestimable financial value, and from the extreme levity of the public powers when it comes to the complementation or permanence of plans. A work that has the purpose of protecting the landscape and social service for the general public obeys criteria still very little-understood by administrations and individuals' (Brasil, 1964).

The park has the most impressive views of the natural and cultural landscape of the city. It integrates the Carioca Landscapes between the Mountain and the Sea, which was recognized as a UNESCO World Heritage site in 2012. Flamengo Park has a modernist layout which stretches along seven kilometres and covers 120 hectares from Santos Dumont airport (designed by the firm MMM Roberto) to Botafogo Beach.

With these projects, Burle Marx achieved impressive and innovative designs for the time. The landscape design guidelines avoid enclosures and interruptions, providing a visual and functional continuity of the park. It is widely open to the population at any time of the day. Flamengo Park, together with Brigadeiro Eduardo Gomes Park and Carlos Lacerda Park, incorporated the Affonso Eduardo Reidy's Museum of Modern Art—a masterpiece of Rio's architecture—and Marcos Konder Netto and Hélio Ribas Marinho's Monument to the Dead of World War II, which won a national public contest. The Monument to Estácio de Sá, designed by Lúcio Costa, is also part of the park.

Author: Paulo Eduardo Vidal Leite Ribeiro.

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SKYLINE PARK, UNITED STATES

Sixteenth Street Mall and Arapahoe Streets, Denver, Colorado
1972–75, 2003 (redesigned), 2023 (impending redesign)

Lawrence Halprin (1970–75), Satoru Nishita (1972–75 with further consultations), Jean Walton (1972–75), Richard Vignola (1972–75), Thomas Balsley (2002–04) (architects)

Public amenity and urbanism

Keywords: linear park, urban renewal, water features

Skyline Park was conceived as part of Denver's urban renewal and became a key component in the Skyline Masterplan: a design and planning document which originated in the 1950s, with a final version published in 1970. The plan embraced over twenty-three blocks in the heart of the downtown precinct, with a park as a central feature to provide an amenity for workers and visitors. The park occupies half of each block along Arapahoe Street from Fifteenth Street to Eighteenth Street, creating a linear sequential passage that draws visitors off the streets away from traffic. Construction began in 1971 and it was opened to fanfare in 1973, with additional updates over the next few years.

The park was initiated in 1970 when the city sought out and hired the office of Lawrence Halprin, a design and planning firm from San Francisco. Halprin's firm was renowned for innovative urban design and signature parks that spoke to the era's values for places that mitigated urban issues such as noise and traffic impact, and generated civic gathering spaces and places of respite in the city.

Skyline Park was a significant example of the Halprin office oeuvre, particularly with the development of three unique fountains to enhance and distinguish each block, thus linking the blocks together with a common theme of water and movement. The fountains are a

Figure 103
View eastward from the D&F Tower, showing the second block between the Sixteenth Street Mall and Seventeenth Street, with the plaza area below the tower, a service area centre to the right, and the signature fountain. © Ann Komara, 2003.

Figure 104
View eastward in the second block between the Sixteenth Street Mall and Seventeenth Street, showing the blocky cast-in-place concrete form of the signature fountain. © Ann Komara, 2003.

readily identifiable signature of the Halprin office, seen in parks in Seattle, Portland, San Francisco and elsewhere. Skyline's triumvirate of elaborate water features drew visitors in from the street and punctuated the park's experience. They enticed visitors to interact, touch, and move into and around the fountains' modern concrete forms. Visitors moved through the blocks along shady walkways of concrete and brick, and within the park's sculptural cast-in-place concrete forms holding lushly planted berms. These walkways simulated a Halprin 'score' with the flow patterns and eddy spots for people to sit cooled by trees and water.

Despite the park's decades of success, the final decade of the twentieth century was not kind; maintenance diminished and the park became overgrown, and its most unique fountain near Fifteenth Street developed unresolved structural and pump problems. Urban growth brought changes to the downtown population. New local merchants and constituents became unhappy with the people the shabby park attracted, aware of the fearful perceptions about safety these users generated for 'more desirable' visitors. The city concurred; working with the Downtown Denver Partnership they began to explore options. Studies were conducted, and a competition was held for the park's redesign. In 2003 the Halprin park was largely demolished to make way for a redesign by Thomas Balsley Associates. This work reflects the unfortunate banality that can happen in 'design by public process'. Two Halprin fountains were 'preserved' and remain in situ with little connection to the new design, with no sense of the park that once gave them their rich design context. In 2019 the City of Denver once again acknowledged problems with the park, including those that persisted despite the first redesign, as well as issues which have more recently arisen. The city sponsored another redesign—a new 'Skyline Park' is in the works. One might hope the Halprin pieces get fully erased so that the park can shed the mantle of 'everywhere but nowhere design' and the site can once again serve as a lynchpin to a vital, contemporary downtown Denver.

Author: Ann Komara

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LATE-TWENTIETH CENTURY ECOLOGICAL TRANSFORMATIONS

AYIA VARVARA URBAN PARK, GREECE

Drama, Central Macedonia
1984–87

M. Ananiadou-Tzimopoulou (landscape architect), D. A. Fatouros, I. Labrianidis, A. Papari (architects), P. A. Gerakis (ecologist), H. Mylonas (civil engineer), A. Ligerakis, C. Sinanis (mechanical engineers), M. Pitsiava-Latinopoulou (transport planning), N. Petropoulos, C. Tzimopoulos (hydraulic engineers)
Public amenity and urbanism, conservation and ecological, industrial and farming

Keywords: cultural landscape, adaptive reuse, urban water park

The Ayia Varvara Urban Park is situated at the centre of the city of Drama and functions as a vital open public green space at and around the springs of the same name. As an urban space it bears distinct spatial features that reflect the early industrial history of the city, such as the nineteenth-century water-powered flour mills that are situated in the wider area. The project involved the design of a contemporary landscape in a natural wetland in order to restore its urban character and preserve the natural, cultural and historic memory of the place. The outcome of the project presents a case of cultural landscape formation of exceptional qualities, since it combines human made and natural micro-environments in a choreographed succession of event-spaces. Furthermore, it interprets in spatial terms the progress of the local community, the development of its settlements over time under the influence and with the con-

Figure 105
The fountain and the urban area for resting and walking. © M. Ananiadou-Tzimopoulou Archive, D. Kalapodas, c.1987.

Figure 106
The lake with waterfalls, looking towards the tobacco warehouse and the artist's studios. © M. Ananiadou-Tzimopoulou Archive, D. Kalapodas, c.1987.

straints posed by nature and, finally, the opportunities presented by the natural environment for growth and prosperity that have shaped the unique social, economic and cultural forces of the city.

Drama, a city built on waters, witnessed a remarkable transformation in the last decades of the nineteenth century when the then-flourishing tobacco industry and the strengthening of trade had led to unprecedented growth and, consequently, an increase of its population. Large tobacco companies established branch offices in the city, tobacco warehouses were built, and new neighbourhoods were eventually created in the surrounding area of the Ayia Varvara springs, west of the walled part of the city. As a consequence, Ayia Varvara was transformed into a prominent industrial district comprising around fifteen water-powered flour mills and a public place for social gatherings.

Ayia Varvara Urban Park was designed as a rich and dense cultural landscape in a wetland, taking into consideration the place's historical, social, ecological and natural identity. It extends to an area of approximately eight hectares, with water and local flora being the two dominant elements of the overall design, forming an intricate landscape of shallow lakes and ponds, streams, pre-existing vegetation and a network of discrete interventions in the form of new tree planting, footpaths, footbridges, rest-areas, waterfalls of small height, water channels and piers. This network of promenades and rest areas successfully integrates three listed flour mills and the shell of an old tobacco warehouse, built in 1925 by the Swiss tobacco trader Herman Spierer and constructed by the Austrian engineer Konrad von Vilas, which now houses a luxury hotel and spa. The project also successfully incorporates the

disused tracks of the closed railway line that criss-crosses the park, as well as a railway warehouse (built in 1895) that today houses the Visitors Information Centre, and the old railway station, which operated for a century as a pump station. In 1999, a monument commemorating Holocaust victims was set up inside the park, preserving the memory of the local Jewish community that was violently assembled at the tobacco warehouses on 3 March 1943, in order to be displaced to Treblinka II concentration camp in Poland.

The park's creative aim was the successful synthesis of the conservation of natural and cultural elements of the city's history with a new, dynamic and contemporary urban space for the future. The successful achievement of this aim propelled the Ayia Varvara Urban Park to its ranking among the top sixty parks in Europe within the framework of the European Community Culture 2000 program. It also holds a prominent place among the most successful contemporary landscapes around the world, as ranked by Osaka Expo 1990 officials.

Author: Emilia Athanassiou

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SUAN LUANG RAMA IX PARK, THAILAND

Chaloem Phra Kiat Ratchakan Thi 9 Road, Bangkok
1987–91

Decha Boonkham (landscape architect), M. L. Tridosyuth Devakul (architect, Commemoration Hall/ Ratchamongkhon Hall), Sumet Chumsai Na Ayutthaya (architect, Geodesic Dome, Conservatory for American Desert Plants)

Public amenity and urbanism, conservation and ecological

Keywords: urban park, ecological park, botanical garden

Suan Luang Rama IX is the largest urban public park and botanical garden in Bangkok, with an area of 500 Rai (80 hectares), and is located to the east of Bangkok. It was constructed to honour His Majesty King Rama IX's 60th Birthday anniversary on 5 December 1987. This public park is utilized for recreational purposes by Bangkok citizens, and also serves as the knowledge source for numerous species of plants, including gardens of flowering plants of various forms, as well as a Water Park—an important inclusion because the lifestyle of Thai people is based on a culture that is tied with water sources. The Water Park and Water Garden were the Royal Initiative Project by His Majesty King Rama IX. As the area is lowland, the garden was to be arranged in a natural manner, and able to be utilized as a water retention area during the rainy season. Hence the Water Garden is considered part of the botanical garden that showcases all species of freshwater and brackish water plants found in the ecosystem. For this reason, the bank of the pond has a minimum slope in order to accommodate the bog plants, with a gradually increased incline to facilitate the growth of aquatic plants with respect to the water depth. The pond also showcases many species of lotus plants.

Suan Luang Rama IX Park is divided into six zones. The Utthayan Maharaj area features the Commemoration Hall, a nonagonal building which stands out from the rest and exhibits the life and activities of the King. The building adjoins Traphangkaeo Reservoir. The second zone, the Botanical Garden, is divided into four island sections separated by moats: the

Figure 107
Commemoration Hall (Ratchamongkhon Hall) located at the Water Park, Traphangkaeo Reservoir, Suan Luang Rama IX Park.
© Narathip Thubthun, 2019.

Figure 108
Map of Suan Luang Rama IX Park.
© Noppawan Ratanamart, 2019.

Carnival botanical garden; the Exhibition botanical garden, featuring models of international gardens (Japanese, English, French, Italian and Spanish); the Core botanical garden, consisting of a herb garden, a terrarium shed and a conservatory for American desert plants displayed in a geodesic dome and housing care and maintenance units, including a nursery and supply and repair rooms. The third zone is the Water Park (Traphangkaeo Reservoir), an excavated basin which serves the dual functions of hosting aquatic activities, and retaining and redirecting floodwater from the eastern suburbs to the Chao Phraya. The Garland Sculpture, located nearby, pays tribute to the Queen. The Rommaniya Garden duplicates the idyllic scene of nature, forest, mountain, stream, and rural beauty. The Water Garden is modelled after a pristine natural swamp in Narathiwat province. A Chinese Garden is nearby. The Sanam Rasdara—the sixth zone—is a multipurpose open ground for playing sports or holding activities. In its grounds are a gazebo and a music hall for outdoor performance.

Suan Luang Rama IX Park also has small gardens that fill corners and clearings: the Cliff-rock Garden; the Rock Garden; Magnolia Corner, a variety of members of the family *Magnoliaceae*; Benchaphan Lotus garden, a collection of lotus and water lily; and finally, a children's playground and a maze located near the Herbarium.

Authors: Suphawadee Ratanamart, Narathip Thubthun and Noppawan Ratanamart

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MAE FAH LUANG GARDEN, THAILAND

Mae Fah Luang District, Chiangrai Province
1992

Mae Fah Luang Foundation (designer under Royal Patronage)
Conservation and ecological

Keywords: floral gardens, Doi Tung, sustainability

The Mae Fah Luang Garden is the most beautiful floral landscaped garden in Thailand, abundant with temperate and tropical flowers blooming all year round. The garden is a tourist attraction and forms part of the Doi Tung Development Project, which was established in 1988 by the Princess Mother on Doi Tung. The project area covers approximately 15,000 hectares, benefiting approximately 11,000 people from twenty-nine villages. Doi Tung was once a secluded area in the heart of the Golden Triangle—a leading region of illicit world opium production. The garden was built in 1992, situated on ten acres of land on Doi Tung, a high mountain in Chiang Rai, the northernmost province of Thailand. The land was originally the Akha village of Pa Kluay, part of an important route for opium caravans and those involved in heroin-related trafficking and weapons in the past.

With the villagers resettled, a garden was created in accordance with the Princess Mother's wish to give Thai people who had never travelled overseas an opportunity to enjoy a temperate flower garden. The decorative flowers at Mae Fah Luang Garden are grown and nurtured by local villagers, hundreds of whom have been trained and work there, earning a sustainable livelihood. In the middle of the garden stands 'Continuity', a sculpture by the late Misiem Yip-In-Soi. The Princess Mother gave this name to the sculpture to draw attention to the fact that continuity ensures the success of any endeavour. The garden also displays a variety of lotus and water lily with rhythmic round shaped mountain rocks decoration.

Figure 109
The sculpture 'Continuity' in Mae Fah Luang Garden. © Suphawadee Ratanamart, 2019.

Figure 110
Lady's Slipper orchids found within the garden. © Noppawan Ratanamart, 2019.

Doi Tung is well known for its cultivation of the beautiful and rare orchids known as Lady's Slipper (in the subfamily *Cypripedioideae*), which are grown in its own tissue culture laboratory which propagates commercial plants to return them to their natural habitat in the surrounding mountains. Doi Tung now has the largest number of Lady's Slipper species, from domestic and foreign to hybrids. In 1993, the Pacific Asia Tourism Association (PATA) named the Mae Fah Luang Garden the winner of the PATA Gold Award for Tourist Site Development.

The Doi Tung Tree Top Walk is the latest activity to match the modern-day wandering lifestyle. Explorers can experience a 295-metre-long walkway among the trees of the Mae Fah Luang Garden at thirty metres above the ground.

Authors: Suphawadee Ratanamart and Noppawan Ratanamart

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HERONS MANGROVE PARK, BRAZIL

Carneiro da Rocha Street, Old City, Belém–PA, 66020–160, Belém, Pará
1998–99

Rosa Grena Kliass (landscape architect), Paulo Chaves
Public amenity and urbanism

Keywords: historic recovery, tourist destination, pedestrian reception

Mangal das Garças is the most recent project by modernist landscape architect Rosa Kliass (1932–), implemented in Belém, capital of the State of Para, Brazil. It is designed as a naturalistic urban park in the Amazonian Region. The Navy gave the state 40,000 square metres of vacant land on the border of the main waterway in the city, the Guamá River. This wetland had become a wasteland when they built a wall all along the riverside to prevent its daily tide. The project aimed to transform it into an urban park.

The objective was to place a restaurant with an open view to the waterfront and the skyline created by a towered church upon a nearby urban hill. In this sense, the project was to complete the landfill as well as build the restaurant by the river.

As Kliass visited the site, she noticed a continuous surface of indigenous water plants, mainly *Montrichardialinnifera*—the aninga, a species native to northern Brazil—struggling to survive in the small strip of wetland remaining by the river. It was vital to preserve this area, which is one of the last Brazilian urban landscapes where this species can be appreciated.

This discovery reoriented the project. Instead of filling the area, the landscape architects decided to create a park where the water was the leitmotif. In the new design, the water invades the whole area and creates compartments showcasing the natural flora of the State of Pará: the wetlands, the dry land forest, and the grassland. They decided also to place

Figure 111
The placement of the Herons Mangrove Park by the Guama River.
© João Ramid.

the restaurant on the land and build a footbridge on its outside that leads to a belvedere by the river, passing over the vast area of luxurious volumes of large and brilliant green leaves.

Conceived as a water trail, the park springs up from a central fountain, and a cascade passes through the whole area along winding streams and runs into the big lake. Paths that lead to shelters and pergolas invite us to enjoy this park, and a butterfly nursery and free water fauna complete the picture. And last but not least, there is a shop inside an old pavilion iron structure, brought to the park, where visitors can buy a range of items from postcards to plants.

Authors: Josiane Santos and Maria Cecilia Barbieri Gorski

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Figure 112
View of the Herons Mangrove Park.

PENHASCO DOIS IRMÃOS, BRAZIL

Rua Aperana, Leblon, Rio de Janeiro, RJ, CEP 22.450–190
1998–2002

Fernando Magalhães Chacel (landscape design coordinator), Roberto Ainbinder, Heloisa Guinle, Ronaldo Benevello, Carlos Manoel Silveira, Lucia Neves (Parks and Gardens Foundation team), Ricardo Villar and Antonio Violante Arquitetos (architects)

Park, public amenity and urbanism, regional park, conservation and ecological

Keywords: reforestation, ecogenesis, seaside promenade

The Two Brothers Cliff (Penhasco Dois Irmãos), also known as the Municipal Natural Park of the two brothers, two cariocas - Sergio Bernardes and Alfredo Sirkis (Parque Natural Municipal Dois Irmãos - Dois Cariocas - Sérgio Bernardes e Alfredo Sirkis), is located at the end of the beach of Leblon, in the South Zone of the City of Rio, an outcrop of magmatic rocks of the granitic-gneiss type. Together with the hills of Sugarloaf, Corcovado and Gávea, some of the most famous geological sites in the country, these features make up the profile of the Carioca landscape. They have been under federal protection since 1973.

Pastures and crops occupied the lands located around the two large rocks until the end of the nineteenth century. In the late 1930s, the area was urbanized,

Figure 113
The Two Brothers Cliff project. © Acervo Técnico Fundação Parques e Jardins, Prefeitura da Cidade do Rio de Janeiro, 2016.

and the hillside areas at the foot of the Cliff were given as donations to the Municipality. In 1992, on the request of civic amenity organizations, the Park was created with the inclusion of several small public areas. Two years later another challenge occurred: to prevent the construction of a large hotel on the slope. A more substantial area was declared to be of interest for preservation, increasing the area of the park.

From this period on, the area has been reforested through a municipality programme that uses the workforce of the surrounding favelas—Chácara do Céu, Vidigal and Rocinha—in these public works. The reforestation, which is ongoing, has been increasing the geological stability of the slopes of Two Brothers Cliff and integrating ecological corridors forming the Carioca Mosaic of Conservation Units. Fernando Chacel's landscape architecture project was implemented in stages, starting in 1998, and continued for almost six years. Working as a consultant for the Parks and Gardens Foundation (FPJ), a local body linked to the Environment Department, Chacel had the support of FPJ technicians.

Composed of gazebos and wooden decks at the highest point of the terrain (120 metres high), the park has a small arena theatre with fifty places, a dwelling area with a space for recreation and a picnic area. The area dedicated to community food production and the building called 'Casa da Horta' were implemented, but are currently intended for the production and storage of seedlings that continue to be planted in the reforestation of the slopes. The sports area with soccer field had already existed, having been used by the residents of the neighbouring favela. In the project, this area gained a support building to serve as a soccer school. The project also has an administrative module, a project by the architects Ricardo Villar and Antônio Violante, and about fifty parking spaces within the limits of the Park.

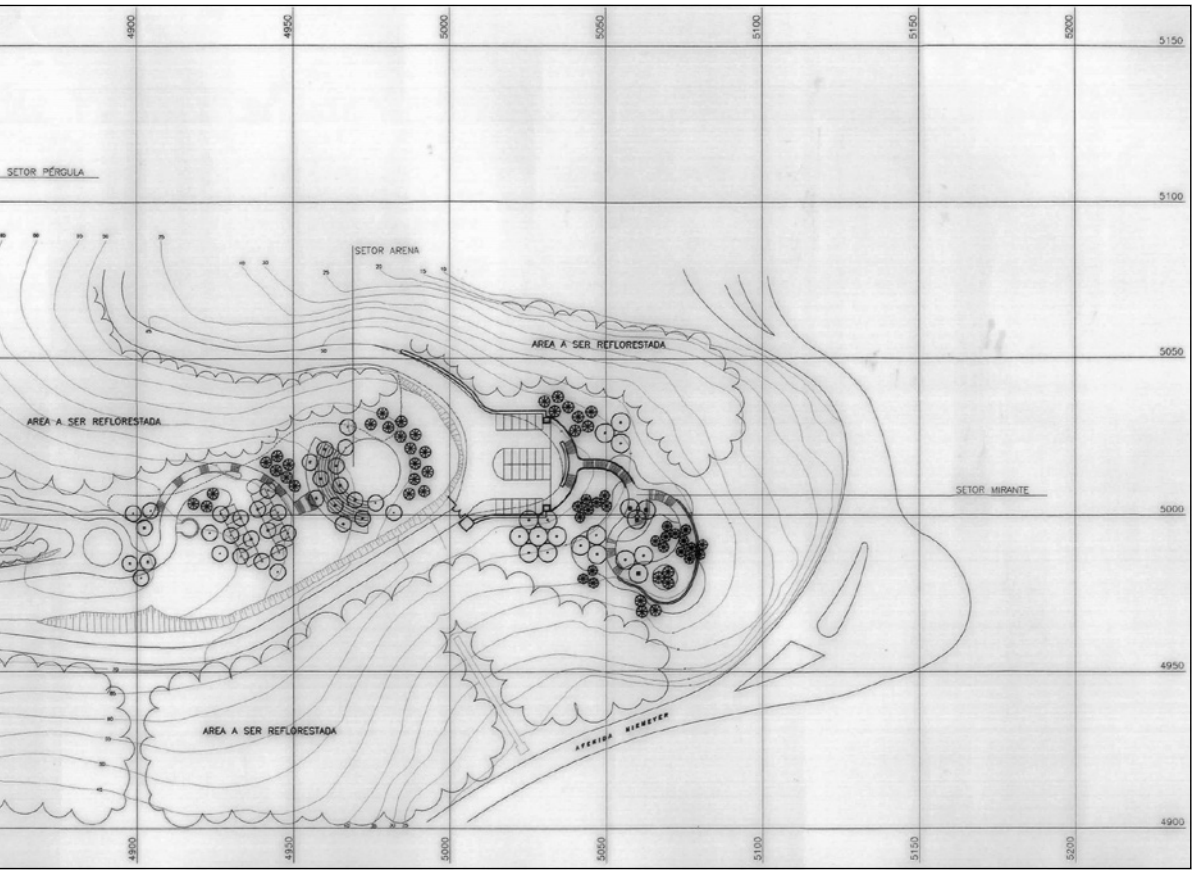

Figure 114
The design of the Two Brothers Cliff park. © Chacel Landscape Architecture, 2016.

According to Ana Luiza Nobre, 'Care for the preservation of the landscape spectacle, by minimizing environmental impact, in fact, guides the project as a whole. Chacel ... redesigned the landscape project on the site, adapting it to the contours and existing natural elements (not always indicated in the topographic survey), and occupying the ground at different levels, created by gentle movements and placement of earth' (Nobre, 2000).

The Two Brothers Cliff Park, officially called Municipal Natural Park of the Two Brothers Cliff—Architect Sérgio Bernardes, is part of the municipal parks network under the management of the Environment Department and has a Management Plan and an Advisory Board installed with representatives of public agencies and civil society.

Author: Claudia Brack

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3 INSTITUTIONS, EDUCATION AND HEALTH

Andrew Saniga, Jan Haenraets and Gulnur Cengiz

Post-war expansion was accompanied by shifts in institutional focus, whether as a product of reform or to satisfy growing needs of changing demography. One of the most notable and dramatic shifts experienced internationally related to university education. Campus infrastructure and new campuses received dramatically increased funding, delivered by newly formed commissions in a bid to meet escalating demands for campus infrastructure. New campuses were sometimes perceived as modernist citadels forged in international modernist architecture. Occupying large greenfield sites, they were often built on ex-agricultural land, cleared and nondescript, yet with newly planted landscapes seeking to deliver environmental quality. Fernando Pabón's discussion of the development of the Pontificia Universidad Catolica de Puerto Rico (1951, 1957, 1965) reveals that it was developed with a quality of spaciousness that in one sense has inadvertently been compromised through time, with the successful establishment and growth of vegetation on the site.

Often campus planning and design precedents stem from English models—the quad, the cloister, ceremonial space, and axial arrangement, as Ola Uduku and Irene Appeaning Addo explain in the project entry for the University of Ghana (1951–59). Zahra Naziri and Somayeh Fadaei Nezhad note the University of Tehran's (1934–66) links to the aesthetics of classical Persian gardens, Iranian neoclassical architecture, and International Style. As a microcosm of the city at large, the modern campus tended to also emphasize site planning for car-oriented development, zoned activities inclusive of car parking and accommodation, humanized spaces, and an internal logic that was aimed at whole-of-campus aesthetic unity. Architectural practices were often the first to take up controlling positions as new campuses expanded. But with the complexity of the task at hand, partnerships with landscape architects and planners often emerged. The designed landscape held potential for achieving high

Figure 115
The back garden at the riverfront at the Mill Owners' Association, Ahmedabad, India, by Le Corbusier. © Jan Haenraets, 2005.

Figure 116
The University of Stirling, Scotland. © Jan Haenraets, 2005.

environmental values along with a clear institutional identity. Planting design, particularly regarding essential choices between deciduous and evergreen, native or non-native, and formal/geometric over naturalistic design, played critical roles in creating visually strong character throughout whilst maintaining comfort in microclimate and functional use.

New campus sites could also possess natural features or visual qualities that carried great weight in university designers' bid to establish an institutional identity distinct from their older counterparts, with which they would invariably compete for students. In the accounts of the new campuses of the University of Ghana and Griffith University's Nathan campus in Australia (1972–75), the authors reveal attempts at innovative landscape design to facilitate institutional distinction. Griffith University is known in Australia as a 'bush campus', immersed in a pre-existing indigenous landscape of high environmental value; its site planning and design was intended to achieve an effect as if its buildings were 'lowered by helicopter' into position. The development of flora reserves immediately adjacent to buildings and within courtyards further immersed staff and students in its forested site. In these ways, university campuses are often the repositories of some of the most important extant landscapes of the modern era.

In some contemporary cities, institutions of learning are combining with institutions of health or other research institutes. In turn, such combinations are extending to the fabric of the city to form large precincts, hubs and the like, that strive to make new connections between research, education and practice. In the contemporary city, innovation hubs and technology precincts are seeing the merging and co-location of institution and infrastructure. In sharp contrast, the modernist institutional landscapes presented here are more indicative of a single-purpose masterplanned approach, as revealed in Fernando Pabón's entry for the Hospital de Distrito in Ponce, Puerto Rico (1945–55, 1965), which is set on a large site on the fringe of the city. Sites such as this, Pabón explains, face new pressures in the wake of development and suburban expansion. Institutional landscape design has resulted in sites of lasting significance, as Nishant Upadhyay and Jan Haenraets reveal of the Mill Owners' Association architecture and garden in Ahmedabad Gujarat, India (1954), amongst others.

EVOLVING CAMPUS LANDSCAPES

UNIVERSITY OF TEHRAN, IRAN

Enghelab Street, Tehran
1934–66

André Godard, Roland Marcel Dubrulle (landscape architects and architects), Maxime Siroux, Mohsen Foroughi, Nikolai Markov (associate architects), Abdol-Azizi Farmanfarmaian, Bahman Paknia, Kourosh Farzami (architects)

Institutional

Keywords: campus, architecture, designed landscape

Ordered by Reza Pahlavi (former king of Iran), the construction of the campus of Tehran University began in 1934. André Godard (1881–1965) was in charge of the site design as Manager of the Antiquities Department and Head of the Museum of Ancient Iran. The plan of the exterior and interior streets and the primary landscape plan was designed by Godard in 1934, including the mass and spatial design, the fences (March 1934), and the main and secondary terraces. On 4 February 1935, the construction started with the seed plantation of tall, shady plane trees along the streets, and which still stand today. Over time the masterplan of the campus was designed and built under different designers, including Godard, Maxime Siroux (1907–75), Roland Marcel Dubrulle (1907–83) and Mohsen Foroughi (1907–83) (Masood, 2014).

