9 Teaching restoration of historical gardens

Research through design experience

Cristina Castel-Branco and Sónia Talhé Azambuja

Introduction

In the 1980s and 1990s, the field of Landscape Architecture focused on developing theories and methods for restoring historic gardens. These efforts were supported by universities, heritage protection institutions, and professionals, and they served as a basis for more rigorous and authentic restoration interventions. The International Committee for Historic Gardens, part of the International Council on Monuments and Sites (ICOMOS/IFLA), created the Charter of Florence in 1981, and it was adopted by ICOMOS in 1982, establishing principles for the protection and preservation of historic gardens. In 1992, the cultural landscape category was also established as part of the World Heritage List created by UNESCO, and the Historic Gardens Committee became part of the Scientific Committee for Cultural Landscapes at ICOMOS (Fowler, 2003). In Portugal, theoretical principles based on the Florence Charter were discussed and used to restore historic gardens (Castel-Branco, 1999) and incorporated in the Universities of Lisbon and Évora teaching programmes. In 1989, the Instituto Superior de Agronomia (ISA), School of Agriculture of the University of Lisbon also began teaching the restoration of historic gardens[1] within the course of History of Garden Art II in the Landscape Architecture programme, drawing on the theories and practices of the National Trust of England (Watkins & Wright, 2007; Harney, 2014), a private foundation in the United Kingdom with expertise in restoration, management, and enhancement of properties in England, as well as the concepts of the Florence Charter (ICOMOS, 1981/1982).

Teaching methodologies on historic garden restoration at the University of Lisbon (1989–2022)

At ISA, students in the Landscape Architecture programme learn how to design restoration plans for historic gardens. Homogeneous regions in Portugal were selected where gardens with similar ecological characteristics and the same time periods could be studied. The case studies could vary from historical estates (*quintas*[2]) and their gardens, botanical gardens, urban parks and gardens, sanctuaries, and convents' enclosures, and the methods have been applied and used as 'hands-on' exercises. Each year, students work in a different region and are divided into

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teams to focus on the main aspects of the analysis for a historic garden: 1) history; 2) space and composition; 3) botany; 4) hydraulics; 5) surroundings. These lectures aim to give students a comprehensive understanding of the place so that they can interpret it and create effective restoration plans.

Field trips (Figure 9.1) are organised for the case studies to five to seven historic gardens within the selected region (Araújo, 1962; Castel-Branco, 2014, 2017). In these field trips, the students visit the place, take notes, draw, conduct interviews with the owners and head gardeners, and perform several types of surveys (botanic, hydraulic system, uses, functions, etc.). During each academic year, instructors organise visits to some of the most significant historic gardens in the Lisbon region, including Quinta da Bacalhoa (16th century), Fronteira Palace Garden (18th century), Botanical Garden of Ajuda (18th century), Estate of Necessidades (18th–19th century) and Tropical Botanical Garden (18th–20th century) (Castel-Branco, 1999, 2002, 2008, 2017). These field trips are intended to create a visual archive in the student's memory and help learn the characteristics of Portuguese gardens and their adaptations to the natural environment.

Simultaneously, students research in the Portuguese National Archives (Arquivo Nacional da Torre do Tombo), National Library of Portugal, owners' private archives, etc. (Viterbo, 1906; Serrão, 2003; França, 2004). The availability of

Figure 9.1 Field trip to visit a historic 'quintas', Arrábida Natural Park, Setúbal, with students of Landscape Architecture of ISA/ULisboa, and Professors Cristina Castel-Branco and Sónia Talhé Azambuja, Spring 2011.

historical sources, maps, photographs, and reports is essential for the analysis phase and allows a quick synthesis of the historical value of *quintas*, convents, gardens, and parks (Treib, 2019). This traditional research process is needed as most of this information is not on the internet. A thorough survey and technical drawing of one selected built structure, from fountains, pergolas, walls, railings, stairs, and paths in woods, is part of the exercise to present within each group's master plan. Learning how to represent a garden feature by measuring and drawing is complemented by the use of 3D simulation and renderings required for each team of students (from 4 to 6 students) (Figures 9.2 and 9.3). For the entire hydraulic system of the garden (Castel-Branco, 2010), which usually needs restoration, a diagnostic survey is carried out to prepare the design pieces for the works that will lead to the restoration. A vegetation survey is also carried out to identify the species and provide information for labelling the most significant specimens (Azambuja,2009, 2021). This survey serves as the basis for the map of outstanding specimens later highlighted in the brochure that students prepare as part of the final presentation. This will be delivered to the owner and possibly to future visitors (Andresen & Matos Silva, 2022). Students will gain additional learning experience by maintaining frequent contact with the garden owners and gaining valuable insights into the client/designer dynamics, which will benefit their future careers as landscape architects.

Figure 9.2 Master's students of Landscape Architecture making presentations of the analyses of the historic gardens case studies during a studio class, ISA/ULisboa, Lisbon, Spring 2022.

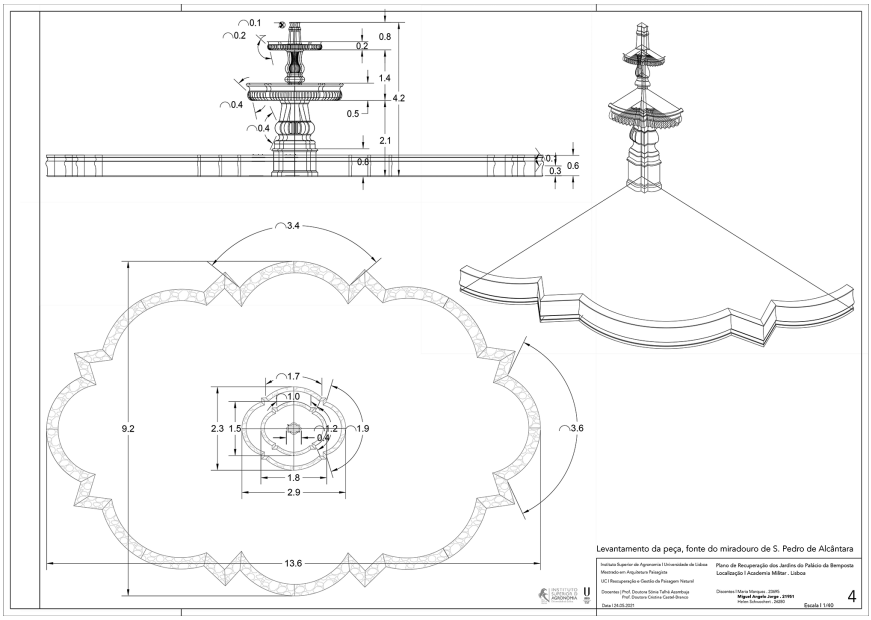

Figure 9.3 Survey of the fountain of S. Pedro de Alcântara Garden, carried out by the students Maria Marques, Miguel Angelo Jorge, and Helen Schwochert under the supervision of Professors Cristina Castel-Branco and Sónia Talhé Azambuja, within the scope of the discipline of recuperation and management of the cultural landscape of the master's in Landscape Architecture at ISA/ULisboa, May 2021.

Following the methodology of the National Trust of England, historical uses of the garden are identified, and surveys of gardens, estates, or heritage sites are recorded using international methods and guidelines (Watkins & Wright, 2007; Fieldhouse & Woudstra, 2000). The Charter of Florence, Charter of Burra, and the Document of Nara define restoration principles for historic gardens, which are presented to the students, who are then encouraged to use them in their proposals (ICOMOS, 1981/1982, 1994; Australia ICOMOS, 2013). The students also follow Carmen Añon Feliú's (1993) four postulates for historic garden restoration 'Respect the Existing Design/Composition', 'Value the Inputs', 'Avoid Dissonances', and 'Find Restoration Solutions within the Garden'. The first postulate emphasises the importance of respecting the existing design of a historic garden and the interventions and maintenance carried out by its various owners over time (Gothein 1928; Jellicoe & Jellicoe, 1975; Girot, 2016). The second postulate stresses the value of all the contributions and layers of time in a historic garden and the need to find a strategy to present them in harmony. The third postulate advocates that we should create an atmosphere in the garden that goes back to the time of its origin to achieve a peaceful and harmonious environment (Castel-Branco, 1999). The fourth postulate advises starting the restoration process with an in-depth study of the garden's history and understanding the motivations behind its creation. By following these

Figure 9.4 Master's class with visiting Professor Timothy Baird from Pennsylvania State University, attended by students and professors of Landscape Architecture at ISA/ULisboa, Lisbon, Spring 2016.

postulates, students can ensure that the plan they propose to restore a historic garden is respectful of its past and sensitive to its cultural and historical significance and meaning (Treib, 2011).