The Medical College forms the northern part of the campus, while at the eastern part the Sciences College, Literature College and College of Fine Arts are found. The Engineering College, Law College, and University Club sit at the western area of the site, with the central area of the campus consisting of a green space with a botanical garden, the university mosque and library.

Interior avenues and tall trees situated on the edge of flower beds have not only been suitable for hot dry climate of Iran but have also created direct perspectives, especially on the slope which is based on classical aesthetics of the Persian garden. It seems that the planning of the landscape was inspired by the approaches of the time, namely authenticity and rationalism. The involved architects and landscape architects graduated from the École Nationale Supérieure des Beaux-Arts (Ghobadian, 2012) and designed the whole site (except for

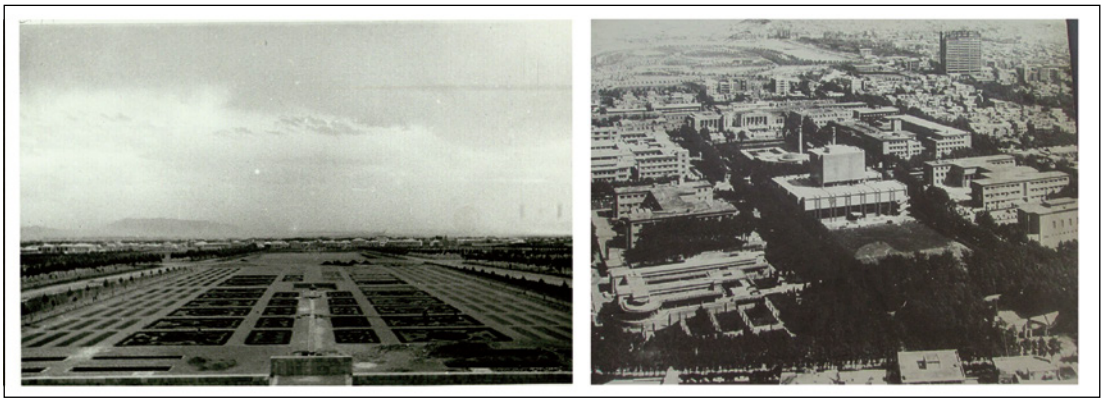

Figure 117
Left: south view of the site of Tehran University Campus after seed plantation. © Archive of the main library of Tehran University, photographer unknown, 1930s. Right: south view of Tehran University Campus. © Archive of the main library of Tehran University, photographer unknown, 1960s.

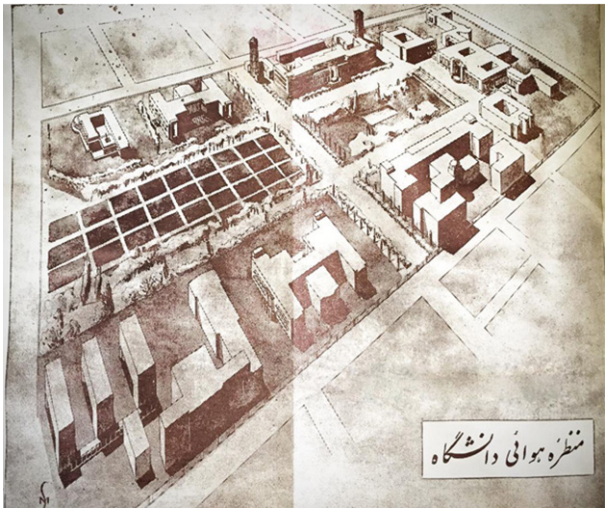

Figure 118
Sketch of the aerial view of the campus. © Archive of the main library of Tehran University, author unknown, 1960s.

the College of Fine Arts and University Club) by applying Iranian neoclassical architectural features in combination with the International style. The design of the corridors, aligned with the plane trees and building masses on both sides planned according to modular divisions, as well as elements such as the ponds in rectangular and square forms, are all reminiscent of the Persian chahar bagh.

In 1968 Dubrulle designed the College of Fine Arts on the east side of the campus, and the University Club on the west side, where Godard had previously designed a green. Contrary to the predominant use of open spaces, the exterior of the University Club was designed in a European style. This part includes grass beds with short-stemmed decorative flowers. The trees in this area have been planted in the 1980s. The landscape design of the College of Fine Arts is like other colleges based on the Iranian neoclassic style. Open spaces between the building blocks are often situated at the east and west sides. These spaces, including the flower beds, the pond and the playgrounds of different sizes, were based on the neo-classical style of Iranian rationalism, and are used as places for dialogue, eating and other social activities.

The University of Tehran—and its location at Enghelab Street—is itself a symbol of the urban reforms of the Modern Movement in Iran. The reforms have taken place in urban design systems and altered the appearance of the city, especially through the construction of wide and lengthy streets. Today, the visual attributes of the site, like the university's main gate and statues, are the symbols of higher education and a reminder that it is a place to train the elites.

Authors: Zahra Naziri and Somayeh Fadaei Nezhad

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PONTIFICIA UNIVERSIDAD CATÓLICA DE PUERTO RICO, PUERTO RICO

Avenida Las Américas, Ponce
1951, 1957, 1965

Juan Amador, Hamlet Conesa, Carl Brunner, Virgilio Monsanto, Mario Salvadori (landscape architects)
Institutional

Keywords: history, at risk, lost

About twenty-five years after the creation of Ponce's bishopric, a long-considered project for a university was undertaken. The swift transformation of local society and its economic engines from an agrarian to an industrial and service-based economy demanded an institutional educational response. Former sugar cane fields with underground water aquifers in the immediate periphery of the city and adjacent to a new highway were acquired by the bishopric to house the new institution. The campus design followed a simple masterplan most likely developed between the bishop and Juan Amador (1923–2005), the architect of the first two buildings and a disciple of Richard Neutra. A low hedge defining the border, an approximated quadrangle, various scattered groves of mahogany, almond and oleander, and an allée of royal palm trees along the main driveway, articulated large expanses of grass.

Originally, simple international-styled buildings defined the northern half of the campus. Design elements emphasized horizontality, panoramic views and transparency, as well as contrasting light, shade and shadows in the open-air galleries and lobbies, with occasional dramatic effects such as staircases and streamlined façades. The interaction between built and landscaped elements may be interpreted as Ponce's original response to San Juan's University of Puerto Rico campus, where the quadrangle's Spanish Revival buildings and landscape presents an orthogonally ordered environment. In Ponce, which had for a long time been San Juan's counterpart, modern abstract simplicity would be the chosen language

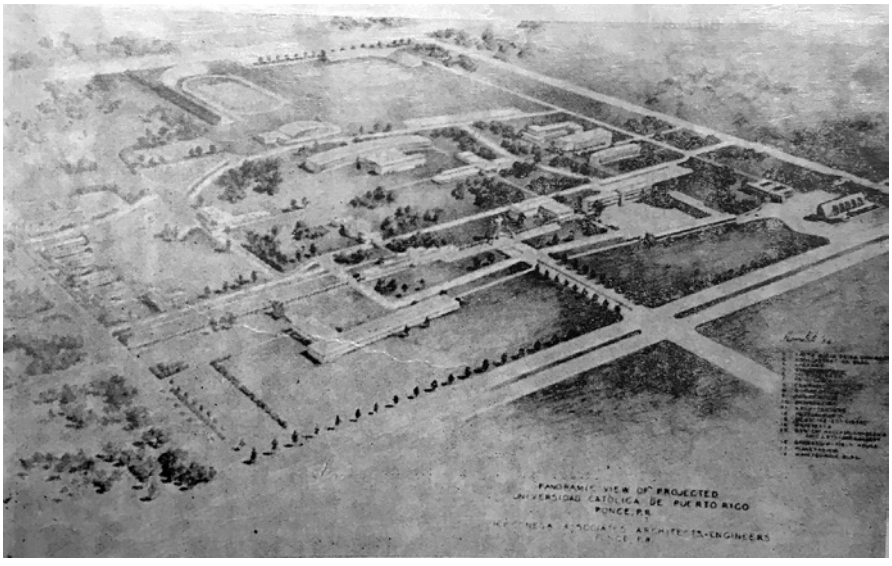

Figure 119
Second iteration of the campus masterplan of the Pontificia Universidad Católica de Puerto Rico. © Hamlet Conesa Associates, 1957.

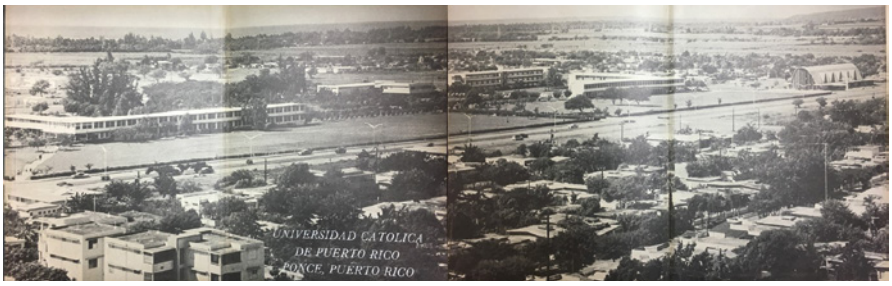

Figure 120
Panoramic view of the campus at Pontificia Universidad Católica de Puerto Rico. © Agnus, Pontificia Universidad Católica de Puerto Rico yearbook, unknown photographer, 1960.

from the start. Nonetheless, the building alignments and the allée defining the main driveway suggest a tension with, and strong influence from, Spanish–Classic heritage. The stoa-like columnar presence of palm tree rows reinforces both the classical plantation axis and the modern spatial concepts of the Cartesian grid. In contrast, the Santa María church building, designed by foreign architects Carl Brunner (1928–97) and Mario Salvadori (1907–97; consultant) is asymmetrically situated in the northwest corner; together with its extruded catenary arch cross-section, it provides the most striking piece in the ensemble. At some point in the development of the second iteration of the masterplan, a similar, yet freestanding, arch was also introduced as a central element aligned with the main driveway, perhaps in reference to Eero Saarinen's (1910–61) St Louis Gateway Arch, then under construction.

It would appear embarking on the cultural project of a university at the edge of an expanding city might best address the accelerating force of globalization. Therefore, the most adequate way to do so should employ up-to-date modern spatial techniques involving as clear as possible a landscape canvas (an unbuilt space unavailable within the urban fabric of 1950s Ponce) upon which to deploy architectural objects like a chessboard. The mostly treeless piece of land afforded largely unobstructed views of the mountains, the city, and the shore. The church's corner placement and alignment of its long axis at a right angle with the main driveway, but parallel to Avenida Las Américas, further suggests this modern conception of space in a free plan. Perhaps naïvely and unexpectedly, the very act of implementing the landscape masterplan with the associated growth and maturity of vegetation significantly contributed to the free plan's and landscape canvas legibility's loss. Present challenges include the erasure or reduced visibility of main architectural and landscape elements due to retrofits, lack of compatibility between existing and new elements, the expansion of parking surfaces, and discontinuation of the original campus masterplan's vision.

Author: Fernando Pabón, with the support of various academic and archival institutions of Puerto Rico

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UNIVERSITY OF GHANA, GHANA

University of Ghana, Legon, Greater Accra
1951–59

Austen St Barbe Harrison (architect)
Institutional

Keywords: university, West Africa, tropical

The University of Ghana was founded as the University College of the Gold Coast by the British colonial government in 1948. At the time of its initial inauguration in 1948, it was temporarily sited on the campus of Achimota Teaching College. The initial University campus masterplan was commissioned in 1951, and took until 1958 to reach completion. The University occupies a significant land area of about 1,295 hectares. The masterplan and initial campus buildings were designed by the British architect Austen St Barbe Harrison (1891–1976) of the Cyprus-based firm Harrison, Barnes and Hubbard. Harrison, who had worked mainly on commissions in Palestine and Macedonia, seems to have used oriental courtyard planning and the axial symmetry of the formal English garden as major design influences for the University of Ghana masterplan.

The university layout is located atop a major escarpment overlooking central Accra. The landscaping responds to the challenge of the steep gradient through its use of planted terracing sympathetic to the buildings, whilst retaining the symmetry of the plan. The use of locally sourced hard stone for the retaining walls of the terracing and for pathways has also worked to integrate the landscaping within the historic garden landscape design. The planting incorporates a series of formal lawns and the use of locally sourced plants to form the changes at terracing levels. Trees, notably the ornamental palm and jacaranda, have also been used to define plan boundaries and areas.

The axial symmetry of the original masterplan can be clearly seen when the campus is viewed from its highest point, a hilltop where the symbolic Clock Tower, Administrative Buildings and the Great Hall are situated. From this location there are commanding views of the entire University campus and also to various parts of central Accra.

The main teaching blocks occupy the central area, with student hostels laid out as an outer ring around the initial masterplan. There are further outer zones where various categories of staff housing are located. Senior staff housing has been planned within a suburban neighbourhood setting with defined grounds and formal front gardens. Junior staff quarter areas were planned in less formal settings, incorporating shared communal areas. Staff now use these shared spaces to take up informal allotment gardening to grow local produce for their own consumption.

The Ghana campus also has been designed to make extensive use of courtyards—an echo, it seems, of the academic 'quads' in the Universities of Oxford and Cambridge in the United Kingdom; this may have been influenced by the firm's approved design of Nuffield College, Oxford in 1940.

These courtyards are used for processional functions such as graduations. Thus, Commonwealth Hall—one of the first student halls of residence—had

Figure 121
Outdoor amphitheatre at Commonwealth Hall, designed to the topographical gradient.

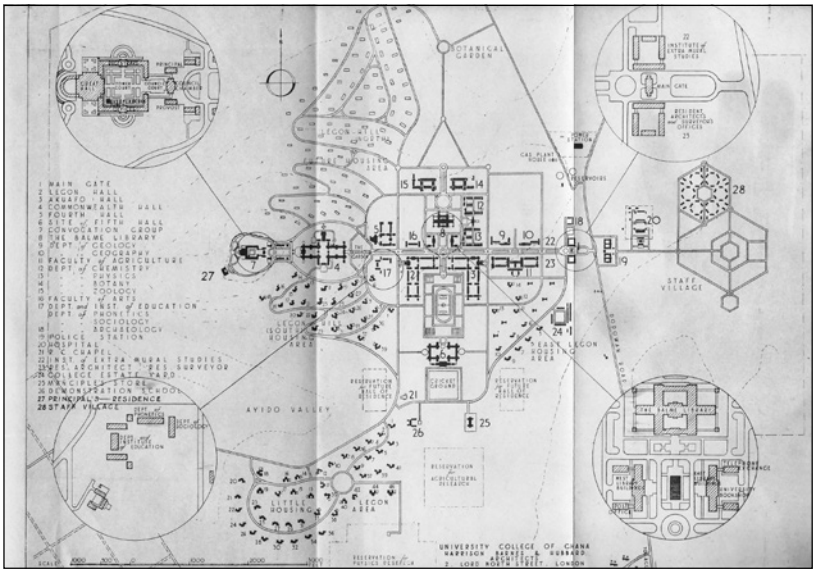

Figure 122
The original masterplan for the University of Ghana.
© Harrison, Barnes and Hubbard Architects, 1954.

an outdoor auditorium design that dealt with the steep land gradient by using planted landscaped terraces to create the raked seating area. This was the site of the University's first graduation ceremonies, and was also the venue for the British Duchess of Kent's visit at the University's official opening in 1957. Since the late 1980s there has been significant development of campus land areas outside of Harrison's original central masterplan. As this later planning has focused on areas with fewer topological challenges, the use of terracing, attention to vistas, selective planting for shade and ornament, and other landscaping elements employed by Harrison have unfortunately been absent in the University's expanded planning.

Authors: Ola Uduku and Irene Appeaning Addo

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UNIVERSITY OF STIRLING, SCOTLAND

Stirling
1966–73 (original development)

Robert Matthew, Johnson-Marshall and Partners (landscape architects, 1966–73), Ed Hilliard (project architect)

Institutional

Keywords: university, picturesque, campus planning

The University of Stirling was founded in 1967. Higher education expanded significantly in Britain after the end of World War II, initially partly in response to demand for scientists and engineers. Seven universities were founded at the end of the 1950s, while the 1963 Robbins Report called for further increases in student numbers, and further new universities were created, including at Stirling in Scotland. Robert Matthew, Johnson-Marshall and Partners (RMJM), the architectural practice which designed the campus at Stirling, was also involved at the Universities of York and Bath, and at the New University of Ulster.

The University Grants Committee—which financed university construction—favoured large greenfield sites, meaning that the new universities were built on the edge of established towns, as at Stirling. For their architects, the new universities were often understood as towns in miniature. Parallels were drawn between the functions of a university and those of a town—circulation, living, recreation, working—and so university campuses offered opportunities to experiment with urban form.

The University of Stirling was built on the 300-acre (121.5-hectare) Airthrey Estate, which had been laid out with an artificial lake and island in the early nineteenth century by White and Son of County Durham. White senior had worked with the famed picturesque designer Lancelot 'Capability' Brown.

RMJM treated the undulating landscape as a picturesque composition, in which controlled views and glimpses were key, and where there were deliberate contrasts between the open lakeside vistas and more enclosed areas of building. Writing in the *Architectural Review* in

Figure 123
The University of Stirling from the Wallace Monument, in its nineteenth-century park landscape, incorporating RMJM's campus development of the 1960s. © Mike Pennington, 2015 (cc-by-sa/2.0).

Figure 124
View across one of the lakes towards the on-site halls of residence of the University of Stirling. © Alistair Fair.

1973, John McKean thought the results 'beautiful', and suggested that the university was 'simple, disciplined, and closely tied to the topography' (McKean, 1973). As in many contemporaneous urban projects, vehicular and pedestrian circulation was separated. A loop road with spurs encircles the campus; a separate network of paths is provided, with covered elevated walkways linking the central buildings. The architecture is robust and low-key, with economical blockwork and concrete finishes.

An initial building—the 'mat-plan' Pathfoot—was constructed quickly to accommodate teaching and administration while the rest of the campus was planned and built. The main part of the campus was laid out to the south, around the lake. Residences are located on the lake's sunny, steep northern hillside. A high bridge connects the residences to the community buildings on the south bank, set at 'concourse' level above the roads. From here there are further pedestrian connections to a long, linear building, a 'wall' housing teaching and research. Punctuating this building and the Pathfoot building are small courtyards, which were given a more formal landscape treatment. Some are paved and some are grassed, while others have a mixture of planting. In 1970, David Baxendall, then the director of the National Galleries of Scotland, described the courts on BBC Radio as being like 'Japanese gardens', suggesting that views of them 'raise your spirits' (Baxendall, 1970). Throughout the campus, the areas where buildings and roads/parking meet are 'hard' in character, intended as urban 'traffic architecture' (though with much ground cover planting), and a focused, enclosed foil to the more open natural landscape elsewhere.

Financial cuts in the 1970s meant that residences planned for the eastern lakeside were never built. Nonetheless, the mature landscape is in good condition. It demonstrates an attractive balance of poetry and pragmatism, and hints at the significance of picturesque theory in urban landscape design in the United Kingdom in the 1950s and 1960s.

Author: Alistair Fair

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GRIFFITH UNIVERSITY, NATHAN CAMPUS, AUSTRALIA

Queensland
1972–75

Roger Johnson (campus planner), Kelvin Crump (architect), Neil Thyer and Barbara van den Broek (landscape architects), Colin Phillips and team (grounds staff)

Institutional, university

Keywords: bush campus, immersion, indigenous landscape

The campus of Griffith University is an excellent example of a new campus developed within an indigenous landscape (often referred to in Australia as 'the bush'). In this sense, its buildings, open spaces, recreational areas and infrastructure are completely immersed within a frame of spectacular native vegetation and natural topographical forms, including striking geological qualities. Campus landscape architect Neil Thyer, who worked for Griffith's Site and Buildings Division from its earliest days in 1972, described the visionary masterplan by planner Roger Johnson as a powerful tool that effectively bound the University's administration of property managers, planners and designers together into a cohesive and aligned team. In this way, the University was able to pursue a modern campus of great distinction relative to the state of Queensland's (and Australia's) more established universities that were often a product of the picturesque or gardenesque and thus characterized by planting schemes far more welcoming of a broad planting mix of both native and non-native species.

Johnson's Campus Development Plan as set out in the *Griffith University Site Planning Report* of 1973 aimed for a compact campus arranged along a circulation spine. The goal ultimately involved retaining and protecting existing vegetation on the site whilst achieving the

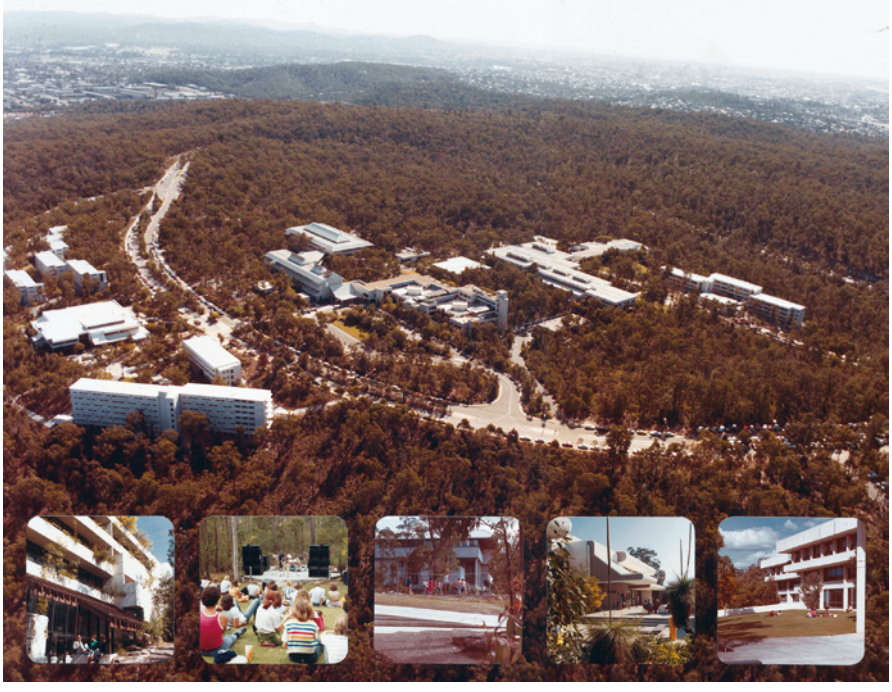

Figure 125
An exhibition panel depicting Griffith University in aerial view with vignettes of campus spaces superimposed on the image. © Landscape Australia: An Exhibition, School of Environmental Planning, The University of Melbourne; exhibition panel assembled by Neil Thyer, Griffith University Queensland, 1982.

Figure 126
Buildings within the Griffith University campus landscape were immersed in the indigenous vegetation on the site, a condition that has persisted to the current day, as depicted here in 2018. © Andrew Saniga.

character of 'a small town in a forest…the antithesis of suburbia where it is sometimes difficult to tell where the countryside finishes and the town begins' (Johnson, 1981). A degree of expediency followed with the establishment of flora reserves immediately adjacent to new buildings. This initiative resulted in striking contrasts between the new buildings of a prescribed palette of materials—which privileged light off-form concrete and unfinished concrete blockwork—with the rawness of the indigenous landscape. This allowed for the protection of unique flora during construction whilst also setting the scene for ongoing management, preservation and regeneration of the indigenous landscape. Thyer described the aesthetic intent in terms that alluded to buildings lowered into the indigenous landscape, to the extent that signage and wayfinding techniques were not dissimilar to those used in national parks. Forest Study Areas were set aside for teaching and research, overseen by a Forest Advisory Committee that was established early on in 1979 (Saniga and Holden, 2023).

A critical device in achieving the campus's immersive qualities was the specification of building envelopes and floor level datums that facilitated circulation between buildings and landscape. This reflected, at an institutional level, the modern ambition of integrating architecture with landscape: of focusing on the integration between indoors and outdoors in ways that transcended the domestic scale.

In 2016 Griffith University was considered one of the ten most significant projects realized between 1966 and 2000 by the Australian Institute of Landscape Architects. The university's dedicated crew of grounds staff have advanced via astute awareness and commitment an innovative management ethos that has upheld the site's natural qualities. Despite challenges over the decades that have ranged from the inevitable pressures of expansion and upgrades to dealing with environmental threats such as fire, the aesthetic qualities of Griffith University remain highly significant.

Author: Andrew Saniga

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LANDSCAPES FOR HEALTH AND COMMERCE

KOCHOVA ZÁHRADA, SLOVAKIA

Partizánska 1267/27, Bratislava
1929–30

Dušan Jurkovič, Jindřich Merganc and Otokar Klimeš (architects), Jozef Mišák (botanist and gardener)
Landscapes as curtilage to buildings or built form

Keywords: interwar modernism, sanatorium, garden planning

Until the 1920s, the street now known as Partizánska Ulica was an area of vineyards and orchards, covering the Castle Hill of Bratislava. More intensive construction in this locality only started after the founding of independent Czechoslovakia in 1918.

On a complex, sloping plot, Dr Karol Koch—a physician, surgeon and orthopedics expert—decided in the late 1920s to construct a sanatorium with its own garden. The design of the sanatorium was prepared by interwar architects Dušan Samuel Jurkovič, Jindřich Merganc and Otokar Klimeš. The building has a ground plan of a wide-angled letter V. Most noteworthy is its cultivated functionalist vocabulary, with ribbon windows at the centre of the façade, while the use of more traditional elements, such as the ceramic tiling and the overall symmetry of the plan, give the structure a dignified appearance.

Behind the sanatorium, a garden was created with a rich dendrological ensemble of tree species, planned and planted by gardener Jozef Mišák. In 1893, Mišák found employment with Count Ambrózy-Migazzi, who was planning for his estate in Tesárske Mlyňany the first evergreen garden (arboretum) in the territory of Slovakia.

In the Kochova Záhrada (Koch Garden) in Bratislava, Mišák unquestionably managed to assemble not only a unique collection of rare trees, but also to formulate a harmonic setting for the building itself through the sophisticated planting and conception of individual sections of the garden in close cooperation with the sanatorium architects. Originally, the

Figure 127
Front view of the Koch Sanatorium, Bratislava, c.1930s.

Figure 128
View of the garden terrace, c.1930s. © MV SR, SNA, f. D.Jurkovič, sign. A-27-IV-23-16.

garden of the Koch Sanatorium had plantings of around 120 species of foreign evergreen trees, of which thirty were coniferous and twenty-six deciduous. Regarded as the most architectonically captivating feature of the garden is its 'nympheum'—a Hellenic form that here received an ingenious modernist interpretation. In addition, in front of the sanatorium building are two artificial pools with an artistically conceived water flow hidden by white statues, apparently representing polar bears.

The space behind the building was previously dominated by a fountain conceived as a cascading waterfall. The separate terraces of the garden were connected with pathways and steps; hidden nooks on the levels contain resting areas with statues and benches. We can also find a stone table, a bird-bath and even a swimming pool. Beside the terrace, there was a platform for relaxation, which also had the function of a 'sun-bath', since during the day it received the longest period of sunlight in the entire garden. The pool and the sun-bath were separated from the access staircase and the pathways by a hedge. The relaxation area beside the staircase was paved in freely placed stones. The landscape plan included the statues 'Mother with Child' and 'Lovers', the works of an unknown artist.

During World War II, the building was used as a German gynecological clinic. The same function remains today, but under the title 'Koch Private Gynaecological and Obstetrics Clinic'. Although the Bratislava City Institute for Heritage Protection prepared an investigation of the Koch Garden in 2007, intended as the basis for preparing a reconstruction of the complex, only the clinic building underwent restoration in 2011.

Author: Katarína Haberlandová.

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HOSPITAL DE DISTRITO, PUERTO RICO

Carretera 14, Ponce
1945–55, 1965

Richard Neutra, Isadore Rosenfield, Conrad Johnson Jr., Reed, Basora and Menéndez, Horacio Díaz, Enrique Soler (architects)

Institutional

Keywords: history, at risk, lost

District hospitals in Puerto Rico were part of the modernization programme of both the last foreign governor and the first elected governor of the island territory. Their lengthy period in office (over twenty-five years) was marked by a significant socio-political, economic, and environmental transition. The rationalization of the territory by zoning laws, mass-housing programs and infrastructure projects prompted the application of standard models in all aspects of life. The planning and partial building of the district hospital in the outskirts of Ponce was meant to provide services not only for the city's residents but also to municipalities adjacent and further afield. The only other hospital complex of similar or greater standing is in San Juan, although smaller versions were planned and built in other regions.