Since 2010, Carl Steinitz's (1990, 2012) six-step method framework for complex and large areas of landscape design, including sequence models, was adapted to garden restoration plans, and the final outputs produced by each group of students follow a multistage structure that includes representation, processes, diagnosis, changes, evaluation, and decision-making. Using this sequence and conducting research while proposing a restoration master plan involves identifying a real-world need for a project in a historical garden, having students conduct research to gather background information on the problem while encouraging them to develop new solutions based on their research findings (Jørgensen et al., 2019, 2022; Castel-Branco & Azambuja, 2020; Azambuja, 2002, 2023). In a studio class, students present their proposals to the class or to a panel of experts and receive feedback and discussion to refine their ideas (Figure 9.2). From 1989 to 2022, specialists such as Ilídio de Araújo, José-Augusto França, Carmen Añón Feliú, John Sales, Thomas Wright, David Jacques, Monica Luengo, Pierre-André Lablaude, Timothy Baird, Marc Treib, Charles Birnbaum, and Carl Steinitz were invited to hold master's classes at ISA/University of Lisbon and comment on proposals for the restoration of historic gardens developed by students (Figure 9.4). Such visiting professors introduce new perspectives during the class's final presentation of the restoration master plan, and students gain important feedback for their work and better understand the

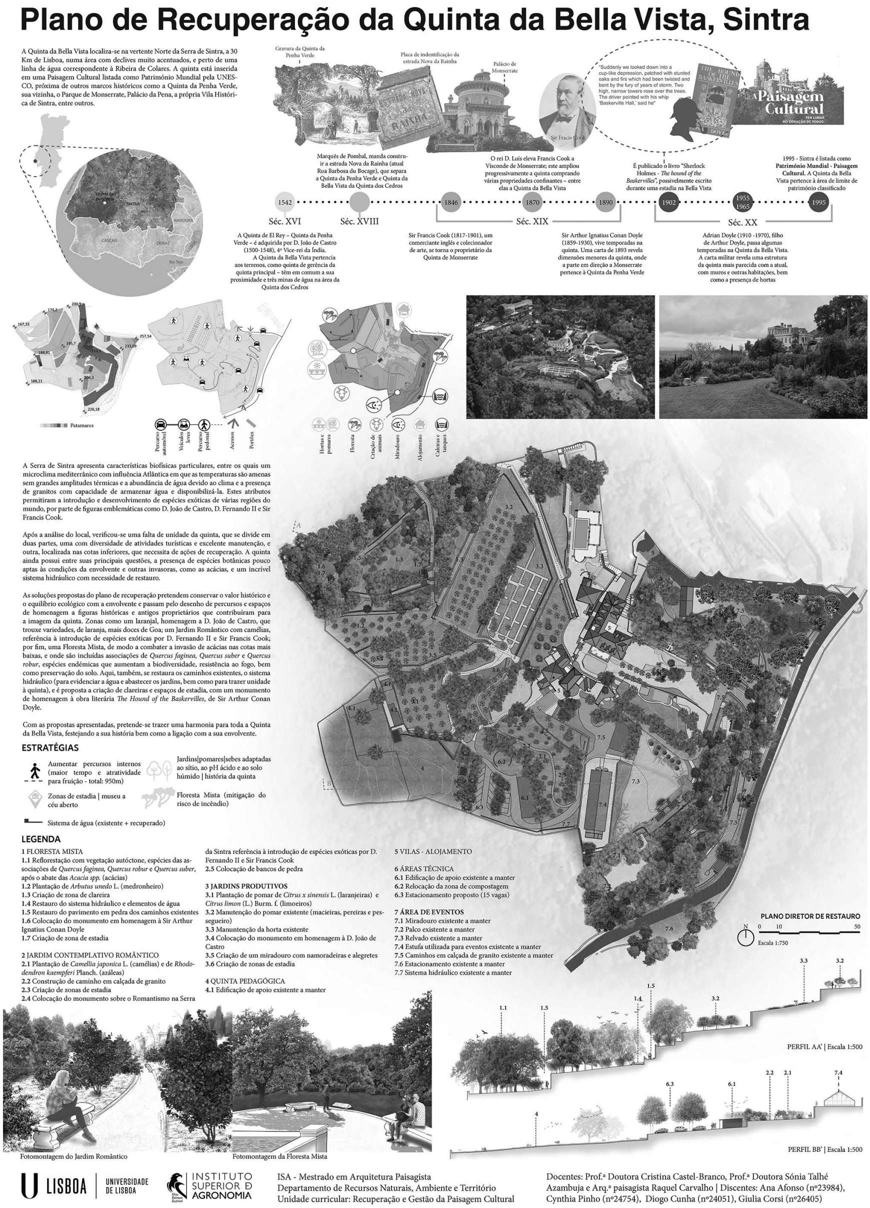

Figure 9.5 Poster with a proposal for the restoration of Quinta da Bella Vista, Sintra, developed by Ana Afonso, Cynthia Pinho, Diogo Cunha, and Giulia Corsi, master's students of Landscape Architecture at ISA/ULisboa, under the supervision of Professor Cristina Castel-Branco, Professor Sónia Talhé Azambuja, and Assistant Raquel Carvalho, 2022.