The location of the hospital along the old central Spanish highway running from San Juan to Ponce provides a historically wide-ranging background for the complex. Significant cultural and socio-economic townscapes and landscapes lie along this road, including coffee highlands, sugarcane valleys, cattle raising farms and former tobacco-growing countryside. The roadway's infrastructural inventory of bridges, causeways and road-menders' houses is also significant on its own.

The hospital complex's striking modern appearance and setting, however, is more closely related to the period's development of carefully designed hotels, factories and military bases than to agrarian or urban agendas. Gently sloping grass expanses and scattered bushes and palm trees helped guarantee generous views of the buildings and surrounding land-

Figure 129
View from the old San Juan–Ponce road (PR–14). © Tom Lehman Flickr Collection, Virgil Stoltzfus, 1960–61.

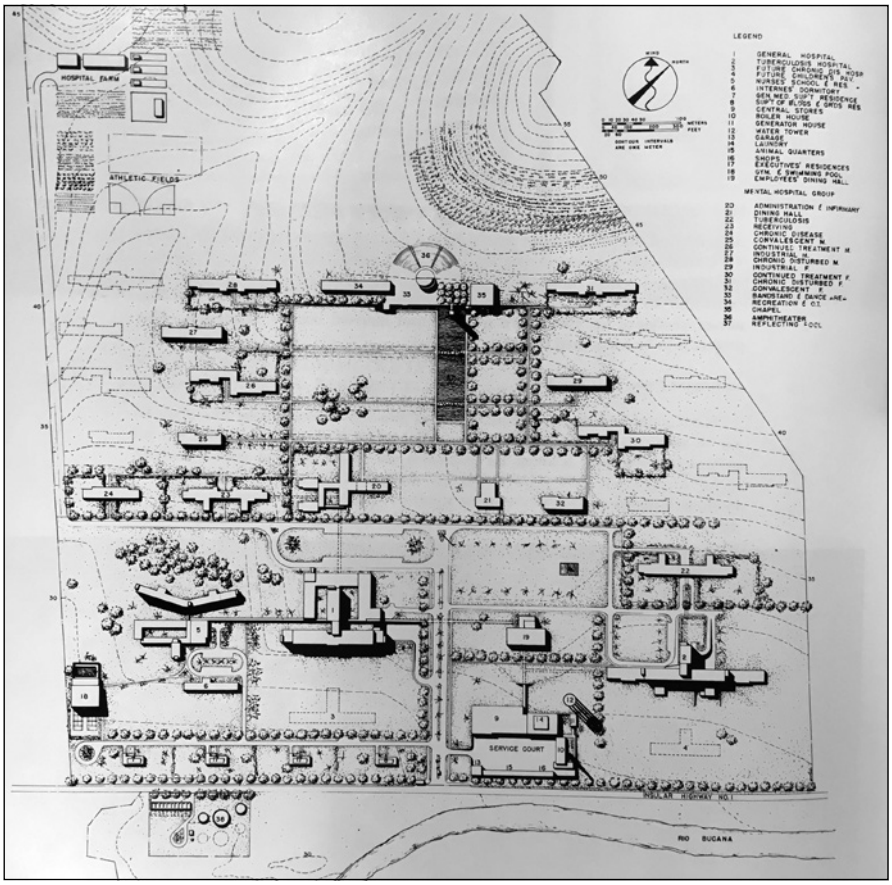

Figure 130
Hospital de Distrito campus masterplan. © Isadore Rosenfield, 1955.

scape. These slopes and associated retaining walls were also employed to hide service spaces such as loading docks. The site's circulation structure is marked by a central driveway leading to the buildings' unusually sited main entrances to its rear. Had the masterplan been completed, this area–and these entrances–would have been the centre area. Throughout the site, only a few low hedges appear to have been planted in order to organize and functionally separate the different components of the hospital complex as intended in the masterplan. Otherwise, lush interior courtyards provided contrast to the sparse surrounding lawns. This structure is further articulated by roofed open-air pedestrian walkways that connect the buildings.

Over the decades, the complex's site has been filled up by buildings and parking lots towards the road, effectively blocking the original buildings from view and erasing the landscaped lawns and gardens. Some of the buildings have also been shut off and abandoned. Portions of the site are currently for sale. The surrounding countryside has also been transformed by suburban sprawl.

Author: Fernando Pabón, with the support of various academic and archival institutions of Puerto Rico

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GARDEN OF THE MILL OWNERS' ASSOCIATION, INDIA

Ashram Road, 380009, Ahmedabad, Gujarat
1954

Le Corbusier (architect)
Commercial, institutional

Keywords: Le Corbusier, modern garden, modernism in India

Charles-Édouard Jeanneret, known as Le Corbusier (1887–1965) was commissioned to build the Ahmedabad Textile Mill Owners' Association's new headquarters, as the first of five commissions received in 1954 in India. The commissions in Ahmedabad kept Le Corbusier occupied between about 1951 to 1956, a period when he was also working on La Tourette, Ronchamp and the Maisons Jaoul in France, as well as Chandigarh. At Ahmedabad the commissions were small in scale, and—though located out in the suburbs—lay within the strong context of the fifteenth-century walled city, which sustained a continuous cultural development around the core of textile production.

The location of Le Corbusier's sites in the overall geography of Ahmedabad elaborates the aspirations of his clients. The 'organic' old city was on the east side of the Sabarmati river, with the modern Mill Owners' Association headquarters set at the river's west bank. The setting of the project, overlooking the river and its floodplains, and then the old city beyond, echoes traditions such as the Mughal riverfront gardens in India. From the rear gardens of the building, one could also visually connect with the traditional cotton-dyers and washermen working and living around the river floodplains, re-emphasizing the connection to the local textile fraternity, though with a distant hierarchical attitude.

Similar elitist attitudes in design could also be observed in the front garden, which is dominated by the concrete ramp that rises towards the façade. Le Corbusier thought of the building as a palace approached by a ramp and a ceremonial route. It was his old theme of 'une maison, un palais', but slightly more of 'un palais', borrowing the design language, site

Figure 131
View of the front garden and ramp at the Mill Owners' Association, Ahmedabad. © Jan Haenraets, 2005.

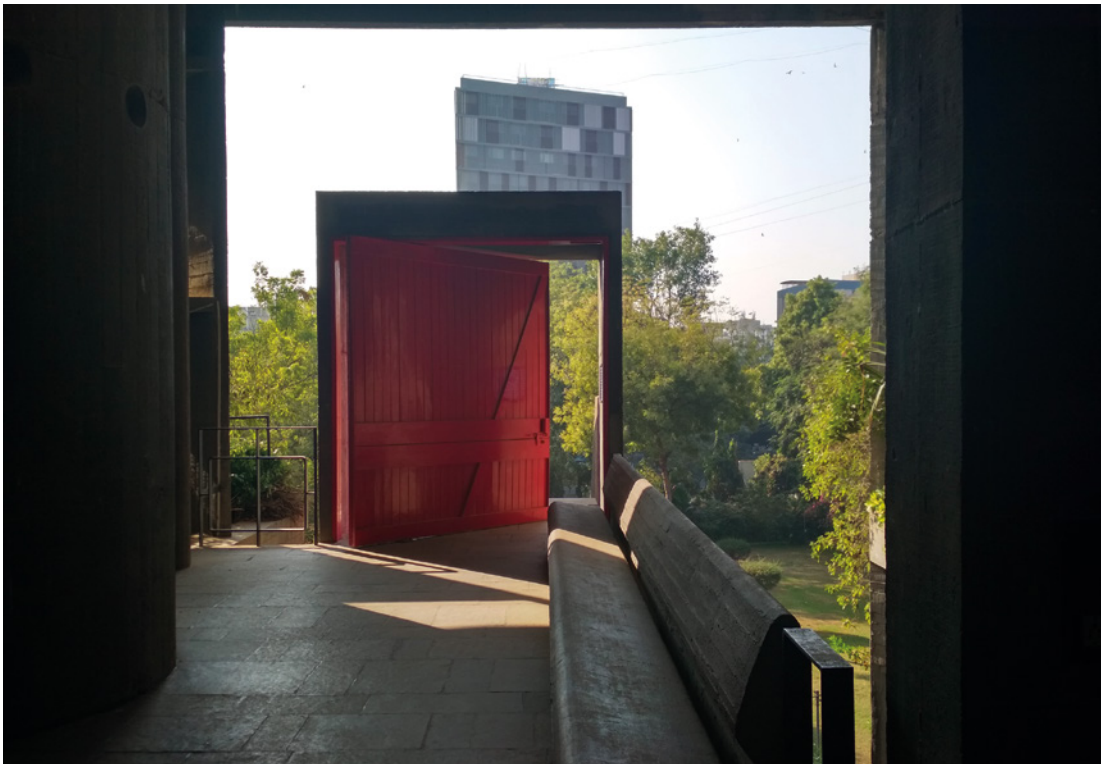

Figure 132
View from the Mill Owners' Association building in Ahmedabad to the garden. © Nishant Upadhyay, 2018.

composition and gardens of a private villa. In the early 1950s, a certain social prestige was attached to the acquisition of an independent villa in a garden—a way of life ironically inspired by that of the British cantonments. Thus, all of Le Corbusier's completed buildings in Ahmedabad have plenty of empty green space around them, contrary to the otherwise introverted planning and central courtyards of the vernacular domestic architecture.

The site planning and positioning of the building resulted in a larger front garden facing the main road, and a smaller east-facing rear garden as a terrace that overlooks the river. The angular front garden also allowed an entrance gate in the centre of the west boundary wall, at the main road, and an access drive to a small car park in the southwest of the garden. The front garden was divided by the ceremonial entrance ramp in two parts: the right side had a colonial-style grass lawn with local varieties of flowering bushes and shrubs, while the left had brick paving (changed to a concrete finish in recent decades) punctured by two trees, gulmohur (*Delonix regia*) and neem (*Azadirachta indica*) which provided shade from the strong summer sun of Ahmedabad. Both gulmohur and neem are an inherent part of the Indian landscape, versus the foreign landscape element of lawns and flower beds. As one walks up the ramp, the buoyancy of which was enhanced by linear planters below the ramp, the planters containing a mix of local green and flowering plant varieties below the *brise soleil* on the right continue to invoke the feeling and physicality of the lawn garden on the left. As the front garden is left behind, the eye is capable of penetrating the structure from the interior to the rectangles of sky. Next, an open hallway guided by columns draws the view automatically to the framework of *brise soleil* which cut a dark chequerboard against the light and frame views to the river landscape beyond.

The distinctive front and back façades and the divided front garden areas reflect a sense of duality which was ingrained in Le Corbusier's design approach, and which was implied between the dense street side and the open riverscape, perhaps hinting at the ambiguous

stance of the Mill Owners—both philanthropic and exclusive at the same time. The building gained international recognition, with the garden less mentioned—it should, however, be looked at as an ensemble, with the riverfront, garden and building complex integrally linked and designed as a functional modernist composition that echoed contemporary aspirations.

Authors: Nishant Upadhyay and Jan Haenraets

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ICI HOUSE, AUSTRALIA

1–4 Nicholson Street and 510-532 Albert Street, East Melbourne, Victoria
1955–58

Bates Smart and McCutcheon (architects), John Stevens (landscape consultant), Gerald Lewers (sculptor)
Commercial

Keywords: international modernism, Roberto Burle Marx and Isamu Noguchi, biomorphism

Widely touted as Melbourne's first building to break the city's long-standing forty-metre building height limit, ICI House (now Orica House) was a freestanding and fully glazed curtain-wall skyscraper of twenty levels high. The building functioned as the national headquarters for Imperial Chemical Industries (ICI) and was Bates Smart and McCutcheon's (BSM's) most accomplished attempt at high-rise office design. Built on raised pilotis, the seventy-metre-high building afforded a ground plane that emphasized a modern landscape design within a large garden courtyard space on the north side. It was a biomorphically-inspired landscape consisting of exposed aggregate paving, sculptural plants and rock, and water, all of which were carefully resolved in concert with the architecture. The gardens passed beneath the building, around three of its sides (including the undercroft car park), and even internally into the ground floor foyer space, where they were divided from it only by glazing that extended from the ground to the ceiling. That landscape was afforded such prominence was partly linked to the fact that John Stevens (1920–2007) had a close professional association with Osborne McCutcheon, a relationship that would lead to further commissions, most notably the landscape for Monash University in Clayton (commencing in 1958).

The office of John Stevens, opened in 1952, was one of the earliest landscape consultancies in Melbourne to be recognized as practising 'landscape architecture' when the profession began to become organized in the 1960s. Initially a graduate of horticulture and agricultural science, Stevens fulfilled his deep interest in plants by generating planting plans and designs for established architects in Melbourne, before heading to Canberra, the nation's capital, to become the landscape architect for the Australian National University, a position he held from 1964 to 1977. In his Melbourne office he employed architecture students including Malcolm Munro and Trevor Westmore, the former of whom would go on to

Figure 133
The sculptural qualities of plant form and natural materials used in ICI House, combined with biomorphic pond and garden bed alignments, reflected the design strategies of Roberto Burle Marx and Isamu Noguchi. © Andrew Saniga, 2019.

Figure 134
The large garden courtyard on the north side of ICI House was designed to integrate with the ground floor of the building. Although aspects of the original design have been modified, the external garden space still relates to interior spaces via exposed aggregate paving and garden beds extending to the base of large sections of ceiling-to-floor glazing. © Andrew Saniga, 2019.

become an accomplished landscape architect and landscape artist predominantly working in Canberra. For Stevens, the priority in design was to be astute in plant selection: the pragmatics of matching plants to particular function was his great skill, and his guiding maxim.

John Stevens and those who worked in his office at the time, such as Munro and Westmore, captured some of the essence of international modernism. This was particularly noticeable by way of the sculptural use of plants and rock, and layouts for paving and garden beds that resembled the strong biomorphic qualities of the work of Roberto Burle Marx. ICI House is considered an amalgam of a number of iconic skyscraper forms, one of which is Lucio Costa et al.'s Ministry of Education and Health building in Rio de Janeiro (1935–43) which had Burle Marx as its landscape architect. ICI House's swirling and banded patterns of exposed aggregate paving strongly resemble the abstract and graphic strategies of Burle Marx's work, although the extent to which Stevens or designers in his office used abstract painting as a strategy to generate the scheme cannot be ascertained. Along with Burle Marx, the project was inspired by the graphic composition of Isamu Noguchi's landscape for the UNESCO Headquarters building in Paris circa 1956 (Munro, 2019).

ICI House today is heritage listed by multiple organizations, including Docomomo Australia. It is still indicative of the office of Stevens's original design, although the building and landscape were altered in 1989 by architects BSM and landscape architects Tract Consultants. The alterations were transformative yet sympathetic: much of the original landscape quality can still be observed by way of the stonework, paving, water feature and Gerald Lewers' sculpture, all of which still pervade the scheme. Some of its planting, particularly the cactuses and succulents that were also deployed internally or within the car park undercroft space, have been lost or replaced.

Author: Andrew Saniga

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4 LANDSCAPES OF INFRASTRUCTURE AND PRODUCTION

Andrew Saniga, Jan Haenraets and Gulnur Cengiz

The mid-twentieth century saw the profession of landscape architecture become increasingly involved with a range of infrastructure, from sewage and drainage to freeways and the like. The post-war development boom provided unprecedented opportunities for landscape architects to work alongside engineers. Public objection from an emerging environmental lobby put pressure on those delivering impactful infrastructure projects. In some countries, landscape architects generated symbiotic professional relationships with engineers to help enable public works agencies 'sell' large-scale projects.

The English landscape architects Sylvia Crowe and Brenda Colvin held great weight across Europe and as far afield as Australia. Their writing and ideas were indicative of a largely intuitive approach, led by an acceptance of the inevitability of infrastructure. They advocated a unified effect, to be achieved through consistency in planting, functional divisions, and consideration of the visual qualities of shade, texture, colour and so on for visual harmony. Danilo Di Donato and Matteo Abita describe how Pietro Porcinai and Riccardo Morandi seized an opportunity to carefully analyse landscape qualities of the site of the Brenner Motorway in Italy (1966–74), and to make its associated landscape insulate rest areas from the noise of the freeway. In the Australian city of Perth, a major road interchange known as the Narrows Interchange (1973–74) planned to be built upon a much-admired vista across the Swan River towards the city skyline was 'sold' to the public as the opportunity to develop a major new park for the city rather than see the loss of 'Perth's Reflecting

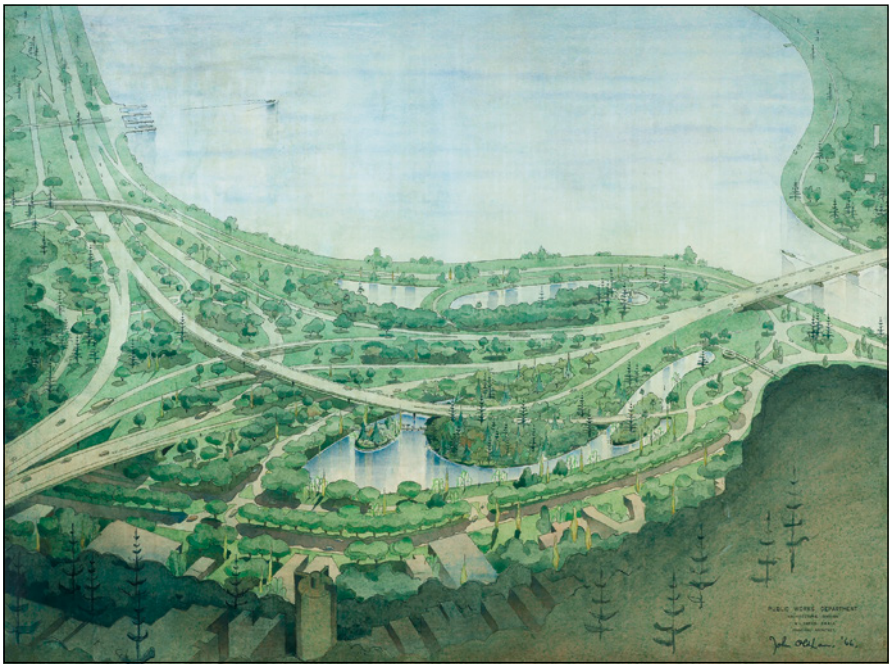

Figure 135
The Narrows Interchange, Australia. © John Oldham, watercolour, 1966.

Figure 136
Lock in Mali Stapar at the Hydro System Danube-Tisa-Danube, Serbia. © Vode Vojvodine public company.

Pool'. Modernist landscape design for infrastructure was pitched at amelioration and opportunism, rather than at activism attempting to thwart destruction in the wake of progress.

In many countries, the expansion of infrastructure also paralleled the reaffirmation of national identity and the embodiment in landscape of nation-building enterprises. This was inclusive of roads, hydro-plants, and even a nation's 'front-of-house infrastructure' by way of its international airport. The history of the Nicosia International Airport in Cyprus (1939–68) spans militaristic, political and touristic forces: its architecture and landscape, Emilia Siandou explains, embody histories of conflict amid an uncertain future. The 478-kilometre-long Israeli Road No. 90 (1967–71)—which, after the 1967 war, was the longest road in Israel—saw the linking of a number of segments of highway that had been built over many decades prior. Efrat Hildesheim gives an account of how it was designed and overseen by Shlomo Aronson in a manner intended to minimize impact, the road being considered as a symbolic national project of modernism while also a tangible manifestation of political history. In Kaunas, Lithuania, Jūratė Kamičaitytė explains how the scale, technical achievement and social benefit of the Kaunas Hydroelectric Power Plant (1955–61) were used to promote the Soviet regime that had occupied a once independent nation. In these ways political histories are often embedded in infrastructure, and in turn, they persist as essential services of a scale and necessity often impossible to erase or recast.

Landscapes of production, too, encompass rich layers of social and cultural history. These histories are inclusive of industrial evolution and its associated physical manifestations—such as workplaces—that involve design by way of architecture, open space, and working and living environments. As modern landscapes, these industrial sites exhibit change across an ensemble of physical elements, as demonstrated by projects such as the Amaindos Mine Town in Cyprus (1904–88). The authors of these project entries reveal how infrastructure—such as the Noordoost Polder in the Netherlands (1936–62)—often serves as a catalyst for change encompassing innovation in town planning, or broader land development patterns linked with farming as in the case of Israel's Kibbutz Alonim (1945–53) or the Atatürk Forest Farm in Turkey (1925–38).

Landscape management at a large scale was often inclusive of strategically and pragmatically conceived planting design. To a large extent, these landscapes have evolved organically, sometimes over many decades, and represent an amalgam of forces, making them complex sites to document and to value in terms of heritage.

Figure 137.
A bird's-eye view of the 1960s terminal building at Nicosia International Airport, taken in 1968.
© Press and Information Office, Republic of Cyprus.

LANDSCAPES OF TRANSPORTATION AND MOVEMENT

NICOSIA INTERNATIONAL AIRPORT, CYPRUS

United Nations Protected Area (UNPA), Lefkosia
1939–68

H.M. MacKay (architect, terminal, 1949), Dorsch und Gehrmann (engineering firm, terminal, 1964–68)
Transport, military

Keywords: at risk, conflict

The Nicosia International Airport (designated NIC by the International Air Transport Authority), as with most European airports of the interwar period, was first established as a military airbase. Its first airstrip was constructed in 1939 by the British colonial government at Yerolakkos, an area of Nicosia with characteristic flat land and low vegetation, which was considered ideal for an airport site. As the Royal Air Force airbase, it included separate zones: the flying field, domestic areas and technical sites, and included many different building types, such as control towers, hangars, technical and training buildings, barracks, officers' messes and other domestic buildings. Post-1945, it gradually shifted from military to civil aviation. The first passenger terminal building was designed and constructed by the Public Works Department. It was inaugurated on 23 May 1949, and celebrated by governmental officials as 'the most modern airport infrastructure in the Middle East'.

The declaration of Cyprus's Independence in 1960 coincided with the emergence of mass tourism. The newly founded Republic of Cyprus considered the upgrade of the airport and

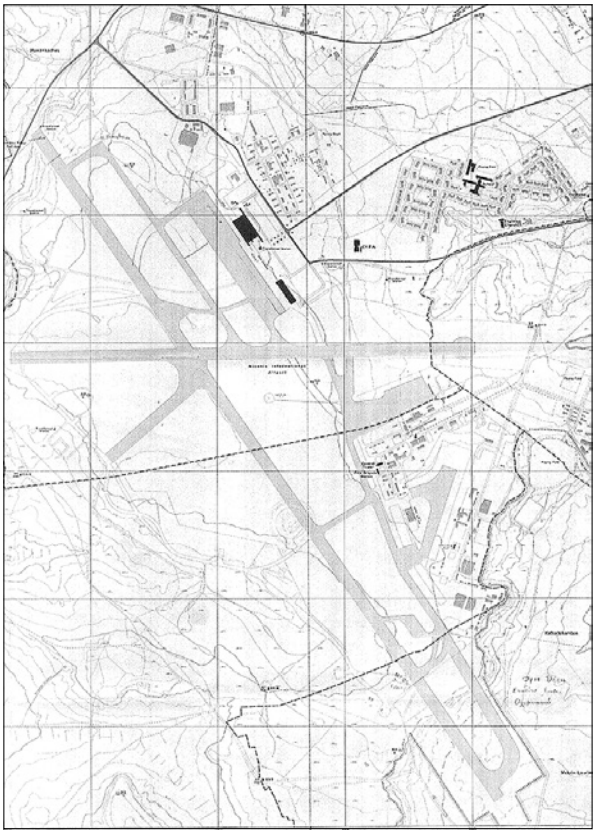

Figure 138
Topographic map of the site of Nicosia International Airport, 1973. © Department of Lands and Surveys, Republic of Cyprus.

Figure 139
A view of the 1960s terminal of the Nicosia International Airport. © Petros Phokaides, 2011.

the expansion of civil aviation as key for economic development of the island in connection to the promotion of infrastructure and tourism. The airport's expansion began in 1964 and included the construction of a new modern terminal building, designed by the German engineering firm Dorsch und Gehrmann, along with an expanded airstrip to accommodate the new types of aircraft. During the same year, the outbreak of violent episodes between the Greek Cypriots and Turkish Cypriots—the island's two main ethnic communities—led to the establishment of the United Nations Peacekeeping Force in Cyprus (UNFICYP). UNFICYP's headquarters were situated within the airport site. The appearance of more military-style structures and camps for the accommodation of the peacekeeping forces and their families contradicted the demilitarization process initiated after the end of World War II.

From the mid-1960s onwards, the Nicosia International Airport was witness to the rise of intense tourist inflows as well as military action, constituting both the main entry point and a contested strategic site to the conflict-torn island. After the Turkish military operation in 1974, which led to a permanent territorial division, UNFICYP took over its administration and rendered the site as neutral grounds, cancelling its use as an airport. Since then, the Nicosia International Airport is situated within a 'buffer zone' that cuts across Cyprus, and constitutes a United Nations Protected Area, administered by UNFICYP, accessible to members of the public only with special permission.

Nicosia International Airport forms a paradigmatic modern landscape deeply linked to international evolution in military and civil aviation, colonial and post-colonial history, and Cyprus' conflict. The events of 1974 interrupted its development, but its inclusion in the United Nations Protected Area and the buffer zone has contributed to the conservation of original structures, despite extensive signs of decay and abandonment. Its first military facilities and terminals from different phases constitute valuable demonstrations of the evolution of modern airport architecture and landscapes. Linked with all the historical phases of Cyprus, it exposes how modern architecture was employed as both a symbol and a tool of modernization, as well as of decolonization and nation-building. Moreover, it constitutes one of the prime areas in Cyprus where the changing modes of economic, social, and political authority over land and territory in Cyprus can be studied and understood. Over and above, the Nicosia International Airport landscape reveals many of the contemporary realities and manifestations of Cyprus's conflict, as well as the challenges of the appreciation and protection of modern heritage within a contested past and undecided future.

Author: Emilia Siandou

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NARROWS INTERCHANGE, AUSTRALIA

Perth
1963–74

John Oldham (landscape architect)
Road interchange

Keywords: infrastructure, public park, land reclamation

The Narrows Interchange in Perth is one of John Oldham's most accomplished works. An architect and landscape architect, Oldham (1907–99) was pivotal in advancing the idea of a new public park to be designed in association with a major piece of road interchange infrastructure. When initially proposed, the interchange was the subject of outrage, the public incredulous that the Department of Main Roads should want to fill a much-cherished landscape feature, Perth's reflecting pool. This was a large area of the Swan River that when viewed at night from atop the adjacent King's Park lookout—a favourite destination for people in Perth—it created a spectacular display consisting of the city's lights reflected on the surface of the water. Oldham was a key founder of the profession of landscape architecture in Western Australia, managing to introduce it to the Public Works Department of Western Australia (PWDWA) at a time when it was not widely recognised. Along with his first major project, the landscape of Serpentine Dam (c. 1960) completed for the Metropolitan Water Supply, Sewerage and Drainage Department (MWSS&DD) while formally employed by the PWDWA, Oldham defined the profession and recruited broadly, establishing careers of others who would continue to advance it across multiple fields of practice.

Oldham's scheme for a park was communicated through an alluring watercolour aerial perspective he drew in order to mimic the view of the Interchange from the adjacent King's Park. In this way the PWDWA's attempt to swing the balance of public debate hinged onde-monstrating the project's vision for creating much needed parkland for the city, despite the fact that the new road interchange would also be a destructive act in terms of the Swan

Figure 140
John Oldham Park at the Narrows Interchange, Perth. A landscape of cascading waterfalls, ponds and lakes helped soften the impact of the Narrows Interchange while also providing new parkland for the city of Perth. © Andrew Saniga, 2019.

Figure 141
John Oldham Park at the Narrows Interchange, Perth. Large stones as sculptural elements were placed along paths and alongside ponds and lakes. © Andrew Saniga, 2019.

River's ecology. In characteristic fashion for the times, when people like Sylvia Crowe and Brenda Colvin were accepting of the inevitability of infrastructure in the post-World War II years, the park at the Narrows amounted to a method for softening the impact of infrastructure. It included a large lake with promontories and cascading waterfalls, a curvilinear path network through and around the lake and the freeway, and a large-scale exercise in the propagation of plants for the site with a mix of native and non-native plant materials.

Oldham was adamant that a modern Australian profession of landscape architecture should be inextricably linked to the Australian landscape—and ultimately Australian identity; he wrote that 'as we develop a garden aesthetic inspired by this "Australian vision", we shall also create a characteristic and beautiful Landscape Architecture' (Oldham, 1959). However, his renderings for the Narrows also depict scenes that reflect Japanese design, a tendency stemming from the writings of people like Christopher Tunnard and extending to well-heeded modernists such as James Rose in America and Karl Langer in Australia. Stepping-stone paths over water, and a strong sculptural use of planting and stone, all helped convey a modern sensibility that broke from the English picturesque and the Arts and Crafts, which were both predominant design aesthetics widely used in Australia up until that time.

The park at the Narrows Interchange, now named 'John Oldham Park', continues to form a key part of the image of the city of Perth—as viewed from both the infamous lookout at King's Park and the road as motorists go streaming by. In addition to the historical associations that the park has regarding the emergence of landscape architecture in Australia, the park's aesthetic qualities continue to evolve in keeping with the intent as depicted in Oldham's modernist renderings, making it a significant example of mid-twentieth-century landscape design.

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BRENNER MOTORWAY, ITALY

The Italian section of the motorway between the cities of Verona and Brenner 1966–74

Guido De Unterrichter and Bruno Gentilini (engineers, masterplan), Bruno and Lino Gentilini (engineers, design Italian motorway section), Pietro Porcinai (landscape design, artistic direction, 1964), Riccardo Morandi (structural consultation, 1964), Studi Esecuzione Progetti Ingegneria, Trento (SEPI SRL) (technical project, 1965–72)

Transport

Keywords: infrastructure, integration, greening

The landscape design of the Brenner Motorway followed a clear strategy: to develop 'A lofty plastic work … that is able to impress a continuity of greenery, lines and colours' (Matteini, 2004). This route connects Modena, in the north of Italy, with Innsbruck in the western part of Austria: the motorway is a crucial corridor crossing the Alps, as a part of the major route E45 that links Italy with Norway. Its construction began at the start of the 1960s. The first layout of the Italian section of Brenner Motorway was planned by the engineers Bruno Gentilini (1925–88) and Lino Gentilini (1933–2001) with Guido de Unterrichter (1903–79). The Gentilini brothers recognized the importance of landscape integration: indeed, they affirmed that 'it is necessary to blend the motorway in the natural environment with a layout that follows a bending line, increasing the field of vision of the driver with continuous changes of scenery' (Facchinelli, 2003). Therefore in 1964 the Ministry of Public Works and the Province of Bozen appointed Pietro Porcinai (1910–86) to achieve a balanced integration of the motorway with the mountainous landscape of South Tyrol.

Figure 142
The sculptural modelling of the terrain along the Brenner Motorway, at a junction close to Chiusa-Bozen.
© Archivio Fondazione Ing. Lino Gentilini, C0001. 0820.01.001, S. Dal Bosco.

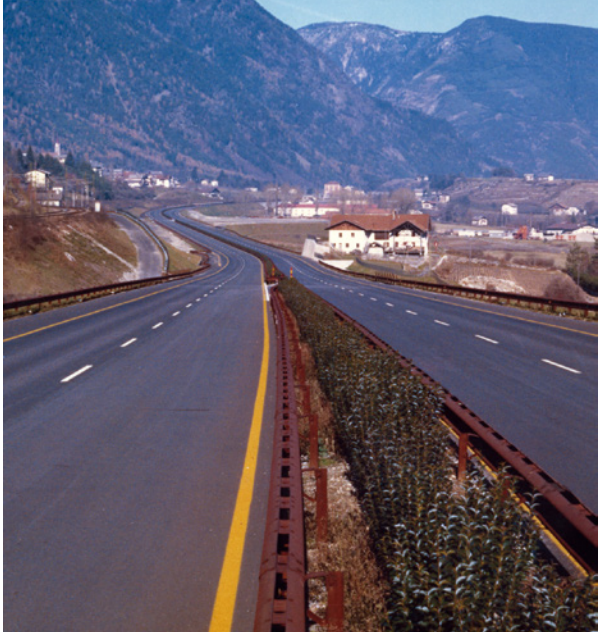

Figure 143
The green area between the two directions of the Brenner Motorway and weathering steel guardrails. © Archivio Fondazione Ing. Lino Gentilini, A0007.0008.00.000, G. Chiolini & C.

Influenced by the writings of Sylvia Crowe, and experiences of North American parkways and cultural exchanges with his colleague H. M. Schiechtl (who was responsible for the Austrian part of the A22 project), Porcinai worked on two operational domains: the sculptural modelling of the terrain in correspondence with bridges, viaducts, galleries and nodes; and the design of the greening along the road.

The modelling of the ground functionally merged the irregular shape of the landscape with the structures of the pathway, which were also studied by the engineer Riccardo Morandi and mainly built of reinforced concrete. Carriageway barriers were made of brown steel, a material that was chosen for its chromatic affinity with the colours of the local soil.

For the greening, Porcinai designed roadside gardens. For instance, using the processes of cut and fill to produce modelled soils supported by timber retaining walls. They ranged from three to twelve meters in height creating 'a sort of garden at the territorial scale' characterized by grass and medium-sized bushes of local plants. In order to visually and acoustically isolate rest areas, Porcinai modelled route embankments and inserted tree lines which were mainly composed of evergreen plants of South Tyrol.

Porcinai defined a project that was able to establish a new and balanced relationship between the infrastructure and the qualities of the landscape. Unfortunately, the full project was not completed; in particular, radical changes affected the greening design, which were instead often simplified with the removal of artificially shaped ground areas. In addition, significant elements of Porcinai's design appear to have changed over time due to inadequate maintenance and decay.

Authors: Danilo Di Donato and Matteo Abita

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ISRAELI ROAD NO. 90, ISRAEL

Northwest Dead Sea Road: Ein-Gedi–Ein-Feshkha segment, Road No. 90
1967–71

Rafael (Rafi) Lerman (architect, Nature Reserves Authority, 1967–69), Shlomo Aronson (landscape architect, Nature Reserves Authority, 1969–71), Dov Eisenberg (engineer, Public Works Department, 1967–71)

Transport

Keywords: road construction, infrastructure, national ideology

Israeli Road No. 90 extends from Israel's northern border with Lebanon to Eilat on its southern border with Egypt. The road is aligned with the Israeli–Jordanian border, with one quarter of it (118 kilometres) extending along the disputed territories of the West Bank. The road's first modern segment (Tiberias-Zemach) was built in 1920 by the socialist Zionist movement 'Gdud HaAvoda'. Yet until 1971, it never constituted one complete road, but rather, segments, as a result of harsh climate, steep topography, conflicts, wars, and politics.

In 1948, when the British Mandate ended, almost all parts of the road existed, except for one segment between Kibbutz Ein-Gedi (three kilometres south of the 'Green Line'—the 1949 armistice border) and Ein-Feshkha (Einot-Tzukim) springs—then Jordanian territory, and now Israeli–Palestinian contested territory. This thirty-five-kilometre segment on the north-western coastline of the Dead Sea had neither trail nor path and was considered impassable due to topographic conditions. The outcome of the 1967 war seemed to open a window of opportunity to complete the road and achieve territorial integrity through landscape and road.

After the 1967 war, the undetermined status of the territories and the State's unofficial policy 'not to decide' on this matter enabled the road's completion, initiated by senior officials of the Nature Reserves Authority (NRA), Israel Defense Forces (IDF) and the governmental Public Works Department (PWD). Shortly after a three-day survey conducted by NRA architect Rafi (Rafael) Lerman, the works began, with no formal planning process, operated and executed on-site by the Public Works Department. The completed road became the longest

Figure 144
Northwest Dead Sea coastline south of Ein-Feshkha, in 1967 and 2017. © Rafi Lerman 1967, courtesy of Rafi and Edna Lerman; Efrat Hildesheim, 2017.

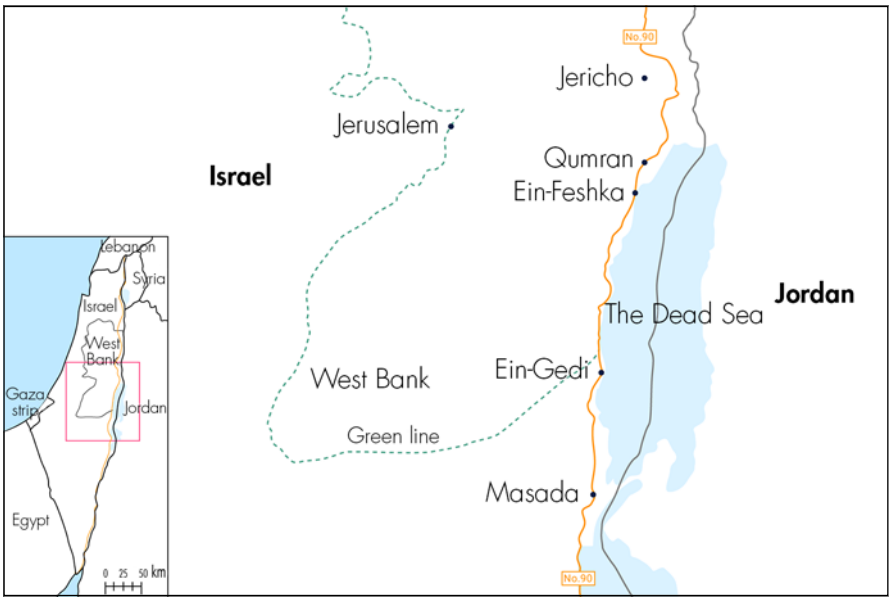

Figure 145
Schematic map of Northwest Dead Sea Road, Israeli Road No. 90. © Efrat Hildesheim, 2017.

in Israel (478 kilometres), highly environmental and landscape-sensitive, yet indifferent to the geopolitical circumstances of the occupied territories.

Public Works Department engineer Dov Eisenberg and architect Lerman, succeeded by landscape architect Shlomo Aronson, worked alongside 550 workers from Gaza. They minimized damage to the landscape by following the existing topography, using local rocks, stones and gravel as road bedding with no cut and fill, and thus creating efficient drainage. The works were actively supported by the Ministries of Labor and Defense, Members of Parliament and Israel Defence Forces authorities. The press and media declared it a symbolic national project that would connect two of the nation's greatest myths: Masada, the last stronghold of the Jewish revolt against the Romans in 73 CE, and Qumran Caves, where the Dead Sea Scrolls were found.

The project reveals deep ideological beliefs and great trust in the Zionist-national meta-narrative (Lyotard, 1984), a circumstance which expresses the modernism inherent in it: the building of one road, from Metula to Eilat, as a symbolic realization of the great national whole—an ideological unification of nation, territory, landscape and nature.

This unification raises several aspects regarding the materialization of the national-modernist vision: a project of national scale, intertwining nature, landscape and modern technology; the materialization of speed, a symbol of the modern revolution (Virilio, 2006); a territorial consolidation allegedly creating one sovereign geographical entity and border-territory affiliation; and an ideological affinity between progress and futuristic technology, and heritage and national mythology (Dimendberg, 1995)—all of which constituting a collective national identity.

Today, the Northwest Dead Sea Road is a modern carriageway with breathtaking landscapes. Yet a military checkpoint north of Ein-Gedi is both a constant reminder of the Israeli-Palestinian conflict, and a breach in the integrity of the national meta-narrative.

Author: Efrat Hildesheim

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VISIONS FOR AGRICULTURAL PRODUCTION

ATATÜRK FOREST FARM, TURKEY

Yenimahalle, Ankara
1925–38

Hermann Jansen (planner), Ernst Egli (architect)
Industrial and farming, leisure

Keywords: urban–rural landscape, public space, mixed-use

Established by the founder of the new Turkish Republic in 1925, Atatürk Forest Farm is one of the unique large-scale heritage landscapes in Turkey. As a spatial tool of the social and economic restructuring of Turkey, the farm became the icon of modernization in the domains of agriculture and industry as well as in social policies. For those reasons, besides being a landscape asset, the farm has very strong representational, associational, and intangible values related to the venerable heritage of Atatürk and his ideas of modernization, as well as the social, cultural and spatial goals of the republican revolution, and the principles of being a modern and self-sufficient society.

The farm was recognized as a 'model' to maintain agricultural and industrial revolution by introducing farmers to new and modern techniques as well as supporting modern agricultural practice and inventions, and in turn, the society with modern values and practices. On an urban scale, one of the major functions of the farm was agricultural, involving production,

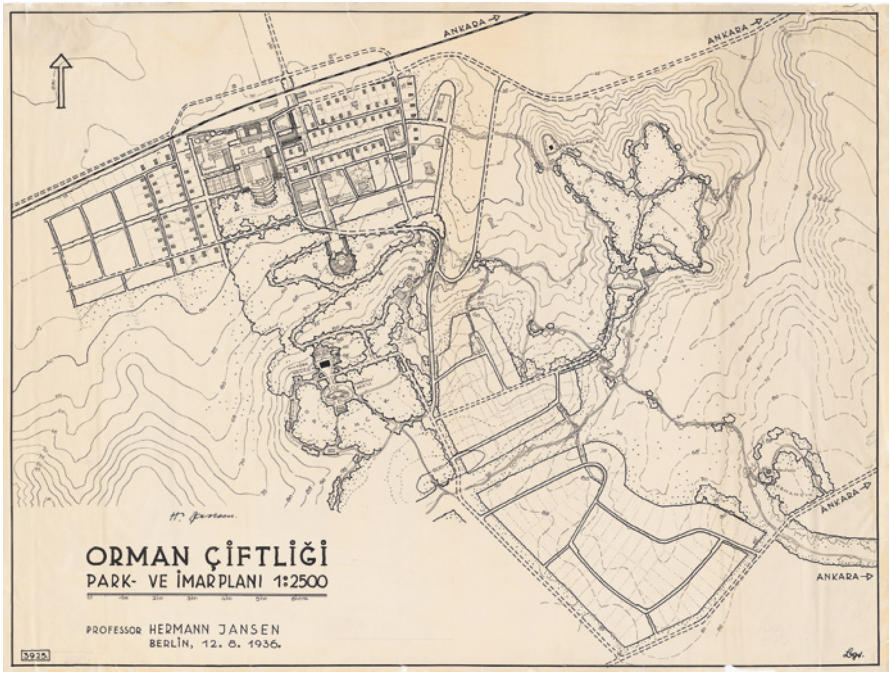

Figure 146
(left) Park and site plan for Atatürk Forest Farm by Hermann Jansen, 1936. © Architectural Museum of Berlin Technical University, Inv. Nr.23338. (above) The largest limits of the Atatürk Forest Farm after 1938 and the current condition of Atatürk Forest Farm and urban area. © Çağatay Keskinok, 'Bir Özgürleşme Tasarısı Olarak Atatürk Orman Çiftliği'. In *Bir Çağdaşlaşma Öyküsü: Cumhuriyet Devriminin Büyük Eseri Atatürk Orman Çiftliği*. Ankara: Koleksiyoncular Derneği, 2008.

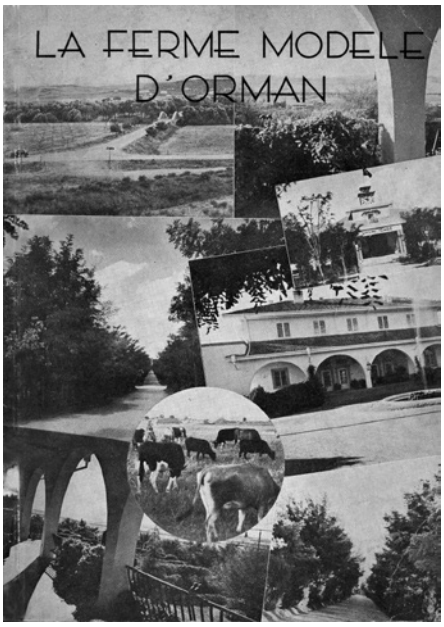

Figure 147
Atatürk Forest Farm in 1936. © *La Ferme Modele d'Orman*. Ankara: Ministry of Interior Affairs, 1936.

education and experimentation, and aiming to contribute to the nourishment of inhabitants with safe foods. Another function of the farm was to provide new and modern modes of recreation to the urbanites by replacing the marshlands near the new capital, Ankara, with modern and productive landscapes.

Once marking the south-west edge of the city and covering approximately an area of fifty-two-million square metres, the landscape character of the farm and its recreational uses differed from the ones within the city centre. The farm was offering a mixed-use landscape to citizens by which industry and nature, and production and recreation were experienced together in a planned/designed setting. This manifold spatiality was clustered into agro-industry factories, housing compounds, and social and cultural facilities like education, sports, health, and recreation. Designed by Swiss architect Ernst Egli (1893–1974), certain built assets of the farm reflect the common characteristics of the early-twentieth-century modern architecture. The site plan, on the other hand, was worked out by German urban planner Hermann Jansen (1869–1945) who also prepared the Ankara Masterplan between 1932 and 1937. The modern built environment of the farm was enfolded within rural scenery and consisted of dry and irrigated farming areas (market gardens, plantation zones, meadows, vineyards, orchards and forests) as well as wetlands.

Although the farm remained the private property of Atatürk until its donation to the National Treasury, it has always been one of the most significant public spaces of Ankara. The land transfers from the farm started immediately after the loss of Atatürk and have continued despite the conservation decisions made in the early 1990s. The farm has lost more than half of its land and certain built assets have been demolished or transferred. The remaining farmland, however, is one of the most significant components of the Ankara valley system and water basin, and covers endemic and planted flora that are capable of enhancing the environmental quality of the city. Currently, the farm remains at the geometric centre of the city as a promising cultural and natural landscape agent for developing landscape strategies in an urban scale.

Authors: T. Elvan Altan, Nilüfer Baturayoğlu Yöney, Selin Çavdar Sert, Ebru Omay Polat and Yıldız Salman

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La Ferme Modele d'Orman, 1936. Ankara: Ministry of Interior Affairs.

NOORDOOST POLDER, THE NETHERLANDS

Flevoland
1936–62

Cees Pouderoyen, Marinus Jan Granpré Molière and Cornelis van Eesteren (spatial layout), Jan Bijhouwer, Guus Overdijkink, Pieter Verhagen and Pieter Boodt (landscape designers)
Land reclamation

Keywords: land reclamation, regional design, comprehensive planning

The 48,000 hectare Noordoost Polder—a joint effort of civil engineers, landscape architects and urban planners—is one of the polders in the former Zuiderzee. The polder lies three to five metres below sea level and is protected by dikes. The former islands of Schokland (UNESCO World Heritage) and Urk are embedded in the reclaimed land. The rational layout of the polder contrasts with the adjacent historic landscape.

The construction of the dike started in 1936 and the land fell dry in 1942. The final layout and landscape design are post-World War II with the landscape plan dating to 1947, although construction of the first farms and houses already started during the war. Construction continued from 1936 to 1962.

The reclaimed land was primarily meant for food production; optimal use of fertile soils was an important criterion. Based on state-of-the-art agriculture at the time, standard plots were twenty-four hectares each (800 by 300 metres). Other land uses such as woods were subordinate and situated on sandy soils and areas with poorly permeable boulder clay.

The layout of the polder was based on Christaller's Central Place Theory and consisted of a concentric system with a central town surrounded by a circle of villages (Christaller, 1933). One of them is Nagele, a modernistic village by Aldo van Eyck, Gerrit Rietveld and landscape architect Mien Ruys. Radial roads and watercourses completed the basic layout of the polder.

Figure 148
Landscape plan of 1947 for the Noordoost Polder, by Bijhouwer, Pouderoijen and bureau Granpré Molière, Verhagen & Kok. © Collectie Nieuwe Instituut/EEST, 9.223.

Figure 149
Aerial view of farm clusters in the Noordoost Polder. © Photo Siebe Swart for Rijksdienst voor het Cultureel Erfgoed, 2013.

The landscape plan was rational, simple and functional, though at the same time rich and sensible. Plantings were designed in line with the basic structure, and not only provided a habitable landscape with some shelter, but also added an architectural spatial dimension. The designers developed a new repertoire of architectural tools on a landscape scale, creating rhythm and scale in the vast openness of the newly reclaimed land. The concentric system was elaborated in a clear hierarchy that enabled orientation. Fast-growing poplar plantings along the ring road and the central axis created large compartments. Together with the woods on the poor soils and greenbelts of the villages, they formed a strong framework. Minor roads within the compartments were planted with other species (ash, elm and others, depending on soil and wind exposure), providing each compartment with a specific character. Farms, sometimes with houses for farm labourers, and surrounded by windbreaks, repeated the concept of the village greenbelt on a smaller scale.

Even though many developments have taken place, such as an increase in the scale of agriculture, bulb production, greenhouse developments, wind turbines and shrinking villages, the polder has maintained its landscape characteristics. The icon of Dutch modernist landscape design has turned into a robust, mature landscape. In 2012, the Noordoost Polder was designated as one of the post-war reconstruction areas (1945–65) of national importance.

Authors: Marlies Brinkhuijsen and Anita Blom

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KIBBUTZ ALONIM, ISRAEL

Jezreel Valley
1945–53

Hanka Huppert-Kurz (landscape architect), Shlomo Vardi (chief Kibbutz gardener)
Domestic and residential, industrial and farming

Keywords: native plants, locality, kibbutz landscapes

The narrative of rehabilitating the landscape and remaking it anew was central to the modernist project of Zionism. Most of the European-trained landscape gardeners practicing in Palestine in the early-twentieth century saw the existing landscape as depleted and barren, a *tabula rasa* on which the new homeland would be designed. Moderating the effects of the local climate would be accomplished by a massive project of 'greening' the Mediterranean landscape, using quick-growing imported plants. While aspects of local culture were selectively appropriated in the making of the new Hebrew culture, native plants hardly figured in these newly-planted landscapes. Paradoxically, it was through the use of imported plants that landscape gardeners hoped to create a sense of belonging: a new 'home'.

However, in the 1940s an alternative discourse emerged regarding the use of native plants, led by a group of landscape architects that included Hanka Huppert-Kurz (1901–98), who trained in Vienna at the *Hohere Gartenbauschule fur Frauen* and emigrated to Israel in 1929. She promoted an Israeli gardening style based on local conditions including climatic factors and the use of regionally specific native plants to strengthen the sense of local identity and place. Designing with native plants was a common theme in gardening literature, especially in the journal of the Gardeners' Association, *Ha-sade La-gan Vela-nof*, during the 1940s and 1950s. Numerous articles presented theoretical as well as pragmatic arguments for their use, based on their ability to survive and adapt to the semi-arid climate with minimal or no irrigation (Alon, 1954; Rosemann, 1957).

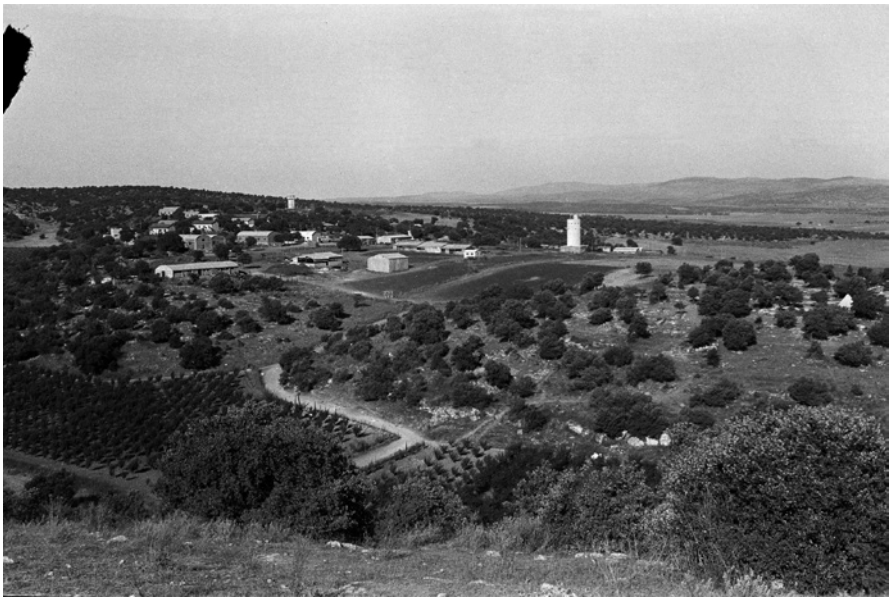

Figure 150
Kibbutz Alonim in the 1940s. © National Photo Collection, Zoltan Kruger, 1946.

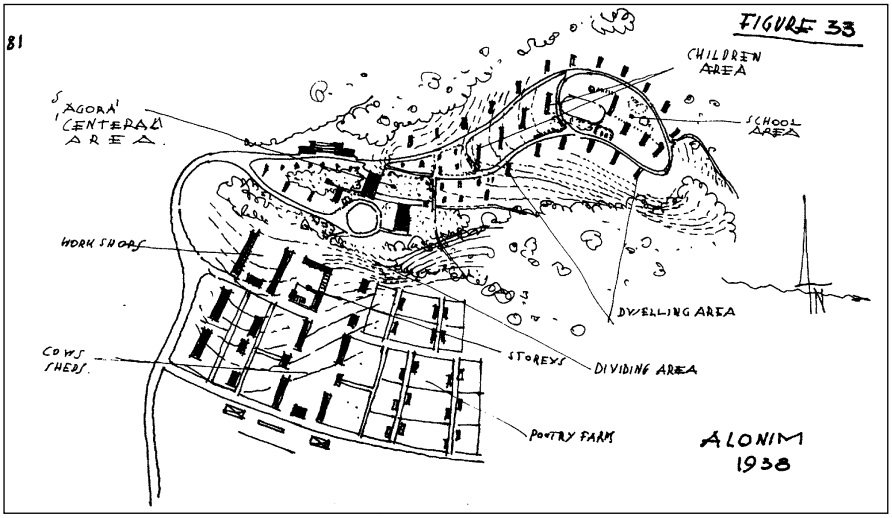

Figure 151
Sketch plan of Kibbutz Alonim. © Yad Tabenkin Archive, Shmuel Bickels, 1938.

This approach can be seen in the landscape of Kibbutz Alonim, founded in 1938 near Tiv'on in the northern Jezreel Valley, which Huppert-Kurz designed in collaboration with gardener Shlomo Vardi. The kibbutz was an agricultural settlement based on an ideology of collective ownership, shared property and equality in the areas of production, consumption and education that was established in the early-twentieth century. By the 1940s kibbutz landscapes were being designed according to accepted spatial layouts and shared a common planting palette, largely made up of non-native species that together produced an image of the kibbutz as a green oasis. Kibbutz Alonim took its name ('Oaks') from its location adjacent to a native woodland of Mount Tabor oak (*Quercus ithaburensis*). Unlike most kibbutzim that were characterized by their spacious lawns and lush gardens, Alonim was integrated into the existing oak woodland. The original water-intensive planting plan by landscape architect Shlomo Oren-Weinberg was not implemented due to the limited water supply. Instead, Huppert-Kurz was hired in 1945 to design a woodland landscape, using local plants that would provide continuity between the kibbutz and its surrounding landscape. Bulbs and wildflowers were naturalized, and other woodland species were transplanted from the wild. A local landscape was created, though occasionally it was based on an *imagined* locality that included species from other regions and plant communities. A notable example is the wide use of the Judas tree (*Cercis siliquastrum*) which was transplanted from the Carmel Forest.

The Israeli ambivalence towards the local landscape—by turns disparaged as a 'wasteland' and embraced passionately—underlies the cultural attitudes that have shaped designers' planting choices in Israel. The debate regarding native versus non-native plants can be understood in terms of the competing claims at the heart of the Zionist project that sought to be both 'new' and 'native', embracing both east and west.

Author: Elissa Rosenberg

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LA MARTELLA RURAL VILLAGE, ITALY

La Martella, Matera
1951–54

Federico Gorio (engineer), Ludovico Quaroni, Michele Valori, Piero Maria Lugli, Luigi Agati (architects, 1951–54), Mauro Sàito (completion architect, 1989–2001)

Domestic and residential

Keywords: remoteness, rural village, community

The rural village of La Martella was born as an agricultural district five kilometres from Matera, as part of the process of displacement and rehabilitation of the Sassi districts (law. n. 619/52), in an active political–cultural climate influenced by the action of Adriano Olivetti (President of the Istituto Nazionale di Urbanistica and vice-president of the United Nations Relief and Rehabilitation Administration—Casas Institute). It was the first example of an integrated landscape–agricultural design. In a similar fashion to the nearby villages of Venusio and Torre Spagnola (unrealized), the village rose on a slight relief in the Bradano valley near Monte Timmari, at a time when the artificial lake of San Giuliano had not yet been constructed. It was founded following a stellar scheme of centripetal development, concentrating services and public spaces (church, kindergarten, theatre, clinic, schools and square) in the centre and distributing the residential buildings along neighbourhood streets that branched off outwards. The bell tower of the church is the central point of reference. The planning of the new houses for the peasant inhabitants is based on an anthropological and sociological investigation of the neighbourhoods of the ancient Sassi quarter, developing traditional distributive aspects (house and stable) and considering some typological solutions of the ancient centre. The neighbourhood streets are developed as an aggregation of two-level houses that can be arranged in various ways and they are built with a continuous tuff structure. Depending on the slope of the neighbourhood streets, different morphological solutions are used in planimetric and altimetric terms: where it is possible, the difference in

Figure 152
General view of the site of La Martella.
© Quaroni Archive.