Figure 9.6 Posters with proposals of restoration for Portuguese historic gardens displayed at the Exhibition 80 Years of Teaching Landscape Architecture in Portugal (1942–2022): Art and Ecology, ISA/ULisboa, 1–9 October 2022, Curator: Invited Professor Sónia Talhé Azambuja, Commissioners: Professor Cristina Castel-Branco and Professor Teresa Andresen.

impact of their efforts. Owners and faculty members are invited, and we believe (Figure 9.5 and Figure 9.6) this approach helps students develop the skills and knowledge needed to restore historical gardens accurately and authentically.

Innovative perspectives explored over the 30 years of teaching practice

Innovative perspectives have been explored over the 33 years of teaching practice, with findings that have improved the result of the exercise. Adding ecology, social issues, and data collected from internet maps, aerial photography, and online research from archives have improved the result of the exercise. Ecology became a requirement, namely in the analysis phase; a thorough landscape analysis of geomorphology, hydrology, ecosystems, climate, natural vegetation, and soils was included. The ecological approach has proven to be very useful for interpreting cultural landscapes. For this reason, we have refined the research question procedure and the result of this teaching exercise over the decades. The diagram from the National Trust of England (Figure 9.7 [Cobham, 1984, p. 5]) has been serving since the 90s as both an academic exercise in teaching and a professional practice of restoration and is recommended to students for preparing the restoration master plan, and it has proved very useful as a 'road map' of good practices in garden restoration.