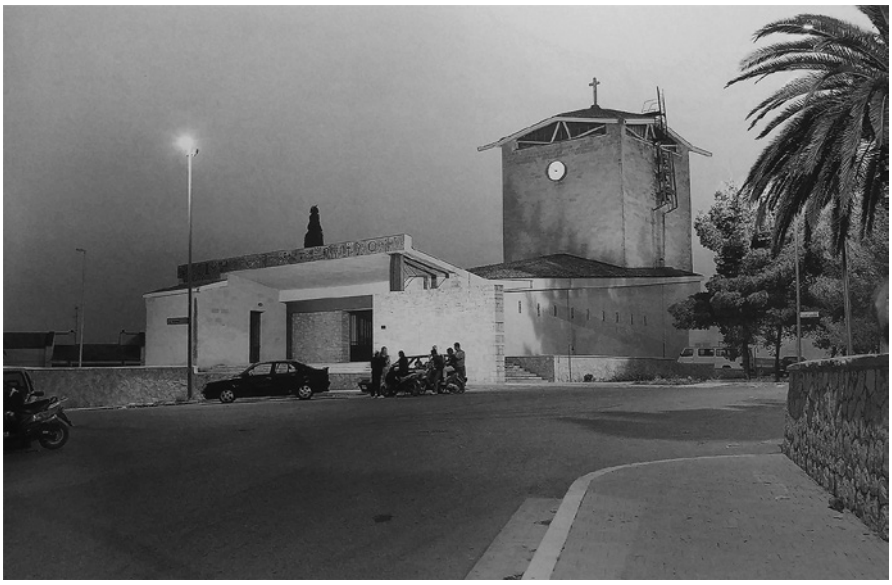

Figure 153
The church by Ludovico Quaroni.
© Quaroni Archive.

height is solved by placing adjacent buildings at different heights. In cases where the slope is greater, it is solved by placing different portions of the same building at different heights. Common bakeries conclude the perspective of some streets.

After a period of abandonment, in 1989 the completion of a non-built neighbourhood street was proposed for the international competition Europan 1, on the basis of the original planimetric and volumetric project. The project, by architect Mauro Sàito, involves the construction of some buildings similar to those of the original project. The new building types, made in tuff and cement structure (1999–2001), are inspired both by the original residential models of the modern village and by the typological and constructive tradition of the Sassi. Other analogical completions of the village were realized subsequently. The village is currently inhabited as a suburban district near the industrial area, but it has widespread elements of degradation, partly due to choices made during construction, and partly to the poor maintenance of buildings. The church by Ludovico Quaroni was restored between 1989 and 1991 (M. Sàito project, G. Grande structures).

The village of La Martella is still considered a valid example of integrated planning in the landscape of Matera's countryside that should be better protected through detailed urban planning oriented to the restoration of the original project.

Authors: Mauro Sàito and Federica Bonerba

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LANDSCAPES OF ENERGY

AMIANDOS MINE TOWN, CYPRUS

Troodos Mountain, Lemesos District
1904–88

Walter Henry Clarke et al. (landscape architects)
Extractive community, mining infrastructure, workers housing and social services

Keywords: abandoned, partly rehabilitated

The Amiandos Mine Town (officially named Pano Amiandos) gradually formed into a company town during British colonial rule (1878–1960) and the early post-Independence years (the 1960s). Developed around the opencast extraction of asbestos, the whole site received its name after the alternative Greek word for the mineral, amiandos (αμίαντος), which means 'undefiled' or 'pure'. The mining operation started in 1904 and was abandoned in 1988 after the international campaign of the 1980s against asbestos's impact on human health. It was developed mainly by foreign private companies (British, Danish, etc.) on the site of the state-owned forest in the mountain range of Troodos, at an altitude of approximately 1400 metres. Its huge expansion took place prior to independence as part of the wider development of the mining industry in colonial Cyprus, whose exports in 1956 reached sixty-seven per cent of all exports of domestic products. Until Word War II and the extensive mechanization of production, the mine gave seasonal employment up to approximately 6,000 labourers per year, having a daytime population of approximately 10,000 people (Christodoulou, 1992; Given, 2005).

At the time, Amiandos Mine Town included mills, workshops, stores, hundreds of workers' houses, commercial buildings, a hospital, schools, a church and athletic fields, as well as a twenty-six-kilometre-long aerial ropeway to the nearest coastline for the exportation of the ore. Due to its gradual development, intense soil geomorphology and lack of integrated planning, its spatial organization was fragmented, also reflecting attempts for class and even racial segregation as part of broader efforts to impose labour control and raise pro-

Figure 154
Postcard featuring an early-twentieth-century photograph by J.P. Foscolo, with the caption 'Natives working at the asbestos mines, Cyprus'. © Michalis Sioulas archive.

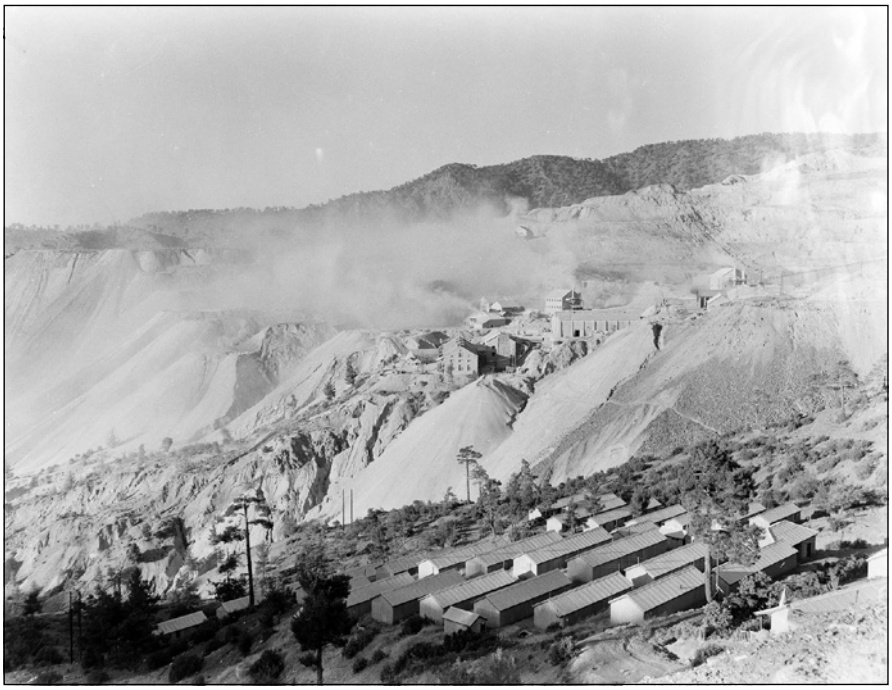

Figure 155
Panoramic view of the Amiandos Mine Town from the west in the 1950s. © Press and Information Office (PIO), Republic of Cyprus.

duction efficiency. In this context, working and living conditions were particularly harsh: labourers worked from sunset to sunrise, living in overcrowded and miserable conditions under intense policing and a monopoly of basic consumer goods such as bread. On the contrary, senior staff enjoyed special comforts and luxury living. While emblematic buildings and foremen's and engineers' houses were designed by architects, the workers' houses were either self-built shelters or standardized constructions provided by technical departments of the mining companies.

After World War II, working and living conditions improved due to the development of trade unionization and wider reforms implemented by the colonial government, while the labour force shrank due to the rapidly increased mechanization of production, including the use of excavators and locomotives, which replaced the manual work of hundreds of workers. In the early 1960s, the production line totally transformed, with the installation of modern crushers, screens and an up-to-date mill nine storeys high which replaced the existing old fashioned mills. Between the 1940s and early 1960s, various structures and whole neighbourhoods were demolished to facilitate the more modern production line along with new construction projects—including workers' housing—took place. In the late 1970s, international demand for asbestos peaked, while in the 1980s the realization of its disastrous effects on human health led to the closing of Amiandos Mine Town in 1988 (Varnava, 1993).

Operating for more than 80 years, Amiandos Mine Town is for Cyprus a paradigmatic modern landscape with architectural, historical and heritage value. Firstly, it was the site where the typology of worker's housing first appeared, and one of the first places where technological innovations such as electricity were introduced in the early-twentieth century in Cyprus (Sioulas and Pyla, 2019). Secondly, as one of the larger private employers in colonial Cyprus (the largest in the 1920s), Amiandos Mine played an important role in working-class formation in the island's agrarian-based economy and society, being the site where major workers' strikes took place. Finally, as one of the largest mining centres of Cyprus where workers' health was extensively at risk, Amiandos Mine Town supported the extraction and international trade and application of hazardous asbestos, ultimately manifesting

the disastrous impact of extractive capitalism on human health and the local environment. Nowadays Amiandos is public property and a rehabilitation programme that focuses mostly on the reforestation of the abandoned mine is underway. Located in the National Forest Park of Troodos, a Natura 2000 area, the programme has also established a visitors' centre and a botanical garden. However, most of the preserved buildings are abandoned, and only a few are still in use. In this respect, its value as a paradigmatic landscape which exposes the complex local and international histories of modernization has not been fully appreciated or highlighted.

Author: Michalis Sioulas

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HYDRO SYSTEM DANUBE-TISA-DANUBE, SERBIA

Autonomous Province of Vojvodina
1947–77

Nikola Mirkov, Dimitrije Milovanov, Žarko Šuput, Stevan Radonjić, Jovan Rakić, Milenko Marjanov (landscape architects)

Public amenity and urbanism, land reclamation

Keywords: irrigation, flood-control, amelioration

The Hydro System Danube-Tisa-Danube (Dunav-Tisa-Dunav, Channel D-T-D, Hs D-T-D) is the largest hydro system in Serbia, interconnecting the watercourses of the Danube and Tisa rivers in Vojvodina, and covering 960 kilometres of natural and built watercourses, around 600 kilometres of which are categorized as navigable. The system connects eighty towns and villages in Vojvodina. Its purpose is multifaceted, serving for drainage of inland waters, flood protection, water supply, navigation, tourism, fisheries and forestry. Its main purpose is water supply for irrigation, and its capacity by design is irrigation of 510,000 hectares, but currently only around 50,000 hectares is in use.

The first built structures of the system date back to the eighteenth century, when the amelioration of the Bačka region began, leading to the construction of a seventy-kilometre-long canal on the Begej river and the 114-kilometre-long Great Bačka Canal in 1793–1801 (designed by Jozef and Gabor Kisz). These older structures have been included in the new system, which was conceptualized by engineer Nikola Mirkov in 1947 and built gradually until its completion in 1977. For this project a vast survey of the land was undertaken at the end of the 1940s, creating new maps of the region. The estimations are that some 400 engineers and experts worked on this project. The project was funded by the Federal Investment Fund, making it one of the top state priorities, mainly because of stabilization of food production, but also to prevent the damage from constant floods that occurred all over Vojvodina and Central Serbia.

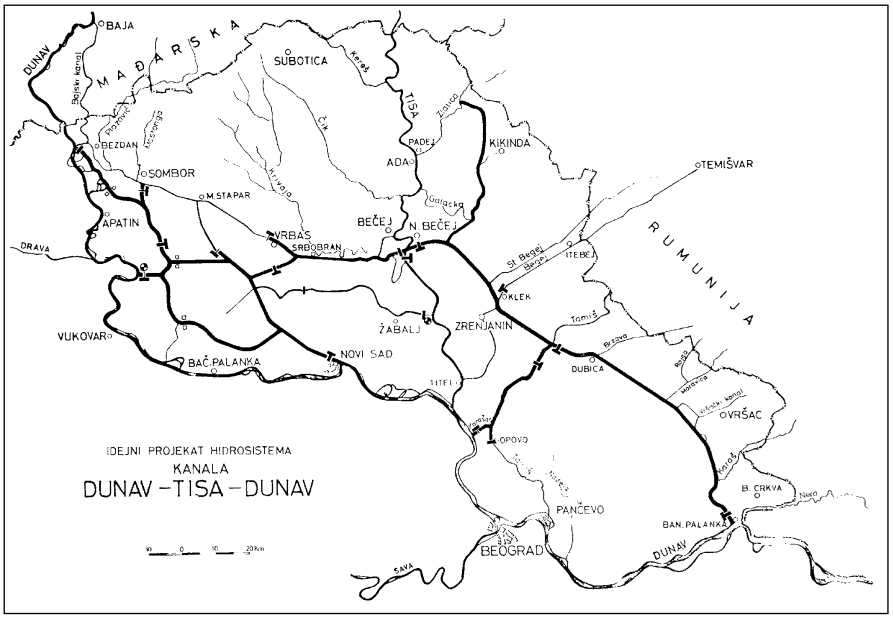

Figure 156
Concept map of the Hydro System Danube-Tisa-Danube (Dunav-Tisa-Dunav). © From Dimitrije Milovanov, Hidrosistem Dunav-Tisa-Dunav. Novi Sad: Vodoprivredno Preduzeće Dunav-Tisa-Dunav, 1972.

Figure 157
The dam on the Tisa River of the Hydro System Danube-Tisa-Danube. © Vode Vojvodine public company.

After resolving the urgent issues of irrigation and drainage, the conditions were met for (re) developing the settlements surrounding the channel. The Institute of Urbanism of the Province of Vojvodina was commissioned to undertake a study, titled 'Organizational Basis of the Space Surrounding the Hydro-System Channel D-T-D', from which to develop the spatial, urban and communal component of the system, especially in the towns and villages on the channel. The scope of the study included sixty-six settlements in proximity to the channel and sixty-two settlements within one to two kilometres of it, with cities, towns and villages included. The goal of the study was to propose a concept for changing the landscape of Vojvodina to eliminate steppes and battle dryland salinity with cultivated forestry and agriculture. It was also intended to use this vast project to benefit the planning and development of the settlements in its surroundings, namely to programme spatial capacities for recreation, tourism and green spaces, and also reorganize the industry, housing and recreational zones of the regional urban centres. Today, the system consists of: eighteen new and fifteen previously existing sluices, five of which are working as sluices and the others repurposed as locks; five safety sluices; ten new and five already existing locks; six pump stations, all built from 1953 onwards; the dam on the Tisa river near Novi Bečej, the largest and the newest structure of the system; eighty-six new bridges, which service sixty-four highways, twenty-one railroads and one pedestrian pathway. Besides being a large amelioration and hydro-transportation system, Danube-Tisa-Danube is also the largest urban, communal and spatial system of Serbia and region, with 128 settlements and around fifty per cent of the population of Vojvodina gravitating and benefiting from it.

Author: Jelica Jovanović

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KAUNAS HYDROELECTRIC POWER PLANT LANDSCAPE, LITHUANIA

Kaunas
1955–61

Department of Institute of Hydro-energy-project in Moscow, D. Chrenov
Industrial and farming

Keywords: hydropower station, regional park, conservation

Kaunas Hydroelectric Power Plant was one of Lithuania's biggest infrastructure projects at the time of its construction. It formed a precedent that has influenced further development of Lithuanian energy infrastructure, the growth of Kaunas city, and the changes in the quality of its natural environment and landscape. Following the decision to exploit the potential of the Nemunas River for electricity production, work began in 1955 (Steiblys, 2019). The place for the Kaunas Hydroelectric Power Plant was chosen according to a proposal made by engineer J. Smilgevičius in the interwar period (Čerbulėnas, 1981). During the five-year construction of the power plant Kaunas Lagoon was formed by damming the river at Pažaislis. The water of the river rose by 19.5 metres in nine months, and forty-five settlements were evicted from the area occupied by the lagoon: villages, farmsteads and Rumšiškės town. The lagoon flooded 0.1 per cent of the area of Lithuania—about twenty villages. The forests and gardens in the valley were cut, the wells of the homesteads were buried, and the cemeteries were evicted in preparations of the bottom of the future lagoon. The towns of Birštonas and Darsūniškis were not flooded due to the installation of embankments, drainage channels, and water pumping stations (Čerbulėnas, 1981). In 1958, it was decided to plant protective greenery on the lagoon shores, using indigenous tree species: pine, spruce,

Figure 158
View of Kaunas Hydroelectric Power Plant and its landscape. © Gintaras Gintautas, 2015.

Figure 159
Girionys forest park with a view over Kaunas Lagoon to Pažaislis Monastery. © Jūratė Kamičaitytė, 2020.

birch, gray alder, black alder, aspen, etc (Čerbulėnas, 1981). As a result, in 1960, the Girionys forest park was created. Besides indigenous species, the following exotic plants were planted in the park: *Abies nordmannniana, Chamaecyparis pisifera, Juniperus squamata 'Meyeri', Picea abies 'Cranstonii', Pinus ponderosa, Pinus sylvestris 'Fastigiata', Acer platanoides 'Globosum', Catalpa bignonioides, Corylus colurna, Fagus sylvatica 'Purpurea Latifolia'*, amongst others.

The construction of the power plant at that time was used as an ideological instrument to demonstrate the indispensable benefits of the Soviet regime. Articles on the construction of the Kaunas Hydroelectric Power Plant appearing in the press constantly informed readers about the use of the latest techniques, the scale of the object, its future benefits, and so on. (Steiblys, 2019).

The lagoon is the largest artificial water body in Lithuania and an exceptional technogenic work in the basin of Nemunas, with abundant exposures (places where layers of rock or sediment open up to the earth's surface) and flooded valleys of streams. The area of the lagoon is 63.5 square kilometres, the length is eighty kilometres, the maximum width is 3.3 kilometres, and the maximum depth is 24.6 metres. In the lower part of the lagoon (about twenty-five kilometres, between the dam and the Strėva influx) the water flooded the entire Nemunas valley. The lagoon is widest and deepest here. In the middle section (about twenty-two kilometres, between the influx of Strėva and Darsūniškis) only part of the valley is flooded; the width is 500–800 metres, and the depth is ten to twelve metres. In the upper section, Nemunas flows through its riverbed; the width is 200–300 metres, and the depth is four to five metres. On the right bank of the lagoon, Kruonis Hydro-accumulative Power Plant was built in the end of the twentieth century. Kaunas-Marijampolė highway passes through the dam of the Kaunas Hydroelectric Power Plant. It also protects the city of Kaunas from flooding (Čerbulėnas, 1981).

In 1992 Kaunas Lagoon Regional Park was established in order to preserve the unique landscape and to ensure its public access. Facilities include a visitor centre, five educational paths, five equipped recreational places, one campsite, and three museums. The peculiarity of the landscape is determined by the large pond aquatorium that has a plastic configura-

tion and is limited by the forest-covered high slopes. The forests surrounding the water body are mostly of spontaneous origin (929.58 square kilometres). Around 2.4 per cent of them are planted as protective greenery (Čerbulėnas, 1981). The naturalness of the park landscape makes a contrast with the prevailing adjacent urbanized and agrarian territories. The high, steep shores and exposures are the most characteristic elements of Kaunas lagoon landscape that give the park its individuality.

Author: Jūratė Kamičaitytė

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5 MEMORY, COMMEMORATION, PROVOCATION

Andrew Saniga, Jan Haenraets and Gulnur Cengiz

The designed landscapes of memory, commemoration and provocation signify a rich and experimental realm of landscape architecture. The ambition to imbue meaning finds expression in materials, landform, fields of objects, ephemerality, and crucially, the conscious use of sculptural elements, sometimes of imposing scale. In this sense, a broad palette of forms emerges, triggering an array of realms in the fine arts.

Nations' cemeteries are a pragmatic necessity, yet are also places that form an alternative 'companion' to the public park. The experimental nature of commemorative landscapes is evident, perhaps as a product of remembrance affording degrees of artistic or poetic licence. The combination of landform and art emerges in evocative and innovative ways. Nataša Koselj explains that at Rab Memorial Cemetery, Croatia (1953), the growing and changing landscapes trigger reflections on death and memory. The examples presented here suggest contrasting approaches to memorials, whether as edifices to a single person or family, each with a distinctive aesthetic quality, or as a mass grave or memorial site, which harnesses serialization or repetition, itself speaking to the gravity of the event in 'field display', imbuing a sense of intensity or sign of significant change.

Other spatial distinctions emerge. The need for systems of interment lends itself to regular forms and repetition, and the incorporation of materials such as concrete in new ways. The integration of landscape and architecture was a product of the functional aspects of cem-

Figure 160
The Azadi Square, Tehran, Iran.
© Archive of National Library of Iran, unknown photographer and date.

eteries in the dual necessities of crypts or mausolea combined with more traditional burial 'plots' beneath individual tombstones. Carolina Quiroga and Mariana Quiroga explain that the Underground Pantheons of the Cemetery of Chacarita, Argentina (1958), exhibit a complex layering of space, an explorative use of materials, and the recognition of the powerful impact that ephemeral aspects such as light and a sense of vacancy might play in the experience of place. A material 'dialogue' between architecture and garden also emerges—for example, the physical and visual 'weight' of Plečnik's materiality in façades impresses on the experience of the adjacent spaces, as at the Begunje (1937–39) and Draga Memorial Area (1953), or Žale Cemetery (1938–40), all in Slovenia.

Beyond the cemetery as a site of commemoration are examples of landscapes with momentous associative meaning. As nations recognize and recall the past, a space opens for provocation, employing spectacle and display. Significant to many of the project entries in this chapter are the shifts in political structures to which landscapes bear witness, and the complex interpretations that ensue around questions over cultural significance and landscape as heritage: whose heritage? What to remember or recall? A striking example is represented in the landscape for the Ninth Fort in Lithuania (1976–84), a country literally torn by waves of occupation most graphically played out in World War II, but historically extending back over many centuries. David Lowenthal captured related phenomena in his most poignantly titled book, *The Past is a Foreign Country* (1985). For European countries that had been annexed by the Soviet Union, the post-Soviet condition of the late-twentieth century has seen a complex array of changes and debates played out upon historical sites. In a comparable vein, Negar Mansouri's project entry for the memorial at Azadi Square (1967–71) to commemorate Iran's celebrations for the 2,500th Anniversary of the Iranian

Figure 161
Antiquities in the garden of the National Museum, Damascus, Syria. © Anas Soufan, 2010.

Figure 162
Stairs and bench at the entrance platform to Rab Cemetery in Croatia by Edvard Ravnikar. © Damjan Gale, Docomomo Slovenia Archive.

Empire is not only demonstrative of the breadth of time of cultural association: it is also a reminder of the potential for memorials erected in an attempt to 'summarize' great complexities in the historical past. In still other contexts, institutional landscapes represent political eras and complex histories of revolutionary change. Indre Grazuleviciute-Vileniske explains that Unity Square and the Garden of Vytautas the Great War Museum in Kaunas, Lithuania (1921–40, 1950–89, 2017–), demonstrates how shapes and forms in the modern landscape are inevitably recast in bids to forget and to heal in the wake of political upheavals of the past.

The modern landscape has been designed and built as a 'canvas' upon which to express ideas. The nature of expression varies, from the scribing upon a site at Little Sparta (1967–c. 1997) at Dunsyre in the Pentland Hills in Scotland, which—as Carsten Hermann explains—was itself a form of rebellion, to the use of landscape as a setting for sculptural form that in different ways complements site and locale.

The aesthetic dimensions of contrast serve to bring natural landscapes into relief. The authors of the project entries of Plaza del Peine del Viento in Spain (1974–77) and the monument for the Founders of the Bulgarian State in Bulgaria (1979–81) reveal how sculptural form interplays with terrain and vegetation for impact.

Figure 163
The Temple Pool Garden at Little Sparta, Scotland, by Ian Hamilton Finlay, created by diverting water from the moorland, with the Temple of Apollo and its inscription 'TO APOLLO HIS MUSIC HIS MISSILES HIS MUSIC'. © Carsten Hermann, 2020.

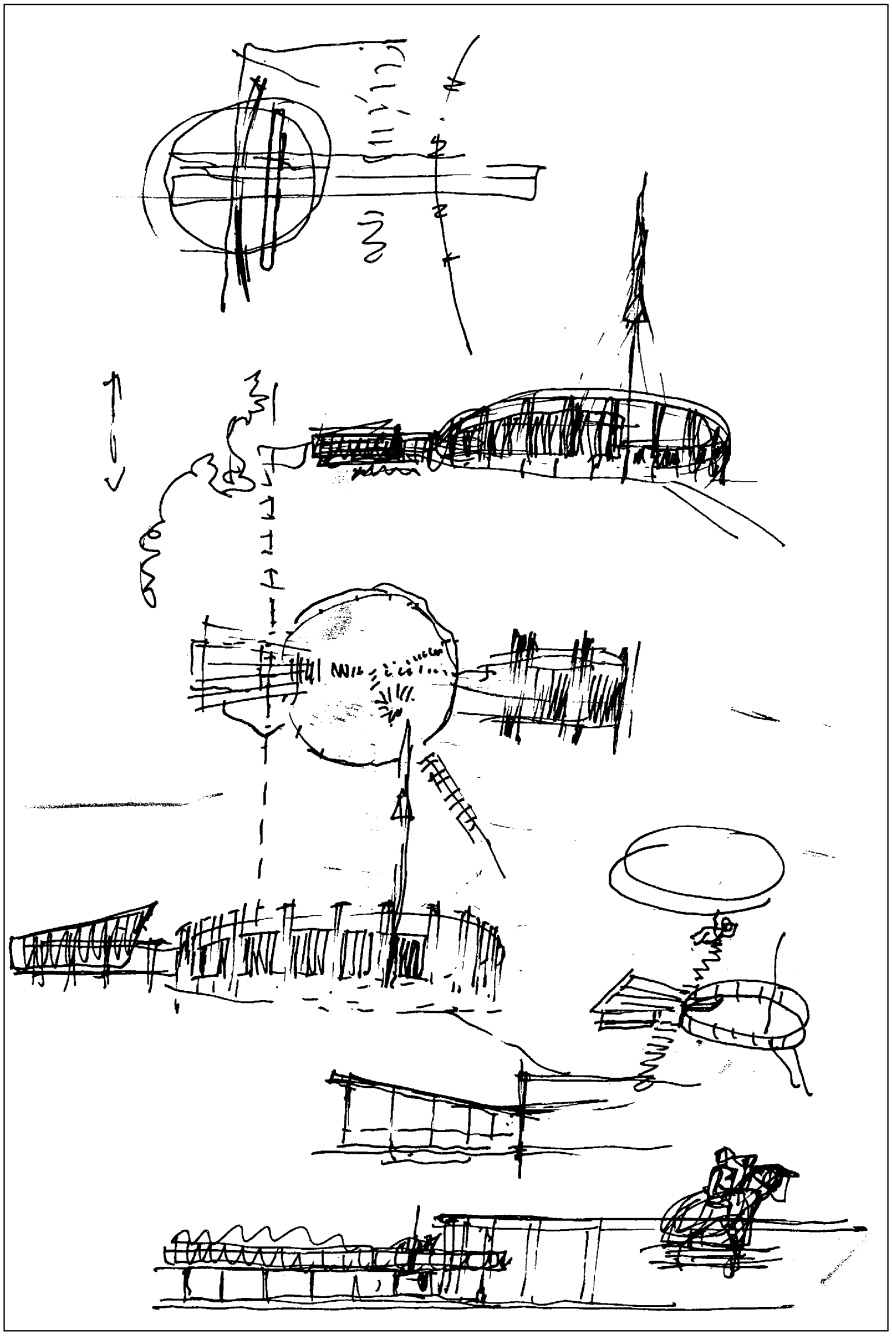

Figure 164
Sketches by Robert Matthew from c.1961–62 for the hilltop scheme with a wooden rotunda at Bannockburn battlefield, with the position of the statue of King Robert the Bruce, the flagpole, and a small interpretation centre attached to the rotunda. The rotunda was built in concrete with a larger visitor centre at walking distance. © Aidan Matthew.

LANDSCAPES OF RECOGNITION AND REMEMBRANCE

UNITY SQUARE AND THE GARDEN OF VYTAUTAS THE GREAT WAR MUSEUM, LITHUANIA

Intersection of K. Donelaičio and S. Daukanto Streets in the centre ('New Town') of Kaunas city
1921–40, 1950–89, 2017–

V. Dubeneckis (1921, 1923–28, 1936), V. Stauskas (1960–65), V. Bartusevičius (1960), K. Šešelgis, T. Šešelgienė (1968–70), B. Zabulionis (1968–70, 1974), A. Sprindys (1968–70, 1975, 1988, 1989), L. A. Dringelis (1997), Giedraitis & Architektai, 3deluxe (2017–) (architects), K. Kriščiukaitis, K. Reisonas (1936), V. Adomavičius (1950) (engineers)

Public amenity and urbanism, Institutional

Keywords: urban landmark, cultural-representational nucleus, constant development

The space under analysis is the geographical, visual, cultural, symbolic and political focal point of Kaunas. The concentration of political and symbolic significance in this space is primarily related to Lithuanian statehood and emerging modernity; it is the site where numerous monuments were built, destroyed and rebuilt, thus reflecting the shifts in values and ideologies. It is also the site of political events related with the interwar Lithuanian state, Soviet Lithuania, and the renaissance of Lithuanian statehood in the 1980s. The square is surrounded by a range of examples of modernist architecture, ranging from interwar representational modernism to Soviet functionalism and contemporary slick glass façades. It can be viewed as an open-air architectural museum.

The development of the site started with the plan of Kaunas of 1847. Since 1871, the square functioned as a market. In 1919, Kaunas became the temporary capital of Lithuania: consequently, the space gained cultural, adminis-

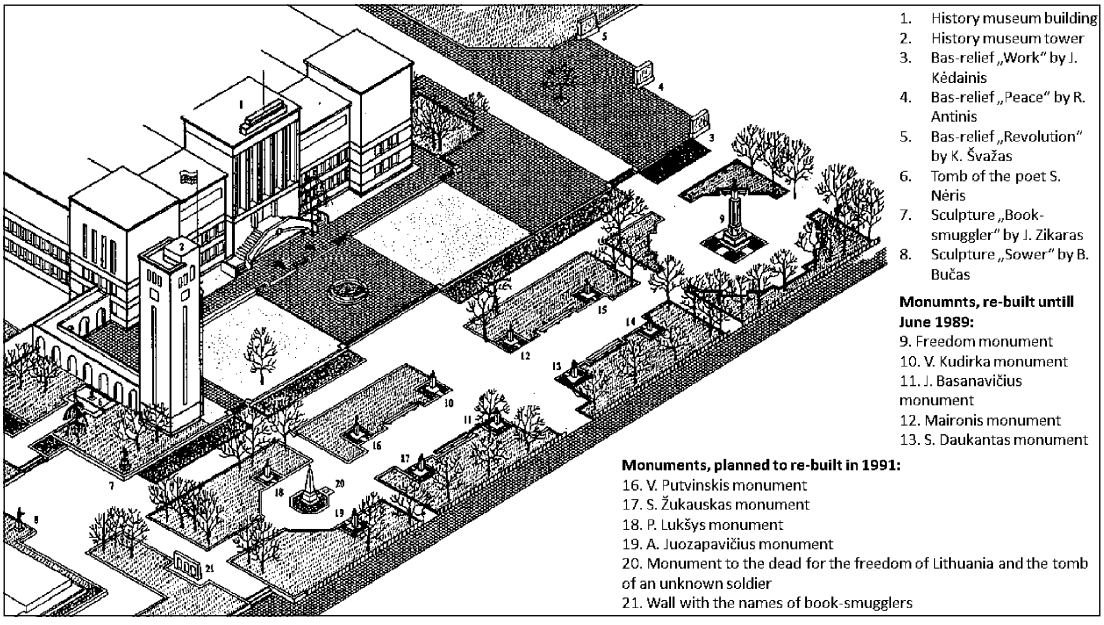

Figure 165
Axonometric view of the Garden of Vytautas the Great War Museum in the scheme, showing the rebuilding of the monuments related to Lithuanian statehood in 1988–91. The monuments of the Soviet period—3 bas-reliefs and the tomb of the poet S. Nėris (relocated in 1992) —are seen in the scheme as well. © A. Jankevčienė et al., 1999.

Figure 166
View of the Garden of Vytautas the Great War Museum towards the building of the former Industrial Design Institute, before the reconstruction of 2017. © Julius Paštukas, 2008.

trative and economic significance. The monuments dedicated to Lithuanian statehood and heroes started to be erected in this space, including the works of famous sculptors Juozas Zikaras (1881–1944), Bronius Pundzius (1907–59), and Bernardas Bučas (1903–79). In 1930, the main landmark of the site—the Vytautas the Great War Museum, designed by Vladimiras Dubeneckis (1888–1932)—was built in the Unity Square (Vienybės Square). After the sequence of interventions, the integral part and important symbolic feature of the complex—the Garden of Vytautas the Great War Museum—was formed.

The most important features of the garden space are: the monument for the unknown soldier; the group of wooden crosses; the walk with the monumental busts of the independence heroes; and the Freedom monument. The ensemble of the garden and museum is complemented by the space dedicated to Lithuanian book-smugglers located behind the museum's bell tower. During the Soviet period, the site was named Julius Janonis Square and redesigned in 1960 according to the project of V. Stauskas and S. Bartusevičius. The monument to Lenin became a focal point of the space and the series of Soviet modernist buildings had emerged, including two design institutes and the House of Political Education, thus shaping the square's enclosure, spatial structure, and the links with the context. The high-rise tower of the Industrial Design Institute forms the spatial triangle with the bell tower of the museum and the Resurrection church located on the Žaliakalnis slopes.

After regaining independence, the part of the square where the monument to Lenin (which had been demolished in 1990) was located was quite derelict; since 2017 it has undergone substantial reconstruction based on the design of German architectural office 3deluxe, which will totally change its surface. Nevertheless, the valuable spatial triangle shaped by the volumes of the buildings will be preserved. The enduring element of the space is the Garden of Vytautas the Great War Museum, laden with symbolic, historical, and cultural meanings. Although the sculptures were demolished during the Soviet period and the space of the garden underwent reconstruction, the sculptures were re-erected in 1988–89 during the Lithuanian national renaissance, together with a redesign of garden space by the architect A. Sprindys.

Author: Indre Grazuleviciute-Vileniske

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GARDEN OF THE NATIONAL MUSEUM OF DAMASCUS, SYRIA

Shukri al-Quwatli Street, Damascus
1936–50

Michel Ecochard and Henry Pearson (architect-urbanists)
Institutional landscape

Keywords: Al-Marj, as-Sulaymaniah hospice, Qasr al-Hayr al-Gharbi

After the French bombardments and destruction of parts of old Damascus during the Great Syrian Revolution of 1925, the mandatory authorities endeavoured to display a modernist and progressive face for the Mandate (Soufan, 2011). During the 1920s–40s, Damascus witnessed the construction of several urban and architectural projects, such as Syria's National Museum of Damascus and its garden. The museum was built in al-Marj al-Akhdar, to the west of the as-Sulaymaniah hospice (1554–59). The first wing of the museum, designed by Michel Ecochard and Henry Pearson, was inaugurated in 1936. It was dedicated to classical collections from Syria, while three other wings for Islamic, Syrian, and modern art collections were added in 1952, 1962 and 1975. They were designed by the Technical Office of the Ministry of Public Works.

The garden of the museum was an integral part of the wider landscaping project of the western entrance to Damascus (Kurd 'Ali, 1944). This project was structured according to a 'modern' urban vision that was proposed by the urban planning service under the direction of Michel Ecochard and the Municipality of Damascus. The plan concerned the organization of the Damascus–Beirut road, and the actual Shoukri al-Quwatly road as well as the adjacent banks of Barada. The whole zone was designated as an administrative and recreational sector, including modern sport facilities as well as a park and buildings of the Syrian University.

A report of the urban planning service highlights that 'These gardens and decks shape an interesting promenade adorned by the most significant Roman and Arab sculptures' ('Article de *Détail*', 1942). The landscape design was minimal and used grassed areas adorned with trees that provided shade and protection from the permanently sunny climate. The garden of the museum is characterized by its two main functions: a much-needed green area in a city with an arid climate, as well as an open-air museum displaying stone statues. The statues represent a wide historical span ranging from the third century BCE to the present. Artifacts of the Greek, Roman, Byzantine, Persian, Islamic and contemporary eras are presented. In 1942, the main façade of Qasr al-Hayr al-Gharbi, the eighth-century Umayyad desert palace, was displaced from its original location to be installed in the museum's garden, a work completed by 1950 ('Rapport sur les Travaux', 1942).

Today, the space of the garden is defined by the buildings located on three sides: the western and southern wings of the museum and the western wing of as-Sulaimaniyah hospice and its distinctive domes. As for the Northern side, it opens toward the Barada river and the Nation Park. The garden is a levelled area of nearly nine thousand square metres, surrounded by wrought-iron fencing that provides the pedestrians in the adjacent streets a view

Figure 167
The garden of the National Museum in Damascus and the main façade of Qasr al-Hayr al-Gharbi, the eighth-century Umayyad desert palace. © Sara Abdel-Mawla Basha, 2020.

Figure 168
Antiquities in the garden of the National Museum, Damascus, Syria. © Sara Abdel-Mawla Basha, 2020.

of the statues. Straight and curved paved pathways allow the visitors to wander among the statues. Up until today, the garden retains its two functions in addition to having become a multi-faceted space for musical events, artistic exhibitions and other cultural open-air activities. Finally, the existence of the museum garden at the first ever constructed museum in Syria created a specific definition for the museum itself.

Author: Anas Soufan

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NATIONAL CULTURAL MONUMENT LEŽÁKY, CZECH REPUBLIC

Dachov 75, Miřetice
1949–88

Ladislav Žák (designer, 1946–48, 1949–52, 1955–60), Květoslav Vaněk (1962–88), Studio Zelený dům (1997, 2002), Petr Pinkas, Jan Žalský (2009)

Public amenity and urbanism

Keywords: World War II memorial, history, habitable landscape

During World War II, dwellers of the village of Ležáky provided members of the Silver-A parachute group with a shelter to operate the radio station *Libuše*, to inform the exiled Czechoslovak government in London about events in the Protectorates of Bohemia and Moravia. After the resistance had been revealed, the village was burnt down on 24 June 1942; the dwellers were killed except for two children. A year later the ruins of houses were razed to the ground by prisoners from labour camps.

Architect Ladislav Žák developed a concept for the design of the territory of the former village after the war ended, in 1946–47. Where houses once had stood, he placed tombstones bearing the names of their exterminated occupants and the motif of a cross. Another tombstone was placed where a former mill-house once stood, and there were further tombstones for persons related to the Ležáky tragedy and the Silver-A group parachutists. A cross was also intended as the dominant element of a chapel on the Zárubka hill, towering over the former village. Despite no tender having been invited for designing the territory, Žák's project won through, and he donated the scheme to the state and public. Žák introduced new elements into the territory besides the chapel: two entrances to the site, a roofed platform for presidential speeches, and a raised platform with a sculptural group of Ležáky victims.

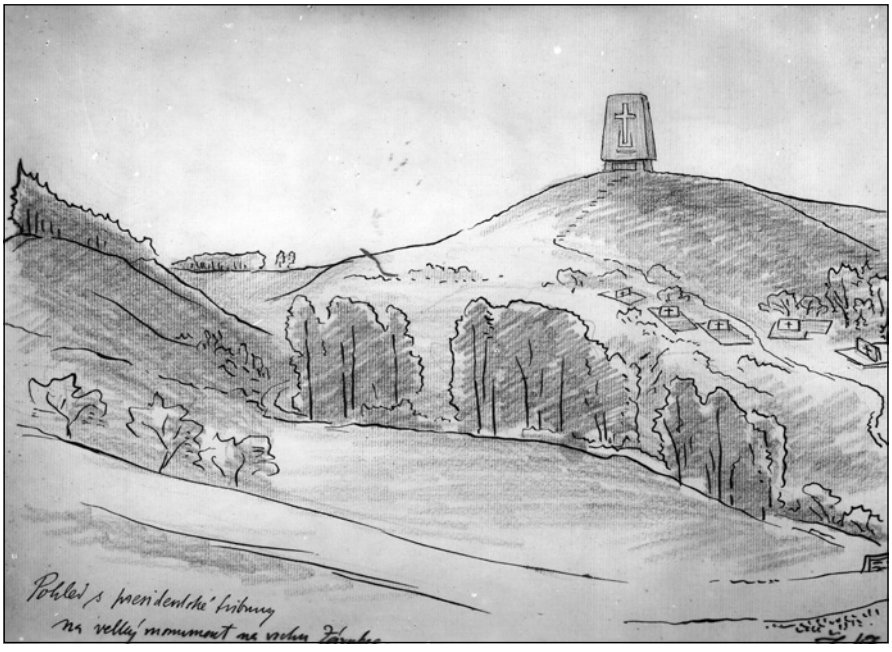

Figure 169
View of the large monument on the Zárubka hill in Ležáky from the roofed stage, by Ladislav Žák, 1947. © Lidice Memorial Archive.

Figure 170
The tombstones marking houses in Ležáky and listing their occupants. © Lidice Memorial Archive.

The landscape setting and relief of the memorial complex, as well as the interconnections between buildings and vegetation, are crucial. Critical is the use of locally sourced material, including granite as the building material for the memorials, coniferous and deciduous forest cover for intended planting which is typical of the area, and grassy areas that are manicured by flocks of sheep. What should be mentioned as well is that Žák intended to plant his favourite plant—*Juniperus communis*—in abundance, which is less than ideal for the Ležáky landscape. Žák once mentioned that the design and construction of Ležáky were to be created by directives on the new landscape architecture spirit, which he called the *Residential Landscape* (1947), with a close connection between the natural and built environment.

Ležáky also attempted to preserve the locality in its true essence, as well to remember its sacred character in places. The contrast between the commemoration of particular people and their tragic fate with open and hospitable scenery looks impressive and is free of pathos; it is not shocking or astonishing. Therefore, it allows a gradual conscious experience of the site to be enhanced.

In terms of history, the fate of Ležáky is associated with Lidice, a Czech village burnt down by the Nazis a fortnight earlier. Soon after the War ended, both destroyed villages became sacred sites which would play an important role in forming the Czech national identity. Unlike at Ležáky, a new village was built on the site of former Lidice.

The sacred site in Ležáky had been included in the list of the National Cultural Monuments in 1978, and was again in 1995. The Ležáky Memorial has been part of the Lidice Memorial since 2008.

Author: Luba Hédlová

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BEGUNJE AND DRAGA MEMORIAL AREA, SLOVENIA

Begunje and Draga, Radovljica Municipality, Gorenjska Region
1937–39 (Begunje), 1953 (Draga)

Jože Plečnik and Edvard Ravnikar with their students (architects)
Public amenity and urbanism, memorial area

Keywords: Murka pavilion, prisms

The villages Begunje and Draga near Begunje are part of the Radovljica municipality in the Gorenjska region in the northern part of Slovenia. Begunje has a rich history, connected with Katzenstein Castle (later Lamberg Castle), which served as a women's prison before World War II, a prison run by the occupying forces during the war, and a psychiatric hospital from the early 1950s. In the late 1930s Jože Plečnik (1872–1957) designed the park and two garden pavilions at the back of Begunje Castle.

The Lamberg family joined the property of Katzenstein Castle with that of Kamen Castle by Draga near Begunje in 1765, and they thus became one estate. The memorial areas in Begunje and Draga can be considered as one entity. The works of two most important Slovenian architects of the twentieth century, Jože Plečnik and Edvard Ravnikar, built before and after World War II, are positioned in the heart of this breath-taking memorial park landscape, and represent a meaningful melange of nature, architecture and history.

Plečnik was commissioned by the nuns of the Order of St Vincent de Paul, who ran the women's prison in Begunje Castle, to design the chapel inside the castle, the castle park and two small park pavilions called Murka. The pavilions have an approximate size of five by ten metres. The first, Murka Brezjanka, was designed for resting and praying in nature, and the second, Jožamurka, for religious ceremonies. Brezjanka sits at the end of the chestnut promenade and is reminiscent of Laugier's idea of a primitive hut. It is very archaic in design, formed by six huge oak tree trunks and a roof for which the nuns made concrete tiles

Figure 171
The wooden pavilion, with paving in stone, exposed concrete, brick, wooden cuts, and benches of Murka Brezjanka, designed by Jože Plečnik, with the view towards the chestnut promenade. The promenade leads to Begunje church and the castle, which serves as a psychiatric hospital with the park used by patients and the public. © Miran Kambič, 2021.

Figure 172
The Draga Memorial by Edvard Ravnikar. © Miran Kambič, Docomomo Slovenia Archive.

with their own hands, in order to make it more affordable. The other pavilion, Jožamurka, is partly closed and like 'a house inside a house'. The pavilions have very interesting paving which uses abandoned material such as wood, bricks and stones in an innovative and playful way typical of Plečnik. Both pavilions have been monuments of national importance since 1999, but at the present moment both are in very bad physical condition and in deep need of better maintenance and good conservation practices.

The well-maintained Draga Memorial in the forest was designed by Edvard Ravnikar in 1953, and it anticipated the shape eventually taken by his famous towers in Republic Square in the heart of Ljubljana in the 1960s. The monument is a non-geometrical cluster of small-sized, concrete prisms shaped as part of a forest meadow: these represent a modernist space–time approach towards the body of the monument—the scattered composition of the prisms in the meadow makes it seem as if they were mushrooms growing naturally in the forest. Together with the Rab memorial, this project denotes the beginning of a new, Cubistic approach towards the monument, so typical of Ravnikar and so different from the rest of Yugoslavia. Ravnikar, as the pioneer of modern urbanism in the territory of the former Yugoslavia, introduced and embodied his own urbanistic and architectural language with his two memorial areas of Rab and Draga, which culminated in the Republic Square towers, forming the centre of Ravnikar's Ljubljana in the 1960s. Among the common characteristics of Plečnik's and Ravnikar's architecture, so beautifully expressed in Begunje and Draga, as well as in most of their other works, is the architecture of human scale.

Author: Nataša Koselj

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TORRE DE BELÉM GARDEN, PORTUGAL

Avenida Brasília, 1400–038, Lisboa
1954

António Facco Viana Barreto (landscape architect)
Cultural, leisure, public amenity

Keywords: cultural area, monumental memory, sustainability

The Torre de Belém Garden stands as a symbolic milestone for modern landscape design in Portugal, in which the modernity of a natural landscape emerged in association with a monument of national heritage and identity. The Torre de Belém has stood, together with the Jerónimos Monastery, at the entrance to the port of Lisbon on the Tagus river since 1514. It recalls the great maritime explorations of the time and testifies to Portuguese art at its best. It served as a fortress and as a ceremonial gateway to Lisbon, and is a prominent example of the Portuguese Manueline style: built at the height of the Portuguese Renaissance, to celebrate an age in which Portugal became the first commercial and maritime empire in early modern Europe. Its cultural importance is recognized by its inclusion on the UNESCO World Heritage list (since 1983), as an ex-libris of Portuguese cultural heritage and as one of the key architectural elements that punctuate the riverside landscape.

From the nineteenth century throughout the city's industrialization process, the riverside at Belém was occupied by various factories and their facilities, some of which even involved the Torre de Belém, as in the case of the *Fábrica de Gás de Belém* (Belém Gas Factory), which was only demolished in 1950 in an effort to reorganize the riverside and pave the way for the improvement of the Tower's surroundings.

The landscape architect António Facco Viana Barreto (1924–2012), who had just graduated from the Instituto Superior de Agronomia, Lisbon, proposed a fundamental concept based on the link between 'simplicity and nature … Only Nature; and in its proper place at the centre, the magnificent work of Man' (Barreto, 1957). All the tree planting was based on indigenous local species, including stone pines, oaks and olive trees.

Figure 173
View of the Torre de Belém Garden. © Ana Tostões, 2020.

Figure 174
View of the Torre de Belém Garden. © Ana Tostões, 2020.

Using innovative and modern ideas, avoiding absolute straight lines and rigid angles, Barreto planned two distinct and interpenetrating areas with different types of vegetation. One part is wider and sunnier, with more open areas and fewer streets, highlighting the monument and letting it 'breathe'. The other is more dense, with impressive shadows producing a contrast between light and darkness. This part at the perimeter of the site, furthest from the Tower, constitutes an outer belt, marking the eastern and northern limits of the landscaped area. It was meant to be a densely wooded area, with larger elements, shady locations, and paths that would lead people to views of the Tower. The trees would decrease in volume, as the spaces opened up in the area closer to the Tower.

To enable the whole monument to be viewed unobstructed, the Tower was 'cast off' from the land and set on the water which surrounds it. To do this, Barreto designed a large, gently sloping amphitheatre in the form of a shell. His proposal involved grading the land that joined the ower to the riverbank with an almost imperceptible slope towards the main motif of the landscape, creating different points of view. Each of the paths assumes an important role in the design, imbuing the Tower with a kind of a floating presence, while avoiding artificial axes that would have disrupted the concept and exaggerated its permanence.

The project was presented to acclaim at the Fifth IFLA *International Congress of Landscape Architecture* in Zurich (1956), and displayed on the itinerant IFLA exhibition that opened in 1957. It was stated in the catalogue that 'Great activity has characterized landscape design in Portugal during the last ten years. Portuguese landscape architects have been well employed by city planning authorities in a kind of teamwork in which various experts have played their part. This has produced remarkably beautiful housing estates. Particularly notable is the beautiful design carried out around the famous sixteenth-century Torre de Belém from where Vasco da Gama sailed to the new world' (IFLA,1957).

Authors: Andreia Gonçalves and Ana Tostões

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LANDSCAPES OF THE ACROPOLIS HILLS, GREECE

Athens, Attica
1954–58

Dimitris Pikionis (architect)
Public amenity and urbanism, conservation and ecological

Keywords: optical–geometrical layout, cultural landscape, pathway

This project was assigned to Dimitris Pikionis (1887–1968) by the Greek State as part of the effort to develop a network of paths linking the different archaeological sites located at the centre of Athens. It consisted of the landscaping on the foot of the Acropolis hill and the Philopappos hill (Hill of the Muses). It also included the construction of a pavilion next to the early Byzantine church of St Demetrius (Loumpardiaris) and the redesign and expansion of the church itself.

One of the things that makes Pikionis's project unique is the fact that he applied Constantinos A. Doxiadis' theory (1936) in the plan of the building complex surrounding St Demetrius as well as on the belvedere of Philopappos hill (Tsiambaos 2018). Those two areas were designed according to a geometrical system of polar coordinates in order to acquire an ideal 'optical balance'. Views directed towards the Acropolis or the distant mountains were also embedded in this optical–geometrical composition.

Another important aspect of the project is the way it reuses and recycles material from the past: mainly building material and architectural elements of the demolished neoclassical houses of nineteenth-century Athens, but also a few Byzantine and ancient spolia found in situ. As Pikionis remarked in his introductory report: 'The alleyways and pathways will be

Figure 175
A view from the courtyard of St Demetrius to one of the paths leading to the belvedere of Philopappos hill.
© Agni Pikionis Archives.

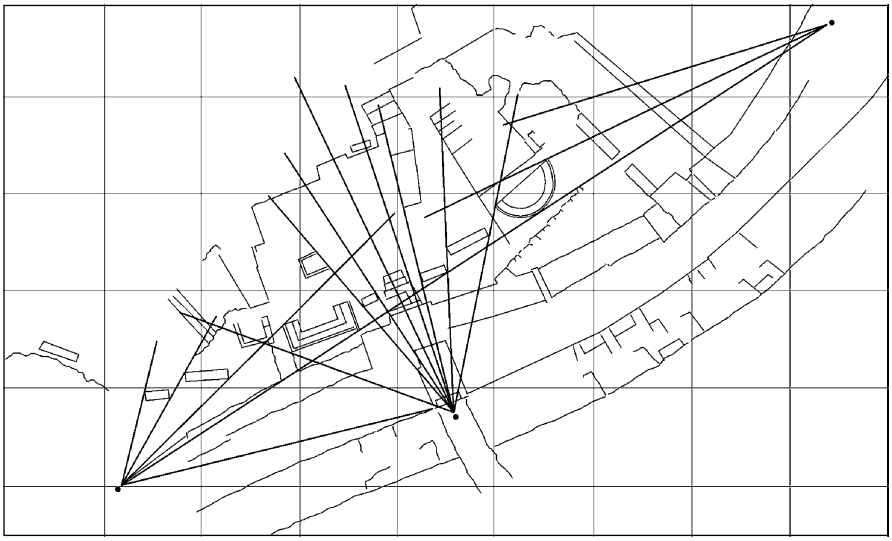

Figure 176
The plan of the belvedere of Philopappos hill, designed according to Constantinos A. Doxiadis's geometrical system of visual angles. © Kostas Tsiambaos.

ornamented with antique fragments, such as stone benches and cylindrical shapes belonging to tombs from the period of Dimitris Poliorcetes' (Johnston, 1989).

The importance of the supervision of the project, with many decisions taken on site, should also be highlighted. Although then in his seventies, Pikionis supervised the project himself, from the general layout to the smallest details in construction, tree planting, and pavements. However, he gave enough freedom to his stonemasons, workmen and assistants, as he believed that creative improvisation during construction was equally important: 'the quality of the finished work cannot be determined, described or formulated a priori … We are dealing with an extensive and, by its very nature, complex project. It comprises a certain amount of town planning—streets, alleys, road junctions, and car parks—as well as the paving of roads and pathways, the construction of retaining walls, parapets, stone enclosures, way-stations and pavilions, and a great deal of landscaping, planning of trees, shrubs, etc. It goes without saying that all these elements must be merged, right down to the minutest detail, into one concept' (Johnston, 1989).

Pikionis's 'handmade' work on Philopappos hill is internationally recognized as an original composition of high historic and artistic value: a multivalent project which merges art, architecture and landscape architecture within the sensitive 'ecosystem' of a distinguished archaeological site (Ferlenga, 1999). In 1996, the project was listed as a monument of contemporary architecture of global significance by UNESCO, while the church of St Demetrius had already received this classification in 1958.

However, the site has been abandoned over time and immediate action is required in order for it to be protected and preserved, so that it continues to serve as an enlightening work for the coming generations to experience and appreciate. Despite a few occasional conservation efforts in the past, its current condition does not guarantee its sustainable future.

Authors: Marianna Charitonidou and Kostas Tsiambaos

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BANNOCKBURN BATTLEFIELD, SCOTLAND

Bannockburn, Stirlingshire
1962–67

Robert Matthew, Eric Stevenson (architects landscape scheme and rotunda, 1960–64), Frank Clark (landscape consultant, 1962), Charles d'O. Pilkington Jackson (sculptor equestrian statue, 1960–63), Ninian Johnson (architect visitors' centre, 1963–67), Ian White Associates (landscape architects redevelopment, 2009–13), Reiach and Hall (architects visitor centre, 2009–13)

Institutional, military

Keywords: battlefield, nationalism, monument

The Battle of Bannockburn of 1314 was a key event in Scottish medieval history, being the culminating event of the Wars of Independence. It was here that King Robert I (Robert the Bruce) defeated the forces of the English king, Edward II. This effectively re-established Scotland as an independent kingdom. Although there is some debate about the precise location of the battle, the designated site has become a revered monument of the nationalist movement.

The first memorial on the site was a flagpole on top of the hill, erected in 1870, followed by a stone cairn in 1957. These have remained throughout the various reconfigurations of the site. In the 1930s, when the fields in the area were being developed for housing by the local authority, and in response to protests by the nationalists, the area around the hill was brought under the stewardship of the National Trust for Scotland, which has continued to manage the site.

In the 1950s various proposals, including for a statue of Robert I, were submitted. Ultimately, as the 650th anniversary of the battle approached, Sir Robert Matthew (1906–75) was appointed to oversee development of the site. Together with the architect, Eric Stevenson (1914–93), a masterplan was created, with the landscape gardener, Frank Clark (1902–71), as consultant.

Figure 177
The rotunda and hilltop scheme, pictured at the opening for the 650th anniversary of the Battle of Bannockburn in 1964. © National Trust for Scotland, Tom Scott.