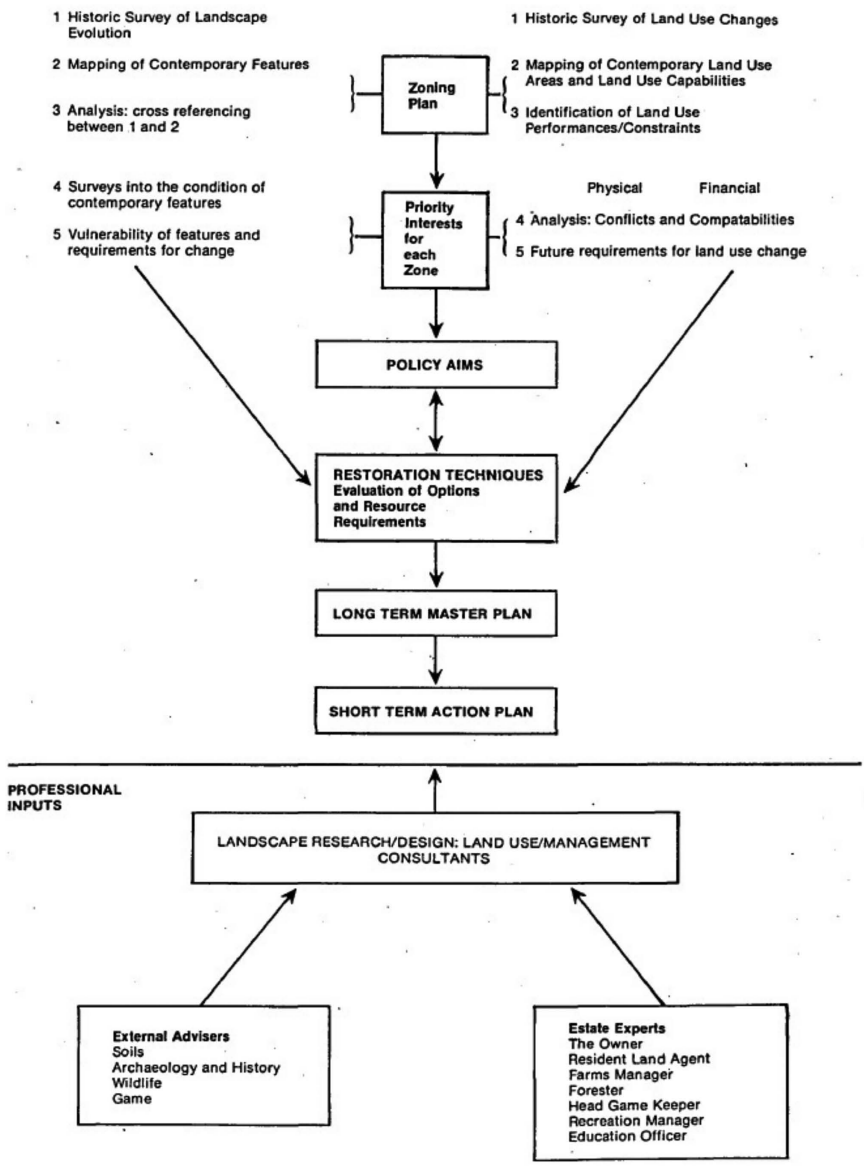

Figure 9.7 The processes involved in producing the landscape restoration plan, National Trust of England methodology.

During the past 33 years, classes have studied approximately 500 historic gardens, and we may have enlarged the scope of the garden restoration research by adding awareness to the ecological processes within the gardens and emphasising the value of interpreting the landscape where the garden was 'sculptured'.

We consider historic gardens 'replacement ecosystems', and though changed by humankind, they still work in balance with nature. They also have proved through two, three, or four centuries that they could withstand the test of time and still display inner sustainable and durable solutions. Analysing and understanding these solutions is an exercise for students that can be used as references for fossil-free outdoor design solutions, inspiring future compositions and processes in garden making. This exercise of finding, understanding, explaining, and finally seeing how it can be used is referred to by students as an important integration of history and heritage into their designer's life.

Two extra learning experiences derived from this 'case study' process emerged, as, during the semester, students maintain frequent contact with the garden owners, gardeners, or people involved with the site and go there by themselves, learning the nature of a first client/designer experience, which is useful for landscape architects. Usually, historical surveys are accompanied by a person responsible for the families' archives, and they are usually asked to come and collaborate in a class where the problems of the garden under study, its history, constraints, and elements that are threatened or in ruin are presented. The availability of elements, maps, photographs, and reports is essential for the analysis phase. Since the internet became an available source, an abundant amount of good data has become available much faster, allowing for a quick synthesis of the case study's historical value without replacing the archives/library research. Following the diagram (Figure 9.7) of the National Trust of England (Cobham, 1984, p. 5), historical uses of the garden are identified, and surveys of the state of gardens, estates, or heritage sites are recorded.

Finally, for the restoration of the garden, 'it is necessary to ally oneself with the mark of whoever designed it, who built it, and whoever maintained it, and respect the mark as an essential factor, as important as the natural processes acting on the site' (Monteiro et al., 1999, p. 143). It becomes more important to show the qualities of the initial design than the design qualities of those who restore the garden or park.

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Notes

1 The introduction of this new course was suggested in 1989 by Cristina Castel-Branco and accepted by Gonçalo Ribeiro Telles, who was the course director at ISA. It adapted the findings of her master's thesis, coordinated by John Martin at the University of Massachusetts, Landscape Architecture and Regional Planning master's degree. In 2008 Sónia Talhé Azambuja joined as an invited professor and added her research area as PhD in History of Art.

2 'Quinta' is a property of varied sizes with more than 10 hectares and usually less than 100 hectares, where agriculture is the main use; a manor house creates the nucleus, and usually a garden completes it. Spread within the whole 'quinta', ornamental elements of the garden create an atmosphere of artistic intentions where the views outward are a final complement.

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