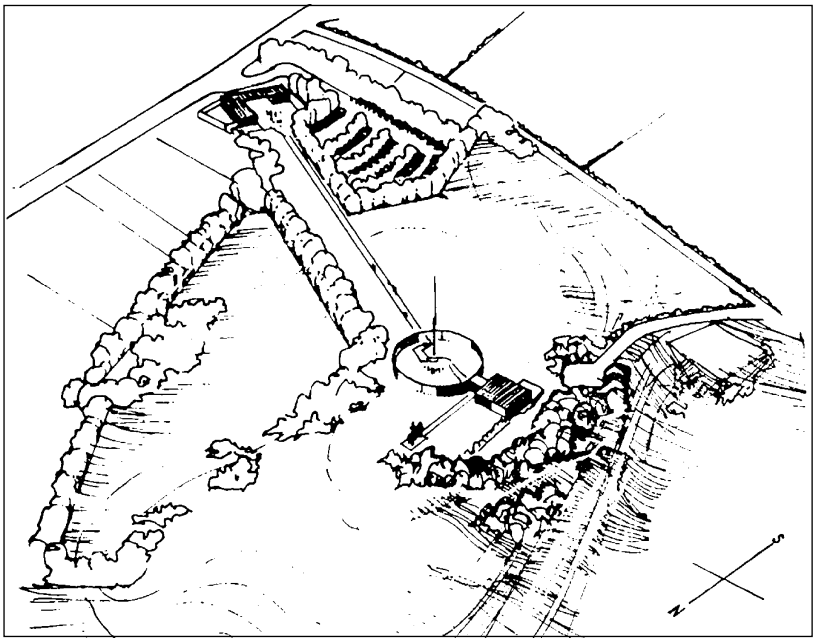

Figure 178
A sketch illustration by Eric Stevenson from 1962 of the proposed hilltop scheme, which still followed Matthew's sketch ideas, with a small interpretation centre attached to the rotunda. The visitor centre near the roadside also illustrates the piazza idea as a starting point of the main axis to the Hilltop scheme. Plantations frame the main vistas from the rotunda. © National Trust for Scotland.

This design featured an axial layout, with a hilltop rotunda, the statue of Robert I, and a visitors' centre by the roadside. The rotunda was an open-top concrete structure centred upon the flagpole. A bronze equestrian statue depicting Robert the Bruce, by Charles d'O. Pilkington Jackson (1887–1973), provided the other focal point. A ceremonial walkway, planted with mature trees, led from the nearest main road, providing the axis to the scheme. The memorial was officially opened by Queen Elizabeth II in 1964, followed by the visitors' centre, to a design by Ninian Johnson (1912–90), in 1967. In 1997, the monument at Bannockburn was designated as one of Docomomo's sixty key monuments of the Modern Movement in Scotland (Docomomo).

In 2009, with the 700th anniversary of the battle approaching, a redevelopment of the site was instigated, and it was included in a newly created 'Inventory of Historic Battlefields'. The anniversary year, 2014, was of particular significance to the ruling Scottish National Party and was chosen for a referendum on Scotland's secession from the United Kingdom. The visitors' centre was demolished and replaced with a larger building designed by the architects Reiach and Hall. The rotunda and flagpole were renovated, and Ian White Associates provided a design for enhancement of the landscaping. All of this was completed in time for a commemorative event held in June 2014. Recently renovated, the structures and landscaping are in good condition, although the original modernist visitors' centre has been lost.

Author: Clive B. Fenton

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AZADI SQUARE, IRAN

Tehran, formerly Shahyad Aryamehr Square
1967–71

Hossein Amanat (architect), Ruhollah Nik-Khesal (assistant landscape architect), Manouchehr Iranpour (associate architect), Ove Arup and Partners (civil engineering), Map Co., Mohammad Pour-Fathi (construction), Iraj Haghighi (workshop chief engineer)

Public amenity and urbanism, leisure

Keywords: memorial monument, urban square, geometric design

Azadi Square, formerly known as Shahyad Aryamehr Square, is a green city square in Tehran, famous for its monumental centrepiece, the Azadi Tower. The design and construction of the square at the entrance to Tehran was the subject of a competition amongst Iranian architects held by the Committee for the Celebrations of the 2,500th Anniversary of the Iranian Empire. The square, which is popular for its landscape, serves as a giant symbolic gate to Tehran for the people entering the city, whether by air—via the adjacent Mehrabad airport—or by road. There was a lot of effort put in place to build a significant monument that would remain impressive for decades. Therefore, a vast area was allocated for the construction of this new symbol of Tehran: an oval-shaped field of about 50,000 square metres, comprising the largest square in the city and the second largest in Iran. The plan of the square is directly derived from the ceiling plan of the Sheikh Lotfollah Mosque, except that it is composed of two halves of two ellipses with two foci, instead of a circle.

Ruhollah Nik-Khesal (1944–) designed the square combining inspiration from historical built examples and modern taste. The role of water and fountains in Iranian gardens has been taken into consideration for the design of the landscape. The space around the square can be reached via an underground passageway that uses the geometry of the arches of an Iranian bazaar. The landscape is designed with several slopes to give a special visual impression to the users. When approaching the Azadi Tower, the alignments in the landscape perfectly

Figure 179
The Azadi Tower, Tehran. © Archive of National Library of Iran, unknown photographer, 1978.

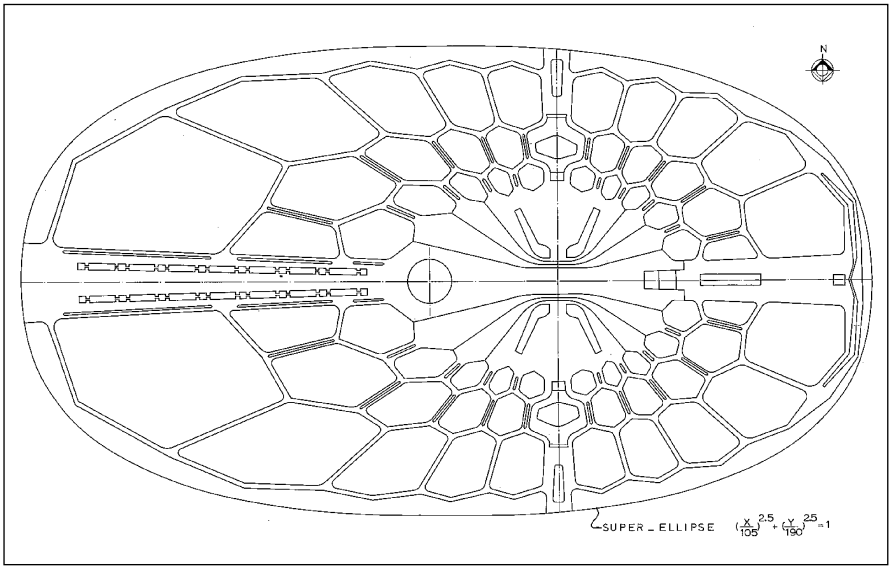

Figure 180
Landscaping plan of the plaza at the Azadi Tower, Tehran.

combine with the tower's architecture, to create the visual effect of arcs coming together. For the tower to be observed as the centrepiece, no other building constructions were allowed above the ground, and visitors were expected to enter the archway from the west to the east, after crossing the elliptical square.

Hossein Amanat (1942–), the winner of the architecture competition, was a graduate of the Faculty of Fine Arts of the University of Tehran. The 'Foursquare' concept, a dominant idea in Iranian architecture, has been used in the design of the Shahyad monument. In the east-west axis, the generous openness of the arch is visibly inspired by the Taq-e Kasra entrance of the Sassanid palace complex, but this parabolic arch has a wider approach to the roof.

'Shahyad,' meaning The King's Memorial Square, was the site of revolutionary demonstrations and events leading up to the Shah's downfall in 1979. Presently it is the main place to annually commemorate Iran's revolution. The municipality of Tehran has taken the responsibility over the restoration of the Azadi Square and Tower, and the Organization of Cultural Heritage and Tourism now supervises the project since the Azadi Tower was listed in 1974 under the category of National Works of Iran.

Author: Negar Mansouri

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LITTLE SPARTA, SCOTLAND

Dunsyre, South Lanarkshire
1967–c.1997

Ian Hamilton Finlay and Mairi Susan Finlay (designers)
Institutional, residential

Keywords: rural, artist garden, sculpture park

Commenced in 1967 by the artist and poet Ian Hamilton Finlay CBE (1925–2006) and his then wife, Mairi Susan (Sue) Finlay, neé MacDonald Lockart (1943–), the garden is a 'unique blend of landscape, sculpture and poetry' (Historic Environment Scotland, 1987). Situated forty kilometres southwest of Edinburgh, in the rural foothills of the Pentland Hills, the Arcadian garden of a size of two hectares includes concrete poetry in sculptural form, and polemic and philosophical aphorisms. Co-created with numerous craftspersons and artistic collaborators, over 270 artworks are 'set into what the artist described as "specific landscapes": distinct areas within the garden, each with its own character and mood' (Little Sparta Trust, n.d.). These garden spaces eventually included the Front Garden, Roman Garden, Julie's Garden, the Allotment and Kailyard (Scots word for kitchen garden), Temple Pool Garden, Woodland Garden, Wild Garden, Lochan Eck Garden and English Parkland.

In 1967, the couple had moved to Stonypath, a small farmstead belonging to the maternal family. By this time, Ian Hamilton Finlay was already internationally known as an innovatory writer and a 'forerunner in the field of image poetry' (Historic Environment Scotland, 1987). Initial work on site included the diversion of a burn to create three ponds and the planting out of the garden in front of the existing cottage. Work progressed incrementally, resources permitting, with Sue Finlay providing the horticultural expertise and skills, and her husband creating visual poetry and designing sculptural artwork for the garden. In 1973, the West Barn was restored and converted into a gallery space to display and sell the artist's work, including a growing range of publications by Wild Hawthorne Press, which the artist had co-founded in 1961.

The artist had an uneasy relationship with Scotland's art establishment, which is reflected in the garden's naming in the late 1970s as Little Sparta, making reference to classical antagonisms: on one hand, between little David and powerful Goliath; and on the other, between

Figure 181
Ian Hamilton Finlay's artwork The Present Order Is The Disorder of The Future, 1983, at Little Sparta's English Parkland. © Rósá Menkman, via Flickr CC BY 2.0, 2015.

Figure 182
Ian Hamilton Finlay's artwork Claudi, a pink concrete bridge at Little Sparta's Lochan Eck Garden. © John Lord / Yellow Book, via Flickr CC BY 2.0, 2007.

the Greek rival cities of Athens and Sparta, with Edinburgh and its art and political establishment being considered the mighty 'Athens of the North' since the nineteenth century.

Over the three decades after 1967, Little Sparta developed into a garden and park 'populated by sculptural or landscape-based poems generally built up around a core linguistic phrase, some taken from earlier text bound poems … The garden's aesthetic and ethical value was gradually nuanced by the installation of works reflecting evolving thematic concerns—from, for example, classical notions of culture, society and warfare in the late 1960s and early 1970s to the interaction of these ideas with the French Revolution, Nazism and modern art in the late 1970s and 1980s' (Little Sparta Trust, n.d.). The cottage, for example, has gradually been adorned externally by a portico and classical pillars to fit the 'evolving neo-classical theme within the garden' (Historic Environment Scotland, 1987).

Today, the garden is maintained by The Little Sparta Trust, which was established prior to the artist's death, welcoming artists for residencies, and visitors to the garden, which has been designated as an outstanding work of art in 1987 through inclusion in Scotland's Inventory of Gardens and Designed Landscapes (Historic Environment Scotland, 1987).

Author: Carsten Hermann

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PLAZA DEL PEINE DEL VIENTO, SPAIN

Paseo de Eduardo Chillida 13, San Sebastián, Guipúzcoa
1974–77

Luis Peña Ganchegui (architect), Eduardo Chillida Juantegui (sculptor)
Public amenity and urbanism

Keywords: abstract, sustainability, rehabilitation

The setting of Plaza del Peine del Viento, the Square of the Wind Comb (current plaza del Tenis, Tennis Square), is one of the most interesting landscape projects of the second half of the twentieth century in Spain. Its ability to create a landscape from an exceptional place without renouncing its character is exemplary.

Eduardo Chillida Juantegui (1924–2002) proposed the gift of a three-piece corten steel sculpture, called Peine del Viento XV, to the municipality of San Sebastian. It was to be installed in a place that was particularly dear to him, at the end of the Ondarreta seaside promenade where the urban coastline promenade ends—a space originally destined to become a car park. Chillida wanted to share this area that he knew so well, so that it could be enjoyed by the citizens of San Sebastián, and he hoped for this site to become the true focus of his proposal. From its inception, this urban space has been embraced by the citizens of San Sebastián and has become one of the symbols of the city.

The area consists of a narrow spit of land between the sea and the rocky slopes of a mountain. Commissioned in 1974, it was arranged by Luis Peña Ganchegui (1926–2009)—who was very close to Chillida—as a long and large terraced square open to the splendid landscape that houses Chillida's sculptures. The plaza also serves as a preamble to the contemplation of the sculptures that comb the wind, which Chillida used to call 'claws', before the plaza enters into the beach known as Ondarreta.

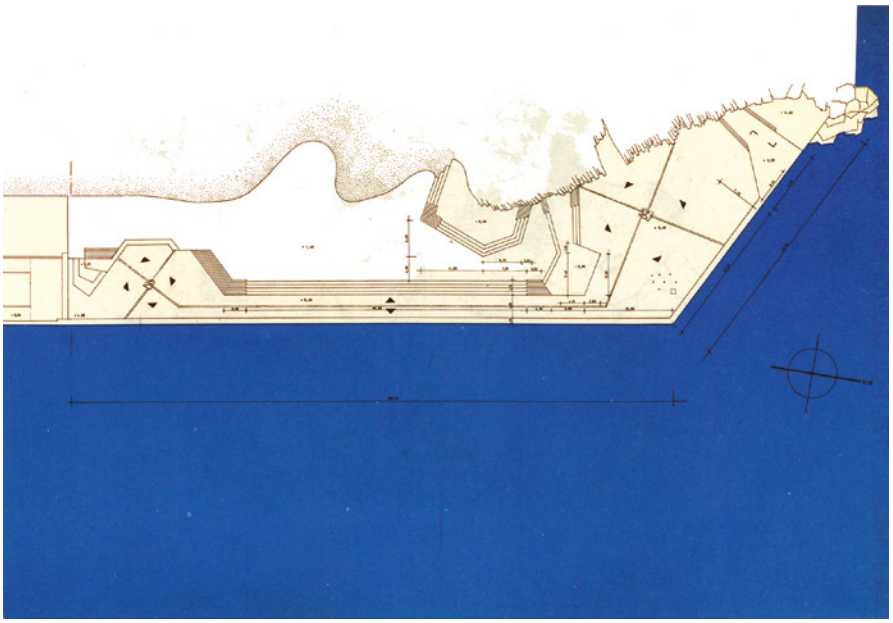

Figure 183
Site plan of Plaza del Peine del Viento in San Sebastián.
© *Arquitectura* 206–07, 1977, 39.

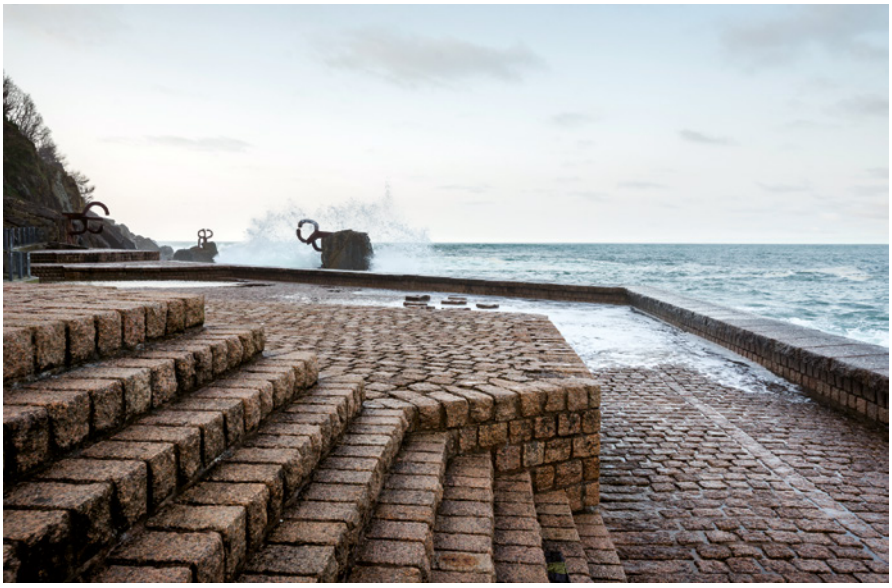

Figure 184
View of Plaza del Peine del Viento, showing its sculptures. © Luis Argüelles, Fundación Docomomo Ibérico, 2019.

Peña Ganchegui's intervention consists of an artificial topography with strong sculptural roots. Large-scale stone grandstands carefully create a synthetic composition thanks to the use of a single element, the granite cobblestone. The steps allow the formation of different spaces: an access area, an intermediate level, a narrow passage between the grandstands and the sea, and the final large terraced square with three different levels, which acts as an amphitheatre from which to discover the dramatic landscape and sculptures. Before reaching the sculptures of Chillida, arranged successively on the rocks at the foot of the cliff, Peña Ganchegui placed a series of holes on the pavement from which jets of sea water emerge. The jets and the sculptures form a set with a strong scenographic character which does not intend to compete with the grandeur of the cliffs or to alter the memory of place.

As with the Royal Crescent in Bath, this space is not only the culminating scene of a picturesque route through the bay with successive hidings and surprise appearances. It also has the power to integrate an urban landscape with its environment by creating three picturesque eye-catching features: the sculptures of Chillida. These masterpieces generate a mixed area of strong poetic, transcendental and contemplative evocations that integrate the scale of the nature of the city through the square and the sculptures.

It is an introvert space, modest in scale, but open to the horizon. Both the artist and the architect present the work as an artifice against the natural. They do not try to imitate nature, but rather to understand it and make it essential. This integration comes from a deep analysis and knowledge of nature; its ability to sublimate lies in the strong contrast between the square and the cliff and between the sculptures and the sea.

Authors: Alberto Sanz Hernando and Patricia Hernández Lamas

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MEMORIAL COMPLEX OF KAUNAS NINTH FORT, LITHUANIA

Žemaičių road 75, Kaunas city
1976–84

A. V. Ambraziūnas (sculptor, 1970–75), A. V. Vielius, G. Baravykas (architects, 1970–75), V. Šimukonytė (sylviculturist, planting designer, 1983)

Military, institutional

Keywords: Kaunas Ninth Fort, mass executions, memorial complex

The Memorial Complex of the Ninth Fort in Kaunas commemorates the mass executions carried out in its territory during World War II. Originally established for military purposes in the beginning of the nineteenth century, the Fort was transformed into a heavy duty prison in 1924–39 (Jankevičienė et al., 1991), and in 1941–44 was used by Nazis as a place of mass execution of Jews and people of other nationalities.

The creation of the Memorial to the victims of Nazis began in 1966 with the announcement of the competition, but it took eighteen years to see the project to completion. The competition was a four-stage process with the winners being chosen in 1970. The winning group included sculptor Alfonsas Vincentas Ambraziūnas (1933–2020) and architects Adolfas Vytautas Vielius (1933–2017) and Gediminas Baravykas (1940–95). The design phase took five years from 1970, with construction lasting until 1984 (Buivydas, 2000). The architectural aesthetics of the Memorial Complex is close not only to brutalism, but also to the ideas of deconstructivism (Drėmaitė et al., 2012) which had only begun to rise in the West in the 1980s.

The Complex occupies an area of about thirty-two hectares and its historic fabric comprises both architecture and landscape. It includes the museum and historic Fort buildings, an impressively scaled sculptural group, the mass execution field with the graves, and the park. The concrete pathway, named 'Death Road', is both the main compositional axis and a storyline of the Memorial Complex. It connects the museum building and the monument, both

Figure 185
View of the Memorial Complex of Kaunas Ninth Fort. © Robertas Račkauskas, Studio RaR, 2016.

Figure 186
View of the Monument of the Ninth Fort. © Kaunas Ninth Fort Museum, 2014.

of which are made of concrete. The dramatic sculptural form of the museum building, well combined with the terrain, appears as a gateway, creating an expressive and emotionally powerful 'introduction' to the entire Memorial Complex. Bringing visitors to the culmination point—the place of mass executions—the 'Death Road' stops in front of an expressive, thirty-one-metre-heigh monument, formed by three multifigural blocks (Rimantas Buivydas, 2000). The sharp silhouette and rough material of the sculptural group creates a contrast between the monument and the still, green surrounding landscape, which further emphasizes its dramatic character. The mass execution field with the graveyard is connected to the monument by a series of concrete 'wedges', which organically grow into the form of the sculptural group. The artistic language steps over the boundaries of the ideological notion of the monument, avoiding the direct, stereotypical associations typical of Soviet-era narratives. This has enabled the monument's persistence across the post-Soviet period.

As a contrast and a counterbalance to its dramatic atmosphere, a park lies next to the Memorial. The core of it is the garden planted beside the Fort in the heavy duty prison period (1924–39). The garden, as a metaphor of vitality, psychologically calms by bringing back themes of life and hope. The natural pond acquires the features of a modern design, creating the chamber space for reflection and experience.

The present planting has changed from the original project prepared by Valentina Šimukonytė (1932–2015) in 1983. The landscape infrastructure requires renovation, which would be the first challenge in the future.

In 1985, the Memorial Complex of the Ninth Fort was awarded the State Prize of the Soviet Union (USSR) (Marija Drėmaitė et al., 2012; Algė Jankevičienė et al., 1991). Since 1993, the historic Fort and new museum buildings, the sculptural group and the mass execution field with the graveyard have been included in Lithuania's Register of Cultural Values. In an ongoing sense, of critical importance are aspirations for not losing the original idea of the authors: for retaining the symbolic meaning of each object, the declared choice of materials, and the overall conceptual whole.

Author: Giedrė Ingrida Laukaitytė-Malžinskienė

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FOUNDERS OF THE BULGARIAN STATE MONUMENT, BULGARIA

Ilchov Bair, Shumen
1979–81

Monument: Krum Damyanov (sculptor), Georgi Gechev, Blagoy Atanasov, Ivan Slavov, Aneta Kamenova (architects), Preslav Hadzhov, Vladislav Paskalev (artists), Simeon Venov (structural engineer)

Pedestrian approach: Boris Kamilarov (architect), Ivan Radev (artist)

Public amenity and urbanism, leisure

Keywords: public amenity and urbanism, leisure

The monument to the Founders of the Bulgarian State is an impressive concrete structure, located on top of the national nature park on Ilchov Bair hill, in a protected landscape above the north-eastern Bulgarian town of Shumen. It is the result of large-scale construction works undertaken in 1981 to commemorate the 1,300th anniversary of the foundation of the Bulgarian State, which was enthusiastically celebrated by the socialist government of Bulgaria at the time. The monument was part of an overall 'facelift' of the centre of the city, including the reconstruction of the regional theatre, the square in front of it, the main pedestrian street, and also the construction of a completely new pedestrian approach towards the monument with 1,300 steps, new landscaping, a series of thirteen water features and sculptural artworks.

The monument was created after a competition won by a team led by the sculptor Krum Damyanov; the idea was to create a singular structure that would symbolize the power of the Bulgarian state and its uneven development. This structure is one massive concrete cube, sliced and deconstructed into two unstable groups of dynamic blocks. It inclines at different angles and encloses fluid internal space with sculptures of granite and béton brut, and vividly coloured murals.

The monument is located within an axis, perpendicular to the central part of Shumen and to the city's natural axis of development. Its place has been carefully selected and the monument is now visible from almost all of Shumen's neighbourhoods, dominating the view from

Figure 187
The pedestrian approach to the monument of the Founders of the Bulgarian State. The landscaping includes water features and sculptural artworks. © Aneta Vasileva, 2018.

Figure 188
View of the steps leading to the monument of the Founders of the Bulgarian State, with the sculptural group. © Aneta Vasileva, 2018.

almost any approach towards the city. It is connected to the city not only visually, but also by a system of approaches: firstly, by a vehicular approach which goes up the hill and around the medieval Fortress of Shumen; and secondly, by a pedestrian approach from the main pedestrian street via a composition of alleys and monumental stairs that zigzag up the hill.

The monument is designed to offer a different 'face' and a completely different first impression depending on the approach a visitor has chosen. Those who arrive by car can leave it at the parking nearby and reach the structure on foot via a wide, well-landscaped and perfectly horizontal alley. The structure reveals itself smoothly as a succession of sloping volumes, gradually increasing in height and leading the visitor into its core. Those who have chosen to climb the legendary 1,300 steps should be prepared for a serious physical effort which finally leads them to a position almost frontally opposed to the monument, then abruptly throws them inside the structure, to be overwhelmed by the dramatically overlapping and threatening concrete volumes above.

The pedestrian approach has been subjected to careful landscaping, including abstract geometric water features and specially designed elements in the public space such as benches, light features and decorations. In addition, contrasting vegetation has been used, with decorative small-scale urban greenery along the first series of stairs passing the thirteen water features (designed by architect Boris Kamilarov), and natural forest up the hill and along the remaining flights of stairs to the monument, which gradually become narrower and steeper. The whole landscape ensemble bears distinct features of regionalism and late modernism.

At the beginning of September 2015, the Municipality of Shumen announced its intention to prepare all the necessary documentation for the complex of the Founders of the Bulgarian State to be first declared national immovable heritage and next to be nominated for the UNESCO World Heritage List.

Author: Aneta Vasileva

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PLACES OF REST

ŽALE CEMETERY, SLOVENIA

Med Hmeljniki 2, Ljubljana
1938–40

Jože Plečnik with his students (architect)
Public amenity and urbanism, cemetery

Keywords: cemetery, Garden of All Saints

Plečnik's Žale is situated in the front right side of the Žale Cemetery, the main cemetery of the city of Ljubljana. Plečnik decided to design it as an apotheosis of *Architectura Perennis*, the idea of eternal architecture: his scheme included a secret mysterious garden, an unusual and almost non-geometric entrance building, a chapel, fourteen mortuaries and a workshop building for coffins. In spite of the many historical cemetery references available, he decided not to follow any association with a necropolis while designing his Garden of All Saints. Instead, his 'necropolis' is designed with benches, symbolic signs, a fountain, and rich architectural composition bringing hope and banishing the anxiety of death. The chapel is not dedicated to any specific saint.

The fourteen mortuaries—the same number as there are stations in The Way of the Cross—are named after the most important Saints of Ljubljana: Peter, Jacob, Mary, John, Ahac, Christophe, Nicholas, Andrew, Francis, Anton, Josef, George, Cyril and Method; and the last one, for non-believers, is the Adam and Eve mortuary. They are inspired by several historical styles—Etruscan, Greek and Egyptian—answering morphological questions about the composition of the wall, floor, ceiling, roof, decoration and light. As Plečnik understood it, everybody is equal in front of God and after death. This social awareness, playfulness and experimentation with materials and construction made Plečnik one of the most important modern architects of the twentieth century, even though he deliberately refused functionalism and rationalism in his work.

Figure 189
Žale Cemetery by Jože Plečnik. © Damjan Prelovšek, Damjan Prelovšek Archive.

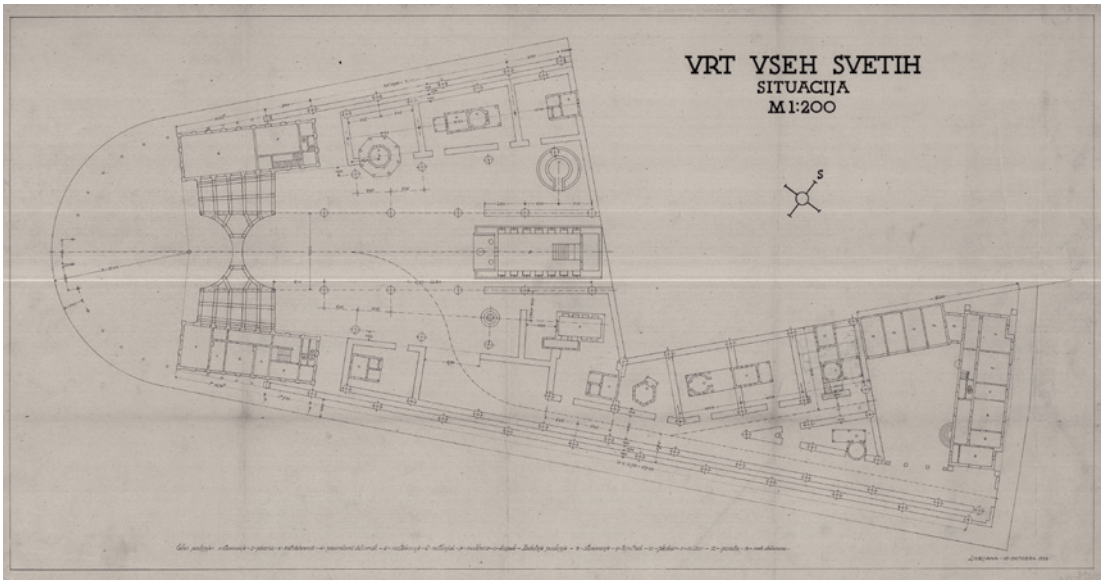

Figure 190
Plan of Žale Cemetery by Jože Plečnik, c.1938. © Documentation MGML, Plečnik's Collection.

The location for Žale Cemetery was chosen in an area that represented the outskirts of Ljubljana in the 1930s. There were huge plantations of hops there, so the address of Žale Cemetery, Med Hmeljniki 2, means in translation 'Among Hoppers 2'. The vegetation was carefully chosen for this area, which was originally named 'The Garden of All Saints' by Plečnik. This is a very intimate and contemplative place designed on a human scale, with an open dialogue between the built structure, the sky and the vegetation.

Plečnik chose the vegetation for Žale in collaboration with city gardener Anton Lap. Green elements are composed of grass, individual trees, clusters of trees, tree lines, hedges, climbing plants and potted plants. Plečnik's Žale is located along the avenue of wild chestnuts, leading to the St Cross Church and the main Žale cemetery entrance.

The most unusual amongst the mortuaries on Plečnik's Žale is St Ahac Mortuary in the shape of a tumulus, which was originally covered with leveled soil and grass. After World War II the soil and grass were removed and the tumulus was covered in stone and planted with the climbing plant *Parthenocissus tricuspidata 'Veitchii'*. Plečnik planted *Picea omorika* in a line from the entrance porticus to the main chapel and an alley of *Carpinus betulus* 'Fastigiata' leading from the main chapel to the south-west exit.

In 1979, Plečnik's Žale was closed, and in 1991, after Slovenia split from Yugoslavia, it was renovated and reopened to fulfil its original function. Today Žale Cemetery is a monument of national importance, well-kept and in good condition.

Author: Nataša Koselj

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RAB MEMORIAL CEMETERY, CROATIA

Kampor, Rab Island
1953

Edvard Ravnikar with his students (architect)
Public amenity and urbanism, cemetery

Keywords: modernistic decomposition of the wall

The Memorial Cemetery at Kampor on Rab Island is a memorial to all the Slovenian, Croatian and Jewish victims who died at the Italian Fascist concentration camp at Kampor between 1942 and 1943. The memorial complex, symbolically designed as a city of the dead, is both a war cemetery and an official state monument. It is fenced with a drystone wall, which is traditional in Rab vernacular architecture. We enter the monument through artistically perforated, bended copper doors, which are one of the most beautiful and poetic features of this monument complex—an aesthetically significant detail in terms of Slovenian post-war architecture, designed by the architect and sculptor Vladimira Bratuž – Laka. It is composed of the following architectural elements: the entrance platform with columns that include the Slovenian and Croatian coat of arms; a stone vase containing soil from the places where the victims came from; and a bench. The area of graves is divided into five thematic groups covering over 1,000 named victims. The main square includes the charnel and obelisk with a symbolic stone arch and a mosaic. These architectural elements are linked with the main stone path paved in a fishbone style, which is reminiscent of the *via sacra.*

The cemetery on the island of Rab is considered one of the most important works by the architect Edvard Ravnikar. Ravnikar changed perceived notions of monuments by avoiding figurative expression. He evoked remembrance by designing not merely the body of the monument, but also the path through the memorial. This relates to the Cubist notion of art,

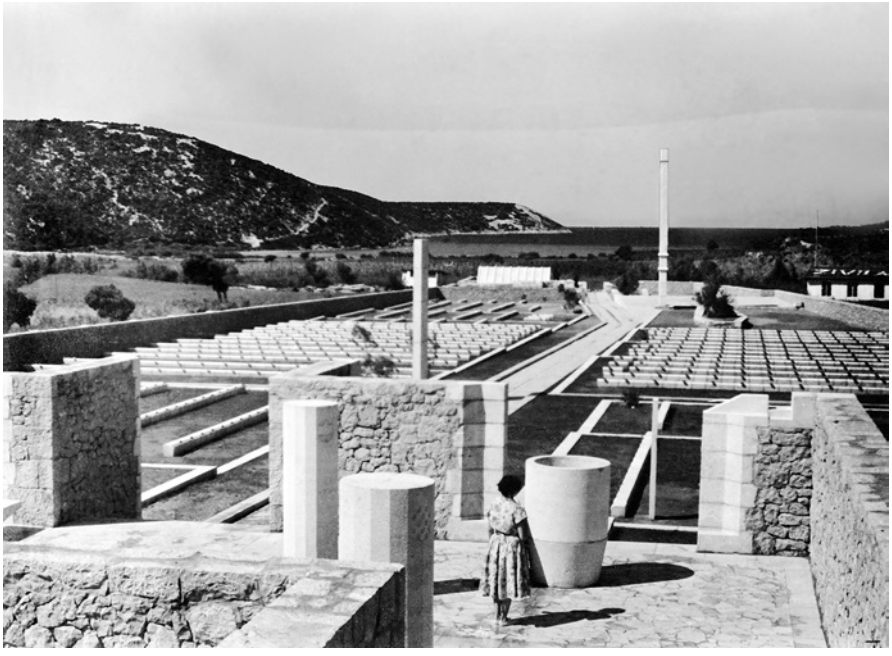

Figure 191
View towards the sea from the entrance platform at Rab Memorial Cemetery, taken in 1953. © France Ivanšek, Docomomo Slovenia Archive.

Figure 192
Horizontal plaques containing victims' names at Rab Memorial Cemetery. © Miran Kambič, Docomomo Slovenia Archive.

which requires the visitor to engage in a physical and mental process in time and space. Essentially, the work's disintegration of a stone wall expresses a symbolic border between life and death, woven into the tradition of stone land boundaries seen on the coast. The markedly linear design of the central stone path terminates in an expansion (a square) and a slender obelisk located at the axis of the lowest point of the hinterland. Along the path, aligned both parallel and perpendicularly, are plaques containing the victims' names. On the left, at the path's end, are the remains of a settlement whose centrepiece is a dome-shaped stone shell with urns and a mosaic by Marij Pregelj. There is considerable attention to detail (copper entry gates, paving, structure of the wall) and an interweaving of the classical and the modernist.

In the present condition of the monument the view to the horizon of the sea is interrupted by very thick vegetation, but on the other hand, this adds another dimension to the experience of the place, triggering memories of changing time and space. Some stone and copper parts of the monument are damaged and should be carefully reconstructed with identical sizes and materials. As the monument was designed in nature, the main challenge will be to preserve not just the structure inside the walls but also the surrounding nature, with the views which so beautifully embrace, underline and characterize this memorial.

Author: Nataša Koselj

The entry for Rab Memorial Cemetery in Croatia was prepared by Docomomo Slovenia.

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UNDERGROUND PANTHEONS OF THE CEMETERY OF CHACARITA, ARGENTINA

Guzmán Avenue 680, City of Buenos Aires
1958

Ítala Fulvia Villa (architect), Lelia Cornell, Raquel S. de Dias, Günter Ernst, Carlos Gabutti, Ludovico Koppman, Clorindo Testa (colaborators)

Public amenity and urbanism, cemetery

Keywords: history, memory, community

The underground pantheons of the cemetery of Chacarita are one of the significant examples of modern landscape design in Argentina. The work is highlighted by the sense of experimental design of the landscape in relation to the program, materiality and space. It was designed by Ítala Fulvia Villa (1913–91), one of the outstanding women architects of the Argentine Modern Movement. She participated in several urban projects and was a member of the Austral Group, a collective of great influence in local modern architecture. During the 1950s, she worked in the Department of Architecture and Urbanism of the Municipality of Buenos Aires where she developed a general plan for the renovation of the old cemeteries of Chacarita (Juan Antonio Buschiazzo and Enrique Clement, 1884), and Flores, two of the three necropoleis of the city together with Recoleta. It arose in response to the need to expand the area because of the rapid population increase in the city at the beginning of the twentieth century.

In the Chacarita cemetery, the main criterion of landscape design was to ensure that the entire surface at ground level was a garden. This was achieved by burying all the structures with the exception of two access pavilions. This decision raised both an integration and a differentiation of the nineteenth-century landscape design of the existing cemetery: axes of symmetry that defined areas for earth graves and individual vaults. The complex is organized around a large rectangular central courtyard and two perimeter patios twelve metres deep. Between these voids a series of galleries are located for the public, with rectangular volumes in the form of islands that house coffins. Contrasting this regularity, Villa proposed

Figure 193
Aerial view of the underground pantheons of the Cemetery of Chacarita. © Espacio GRIS Archive.

Figure 194
Courtyard view of the underground pantheons of the Cemetery of Chacarita. © Carolina Quiroga, 2010.

two garden design concepts. At ground level, there were gardens of various shapes and colours of plans organized in a regular grid. At entry level, there was a garden conceived as an open lawn space with sculptural elements: sinuous-shaped stonecutters, a big curved wall, and air vents and odour-removal tubes with coloured decorative coverings. In both spaces, she also studied the combinations of plants and flowers, taking into account the colours, textures, brightness, and flowering periods. A remarkable aspect of the work is the investigation of the technical–expressive capacities of noble materials, such as reinforced concrete with a hammered finish and marble. Another distinctive theme is the precise and sensitive handling of space. Villa experimented not only with vegetation and architectural elements, but also with intangible aspects such as light and emptiness, achieving an innovative landscape in this type of program.

Currently, the underground pantheons maintain their original function. In 2023 it was declared a cultural property of the city by an initiative of two networks of women architects backed by hundreds of supporters. Ítala Fulvia Villa has a legacy in the necropolis of Chacarita—a landscape of great social, cultural and aesthetic value where architecture and vegetation transcend a mere exploration of form and use to become an intensely poetic experience.

Authors: Carolina Quiroga and Mariana Quiroga

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THE EXTENSION OF TURKU CEMETERY, FINLAND

Skarppakullantie 2, Turku
1964–83

Pekka Pitkänen (architect)
Commemorative, public amenity and urbanism

Keywords: cemetery landscape, late modernism, sacral architecture

The first phase of the Turku cemetery in Southern Outland was built in 1805–07 according to a plan by Carlo Bassi. The cemetery was subsequently expanded in several phases to include Orthodox, Jewish, Muslim, and Catholic sections. In the northern part the Resurrection Chapel (1938–41) was planned by Erik Bryggman.

Pekka Pitkänen's extension of the cemetery was organically linked to the Chapel of the Holy Cross he planned in 1963–67. The new landscaping took place between the chapel and the Uudenmaantie highway to Helsinki, on an area used as a sand and gravel pit and given over by the city to the congregation in 1965. The area was totally spoiled by excavations, with the exception of two small hills.

The boundary of the cemetery is defined by a two- to three-metre-tall concrete retaining wall which includes a flower sales pavilion. The landscaping includes three clearly distinct parts: the surroundings of the chapel, a conventional graveyard on the level part, and an extension exploring new burial solutions in the hilly terrain in the western part of the site.

The area surrounding the chapel is an integral part of its architecture, similar to the Woodland Cemetery in Stockholm. The mourners approach the chapel by walking via a monumental staircase through a concrete wall. The chapel is partly concealed at the end of a meadow behind bushy mountain pines. Exiting the chapel after a ceremony for cremation, the same

Figure 195
The Chapel of the Holy Cross, seen from the Skarppakullantie Street. © Museum of Finnish Architecture, Pekka Pitkänen.

Figure 196
The urn grove is terraced around an irrigation pool.
© Museum of Finnish Architecture, Pekka Pitkänen.

landscape frames the return to the ordinary daily world. The Holy Cross itself is situated on the lawn so that it greets the arriving mourners, and at the same time meets those departing. The chapel has three burial chapels and a crematorium, with façades and interiors mostly in bare concrete. In the two main chapels, there is a garden screened by concrete walls to which a large window opens. For burials, the funeral procession passes via the glass window doors to the graveyard.

The area to the southwest of the chapel is a conventional burial area with a radial arrangement. The westernmost area experimented with burial forms, which were new in Finland at the time the cemetery was built. Traditionally, since the beginning of the nineteenth century, most people were buried in family plots in coffins. Between two small pine hills, the only natural parts of the landscape, lies the urn grove, which is terraced on both sides of a small reservoir of irrigation water. The paths are mostly in asphalt, with black granite stairs connecting the different levels. In a crater-like small gravel pit there is the remembrance grove, consecrated in 1983. The ashes are buried here anonymously. The bronze sculpture 'Transfiguration' ('Kirkastuminen') by Tapio Junno, was unveiled in 1990, and serves as a joint memorial. On the western hill, populated by pine trees, is an area that was opened in 1991 and provides the opportunity for mourners to spread ashes in nature.

The extension of the graveyard provides the oldest city of Finland with new forms of burial in a modernist setting, integrated with the crematorium chapel.

Author: Mikko Laaksonen

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KWAME NKRUMAH MAUSOLEUM AND MEMORIAL PARK, GHANA

John Evans Atta Mills High Street, Central Business District Accra
1992

E. G. A. Don-Arthur (engineer, architect), Ghana Architectural and Engineering Services Limited (project management), Ghana Parks and Recreation

Institutional

Keywords: mausoleum, public park, national memorial

The Kwame Nkrumah Mausoleum and Memorial Park is located on the site of Ghana's old polo club grounds on the outskirts of Accra's Central Business District along the John Evans Atta Mills High Street. The mausoleum occupies about 5.2 hectares of land, opposite the courts of law and overlooking the sea. It was commissioned and built by Flight Lieutenant Jerry John Rawlings, Ghanaian Head of State, in the early 1990s, to serve as a national monument and a symbolic final resting place for Ghana's first President, Kwame Nkrumah. Nkrumah died in exile in Romania in 1972. His body was flown back to Ghana and initially interred in Akropong, his hometown.

Whilst the idea of constructing a memorial for Nkrumah had been mooted at his death, it was not until the reappraisal and rehabilitation of his political legacy in the 1980s that his historic significance to Ghana and the world was established. This was when the Rawlings government commissioned the construction of a national mausoleum, which was undertaken by Dr Don-Arthur (1939–), the chairman of the Ghanaian non-Aligned movement, which Nkrumah had been a leader of in the 1960s.

The park is located at a prominent location of historical significance in central Accra where Nkrumah had declared Ghanaian independence in 1957. It is a predominantly hard landscaped park. The centrepiece is the marble clad mausoleum structure where Nkrumah is interred. There are axial processional vistas which focus on the mausoleum. The park has hard surfacing made of concrete slabs with stone insets, and formal planting creating avenues along the main vistas. The areas between the avenues and pathways are planted as formal grassed areas. The mausoleum's central avenue has a water feature with life-size bronze cast sculptures. The water symbolises eternal life, while the bronze sculptures depict traditional Ghanaian praise musicians, heralding Nkrumah's achievement.

The grounds also incorporate a formal park with a number of tree species. Some of these have been planted in this area by visiting dignitaries. Beyond the mausoleum is a small subterranean museum, designed in a muted art deco 'Egyptian' style, possibly referencing Nkrumah's Egyptian wife who is also buried within the grounds. Also of note is a life-sized statue of Nkrumah, which had initially been taken down from its original location in Accra after his overthrow in 1966. This now sits close to the Mausoleum in the Memorial Park grounds. The construction of the Nkrumah memorial grounds combines a formal ceremonial memorial with a public-focused open park design, and thus achieves a postmodern planning response to the formal–informal use of a public space.

Figure 197
The ceremonial axis of Kwame Nkrumah Mausoleum and Memorial Park, showing the water feature and bronze praise figurines.

Figure 198
View of the Formal Garden with planted trees. © Ola Uduku, 2019.

It normally functions as a public park which attracts a nominal entry fee, but it attains ceremonial national status on ceremonial days and holidays when it is used for national functions, such as Annual Days of Remembrance, including Nkrumah's birthday on 21 September, and Republic Day on 1 July. It also functions in this manner when it is the venue used to host visiting dignitaries, who come to pay respects to Kwame Nkrumah as an African statesman. The park is already a listed national monument.

Authors: Ola Uduku and Irene Appeaning Addo

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LANDSCAPES BY COUNTRY

TIMELINE OF LANDSCAPES

The order of listing of landscapes is derived from the earliest date of the planning and construction processes that led to their creation.

METHODOLOGY AND SUBMISSIONS: GEOGRAPHIC RANGE AND PERIOD

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The content of the book was based on an initiative by the Docomomo International Specialist Committee on Landscape and Urbanism (ISC/U+L). The following is a clarification of the methodology employed in order to illustrate how the gradual collection of material from the Docomomo chapters resulted in the final publication.

As explained in the chapter, 'Making Twentieth-Century Landscapes Visible', the ISC/U+L's call for submissions went to Docomomo's seventy-one chapters in January 2019, requesting up to three landscape sites. Ultimately the total number increased to seventy-four as representatives for some countries without a Docomomo chapter wished to participate. Those seventy-four were initially considered in terms of the six geographic regions that the United Nations employs in its world population models. The geographical spread of these chapters was (Figure 3 on page 18): nineteen from Asia (25.68%), five from Africa (6.76%), thirty-one from Europe (41.89%), three from North America (4.05%), fourteen from Latin America and the Caribbean (18.92%), and two from Oceania (2.70%). This does not take into account whether a chapter was indeed active, nor does it correspond directly with the population numbers of world regions: Asia, for instance, has about 60% of the world's population, while only just over a quarter of Docomomo's chapters are found in the region. In addition, some geographic regions have more countries than others. However, the data reinforces Docomomo's prominence in Europe, with some representation in Asia and America, while Africa and Oceania are less well represented.

By May 2019 the first entries were received from sixteen chapters, representing a participation rate of 21.62%, with variable numbers of sites being entered by each chapter. The editors observed that the quality of the submissions greatly varied despite the requirements and expectations laid out in the call for submissions. For example, some of the submissions lacked a landscape focus while others lacked mid-twentieth-century significance. A second call for submissions was issued while initial editorial work could start and the first-round feedback could be given. By September 2019 a total of twenty-four chapters (about 32% participation) and sixty-six sites (averaging 2.75 sites per chapter) had been submitted. The editors identified themes and developed a draft structure for the publication, generating an iterative process that enabled editing and seeking further participation that would 'backfill' and broaden the data set.

As mentioned under 'Making Twentieth-Century Landscapes Visible', by August 2020 about 51% of the chapters had submitted their final entries, representing sites in thirty-eight countries (Figure 2 on page 18, Figure 4 and Figure 5 on page 19). Eighty-six sites were selected from the submissions. In terms of geographic representation, Europe still predominated in absolute numbers of sites and as a proportion of responses (Figure 3 on page 18). This bias is significant because as the entries were subject to comparative analysis it became clear that for mid-twentieth-century European landscapes the impacts of socio-political change related to World War II were often critical to how a site was defined. Clearly other parts of the world were also influenced by World War II, indirectly as a result of post-war development boom, but the scale of change often played out more centrally in the 'fate' of sites in the European context. A notable example was the impact of communism

for the Soviet Union, where landscapes often became a canvas for expressing social engineering and reform.

The statistics and maps of participation in this book (Figure 2 on page 18, Figure 4 and Figure 5 on page 19) reveal that there are significant gaps in representation from some regions of the world. Africa and Oceania continue to have a limited number of Docomomo chapters and only Ghana and Australia submitted sites for these geographical regions. Why are such levels of participation and degrees of geographical spread relevant? With so few chapters in some regions, combined with the inevitable focus on architecture, the landscape heritage of the Modern Movement in those regions most certainly must still be overlooked and ill-defined. In these cases, the stewardship of significant landscapes from the Modern Movement remains uncertain. Despite this, the opportunity to raise issues around the documentation, protection and safeguarding of architectural and landscape architectural heritage seems a most timely one.

The outcome also provokes the question of why several countries that have been active within Docomomo for many years chose not to participate. It may well be that the call for submissions did not reach some of these chapters. Alternatively, perhaps this occurred as a result of memberships that are predominantly architectural in orientation, with a concomitant lack of availability of landscape knowledge, or even just a lack of time to commit to what are essentially voluntary activities. Participation in any location required a level of initiative, coordination, decision-making, responsibility, and ultimately, 'belief' that landscapes did require attention and increased awareness in their region. The existence of this book may hopefully go some way to turning the situation around, although there will then be the need to further develop an even more complete inventory and a corresponding broadening of involvement.

It is difficult to assess whether the initiative of this book has successfully or sufficiently helped to engage new landscape experts in Docomomo. Furthermore, it is not clear if other organizations that have activities and missions that include a focus on landscapes of the twentieth-century may have become in some way engaged in Docomomo's activities as a result of the preparation of this book. A proportion of the submissions were not prepared by landscape experts, which seems reflective of the current make-up of the membership of Docomomo. Nevertheless, many landscape experts or enthusiasts came forward to participate. The ISC/U+L could use this as an opportunity to engage more landscape-interested people in its wider activities and to promote itself more vigorously by way of this publication.

LANDSCAPE TYPES

The typology used for the landscapes in the book is the *Typology of Designed Landscapes of the Recent Past* (Haenraets, 2010) that was based on a comparative study of various international sample typologies, for which the references are provided below.

Domestic and residential landscapes

Single dwelling, multiple dwellings, no dwelling, communal garden, public and private housing estates, private gardens, small residential grounds.

Transport landscapes

Airports, motorways, streets in the sky, railways, canals, recreational routes, parkways, drives, trails.

Industrial and farming landscapes

Quarries, factories, forestry, power stations, sewage works, water reservoirs, land reclamation, utilities, communications, farming, fishing, plantation grounds.

Commercial landscapes

Corporate gardens, shopping malls, department store, roof gardens, hotel, office, public building, open by subscription or ticket, golf course

Institutional landscapes

Hospitals, religious, prisons, schools, colleges and universities, crematoria, administration, government offices, libraries, museums, galleries, sculpture gardens.

Military landscapes

Training areas, cold war sites, military graves, battlefields, battlefield parks, military bases, airfields, monuments, commemorative parks.

Public amenity landscapes and urbanism

Public parks, public walk, town walks, plaza, square, green, mall, playgrounds, river walks, seaside promenades, cemetery, churchyard, civic schemes and masterplans (including New Towns), urbanism, city planning or civic design subdivisions, planned communities, resorts, other public spaces.

Leisure landscapes

Zoological gardens and parks, allotments, theme parks, caravan parks and campgrounds, water reservoirs, lidos, swimming pools, leisure centres, golf courses, garden festivals, race tracks, ski resorts, country parks, tennis courts, bowling greens, bridle trails, stadiums, ball parks, race tracks, fairs and exhibition grounds.

Conservation and ecological oriented landscapes

Historic garden restorations, wildlife gardens, forestry, national and regional parks, arboreta, botanical and display gardens, land reclamation.

Unclassified

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Docomomo International

Docomomo International stands for the international committee for the documentation and conservation of buildings, sites and neighbourhoods of the Modern Movement.

Docomomo International is a non-profit organization dedicated to documentation and conservation of buildings, sites and neighbourhoods of the Modern Movement. It was initiated in 1988 by Hubert-Jan Henket, architect and professor, and Wessel de Jonge, architect and research fellow, at the School of Architecture at the Technical University in Eindhoven, the Netherlands. In 2002, the Docomomo International secretariat relocated to Paris and was hosted by the Cité de l'Architecture et du Patrimoine in the Palais de Chaillot. The chair and secretary general were Maristella Casciato, architect and architectural historian, and Émilie d'Orgeix, architectural historian, respectively, with Anne-Laure Guillet being director. In January 2010, the Docomomo International secretariat relocated to Barcelona, hosted by the Fundacion Mies van der Rohe.

From 2010 to 2022 Docomomo International was hosted in Lisbon, at Instituto Superior Tecnico — Lisbon University. The chair was Ana Tostões, architect (ESBAL, 1982), architecture historian (UNL, 1994), member of Docomomo Ibérico, and full professor at the Civil Engineering and Architecture Department of the Instituto Superior Técnico— Lisbon University. In 2022 the Docomomo International Secretariat relocated to Delft, the Netherlands, to the Faculty of Architecture and the Built Environment at Delft University of Technology (TU Delft). The chair is Uta Pottgiesser, an architect, full professor and chair of Heritage and Technology at TU Delft (Faculty of Architecture and the Built Environment) since 2018. The secretary general is Wido Quist, associate professor in building conservation and historic building materials (since 2013) as well as since 2018 Section Leader Heritage and Architecture at the Faculty of Architecture and the Built Environment of Delft University of Technology.

Mission

In the last decades, the architectural heritage of the Modern Movement appeared more at risk than during any other period. This built inheritance glorifies the dynamic spirit of the Machine Age. At the end of the 1980s, many modern masterpieces had already been demolished or had changed beyond recognition. This was mainly due to the fact, that many were not considered to be elements of heritage, that their original functions have substantially changed and that their technological innovations have not always endured long-term stresses.

Docomomo International's missions are to:

- Act as watchdog when important Modern Movement buildings anywhere are under threat.
- Exchange ideas relating to conservation technology, history and education.
- Foster interest in the ideas and heritage of the Modern Movement.
- Elicit responsibility towards this recent architectural inheritance.

Since its creation, Docomomo International has experienced a rapid growth, establishing itself as a major player not only in the realm of conservation, but also in the broader field of architectural culture. The pluralist, interdisciplinary nature of Docomomo International, due to its ability to bring together historians, architects, town-planners, landscape architects, conservationists, teachers, students and public officials, has been a strong asset.

At present, Docomomo International includes seventy-one chapters and more than 3,000 members, in Europe, America, Asia, Oceania and Africa. In their variety of cultures and experiences, the chapters represent the true richness of Docomomo International.

The Eindhoven–Seoul Statement

Docomomo's main goals are brought together in the Eindhoven Statement which was issued at the conclusion of the founding conference in 1990. It was updated in Seoul, 2014, where it was approved the Eindhoven–Seoul Statement:

Docomomo International is a non-profit organization dedicated to the documentation and conservation of buildings, sites and neighborhoods of the Modern Movement. It aims to:

- Bring the significance of the architecture of the Modern Movement to the attention of the public, the authorities, the professionals and the educational community.
- Identify and promote the surveying of the works of the Modern Movement.
- Promote the conservation and (re)use of buildings and sites of the Modern Movement.
- Oppose destruction and disfigurement of significant works.
- Foster and disseminate the development of appropriate techniques and methods of conservation and adaptive (re)use.
- Attract funding for documentation conservation and (re)use.
- Explore and develop new ideas for the future of a sustainable built environment based on the past experiences of the Modern Movement.

Docomomo International Specialist Committee on Urbanism and Landscape

The International Specialist Committee on Urbanism and Landscape (ISC/U+L) promotes the research, documentation and protection of modern ensembles and environments, as opposed to individual 'setpiece' monuments. In practice, our current work focuses almost exclusively on research and documentation.

The Mission of the Committee is to:

- Develop and disseminate a vision of the modern heritage in terms not just of individual setpiece monuments but also of collective planned ensembles and landscapes, on a scale extending to that of the city or region.
- Develop new techniques of recording and analysis appropriate to this collective heritage, and make them available via innovative database or web-based initiatives.
- Establish appropriate recording and conservation criteria for Modern Movement landscape (as opposed to built) heritage.
- Investigate and compare the viability of recording-based and conservation-based strategies for large complexes and sites under threat, and act as a 'rescue' watchdog when appropriate.
- Carry out in-depth international comparative studies of selected building or landscape types, commencing with post-war mass housing.
- Assist in the establishment of new Docomomo working parties (chapters) in places of special relevance to Modern Movement urban and landscape heritage.

This book presents a wide range of landscapes that have been integral to the Modern Movement era. It aims to raise awareness of their design significance and to broaden understanding of their diversity. It demonstrates the breadth of roles that landscape architects and affiliated designers have played in response to the demands wrought by social, political and environmental change, particularly in the post-World War II years. In this sense it draws attention to people and places that previously may have been marginally understood—'invisible' or 'dislocated'—thus enabling them to be appreciated in new ways and to be considered more carefully in comparative analyses into the future.

Included in this book are eighty-six landscapes spanning the twentieth century and representing the following thirty-eight countries: Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Croatia, Cuba, Cyprus, Czech Republic, Finland, France, Ghana, Greece, Guatemala, India, Iran, Israel, Italy, Japan, Lebanon, Lithuania, Mexico, Portugal, Puerto Rico, Romania, Scotland, Serbia, Slovakia, Slovenia, Spain, Syria, Thailand, the Netherlands, Turkey, United States of America, and Venezuela.

The contributors to this monograph are largely representatives of the International Committee for Documentation and Conservation of Buildings, Sites and Neighbourhoods of the Modern Movement, otherwise known as Docomomo International. Docomomo is made up of a wide range of people representing an array of cultures, expertise and interests, the distinctive 'voices' of which permeate this book.

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International Specialists Committee on **Urbanism** + **Landscape**